

**Before the**  
**MAHARASHTRA ELECTRICITY REGULATORY COMMISSION**  
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**CASE No. 48 of 2016**

**In the matter of**  
**Petition of Maharashtra State Electricity Distribution Co. Ltd. for Truing-up for FY**  
**2014-15, Provisional Truing-up for FY 2015-16 and**  
**Multi-Year Tariff for 3rd Control Period FY 2016-17 to FY 2019-20**

**Coram**

**Shri. Azeez M. Khan, Member**  
**Shri. Deepak Lad, Member**

**ORDER**

**Dated: 3 November, 2016**

Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) filed a Petition on 4 March, 2016 for Truing-up of Aggregate Revenue Requirement (ARR) for FY 2014-15 and Provisional Truing-up of ARR for FY 2015-16 under the MERC (Multi-Year Tariff (MYT)) Regulations ('MYT Regulations'), 2011; and for approval of the MYT for the 3rd Control Period FY 2016-17 to FY 2019-20 under the MYT Regulations, 2015. Thereafter, MSEDCL submitted a revised Petition on 7 June, 2016.

The Commission, in exercise of its powers under Sections 61 and 62 of the Electricity Act (EA), 2003 and all other powers enabling it in this behalf, and after taking into consideration MSEDCL's submissions, the written and oral suggestions and objections received and the responses of MSEDCL, and all other relevant material, has approved the Truing-up of ARR for FY 2014-15, Provisional Truing-up of ARR for FY 2015-16 and ARR for the 3rd Control Period and determined the Retail Tariff, Wheeling Charges, Cross-Subsidy Surcharge and Additional Surcharge in this Order.

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### List of Abbreviations

Abbreviation	Expansion
A&G	Administration and General
ABR	Average Billing Rate
ABT	Availability Based Tariff
ACoS	Average Cost of Supply
AFC	Annual Fixed Cost
AG	Agriculture
AMR	Automated Metering Reading
APDRP	Accelerated Power Development and Reforms Programme
APPC	Average Power Purchase Cost
ARR	Aggregate Revenue Requirement
AS	Accounting Standard
ASC	Additional Supply Charge
AT&C	Aggregate Technical and Commercial
ATE/APTEL	Appellate Tribunal for Electricity
BEST	Brihan-Mumbai Electric Supply & Transport Undertaking
BPL	Below Poverty Line
BSC	Base Station Controllers
CAG	Comptroller and Auditor General
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditures
CBA	CBA
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
CGPL	Coastal Gujarat Power Limited
CGRF	Consumer Grievances Redressal Forum
CIL	Coal India Ltd.
COD	Commercial Operation Date
Commission/MERC	Maharashtra Electricity Regulatory Commission
COS	Cost of Supply
CPI	Consumer Price Index
CPP	Captive Power Plant
CPPA	Captive Power Producers Association
CR	Consumer Representative
CSD	Consumer Security Deposit
CSS	Cross-subsidy Surcharge
CT	Current Transformer
CWIP	Capital Work in Progress

Abbreviation	Expansion
CUF	Capacity Utilisation Factor
DA	Dearness Allowance
DCL	Distribution Commercial Loss
DDUGJY	Deen Dayal Upadhyay Gram Jyoti Yojana
DF	Distribution Franchisee
DIC	Directorate of Industries and Commerce
DPC	Delay Payment Charges
DPR	Detailed Project Report
DSM	Demand Side Management
DTC	Distribution Transformer Centre
DTL	Deferred Tax Liability
EA2003/Act	Electricity Act, 2003
ED	Electricity Duty
EDP	Embedded Display Port
EHV	Extra High Voltage
ERP	Enterprise Resource Planning
FAC	Fuel Adjustment Charge
FBSM	Final Balance Settlement Mechanism
FSA	Fuel Supply Agreement
FY	Financial Year
GC	Generation Charge
GEC	Gross Energy Consumption
GFA	Gross Fixed Assets
GFSS	Gaothan Feeder Separation Scheme
GOI	Government of India
GoM	Government of Maharashtra
GSA	Gas Supply Agreement
HP	Horse Power
HT	High Tension
HVDS	High Voltage Distribution System
IBSM	Interim Balancing Settlement Mechanism
IC	Interim Charge
IDC	Interest During Construction
IIT	Indian Institute of Technology
InSTS	Intra-State Transmission System
IoWC	Interest on Working Capital
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
IT/ITES	Information Technology/ Information Technology Enabled Services

Abbreviation	Expansion
kVA	Kilo-Volt Ampere
kW	Kilo Watt
kWh	Kilo Watt Hour / Unit
LF	Load Factor
LT	Low Tension
LV	Low Voltage
MGP	Mumbai Grahak Panchayat
MIDC	Maharashtra Industrial Development Corporation
MIS	Management Information System
MoD	Merit Order Despatch
MOEF	Ministry of Environment and Forest
MOP	Ministry of Power
MoU	Memorandum of Understanding
MPECS	Mula Pravara Electric Cooperative Society Limited
MSEB	Maharashtra State Electricity Board
MSEBHCL	Maharashtra State Electricity Board Holding Co. Ltd.
MSEDCL	Maharashtra State Electricity Distribution Co. Ltd.
MSETCL	Maharashtra State Electricity Transmission Co. Ltd.
MSLDC	Maharashtra State Load Despatch Centre
MSPGCL	Maharashtra State Power Generation Co. Ltd.
MTR	Mid Term Review
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NCDP	New Coal Distribution Policy
NLDC	National Load Despatch Centre
NPCIL	Nuclear Power Corporation of India Limited
NTP	National Tariff Policy
NTPC	National Thermal Power Corporation Limited
O&M	Operation and Maintenance
OA	Open Access
Opex	Operational Expenditure
P&L	Profit and Loss
PD	Permanent Disconnected
PF	Power Factor
PFC	Power Finance Corporation
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PoC	Point of Connection
PPA	Power Purchase Agreement

Abbreviation	Expansion
P:SI	Project for System Improvement
P:IE	Project for Intensive Electrification
PWW	Public Water Works
PXIL	Power Exchange India Limited
R&M	Repair and Maintenance
RBI	Reserve Bank of India
RE	Renewable Energy
REC	Renewable Energy Certificates
RECL	Rural Electrification Corporation Ltd.
RGGVY	Rajeev Gandhi Grameen Vidyutikaran Yojana
RGPP	Ratnagiri Gas and Power Pvt. Ltd.
RInfra	Reliance Infrastructure Limited
RLC	Regulatory Liability Charge
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RTC	Round The Clock
RSD	Reserve Shutdown
Rs.	Indian Rupees
SBAR	State Bank Advance Rate
SBI	State Bank of India
SBLC	Stand By Letter of Credit
SCADA	Supervisory Control and Data Acquisition
SD	Security Deposit
SERC	State Electricity Regulatory Commission
SEZ	Special Economic Zone
SLDC	State Load Despatch Centre
SMD	Simultaneous Maximum Demand
SOP	Standards of Performance
SSP	Sardar Sarovar Project
STP	Sewage Treatment Plant
STU	State Transmission Utility
T&D	Transmission and Distribution
TBIA	Thane Belapur Industries Association
TC	Transmission Charge
ToD	Time-of-Day
TOSE	Tax on Sale of Electricity
TPC	The Tata Power Company Ltd.
TSO	Temporary Supply Others
TSR	Temporary Supply Religious

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Abbreviation	Expansion
TSSIA	Thane Small Scale Industries Association
TSU	Transmission System User
TTSC	Total Transmission System Cost
TVS	Technical Validation Session
UI	Unscheduled Interchange
ULDC	Unified Load Dispatch & Communication
UMPP	Ultra Mega Power Projects
USO	Universal Service Obligation
VIA	Vidharba Industries Association
VRSC	Voluntary Retirement Scheme
V-CoS	Voltage-wise Cost of Supply
Wef	With effect from
WPI	Wholesale Price Index
WRLDC	Western Regional Load Despatch Centre
WRPC	Western Region Power Committee
y-o-y	Year on Year

# **1 BACKGROUND AND SALIENT FEATURES OF ORDER**

## **1.1 Background**

MSEDCL is a Company formed under Government of Maharashtra (GoM) Resolution No. ELA – 1003/P.K.8588/Bhag-2/Urja-5 dated 24 January, 2005 from 6 June, 2005 according to the provisions of Part XIII of the EA, 2003. The provisional Transfer Scheme was notified under Section 131(5) (g) of the EA, 2003 on 6 June, 2005, which resulted in the creation of the following four successor Companies from out of the erstwhile Maharashtra State Electricity Board (MSEB), namely,

- a) MSEB Holding Co. Ltd.;
- b) Maharashtra State Power Generation Co. Ltd. (MSPGCL);
- c) Maharashtra State Electricity Transmission Co. Ltd. (MSETCL); and
- d) Maharashtra State Electricity Distribution Co. Ltd.

*MYT Order (Case No. 121 of 2014):* MSEDCL filed its Petition for MYT approval for the 2nd Control Period FY 2013-14 to FY 2015-16, on which the Commission passed its Order dated 26 June, 2015 in accordance with the MYT Regulations, 2011.

*Multi Year Tariff Regulations, 2015:* On 8 December, 2015, the Commission notified the MYT Regulations, 2015. These are applicable for determination of Tariff from 1 April, 2016 up to 31 March, 2020.

MSEDCL submitted its original Petition for approval of final true-up of ARR for FY 2014-15, provisional true-up of ARR for FY 2015-16 and approval of MYT for the 3rd Control Period on 4 March, 2016.

On 10 March, 2016, the Commission raised preliminary data gaps and sought certain information.

The Commission held a Technical Validation Session (TVS) on 21 March, 2016, to which the authorised Institutional Consumer Representatives (CRs) were also invited. The list of persons who attended the TVS is at Appendix-1.

In addition to the data gaps raised by the Commission, various issues were raised by the CRs, which were partly replied to by MSEDCL prior to the TVS. During the TVS, the Commission directed MSEDCL to submit replies to the data gaps it had highlighted and to various other points raised by the CRs within two weeks.

The Commission held a second TVS on 29 April, 2016 in the presence of the authorised Institutional CRs. The list of persons who attended the TVS is at Appendix-2.

Following the TVS, the Commission directed MSEDCL to address the further data gaps and other concerns raised. MSEDCL submitted its replies on 6<sup>th</sup> and 10<sup>th</sup> May, 2016.

## 1.2 Admission of the Petition, and Regulatory Process

On 7 June, 2016, MSEDCL submitted its revised Petition with the following prayers:

- “1) To admit the MYT Petition as per the provisions of the MERC (MYT) Regulations, 2015 and present Petition may please be considered for further proceedings before Hon'ble Commission;*
- 2) To condone the delay in filing the Present Petition*
- 3) To approve the total recovery of Aggregate Revenue Requirement and Revenue Gap for FY 2014-15 to FY 2019-20 along with other claims as proposed by MSEDCL;*
- 4) To allow to recover the additional charges in case of any variation in the cost of the Central Government Power Station as approved by CERC in line with the CERC (Terms & Conditions of Tariff) Regulations, 2014;*
- 5) To approve mechanism for recovery of computed Revenue Gap and Tariff Schedule considering the Tariff Design principles and other suggestions proposed by MSEDCL;*
- 6) To approve the separate category of HT Agriculture Others and LT Ports along with the tariffs proposed by MSEDCL;*
- 7) To approve the classification for 0-20 kW in LT Non Residential as proposed;*
- 8) To provide tariffs for individual categories as proposed by MSEDCL;*
- 9) To approve cross-subsidy surcharge and all such other charges including Wheeling Charges and Losses for Open Access consumers as proposed for FY 2016-17 to FY 2019-20.*
- 10) To approve the Additional Surcharge for Open Access consumers as proposed for FY 2016-17 to FY 2019-20.*
- 11) To approve the suggested categorization for different type of activities as proposed by MSEDCL in applicability of tariff;*
- 12) To allow MSEDCL to file a separate Petition seeking revision in present Schedule of Charges as and when need arises;*
- 13) To grant any other relief as the Hon'ble Commission may consider appropriate;*
- 14) To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;*
- 15) To condone any error/omission and to give opportunity to rectify the same;*
- 16) To permit MSEDCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time;”*

The Commission admitted the revised MYT Petition on 10 June, 2016. As required under Section 64 of the EA, 2003, MSEDCL issued Public Notices in three English (Indian Express, Hindustan Times and Times of India) and two Marathi (Lokmat and Puniyanagari) daily newspapers on 15 June, 2016 inviting suggestions and objections

on its Petition. The Petition and Executive Summary (in English and Marathi) were made available for inspection or purchase at MSEDCL's offices. The Petition was also available on MSEDCL's website ([www.mahadiscom.in](http://www.mahadiscom.in)) free of cost in downloadable format. The Executive Summary of the Petition and the Public Notice were also made available on the websites of the Commission ([www.mercindia.org.in](http://www.mercindia.org.in)) / ([www.merc.gov.in](http://www.merc.gov.in)) in downloadable format.

The Commission held Public Hearings at Amravati, Nagpur, Aurangabad, Nashik, Pune and Navi Mumbai from 11July to 28July, 2016 as per the schedule set out in the Table below, at which several Public Representatives, Consumer Representatives, other stake-holders and members of the public were heard. The Commission also received several written suggestions and objections. The list of persons who submitted written suggestions and objections and / or attended the Public Hearings is at Appendix- 3.

**Table 1-1: Schedule of Public Hearings**

Sr.No.	Venue	Date
1	Amravati - Hall No.1, Divisional Commissioner's Office Camp, Amravati	Monday, 11July, 2016
2	Nagpur - Vanamati Hall, V.I.P. Road, Dharampeth, Nagpur	Wednesday, 13July, 2016
3	Aurangabad - Meeting Hall, Office of the Divisional Commissioner, Aurangabad	Monday, 18July, 2016
4	Pune - Council Hall, Office of the Divisional Commissioner, Pune	Wednesday, 20July, 2016
5	Nashik - Niyojan Bhavan, Collector's Office Campus, Old Agra Road, Nashik	Monday, 25July, 2016
6	Navi Mumbai - Agri Koli Sanskriti Bhavan, Palm Beach Road, Sector 24, Nerul, Navi Mumbai	Thursday, 28July, 2016

The Commission has ensured that the due process contemplated under law was followed at every stage to ensure transparency and public participation. Adequate opportunity was given to all to present their responses. Various suggestions and objections raised on the Petition, both orally at the Public Hearings and in writing, along with MSEDCL's responses and the Commission's Rulings have been summarised in Section 2 of this Order.



### **1.3 Organisation of Order**

This Order includes the following Sections:

**Section 1** provides a brief background of the process undertaken by the Commission;

**Section 2** summarises the written and oral suggestions and objections raised. These are followed by the responses of MSEDCL and the Rulings of the Commission;

**Section 3** deals with the final true-up of ARR for FY 2014-15.

**Section 4** deals with the provisional true-up of ARR for FY 2015-16.

**Section 5** deals with the MYT for the 3rd Control Period.

**Section 6** discusses certain amounts claimed by MSEDCL on account of impact of Review Order, other Orders passed by the Commission, and computation of the impact of carrying and holding costs and their effect on the net Revenue Gap;

**Section 7** discusses the compliance of previous directives issued to MSEDCL, and further directives issued in this Order; and

**Section 8** sets out the Commission's Tariff Philosophy and the category-wise tariffs applicable for the 3rd Control Period, including determination of Wheeling Charges and Cross-Subsidy Surcharge, followed by the Schedule of revenue at the revised tariffs at Annexure I to IV, and the approved Tariff Schedule at Annexure V to VIII.

## **2 SUGGESTIONS/OBJECTIONS, MSEDCL'S RESPONSE AND COMMISSION'S RULINGS**

### **2.1 Delay in Filing of Tariff Petition**

#### ***Objections/Suggestions***

Chamber of Marathwada Industries and Agriculture (CMIA), Videocon Industries Ltd, Piaggio Vehicles Ltd., Mahindra Sanyo and several others stated that, since there has been a delay in filing of the Petition against the time stipulated by the Commission, the gap due to revision of tariff after 1 April should be to MSEDCL's account and not be borne by consumers.

CMIA, Balaji Electro Smelters Ltd. and Vidyut Urja Equipments Pvt. Ltd. stated that MSEDCL has been delaying the submission of its Petitions and demanding carrying cost on account of this delay. The carrying cost on the delayed filing of Petitions should not be provided to MSEDCL. While true-up, if there is any surplus in any year, the Commission may direct payment of holding cost to consumers by deducting it from the ARR. Mahindra Sanyo Special Steels. Pvt. Ltd. (MSSSPL) and Alloy Steel Producers' Association of India (ASPAI) also stated that, as per the principle settled by the Appellate Tribunal for Electricity (ATE), the Commission should disallow the carrying cost arising from the delay in filing of the present Petition.

#### ***MSEDCL's Reply***

MSEDCL has filed its MYT Petition only a few after the deadline set by the Commission. In its Petition, it has explained the reasons and sought condonation for the delay, and the Commission has admitted the Petition.

Carrying cost should be allowed on costs whose recovery has been deferred. The principles for carrying cost have been laid down by the ATE in its Judgment dated 8 April, 2015 in Appeal No. 160 of 2012. Accordingly, MSEDCL has claimed carrying cost on the Revenue Gap of FY 2014-15 and FY 2015-16, i.e., only till 31 March, 2016.

Further to reduce the burden on consumers, MSEDCL has at present not claimed carrying cost for the unrecovered Gap. However, considering the final financial implications when audited figures become available for the respective years, the carrying cost on the Gap as determined in the true-up process during the Mid-Term Review (MTR) will be reviewed.

#### ***Commission's Ruling***

Regulation 5.1(a) of the MYT Regulations, 2015 required filing of MYT Petitions for the 3rd Control Period by 15 January, 2016. However, considering difficulties raised by various Utilities, the Commission vide Order dated 15 January, 2016 had extended the time up to 15 February, 2016, including for MSEDCL.

Vide letter dated 11 February, 2016, MSEDCL sought further time, but the Commission rejected any further extension. Thereafter, on 3 March, 2016, MSEDCL filed its original MYT Petition, including a prayer for condonation of the delay in filing the Petition. The first TVS was held on 21 March, 2016. Thereafter, a second TVS was held on 29 April, 2016 in which MSEDCL was directed to submit pending replies to datagaps within a week, and to file its revised Petition incorporating its replies to the data gaps and the issues raised during the TVS. However, MSEDCL submitted its revised Petition only on 7 June, 2016 which was admitted by the Commission on 10 June, 2016 for further regulatory process.

As regards the cost implication of the delay, the Commission has analysed each head of expenses and revenue submitted by MSEDCL, and has determined the revenue requirement to be passed on to consumers in this Order. While doing so, carrying cost / holding cost has been allowed only as per the principles laid down by ATE. The cost implication on account of the delay in filing the final MYT Petition can be ascertained only at the true-up stage. Therefore, the Commission shall consider this issue at the time of the Mid-Term Review (MTR). The Commission's approach towards carrying cost/holding cost has been elaborated in Chapter 6 of this Order.

## **2.2 Sales Projections**

### ***Objections/Suggestions***

Balaji Electro Smelters Ltd., CMIA and several others stated that unrealistic sales estimates have resulted in MSEDCL entering into long-term Power Purchase Agreements (PPAs) for more than its requirements, due to which it is paying an unduly large amount of Capacity Charges to some Generating Stations.

Shri. V.V. Joshi of Tata Motors stated that MSEDCL has incorrectly related the reduction in the High-Tension (HT) Industrial category sales as due to Open Access (OA), and suggested that MSEDCL's incorrect projections have resulted in a gap of 203 MU between the actual and projected sales for FY 2014-15. In fact, HT Industrial category sales in FY 2014-15 were higher by 4.83% over FY 2013-14, which suggests that OA has not had any negative impact on the HT Industrial category sales.

Shri. P. P. Karhade, for Urja Prabhodan Kendra, stated that, in spite of the decline in revenue from sale of power in FY 2015-16 over FY 2014-15, MSEDCL has projected a sustained growth of around 6.3% per year in revenue from sale of power in the 3rd Control Period, which seems to be based on incorrect assumptions.

Prayas (Energy Group) ('Prayas'), an authorised CR, stated that likely migration on account of the Solar Roof-top Net Metering dispensation has not been taken into consideration by MSEDCL.

Shri. Suhas Khandekar sought clarification for the significant reduction in sale to Railways from FY 2016-17 onwards.

Vidyut Urja Equipments stated that Distribution Loss should not be applied to the sales of Distribution Franchisees while computing the Energy Balance, as the Distribution Franchisee area starts from 33 kilovolt (kV) and above and ‘Distribution Loss after energy at distribution periphery’ has to be borne by the Franchisee. Balaji Electro Smelters Ltd. and others also stated that Distribution Franchisees (DFs) are liable to bear the Distribution Loss in their area. Adding Distribution Losses in the Energy Balance even after discounting the Average Billing Rate (ABR) to Franchisee is not permissible and incorrect.

Tata Motors stated that there is a difference in the Franchisee sales data mentioned in the Petition and in the regulatory format for the 3rd Control Period, resulting in a sales gap of 1,000 MU every year due to incorrect data in the Petition.

### ***MSEDCL’s Reply***

Based on past experience, the historical trend method has proved to be reasonably accurate and is well-accepted for estimating the load, number of consumers and energy consumption. Hence, MSEDCL has estimated energy consumption for various customer categories primarily based on the CAGR trend of past years. Wherever it is observed that the trend is unreasonable or unsustainable, or considering the impact of OA on industrial consumption, the growth factors have been corrected to arrive at more realistic projections. However, due to uncontrollable events, the actual sales are not in line with the projected sales.

From November 2015, being a deemed Distribution Licensee, Railways stopped procuring power from MSEDCL, which resulted in the reduction of sale to that category. However, some of the consumers under Railway Traction are still with MSEDCL and, accordingly, considering the sales of March, 2016, MSEDCL has projected the sales of Railways for the 3rd Control Period at the same level.

Since the DF is an agent of MSEDCL, it has to consider the Loss within the Franchisee area for Energy Balance. MSEDCL calculates Distribution Loss based on the metered input energy and sales irrespective of the voltage level for all its consumers. Hence, the Loss of every EHV consumer forms an integral part of MSEDCL’s Distribution Loss.

### ***Commission’s Ruling***

The Commission has noted the objections as well as MSEDCL’s reply on the methodology and assumptions for the consumer category-wise projection of sales and estimation of OA sales over the 3rd Control Period. The Commission has undertaken a detailed analysis of MSEDCL’s growth in category-wise consumers, Connected Load and sales projections. The Commission’s analysis on the category-wise sales growth rate is set out in Chapter 5.

## **2.3 Agriculture Sales Estimation, Distribution Loss and Agricultural Metering**

### ***Objections/Suggestions***

Shri. Pratap Hogade of Maharashtra Veej Grahak Sanghatana (MVGS) stated that MSEDCL had abnormally increased the sales in the Agricultural pumpsets category in FY 2013-14 and FY 2014-15 in order to manipulate and hide the real Distribution Losses, i.e., theft and corruption. As per the data (of 4,021 Feeders) given by MSEDCL itself, at least half the Circles and 83% of the Feeders are showing negative losses. Hence, agricultural consumption and losses must be reassessed by the Commission, as was done in October, 2006. He also suggested that agriculture consumption above the threshold norm of 1,318 Hrs/HP/annum should be disallowed.

Balaji Electro Smelters Ltd. and others referred to the data/information obtained by MVGS on agriculture Feeder consumption from MSEDCL under Right to Information, and stated that they have carried out an analysis of the data. For FY 2013-14 and FY 2014-15, there is a difference between the energy consumption as per the data obtained under RTI and that presented in the present Petition. Referring to the data of Feeders showing a negative loss, they contended that MSEDCL has abnormally increased the reported sales on these Feeders to hide their commercial Distribution Loss. The data, not only for 4,020 Feeders but also for the remaining Feeders, have several irregularities. They urged that this be controlled and erroneous reporting be eliminated quickly. The Agriculture sales of 8,121 MU and 10,293 MU for FY 2013-14 and FY 2014-15, respectively, may not be approved, and a similar approach followed for FY 2015-16 and for the 3rd Control Period.

Balaji Electro Smelters Ltd. added that there are irregularities with respect to agriculture sales on the remaining 13,111 Feeders. A third-party audit may also be conducted on all the Feeders immediately, in line with the study being carried out with the help of IIT with regard to Agriculture Feeders. In the past, the Commission had already allowed increased levels of losses twice over and above the base approved losses of 26.87%. Allowing a further increased level of Distribution Loss again would amount to encouragement of theft, and cannot be allowed under any provision of the EA, 2003, or the Rules and Regulations. The Commission may determine the Distribution Loss trajectory without increasing the level already allowed, and gains and losses on account of additional targeted Distribution Losses have to be shared in accordance with the Tariff Regulations.

Vidharbha Industries Association (VIA), an authorised Institutional TCR, stated that, on the one hand, MSEDCL has submitted a metering plan for 16,01,847 agriculture consumers so as to complete metering of all agricultural consumers by 31 March, 2018. On the other hand, it has proposed an AG-unmetered tariff for FY 2018-19 with projected sales of 10,581 MU and for FY 2019-20 with projected sales of 10,107 MU, which indicates that conversion to metering of only about 15% of the un-metered AG

consumers is envisaged till March, 2018. MSEDCL needs to show its commitment to improve its Agriculture Supply Business model. For metering of agriculture consumers, a two phase approach is suggested. In Phase I, all DTCs in each Circle should be metered and farmers should be billed on a proportionate basis, which can be termed as a Group Metering scheme. In such Group Metering, metered farmers would not allow connection in any unauthorized manner by other farmers, and this would also address the difficult task of visiting all the geographically scattered farms for taking readings. In the present scenario, the readings of metered consumers are fake. In Phase II, advanced technology for recording consumption of energy needs to be deployed, or else spending large amounts on consumer-wise metering for Agriculture consumers will not give the desired results.

VIA also stated that the Commission in the past had disallowed a certain quantum of power purchase on the grounds of unrealistic Agriculture sales data. If MSEDCL is still not able to rectify the abnormal inputs, then power purchase corresponding to the excess reported agriculture sales should be disallowed. VIA stated further that the tariff for Agriculture un-metered category determined by the Commission is in violation of Section 55 of the EA, 2003, as this provision does not permit a Distribution Licensee to supply power without meters. The Commission also make a provision for off-setting the period of interruptions on account of failure of a transformer for more than 48 hours.

Confederation of Real Estate Developers' Associations of India (CREDAI) - Nagpur Metro stated that, for the second year in row, Maharashtra crop production has been lower because of lower than average rainfall. Agriculture consumption declined in FY 2014-15, and the Economic Survey for FY 2015-16 has projected a 22% drop in food grain production with deficient rain and drought conditions. In this background, the Agriculture sales reported by MSEDCL are a matter of concern as unmetered sales are 27% and 33% higher than the approved sales for FY 2014-15 and FY 2015-16, respectively, and the Commission may initiate an investigation into the matter. CREDAI stated that the Commission also needs to set prudent AT&C loss reduction targets and allow only prudent costs in the ARR.

Shri. Hemant Kapadia, an Individual TCR, stated that in the Aurangabad Urban area, out of 85 Feeders, the Distribution Loss on 46 Feeders is more than 42%, whereas MSEDCL has claimed only 14-15% Distribution Loss. He asked for methodology and action plan for proposed reduction in the Distribution Loss. He questioned the status of the Agriculture Consumption Committee and stated that there is no progress in the work and that, after a lapse of six months, no data has been furnished to the Committee.

MSSSPL, ASPAI, Inox Air Production and others stated that MSEDCL has claimed a Distribution Loss of 14.51% for FY 2015-16, which is higher than the approved level of 13.50%. Hence, while estimating the ARR for FY 2015-16, the Commission should

either disallow the excess power purchase beyond the approved Distribution Loss or should consider the notional revenue from additional sales.

Inox Air Products and others stated that the proposed Distribution Loss reduction of 0.25% per year over the approved Distribution Loss for the 3rd Control Period should not be accepted. Instead, a higher target of 1% reduction should be considered over the approved level of Distribution Loss of each previous year.

Prayas stated that incorrect agriculture sales estimates have resulted in artificial loss reduction. Data and analysis shows that the agriculture sales estimate is flawed and unrealistic. Restatement of agricultural sales and Distribution Loss to realistic levels is a must for meaningful tariff determination. Delaying this further would be a travesty of the public process. Considering the appropriate hours of operation of agricultural pumps would show that Distribution Losses are around 21-23% instead of the claimed level of 16%.

Shri N. D. Patil, representing Maharashtra Rajya Irrigation Federation, observed that in FY 2014-15 and FY 2015-16 several MSPGCL Generating Stations were not operating due to water shortage. However, as per MSEDCL reports, Agricultural pumpsets in these areas have reported operating hours in excess of 1800 hours/HP/annum. HT Agriculture connections, Irrigation Societies, and Agriculture consumers with high Connected Load (10 HP and above) should be supplied only metered power. Concession/ subsidy for these categories should be extended only for metered consumption. The Commission may issue directions to MSEDCL that, no bills should be issued to such categories without proper meter reading.

Thane-Belapur Industries Association (TBIA), an Authorised Institutional TCR, contended that the Agriculture consumption figures are not reliable and should be reduced by at least 25-30%.

Shri. V. V. Joshi of Tata Motors stated that the Distribution Losses are higher than approved by the Commission and there is no concrete plan to reduce them. Moreover, MSEDCL has presented different figures of Distribution Losses.

Shri. Vivek Velankar, Sajag Nagrik Manch stated that the Distribution Loss level should be fixed at 10% for the determination of Tariff. Zones with higher Distribution Losses should be imposed with a 'variable loss surcharge'. MSEDCL employees and officers should be penalised if this loss level is not brought down. Indoworth India Ltd. and several others also suggested that a Division-wise specific surcharge be imposed on Divisions with losses beyond 20% so as to protect consumers in other Divisions having lower losses.

Urja Sahyog, Dr G. H. Barhate, Shri. Vivek Velankar and others stated that the agricultural consumption as reported by MSEDCL seem to be on the higher side, considering the fact that FY 2014-15 and FY 2015-16 were drought years with poor availability of water and reduction in the use of agricultural pumpsets. Shri. Velankar

contended that this was a purposeful jugglery to show that T&D losses are less than actual.

CMIA stated that MSEDCL is not taking action to control Commercial Losses, which has resulted in higher tariffs. The Distribution Losses are as high as 40%, out of which 30% are Commercial Losses. MSEDCL was manipulating agricultural Feeder data, and the Commission may disapprove Agriculture sales of 8,121 MU and 10,293 MU for FY 2013-14 and FY 2014-15, respectively, and adopt a similar approach for FY 2015-16 and the 3rd Control Period.

Maharashtra Industrial Development Corporation (MIDC) Industries Association, Nagpur, Shri. Pramod Khandagale of MVGS and others urged a third-party verification of Agricultural pumpset consumption along with Connected Load and meter reading, stating that the actual Distribution Loss of MSEDCL is around 27% and not as reported by it in the Petition. Stringent measures should be taken to limit the Distribution Loss to 12% level so that MSEDCL's inefficiency is not passed on to industrial and other consumers.

TBIA presented a Feeder-wise analysis in which Feeders with loss of 'more than 50%' consume almost the same energy as those with loss of 'less than 15%'. This shows that there are still a large number of Feeders with high losses and it is essential to target and control their loss level.

Federation of Industries Association, Vidharbha, stated that, given the higher loss level in the State, if the major power-consuming industries are given incentives to establish industries closer to the power generation centres, the T&D losses can be reduced to a great extent, thereby making power cheaper for consumers.

Shri. C.M Deshpande stated that, even one year after the direction given by the Commission to carry out 100% metering by 2018, there seems to be no progress. MSEDCL is neither interested in providing meters nor in taking readings. This is a wilful violation of the Commission's Order. He also stated that unmetered supply to agricultural pumps has caused pumping of water in an uncontrolled manner which has resulted in water scarcity and droughts.

Tata Motors, Urja Prabhodhan Kendra and others stated that MSEDCL has projected conversion of 1 lakh unmetered agricultural consumers to metered connections every year from FY 2016-17 to FY 2019-20. Considering the past trend and in the absence of any concrete plan for reduction in unmetered consumers, MSEDCL's claim is unrealistic and needs revalidation. Urja Prabhodhan Kendra added that, as per these projections, it will take 15 years to convert unmetered into metered connections, which is not acceptable. With such a large number of unmetered connections, the financial condition of MSEDCL is bound to suffer.

Shri. Hemant Kapadia stated that, despite the directives of the Commission, not a single Agriculture unmetered consumer has been converted to a metered connection in the three Zones of Marathwada region.



The Institution of Engineers (India) stated that all the unmetered agriculture connections (pending since 2007) and all DTCs should be provided with meters for proper energy accounting to minimise losses, and suggested that third-party Feeder audits should be mandatory.

Shri. Kailash Khandelwal of Akola Industries Association stated that 100% metering and billing of agriculture consumers should be done, and contended that actual agriculture consumption may be lower than considered at present (based on mathematical calculations).

Inox Air Products and others stated that MSEDCL is dumping the sales under Agriculture consumption to justify imprudent power purchase contracts and to recover higher Operation and Maintenance (O&M) expenses. As per its proposal of converting 1 lakh unmetered consumers to the metered category, MSEDCL has calculated the consumption of unmetered Agriculture consumers and added it to the metered category, thereby inflating the figures of metered sales by 8,084 MU and reducing the unmetered sales by 1,422 MU.

Shri. Avinash Prabhune, an authorised TCR and others stated that no tariff increase should be allowed unless MSEDCL carries out 100% Agriculture metering and DTC/Feeder metering.

Shri. Mahendra Jichkar stated that the Feeder management scheme introduced in the Kamptee (Nagpur) area from May, 2016 has shown great progress in high-loss areas. This activity has to be prioritised in a target loss reduction programme.

Shri. Mahaveer Jain stated that, despite the Commission's direction in Case No. 12 of 2012 not to release new unmetered agriculture connections, thousands of new unmetered connections have been given. At the same time, existing unmetered connections have not been converted into metered as per the Commission's directives. This should not be accepted and strict action should be taken.

### ***MSEDCL's Reply***

#### **Agriculture Sales**

In its MYT Order dated 26 June, 2015 in Case No. 121 of 2014 ('previous MYT Order'), the Commission approved the category-wise sales based on the projections made considering 11 months' actual sales data. However, the Commission did not accept the LT agriculture sales of 27,293 MU reported by MSEDCL in its additional submission for FY 2014-15. Therefore, while approving the sales for FY 2014-15, the Commission worked out the total sales based on the actual sales for 11 months for all the categories except agriculture. For agriculture sales, the Commission considered the projections of MSEDCL.

The LT input has increased by 13.95% in FY 2014-15 as compared to 2.52% in FY 2013-14, whereas total agriculture sale has increased by 23.34% in FY 2014-15 as

compared to 3.80% in FY 2013-14. This prima facie corroborates the increase in agriculture sales.

There has been an increase in LT Agriculture sales, which is in line with the increase in LT input. Thus, there has not been any unreasonable increase in LT Agriculture sales.

### **Distribution Loss**

Energy losses occur in the process of distribution of electricity to consumers due to Technical and Commercial Losses. The Technical Losses are due to energy dissipated in the conductors and equipment used for transmission, transformation, sub-transmission and distribution of power. These Technical Losses are inherent in a system and can be reduced only to an optimum level. They can be further segregated depending upon the stage of power transformation and transmission system as Transmission Losses (400 kV/220 kV/132 kV/66 kV), sub-Transmission Losses (33 kV /11 kV) and Distribution Losses (11kV and below). The Commercial Losses are caused by theft, pilferage, defective meters, and errors in meter reading. The major reasons for Technical Losses are large-scale rural electrification through long 11 kV and LT lines, many stages of transformation, poor quality of equipment used in agricultural pumping in rural areas, and coolers, air-conditioners and industrial loads in urban areas.

It is worthwhile to look at the statistics of the main infrastructure being maintained by MSEDCL across Maharashtra:

**Table 2-1: MSEDCL Infrastructure across Maharashtra, as submitted by MSEDCL**

<b>Particulars</b>	<b>31 March 2015</b>	<b>31 March 2016</b>
No. of Sub-Stations	2,925	3,052
No. of Power Transformers	4,805	5,058
Capacity of Power Transformers (in MVA)	26,876	28,570
No. of Distribution Transformers	5,23,583	5,48,988
Capacity of Distribution Transformers (in MVA)	49,029	52,503
LT Line Length (ckt-km)	6,07,657	6,28,592
11 kV Line Length(ckt-km)	2,70,095	2,78,096
22 kV Line Length(ckt-km)	31,925	32,270
33 kV Line Length (ckt-km)	40,112	41,260

Moreover, MSEDCL is serving the largest geographical area as compared to any State Electricity Distribution Company in India. Due to its large geographical spread, the length of LT lines is also significantly larger. These LT lines contribute significantly to Technical Loss. The LT network is also vulnerable to Commercial Losses. Due to the far-flung rural nature of agriculture consumers across the State, non-availability of

quality agencies for meter reading and tendency of consumers not to keep metering installations in order makes proper meter reading very difficult.

MSEDCL is making rigorous efforts in various areas including metering and billing and is conscious that reduction in Distribution Losses will enable reduction in costs and increase revenue, which will benefit the power sector in Maharashtra. The Distribution Loss during FY 2009-10 to FY 2015-16 is tabulated below:

**Table 2-2: Distribution Lossin FY 2009-10 to FY 2015-16, as submitted by MSEDCL**

FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (Provisional)
20.60%	17.28%	16.03%	14.67%	14%	14.17%	14.51%

In FY 2014-15, the actual Distribution Losses were 14.17% as against the approved level of 13.75%.

MSEDCL endeavours to reduce Distribution Losses to the lowest possible level. It has achieved a significant reduction in Distribution Losses in recent years from FY 2005-06. These efforts shall continue and be increased. However, loss reduction is a slow process and becomes increasingly difficult as the loss levels come down. The reduction in HT sales and increase in LT sales has also impacted the Distribution Losses.

A Committee of experts has been constituted to look into the actual as against the billed Agriculture load and Agriculture consumption. The Indian Institute of Technology (IIT), Mumbai has been appointed to assist the Committee for carrying out the study. Based on the report of the Expert Committee and directives from the Commission, appropriate action would be taken.

### **Agricultural Metering**

MSEDCL has submitted a detailed plan for metering of unmetered Agriculture consumers. However, it had not received approval from the Commission till the time of submission of the present Petition. However, considering a realistic view, MSEDCL proposed to convert 1,00,000 consumers per year to the metered category. Considering an average load of 4 HP and unmetered index of 1,185, MSEDCL has calculated the consumption of these unmetered consumers and that is added to the metered category. MSEDCL has considered 0% growth for the remaining unmetered consumption.

MSEDCL is releasing all new connections only with meters.

### **Commission's Ruling**

#### **Agriculture Sales**

Several objections have been raised regarding the estimation of agriculture sales by MSEDCL. Various anomalies in agriculture sales estimation and the extent to which

agriculture consumption is overstated have been cited, including in terms of the number of hours of operation of agricultural pumps (showing higher hours of operation in water-scarce areas).

The total sales submitted in the Petition and the sales as per the Audited Accounts for FY 2014-15 match. In order to verify the Agriculture sales submitted by MSEDCL, the Commission analysed the Circle-wise metered and unmetered data submitted by MSEDCL of the number of Agriculture consumers, Connected Load, assessment of Agriculture Index, Feeder-level energy input and Agriculture sales for FY 2014-15. The analysis of the Commission has been set out in Sections 3.1 of this Order.

### **Distribution Loss**

The computation of actual Distribution Loss in FY 2014-15, the computation of efficiency loss on this account, and the sharing of this efficiency loss between MSEDCL and consumers have been elaborated in Sections 3.4 and 3.30. The Commission has restated the loss level for FY 2014-15 considering the revision in Agriculture sales for that period. The loss has been restated to 16.36% against 14.17% claimed by MSEDCL. As per the MYT Regulations, 2011, one-third of the efficiency loss on account of non-achievement of the Distribution Loss target is passed on to consumers, while the remaining two-thirds has to be borne by MSEDCL, as elaborated in the Sections cited above.

For FY 2015-16, the Commission has computed a Distribution Loss of 18.24% based on the revised sales, mainly on account of re-assessment of Agriculture sales as approved for the year. Further, the impact of sharing of losses on account of non-achievement of Distribution Loss target has been considered on provisional basis. The Commission's detailed analysis and rulings on the issue of Distribution Loss to be considered for FY 2015-16 are elaborated in Sections 4.3 of this Order.

For the 3rd Control Period, the Commission has decided to set a trajectory for reduction of Distribution Loss considering the restated Distribution Losses of FY 2015-16 as the base. As stated in Section 5.4, annual reduction of 1.5% in MSEDCL's Distribution Losses has been targeted over the 3rd Control Period. Further, the opening Distribution Loss level and further trajectory for the 3rd Control Period has been stipulated on a revised basis as the Distribution Loss excluding EHV sales, for the reasons explained in Section 5.4.

### **Agricultural Metering**

It is the responsibility of MSEDCL as a Licensee to meter all consumers as per Section 55 of the EA, 2003. Some years ago, in its Order dated 13 October, 2006 in Case No. 13 of 2006, the Commission had rejected MSEDCL's prayer for extending the statutory time limit (two years from the notification of the EA, 2003) to five years for installing correct meters for agricultural consumers.

In the previous MYT Order dated 26 June, 2015, the Commission directed MSEDCL to complete metering of unmetered Ag consumers within 3 years. Accordingly, MSEDCL had submitted a Detailed Project Report (DPR) for a Metering Programme for in-principle approval of the Commission. The Commission observed that MSEDCL has included in the scheme the cost towards Capacitors as a part of the overall cost estimates, which is actually a cost to be borne by the individual consumers and not by MSEDCL for passing on to all other consumers through the ARR and tariff. The DPR was referred back to MSEDCL for revision and resubmission. However, MSEDCL has not submitted any revised DPR for in-principle approval till now. Notwithstanding this, in order to expedite implementation of the scheme without any further delay, capitalisation for the scheme has been allowed provisionally over the 3rd Control Period.

Until the above metering plan is fully implemented, the supply to un-metered agriculture consumers would continue and cannot be allowed without any tariff. Thus, the flat rate tariff structure (Rs/HP/month) for such un-metered Agriculture consumers will have to continue for the time being. The Commission has determined the tariff accordingly in Chapter 8 of this Order.

However, in order to promote metering, the Commission has further increased the difference between the Average Billing Rate (ABR) of un-metered and metered Agriculture connections. Further, a new sub-category of consumers with Connected Load of above 7.5 HP has been created under the un-metered Ag category with a higher tariff. Such tariff differential may encourage un-metered consumers to opt for metered supply.

The Commission directs MSEDCL to provide meters for all un-metered LT Agriculture pumpsets with Connected Load above 7.5 HP within one year from this Order, out of the total target set in this Order for conversion of un-metered to metered connections. The number of such consumers being relatively small (around 74,000), it should not be difficult to procure appropriate meters of good quality in a short period. Failure to implement this direction within the stipulated period may compel the Commission not to consider the input energy required for such consumers. The Commission expects MSEDCL to demonstrate its seriousness by prioritising this while moving towards metering of all un-metered Agriculture consumers. The Commission notes that MSEDCL has not even at its own submitted any information for the steps taken by it such as purchase plan, supply of meters by vendors, then prioritising plan for fixing these meters to all unmetered Agriculture Consumers post issue of directions through Commission's previous Order in Case No. 121 of 2014 dated 26 June 2015.

As per the previous MYT Order, metering of un-metered Ag consumers is to be completed by FY 2017-18. However, MSEDCL has not demonstrated its seriousness in this regard and delayed the process by including Capacitors in the DPR for Agriculture metering. Nearly two years have lapsed without any substantive action by

MSEDCL. Metering of 16 lakh un-metered Agriculture consumers in the remaining period of 1 year, as envisaged in the previous MYT Order, would hardly be possible. In these circumstances, the Commission has no other option but to revise the target for metering of un-metered Agriculture consumer to a more realistic level. Accordingly, the Commission directs MSEDCL to complete metering of all un-metered Agriculture consumers by the end of the 3<sup>rd</sup> Control Period, i.e. by March, 2020.

## **2.4 Power Purchase**

### ***Objections/Suggestions***

#### **a) Power Procurement and Planning**

Balaji Electro Smelters Ltd., CMIA, and others stated that, given the high per unit power purchase cost of MSPGCL's Chandrapur Unit 3 and 4, they should be discarded with no obligation to pay Fixed Charges. Balaji Electro Smelters Ltd. referred to MSEDCL's proposal of power purchase from new Generating Stations/Units of MSPGCL, and stated that the power purchase cost of these new Stations is high, with an average rate of Rs. 5.56/kwh.

Balaji Electro Smelters Ltd. further stated that, for FY 2016-17, if MSEDCL procures power under Merit Order Dispatch (MOD) principles by not procuring power from the new Generation Units of MSPGCL and procures power from existing Stations to for which MSEDCL is liable to pay Capacity Charges, the average power purchase cost can be around Rs. 3.57/kWh. The Commission may not allow MSEDCL to enter into any new long-term PPA, including with upcoming Generating Stations of MSPGCL, direct MSEDCL to procure the additional power required from those Stations to whom MSEDCL has to pay Capacity Charges, and to make efforts to procure cheaper power from Power Exchanges by efficiently managing power purchases. MSEDCL also has to procure cheaper power from short-term sources. If any Generator agrees to supply cheaper power, MSEDCL should enter into a PPA of three instead of seven years.

VIA questioned why, if the average power purchase cost (APPC) which comprises 80% of the ARR is increasing by only 10%, the tariff increase proposed is more than 22%. There is a need to re-examine the existing PPAs, and the terms should be renegotiated by allowing the Generators to sell their power to third parties, thereby reducing the Capacity Charges proportionately. Generating Plants whose Tariff is not decided through competitive bidding and whose effective tariff is above Rs. 5/kWh should be asked to resort to economic shutdown and only their employee and maintenance cost should be considered for the ARR.

CREDAI asked that the power purchase cost be rationalised by progressively reducing the share of MSPGCL and scrapping the PPA with the Rattan India. An audit by the Comptroller and Auditor General (CAG) should be sought of the power purchase for the last 10 years.

VIA and others stated that short-term power purchase in case of shortfalls, including purchase from the day-ahead market, should be explored.

Mahratta Chamber of Commerce, Industries & Agriculture (MCCIA), Pune, MVGS, Akot MIDC Industries Association, Shri Hemant Kapadia and several others stated that MOD principles should be mandatorily followed while arriving at the ARR. MCCIA added that MSEDCL should procure available cheap power to cater to its requirements rather than costly power so as to reduce its purchase cost and thereby give relief to consumers.

MIDC Industries Association, Nagpur, MVGS and others stated that the power purchase rate from MSPGCL is around 1 Rupee higher than that of private Generators. The Commission should take stringent measures to improve the efficiency of MSPGCL Units such that they achieve an average Plant Load Factor (PLF) of 80%, thereby resulting in reduction of its power purchase rate.

Shri. Avinash Prabhune, an authorised CR stated that the cost of power purchase from MSPGCL is higher than the average cost from other sources. This will have a major impact on the overall power purchase cost of MSEDCL as 40% of the power is procured from MSPGCL. Power purchases at rates higher than the average purchase cost must be disallowed and there should be strict implementation of MOD.

Dr.G.H. Barhate, authorised CR, and others stated that, due to lower PLF of MSPGCL's Generating Stations, their cost of generation is higher as compared to private and Central Sector Generators. MSEDCL is incurring a heavy cost on power purchase by procuring power from MSPGCL.

Shri. Pratap Hogade of MVGS stated that power purchase cost from MSPGCL is more than Rs. 4 per unit while ample power is available in the market at a lower rate of Rs. 3.5 per unit. The power purchase cost should be brought down to the minimum and MOD principles should be strictly observed.

Shri. P.P.Karhade of Urja Prabhodan Kendra stated that MSEDCL is buying power from MSPGCL even though the generation cost of MSPGCL is very high as compared to others. MSEDCL should revisit its power procurement from such expensive vendors and be selective in procuring power only from Units with lower generation cost. Higher power purchase cost is the main reason for higher Tariff.

Videocon Industries, Piaggio Vehicles and others objected to the proposed purchases from tied-up power which is increasing average procurement price to more than Rs.4.00/unit. They suggested that MSEDCL procure power from inter-State Generators on MOD basis, which might save at least Re. 1/unit. The Commission may provide guidelines for MOD.

Dr. Ashok Pendse of TBIA argued that there is no provision either in the Commission's Availability-Based Tariff (ABT) Order of 2007 or in the PPAs which state that every Station or Unit in the State must run at its technical minimum, and

MSEDCL's claim running on technical minimum is required is not supported even by their actions in the past. MSEDCL should look at other sources such as the Power Exchanges, short-term power purchase, Traders, Captive Power Plants (CPPs), etc., instead of buying expensive power from MSPGCL. The power purchase should be strictly as per the MODas defined by the Commission. Any deviation should be disallowed from the power purchase. As per MSEDCL's submission, 24% of the fixed costs for FY 2016-17 will be going towards stranded generation capacity. Under such circumstances, MSEDCL has to make an effort to walk out of the contracts, as done by Utilities in other State such as Delhi.

Inox Air Products, Alloy Steel Producers' Association India (ASPAI) and several others stated that it seems like NTPC is not billing MSEDCL strictly as per the Tariff norms approved by CERC in Tariff Regulations, 2014 as various discrepancies have been observed in the NTPC billing. The Commission should direct MSEDCL to undertake strict scrutiny of NTPC billing of the Variable Charge and ensure that NTPC billing is strictly as per CERC Tariff Regulations. Inox Air Products, ASPAI further stated that the variable cost projection of NTPC Stations seems to be on a higher side and the Commission should scrutinize the variable cost of NTPC Stations for FY 2016-17 onwards.

MSSSPL and ASPAI stated that power purchase cost of the Central Sector Kawas and Gandhar Gas Plants should be disallowed as the State has surplus power and procuring expensive power from gas-based Generating Station is not prudent. The power purchase from National Thermal Power Corporation (NTPC)'s Mouda Plant should also be disallowed as it does not have a Fuel Supply Agreement (FSA) at the notified price and has a very high variable cost.

Vidyut Urja Equipments Pvt. Ltd. stated that MSEDCL is already paying Capacity Charges on its allocated share. However, it can save Rs. 2,952 crore if, instead of procuring power from MSPGCL's new Stations, it procures power from Generating Stations to whom it has to pay Capacity Charges.

#### **b) Power Purchase from Renewable Energy Sources**

Shri. Kaparathi of Balaji Electro Smelters Ltd. stated that MSEDCL has proposed power procurement from Renewable Energy (RE) sources at a high rate, and should instead procure power from cheaper sources through 'reverse bidding' like NTPC.

Century Enka Pvt. Ltd. and several others stated that the power purchase cost from RE sources is projected to be very high (Rs. 5.77/kWh) for FY 2015-16. The quantum is 7.4% of total quantum projected for FY 2015-16. It should be restricted to the minimum, and MSEDCL should focus on purchase from other sources with lower cost.

Parabhani Jilha Ginning Pressing Association, Parbhani stated that rates for RE power purchase are double the MSPGCL rates. The Commission may to review the Renewable Purchase Obligation (RPO) target of 12%, and set RE tariff rates at par



with other States. MSPGCL should be made to buy more Solar energy, which is available at reasonable rates.

**c) Past Period Power Purchase Reconciliation With MSPGCL**

Balaji Electro Smelters Ltd. stated that MSEDCL had been paying Delayed Payment Charges (DPC) and interest to most of the Generators. This amount should be deducted from the allowed power purchase expense.

MSSSPL and ASPAI stated that the Commission should consider Rs. 17,916 crore towards power purchase from MSPGCL based on the Audited Accounts, as against Rs. 1916 crore claimed by MSEDCL for FY 2014-15. The Commission should disallow the DPC paid to MSPGCL (amounting to Rs. 1,051 crore) and other Generating Stations (including NTPC).

Shri. V.V. Joshi representing Tata Motors stated that comparison of MSPGCL's FY 2014-15 Director's Report and MSEDCL Petition for FY 2014-15 shows that MSEDCL purchased 4,457 MU (9%) less from MSPGCL but paid Rs. 242 crore (1.28%) more. MSEDCL's true-up Petition for FY 2014-15 needs to be corrected for this excess cost of power purchase of Rs. 242 crore. Similarly, the ARR of MSEDCL for FY 2016-17 to FY 2019-20 should be reduced by Rs. 6,372 crore for the projected excess cost of power purchase from MSPGCL.

**d) Surplus Power**

Prayas stated that MSEDCL has no plan to sell surplus power. If surplus power is sold at Rs. 3.50/unit, a significant reduction in revenue requirement is possible. MSEDCL needs to explore ways to earn revenue from sale of surplus power. These options could be (a) sale to the Mumbai Distribution Licensees through medium-term PPAs (b) sale to Licensees and OA consumers outside the State (c) incentivise large consumers to consume more than their previous year's total consumption.

Prayas also suggested that MSEDCL should not sign any new PPA for MSPGCL or NTPC capacity, and should explore ways to surrender stakes in NTPC

Balaji Electro Smelters Ltd., CMIA, and others objected to the sale of surplus power at a lower rate of Rs 2.16/unit, resulting in loss. They contended that MSEDCL rather than consumers should bear this loss.

**e) Cost of meeting Environmental Norms**

Prayas stated that MSEDCL has not accounted for levy of Clean Environment Cess, and compliance of Ministry of Environment, Forests and Climate Change (MoEF) norms as per the Environment (Protection) Amendment Rules, 2015 in the power purchase cost.

Exide Industries Ltd., Asahi India Glass Ltd., and others stated that many Generators may not have the technical and financial viability to meet the MoEF norms of substantially reducing water consumption and gas emissions. The Commission may

scrap certain PPAs which are likely to put an unsustainable burden on consumers for implementing stricter environmental norms.

***MSEDCL's Reply***

**a) Power Procurement and Planning**

As regards power purchase at high cost from MSPGCL, almost the entire power procurement of MSEDCL is done at regulated Tariffs or competitive rates as approved by the Regulatory Authorities (the MERC or CERC). The additional power, if required on round-the-clock (RTC) basis or for a specific period, is purchased through Power Exchanges or through competitive bidding on a transparent E-Tendering basis.

As per the provisions of PPAs, MSEDCL has to pay the fixed costs even if the power from a Generating Station is not scheduled as per the MOD principles. Due to the impact of such fixed costs, the per unit rates of various Generating Stations change significantly. To avoid the burden of such high fixed costs, MSEDCL in coordination with the MSEB Holding Co. Ltd. (MSEBHCL) has decided to optimize the power purchase from MSPGCL as discussed further below.

For cost optimization, MSEDCL has decided to procure power from the most efficient units and to shut down units with higher cost from its power purchase in such a way that no fixed cost obligation arises in case the Plant is shut down. Accordingly, certain generation units of MSPGCL are proposed to be shut down.

For Parli Unit 6 and 7, since the actual PLF is lower than the normative, the Fixed Charges have been reduced on pro-rata basis in line with the MYT Regulations, 2015.

As regards inefficiency and low PLF, MSEDCL purchases power from MSPGCL at the rates approved by the Commission. MSPGCL is a separate corporate entity whose operational parameters for determination of Tariff are as per the approval of the Commission, and MSEDCL does not have any specific comment to offer.

As regards power purchase from Kawas and Gandhar gas based Generating Stations and NTPC Mouda, MSEDCL is receiving power from these Generating Stations as per the share decided by the Ministry of Power.

The power from the Generating Station is scheduled by the Maharashtra State Load Despatch Centre (MSLDC) as per the MOD stack given by MSEDCL. MSEDCL has been procuring power from these Stations based on the MoP allocation and as per the MOD stack within the provisions contained in the PPA.

MOD principles have been adopted based on the rates as approved by the Commission, and inefficient Plants have been backed down.

CERC approves the Tariff for the Central power Stations unit-wise based on the CERC Tariff Regulations, 2014.

**b) Power Purchase Cost from RE sources**

As per the MERC (Renewable Purchase Obligation (RPO), its Compliance and Implementation of REC Framework) Regulations ('RPO Regulations'), 2016, MSEDCL needs to procure electricity generated from RE sources. For the 3rd Control Period, the quantum of purchase required (in %) from RE sources ranges from 11 to 15%. Thus, to comply with the RPO target as stipulated above, the power purchase from NCE cannot be below the stipulated range.

**c) Reconciliation of Power Purchase Cost for FY 2015 From MSPGCL**

MSEDCL had proposed Rs. 19,161 crore as the cost of power purchase from MSPGCL, and not Rs. 1,916 crore as cited by the Objector. As against the estimation of Rs. 19,161 crore, the actual power purchase cost from MSPGCL was Rs. 19,212 crore.

MSEDCL has submitted the reconciliation in the power purchase amount as per the Audited Annual Accounts reported by MSPGCL and MSEDCL for FY 2014-15. As per the reconciliation, the liability towards power purchased from MSPGCL for FY 2014-15 has been correctly accounted by MSEDCL.

**d) Trading of Surplus Power**

Considering the power scenario at various times, the surplus Generators are backed down to the technical minimum.

Due to a drop in demand during night hours, surplus power is available. As generation cannot be reduced below the technical minimum, the surplus power (after backing down) needs to be taken out in order to maintain the stability of the system. The power so traded is at the market rate, which is uncontrollable and depends on the demand-supply situation.

**e) Cost of Meeting Environmental Norms**

MSEDCL has submitted the present Petition as per the MYT Regulations, 2015. The norms specified the Generators are not under the purview of MSEDCL.

***Commission's Ruling***

The Commission has approved the power purchase expenses for FY 2014-15 after prudence check which included reconciliation of cost with MSPGCL Audited Accounts and verification of sample bills for various Generating Stations. The detailed analysis set out in Section 3.5 of this Order.

During the admission process and the public consultation process, it has been contended that MSEDCL had not strictly followed MOD principles while procuring power from various Stations during FY 2015-16. To analyse this further, the Commission had sought clarification from MSEDCL regarding instances in which it had not adhered to MOD principles in FY 2015-16 along with the reasons. The

Commission's observations and views on the power purchase cost and quantum for FY 2015-16 are set out in Section 4.4 of this Order.

As regards projections of procurement from MSPGCL, the Commission has analysed the Station-wise cost of generation of MSPGCL in its MYT Order in Case No. 46 of 2016. In that Order, the Commission has taken the landed prices of fuels based on the actual landed prices for January to March, 2016, after adjusting the coal price for increase in the Clean Environment Cess (earlier known as Clean Energy Cess).

While considering the projected power procurement plan of MSEDCL for the 3<sup>rd</sup> Control Period, the Commission has considered the parameters approved in the MSPGCL MYT Order. The Commission has also taken into consideration the optimal power procurement mix considering the MOD principles for least-cost procurement. For factoring the seasonal and monthly variations in demand and supply, the Commission has analysed the month-wise MOD. Availability from new Generating Stations has been taken considering realistic dates of commissioning. The Commission's views and analysis of MSEDCL's power purchase quantum and costs, including from RE sources, for FY 2016-17 to FY 2019-20 are set out in Chapter 5.6.

As regards surplus energy, the Commission notes that, based on its analysis, a significant quantum of surplus energy of around 25,000 MU in the first year, increasing to around 42,000 MU in the last year, is projected during the 3<sup>rd</sup> Control Period. In view of this expected surplus, MSEDCL should explore possibilities of selling the surplus power through short-term/ medium-term bilateral contracts or through Power Exchanges in an optimal and efficient combination and manner, so that its net power procurement costs are reduced.

## **2.5 Operation and Maintenance Expenses**

### ***Objections/Suggestions***

Balaji Electro Smelters Ltd. pointed out that the proposed O&M expenses are higher than the normative. MSEDCL has to improve its performance to reduce these expenses. Marathwada Development Board stated that the actual expenses always exceed the approved expenses, and asked whether improvement efforts are in the right direction.

CREDAI suggested that telephone and postage related expenses can be reduced by mandatory use of internet, intranet, emails and voice calling on internet, which would also reduce the cost on stationary and printing. Conveyance and travel expenses should be reduced by using audio/video conference calls and sharing details using software like Team Viewer. Instead of a large number of security personnel, deployment of security cameras and control through a centralised monitoring control room should be put in place. Further, electricity consumption may be reduced by using LED bulbs and installing Solar rooftop plants at MSEDCL's buildings and sub-Stations.

Shri Avinash Prabhune stated that O&M expenses are high. Employee expenses are as high as five times the R&M expenses, and large huge expenses should not be allowed. Shri. Gurpreet Singh Bagga, CMIA also stated that MSEDCL's O&M expenses are increasing steeply every year, leading to higher Tariffs. He urged MSEDCL to improve performance and strive to reduce such expenses.

Shri. Hemant Kapadia pointed out that O&M expenses projected in the 3<sup>rd</sup> Control Period ranged from 76 paise per unit to 86 paise per unit, as compared to 73 paise per unit in FY 2015-16. Dr. G. H. Barhate, an authorised CR, also stated that the proposed O&M expenses ranged from 73 paise to 89 paise per unit, as against around 25 to 35 paise per unit in neighbouring States. Given the difference of Rs. 11,537 crore between normative and projected O&M expenses for FY 2016-17 to FY 2019-20, the proposed O&M expenses should not be approved. Shri. Pratap Hogade, MVGS also stated that the projected O&M expenses are very high. Normative expenses are around 55 to 63 paise per unit, and any excess should be disallowed.

Shri. R.B. Agrawal and Advocate Anil Harishchandra Vyas stated that the claim for O&M expenses is misconceived. The major portion of the revenue requirement is being spent on salaries of employees, which should not be the case.

MSSSPL and ASPAI sought clarification regarding the computation of O&M expenses, since the expenses claimed by MSEDCL from FY 2016-17 onwards are not in accordance with the MYT Regulations. Further, wage revision-related expenses and arrears should be allowed only on the basis of actual payment and not provisionally on the basis of payment expected to be made in the future, as has been done for MSLDC and Brihanmumbai Electric Supply and Transport Undertaking (BEST). Gratuity and earned Leave Encashment has been claimed on actuarial valuation. However, these liabilities are unfunded, which amounts to serious regulatory fraud.

Prayas stated that the estimation of O&M expenses for the 3<sup>rd</sup> Control Period is not as per the MYT regulations.

Balaji Electro Smelters Ltd. stated that MSEDCL should digitize all inventory and Fixed Assets and maintain proper records for quantity, quality and value under each head of capital expenditure and others. Accountability should be fixed on the officers for the safe custody of inventory in their areas taking into account adverse comments made by auditors and faults pointed out by auditors on the ERP-SAP of MSEDCL on inventory and Fixed Assets.

### ***MSEDCL's Reply***

O&M expenses are required for day to day operations. The allowed expenses based on the methodology/ procedure in the MYT Regulations, 2015 would lead to much lower projection of O&M expenses for the Control Period due to lower inflation factor/index. Considering the past trends and inflationary indices, an increase of only 2.76% per annum on this basis would lead to under-estimation of expenses which will

be difficult for MSEDCL to sustain. Therefore, MSEDCL has calculated the O&M expenses based on historical trends, salary and wages principles and inflation.

The O&M expenses approved by some other State Commissions for FY 2016-17 are: Madhya Pradesh – 73 paise/unit, Karnataka – 61 paise/unit and Andhra Pradesh – 56 paise/unit. The O&M expenses of MSEDCL are comparable to these States. It has to be noted that MSEDCL is serving to a larger area than any other Distribution Licensee in Country.

MSEDCL has proposed the administrative expenses based on the historical trends and inflation. Its administrative expenses are more or less at par with those of other leading State Distribution Utilities in the country.

As regards inventories and materials purchased, MSEDCL reviews its inventories and takes appropriate action to control them.

There is no regulatory fraud if the Gratuity and Leave Encashment are unfunded. As per Note No. 16 of Notes to Accounts in MSEDCL's Annual Report for FY 2014-15, Gratuity (Unfunded Defined Benefit Plan: Gratuity) is payable to all employees of under the Payment of Gratuity (Amendment) Act, 2010 and MSEDCL Gratuity Regulations, 1960, whichever is more beneficial to the employee. Leave Encashment Benefit (Unfunded Defined Benefit Plan: Leave Encashment) is payable to all employees as per the Company's Employees Service Regulations, 2005. The earned leave and half average pay can be accumulated up to 300 and 360 days respectively.

Gratuity and long-term compensated absences as per actuarial valuations as on 31 March, 2015 are recognized in the financial statements in respect of Employee Benefits Schemes. MSEDCL has not made any investments in planned assets.

The Accounting Standards 15 and the above regulations permit a Defined Benefit Plan which is unfunded. Accordingly, the employee benefits of Gratuity and long-term compensated absences have been accounted, and the claim that it entails a serious regulatory fraud is not valid. The change in the Defined Benefit Obligation during the period is given below:

**Table 2-3: Defined Benefit Obligation, as submitted by MSEDCL (Rs.lakh)**

Particulars	Leave Encashment		Gratuity	
	FY 2014-15	FY 2013-14	FY 2014-15	FY 2013-14
Opening Defined Benefit Obligation	1,21,255	1,49,021	1,87,435	1,58,425
Current Service Cost	10,838	13,601	9,571	7,485
Interest Cost	9,144	12,349	15,258	11,858
Action Plan Participants Contribution	0	0	0	0
Acquisition/Business Combination/Divestiture	0	0	0	0
Benefits Paid	(18,125)	(29,580)	(43,180)	(25,860)

Particulars	Leave Encashment		Gratuity	
	FY 2014-15	FY 2013-14	FY 2014-15	FY 2013-14
Past Service Cost	0	0	0	0
Curtailments/Settlement	0	0	0	0
Actuarial (Gains)/Losses	25,910	37,956	52,885	35,528

As per Para 61 of the Accounting Standards 15, MSEDCL has included the following amounts in the calculation of Profit and Loss (P&L) charge as below:

**Table 2-4: Profit and Loss Charge, as submitted by MSEDCL (in Rs.lakh)**

Particulars	Leave Encashment		Gratuity	
	FY 2014-15	FY 2013-14	FY 2014-15	FY 2013-14
Current Service Cost	13,601	10,838	9,571	7,485
Interest Cost	12,349	9,144	15,258	11,858
Actuarial (Gain)/Loss	37,956	25,910	52,885	35,528
<b>P&amp;L Charge</b>	<b>63,906</b>	<b>45,892</b>	<b>77,713</b>	<b>54,871</b>
<b>Less: Benefits Paid</b>	<b>(29,580)</b>	<b>(18,125)</b>	<b>(43,180)</b>	<b>(25,860)</b>
<b>Balance Income/Expenses</b>	<b>34,326</b>	<b>27,766</b>	<b>34,533</b>	<b>29,010</b>

The P&L charge of Rs. 777.13 crore has been created as per the provisions of Para 61 of Accounting Standards 15. The contention that the provision for Gratuity has been created so as to match the incremental liability of Gratuity based on actuarial valuation is invalid, as evidenced from the calculation in the above Table.

Further, as per the same para of the Standards 15, the effect of any settlements and curtailments is reduced from the P&L charge. Accordingly, Rs. 431.80 crore has been reduced and the net charge to P&L is Rs. 345.33 crore.

### ***Commission's Ruling***

The Commission has taken the O&M expenses for FY 2014-15 and FY 2015-16 for the Distribution Wires and Retail Supply Business separately as per the MYT Regulations, 2011. It has treated O&M expenses as a controllable parameter and accordingly considered the sharing of gains and losses for FY 2014-15 in accordance with the Regulations. The Commission's view and analysis are set out in Chapters 3 and 4 of this Order.

For FY 2015-16 and the 3rd Control Period, although MSEDCL has claimed O&M expenses applying certain inflation rates, it has also submitted the workings of O&M expenses as per the norms in the MYT Regulations.

If the expenses claimed by MSEDCL are allowed, then the purpose of specifying norms, after due regulatory process and consultation would be defeated. Therefore, the Commission has considered the O&M expenses for the 3rd Control Period as per

the MYT Regulations, 2015. The O&M expenses allowed over this Period have been detailed in Chapter 5 of this Order.

The Commission has noted MSEDCL's submission regarding provisioning and treatment of Gratuity and Leave Encashment benefits in line with the Accounting Standards.

## **2.6 Capital Expenditure and Capitalisation**

### ***Objections/Suggestions***

MIDC Industries Association, Amravati, MVGS, Buldhana, Forstar Frozen Foods Pvt. Ltd., and several others stated that the capital expenditure of MSEDCL is around 1.5 times or more than that of private Utilities. It should be controlled and brought within limits. Shri. Suhas Khandekar and others suggested that the Commission should compare this across Utilities and require data and explanations from MSEDCL.

Shri. Gurpreet Singh Bagga, CMIA pointed out that MSEDCL has already spent more than Rs 50,000 crore on capital expenditure since FY 2007-08, and no other Distribution Company has spent even 25% of this amount during this period. Increasing capital expenditure results in increase of interest on term loans, thus resulting in steep increase in Tariff.

Shri. Avinash Prabhune and others suggested that MSEDCL should not be permitted to incur any capital expenditure unless a satisfactory CBA is submitted to the Commission, and added that an independent audit of capital expenditure is necessary.

Dr. Ashok Pendse, TBIA, stated that, even after capital expenditure of Rs. 18,000 crore in the last four years, there is no significant improvement. The capital expenditure should be pruned.

Shri. Pratap G Hogade, MVGS stated that MSEDCL has spent more than Rs 40,000 crore in the last 10 to 12 years as capital expenditure, without improvement in supply quality. The capital expenditure of the last 10 years should be physically verified and audited by the Commission or a third party appointed by it.

Vidyut Urja Equipments Pvt Ltd., and Balaji Electro Smelters Ltd. stated that MSEDCL is proposing very large capital expenditure of Rs. 38,945 crores within five years, which is unwarranted if the benefits are not achievable and undesirable, or if it results in an unjustified tariff increase. MSEDCL should be directed to maintain detailed records of inventory and cost-benefit analysis (CBA) of all schemes along with monitoring, review and results from those schemes from time to time.

Prayas highlighted some shortcomings in the Petition, such as the capital expenditure projected being based on unapproved grants.

Shri. N. Ponrathnam (an authorised CR) sought clarification of the purpose of single-phasing schemes under the DeenDayalUpadhyay Gram JyotiYojana (DDUGJY) and



Gaothan Feeder Separation Scheme, when MSEDCL is claiming uninterrupted power supply.

MSSSPL and ASPAI contended that, as per the Audited Accounts, capitalisation of employee expenses and administrative and general (A&G) expenses are on an adhoc basis @15% without ascertaining these expenses, which shows that the capitalisation amount claimed by MSEDCL is not on the real value of assets. Hence, unless MSEDCL provides details of these expenses, capitalisation may be approved excluding these expenses. Further, capitalisation should be approved only after carrying out verification of Fixed Assets. They suggested that the Commission should not reconsider the disallowances of Gross Fixed Assets (GFA) for previous years amounting to Rs. 1,336 crores, unless justification is provided by MSEDCL; and not allow capitalisation for schemes for which MSEDCL has not provided the CBA.

Balaji Electro Smelters Ltd. stated that MSEDCL has accepted time/cost over runs/inefficiencies on the approved capital expenditure but insists on capitalisation of final expenditure every time, which is not in accordance with the MYT Regulations. The Commission should deduct the amount of variation on account of controllable factors of each capital expenditure scheme. MSEDCL should be directed to undertake monitoring and control of each capital expenditure scheme from the sub-Division level through CBA. Action should be taken on irregularities and under-achievement of benefits. The details should be submitted to the Commission quarterly and publish on the MSEDCL website.

### ***MSEDCL's Reply***

The basic objective of capital expenditure is to upgrade the ageing and weak distribution network to desirable standards so as to provide better network reliability and sustainable performance. It is, therefore, essential to take necessary measures to meet the challenges arising from the EA, 2003 and rules and regulations, such as the Standards of Performance (SoP) Regulations of the Commission.

The capital expenditure also envisages reinforcement of the system to provide quality, security and availability of power supply to the consumers, to undertake system development to meet the load growth, to achieve the targeted reduction in system losses, undertake automation and other improvement works to enhance customer service and fulfil social obligations such as electrification of unserved areas.

The Commission has given in-principle approval to all infrastructure schemes with capital expenditure of more than Rs. 10 crore. While giving approval, the Commission has already scrutinized the expenditures proposed on each scheme. The CBA for all infrastructure schemes have been submitted to the Commission and is examined by it.

The reduced Distribution Losses, higher collection efficiencies, number of new connections released and time taken for release of new connections are some of the tangible benefits of capital expenditure which MSEDCL has achieved.

As regards impact of opening GFA, the Commission has allowed the capex-related expenses for FY 2007-08. Accordingly, the corresponding opening GFA should change. MSEDCL has provided the CBA for the corresponding years.

A&G expenses and employee expenses have been calculated as per the corrigendum dated 1 December, 2011 to Accounting Circular 789 issued by MSEDCL. The A&G expenses and employee expenses are added at 15% of Work in Progress (WIP) and the A&G and employee expenses capitalised.

Physical verification of Fixed Assets was conducted at the MSEDCL Head Office and Circle Offices in FY 2014-15. This exercise will be repeated once in three years. MSEDCL proposes to update asset records and carry out physical verification at the Division and sub-Division levels in FY 2016-17.

As regards capitalisation for FY 2014-15 and FY 2015-16, MSEDCL stated that it has already submitted the CBA reports for FY 2014-15. The CBA reports for FY 2015-16 will also be submitted to the Commission after finalization of Audited Accounts for FY 2015-16.

The DDUGJY was launched by Govt. of India (GoI) for creation of infrastructure for distribution of energy in rural areas.

The demand for electricity in rural areas is increasing due to increase in the consumer base, changes in lifestyle and consumption patterns which requires continuous strengthening and augmentation of the distribution network. Corresponding strengthening and augmentation of the sub-transmission and distribution infrastructure is also necessary to ensure reliable and quality power supply in rural areas.

### ***Commission's Ruling***

For capital expenditure and capitalisation, the Commission has considered only those schemes which it has approved in-principle based on the DPRs submitted by MSEDCL, except for the Agriculture metering-related scheme which has been allowed provisionally for expediting its implementation. In addition, for FY 2014-15 the Commission has considered only those schemes whose costs and benefits have been clearly stated by MSEDCL. For FY 2014-15 and FY 2015-16, the Commission has also carried out scrutiny of the actual capitalisation.

Based on scrutiny of the actual capitalisation in FY 2015-16 under the scheme 'Infra Plan Works-II', the actual capitalisation reported was only Rs. 483 crore as against Rs. 2,440 crore proposed, and the Commission has provisionally approved Rs. 483 crore against this scheme. Capitalisation towards non-DPR schemes has been allowed only upto the threshold limit of 20% of the capitalisation towards DPR schemes.

The Commission has disallowed 50% of the IDC of those schemes whose capitalisation has exceeded the in-principle approval. The Commission's observations regarding the capitalisation in excess of the costs approved in principle are elaborated in Section 3.7 and 4.7.

As regards the capitalisation for 3<sup>rd</sup> Control Period, in Section 5.8 the Commission has analysed MSEDCL's capital expenditure and capitalisation claims. Over the 3<sup>rd</sup> Control Period, as against MSEDCL's claim for capitalisation of Rs. 32,685 crore, the Commission has allowed Rs. 16,758 crore based on the analysis in that Chapter.

## **2.7 Depreciation**

### ***Objections/Suggestions***

MSSSPL and ASPAI stated that not all assets of MSEDCL are new, and this would reduce the depreciation rate below 5.28%. Hence, the depreciation rates should be allowed after scrutiny, and the advance against depreciation allowed in the past needs to be verified. Further, for SAP implementation, MSEDCL has claimed excess depreciation of Rs 1,007 crore, for which year-wise details should be sought and the holding cost ascertained.

Shri. N. Ponrathnam sought clarification regarding the depreciation expense collection and accumulation till date.

### ***MSEDCL's Reply***

MSEDCL has calculated the depreciation considering the rates in the MYT Regulations. In Form 5.1, it has provided the calculations for depreciation.

The Commission has discontinued the provision for Advance against Depreciation from the MYT Regulations, 2011.

As regards excess provision for depreciation, MSEDCL has undertaken the final true-up of FY 14-15 as per the Audited Accounts. MSEDCL has claimed the Prior Period Income/expenses as per the methodology adopted by the Commission previously.

In reply to Shri. N. Ponratnam, depreciation is the systematic reduction in the recorded cost of a Fixed Asset. Depreciation is provided for replacement of existing Fixed Assets in future. The MYT Regulations, 2015 also permit recovery of depreciation on the value of Fixed Assets.

Note 12 - Fixed Assets" provides the details of Gross Block, Depreciation Reserves and Net Block.

### ***Commission's Ruling***

The Commission's analysis of the depreciation claimed by MSEDCL is set out in Section 3.8, 4.8 and 5.9.

## **2.8 Interest on Working Capital and Consumers' Security Deposit**

### ***Objections/Suggestions***

VIA stated that MSEDCL has been contending that, at the time of demerger, it received only notionally an amount of Rs. 1823 crore against Consumers' Security Deposit (CSD) and no cash and that, therefore, it may be excluded from the CSD in the working capital formula. If another entry of receivables which was given to

consumers against that CSD which MSEDCL has duly encashed in the form of recovery, this comes to 3141.63 crore. As such, both entries need to be considered while deciding this issue. MSEDCL's claim that its cash flow issues are on account of disallowing working capital interest due to adequate working capital as per the formula is incorrect. The cash flow is affected because MSEDCL is unable to recover Ag arrears due to fictitious dues.

CREDAI submitted that, while MSEDCL has claimed interest on CSD at 8.75%, the actual interest rate paid by MSEDCL to consumers is only 7%. Shri. R.B. Agrawal and Adv. Anil Harishchandra Vyas stated that MSEDCL is liable to pay interest on CSD.

MSSSPL and ASPAI sought clarification regarding the accounting of CSD for the purpose of working capital computation as MSEDCL has proposed not to consider it in computation of the normative Interest on Working Capital (IoWC). No review has been filed on the normative IoWC approved in the Commission's previous MYT Order, and hence there is no merit in MSEDCL's proposal.

Tata Motors Ltd.'s representative stated that the Audited Accounts for FY 2014-15 indicates a discrepancy in the accounting of CSD. MSEDCL's SAP-ERP database shows a CSD amount which is lower by Rs. 51.35 crore than in its Books of Accounts, which needs to be corrected in the truing-up for FY 2014-15.

Shri. Suhas Joshi stated that consumers are paying CSD equal to 30 days' billing, which is insufficient. Another 30 days are required for reading, due date period and disconnection notice period. Hence, MSEDCL should take CSD equal to 60 days of billing from all consumers.

Balaji Electrosmelters Pvt. Ltd. and Vidyut Urja Equipments Pvt Ltd. asked the Commission not to allow huge the cash profits and expenses claimed by MSEDCL. An amount of Rs. 1216 crore over the period FY 2005-06 to FY 2013-14 disallowed earlier by the Commission has been claimed in the present Petition.

### ***MSEDCL's Reply***

#### **Working Capital**

Working capital is mainly required to meet the liabilities relating to fuel or power purchase and is beyond the reasonable control of MSEDCL. As per the Audited Accounts, MSEDCL has paid IoWC. It is a legitimate expense which needs to be allowed.

All the components of ARR cited by the Objector do not lead to cash surplus. The depreciation is adjusted against the loan repayment, and Bad Debts are inseparable incidences in the business of electricity distribution and cannot be treated as cash profit. Such costs approved by the Commission are within the norms specified in the MYT Regulations. Also, the disallowance of Rs. 1,216 crore from FY 2005-06 to FY 2013-14 is related to IoWC, along with other disallowances of legitimate expenses.

**Consumers' Security Deposit**

MSEDCL has been recovering the CSD as per the provisions of the Supply CODE Regulations, 2005. Once in each financial year, in April/May, MSEDCL reviews the CSD at the credit of every consumer vis-a-vis the average amount of energy bill over the previous year. The additional CSD if required is demanded through bills.

With regards to consumer's CSD billing period, MSEDCL stated that the suggestion is well accepted; however, the CSD is collected in line with the Supply CODE Regulations issued by the Commission.

***Commission's Ruling***

The Commission has calculated the IoWC and interest on CSD in accordance with the norms specified in the MYT Regulations. The computation of normative IoWC for FY 2014-15, computation of efficiency gain on this account, and its sharing between MSEDCL and consumers have been elaborated in Sections 3.11 and 3.30 of this Order.

For FY 2015-16 and for the 3rd Control Period, the Commission's analysis and ruling on IoWC and CSD are elaborated in Section 4.11.

As regards the CSD to be considered for FY 2014-15, the Commission has verified the Audited Accounts and considered it while allowing the IoWC in the true-up. The ARR components have been allowed as per the MYT Regulations.

**2.9 Recovery of Arrears*****Objections/Suggestions***

Balaji Electro Smelters Ltd., Thane Small Scale Industries Association (TSSIA) and others contended that the main reason for the financial crunch of MSEDCL is the huge arrears from various consumers, which should be recovered at the earliest. Shri. Mahendra Jichkar stated that schemes need to be introduced for minimizing arrears. Marathwada Development Board stated that high arrears are leading to increased late payment burden and asked about the accountability for this.

Shri. Hemant Kapadia stated that arrears of Rs. 8,182 crore are pending from DFs, Government organizations and Permanently Disconnected (PD) consumers, and consumers at large are not responsible for them. He referred to Section 61(d) of the EA, 2003, and stated that the liability on account of these arrears cannot be passed on to consumers.

Urja Sahayog, Aurangabad pointed out that the arrears are increasing. If they were to be recovered, the burden on IoWC (which is currently being passed on to consumers) will reduce. The burden on account of agricultural arrears should also not be passed on to other consumers. Shri. B.S. Khandare, Maharashtra Rajya Grahak Parishad, Amravati pointed out that the arrears have mounted to around Rs. 24,000 crore. MSEDCL should be directed to recover at least 50% of the arrears in the next

two months, and resubmit the Tariff proposal thereafter considering the revised Revenue Gap after accounting for the unrecovered arrears.

Shri. R.B. Agarwal and Adv. Anil Harishchandra Vyas stated that, if the arrears and dues are recovered, there would be no need to increase the tariff, and it could be reduced. MIDC Industries Association, Nagpur and others also pointed out that MSEDCL has to recover arrears of around Rs. 18,500 crore. Jain Irrigation Systems Ltd., Technova Imaging System (P) Ltd., Indoworth India Ltd., and others stated that collection efficiency has come down. If MSEDCL recovers old arrears, there will be no need for a tariff increase, or for an Additional Surcharge to bridge the Revenue Gap.

Century Rayon Pvt. Ltd. and others stated that collection efficiency has to be increased by metering all Connected Loads, and unaccounted losses must be minimised. Urja Prabhodan Kendra contended that, due to administrative inefficiency; huge arrears of around Rs. 23,000 crore are yet to be recovered from consumers. MSEDCL should publish the list of defaulters with arrears of more than Rs. 1 lakh. Jain Irrigation Systems Ltd., Technova Imaging System (P) Ltd. and many others stated that the collection efficiency figures show that huge arrears of Rs. 25,427.26 crore, against last year's figure Rs. 21,305.90 crore, are recoverable from the consumers and the Mula Pravara Electric Co-operative Society (MPECS).

Balaji Electro Smelters Ltd., and Vidyut Urja Equipments Pvt. Ltd. alleged that MSEDCL may have reduced the arrears of residential and commercial consumers by lump-sum writing off under Bad and Doubtful Debts without following any procedures. At the same time, it may have retained the arrears of agriculture consumers as they are to obtain assistance from the State Government under various schemes claiming to reduce them in the future in the name of farmers' welfare. MSEDCL's collection efficiency is low and will definitely increase arrears every year. MSEDCL should make efforts to improve its collection efficiency.

Maharashtra Rajya Veej Tantrik Kamgar Sanghatana, Aurangabad stated that around Rs. 60 crore of arrears are due against around 32,000 PD consumers, and directions should be issued for their recovery.

### ***MSEDCL's Reply***

The arrears to be recovered from consumers of different categories are undoubtedly increasing (in absolute value) and effective and concentrated efforts are needed for their recovery. At the same time, it is necessary to examine the reasons for accumulation of arrears, the permissible action which can be taken for recovery and the time consumed in this process, the constraints and limitations of MSEDCL in resorting to coercive action, etc.

It cannot be presumed that all consumers would pay their dues in time every time, and it is natural that there will be always some arrears to be recovered from consumers. If some portion of past arrears is recovered during a particular period, some other

consumers may on occasion not pay the current bill in that period and may fall into arrears but pay with some delay. In these circumstances, even after recovery of some portion of the past arrears, the level of receivables remains more or less the same on account of the addition of fresh arrears. This happens in every industry or commercial establishment. They also have a certain level of receivables from their customers. It is, therefore, necessary to judge the efficiency of MSEDCL in recovery of arrears by comparing the assessment during a particular month and recovery of arrears during that particular month. It will be seen that MSEDCL has been able to recover the amount equivalent to the assessment during the respective months, except for a few consumer categories like Agriculture, rural Public Water Works, etc.

MSEDCL maintains its accounts on accrual basis, i.e., income and expenses are recorded as they arise, regardless of whether or not cash has actually changed hands. The financial statements have been prepared based on the accrual method of accounting in accordance with the generally accepted accounting principles and the provisions of the Companies Act as adopted consistently by MSEDCL. Hence, arrears, if any, would automatically reflect in Receivables in Current Assets and Recovery of Arrears is adjusted against the same account. Revenue billed irrespective of actual recovery of revenue is considered for the ARR. Therefore, any accrual of arrears or receipt of arrears will not affect the proposed Gap and its burden will not be passed on to other consumers.

The arrears position reflects the arrears as on a particular day. MSEDCL may not disconnect electricity connections of Government Departments for non-payment of bills, like other consumers, especially those maintaining essential services. Moreover, if such Government consumers are disconnected, the ultimate sufferer would be the common man as many of these authorities serve the daily needs of consumers. It is not that MSEDCL does not act against Government consumers at all; however, field officers take action against such Govt. Department consumers after considering the ground realities.

The collection efficiency for Residential, Commercial and Industrial categories has been in the range of 96-100%. In the last few years, the overall collection efficiency has also been consistently in the range of 95-99%. Barring a few categories such as Agriculture, Public Water Works etc., collection efficiency has improved significantly. However, efforts are being made to improve the collection efficiency in respect of other categories as well.

If a consumer neglects or fails to pay the energy bills, MSEDCL has powers to disconnect his power supply after giving him 15 days notice as per S. 56 of the EA, 2003. However, it cannot be presumed that, once supply is disconnected, the dues are received from a defaulting consumer immediately. Moreover, for a consumer for whom power supply has an important role in maintaining financial viability (like industrial, agricultural, etc. consumers) disconnection of power supply may drastically reduce his paying capacity, which would make it very difficult for MSEDCL to

recover its dues if his financial status deteriorates beyond a point. If the consumer's business becomes sick and closes down, MSEDCL can only initiate legal proceedings for recovery of dues. This takes considerable time and, even if MSEDCL succeeds, recovery is still difficult since by that time nothing is left for MSEDCL to attach against its dues. The general measures taken for recovery of arrears are as under:

- a) To issue notices to pay the energy bills.
- b) To disconnect the power supply.
- c) To file a legal suit for recovery of arrears.
- d) To encourage consumers to pay the arrears by giving various facilities such as payment by easy instalments, waiver of minimum charges, waiver of Delayed Payment Charges (DPC), concessional interest, etc.

Whenever necessary, concession schemes are introduced to make it easier for consumers to clear their arrears. Wide publicity is given to such schemes. Consumers are contacted personally by MSEDCL's local offices and motivated to pay the bills. Disconnection drives are regularly arranged. In such drives, an Engineer along with Janmitra and staff from the accounts Section visit the premises and recovery is done by giving receipts on the spot.

MSEDCL has also implemented various measures to curb Distribution as well as Commercial Losses, such as flying squads, special squads for theft detection, special theft drives, DTC metering, dedicated police Stations etc.

In spite of all these efforts, sometimes recovery is not possible for reasons beyond the control of MSEDCL. Such arrears can be termed non-controllable arrears.

### ***Commission's Ruling***

In its Tariff Order in Case No. 19 of 2012, the Commission noted as follows:

*"The Commission is of the view that though arrears do not affect the determination of ARR directly, it is important to collect arrears on time to maintain liquidity and reduce the need of working capital. MSEDCL has recently reported serious liquidity problems affecting its working capital and strictures from Banks to deny financing of working capital."*

In its previous MYT Order, the Commission given the following direction:

*"The Commission directs MSEDCL to submit its action plan for recovery of arrears and also publish on its website the quarterly report on status of arrears and recoveries made during the quarter against each consumer category and across all Circles."*

As compliance, MSEDCL has prepared detailed guidelines for field officers. MSEDCL has also submitted a format in which to publish the Circle-wise and category-wise demand collection and arrears report on its website for each quarter. The compliance of the above directive has been analysed in Chapter 7 of this Order.



## **2.10 Provision for Bad Debts**

### ***Objections/Suggestions***

MSSSPL, ASPAI and others stated that MSEDCL has claimed provision for Bad Debts at 2.02% of the receivables, as against the norm of 1.5% in the MYT Regulations.

Balaji Electro Smelters Ltd., and Vidyut Urja Equipments Pvt. Ltd. referred to the FY 2014-15 Auditor's Report which noted that

“Based on such policy the Company has classified trade receivables into bad and doubtful and also made lump sum provision without assessing the recoverability position of its trade receivables, without making age wise analysis, without considering the efforts made for recoveries etc.”

They submitted that this defeats the basic objective of allowing a provision for Bad and Doubtful Debts. As per the provisions of the Income Tax Act, provisioning and writing off of Bad and Doubtful Debts without sufficient reason or efforts for recovering them and including them in the profit is not permissible.

Shri. Suhas Joshi pointed out that PD arrears prior to three years and huge fictitious arrears due to wrong billing/average billing should be withdrawn and shifted to Bad Debts. Under the Limitation Act and Section 56 of EA, 2003, MSEDCL cannot recover arrears prior to 3 years. Hence, these should be treated as Bad Debts and should be withdrawn from the Ledger. He suggested that MSEDCL declare an Amnesty Scheme for PD arrears under which, if MSEDCL waives 100% interest and the DPC levied on PD consumers, at least the principal amount would be recovered.

### ***MSEDCL's Reply***

Bad Debts are an inseparable incidence of every business, including the business of electricity distribution. The Commission has been following the principle that Bad Debts shall not exceed 1.5% of revenue in any financial year and accordingly approving the provision on normative basis.

MSEDCL has claimed the provision for Bad and Doubtful Debts for FY 2014-15 as per the Audited Accounts. It has claimed the provision for the 3rd Control Period as per the provisions of the MYT Regulations, 2015. Regulations 73 and 82 specify that a provision of Bad and Doubtful Debt may be allowed up to 1.5% of the receivables shown in the Audited Accounts, duly allocated for the Wires and Supply Business. Accordingly, MSEDCL has allocated the amount shown as receivables in the Audited Accounts of FY 2014-15 in the ratio of 10% to Wires Business and 90% to Supply Business, and calculated the provision for Bad Debts.

MSEDCL has taken note of the observations/suggestions made on Bad Debts and an Amnesty Scheme.

### ***Commission's Ruling***

The provisioning for Bad Debts is a legitimate expense head to be allowed in the ARR as per the MYT Regulations. However, Bad Debts should be minimized and Licensees must have prudent policies procedures policies to deal with Bad Debts recovery and write-off. The issue of Bad Debts is dealt with in Sections 3.13, 4.13 and 5.14 of this Order.

## **2.11 ARR, Revenue Gap and Regulatory Asset**

### ***Objections/Suggestions***

Hindalco Industries Ltd., Owens-Corning (India) Pvt. Ltd., Asahi India Glass Ltd., and many others stated that MSEDCL has erroneously calculated the ARR and imposed an additional burden on OA consumers by increasing the OA charge and tariff.

Balaji Electro Smelters Ltd. asked for scrutiny of understatement of revenue collections for FY 2014-15 and FY 2015-16. MSEDCL revenue collections for each consumer category should be as per the approved ABR of sales of the respective categories and Fuel Adjustment Charge (FAC) should also be added for revenue collection. The approved ABR is not available for each category, and adverse comments made in the Audit Report for FY 2014-15, including on revenue, have not been considered. Hence, the Commission should undertake detailed scrutiny of revenue for FY 2014-15. Further, from comparison of the approved ABR for FY 2015-16 in the previous MYT Order with the estimated ABR for FY 2015-16 in MSEDCL's Petition, the approved ACoS is Rs. 6.43/kwh (including FAC) whereas the estimated ACoS is Rs. 5.90/kwh, i.e. less by Rs. 0.53/kWh.

Federation of Industries Association, Vidharbha stated that manipulation in revenue figures has been detected by the Audit Department, which needs to be verified before allowing increase in Tariff. Balaji Electro Smelters Ltd., and Vidyut Urja Equipments Pvt. Ltd. stated that MSEDCL has not proposed creation of a "Regulatory Asset" for the uncovered gap and resources for adjustment of the Regulatory Asset in future years.

Shri. Avinash Prabhune contended that MSEDCL is juggling figures for its Tariff proposal. It has projected an increase in electricity charge of around 4.44% to 9.83 % yearly on a general perception of inflation and increase in other costs. In reality, the ARR for the 3rd Control Period is Rs. 2,96,114 crores, and the Revenue Gap of Rs. 56,372 is based on an average yearly rise of 19%.

Linde India Ltd. suggested that only losses due to uncontrollable factors should be compensated to MSEDCL.

**MSEDCL's Reply****Revenue Gap**

The summary of Revenue Gap for the 3<sup>rd</sup> Control Period, after considering impact of previous period adjustments, is as summarised below:

**Table 2-5: Revenue Gaps, as submitted by MSEDCL (Rs. crore)**

Sr. No.	Particulars	Amount
1	Revenue Gap for FY 2014-15	1,271
2	Revenue Gap for FY 2015-16	4,044
3	Revenue Gap for FY 2016-17	8,284
4	Revenue Gap for FY 2017-18	11,196
5	Revenue Gap for FY 2018-19	14,548
6	Revenue Gap for FY 2019-20	15,750
7	Impact of Review of MYT Order incl. carrying cost	177
8	Carrying Cost on Gap of FY 2014-15 and FY 2015-16	424
9	Impact of Mula Pravara Case	679
<b>10</b>	<b>Total Revenue Gap of MSEDCL</b>	<b>56,372</b>

The above projected Revenue Gap needs to be recovered to maintain the viability of MSEDCL. The Tariff increase required on account of this Revenue Gap is mainly due to increase in power purchase cost, including Transmission and O&M costs.

Power purchase cost, including Transmission cost, constitutes around 80% of the revenue requirement of MSEDCL, which is met from regulated Tariff. Due to variations in market-driven fuel costs and increase in RPO, the power purchase cost in FY 2019-20 is projected to have increased by 26% compared to FY 2016-17. The total cost will increase from Rs. 64,525 crores in FY 2016-17 to Rs. 83,096 crores in FY 2019-20, which includes the expected rise in RE power purchase expenditure of around 67% over this period.

MSEDCL added that based on the reasons and facts stated above, MSEDCL is compelled to propose increase in Tariff in order to serve its customer better and so as to supply reliable and quality power.

The Revenue Gap is calculated as per the norms in the MYT Regulations, 2015, under which for FY 2014-15 the Audited Accounts are taken, and for FY 2015-16 provisional figures are considered, resulting in a change in the Gap as compared to that approved by the Commission in the previous MYT Order.

**Pass-Through of Past Losses**

The losses are passed through in accordance with the MYT Regulations after scrutiny of the Commission.

### **Regulatory Assets**

MSEDCL has proposed recovery of the Revenue Gap over four years. Under this proposal, MSEDCL will recover less revenue than its requirement in the first year. However, it expects to bridge the gap through efficiency improvements and other measures.

As regards lacunae in revenue collection for FY 2014-15, mere comparison of numbers may not provide the correct picture. Revision in sales of a particular category needs to be considered along with the ABR of that category. The ABR of the agriculture category is less than 50% of the overall ABR. MSEDCL has taken the revenue as per the Audited Accounts duly certified by the Statutory Auditors.

Regarding revenue collections in FY 2015-16, considering the uncertainties in the recoveries from theft and miscellaneous charges from traders, MSEDCL has not projected the revenue from them. However, it has projected the stand-by charges at Rs. 420 crores for FY 2015-16.

### ***Commission's Ruling***

The Commission has analysed each head of expense and revenue claimed by MSEDCL and its proposed treatment, and accordingly determined the ARR and hence the Revenue Gap or Surplus over the 3rd Control Period in accordance with the MYT Regulations. The Commission's analysis of the Revenue Gap or Surplus is set out in Chapter 6.

## **2.12 Increase in Tariff**

### ***Objections/Suggestions***

Marathwada Development Board stated that there is a considerable difference between the Tariffs for LT Industry in Maharashtra and other States, and the Tariff in Maharashtra should be brought on par with others. Due to the projected Revenue Gap, industries fear that increase in Tariff is inevitable. A balancing act is required between increase in Tariff vis-à-vis other parameters such as arrears, O&M costs, FAC and power purchase cost.

Akot MIDC Industries Association, Seafood Exporters Association of India (SEAI), Navi Mumbai Cold Storage Owners Association, Century Rayon Pvt. Ltd., Rizwan Ice & Cold Storage Pvt. Ltd., Alps Ice & Cold Storage Pvt. Ltd., Forstar Frozen Foods Pvt. Ltd. and others also pointed out that the tariff of MSEDCL is 1.5 times higher than in neighbouring States, which has had an adverse impact on the Industrial and Commercial sector. Competitive rates are necessary to prevent migration of industries which provide very large employment and taxes to both Central and State Governments. Chamber of Small Industry Association, Navi Mumbai stated that the prudent policy would be to reduce the present rates to the extent possible to boost the economy of Maharashtra. Marathwada Association of Small Scale Industries and Agriculture (MASSIA), Aurangabad and others also stated that the present Tariff rate

is already higher than in the neighbouring states. Further increase would break the Micro, Small and Medium Industries (MSMEs) and force them, particularly power-intensive units, to shift to neighbouring States, which will result in revenue loss to Government and impact employment in the State.

Balaj Electro Smelters Pvt. Ltd. stated that the HT Temporary Tariffs are increased steeply during a time of acute power shortages. OA consumers are imposed with this Tariff when the Generator injects less power into MSEDCL grid due to various constraints. Hence, the HT temporary Tariff should be reduced to the level proposed for religious purposes.

Shri. B.S. Khandare, Maharashtra Rajya Grahak Parishad, Amravati stated that MSEDCL's proposal of increase in Tariff should be rejected considering (a) the drought situation in Vidharabha-Marathwada and in Western Maharashtra followed by farmer suicides in the region for the past two years and (b) as per the principles of MYT framework, Tariff should be fixed for a Control Period. However on the contrary, MSEDCL has sought Tariff increase for every year, which is against the principle of MYT.

Shri. Avinash Prabhune and others opposed the proposed Tariff increase, and stated that the billing for the residential category would also increase considerably. Uniform lower rates are needed for consumption up to 300 units, with some additional burden for up to and above 500 units. The total units consumed should be charged without telescopic slab benefits at higher rates.

Adv. Anil Chavan objected to the Tariff increase stating that 60% of the consumers are middle class residential consumers who cannot afford it. He proposed that the Tariff rates should be (a) up to 100 units: Rs. 3.5/unit; (b) 101 to 300 units = Rs. 4/unit (c) 301 to 500 units = Rs. 5/unit.

Shri. P.P.Karhade, Urja Prabhodan Kendra urged that the Tariff rise may be upto 5.5%. He pointed out that the proposed Tariff rise for the LT-II category is 15% (for 0-20 kW) and 17% (for more than 20 kW), which should be reduced to 5.5%. Adv. Rajesh Shah also stated that the Tariff increase is exorbitantly high and unaffordable, and suggested that the initial slab for the residential category should be revised from 0-100 units to 0-400 units, in line with Tariff categorization in Delhi. Shri. S.G. Bahale, Institution of Engineers (India) opined that the number of slabs for residential consumers should be reduced to three instead of five. Akhil Bharatiya Grahak Panchayat, Latur suggested that increase for residential consumers with 0-500 units consumption should not be more than 2% per year.

Dr. Ashok Pendse, TBIA pointed out that the Tariff design is skewed and needs to be corrected. The proposed Tariff for the LT residential category (LT-1B) (from 101 – 300 units), is higher than that of the LT Industrial category (greater than 20 kW) (LT-V) and HT Industrial category (non Express Feeders) (HT-1), which is unjust to residential consumers.

Prayasproposed that uniform Tariffs should be applicable for all LT consumers with a Connected Load of less than 10 kW and up to 300 units of consumption per month considering the following:

- a) Telescopic Tariffs (with two to three slabs), with uniform slab-wise Tariff across categories.
- b) For consumption above 300 units, the Tariff slabs as well the Tariffs can vary across categories and can be charged higher Tariffs such that the proposal is revenue neutral.

The Tariff of small consumers may be linked to the inflation rate to enable automatic revision and certainty in Tariff. The Tariff of such small consumers (less than 300 units per month) can be linked to inflation minus 2%, and should be revised automatically at the beginning of every year based on the previous year's inflation index. The Charges and the escalation in Tariffs should be fixed for the MYT period and should not include FAC or other additional charges, as that would reduce Tariff certainty. Post the MYT period, the Tariff design and the charges should be re-assessed.

MIDC Industries Association, Amravati stated that MSME industries generally fall in the 0-20 kW of LT V category. This slab should be expanded to 0-50 kW as MSME industries play an important role in job creation in rural and urban areas.

Shri. Pramod Narayan Khandagale, MVGS, Buldhana, Shri. Sandip Belsare, Pimpri Chinchwad Small Industries Association and others presented objections on behalf of industrial consumers, powerloom consumers, residential consumers (up to 300 units), commercial consumers (up to 200 units) and agricultural consumers. They urged that there be no Tariff increase, and the Tariff determined in the previous MYT Order should be fixed and continued for the next two years. MIDC Industries Association, Amravati further stated that, as declared by the Government, the Tariffs should be brought down to level of other States.

Indo Rama Synthetics Ltd., Indoworth India Ltd., Linde India Ltd., and others stated that the increase proposed by MSEDCL for HT Express FeederIndustrial category in both Fixed and Energy Charges are exorbitant, and should not be considered considering recession in the Industrial sector. The rate of Fixed Charges, Energy Charges and Cross-Subsidy Surcharge (CSS) should be as per the adjoining States. Praxair India Pvt. Ltd. also suggested that the existing Fixed Charges/Energy Charges should be retained.

Dr. G.H. Barhate stated that the proposed increase in Tariff is compounded and around 27%, as against the claimed increase of around 5.5%-6.5% per year. In case of BPL consumers, the Y-o-Y Tariff increase is around 8.25% against the cumulative increase of around 33%. Rates for these consumer categories should be maintained at the same level.

Shri. Tarun Agarwal stated that, by recovering even 50% of the old dues, i.e. of Rs. 25,427 crore, MSEDCL can easily meet the Revenue Gap for at least two years. Hence, there is no need of to raising Tariffs.

Shri. Vivek Velankar, Sajag Nagarik Manch, Pune stated that increase in Fixed and Energy Charges for Public Water Works (PWW) and street lights will have adverse effects on consumers. The concerned Local Authorities should also not pass on these increases to common consumers for the Public Services they offer.

Shri. Tushar Parakh, Maha Cold Storage Association, Pune pointed out that the Tariff for LT-IV Agriculture metered-others and HT-V Agriculture -others is already 30% higher than for agricultural pumpsets. MSEDCL's proposal to further increase Energy and Fixed Charges should be rejected.

Shri. T. K. Satpathy, Br. Sheshrao Wankhede S.S.S Girni Ltd. and Sanjay Gandhi Cotton Growers Co-Op Spinning Mills Ltd. stated that spinning mills in the State are facing financial hardship due to a number of issues. Hence, spinning mills should be excluded from any Tariff increase as it will make their operations unviable.

Sanjay Gandhi Cotton Growers Co-Operative Spinning Mills Ltd. stated that it is facing an additional burden of Rs. 8 to 9 lakh per month. Hence, Electricity Duty should be waived for all such consumers, considering that certain spinning mills in Maharashtra are already exempted from Electricity Duty.

Shri. C. G. Shegaonkar, MIDC Industries Association, Nagpur stated that the proposed Tariff is high, due to which all categories of consumers will suffer. The cost of MSEDCL's inefficiency should not be passed on to the consumers.

Shri. Vasudeo Thombare, Akhil Bhartiya Kisan Union stated that bills are being raised even though meters of agricultural connections or pumpsets are not read and even when water is not available. Also, in some cases, the HP capacity of agricultural pumps are wrongly recorded as of higher capacity (e.g., 3 HP motor capacity is recorded as 5 HP), and such consumers are not consulted before recording the pump capacity. Hence, he opposed the increase in Tariff for agricultural pumpsets and stated that measures should be taken to reduce the inefficiency of MSEDCL and consequent losses.

Nagpur City (District) Congress Committee, Shri. Sanjay Dharmadhikari, Shri. Mukund Mundra and others also objected to the proposed increase in Tariff.

Federation of Industries Association, Vidharbha stated that even the present Tariff is very high in comparison to neighbouring State. Further increase will encourage migration of existing industries to other States, thereby resulting in revenue loss and unemployment. If the Tariffs are competitive, fewer consumers will opt for captive power generation or OA, thereby increasing the effective number of consumers and improving the distribution of costs.

Shri. Anil Wadpalliwar stated that the Revenue Gap forecast by MSEDCL is incorrect and improper, and MSEDCL should be directed to submit the proper figures in order to justify the proposed Tariff increase.

Shri N.D Patil, Maharashtra Rajya Irrigation Federation, Shri Sanjay Ghatge, ex-Member of Legislature, and several others argued that there should not be any tariff increase for small irrigation schemes. Since the last few years, farmers are suffering huge financial loss due to drought and other natural calamities. Moreover cooperative irrigation schemes are being run by small farmers without any subsidy support. For similar reasons, no increase in the tariff for Agriculture pumpsets is justified either.

Shri. Bacchu Kadu, Member of Legislature, Adv. Vamanrao Chatak, Ex-Member of Legislature, the Nagpur City (District) Congress Committee, Shri. Prashant Daryapurkar and others stated that, given the number of Generating Units there, the Vidharbha region should be given the benefit of lower tariff. Shri. Pappu Deshmukh, Prahar Sanghatana also stated that around 30% of the total electricity in the State is generated in Chandrapur District. As water from the Wardha and Erai rivers is being utilised for such generation, farmers and ordinary citizens are facing water shortage. Further, due to generation of electricity and the pollution associated with it, people are facing health related issues resulting in increased medical expenses. Considering this, the Commission should direct MSEDCL to give 50% discount in the electricity bills of consumers in Chandrapur district.

Shri. Mahendra Kapase stated that consumers in Vidharbha cannot afford higher bills and a per unit Tariff of around Rs. 3/unit should be fixed for the Vidharbha region.

Dr. Shrinivas Khandewale stated that, compared to the electricity generated in Vidharbha, only 1/3<sup>rd</sup> is supplied, and questioned how the huge Revenue Gap of Rs. 56,000 crore can be applied across the State. The electricity rate should be reduced by 50%.

Shri. D K Chakraborty stated that the summer season months are very hot in Vidharbha region. The GoM and Municipal Corporation issues advisory notes cautioning common citizens on the do's and don'ts. Due to these natural conditions, citizens have to cool their homes with fans and air coolers, leading to higher consumption. The air coolers are not a luxury, but a necessity to survive. Hence, the basic slab of 0-100 units may be increased to a higher unit slab for the three summer months.

Shri. Mukund Mundra stated that Transmission Charges should be reduced for Vidharbha.



***MSEDCL's Reply*****General Justification for Increase in Tariff**

MSEDCL stated that the Tariff rate appears prima facie to be higher than for other State Utilities. However, there are important factors that contribute to this, such as

- a) Differences in power generation and power purchase expenses considering the diversity in power generation sources and available power resources (thermal/Hydro/nuclear/NCE).
- b) Variation in power purchase cost due to fuel sources and fuel availability (pit-head Stations).
- c) Fuel cost increase due to transportation of coal from mines.
- d) MSEDCL distributes electricity in the largest geographical area in India as compared to other Distribution Utilities.
- e) Geographical diversity of the State.
- f) Diversity in consumer mix and consumption pattern.
- g) Economic/Industrial/Agricultural Policy of the State.
- h) 24/7 supply to industry.
- i) Other terms and conditions of Tariff.
- j) Historically followed principles and policies regarding determination of Tariff
- k) Financial position, including unrealistic assets and liabilities carry forwarded due to unbundling.

Considering the above, it is not appropriate to compare the stand-alone Tariff of MSEDCL with the Tariffs of other State Distribution Utilities. Further, the time lag in tariff revision (including the true-up exercise) is affecting the finances of MSEDCL. This has led to higher working capital requirements and accumulation of financial losses that have then to be recovered through increase in rates.

There was a reduction in Tariff in the last MYT Order. However, MSEDCL is finding it extremely difficult to sustain its operations at the present Tariff levels because of intrinsic rise in expenditure due to inflationary pressures, consistent rise in cost of power as well as energy demand, and its obligations under the policy objectives of the State and Central Governments. Therefore, MSEDCL has had to seek an increase in Tariff so as to meet its requirements so as to remain financially viable and to meet its financial obligations and discharge the liabilities.

MSEDCL has proposed an increase in Fixed and Energy Charges for various categories in order to bridge the Revenue Gap over the Control Period. The increase is the minimum required for MSEDCL to meet inflation as well as the additional costs that have arisen due to its Renewable Purchase Obligation (RPO) as per the new RPO Regulations 2016, power purchase on monthly Merit Order Despatch (MOD) principles, change in consumer mix, Commission's Order on Mula Pravara Electric Cooperative Society relating to payment of Wheeling Charges, increase in Point of Connection cost, reduction in revenue, etc. The Tariff increase is necessary for its

survival and is purely to meet the Revenue Gap arising due to increase in cost on account of inflation in the country and additional costs which are beyond the control of MSEDCL.

The rationale for Tariff increase is in line with the trend of the cost as well as inflation. The following indices may be considered:

- a) The Compound Annual Growth Rate (CAGR) of the Wholesale Price Index (WPI) of fuel/power and coal for the last 10 years is 6.69% and 5.46% respectively.
- b) The six monthly average Dearness Allowance (DA) increase is ~8%.
- c) The CAGR of WPI of copperwires, electrical machinery and transformers for carrying out Repairs and Maintenance (R&M) for the last 10 years is 8.31%, 3.35%, and 4.97% respectively.
- d) The average yearly inflation rate is ~5.88%, and for the last 15 years is ~6.98%.
- e) The costs of MSEDCL have escalated at 8% in the last five years.

Considering inflation in the range of 5% to 8%, MSEDCL expects the same trend in the near future, and hence proposed the Tariff increase is necessary for its survival.

As regards Tariff rationalization up to 400 units for residential consumers, the categorization of consumers for determination of Tariff is to be decided by the Commission. MSEDCL is also not authorized to decide the Tariff rates across the State, which is the jurisdiction of the Commission.

#### **Justification for Tariff Increase for Residential/Commercial Consumers**

The Tariff increase proposed is based on the expected average inflation over the Control Period. MSEDCL has also initiated actions to reduce the cross-subsidy levels for the subsidizing consumer categories. The tariff increase proposed is the minimum required to meet inflation. Considering the increases in costs and reduction in revenue explained earlier, MSEDCL needs an increase over and above the inflationary increase. The increase is purely to meet the increase in costs due to inflation and additional costs which are beyond the control of MSEDCL.

While proposing the Tariffs, MSEDCL has considered that all consumers should at least share the burden of inflation, and the balance unrecovered Gap after such increase would be adjusted in the Tariff in such a way that there would be a reduction in cross-subsidy.

#### **Justification for Tariff Increase for Industrial Consumers**

In order to boost industrial growth, various incentives in electricity Tariffs are provided to the Industrial category Consumers, which are probably the highest in the Country. The incentives available to the Industrial category consumers include Time-of-Day (ToD) rebate for night consumption of Rs. 1.50/unit, Load Factor incentives up to 15%, Power Factor (PF) incentives up to 7%, prompt payment discount of 1% and EHV rebate of 3%. Thus, eligible industries in the State are getting incentives up to

26% which is around Rs. 1.50 to 2.00 per unit, which is probably the highest in the country.

MSEDCL has allowed industries to switch to the non-continuous supply category if they opt to do so, thereby providing them additional benefit of Rs. 0.50 per unit.

### **Increase in HT Temporary Tariff**

Temporary Tariff is applicable to OA consumers when they require power from MSEDCL, as per the provisions of the the MERC (Distribution Open Access) Regulations ('DOA Regulations'). MSEDCL has proposed revision in Temporary Tariff in line with the revision proposed for other categories and their prevailing Tariffs.

### **Tariff Increase proposed on unreasonable grounds**

The Commission undertakes prudence check of all the expenditure and revenue submitted by MSEDCL along with the Annual Audited Accounts. If required, the Commission seeks additional data for confirmation. Therefore, it would not be appropriate to say that the Tariff increase is on unreasonable grounds.

The projected Revenue Gap needs to be recovered to maintain the viability of MSEDCL, and the increase in Tariff required to meet it is mainly attributable to an increase in power purchase cost, including Transmission cost and O&M costs.

### ***Commission's Ruling***

The Commission has analysed in detail MSEDCL's proposal for power purchase and other costs before determining the Tariff revision in this Order. It has allowed prudent power purchase and O&M expenses as against those proposed, which has helped to maintain the level of Tariff increase over the 3rd Control Period. In addition, the Commission has observed that the increase proposed by MSEDCL does not take into account the revenue on account of FAC recovery in the 3rd Control Period, which is around Rs. 19,373 crore (computed by applying the FAC rate for June, 2016 – the month in which the revised MYT Petition was submitted - on the approved Energy Sales for the 3rd Control Period).

The Commission has considered the impact of such FAC revenue in the 3rd Control Period, which has helped to contain the level of Tariff increase. The Commission has approved a tariff increase of 1.49%, 2.00%, 1.20% and 1.27%, as against 8.08%, 8.91%, 8.83% and 4.84% proposed by MSEDCL for FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20, respectively.

## **2.13 Increase in Fixed Charge**

### ***Objections/Suggestions***

Shri. Mahendra Jichkar stated that, in the proposed LT Tariff, increase by more than 100% in Fixed/Demand Charges for all categories has been proposed by MSEDCL. This is totally unjustified. Shri. P.P. Karhade, Urja Prabhodan Kendra also stated that

the increase in Fixed Charges for residential LT-1 categories proposed by MSEDCL is very high, at 100% for up to 500 units and 150% for above 500 units. This should be reduced to 10% per year.

Shri. Avinash Prabhune and LAD College, Nagpur stated that it is unjust to raise the Fixed Charge from Rs. 50 to Rs. 175 within four years (for consumption up to 300/500 units). Shri. Suhas Khandekar also stated that the proposal for increasing the Fixed Charges should not be accepted, as it acts as a deterrent to energy-saving opportunities. Moreover, increasing the Fixed Charge impacts lower consumption consumers more, and should be kept low for consumers in the lower consumption brackets. Shri. Tarun Agarwal suggested that the existing Fixed Charges be maintained for residential consumers. Shri. G.H. Barhate added that the proposed increase in Fixed/Demand Charges in case of LT residential and commercial consumers of around 150% to 300% should be rejected.

Shri. Vivek Velankar, Sajag Nagarik Manch, Pune stated that increasing Fixed Charges on express Feeders is unnecessary as such consumers have already paid huge charges to put the infrastructure in place.

MCCIA urged that the upward revision in Fixed Charges proposed be rejected.

Nagpur Metro Rail Corporation Ltd. stated that the increase in Energy Charges for Monorail/Metro (HT XI) is much steeper than for Railways (HT-III). Nagpur Metro Rail Corporation Ltd. also stated that the increase in Demand Charge from Rs. 220/kVA/month to Rs. 295/kVA/month for Monorail/Metro is unjust. In spite of the similar cost structure of Metros and Railways (HT-III), Metros have to bear a Demand Charge whereas Railways have no Demand Charge but a single-part tariff. Metros should not be subjected to further increase in Demand Charge and Energy Charge.

Shri. Suhas Joshi stated that MSEDCL should not levy Fixed Charges during shutdown, breakdown, faults, etc.

### ***MSEDCL's Reply***

It has been the Commission's policy to recover the fixed costs of MSEDCL through a Fixed Charge on consumers to the extent possible. In its first Tariff Order dated 05 May, 2000, while determining the Fixed Charge component of the Tariff, the Commission had ruled that the recovery of fixed costs should come from Fixed Charges, and has also that the Fixed Charge component of Tariff needs to be gradually increased to cover the actual fixed costs incurred.

However, in the June, 2008 Tariff Order, the Commission unilaterally decided to reduce the Fixed Charges applicable to different categories of consumers, citing reduced availability of power. Thereafter, in its Tariff Order dated 12 September, 2010, the Commission observed that

“.... once sufficient power is available and contracted by the Licensees, the Fixed/Demand Charges can again be increased ...”

Considering that additional availability of power is resulting in continuous supply of power to the majority of consumers, the Fixed Charges need to be gradually increased so as to increasingly recover the fixed component of MSEDCL's expenses through Fixed Charges. Against 39% of recovery that should have been allowed by the Commission against fixed costs, only 17% is allowed through Fixed Charges. This is against basic the principle of recovery followed by the Commission.

Therefore, MSEDCL has proposed a gradual increase in the Fixed/Demand Charges for various categories, in line with the Commission's observations cited above.

Fixed Charges are billed against the infrastructure already created and is recovered against the costs for servicing such infrastructure. Therefore, they need to be levied even in case of shutdown, breakdown, faults, etc.

### ***Commission's Ruling***

Several consumers have objected to MSEDCL's proposal of annual increase in Fixed/Demand Charges by 7% to 10% in most of the categories, though in certain categories (LT-I Residential), MSEDCL has proposed a 20% to 100% increase in Fixed Charges. The Commission has elaborated the rationale for levy of Fixed Charges and Demand Charges in previous Tariff Orders, i.e. to the extent possible, recovery of fixed costs should come from the Fixed Charge component of Tariff. That is also in accordance with the EA, 2003 and the Tariff Policy. At present, the Fixed Costs constitute ~ 39% of the ARR of MSEDCL, whereas their revenue recovery through Fixed Charges amounts to ~ 16% of total revenue. Levy of somewhat higher Fixed Charges and Demand Charges rates would not result in any windfall gain to MSEDCL since it would still be recovering only a relatively small part of its fixed costs through Fixed Charges. Even with the proposed increase, the revenue recovery from Fixed Charges would amount to 16%-17% of the total revenue. Moreover, the proposed increase and rationalization in Fixed Charges is unlikely to result in any significant Tariff shock for consumers, since Fixed/Demand Charges typically contribute only a small part of their total monthly bills.

Given the much-improved availability of power now in the State, the Commission has slightly increased the Fixed/Demand Charges for all categories of consumers. Moreover, with the rationalization of Energy Charges elaborated in Chapter 8 of this Order, the revision in Fixed Charge is unlikely to burden consumers significantly.

Other issues relating to Tariff design have been dealt with in Chapter 8, in which the Tariff Philosophy and Tariff design-related aspects have been discussed in detail.

## **2.14 Fuel Adjustment Charge**

### ***Objections/Suggestions***

Balaji Electro Smelters Ltd. and Marathwada Development Board stated that there are deficiencies in the present system of allowing levy and collection of FAC and the formula specified in the MYT Regulations. Balaji Electro Smelters Ltd. stated that, in

FY 2014-15 and FY 2015-16, MSEDCL has illegally collected FAC since it includes disallowed power purchase. They asked the Commission to take suo-motu action to rectify these deficiencies and evolve a simple method and formula for levying of FAC. MSEDCL has illegally collected FAC in FY 2016-17 towards power purchase expenses of FY 2015-16, and this illegally collected FAC amount to the tune of Rs. 2,000 crores should be added in the revenue estimates of FY 2016-17 along with carrying cost.

VIA stated that MSEDCL is not following the MYT Regulations for calculating FAC. The present methodology of recovery of FAC is creating uncertainty and large variations in FAC charges ranging from Rs. 0.10/kWh to Rs. 1/kWh. It suggested that FAC for N-2<sup>th</sup> should be calculated and billed in the N<sup>th</sup> month, but be based on consumption of N-2<sup>th</sup> month. This method has advantages, namely (a) there will be no under-recovery or over-recovery and also no carrying cost, (b) the consumer who migrated under OA or gets permanently disconnected in N<sup>th</sup> month will also require to settle FAC payable for past consumption before settlement of accounts (c) a new consumer who has not consumed electricity in the N-2<sup>th</sup> month will not be required to pay the unjustified FAC in N<sup>th</sup> month for the period when he was not a consumer. Further, the FAC will be streamlined and range between Rs. 0.30 to 0.40.

Shri. Gurpreet Singh Bagga, CMIA, Aurangabad and Shri. Pratap G Hogade, MVGS stated out that FAC collected by MSEDCL on power purchase should be disallowed in FY 2014-15. Shri. Bagga suggested that penalties be imposed for excess FAC collected for FY 2014-15 to FY 2016-17 and the excess revenue collected for FY 2016-17 should be added in the revenue for that year. The Commission may initiate suo-motu proceedings for changing the present system of FAC collection and simplify the FAC formula by amending the MYT Regulations, 2015.

C.G Shegaonkar, MIDC Industries Association, Nagpur and Textile Consumers' Foundation, Nashik stated that MSEDCL has no proper formula to calculate FAC, as it is as high as 0.92 Rs/unit, and suggested to limit the FAC.

Parbhani Jilha Ginning Pressing Association stated that FAC recovery during January to December, 2015 for industry was higher than in other States. Industries in the State are facing problems due to high Tariff as well as FAC. The FAC ceiling should be 5% instead of 20%. Asahi India Glass Ltd., Shri. Tarun Agarwal, and others also urged that the ceiling of FAC should be reduced to 10% instead of the existing 20% (as per existing provisions), while the Institution of Engineers (India) stated that it should be +/-5%.

Dindori Industrial Association stated uniform levy of Z Factor is imperative for all consumers as per the practise of other State Commissions. Bhagwati Steel Cast Pvt. Ltd. contended that the FAC is neither fixed nor transparent.

### ***MSEDCL's Reply***

The very purpose of FAC is to compensate the Distribution Licensee for the increase in power purchase costs during the year to keep its financial liquidity intact. A Generator has to make payment for fuel. Any increase in fuel price will have to be compensated, or else the Generator would not be in a position to procure enough fuel to generate. Therefore, the Distribution Licensee which procures power from the Generators would have to pay them the increased costs. If Distribution Licensees are not compensated during that period, their liquidity would be affected.

A part of the power procured by Distribution Licensees comes from the Central Sector Generating Companies whose Tariff is regulated by the Central Electricity Regulatory Commission (CERC) and the State-owned Generation Companies whose Tariff is regulated by the State Commissions. The CERC in its Tariff Regulations has provided a formula for fuel price adjustment, and the charges of the Generation Companies are increased as and when the fuel prices increase.

As per the provisions of EA, 2003 and National Tariff Policy, the Appropriate Commission is to specify an appropriate price adjustment formula for recovery of the costs arising on account of the variation in the price of fuel, power purchase, etc. on monthly/quarterly basis for recovery of all prudent costs of the Generating Company and the Licensee. FAC is being levied as per the provisions of the EA, 2003 and MYT Regulations. It is also submitted to the Commission for vetting. The Commission has already approved the FAC for FY 2014-15 after detailed scrutiny. The FAC for FY 2015-16 has also been submitted to the Commission.

The Commission has issued a suo-motu Order for revision in the ceiling for levy of FAC, revising the average FAC ceiling to 20% of the variable Tariff for all Distribution Licensees, as against 10% ceiling prevalent earlier. This revision was due to under-recovery of FAC, affecting the financial position of Distribution Licensees.

### ***Commission's Ruling***

The existing FAC formula in the Regulations has been specified after due consultation, and is intended to pass on changes in fuel-related costs from time to time during the year, as envisaged in the EA, 2003, in addition to the base tariff set for the year so as to take into account cost variations which have to be met by Licensees and Generators. Not providing for FAC, or lowering the ceiling, would not only affect Licensees and Generators adversely, but also result in consumers having to pay higher carrying cost for the period till the tariff is next revised. The Commission approves the FAC submitted by MSEDCL post facto after detailed scrutiny, and the subsequent tariff determination and truing-up processes take into account the facts emerging at that time.

During the vetting of FAC submissions for FY 2015-16, the Commission observed that MSEDCL has levied FAC to its consumers in August, 2015 to March, 2016 on the basis of expected variation in power purchase costs. Since this was against the basic principle of FAC and the provisions of the MYT Regulations, which require

FAC to be computed post facto considering the actual variation in power purchase cost, on 29 July, 2016 the Commission has directed MSEDCL to refund an over-recovered amount of Rs.58.21 crore along with interest through the FAC mechanism, and to desist from doing so in future.

Regarding changing the current methodology and allowing billing of FAC determined for the 'nth' month on the consumption of the 'n-2th' month, electricity supply being an ongoing business, consumers are regularly both added and exit from the system. Under the principles of ongoing business in the electricity sector, the impact of true-up and associated carrying costs as well as FAC is recovered only from consumers who are receiving supply at the time of such recovery, and is not recovered on a one-to-one basis from the same consumers as were receiving supply at the time the costs were incurred. Therefore, such change in the methodology for billing FAC is not tenable.

## **2.15 Cross-Subsidy**

### ***Objections/Suggestions***

Shri Ashish Chandarana for VIA stated that residential consumers using 1,000 units and above should be incentivized, as such consumers along with the commercial consumers are bearing the highest burden of cross-subsidy.

The current practice uses ACoS for Tariff determination, and there is a need for moving from ACoS to the consumer category-wise CoS in a time-bound manner. The only key information required for category-wise CoS is voltage-wise asset details, and Tariff setting based on this, reduction of cross-subsidies, including intra-category cross-subsidy, can be initiated starting from FY 2016-17.

Videocon Industries Ltd., Jain Irrigation Systems Ltd., Piaggio Vehicles Pvt. Ltd., Asahi India Glass Ltd., and others contended that the proposed Tariff increase is irrational as the cross-subsidy is much more than 20% of the ACoS.

Shri Jayant Deo referred to the Clause 8.3 of the Tariff Policy, and stated that the following are relevant:

- a) BPL consumers to have Tariff of at least 50% of ACoS.
- b) The Commission should develop a road-map to bring Tariffs within +/-20% of ACoS.

Nearly 1/3rd of power of MSEDCL is sold at subsidised rates below 55% of ACoS which has resulted in shockingly low Tariff for subsidised consumers for several years. The cross-subsidised Tariffs should be brought to sustainable levels as required under the Tariff Policy, at least to 80% of the ACoS so as to protect industry and other subsidising consumers.

Textile Consumers' Foundation strongly opposed the proposed cross-subsidy, which is against the Tariff Policy, 2016. MSEDCL has not provided any road-map on how to reduce it in coming years. This indicates that MSEDCL is not willing to promote OA.



TechNova Imaging System (P) Ltd., Galaxy Surfactants Ltd., and others stated that the present Tariff is more than +/- 20% of the ACoS. As specified in the Tariff Policy, it should be within the limit of 20% of ACoS. TechNova Imaging System (P) Ltd., Galaxy Surfactants Ltd., Praxair India Pvt. Ltd. and others also objected to the increase in cross-subsidy. Contrary to the EA, 2003 Act and the Judgments of the Appellate Tribunal for Electricity (ATE), the cross-subsidy is well beyond the limit of +/-20% of ACoS. The cross-subsidy should be immediately reduced as required under the Tariff Policy 2016..

### ***MSEDCL's Reply***

#### **Road-map for Cross-subsidy**

The proposed Tariff increase is based on the economic indicator, of expected average inflation during the Control Period. MSEDCL has initiated action to reduce the cross-subsidy for the subsidizing categories.

While proposing the Tariff, MSEDCL considered that all consumers may at least share the burden of inflation, and the balance unrecovered gap would be adjusted in Tariff in such a way that there would be a reduction in cross-subsidy. Accordingly, the Tariff of subsidised consumers has increased more than the Tariff of subsidizing consumers.

Inflation is expected of all the commodities based on which the Index is computed by the Government of India (GoI) and and, therefore, all consumers, irrespective of their Tariff category, will be equally affected by it.

Considering the far-reaching implications on cross-subsidised consumers, it would be imperative to study in detail the following factors while deciding the cross-subsidy road-map:

- a) No Tariff shock to any Consumer Category.
- b) 'Capacity to pay' of weaker consumer categories.
- c) Expected increase in the network and supply costs.
- d) Financial impact of OA on the Distribution Licensee.
- e) Change in consumer mix due to OA.

While deciding the Tariffs of subsidised categories, especially the Agriculture category, various important parameters need to be kept in mind such as limitations due to impact of natural calamities and irregularities in weather conditions. For instance, an agriculturist may have limitations on export or storage of his produce, and natural phenomena like heavy or no rainfall or hailstorms would have a tremendous impact on his production. Therefore, the increase in agricultural Tariff is proposed considering these prospects.

Clause 8.3 of the Tariff Policy provides for the Tariff design principles. The Policy advocates that rational and economic pricing of electricity can be one of the major tools for energy conservation and sustainable use of ground water resources. The

Policy also provides that a higher level of subsidy could be considered to support poor farmers in regions where adverse ground water Table condition requires large quantum of electricity for irrigation purposes subject to suitable restrictions to ensure maintenance of ground water levels and sustainable ground water usage. Thus, the socio-economic factors are required to be considered in deciding the Tariffs of certain categories.

It is equally important to note that MSEDCL is supplying 24/7 quality supply to Industries, whereas load shedding is carried out for other consumer categories during power shortage. While deciding the cross-subsidy, it is important to note that quality of supply is not same for all consumer categories.

Therefore, a detailed study is required to be undertaken for reduction in cross-subsidies, which needs a due consultative process of all stake-holders including Government.

The road-map for reduction of cross-subsidy in Maharashtra is yet to be finalised. MSEDCL believes that the cross-subsidy reduction in Tariffs can be taken up after a transparent road-map is formulated.

The Tariff increase is proposed on the basis of expected rate of inflation equally affecting all the consumers, and MSEDCL has initiated steps towards rationalization of cross-subsidy to some extent.

### ***Commission's Ruling***

The Commission is conscious of the need to gradually reduce cross-subsidy. The GoM had issued certain directions in this regard under Section 108 of the EA, 2003. The Commission had submitted a draft report to the GoM, which proposed a roadmap. Nevertheless, the Commission has effected a reduction in cross-subsidy to some extent, as will be seen in the Table on cross-subsidy at the existing and proposed Tariffs in at Chapter 8 of this Order, which also deals with the determination of CSS.

## **2.16 Tariff re-categorisation of various Consumer Categories**

### ***Objections/Suggestions***

Shri. Mahendra Jichkar suggested an additional slab of above 500 units consumption in the LT-II non-residential consumer category, with higher Tariff compared to the Tariff of residential consumers consuming more than 1,000 units. This would also encourage such consumers to reduce their consumption. The benefit from this category should be adjusted in the LT-I Residential category tariff.

Shri. Hemant Kapadia objected to MSEDCL's proposal for reducing the existing slab from 0-200 to 0-100 units for LT commercial consumers, stating that it will result in additional burden on small shop owners. Nagpur City (District) Congress Committee stated that the existing slab of 0-100 units in case of residential consumers should be revised to 0-300 units considering the profile of such consumers.

VIA stated that Mobile Tower operators are getting undue advantage of the cross-subsidised Industrial Tariff meant for Micro and small-scale industry, Flour Mills and Welding Workshops, i.e., Industries below 20 kW. The LT V(A) category has a Tariff below ABR. Therefore, due provision should be made to ensure that this category comes under LT V(B) by prohibiting such consumers from getting undue benefit of subsidy or by transferring them to the Commercial category. Shri.Suhas Joshi also suggested that mobile towers should be classified under Commercial Tariff as they do not involve any manufacturing process.

Bharati Airtel Ltd. stated that MSEDCL should charge Industrial Tariff for consumption by mobile towers, Base Station Controllers (BSC) and Mobile Switching Centres (MSC) requiring an Information Technology (IT) and IT-enabled Services (ITES) Registration Certificate. In the previous MYT Order, the Commission had rejected the proposal for categorization of mobile towers under the Industrial category. However, under GoI's Notification 8 of 2012, the Telecom sector has been notified as an Infrastructure sector.

Shri.Suhas Joshi pointed out that many IT/ITES consumers who are not having permanent IT Registration Certificate are presently billed as per the Industrial Tariff category. Only consumers having permanent IT registration should be classified under Industrial category.

Shri Suhas Khandekar stated that, while the requirements for religious purposes are for very short periods, the financial implications on individual consumers in both Temporary categories, religious and non-religious (under LT VII category), are substantial. These sub-categories of temporary supply should be merged.

Shri Suhas Khandekar stated that street light is also a Public Service. There is no need for a separate category LT-VI for street lights, and it should be merged with the LT X (Public Service) category.

He also suggested merging HT X (Ports) with the HT II (Commercial) category.

Shri Khandekar pointed out that the rates for Railways and Monorail/Metro being the same, the two categories should be combined. Railways should be included in the Public Services category (HT IX).

Shri. Pratap Hogade on behalf of the Tyre Remoulding Working Companies stated that these consumers are industrial and manufacturing units. Before the Tariff Order of August, 2012, they were classified as industrial units, but have thereafter been applied the higher Commercial Tariff category. Tyre remoulding and retreading units should be categorised under the Industrial Tariff considering the processes involved. VIA and others also stated that, as per the definition of industry, i.e. "*work which entails manufacture*", tyre remoulding activity is industrial. The MSME Ministry has also reclassified it as a manufacturing industry by revising its earlier classification as a service industry. The work involved is refurbishing scrap tyres into new usable tyres by use of rubber as raw material, which involves a process.

Therefore, it is inappropriate to keep tyre remoulding units in the Commercial instead of the Industrial category.

Sasi Retreading Enterprises Pvt. Ltd. stated that the Commission might have inadvertently classified tyre retreading units in the Commercial category in the 2012 Tariff Order. They should be shifted back to the Industrial category as MSEDCL had not given any logical justification to classify tyre remoulding and retreading units in the Commercial category in 2012 Tariff proceedings. He also referred to the classification of tyre retreading as industrial by the Data Bank Division of the MSME Ministry, GoI.

Shri. Hemant Kapadia stated that the process of tyre retreading units is similar to a manufacturing process. Tyre retreading units were registered as Small Scale Units (SSI) and situated in Maharashtra Industrial Development Corporation (MIDC) areas. They should be reclassified under the Industrial category.

Shri. Suhas Khandekar stated that the total billing under the category of Crematoriums and Burial Grounds is low, and these are Public Services. No single individual uses this service frequently, and therefore its users will not be affected much by its tariff. Hence, he suggested merging this category with LT X (Public Service).

Shri. Suhas Khandekar and others stated that automobile workshops and repair shops are presently covered under the Commercial Tariff. However, the Industrial category contains 'Engineering Workshops', and all automobile workshops or other repair shops also have 'Engineering Activities'. Hence, all such entities should be treated as industries. Where workshops and showrooms are combined, the consumers can be asked to segregate the two and all the workshop-related activities can be billed under the Industrial Tariff through a separate sub-meter, and remaining on commercial basis. Till such separation, the Commercial Tariff could continue to be applicable to the entire unit.

SEAI, Alps Ice & Cold Storage Pvt. Ltd. and others stated that the Commission in its previous MYT Order might have inadvertently placed fisheries in the Industrial category (even though the activities of fisheries do not involve any manufacturing process), while activities like floriculture, horticulture etc. were classified as Agriculture - Others in the same Order. Thus, the Commission may (i) to consider re-categorization of fisheries in Agriculture – others or an appropriate category and (ii) merge the separate categorization of integrated sea food processing units in cold storages, other than the cold storages used for agricultural produce.

Navi Mumbai Cold Storage Owners Welfare Association stated that the Commission should give an exhaustive list of agriculture produce in the Tariff Order as there remains considerable ambiguity regarding what constitutes agriculture produce, due to which the beneficiary cold storages find it difficult to avail the concessional Tariff. If that is not possible, the Commission may, whenever a doubt arises, clarify whether a particular produce is agricultural produce or not.

Navi Mumbai Cold Storage Owners Welfare Association also stated that the Commission has clarified that allied activities undertaken in the premises of a consumer, like canteen, office club, swimming pool etc., should be billed as per the Tariff category of the consumer. Identical treatment can be given to the allied activities that are undertaken in a cold storage, provided such activities are for captive purpose. A certain percentage may be benchmarked, say 10% of the total load, for such allied activities which can be permitted to avail power supply from the main source, since getting separate power supply for such allied activities is most of the time technically not possible.

Shri. Suhas Joshi stated that cold storages do not involve any manufacturing activity and hence, should be classified under Commercial category. The Agricultural Tariff is presently applicable for agricultural cold storages; but many stockists and traders are taking undue advantage of this.

Roma Builders Pvt. Ltd. suggested that the Tariff for operating the Sewage Treatment Plants (STPs) by commercial and other entities be revised to LT-III, as applicable to STPs operated by Govt agencies and NGOs.

Strome Energy Pvt. Ltd. stated that no Contract Demand is required for fire pumps installed at Residential/Commercial complexes, as they are operated only for a few minutes during trials monthly or quarterly. Due to Demand Charges, higher costs are to be incurred although the pumps are required for emergencies. The Tariff for fire pumps should be without Demand Charges.

VIA suggested that common amenities at residential complexes should be brought under Public Services.

Shri. Suhas Khandekar suggested that Government/Private/Co-operative Housing Colonies (where electricity is used exclusively for residential purpose), only for common facilities like water pumping/street lighting/lifts/parking lots/fire fighting pumps/ premises (security) lighting, etc., should be shifted from Residential to Public Services (LT X).

Shri. Suhas Joshi stated that the Tariff for Group Housing Society HT (VI) is very low. He suggested that it should be at par with the Residential Category LT (1) as it is to serve a residential purpose only.

Shri. Hemant Kapadia pointed out that small manufacturing units are categorized as commercial activity, while HT consumers engaged in seed manufacturing continued with the Industry Tariff. In spite of Orders passed by the Consumer Grievance Redressal Forum (CGRF) and filing Petitions before the High Court, consumers such as 1) Sunrise Industries, Jalna 2) Markfield Seeds, etc. have suffered harassment and financial loss. The activity of seed manufacturing may be explicitly mentioned in the applicability list so as to make its status clear.

MCCIA stated that the Tariff for the proposed separate categories of HT and LT for educational institutions, hospitals, testing facilities, R&D centres should be less than that of the Commercial category. This will help these institutions provide better services at reasonable cost to society.

Shri. Hemant Kapadia objected to the fact that R&D units situated outside industrial premises are levied the Commercial Tariff, while those inside industrial premises are levied Industrial Tariff. Considering that research creates development and employment, all R&D units may be classified under the Industrial category and special concession should be given to such units.

Shri. Suhas Khandekar stated that the approved Tariff has been consistently very high for residential slabs of 500-1,000 units. For consumption above 1,000 units, the the monthly bill for residential consumers is higher than for commercial consumers. The real impact of higher residential Tariff is on hostels for students, orphanages or hostels for destitutes, besides common facilities in Housing Societies. Many such entities are running on charity and cater to socially and economically backward persons, and need financial support from every corner. He suggested that all students' hostels affiliated to educational institutions or students' hostels, working men/women's hostels and (i) homes/hostels for destitutes, persons with disabilities/handicapped persons, or mentally ill persons (ii) remand homes (iii) dharamshalas, (iv) rescue homes, (v) orphanages should be shifted to the Public Services LT X category.

Shri. Hemant Kapadia stated that the Tariff for advertisements and hoardings is the highest and 300 % more than ACoS, which is unrealistic and unjust. Advertisements and hoardings are part and parcel of any business activity, and should be merged with Commercial Tariff.

Shri. Suhas Joshi suggested that the following categories should be added in Commercial category (LT-II/HT-II):

A) All cold storages/godowns/ware houses B) Tissue culture C) Ice factory/ice parlour/chilling Plants D) Transformer repair workshops E) Purely R and D labs F) Testing labs G) Mobile towers and telephone exchanges H) Poultry/Hatchery/Fishery/Cattle farms I) Ports J) Service industries K) State Transport workshops/private workshops L) Stone/Fodder/Cane crushers M) Private hospitals and private educational institutions N) Cinema theatres O) Bulk supply consumers P) mixed load consumers Q) Consumers taking supply for resale of energy R) Interstate/Intrastate consumers S) Unregistered IT/ITES units/parks T) Unregistered industries U) Industries having no manufacturing activity V) Any non-manufacturing and non-residential activity which is not classified under other specific Tariff category.

Shri. Mahaveer Jain stated that all the four Distribution Licensees in Maharashtra have different Tariff categorization and definitions of PF penalty. The Electricity

Duty and other charges are also different. These should be harmonised across Licensees.

Mahindra Sanyo Special Steel Pvt. Ltd. and others referred to the ATE Judgment in Appeal Nos.13 of 2010 and 198 of 2010 and 42 of 2011 on the Appeal filed by Ispat Industries Ltd. against the Commission's Order on the issue of Voltage-wise Cost of Supply (VCoS). ATE had directed the Commission to create a separate category for Arc Furnace EHV consumers. Their demand profile varies, with peak demand being the highest at 40 MW and lowest at 1 MW. The base load demand is 7.1 MW for 80% of the time throughout the month, intermittent demand varies between 7.1 MW and 32 MW and the peak demand is 40 MW. Therefore, there is a genuine difficulty in maintaining the demand. They requested that a separate category, considering the load variation, be considered for Arc Furnaces and a single part Tariff specified as with Railway Tariffs (load variability of traction load). In the neighbouring State, the Chhattisgarh Electricity Regulatory Commission has also specified steel industries as a separate category, determined a lower Tariff as compared to other categories of consumers and introduced a new optional Tariff on Load Factor basis.

### ***MSEDCL's Reply***

#### **Tariff for Sewage Treatment Plants**

In its Tariff Order for FY 2012-13 (Case No. 19 of 2012), the Commission had ruled that the Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) owned, operated and managed by any agency other than Local Self-Government bodies (excluding Maharashtra Jeevan Pradhikaran) shall not be eligible for the LT-III Tariff. The rationale behind this categorisation was that there may be commercial motive if it is not completely under the ownership, operation and maintenance of the Local Authority. MSEDCL has not proposed any change in the current categorisation.

#### **Creation of Separate Category for Metros**

As per the previous MYT Order, the Commission had given the following rulings:

*"6.34.3 The Commission notes the ongoing development of Metro rail services in Maharashtra as a means of mass public transportation. However, at this stage, the Commission is not inclined to place the Metro rail services at par with Railways in terms of Tariff. The Commission is in the process of further understanding the powers requirement of Metro, and its Tariff has for the time being been determined on a two-part basis at a rate marginally higher than the Tariff applicable to Railways."*

*6.34.4 The Commission has decided to create a separate Tariff category for Traction purpose for Metro and Mono Rail. The other activities necessary for the operation of Metro/Mono Rail, including Stations and yards, shall be covered under HT IX (B): Public Service – Others category."*

*6.34.5 In case all the activities carried out at Metro Stations as well as the requirement for Traction are connected at a single point, then the Tariff for Metro rail will be applicable. However, if separate meters are available for usage other than Traction, such supply shall be billed as per the parent category of the usage.”*

MSEDCL has proposed Tariffs based on the existing framework of categories and sub-categories. It is not authorized to decide the Tariff category of consumers based on their usage of electricity. Those powers are with the Commission.

#### **HT Continuous/Non-Continuous Category, Tariff of IT/ITES Units and Cold Storages**

MSEDCL has proposed equal increase for both continuous and non-continuous supply categories.

Determination of Tariff and the Tariff philosophy comes under the purview of the Commission and it has the powers to determine the Tariff for various consumer categories.

#### **Ports**

Ports were under the HT-II Commercial category. However, in compliance of the ATE's Judgment dated 19 December, 2012, the Commission created a new category of HT X -Ports. MSEDCL is not authorized to decide the Tariff category of consumers based on their usage of electricity. These powers are with the Commission.

#### **Automobile Workshops and Repair Workshops**

Considering the commercial activities in automobile and any other type of repair centres, these are rightly categorized by the Commission in the Commercial category. MSEDCL has not proposed any change.

#### **Categorization of Railways and Monorail, Street Lights, Temporary Connections, Crematoriums and Burial Grounds**

MSEDCL has proposed Tariffs based on the existing framework of categories and sub-categories. The powers to decide the Tariff category of consumers based on their usage of electricity are with the Commission.

#### **Tariff of Poultry/Hatcheries /Fisheries**

As above.

#### **Tariff for HT VI - Group Housing Society**

As above.

#### **Addition of Activities in Commercial Category**

As above.

#### **Re-Categorisation of Tariff Category- Tyre Retreading**



As above.

### **Fisheries**

The Objector has asked for re-categorization of fisheries from the current Industrial category to Agriculture- Others. As per its Order in Case No. 42 of 2015 dated 13 May, 2016, the Commission has re-categorized fisheries in the Industrial category, stating that fish is a raw material and would qualify as activities to which Industrial Tariff would apply. Therefore, according to the Order No.42 of 2015 of the Commission, fisheries would be categorized as Industrial category. The same has been proposed by MSEDCL.

### **Separate Categorization of Integrated Sea Food Processing Units**

MSEDCL has proposed Tariffs based on the existing framework of categories and sub-categories. It is not authorized to decide the Tariff category of consumers based on their usage of electricity, which is within the purview of the Commission.

### **Consideration of Allied Activities**

The suggestion is noted. However, the powers to determine categorization and Tariff philosophy are vested with the Commission.

### **Different Tariff Logic and Criteria**

The Distribution Licensees are different entities serving in different areas having separate consumer mix and geographical spread. Therefore, it would not be appropriate to compare them. MSEDCL has been proposing Tariffs based on categories that are according to the existing framework. Powers to decide the Tariff category of consumers based on their usage of electricity are with the Commission.

### **Separate Tariff for Arc Furnaces**

MSEDCL has been proposing Tariffs based on the existing categories. It is not authorized to decide the Tariff category of consumers based on their usage of electricity. Those powers are with the Commission.

### ***Commission's Ruling***

Applicability of Tariff and consumer categorisation were among the issues most frequently raised during the public consultation process. In the Section on Tariff philosophy in Chapter 8 of this Order, the Commission has elaborated its views regarding consumer categorisation and applicability of Tariff for various categories.

## **2.17 Separate Tariff for EHV Consumers**

### ***Objections/Suggestions***

MSSSPL stated that the Commission, in its Reply in Appeal No.230 of 2015, had stated that the EHV rebate is an alibi for a separate tariff for EHV consumers. EHV rebate is provided to share the operational efficiency gains to the Distribution Licensee

that EHV consumers bring to the distribution system, and cannot be treated in line with separate categorisation of consumers.

ASPAI suggested an upward increase in the EHV benefit from 3% to 10%, so that the minimal Transmission Loss from this category is recognised.

***MSEDCL's Reply***

MSEDCL has not proposed any change in the present incentives/rebates/penalties. Their determination is within the purview of the Commission.

**Increase in EHV Rebate**

The Commission has already decided the issue in Case No. 113 of 2014 as under:

*“10. In view of the foregoing, the Commission clarifies that it has provided in its Order a rebate for EHV supply computed on the base Energy Charge plus ToD charge. FAC or other charges are not included for the purpose of computation of the rebate.”*

***Commission's Ruling***

In pursuance of the methodology for Tariff design specified under the MYT Regulations, 2015, the Commission, in this Order, has un-bundled the Energy Charge (now termed as Variable Charge) into a 'Wheeling Charge' component and an 'Energy (Supply) Charge' component. This segregation of Wheeling Charges from the Energy Charge would result in Tariff differentiation for HT consumers connected at EHV (66 kV and above), 33 kV and 22kV & 11 kV. The tariffs of HT consumers connected at EHV and at 33 kV levels, comprising around 46% of the total HT energy sales, have been reduced significantly due to such segregation of Wheeling Charges. In effect, HT consumers have been further classified based on the basis of voltage level, i.e. EHV, 33 kV and 22 kV and 11 kV. Accordingly, the Commission has kept in view the ATE's direction for creating a separate consumer category for EHV consumers.

The Commission in this Order has determined a separate tariff for the EHV voltage level. Therefore, it has discontinued the EHV Supply Rebate.

**2.18 Merger of Continuous and Non-Continuous Supply Categories**

***Objections/Suggestions***

Shri. Suhas Khandekar stated that, in the previous MYT proceedings, MSEDCL had proposed merging the continuous and non-continuous consumer sub-categories, but the Commission decided to only reduce the gap in Energy Charges between these two to 50 paise per unit, and gradually reduce the difference. In MSEDCL's present Petition, the difference is increasing every year, which needs to be reversed.

Industrial Metal Powders (India) Pvt. Ltd., Shri. Suresh Sancheti, One up Advisors, and Consultants Pvt. Ltd. stated that it is high time that both categories (HT-1 Continuous and Non-Continuous) are merged. The entire capital expenditure for

express Feeder consumers and its maintenance is done by the consumer, which is a great relief to MSEDCL.

Shri.Hemant Kapadia pointed out that 60% to 70% of HT express Feeder consumers, including consumers on EHV Feeder (132 & 220 KV), have opted for change in category. There should now be only a single category.

VIA challenged MSEDCL's submission made at para 6.16 (Volume 1A) of the Petition praying for review of the directions regarding change in Tariff from continuous to non-continuous and restricting the option to only once during the financial year. MSEDCL have cited the SoP Regulation 4.13 (b). The SoP Regulations are notified in compliance of Section 57 of EA, 2003, which is for giving time bound services to consumers. It does not override the right of MSEDCL to reject the application of a consumer if it is not as per the directives in the Tariff order. There cannot be two Tariffs for a single consumer. The need for change in Tariff arises only when the consumer changes the purpose of use.

#### ***MSEDCL's Reply***

In its earlier Petition, MSEDCL had proposed merger of express and non-express Feeder consumer category. However, the Commission had not accepted it. Considering the Commission's in the previous MYT Order, MSEDCL has retained separate continuous and non-continuous categories.

Further, the Petition before the Commission on the issue of revenue loss due to consumers exercising choice between continuous and non-continuous supply is still pending (Case No. 94 of 2015).

#### ***Commission's Ruling***

The Commission has decided to merge the sub-categories, viz. continuous and non-continuous. The Tariff philosophy and applicable Tariff for these has been elaborated in Chapter 8 of this Order.

### **2.19 Separate Category for Consumers of 1 MW and Above**

#### ***Objections/Suggestions***

Shri. Jayant Deo stated that there is a need to segregate bulk consumers having more than 1 MW requirement from non-bulk retail consumers. By clubbing such bulk consumers with other non-subsidised retail consumers while determining Tariff, the non-bulk and non-subsidised retail consumers are bearing the brunt of power utilized not only by the subsidised consumers, but also by the bulk consumers. He, therefore, suggested segregation of bulk consumers having more than 1 MW consumption from retail consumers to rationalize this aspect of the power market, to bring about proper implementation of OA in Maharashtra, to foster competition between entities supplying power to the end user, and also to secure justice for the retail consumers.

Balaji Electro Smelters Ltd., Shri.Gurpreet Singh Bagga, CMIA suggested introduction of a new category for industrial consumers with 1 MW and higher Contract Demand by levying competitive Tariffs in comparison to OA providers for a temporary period till the Industry category Tariffs of MSEDCL reach the competitive levels of OA providers.

Shri. Hemant Kapadia stated that MSEDCL is creating many hurdles for consumers who opt for OA or desire to purchase power from suppliers other than MSEDCL. He referred to the EA, 2003 regarding the need for competition, and suggested that a separate sub-category be created for OA consumers.

Prayas suggested that consumers with Connected Load of more than 1 MW should be encouraged to enter into fixed term contracts with MSEDCL at mutually agreed Tariffs.

#### ***MSEDCL's Reply***

The Commission has already addressed the issues relating to consumers having Contract Demand of 1 MW in Case No. 50 of 2012.

#### ***Commission's Ruling***

In its Order dated 02 January, 2013 in Case No. 50 of 2012, the Commission has deliberated and addressed the issues relating to Tariff determination for consumers having Contract Demand of 1 MW and above. In that Order, the Commission observed that the option of OA provided under Section 42 is an enabling provision and should not be interpreted to mean that all such consumers must necessarily avail OA. Therefore, while determining the Tariff, it would not be appropriate to discriminate between consumers based on their eligibility for availing OA. Hence, the Commission has not determined a separate Tariff for consumers with loads of 1 MW and above.

The consumers with Contract Demand above 1 MW are eligible to avail OA. The determination of Wheeling Charges and CSS has a bearing on the OA transactions. The Commission has elaborated the rationale and principle for determination of Wheeling Charges and CSS separately in this Order. All other categorization related changes are dealt with in Chapter 8.

### **2.20 Time-of-Day Tariff**

Balaji Electro Smelters Ltd., Vidyut Urja Equipments Pvt. Ltd. and others stated that it is beneficial for MSEDCL if the consumer avails more power at night by taking advantage of night ToD rebate. A decrease in the Night Tariff rebate from Rs.2.50/kwh to Rs.1.50/kwh has resulted in some industries moving out to OA, thereby reducing the night consumption. To enable more consumers to shift their load, which will help in flattening the load curve and to attract OA consumers, the Commission should extend the Night Tariff Rebate upto 12 hours or increase it to 300 paise/kWh.

MSSSPL, ASPAI, MASSIA and others stated that reduction in ToD benefits from Rs. 2.5/unit to Rs. 1.5/unit has resulted in financial loss to consumers. Hence, it should be restored to Rs. 2.5/unit. Parbhani Jilha Ginning Pressing Association stated that, to promote the industry as well as to boost production in the State, ToD incentive of Rs. 1.50 per unit should be increased to Rs. 3.00 per unit.

Shri. Mahaveer Jain stated that, as per MSEDCL data, the peak hours are different from what is fixed currently. Peak hours are hours when there is very high load, which is between 11 am and 4 pm. The peak hours set currently are 6:00 to 9:00 am and 6:00 to 10:00 pm. The Commission should analyse the real peak hours load for load management

Shri. Lalji Ramji Salva, Navi Mumbai Cold Storage Owners and others stated that the benefits of ToD tariff should be extended to all cold storages, including those which are meant for agriculture produce.

Federation of Industries Association, Vidharbha stated that MSMEs normally work in general shift (9.00 am to 5.30 pm) and thus have to bear higher peak hour charges. These cannot be compensated by off-peak hours low charges, as they cannot work during night hours. This will kill the MSME sector which is a major employment generator.

### ***MSEDCL's Reply***

The powers to decide the Tariff category, charges, incentives, penalties and rebate applicable to all categories of consumers based on their usage are with the Commission.

### ***Commission's Ruling***

The Commission has carried out an analysis of hourly data of the past years and of the daily load pattern and need for revision of ToD tariff, as set out in Chapter 8 of this Order.

## **2.21 Load Factor Incentive and Power Factor Incentive**

Western Maharashtra Steel Manufacturers' Association, Dindori Industrial Association and others stated that the proposed Load Factor discount should begin at 60% rather than the current 75%, and the maximum discount should be increased to 25% from the current 15%. It also stated that in attempting to use cheaper power at night, the Contract Demand level is exceeded at times. As a result, these night units are used instead of being wasted. Therefore, no penalty should be levied on the excess demand at night.

Balaji Electro Smelters Ltd. stated that some consumers are exceeding Contract Demand in the night hours and paying only a marginal penalty on the exceeded Contract Demand and enjoying higher more Load Factor incentives at the same time.

ASPAI stated that the Load Factor incentive should be allowed at 50% load for Electric Arc Furnace-based alloy steel industries, and Power Factor incentive should be maintained at 7%.

Vidyut Urja Equipments Pvt. Ltd. stated that, to ensure that consumers are not exceeding Contract Demand in night hours, the Load Factor formula should be changed in such a way that if the contracted demand is exceeded, 100% of consumption on the exceeded Contract Demand during night hours would not be considered for calculation of Load Factor incentives.

### **MSEDCL's Reply**

MSEDCL has not proposed any change in the present incentives/rebates/penalties.

### ***Commission's Ruling***

The Commission has not revised the Load Factor and Power Factor incentives, as explained in the Section on Tariff philosophy.

## **2.22 Open Access and Wheeling Charges**

Tata Motors, Owens Corning and others stated that, contrary to the EA, 2003 and the National Tariff Policy, the rate of CSS is progressively increasing instead of reducing. Tata Motors further stated that, instead of MSEDCL trying to improve its performance, it is trying to cover its inefficiencies by imposing Additional Surcharge and CSS on OA consumers, which is killing OA mechanism.

Hindalco Industries and Owens Corning referred to the ATE judgment in the matter of Steel Furnace Association of India vs. Punjab State Electricity Regulatory Commission (Appeal No.38 of 2013), and stated that during power cuts/load shedding, the OA consumer is not procuring any electricity and the Distribution Licensee is under no obligation to supply power during this period. Therefore, there is no question of levying surcharges in the form of CSS and Additional Surcharge by MSEDCL. If Additional Surcharge is to be imposed, it should be imposed only on consumers reducing their Contracted Demand.

Tata Motors, Balaji Electro Smelters Ltd., and others objected to the proposed Additional Surcharge on OA consumers. Such unjustified charges make the OA business financially unviable in the State.

Steel Authority of India Ltd., Chandrapur stated that levy of CSS on industrial consumers has made their operations unviable due to which many power-intensive industries have set up their own Captive Power Plant (CPP) to ensure availability of reliable and economic power. This shifting of industrial consumption has resulted in availability of adequate power, reduction of Transmission and Distribution (T&D) Loss and improved the energy efficiency of industries. The proposed levy of Additional Surcharge on CPPs is against the provision of the EA, 2003 and will make operation of these industries unviable and may force them to shut down their CPPs.

CMIA, Asahi India Glass Ltd., Praxair India Pvt. Ltd., and others stated that MSEDCL's proposal of Additional Surcharge should be rejected, as MSEDCL has not conclusively demonstrated that the obligation of existing power purchase commitments continues to be stranded.

MSSSPL and ASPAI stated that, till all categories of consumers are supplied with 24/7 power, there cannot be any case for approval of Additional Surcharge for OA.

VIA stated that the 'obligation to supply cost' cannot be more than Demand Charges determined by the Commission. These Demand Charges, when converted from per kVA to per kWh terms, come to around Rs. 0.40 per unit. Hence, the Additional Surcharge cannot exceed Rs. 0.40 per unit for OA consumers. Indoworth India Ltd. also stated that Fixed Charges for stranded capacity cannot be recovered from consumers as there is no obligation to supply power to OA consumers. Hence, the Additional Surcharge should not be levied on OA consumers.

Shri. Mahendra Jichkar stated that many consumers of MSEDCL are opting out for OA as the Tariff of MSEDCL is the highest amongst the nearby States. Instead of imposing any further charges, MSEDCL should provide a Tariff which is affordable and in line with the other power sources. MSEDCL need to put in efforts to bring back these consumers.

Shri. Pratap Hogade, MVGS stated that the backed down capacity should be brought to the optimum minimum level and no Fixed Cost obligation should be allowed to any suppliers. The long-term PPAs should be revised or revoked as may be required.

Videocon Industries Ltd., Jain Irrigation Systems Ltd., Piaggio Vehicles Pvt. Ltd., and others stated that the Commission should investigate the cause of stranded capacity so that consumers are not penalized.

CMIA, MASSIA, Shri Hemant Kapadia and others stated that the minimum requirement of 1 MW load should be reduced to 500 kW for eligibility to source power through OA. MASSIA further suggested that a group of MSMEs collectively consuming 500kW may also be made eligible for OA.

The Institution of Engineers (India), TechNova Imaging System (P) Ltd., and others stated that the 22 kV Feeders of the old network are overburdened with the wheeling loss/charges of 11 kV Feeders. 22 kV Feeders need to be treated at par with 33 kV Feeders to avoid overcharging of wheeling losses and charges. This is a major obstruction to 22 kV Feeder consumers to avail OA power, which needs to be removed.

Hindalco Industries Ltd. and Owens-Corning (India) Pvt. Ltd. objected to the increase in Wheeling Charges for 11/22/33kV. Such high Wheeling Charges would render OA unviable and defeat the very intent of EA, 2003.

The Institution of Engineers (India), Shri Tarun Agarwal and others stated that the DOA Regulations, 2016 allowed power trading on Power Exchanges on day-ahead

basis. However, MSEDCL is creating hurdles in the implementation of the new DOA Regulations, 2016, and suitable practice directions need to be issued to implement the Regulations smoothly for Power Exchange transactions.

### ***MSEDCL's Reply***

#### **Cross-subsidy Surcharge**

The EA, 2003 defines "Open Access" and inter-alia mandates the Commission to determine "Cross-subsidy Surcharge", "Additional Surcharge" and other applicable charges payable by consumers opting for OA. The National Electricity Policy which also provides for recovery of CSS from OA consumers.

MSEDCL has sought recovery of the Revenue Gap and proposed revised Energy Charges. Accordingly, the ABR of existing consumers of MSEDCL is changing. The change in ABR of consumers further results in change in CSS being paid/ payable by the existing OA consumers. Since Section 42 of the EA, 2003 also states that the CSS needs to be utilized to meet the requirements of current level of cross-subsidy within the area of supply of the Distribution Licensee, there is a need to re-determine the CSS to maintain the proposed level of cross-subsidy, to be paid by consumers availing OA at that point of time. Accordingly, MSEDCL has proposed the CSS.

#### **Additional Surcharge**

MSEDCL has implemented the Intra-State Availability-based Tariff (ABT) in Maharashtra since 1 August, 2011 and the Maharashtra State Load Despatch Centre (MSLDC)/Distribution Licensees are granting approvals/consent to OA consumers for purchase and sale of power through OA as per the DOA Regulations. Accordingly, OA consumers are now buying a considerable quantum of power under OA. On the other hand, MSEDCL has tied up a sufficient quantum of power considering the overall growth. This results in stranded generation capacity and under-recovery of fixed cost. Hence, there is need for determination of Additional Surcharge payable by OA consumers.

MSEDCL is in a peculiar situation, wherein it has tied up sufficient quantum of power, after due approval of the Commission by considering the overall growth in the State and, therefore, for upcoming consumers also; and on the other hand the OA users are not availing power supply from MSEDCL. As a result, this generation capacity tied up by MSEDCL remains idle. In such situation, MSEDCL needs to back down the generation. However, it has to pay Fixed (Capacity) Charges to the Generators as per the terms and conditions of the PPAs irrespective of the utilisation of generation. This burden of fixed cost is affecting the viability and sustainability of operations of MSEDCL. This ultimately affects the end consumers who are buying power from MSEDCL.

In such situation, it would be appropriate that an Additional Surcharge is determined and made applicable to OA consumers as per the provisions of Section 42 of the EA,



2003. Clause 5.8.3 of the National Electricity Policy also provides for recovery of Additional Surcharge from OA consumers, as does Clause 8.5 of the Tariff Policy, 2016. Regulation 14.8 of the DOA Regulations, 2016 also outlines the principles for determination and levy of Additional Surcharge.

MSEDCL has tied up with sufficient capacity to meet the future demand, which was projected based on then prevailing demand growth. However, now certain consumers have opted for OA, resulting in stranded generation capacity. In order to reduce the unnecessary burden of payment of Fixed Charges due to such stranded capacity, MSEDCL has proposed to recover Additional Surcharge from OA consumers to that extent.

The calculations show that the backed down capacity is higher than the OA capacity. Therefore, that part of the backed down generation capacity is due to OA. In case the OA consumers had availed power from MSEDCL, the backed down capacity might have been limited to that extent.

The detailed methodology along with the backed down quantum and fixed cost obligation is provided in the Petition.

#### **Levy of CSS and Additional Surcharge during power cuts**

MSEDCL is supplying 24/7 quality power to industries and is in a surplus situation, and load shedding is being carried out for other consumer categories only in case of technical constraints. Thus, MSEDCL is in a position to supply power to the consumers opting for OA, and also has a Universal Service Obligation (USO) to supply power to all consumers within its Licence area.

The ATE Judgment referred to is not applicable in the present case, and the levy of CSS and Additional Surcharge is applicable in line with the MYT Regulations, 2015 and DOA Regulations, 2016.

#### **Wheeling Charge and Wheeling Loss**

MSEDCL has proposed Wheeling Charges and losses based on the existing framework of categories and sub-categories.

#### ***Commission's Ruling***

The Commission has dealt with the issues relating to OA Charges as well as the retail Tariff applicable to eligible OA consumers in Chapter 8 of this Order.

The DOA Regulations, 2016 have been notified only a few months ago after due public consultation. During that process, the Commission, after due consideration, had decided to retain the minimum eligibility requirement of 1 MW for sourcing power through OA as more appropriate and feasible.

While the option of OA available to eligible consumers is intended to encourage competition and choice, exercising such choice would depend upon several factors, including the retail Tariff of the Distribution Licensee and the applicable OA charges.

In Chapter 8, the Commission has dealt with the determination of Wheeling Charges, CSS and Additional Surcharge, which have an important bearing on OA transactions. It has also revised the retail Tariff for the Industrial and Commercial categories, which predominantly include the eligible OA consumers. The interplay of these and other factors would determine the evolution of OA transactions in the State.

### **2.23 Non-Recovery of timely Subsidy from GoM**

Shri.Mahaveer Jain stated that the GoM due of Rs. 2,650 crore (FY2014-15) is a serious issue, and the subsidy against tariff offered by GoM must be accepted only if advance payment is made to MSEDCL.

Shri.Tarun Agarwal stated that the Agriculture arrears of Rs.13,948 crore should be claimed from GoM as subsidy instead of putting that burden on other categories.

The Institution of Engineers (India) stated that, as per Section 65 of the EA, 2003, if the State Government requires the grant of subsidy to any class of consumers in the Tariff determined by the State Commission, the State Government shall pay the amount in advance to the Distribution Licensee.Hence, in the absence of subsidy payment from GoM, theCommission should not pass this burden on other categories and the subsidy for the Agriculture category should be claimed from GoM instead.

Shri.Jayant Deo stated that the subsidised rates for Agriculture should be permitted up to a pre-defined level of consumption, beyond which a Tariff that reflects the efficient cost of service should be charged. Shri Deo, Century Rayon, Federation of Industries Association, Vidarbha and others stated that subsidy to genuine consumers should be routed through Direct Benefit Transfer (similar to LPG subsidy) to the Bank accounts of the concerned consumers. .

Federation of Industries Association,Vidharbha stated that MSEDCL has manipulated the agriculture subsidies to lower the T&D loss figure, which needs to be verified. Further, the subsidies offered by GoM on various accounts shouldnot be loaded on consumers but should be compensated by GoM.

#### ***MSEDCL's Reply***

MSEDCL is regularly getting subsidy on the concessions declared by the GoM. Electricity Duty (ED) and Tax on Sale of electricity (TOSE) are being collected on behalf of GoM, and is being adjusted against the subsidy. In view of the practical difficulties, the processes involved at the Govt. Level and the amount available through ED and TOSE, MSEDCL is getting the subsidy amount as good as in advance from GoM. After the periodic reconciliation of payables and receivableswith GoM, necessary GR for such adjustment is being issued by the GoM.

#### ***Commission's Ruling***

The Commission has noted the objections in this regard, and MSEDCL's replies. Section 65 of EA, 2003 specifies that the Licensee will have to be paid an equivalent

amount in advance in case the Government requires the grant of any subsidy to any consumer or class of consumers in the Tariff determined by the Commission.

## **2.24 Metering Faults, Meter Reading and Billing Issues**

### ***Objections/Suggestions***

Shri.Mahaveer Jain stated that there is a loss of Rs. 150 crores due to the time gap between generation of bills and meter readings. He proposed the following timelines for generation of bills:

- a) Bill amount above Rs. 10lakh- Within two days.
- b) Bill amount above Rs. 1 crore- Date of meter reading.

The average time for generation of bills must be brought down to around three to five days in FY 2016-17. Tapa Power Co. Ltd (Distribution) (TPC-D) and Reliance Infrastructure Ltd (Distribution) (RInfra-D) are generating bills in one to three days.

Shri.Mahaveer Jain also stated that the billing pattern of the four Distribution Licensees are different. Also, complete information is not provided in the soft copy of bills and the duplicate bills by MSEDCL appropriately.

MVGS, Buldhana stated that bills issued to agricultural consumers in Buldhana District are found to be mostly erroneous. Strict instructions should be given to avoid billing malpractices/wrong billing.

Adv. Anil N. Chavan asked that subsidies, Transmission and Distribution LossCharges, base energy rates, FAC, etc. should be included in consumer bills.

Balaji Electro Smelters Ltd., Vidyut Urja Equipments Pvt. Ltd., and others stated that MSEDCL had given contracts for photo meter reading of consumers but many irregularities were reported by consumers. No penalties are imposed on outsourcing agencies for their deficiencies. Moreover, there is no outsourcing for agriculture metering, and even upon request by farmers the staff of MSEDCL is also not taking the readings.

Urja Sahayog questioned whether 100% meters of all categories are in working condition. It also questioned the time taken by MSEDCL to issue the first bill from the date of connection. Adv. Rajesh Shah stated that meters installed by MSEDCL are faulty.

### ***MSEDCL's Reply***

#### **Outsourcing of Meter Reading**

The defaults of the photo meter reading agencies are being dealt as per the provisions of the agreements.

### **Faulty Meter Installation**

The Objectors have made certain allegations regarding faulty meter installation by MSEDCL without proper supporting documents. If they provide additional details, MSEDCL will look into the matter.

The meter can fail, and whenever such faulty meter is detected/reported, appropriate action for meter replacement is taken.

### **Delay in Billing**

Generally for HT and LT Category (>20 kW) consumers, the bills are issued by fifth of every month. For other LT Category consumers also, MSEDCL tries to provide bills within five days of meter reading. However, due to various reasons the bills may get delayed. MSEDCL is trying to improve this to the extent possible.

Regarding the standard pattern of billing, MSEDCL has noted the suggestion made.

Regarding the time gap between the date of connections and issue of first bill, MSEDCL endeavours to provide timely bills to consumers.

### **Charges to be shown in Bills**

The Energy Charges and FAC are already mentioned in the bills raised by MSEDCL and subsidy details are also specified whenever applicable. There is no such charge as Transmission and Distribution Loss charge being levied on consumers, and therefore it is not mentioned in consumer bills.

### ***Commission's Ruling***

The Commission has taken note of the deficiencies pointed out in the customer related processes and service delivery related issues, which not only affect the consumers but also result in Commercial Loss for the Distribution Utility. Addressing the billing process related issues is critical and should be taken up on priority, as improving billing and collection cycle efficiency would ease the liquidity position for MSEDCL as well.

The Commission notes MSEDCL's submission during the Hearings regarding the initiatives it has recently taken for mobile alerts and the introduction of a mobile-based application. MSEDCL should explore further expansion of its mobile applications to enhance other customer outreach and awareness activities.

MSEDCL should review its billing related processes, identify current limitations/gaps and areas for improvement and take corrective steps and monitor the implementation of necessary actions at the highest level. MSEDCL may also conduct a third-party process audit of its billing processes, including audit of its billing software/system.

## **2.25 Standards of Performance, and efficiency in administration**

### ***Objections/Suggestions***

Rubcomp Industries Pvt. Ltd. stated that quality power should be supplied 24/7 and the SoP Regulations should be amended to enforce this.

VIA stated that the number of cases of faulty meters is very high and MSEDCL needs to tackle this issue on urgent basis.

Forstar Frozen Foods Pvt. Ltd. and many others stated that the management of MSEDCL must be improved and administrative and technical expenses should be brought down.

Ginning Pressing Association, Parbhani stated that MSEDCL should use quality material. For better quality service, MSEDCL should use technologies like video conferencing and move towards 'paper less' systems.

Prayas stated that the steep increase in O&M and capital expenditure has not resulted in improvement in supply quality, and no public consultation is taken for compliance with the SoP. No analysis of reliability indices, Feeder load data, and load shedding and load management has been provided. There are large variation in interruption numbers (>15 min) and interruption hours (> 15 min.) between urban and rural areas. For example, the average duration of interruption in Pune district in FY 2015-16 in rural areas and urban areas was 35 Hours and 11 Hours 15 minutes, respectively.

Shri. Suhas Joshi stated that there are frequent power failures due to faulty and overloaded systems during the monsoons.

Shri. Suhas Joshi suggested that MSEDCL undertake austerity measures. It should minimize expenditure and stop unwanted expenditure. MSEDCL should analyse this. MSEDCL should keep a vigil on four departments, namely power purchase Section, material management Section, infra/projects Section and civil department. He asserted that the material management Section should buy all materials through e-tendering only, and that too at the central level, and purchases at the Zonal level should be stopped immediately.

Bhagwati Steel Cast Pvt. Ltd. contended that Power Factor needs to be improved. It is getting 30 kV instead of 33 kV, which it had reported to MSEDCL. This affects the Load Factor and damages its costly equipments.

Nashik Industries & Manufacturers Association and Ambad Industries Manufacturers Association stated that quality powershould be supplied 24/7. Further, the SoPRegulations should be amended to provide that normal fuse-off calls should be attended to in one hour in cities and threehours in rural areas.

Shri. Arvind Bhaskar Gadakh stated that farmers are not getting quality power supply resulting in a tendency not to pay bills.

### ***MSEDCL's Reply***

Regarding quality and 24/7 power supply, MSEDCL follows procedures and strives to complete the activities within the time lines mentioned in the SoP Regulations. However, there may be delay in certain cases due to unforeseen conditions. Still, the consumer can seek the desired information at some other appropriate forum, and it does not fall within the purview of the present Petition.

### **Strong Professional and Technical Management**

MSEDCL works as per the EA, 2003 and Rules and Regulations specified by the Commission. It has the adequate technical and managerial workforce and regularly uses modern technology in day to day work.

Regarding austerity measures, MSEDCL noted the suggestions/observations.

### ***Commission's Ruling***

The Commission observes that adherence to the SoP Regulations by Distribution Licensees and compliance monitoring thereof is crucial. The Commission has been dealing with several cases in which CGRFs have given directions which are not implemented or delayed.

In its previous MYT Order, the Commission had directed as follows:

*“...The Commission hereby directs MSEDCL to update the performance indices on a monthly basis on its website and also submit quarterly report to the Commission in accordance with Regulation 10.3 of the MERC (Standard of Performance of Distribution Licensees, period for giving supply and determination of compensation) Regulations, 2014.”*

The compliance of this directive has been analysed in Chapter 7 of this Order. However, specific instances of non-compliance or delay in compliance cannot be addressed in the present proceedings.

In this context, MSEDCL has mentioned during the Public Hearings the mobile based application launched by it which enables consumers to access certain services. As per MSEDCL, amongst various other functionalities available on the mobile app, there is also a provision to register and track power failures.

MSEDCL may also use the electricity bills as well as the mobile application as important communication/outreach tools for consumer awareness.

## **2.26 Fatal System Incidences and Planning for Safety System Upgradation**

### ***Objections/Suggestions***

Urja Sahayog stated that MSEDCL has a large number of fatal accidents and ranks 2nd in the country. The fatal accidents are due to improper maintenance practices and the burden of compensation paid is passed on to the consumers.

Adv. Anil N Chavan stated that power quality and safety should be maintained to reduce pilferage in the transmission and distribution network and to avoid accident and fire due to high voltage surge in residential lines.

***MSEDCL's Reply***

MSEDCL is very much concerned about the safety and Distribution Losses and is committed to reduction of Distribution Losses.

Electrical accidents occur for various reasons such as fault in the distribution line, due to natural calamity, due to heavy rains etc., and not all accidents occur due to poor maintenance. Utmost care is taken by MSEDCL to avoid any sort of accidents. However, such incidences of accidents are investigated and appropriate action as may be required is taken.

***Commission's Ruling***

Strict adherence to safety standards and protocols need to be followed to avoid accidents, and regular monitoring and upkeep of safety devices, training of operating staff and consumers is equally important. The Commission's observations regarding compliance of the earlier directive has been elaborated in Chapter 7.

**2.27 Audit Reports, and Comments of Auditor*****Objections/Suggestions***

Shri. S. Y. Kelkar, Shri. R.K Sharma of Siyaram Silk Mills Ltd., Shri. Anil Agrawal, and others stated that the Commission should periodically review all Audit Reports and comments of the Auditor as MSEDCL is a GoM Company and answerable to the people of Maharashtra.

***MSEDCL's Reply***

MSEDCL submits its Audited Accounts to the Commission during every true-up exercise. Accordingly, it has submitted the Audited Accounts for FY 2014-15 to the Commission for scrutiny and analysis.

***Commission's Ruling***

The Commission undertakes the true-up of every financial year considering the Audited Accounts.

**2.28 Energy Conservation*****Objections/Suggestions***

Shri. Mahendra Jichkar stated that energy conservation must be made compulsory and special incentives should be granted for consumers saving energy. Shri. Mahaveer Jain stated that there are ample opportunities to save costs through energy conservation, which MSEDCL could have implemented. He suggested that new buildings with façade should mandatorily use at least 30% Solar and Biogas from STP/waste. He referred to Haryana State, where it is mandatory for new buildings having load more than 100 kVA to generate at least 10% of Solar power.

***MSEDCL's Reply***

MSEDCL has noted the suggestions. MSEDCL has also started some energy-savings Demand-Side Management Measures measures such as installation of 5 star rated fans and replacement of large AC/chillers(including white roofing), etc.

Regarding new buildings having load more than 100 KVA, MSEDCL is not authorized to make such provision.

***Commission's Ruling***

The Commission has kept in view the key objectives of EA, 2003, including promotion of competition, protection of the interest of consumers and encouraging economy and efficiency in the use of electricity. The Commission has to balance the promotion of efficient use of electricity through appropriate price signals and the reasonableness of Tariff, without Tariff shock to any category. Further, the Commission approves DSM expenses which would encourage adoption of energy efficiency measures, and has set up a mechanism for separate analysis and approval of such programmes under its DSM Regulations. In general, MSEDCL should encourage its consumers, particularly new establishments, townships and growth centres for deployment and use of energy-efficient appliances and BEE certified star rated appliances. It should undertake consumer education and awareness campaigns and also develop an action plan for deployment of such appliances at its own establishments.

**2.29 Voltage-wise Cost of Supply**

***Objections/Suggestions***

Inox Air products Pvt. Ltd., MSSSL, and ASPAI stated that MSEDCL should determine the Tariff based on VCoS, in compliance to the directives issued by ATE.

Balaji Electro Smelters Pvt. Ltd., and Vidyut Urja Equipments Pvt. Ltd. stated that the Commission is providing power Tariff rebates of 3% to EHV consumers. MSEDCL has provided the voltage-wise cost for FY 2016-17 on the basis of assumption in compliance with the ATE Order. Hence, the Commission should allow voltage-wise Tariffs to EHV, 33 kV and 11 kV level consumers.

***MSEDCL's Reply***

MSEDCL has been complying with the directives regarding VCoS based on the approach and methodology adopted by the Commission in previous Tariff orders. It has been computing VCoS based on the best available information pertaining to voltage-wise losses/network costs/segregation of Gross Fixed Assets (GFA). In its previous MYT Order, the Commission has approved the VCoS which is in line with ATE. On similar lines, in the present Petition also, MSEDCL has provided the methodology and calculations of voltage-wise cost.



***Commission's Ruling***

The Commission has dealt with this issue in Chapter 8

**2.30 Distribution Franchisees*****Objections/Suggestions***

CREDAI - Nagpur Metro asked the Commission to review the DF related operations of MSEDCL. The Report of the Fact-Finding Committee on the operations of SNDL Distribution Franchisee for Nagpur submitted to GoM should be made public.

Shri. Hemant Kapadia stated that, out of the three DFs appointed by MSEDCL in Nagpur, Aurangabad and Jalgaon, the agreement of two, namely GTL of Aurangabad and Crompton of Jalgaon, has been terminated for default in payment. MSEDCL is yet to recover Rs. 252.37 crore from these DFs, and is passing this burden on to consumers through the ARR. The Commission should direct MSEDCL to submit the audited balance sheet of these three DFs. Nagpur City (District) Congress Committee stated that consumers are aggrieved by SNDL's operation, and urged that the SNDL Franchise be terminated and its operation transferred to MSEDCL. The functions of the Nagpur DF and its powers should be clarified to the consumers.

Shri. Vikas Thakre, former Mayor of Nagpur, stated that SNDL is not experienced in the field and there are frequent interruptions in electricity supplied. He also highlighted the pending dues of SNDL.

Shri. Sanjay Dharmadhikari stated that no action has been taken on the Report of the Fact-Finding Committee on the operations of the SNDL Distribution Franchisee.

***MSEDCL's Reply***

As regards the amounts to be recovered from DFs, the final termination Accounts as per the provisions of the Distribution Franchise Agreements (DFAs) are being processed. However, as per the DFA provision, penal interest is charged @ 18% p.a. quarterly compounded. Accordingly, while finalizing the final accounts of DFs, penal interest has been charged to them. The amount including the penal interest is being recovered from the DFs.

***Commission's Ruling***

The Commission has noted the objections and submissions made by MSEDCL. MSEDCL should furnish the detailed status of the collection of arrears from the DFs in its MTR Petition, along with a review of their performance.

### 3 TRUE-UP OF FY 2014-15

#### 3.1 Background

MSEDCL has sought Truing-up of the ARR for FY 2014-15 considering actual expenditure and revenue as per the Audited Accounts and in accordance with the MYT Regulations, 2011. It has submitted reasons for differences between the actual expenses for FY 2014-15 as compared to those approved in the previous MYT Order.

The analysis underlying the Commission's approval for true-up of FY2014-15 is set out in the following Sections.

#### 3.2 Sales in FY 2014-15

##### *MSEDCL's Submission*

MSEDCL has submitted the actual category-wise sales in FY 2014-15. Total sales excluding sales of all DFs amounted to 84,017 MU, while the corresponding sales level approved in the previous MYT Order was 80,211 MU. Category-wise actual sales for FY 2014-15 for MSEDCL excluding the DF areas are summarised in the following Table.

**Table 3-1: Category-wise Sales for FY 2014-15(excluding DF areas), as submitted by MSEDCL (MU)**

Category	Previous MYT Order	Actual	Deviation
Residential	16,415	16,388	(27)
Commercial	5,745	5,732	(13)
HT-Industries	23,743	23,540	(203)
LT-Industries	5,725	5,714	(11)
PWW	1,885	1,897	12
Street Light	1,467	1,430	(37)
Agriculture	22,432	26,521	4,089
Public Services	986	984	(2)
Railways	1,433	1,437	4
Others	390	386	(4)
PD Consumers	(9)	(10)	(1)
<b>Total</b>	<b>80,211</b>	<b>84,017</b>	<b>3,806</b>

Except for sales reported for LT agriculture and HT Industries, the actual sales for all other categories in FY 2014-15 as approved by Commission in its previous MYT Order. More consumers opting for OA had affected HT sales. The quantum of agriculture sales as compared to total sales has not varied abnormally and generally followed the same trend and similar pattern of increase across the distribution network.

**Table 3-2: Change in Agriculture Consumption, as submitted by MSEDCL**

Parameters	2012-13 (MU)	2013-14 (MU)	% Rise	2014-15 (MU)	% Rise
Total Input	97846	99575	1.77%	110458	10.93%
Total LT input	62756	64335	2.52%	73310	13.95%
Total Sale	83488	85631	2.57%	94805	10.71%
Total LT Sale	48781	50774	4.09%	58056	14.34%
Total AG Sale	20070	20832	3.80%	25695	23.34%

A comparison of the Consumption Index ('AG Index') of metered and unmetered consumers for FY 2013-14 and FY 2014-15 substantiates its contention that unmetered consumption is not abnormally high and in line with the metered consumption, as summarised in the following Table.

**Table 3-3: AG Index for FY 2013-14 and FY 2014-15 as submitted by MSEDCL**

Item Description	Index of Metered consumption (kWh / HP / year)		Index of Un-Metered consumption (kWh / HP / year)	
	FY 2013-14	FY 2014-15	FY 2013-14	FY 2014-15
	1065.61	1254.13	1185.92	1436.36
% Rise over last year		17.69%		21.12%
% Difference of un-metered over metered			11.29%	14.53%

In response to queries regarding AG sales, MSEDCL has submitted a detailed statement showing the trend of AG sales, Connected Load (HP), AG Indices (kWh/HP/annum), etc. for the last 8 years. Agriculture sales are also dependent of water availability, rainfall during the particular year, variation in crop pattern etc. Therefore, the variation in the trend of agriculture sales cannot be analysed in isolation.

**Table 3-4: AG Sales trend as submitted by MSEDCL**

Financial Year	AG Sales (MU)	AG Consumers (Nos.)	AG Connected Load (HP)	AG Index (kWh/HP/annum)
2007-08	11,808	2,583,033	10,893,861	1083.91
2008-09	12,209	2,668,547	11,286,795	1081.67
2009-10	13,400	2,801,235	11,826,196	1133.04
2010-11	15,766	3,156,977	14,903,048	1057.87
2011-12	20,933	3,435,051	17,956,725	1165.76
2012-13	20,070	3,561,325	18,394,529	1091.07
2013-14	20,832	3,644,046	18,593,626	1120.40
2014-15	25,695	3,807,593	19,269,274	1333.47

MSEDCL has also furnished Circle-wise details of the number of Agriculture consumers (metered/unmetered), Connected Load (metered/unmetered), assessment of AG Index and the agriculture sales, as directed in the previous MYT Order.

As per the directions of the MSEB Holding Company Limited (MSEBHCL), a three member Agricultural Consumption Committee has been constituted which will look into the actual as against the billed load and consumption. Its members are:

- (a) Shri Vishwas Pathak, Director, MSEBHCL and Committee Chairman;
- (b) Shri Pratap Hogade, Ichalkaranji, Member
- (c) Shri Ashish Chandarana, Akola, Member.

The terms of reference of the Committee are as follows:-

- (a) To look in to the billing methodology of MSEDCL in relation to agricultural pumps;
- (b) To recommend an appropriate Agency to carry out field work to analyse 100 Feeders as may be identified;
- (c) To oversee the work of such Agency; and
- (d) To submit its report by or before 31st December 2015 (which is being extended)

MSEDCL has appointed the Indian Institute of Technology (IIT), Mumbai to assist the Committee for carrying out this study of agricultural consumption in Maharashtra. The time lines for the study are as follows:

1 <sup>st</sup> Month	2 <sup>nd</sup> month to 5 <sup>th</sup> month	6 <sup>th</sup> Month
Hiring, Detailed Project Plan Development, Data Analysis & Division, Identification, Identification of Feeders and Training of field staff	Field Survey of 30 Feeders & 300 Consumers each month, field data analysis and analysis of previous methods of estimation, analysis of trends in agricultural Connections/ Loads	Estimation of agricultural consumption for FY 2014-15

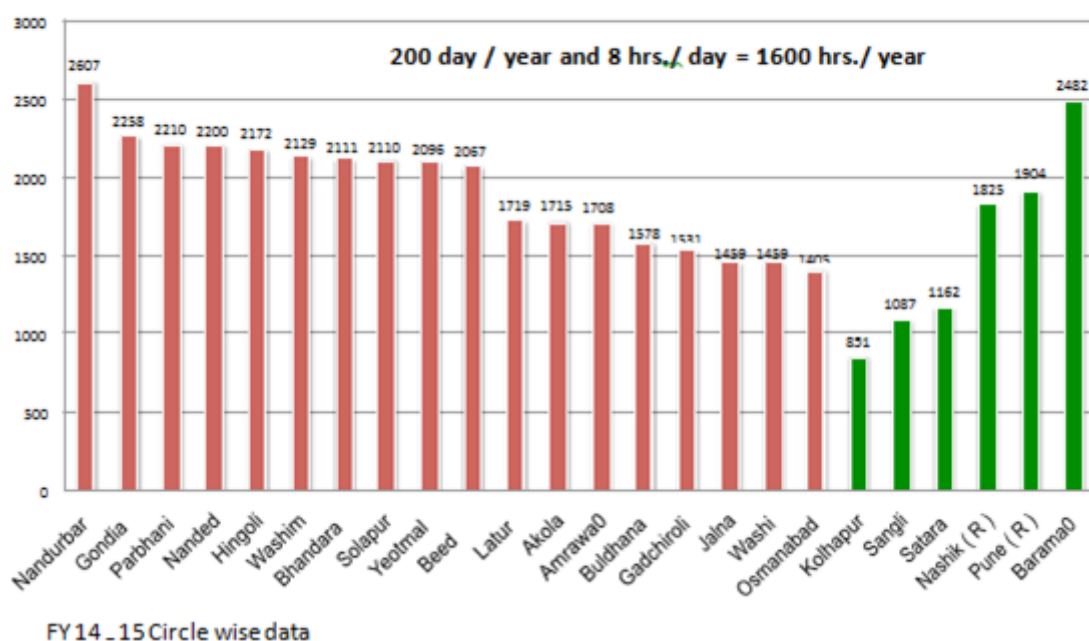
IIT Mumbai is carrying out field visits with the help of local Engineering Colleges to collect AG related data. Thereafter, it will carry out analysis of data collected during field visits and submit its Report to the Committee of Experts. Based on said Report and recommendations that would be given by the Committee, the corresponding changes in the sales of MSEDCL, if required, shall be carried out. Till that time, the Commission may approve the sales as submitted in the present Petition.

MSEDCL has also replied to various queries and discrepancies highlighted by the Institutional CRs and others, viz. Prayas, VIA, TBIA and MVGS. Several issues regarding assessment of Agriculture sales of MSEDCL were highlighted during the TVS and admission proceedings, and subsequently during the Public Hearing.

Based on analysis of Circle-wise details of agriculture sales presented by MSEDCL along with the Petition, Prayas had pointed out that a very high number of hours of

operation of agricultural pumpsets has been reported in areas such as Nandurbar, Parbhani, Yavatmal, Beed, Latur, etc., although they are drought-prone areas, in comparison with water rich areas such as Kolhapur, Sangli and Satara where water-intensive sugarcane is grown. Prayas contended that these serious anomalies show that the agriculture sales estimate provided by MSEDCL for FY 2014-15 is incorrect and unreliable. Based on analysis of data, Prayas presented the comparison of Circle-wise AG Index of hours of operation per year as below:

**Chart 1: Hours of operation per year**



In response to the concerns raised by Prayas, MSEDCL has stated that, though there is wide difference between actual usage hours of agricultural pumpsets in Nandurbar, Gondia, Parbhani, Nanded, Hingoli and Baramati Circles as compared to Kolhapur, Sangli and Satara Circles, such comparison in isolation may not be appropriate since the usage hours will vary in different areas as per the crop pattern in the respective areas, irrigation facilities available, rainfall in a particular period, ground water levels, use of latest technology for irrigation (like drip irrigation or sprinkler irrigation), grade of soil, etc. Admittedly, these factors being different in different regions, average usage hours of agricultural pumpsets in different Circles would be different.

According to MSEDCL, although it is mandatory for agricultural consumers to install Capacitors of appropriate ratings, it is rare to find any agricultural consumers who have provided reactive compensation to their pumpsets. In such situation, the average consumption of an agricultural pumpset of 3 HP having no reactive compensation would be higher than the average consumption in ideal conditions. Moreover, average HP of an agricultural pumpset which has been in use for more than 2/3 years, will be higher than the name plate capacity because of repairs and rewinding done during that

period. The consumption of a repaired agricultural pumpset will obviously be more than the derived consumption based on the name plate capacity.

In some areas, due to continuous drought like situation, the water level might have gone down and the agricultural consumers might have enhanced the capacity of their pumpsets, and such enhanced capacity might not have been reflected on the records of MSEDCL. This would also result in higher consumption.

Thus, before concluding that MSEDCL has estimated / projected agriculture sale on a much on higher side, all these factors need to be examined in detail, proper survey of different Circles has to be undertaken, the actual capacity of agricultural pumpsets in operation cross verified with the records of MSEDCL, and additional consumption due to non-provision of reactive compensation needs to be established.

The IIT, Mumbai was appointed to assist the Committee for carrying out the study of agricultural consumption in Maharashtra on behalf of the Agricultural Consumption Committee. The Committee will finalize the Report after field visits and analysis, which may take time as seasonal fluctuations affecting agricultural sales is also required to be considered. Once the Report is finalised, the sales to agricultural consumers will crystallize based on the findings, and the corresponding changes in the sales of MSEDCL may be carried out by the Commission.

MSEDCL added that the Report will be available by March, 2017 and hence, in the interim, the Commission may approve Agriculture Sales as submitted in the Petition.

In this context, several Objectors have highlighted issues and anomalies in the agricultural demand estimation methodology of MSEDCL. They have demanded restatement of agricultural sales, which would also impact estimation of Distribution Losses. Upon such restatement and with increased efforts towards loss reduction, the Tariff impact on consumers could be reduced. MSEDCL contended that prima facie there are some issues with agriculture sales data. However, the precise reasons can be ascertained only after receipt of the Report from the Committee, which will be available by March 2017.

### ***Commission's Analysis and Ruling***

The Commission has verified the actual category-wise sales reported by MSEDCL in its Petition vis-à-vis the sales as per its Audited Annual Accounts for FY 2014-15. The category-wise and total sales in the Petition match the total sales of 84,017 MU as reported in the Notes to the Audited Accounts.

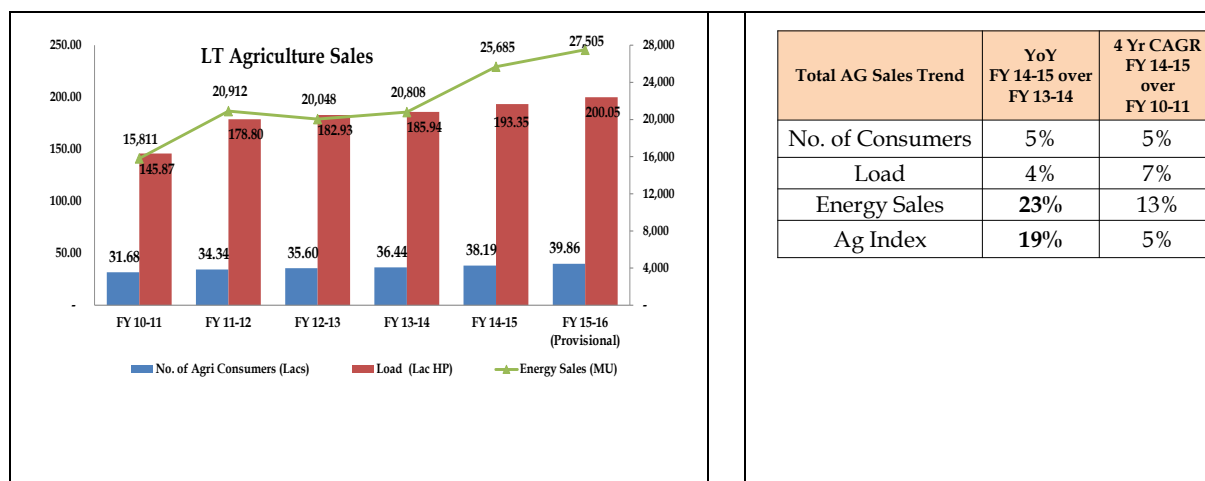
However, the Commission notes that several objections were received during the TVS and public consultations on the Petition regarding estimation of Agriculture sales by MSEDCL. CRs and others have highlighted anomalies in the estimation, and contended that the issue is the extent to which agriculture consumption has been overstated. In this regard, the study process initiated by MSEBHCL was welcomed,

and it was expected that the Committee findings would contribute to a more scientific methodology for sales estimation.

However, the Committee Report will be available only by March, 2017 and approving the sales estimations entirely based on MSEDCL's data will have revenue implications for consumers in the interim. Hence, acceding to MSEDCL's request to restate agriculture sales based on the Committee Report only at the time of MTR, would imply not recognizing the apparently higher level of Distribution Losses and postponing efforts to reduce them by at least two more years.

In this background, the Commission has analysed the annual trend in agriculture consumption (MU), number of consumers, Connected Load (HP), Sales and AG Index (kWh/HP/annum) as reported by MSEDCL in its various submissions, which are summarised below:

**Table 3-5: LT Agriculture Sales in FY 2010-11 to FY 2015-16 submitted by MSEDCL**



MSEDCL has reported a significant increase in agriculture consumption by 23% during FY 2014-15, of which around 4% can be attributed to increase in Connected Load (HP) and increase in the number of consumers. However, the remaining 19% is attributed to increase in the AG Index, which needs to be scrutinised further.

Till FY 2013-14, the Commission had assessed unmetered AG Sales by arriving at the Index of un-metered agricultural consumption based on the consumption recorded by metered agricultural consumers with normal progressive meter reading status, i.e., excluding meters with zero or negative consumption. However, in its additional submission in the proceedings of the previous MYT Order, MSEDCL reported a significant increase in the provisional AG sales in FY 2014-15 without any corresponding increase in the number of consumers or Connected Load. Therefore, the Commission did not accept the agriculture sales reported by MSEDCL, based on 11 months' actual, and had considered the original projections of MSEDCL as submitted in its Petition.

During the public consultations, concerns have also been raised regarding the reliability of metered data and its reporting in case of metered agricultural pumpset connections.

In its earlier Tariff Orders and previous MYT Order, the Commission had emphasised the need for Feeder-wise energy audit and for carrying out detailed analysis of Feeder-wise data for arriving at realistic agriculture sales figures, particularly in view of serious concerns regarding estimation of AG unmetered consumption.

The following directives were given in the previous MYT Order regarding agriculture consumption, whose compliance by MSEDCL is elaborated in a subsequent Chapter of this Order.

- MSEDCL should provide details of energy consumption on the separated Agriculture Feeders for FY 2013-14 and FY 2014-15.
- MSEDCL should furnish Circle-wise (metered and un-metered) data on the number of AG consumers, Connected Load, assessment of AG Index, and AG sales for FY 2013-14 and FY 2014-15;
- 100% metering should be undertaken within 3 years; the metering plan should be modified accordingly and the detailed Circle-wise revised metering plan submitted;

The Commission also stated that it would appoint an independent agency for verification of agricultural sales and to determine the sub-Division-wise weighted average consumption Index for un-metered agriculture connections. (The Commission does not need to do so now considering the separate exercise being undertaken by the MSEBHCL through IIT, Mumbai.)

Accordingly, while examining the present Petition, the Commission had sought the following data from MSEDCL for further analysis of sales reported against agriculture consumption:

Circle-wise consumption recorded on separated AG Feeders

Circle-wise consumption recorded on Feeders with Special Design Transformer (SDT)

Circle-wise consumption recorded on Feeders in Single Phasing Scheme

Circle-wise consumption recorded on other Feeders with AG consumers

Circle-wise details of AG sales-Billed and Assessed.

In order to verify the AG sales submitted by MSEDCL, the Commission analysed the Circle-wise (metered and un-metered) data submitted by MSEDCL in terms of the number of AG consumers, Connected Load, assessment of AG Index, Feeder-level energy input and AG sales for FY 2014-15.



The summary of Circle-wise data submitted by MSEDCL is shown in the following Table.

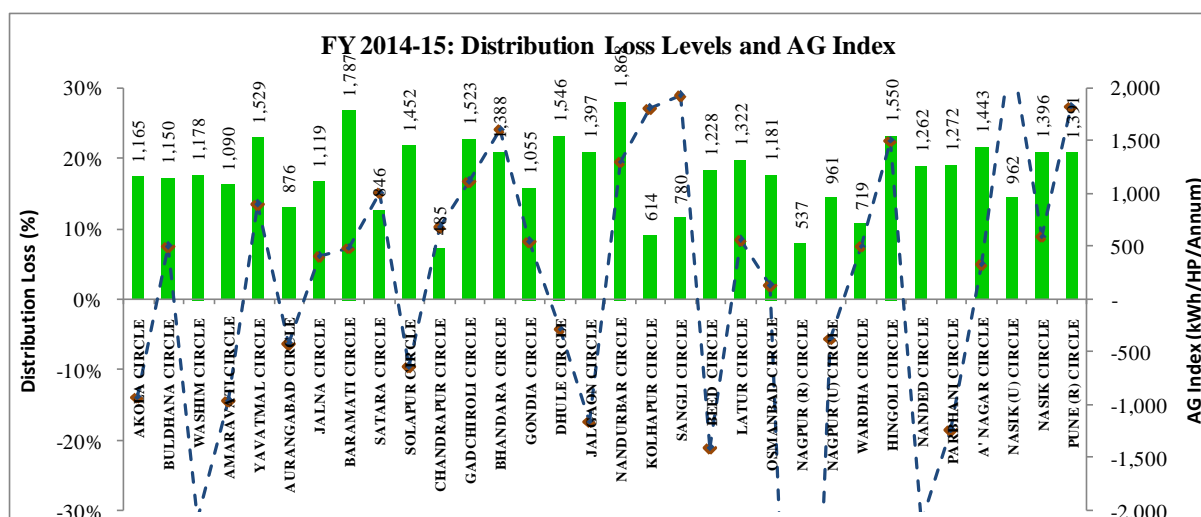
**Table 3-6: Summary of Circle-wise data for FY 2014-15 submitted by MSEDCL**

Sr. No.	Feeder Type	Number of Feeders		Number of Agriculture consumers		Connected Load of Agriculture consumers	
		Nos.	%	Lakh	%	HP	%
1	Agriculture separated Feeder	1,490	8%	6.03	16%	31.18	16%
2	Agriculture separated Feeder with SDT	2,688	15%	14.42	37%	73.28	39%
	<b>Sub-Total</b>	<b>4,178</b>	<b>23%</b>	<b>20.45</b>	<b>53%</b>	<b>104.46</b>	<b>55%</b>
3	Single Phasing Feeder	3,175	18%	13.58	35%	66.61	35%
4	Mixed Feeder	10,582	59%	4.60	12%	19.37	10%
	<b>Total</b>	<b>17,582</b>	<b>100%</b>	<b>38.63</b>	<b>100%</b>	<b>190.45</b>	<b>100%</b>

Information about Feeder-level energy input and consumption on 4178 separated Feeders across all Circles is available for around 53% of the total number of consumers, which covers about 55% of the total Connected Load of agriculture consumers. This being a reasonably large sample size, the Commission has taken the consumption reported for these Feeders for further analysis. To clarifications sought regarding the Feeder data, MSEDCL stated that out of the data from 218232 entries, only 6567 entries, i.e., 3% of the total, were excluded as being abnormal. MSEDCL stated that the incorrect inputs were due to incorrect data feeding, burnt meters and failure of metering equipment, viz. CT/PT failure, cable failure etc.

Upon scrutiny of the Circle-level Feeder-wise data for agriculture separated Feeders, the Commission noted a negative Distribution Loss in some Circles (involving 1650 out of 4178 Feeders). Therefore, while determining the Circle-wise AG Index, i.e. the Energy Sales divided by the Connected Load, the Commission has adopted the following approach:

- For Feeders with positive Distribution Loss levels (i.e. 33 Circles covering 2528 out of 4178 Feeders), the AG Index is worked out as the ratio of the reported Energy Sales to the Connected Load (HP) on the Feeder.
- For Feeders with negative Distribution Loss levels (i.e. 12 Circles covering 1650 out of 4178 Feeders), the AG Index is worked out as the ratio of Energy Input reported for the Feeder to the Connected Load (HP) on the Feeder.



With the present data constraints, there are limitations in this approach of Feeder-based assessment of AG Index determination as well. For ascertaining the AG Index from Feeder-based measurement, it is necessary to have information about the input energy to the Feeder, details of the Feeder configuration, proper indexation of DTCs/consumers, assessment of Technical Loss, validated information about Connected Load (HP) for each Feeder, and regular updating of addition of consumers and Connected Load on each Feeder.

Availability of monthly data for Feeder-wise energy input is critical in this approach. MSedCL should ensure that Feeder-based metering with Automated Metering Reading (AMR) facilities, at least for AG separated and SDT Feeders, is operationalised within the next 18 months. The monthly data should be published on a quarterly basis on its website to ensure transparency and enable wider analysis. Instead of waiting for complete coverage, the Feeder details should be provided as and when a Feeder is metered in this manner. The data should cover Feeder-wise Connected Load (metered/un-metered), Feeder-level energy input, billed energy units, and number of interruptions and outage hours.

The Circle-wise AG Indices arrived at as above were multiplied by the corresponding Connected Load to derive the Circle-wise AG Sales. The following Table summarises the AG sales as projected by MSedCL and as worked out by the Commission based on its Circle-wise AG Index workings:

**Table 3-7: Revised AG sales for FY 2014-15 as per AG Index derived by Commission**

Agriculture Sales (MU)	MSedCL	Commission Analysis	Difference
Un-Metered	12,012	10,388	1,624
Metered	13,673	12,883	790
<b>Total</b>	<b>25,685</b>	<b>23,271</b>	<b>2,414</b>

There is no convincing justification for the large increase of 23% in AG Sales and 19% in the AG Index, inspite of only 4-5% growth in the number of consumers and Connected Load in FY 2014-15 over the previous year. At the same time, the Commission notes that the detailed study and findings of the Agriculture Consumption Committee would be available by March, 2017. While the Commission recognises that the AG Index based on the existing methodology followed by MSEDCL needs to be revisited, validation of the data and this methodology, and the anomalies and limitations of the existing processes for assessment of AG Index would emerge from the Committee's Report.

However, awaiting the findings of the Committee would lead to delay in the recognition of a more realistic present level of Distribution Loss and consequently defer the actions required to reduce it. Therefore, the Commission has decided to adopt this methodology based on Feeder-based Energy accounting of AG separated Feeders and AG separated Feeders with SDT to determine the Circle-wise AG Index, as explained in the preceding paragraphs.

**Table 3-8: Summary of Agriculture Sales for FY 2014-15**

Particulars	FY 2013-14 Previous MYT Order	FY 2014-15 MSEDCL's submission	FY 2014-15 Approved by Commission*	YoY Growth as per MSEDCL's submission	YoY Growth as per Commission's Approval
<b>No. of Consumers (in lakh)</b>					
Un-Metered	16.09	15.97	15.97	-1%	-1%
Metered	20.35	22.23	21.94	9%	8%
<b>Total</b>	<b>36.44</b>	<b>38.19</b>	<b>37.90</b>	<b>5%</b>	<b>4%</b>
<b>Load (in lakh HP)</b>					
Un-Metered	84.68	83.63	83.63	-1%	-1%
Metered	101.26	109.72	108.92	8%	8%
<b>Total</b>	<b>185.94</b>	<b>193.35</b>	<b>192.55</b>	<b>4%</b>	<b>4%</b>
<b>Energy Sales (MU)</b>					
Un-Metered	9,991	12,012	10,388	20%	4%
Metered	10,817	13,673	12,883	26%	19%
<b>Total</b>	<b>20,808</b>	<b>25,685</b>	<b>23,271</b>	<b>23%</b>	<b>12%</b>
<b>AG Index (kWh/HP/Annum)</b>					
Un-Metered	1,180	1,436	1,242	22%	5%
Metered	1,068	1,246	1,183	17%	11%
<b>Total</b>	<b>1,119</b>	<b>1,328</b>	<b>1,209</b>	<b>19%</b>	<b>8%</b>
<b>AG Index (Hours/Annum)</b>					
Un-Metered	1,582	1,925	1,665	22%	5%
Metered	1,432	1,670	1,585	17%	11%
<b>Total</b>	<b>1,500</b>	<b>1,781</b>	<b>1,620</b>	<b>19%</b>	<b>8%</b>

*\*No. of Consumers and Connected Load revision as per the additional submissions of MSEDCL.*

The AG Sales arrived from the Circle-wise AG Index norm methodology as above is subject to the findings of the Report of the Agricultural Consumption Committee assisted by IIT Mumbai. The Commission would undertake a detailed review of the methodology of determination of AG Sales after the Report is finalised. However, until the findings of the study become available, the methodology adopted in this Order based on Feeder-based energy accounting shall form the basis for determination of the AG Index and assessment of Agriculture consumption.

Accordingly, the total Energy Sales for FY 2014-15 as submitted by MSEDCL and as approved by the Commission are summarised as follows:

**Table 3-9: Energy Sales for FY 2014-15, as approved by Commission**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
<b>HT Sales</b>			
HT Sales – MSEDCL	30,450	30,234	30,234
<b>LT Sales</b>			
LT Sales - Excluding AG Sales	28,180	28,099	28,099
LT Sales - AG Sales	21,581	25,685	23,271
<b>MSEDCL Sales(HT and LT)</b>	<b>80,211</b>	<b>84,018</b>	<b>81,604</b>
Energy Sales in DF Areas	6,398	6,415	6,415
HT Sales - Open Access (Conventional)		3,909	3,909
HT Sales - RE Open Access and HT Credit		462	462
<b>Total Energy Sales (including DF Areas, Open Access and Credit Sales)</b>	<b>86,609</b>	<b>94,804</b>	<b>92,390</b>

### 3.3 Energy Balance for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has submitted the Energy Balance based on the power procurement (within and outside the State), estimate of sales including sales within DF area, energy units handled for OA, estimate of Transmission Loss (within and outside the State) and Distribution Losses for FY 2014-15.

While calculating the Energy Balance as a whole, in the overall sales MSEDCL has included the sales to consumers of the DF area.

MSEDCL is procuring power from various sources, including MSPGCL, the Central Sector Generators including Nuclear Power Plants, Traders, CPPs and RE sources. These sources are both within and outside Maharashtra. It is very difficult to differentiate which power is coming from which source at the Transmission periphery. Hence, applying individual Inter-State Transmission Losses for each Generating Station would give a distorted picture. Therefore, the average Inter-State

Transmission Loss has been taken for the whole year for power sourced from outside Maharashtra.

MSEDCL has taken the average of Transmission Losses for 52 weeks provided by the Western Region Load Despatch Centre (WRLDC), which works out to 3.93%, and the intra-State Transmission Loss of 3.89% as approved in the InSTS Tariff Order dated 26 June 2015. It has also taken 580 MU of “surplus energy traded”, which is the actual energy traded by MSEDCL during FY 2014-15. The Commission may approve the Energy Balance for FY 2014-15 as shown in the Table below:

**Table 3-10: Energy Balance for FY 14-15 as submitted by MSEDCL**

Particulars	Unit	FY 2014-15
		Actual
<b>Power Purchase from outside Maharashtra</b>		
NTPC	MU	24,452
NPCIL (KAPP)	MU	1,077
SSP	MU	768
PENCH	MU	125
CGPL	MU	4,823
<b>Total (A)</b>	<b>MU</b>	<b>31,245</b>
Inter-State Transmission Loss	%	3.93%
Inter-State Transmission Loss	MU	1,228
<b>Total Purchase at Maharashtra periphery (B)</b>	<b>MU</b>	<b>30,017</b>
<b>Power Purchase within Maharashtra</b>		
MSPGCL	MU	44,856
NPCIL (TAPP)	MU	3,980
Dodson	MU	70
JSW	MU	2,006
Adani Power	MU	16,025
Emco Power	MU	1,433
Rattan India	MU	1,912
NCE	MU	8,099
CPP	MU	1,145
FBSM	MU	(1,462)
Traders	MU	3,269
Input for Open Access consumption	MU	4,159
<b>Total (C)</b>	<b>MU</b>	<b>85,492</b>
Total Energy Handled (A+C)	MU	<b>1,16,736</b>
<b>Surplus Energy Traded (D)</b>	<b>MU</b>	<b>580</b>
<b>Total Power Purchase available at G&lt;&gt;T Periphery (B+C-D)</b>	<b>MU</b>	<b>1,14,929</b>
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>MU</b>	<b>1,14,929</b>
Intra-State Transmission Loss	%	3.89%
Intra-State Transmission Loss	MU	4,471
Sales at 220 kV/44 kV level	MU	2,986
Sales at 110 kV/132 kV level	MU	4,109
Sales at 66 kV level	MU	204

Particulars	Unit	FY 2014-15
		Actual
Energy Available for sale at 33kV	MU	1,03,159
Energy Injected and drawn at 33kV	MU	412
<b>Total Energy Available for Sale at 33kV</b>	<b>MU</b>	<b>1,03,571</b>
Distribution Loss	%	15.51%
Distribution Loss	MU	16,066
<b>HT Sales</b>	<b>MU</b>	
Sales to Own Supply Consumers	MU	25,088
Sales by Licensee to Change-over consumers on other Licensee's network	MU	-
HT and Renewable Open Access Credit	MU	462
Sales to Open Access Consumers (Conventional)	MU	3,909
<b>LT Sales</b>	<b>MU</b>	
Sales to Own Supply Consumers	MU	58,046

### Commission's Analysis

The Energy Balance submitted by MSEDCL for FY 2014-15 is as per the format F1.4 prescribed for the 3<sup>rd</sup> Control Period, in which Distribution Loss has been estimated excluding EHV sales. However, in its earlier MYT Order, the Commission had approved the Energy Balance in which the Distribution Loss allowed included EHV sales for FY 2014-15. Thus, for comparison purposes, Commission asked MSEDCL to submit the Energy Balance in the earlier format, which it provided as follows.

**Table 3-11: Energy Balance for FY 2014-15 as submitted by MSEDCL in Revised Format**

Sr. No.	Particulars	Units	Previous MYT Order	MSEDCL revised Submission
<b>A</b>	<b>Purchase within Maharashtra</b>			
a	<i>Purchase from MSPGCL</i>	MU		44,856
b	<i>NPCIL Tarapur</i>	MU		3,980
c	<i>Dodson</i>	MU		70
d	<i>Traders</i>	MU		3,269
e	<i>IPP</i>	MU		21,377
f	<i>NCE / CPP</i>	MU		9,244
g	<i>IBSM + FBSM</i>	MU		(1,462)
h	<i>Other power on MSEDCL Network</i>	MU		4,159
	<b>Total Purchase within Maharashtra</b>	<b>MU</b>	<b>72,246</b>	<b>85,492</b>
<b>B</b>	<b>Purchase outside Maharashtra</b>			
a	Central Generating Station + NPCIL + UMPP + SSP + Pench	MU	33,698	31,245

Sr. No.	Particulars	Units	Previous MYT Order	MSEDCL revised Submission
b	Inter State Transmission Loss	MU	3.79%	5.30%
c	Total Purchase at Maharashtra periphery	MU	32,420	29,588
3	Total Power Handled	MU	104,666	115,080
d	Surplus Energy Traded	MU	651	580
e	Total Purchase available at Transmission Periphery	MU	104,015	114,500
	Intra-State loss	%	3.89%	3.89%
	Energy at Distribution Periphery injected (above 33 kV)	MU	99,969	110,045
4	Energy at Distribution Periphery injected and drawn (33 kV and below)	MU	447	412
a	Energy at Distribution Periphery	MU	100,416	110,457
b	Distribution Losses	%	13.75%	14.17%
c	Distribution Losses	MU	13,807	15,653
d	Energy Available for Sale	MU	86,609	94,805
e	Sale by MSEDCL	MU		90433
f	Open Access Sales	MU		3,909
g	<b>Adjustments in billing due to AMR/Change in Billing Cycle &amp; captive OA Sale, Credit Sale, PD Sales etc.</b>	MU		<b>462</b>

The Commission also sought the reconciliation of energy drawn by MSEDCL with the IBSM/FBSM statement for FY 2014-15. This was furnished, and was subsequently verified.

Based on the revised estimate of Agriculture Sales by the Commission, the approved sales including the DF sales, OA sale and credit sale as available for the Energy Balance of FY 2014-15 are as shown below:

**Table 3-12: Energy Sales for Energy Balance of FY2014-15 as approved by Commission**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Energy Sales by MSEDCL for FY 2014-15 (incl. DF area sales)		90,433	84,502
Add: OA Sales (Conventional)		3,909	3,909
Add: HT and Renewable OA		462	462
<b>Total Energy available for Sales</b>	<b>86,609</b>	<b>94,805</b>	<b>92,391</b>

The Energy Balance reported by MSEDCL and approved by the Commission for FY 2014-15 is presented in the Table below. The difference in the Energy Balance



claimed by MSEDCL and that approved by the Commission is mainly on account of the difference in Agriculture Sales approved by the Commission vis-à-vis that claimed by MSEDCL as part of the total Energy Sales. The Distribution Losses arrived at in the Energy Balance are consequent to the above changes.

**Table 3-13: Energy Balance for FY 2014-15 as approved by the Commission**

Particulars	Unit	Previous MYT Order	MSEDCL Petition	Approved in this Order
Retail Energy Sale to Consumers incl OA and credit sales	MU	86,609	94,805	92,391
Distribution Losses	%	13.75%	14.17%	16.36%
Distribution Losses	MU	13,807	15,653	18,067
Energy at Distribution Periphery	MU	1,00,416	1,10,457	110,458
Energy at Distribution Periphery injected and drawn at 33 kV	MU	447	412	412
Energy at Distribution Periphery injected from 33 kV and above	MU	99,969	110,045	1,10,046
Intra-State loss	%	3.89%	3.89%	3.89%
Total Energy required at Transmission Periphery	MU	1,04,015	114,500	1,14,500
Surplus Energy Traded	MU	651	580	580
Total Power Purchase Quantum Payable	MU	1,04,666	115,080	1,15,080
Power Purchase Quantum from Intra-State sources	MU	72,246	85,492	85,492
Power Purchase Quantum from Inter-State sources at Maharashtra Periphery	MU	32,420	29,588	29,588
Inter-State losses	%	3.79%	5.30%	5.30%
Power Purchase Quantum from Inter-State Sources	MU	33,698	31,245	31,245
<b>Total Energy Units handled</b>	<b>MU</b>	<b>1,05,945</b>	<b>1,16,737</b>	<b>1,16,737</b>

### 3.4 Distribution Loss in FY 2014-15

#### *MSEDCL's Submission*

The actual Distribution Losses were 14.17% as against 13.75% approved in the previous MYT Order. MSEDCL has achieved a significant reduction in Distribution Losses in recent years. Its efforts would continue, but loss reduction is a slow process and becomes increasingly difficult as the loss level falls. Reduction in HT sales and increase in LT sales has also impacted the Distribution Loss. The Commission may approve the actual Distribution Loss for FY 2014-15.

#### *Commission's Analysis and Ruling*

The Commission had stipulated the trajectory for reduction of Distribution Loss in its Business Plan Order for MSEDCL in Case No. 134 of 2012 for FY 2013-14 to FY



2015-16. As per the trajectory, the Distribution Loss level stipulated for FY 2014-15 was 13.75%. That formed the basis for provisional approval of the Energy Balance in the previous MYT Order for that year. However, MSEDCL now has submitted a Distribution Loss level of 14.17% for FY 2014-15, which is higher than the stipulated target.

The Commission had asked for the reason for higher Distribution Loss. MSEDCL stated that, since the power flow has been continued in the higher loss making areas, the resultant loss has increased by 0.42%, from 13.75% to 14.17%. MSEDCL further stated that the Distribution Loss in FY 2014-15 has increased only by 3.05%  $((14.17\% - 13.75\%) / 13.75\%)$  as compared to the approved loss due to higher operational efficiency and discipline, and cited various initiatives taken to reduce Distribution Loss.

MSEDCL also stated that, as directed by the Commission in the previous MYT Order, it has withdrawn load shedding in areas where there is sufficient availability of the power in the system. To the extent possible, it has ensured that the Load Shedding Protocol is used only as load regulation measure in shortage situations and not as a matter of routine. MSEDCL submitted details of the actual loss level in all load shedding areas.

As discussed earlier, the Commission has approved revised Energy Sales of 92,391 MU for FY 2014-15. Based on this, the approved Distribution Loss for FY 2014-15 is as shown in the Table below:

**Table 3-14: Distribution Loss for FY 14-15 as approved by the Commission**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Distribution Loss	13.75%	14.17%	16.36%

### 3.5 Power Purchase Expenses for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has submitted the actual Power Purchase expenses for FY 2014-15 as Rs. 43,614 crore, as against the earlier approved expenses of Rs. 39,694 crore.

While approving the power purchase for FY 2014-15 in the previous MYT Order, the Commission had provisionally disallowed power procurement on account of the excess sales estimated towards Agricultural category. These disallowed excess sales of 5728 MU translated into a disallowance of power purchase quantum of 7535 MU in the Energy Balance. The total power purchase cost provisionally disallowed was Rs. 2823 crore at an average rate of Rs. 3.75/kWh, which was to be scrutinized further at the time of true-up.

The comparison of source-wise power purchase expenses as per the Audited Accounts for FY 2014-15 and as approved in the previous MYT Order is shown in the Table below:

**Table 3-15: Power Purchase Expenses for FY 2014-15 as submitted by MSEDCL**

Source	Previous MYT Order		MSEDCL Petition		
	Quantum (MU)	Cost (Rs.Crs.)	Quantum (MU)	Cost (Rs.Crs.)	Deviation
MSPGCL	45,074	19,161	44,856	19,212	51
NTPC	24,452	7,248	24,452	7,268	20
NPCIL	5,057	1,218	5,057	1,239	21
SSP	768	157	768	160	3
PENCH	125	26	125	26	0
JSW Power	2,006	575	2,006	585	10
Dodson	69	23	70	25	2
Traders	3,267	1,219	3,269	1,221	2
Renewable and CPP	8,700	4,590	9,244	5,066	476
FBSM	(240)	20	(1,462)	(19)	(39)
Powergrid and Other Charges		1,210		1,419	209
CGPL	4,823	1,183	4,823	1,197	14
Adani	15,991	4,898	16,025	5,199	301
IndiaBulls	1,943	593	1,912	556	(37)
EMCO POWER	1,444	396	1,433	458	62
Less: PP Disallowed	7,535	2823			(2,823)
<b>Total Power Purchase</b>	<b>1,05,945</b>	<b>39,694</b>	<b>1,12,578</b>	<b>43,614</b>	<b>3,918</b>

The provisional details of power purchase expense submitted in the earlier MYT proceedings were based on the available information at that time. Subsequently, the Audited Accounts of FY 2014-15 have been finalised and the power purchase expenses for FY 2014-15 have been revised. The detailed reasons for major differences in the power purchase cost are:.

**MSPGCL:** MSEDCL has included the cost of Infirm Power amounting to Rs. 55 crore in the audited power purchase expenses. Further, the provisional number of units from Hydro generation turned out to be 3998 MU as against the considered figure of 4232 MU. Thus, even though the overall quantum purchased from MSPGCL has reduced, the cost has increased.

**NTPC:** MSEDCL has considered the energy bills of April, 2015 as well as the revised bills for March, 2015 in the audited power purchase expenses, with an overall impact of Rs. 15 crore.

**NPCIL:** MSEDCL has considered the impact of the RoE adjustment in the bills, amounting to around Rs 18 crore, in the audited power purchase expenses.

JSW Power: The provisional bills of January to March, 2015 considered while submitting the provisional power purchase expenses, were revised, which resulted in a difference of around Rs.10 crore.

RE and CPP: Since the data for REsources was not available for February and March, 2015 while submitting the provisional power purchase figures to the Commission, MSEDCL had estimated Rs. 600 crore for these two months. However, actual expenses were around Rs. 960 crore, resulting in a difference of Rs. 360 crore.

FBSM: MSEDCL has taken the information of FBSM available up to August, 2014. This was finalised subsequently, and has accordingly been revised.

PGCIL Charges: MSEDCL has included the PoC 3 Deviation bills from April, 2014 to March, 2015 of Rs.150 crore and the ULDC bill of Rs. 63 crore in actual expenses. This resulted in difference in the PGCIL Charges.

EMCO: MSEDCL has included Transmission Charges of around Rs. 67 crore, as it needs to pay these Charges to EMCO as per the ATE Order dated 8th May, 2015.

Adani Power: MSEDCL has included the additional impact of 'change in law' bills of around Rs. 280 crore and payment of full Capacity Charges of around Rs. 85 crore in actual expenses.

India Bulls/Rattan India: MSEDCL has deducted the penalty of around Rs.30 crore.

CGPL: MSEDCL has added a supplementary Bill while finalizing the actual expense.

### ***Commission's Analysis and Ruling***

The Commission asked for the Reconciliation Statement on power purchase expenses between 'Revenue from Sale of power to MSEDCL as per MSPGCL Audited Accounts for FY 2014-15' and 'Cost of Purchase of Power from MSPGCL as per MSEDCL Audited Accounts for FY 2014-15'. While the Audited Accounts of MSEDCL show the expense towards power purchase from MSPGCL as Rs. 19212.41 crore, in its Accounts MSPGCL had reported revenue from sale of power to MSEDCL of only Rs. 18921.69 crore (a difference of Rs 290.72 crore). MSEDCL later submitted the detailed break-up of the difference of Rs. 290.72 crore, which mainly included the impact of surcharge bill and reconciliation of past period claims as summarised in the Table below.

**Table 3-16: Reconciliation of Power Purchase Expenses of FY 2014-15 between MSEDCL and MSPGCL, submitted by MSEDCL**

<b>Particulars</b>	<b>Amount (Rs.Crore)</b>
Energy Bill	14,915.14
FAC Bill	2,997.09
Supplementary bill due to MERC Order 103 of 2014	1,245.13
Infirm Power	55.05
<b>Total Purchase (amount) for 14-15 as per MSEDCL (A)</b>	<b>19,212.41</b>

Particulars	Amount (Rs.Crore)
<b>Total Sales (amount) for 14-15 as per MSPGCL (B)</b>	<b>18,921.69</b>
<b>Difference before reconciliation as explained by transactions at MSPGCL (C=B-A)</b>	<b>(290.72)</b>
Infirm power not considered in Sales	(55.05)
Surcharge bill	1,051.04
PLF Based Incentives	3.80
Withdrawal of Incentive April, 2009	(1.65)
Reconciliation FY 2006-07	0.05
Reconciliation FY 2007-08	(0.13)
Reconciliation FY 2009-10	(0.03)
Hydro Adjustment FY 12-13	(0.20)
Withdrawal of FAC Feb 2009	(0.30)
Withdrawal Pro Rata Fixed Charges - Idle Capacity	(85.19)
Ghatghar Lease Rent Withdrawal	(120.29)
Gap Adjustment Case No 15 of 2015	(605.37)
Impact of variation in Energy Charges for FY 2014-15	(609.71)
Advance Against Depreciation	(189.70)
Solar 1 MW	0.42
Solar 125 MW	304.92
Solar 50 MW	16.67

This has been verified by the Commission. However, it sought further details of the Surcharge bill of Rs. 1051.04 crore. MSEDCL stated that this amount in the Reconciliation Statement is the amount booked by MSPGCL in its Books of Accounts as DPC against late payments from MSEDCL. However, MSEDCL reaffirmed that it has not made any provision in its Audited Accounts towards the DPC for MSPGCL.

As sought by the Commission, MSEDCL submitted the month-wise Power Grid charges paid to PGCIL and RLDC fees/charges paid to POSOCO for FY 2014-15 and submitted sample bills. The Commission has verified these and found them to be in order.

MSEDCL was also asked for sample bills for each of the Stations of NTPC, NPCIL, IPPs, SSP, Pench, Dodson-I&II and CGPL from which it had procured power, along with samples of Supplementary bills for FY 2014-15. MSEDCL submitted sample bills for each quarter of FY 2014-15 for each Station, and samples of supplementary bills raised by Generator during the year. The Commission has verified the sample bills and found them to be in order.

MSEDCL was asked for the reconciliation of the power purchase cost from NCE sources with its Audited Accounts for FY 2014-15, since the submissions on source-wise power purchase did not tally with the Audited Accounts. MSEDCL stated that, due to the only partial implementation of SAP in FY 2014-15, there was an

inadvertent error in the source-wise allocation of costs for NCE sources, which was rectified and the revised data submitted. The Commission has verified this also.

As per the RPO Regulations, 2010, each Distribution Licensee has to meet 9% of its requirement through RE sources in FY 2014-15, including 0.5% through Solar sources and 0.2% through Mini/MicroHydro sources. As MSEDCL had not stated how it had or would meet these RE-source specific RPO targets, the Commission asked for the details. MSEDCL submitted the details of power purchase from RE sources. It also stated that it has filed a Petition in Case No. 44 of 2016 before the Commission to carry forward the shortfall not met by the end of FY 2015-16 to the next Review Period.

The Commission had verified the compliance of RPO targets by MSEDCL for FY 2014-15 in its Order dated 14 September, 2016 in Case No. 16 of 2016. The Commission concluded that MSEDCL had not fulfilled its stand-alone Solar, Non-Solar and Mini /Micro Hydro Power targets for FY 2014-15, with a shortfall of 275.85 MU, 646.37 MU and 17.83 MU, respectively. It also had a cumulative shortfall as at the end of FY 2014-15, including earlier years, of 1201.81 MU, 1724.49 MU and 50.48 MU, respectively. The Order also ruled as follows:

*“MSEDCL has not achieved its stand-alone Solar and Non-Solar RPO targets for FY 2014-15. As discussed earlier in this Order, the Commission finds no justification or mitigating circumstances for this shortfall (except in respect of Mini/MicroHydro). Moreover, the cumulative shortfall as at the end of FY 2014-15 has increased. In similar circumstances pertaining to the stand-alone shortfall of FY 2013-14, the Commission, in its Order dated 4 August, 2015 in Case No. 190 of 2014, had directed MSEDCL to create a RPO Regulatory Charges Fund under Regulation 12. (As regards the cumulative shortfall of previous years, the Commission had already allowed MSEDCL to meet it by the end of FY 2015-16). The relevant regulatory provisions and the detailed directions given by the Commission in that Order have been set out at paras. 3 and 6 above.*

*Along similar lines, the Commission directs MSEDCL as follows with regard to the shortfall against its stand-alone Solar and Non-Solar (excluding Mini/MicroHydro) RPO targets for FY 2014-15:*

*1) MSEDCL shall constitute a separate ‘RPO Regulatory Charges Fund’;*

*2) The Fund shall be utilised by MSEDCL to purchase Solar and Non-Solar RECs and/or to procure power so as to fully meet the shortfall against its stand-alone Solar and Non-Solar (excluding Mini/MicroHydro) RPO targets for FY 2014-15, as summarised at para. 19 above, by the end of March, 2017, and the amounts to be deposited into the Fund shall be determined by MSEDCL accordingly from time to time over the remaining period of FY 2016-17;*

3) Considering the circumstances set out in this Order which have led the Commission to invoke Regulation 12, the expenditure expected for purchase of RECs and/or power procurement from the Fund shall not be passed through to consumers to the extent of the shortfall not met by MSEDCL by the end of FY 2016-17.

4) The performance of MSEDCL in this regard shall be reviewed in the RPO compliance verification proceedings for FY 2016-17 and also taken into account in the Mid-Term Review proceedings for the 3rd Multi-Year Tariff Control Period.

*The Commission has not specified the amounts to be deposited in the Fund since that will depend on the power procurement and/or REC purchase mix opted for by MSEDCL, the actual rate of RECs in the market from time to time, etc. Moreover, MSEDCL need not deposit into the Fund the entire amount estimated to be required in a lumpsum at the outset, but spread it over the remainder of the year depending on its assessment of the market."*

Further, as sought by the Commission, MSEDCL submitted the reconciliation of FBSM/IBSM bills with the Audited Accounts, which was verified.

On the above basis, the Commission has verified the source-wise power purchase cost and reconciled it with the Audited Accounts for FY 2014-15.

Regarding the power purchase in FY 2014-15 and FY 2015-16, the Variable Charges considered for the IPPs are different from the rates in the PPA Schedule. For example, the Variable Charge taken for Adani Power(1320 MW) is Rs 1.58/kWh against the PPA rate of Rs.1.44/kWh. Similarly, the Variable Charge considered for Adani Power(1200 MW) is Rs 2.02/kWh against the PPA rate of Rs.1.55/kWh. MSEDCL was asked to submit the reconciliation of Variable Charges considered for IPPs. MSEDCL submitted the required details, and stated that the PPA rates are linked to various factors such as variation in monthly exchange rate, CERC index for inland handling of imported fuel and CERC index for inland transportation of fuel. MSEDCL submitted the following Table providing the reconciliation..

**Table 3-17: Reconciliation of Variable Charges of FY 2014-15 submitted by MSEDCL**

Station	Variable Charge as per PPA	Variable Charge as per Petition	Remarks
IPP – JSW	$0.1298 + 0.59 \times \text{monthly Dollar rate} + 0.01708 \times \text{monthly Dollar rate} \times \text{monthly CERC index for fuel}$	1.90	The CERC index is applied for escalable factor on monthly basis. Dollar rate may vary in each month.
CGPL	$0.00707 \times \text{Monthly Dollar}$	1.45	The CERC index is applied for

Station	Variable Charge as per PPA	Variable Charge as per Petition	Remarks
	rate+0.00585 x Monthly dollar rate x monthly CERC index for fuel+0.048+0.046 x Monthly CERC index for inland handling +0.00284 x Monthly dollar rate+0.00109 x Monthly dollar rate x monthly CERC index for transportation.		escalable factor on monthly basis. Dollar rate may vary in each month.
Adani Power 1320	1.44	1.58	Includes CIL bills claimed by Adani Power for 1320 MW
Adani Power 1200	0.47 x Monthly CERC index for fuel+0.6610+0.0445 x monthly index for transportation	2.02	The CERC index is applied for escalable factor on monthly basis. Also includes CIL bills claimed by Adani Power
Adani Power 125	0.47 x Monthly CERC index for fuel+0.6610+0.0445 x monthly index for transportation	2.17	The CERC index is applied for escalable factor on monthly basis. Also includes CIL bills claimed by Adani Power
Emco Power	0.456 x Monthly CERC index for fuel+0.4920 x Monthly CERC index for transportation	1.39	No variation in average rate. The CERC index is applied for escalable factor on monthly basis.
Ratan India	0.592 x Monthly CERC index for fuel+0.9+0.334 x Monthly CERC index for transportation	2.29	The CERC index is applied for escalable factor on monthly basis.

Accordingly the Commission approves the net power purchase expenses as follows.

**Table 3-18: Power Purchase Expenses for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Power Purchase Expenses	39,694	43614	43614



### 3.6 O&M Expenses for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has considered the O&M Expenses on actual basis as per its Audited Annual Accounts for FY 2014-15, as shown below:

**Table 3-19: O&M Expenses for FY 2014-15 as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2014-15 (Actual)
Employee Expenses	4,551
A&G Expenses	703
RM Expenses	903
<b>Net O&amp;M Expenses</b>	<b>6,158</b>

While MSEDCL has claimed O&M Expenses as per the Audited Annual Accounts, it has also sought that they be approved as per the norms specified in the MYT Regulations, 2011. Accordingly, it has worked out the O&M Expenses separately for the Wires Business and Supply Business on a normative basis in accordance with the Regulations.

For estimating O&M Expenses as per the norms, it should be noted that all Supply Business consumers also use its network. Further, most OA consumers have opted for partial OA, with very few using only Wires. Therefore, MSEDCL has considered the same number of consumers for its Wires Business and its Supply Business. Similarly, considering the various capital investment schemes and consequent addition to its network, MSEDCL has considered the network asset base (GFA). The following Table provides the summary of O&M Expenses (net of capitalisation) for FY 2014-15.

**Table 3-20: Comparison of O&M Expenses for FY 2014-15 by MSEDCL (Wires + Supply) (Rs. crore), as submitted by MSEDCL**

Particulars	Previous MYT Order	Normative O&M	Actual /Audited
O&M Expenditure for Wires business	4,114	4,350	4,799
O&M Expenditure for Retail Supply Business	1,842	1,970	1,359
<b>Operation and Maintenance Expenses</b>	<b>5,956</b>	<b>6,320</b>	<b>6,158</b>

The Commission may approve the O&M Expenses as per the Audited Accounts and also undertake sharing of gains vis-à-vis the normative O&M expenses as per the MYT Regulations, 2011.



***Commission's Analysis and Ruling***

The Commission has applied the norms specified in Regulations 78.4.1 and 97.2.1 of the MYT Regulations for approval of O&M Expenses for the Wires Business and Supply Business.

The Commission observed an increase of Rs. 134.89 crore in expenses on account on DA in FY 2014-15. Upon justification sought, MSEDCL submitted the relevant notifications of GoM whereby the DA was increased, and this was verified.

The Commission observed that employee cost capitalised in FY 2014-15 was less by Rs. 87.51 crore as compared to FY 2013-14. MSEDCL stated that capitalisation of employee cost is calculated on the basis of addition to capital works in progress (CWIP) during the financial year, and that addition to CWIP in FY 2013-14 was higher than in FY 2014-15.

As regards queries pertaining to increase in A&G Expenses due to outsourcing of the metering and billing system, MSEDCL stated that, due to such outsourcing, improvements have been observed, but it is difficult to quantify the benefit in terms of an amount.

The Commission asked MSEDCL for clarification regarding the miscellaneous expense of Rs. 119 crore included in A&G Expense. MSEDCL had provided justification towards Rs. 109 crore. It subsequently stated that the difference of Rs. 10 crore, miscellaneous expense of Rs. 9.08 crore is towards the refund of CSS to Sai Wardha Power Ltd. for FY 2013-14 (since it was held to be a Group CPP in that year).

The Commission has considered the revised sales, GFA and number of consumers for the normative O&M Expenses. While estimating the O&M Expenses on normative basis, MSEDCL has taken parameters such as sales and GFA at the aggregate level, including those of the DF areas. As per terms of the DF arrangements, MSEDCL is not required to incur O&M expenditure towards DF operations. The Franchisee is required to undertake O&M activities within its area, for which it is suitably compensated as per the provisions of the Franchisee Agreement. Therefore, allowing normative O&M Expenses on these parameter values at the aggregate level including such DF areas is not correct.

Hence, for computing the normative O&M expenses for the Supply Business as well as for Wires Business, the Commission has not considered the sales, number of consumers and GFA pertaining to DFs.

**Table 3-21: O&M Expenses approved by Commission for FY 2014-15 (Wire)**

Particulars	Units	Previous MYT Order	MSEDCL Norm Computation	MSEDCL Estimate	Approved in this Order
<b>Composite O&amp;M Norms</b>					
<b>O&amp;M Expenses Norm specified in Regulations</b>					
For Wheeled Energy	paise/kWh	13.57	13.57		13.57
For No. of Consumers in Wires Business	Rs lakh/ '000 Consumers	7.00	7.00		7.00
For R&M Expenses	% of GFA	4.00%	4.00%		4.00%
<b>Parameters for O&amp;M Expenses</b>					
Wheeled Energy	MU	92,551	107,480		102,454
No. of Consumers in Wires Business	'000 Consumers	22,063	21,853		20,920
Opening GFA	Rs. crore	32,846	34,056		32,082
<b>Total O&amp;M Expenses</b>	<b>Rs. crore</b>	<b>4,114</b>	<b>4,350</b>	<b>4,799</b>	<b>4,138</b>

**Table 3-22: O&M Expenses approved by Commission for FY 2014-15 (Supply)**

Particular	Units	Previous MYT Order	MSEDCL Norm Computation	MSEDCL Estimate	Approved in this Order
<b>Composite O&amp;M Norms</b>					
<b>O&amp;M Expenses Norm specified in Regulations</b>					
For Sales in Supply Business	paise/kWh	9.40	9.40		9.40
For No. of Consumers in Supply Business	Rs lakh/ '000 Consumers	4.85	4.85		4.85
For R&M Expenses	% of GFA	0.50%	0.50%		0.50%
<b>Parameters for O&amp;M Expenses</b>					
Sales	MU	80,211	94,805		85,975
No. of Consumers in Supply Business	'000 Consumers	22,063	21,853		20,920
Opening GFA	Rs. crore	3,650	3,784		<b>3,565</b>
<b>Total O&amp;M Expenses</b>	<b>Rs. crore</b>	<b>1,842</b>	<b>1,970</b>	<b>1,359</b>	<b>1841</b>

**Table 3-23: O&M Expenses for FY 2014-5 (Wires+Supply) approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Norm Computation	MSEDCL Actual	Approved by Commission
O&M Expenditure for Retail Supply	1,842	1,970	1,359	1,841

Particulars	Previous MYT Order	MSEDCL Norm Computation	MSEDCL Actual	Approved by Commission
Business				
O&M Expenditure for Wires Business	4,114	4,350	4,799	4,138
<b>Operation &amp; Maintenance Expenses</b>	<b>5956</b>	<b>6320</b>	<b>6,158</b>	<b>5,979</b>

Under the MYT Regulations, 2011, the O&M Expense is a controllable parameter, and any difference between the actual and the normative O&M Expense is an efficiency gain or loss to be shared among MSEDCL and consumers. Accordingly, the difference between the actual O&M Expenses as per the Audited Accounts and the O&M Expenses allowed on normative basis for FY 2014-15 has been taken as an efficiency gain, and shared between MSEDCL and the consumers. The details of sharing of gains have been presented in subsequent Sections.

### 3.7 Capital Expenditure and Capitalisation for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has submitted the details of capital expenditure and capitalisation that it has considered for FY 2014-15. The following Tables summarise the details of capital expenditure and capitalisation for DPR and Non-DPR schemes:

**Table 3-24: Capex and Capitalisation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Capex	4,099	3,128
Capitalisation	4,072	3,854

**Table 3-25: DPR Scheme Capex and Capitalisation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

DPR Scheme	Capital Expenditure	Capitalisation
Infra Plan Works	885	1,345
Infra Plan Works – II	381	278
GFSS – I	7	7
GFSS – II	67	41
GFSS – III	41	50
GFSS IV	97	150
Fixed Capacitor Scheme	-	21
LT Capacitor Phase I & II	-	-
Single Phasing - Left out villages	33	24
Elimination of 66 KV Line	3	3
AMR	-	0

DPR Scheme	Capital Expenditure	Capitalisation
APDRP	-	-
Phase-I	22	36
Phase-II	27	21
RAPDRP A	137	158
<i>RAPDRP B</i>	479	604
DTC Metering	-	-
Phase-I &Phase-II	-	-
Phase-III	12	13
SPA:PE	283	288
P:SI	39	87
P:IE	21	31
DRUM	-	(0)
RGGVY	17	60
Agriculture Metering	26	22
		-
<b>Total DPR Schemes</b>	<b>2,576</b>	<b>3,238</b>

**Table 3-26: Non-DPR Scheme Capex and Capitalisation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Non-DPR Schemes	Capital Expenditure	Capitalisation
FMS	3	1
Load Management	-	0
P.F.C.Urban Distribution Scheme	39	40
MIDC Interest free Loan Scheme	2	6
Evacuation	13	13
Evacuation Wind Generation	25	18
DPDC / Non-Tribal	71	85
DPDC / SCP (Loan up to 2012-13)	75	65
DPDC / TSP + OTSP	95	87
JBIC	-	1
New consumers	62	73
Back log	150	213
Single Phasing	17	9
Special Action Plan(Nandurbar)	-	6
<b>Total Non-DPR Schemes</b>	<b>552</b>	<b>615</b>

**Table 3-27: Summary of Capex and Capitalisation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Particulars	FY 2014-15 (Actual)
<b>Capital Expenditure</b>	
DPR Achemes	2,576
Non DPR Schemes	552

Particulars	FY 2014-15 (Actual)
<b>Total</b>	<b>3,128</b>
<b>Capitalisation</b>	
DPR Schemes	3,238
Non DPR Schemes	615
<b>Total</b>	<b>3,854</b>

As per the Annual Accounts, the addition to GFA is Rs. 4044 crore, whereas in Form 4.2 MSEDCL has shown capitalisation as Rs. 3854 crore. MSEDCL clarified that, in Form 4.2, only scheme-wise details have been shown, whereas in the Annual Accounts the Addition to GFA is shown in totality, including land and land rights, buildings, etc. The details are shown in the following Table.

**Table 3-28: Summary of Capitalisation for FY 2014-15, as submitted by MSEDCL**

Sr. No.	Particulars	Amount (Rs. crore)
1	Capitalisation as per Note 12 of Annual Accounts	4,044
2	Capitalisation as per Form 4 (A)	3,854
3	<b>Other Assets</b>	
4	Land	88
5	Buildings	30
6	Vehicles	0
7	Furniture & Fixtures	34
8	General Assets	25
9	Other Civil Works	12
	<b>Total (2 to 9)</b>	<b>4,044</b>

### ***Commission's Analysis and Ruling***

In the previous MYT Order, the Commission had stated as follows:

*“As sought by the Commission, MSEDCL submitted its scheme-wise justification for excess capitalisation. As stated earlier, the Commission is of the view that since significant excess capitalisation is due to time over-run of the schemes, excess interest was incurred which would have been capitalised as IDC. At the same time, due to excess capitalisation, an undue burden of excess IDC is passed on to the consumers. While the Commission will undertake detailed scrutiny and prudence check of scheme-wise excess capitalisation, vis-a-vis the in-principle approvals granted, during truing-up at the end of the Control Period, the Commission is provisionally allowing this capitalisation claimed for FY 2014-15 and FY 2015-16 but disallowing 50% of the IDC against such schemes.”*

For the following DPR schemes, MSEDCL has claimed capitalisation in excess of the in-principle approved cost:

**Table 3-29: Excess Capitalisation claimed by MSEDCL in FY 2014-15 (Rs. crore)**

Major Schemes	Excess Capitalisation in FY 2014-15
Infra Plan Works	1,345
GFSS	98
RAPDRP A	15
DTC Metering Phase-III	13
SPA:PE (Release of Agri. Connection)	288
P:SI (Project for System Improvement)	87
P:IE(Project for Intensive Electrification)	31
RGGVY	30
<b>Total</b>	<b>1,905</b>

As per Regulation 27.2,

*“27.2 The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:*

*Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.”*

As sought by the Commission, MSEDCL submitted the CBA report for the schemes capitalised during FY 2014-15. The Commission has perused the CBA reports. Considering the scheme-wise justification submitted, the Commission has accepted the excess capitalisation for FY 2014-15 after disallowing IDC on account of time over-runs.

However, the Commission expects future CBA reports to be more elaborate and more clearly demonstrate the benefits resulting from the schemes. In case of non-quantifiable benefits, these should be adequately explained.

Further, as highlighted in earlier Orders, significant part of the excess capitalisation is due to time over-runs, and excess interest was incurred which would have been capitalised as IDC. Due to excess capitalisation, excess IDC is also being passed on to consumers which would require justification. The Commission notes that MSEDCL does not maintain scheme-wise IDC computations, but computes IDC as a fixed percentage of 2.95% of the total capitalisation of each scheme. In case of schemes with excess capitalisation over and above the in-principle approved capital

expenditure, the Commission has continued to disallow 50 % of the IDC worked out by MSEDCL.

MSEDCL has not furnished scheme-wise IDC computations or any details of scheme-wise allocation of loans and phasing of expenditure, which is necessary for ascertaining the scheme-wise excess capitalisation of IDC. However, it has stated that interest capitalisation during FY 2013-14 amounted to 2.95% of the total capitalised amount. Thus, for estimating the IDC component included in the excess capitalisation of Rs. 1905 crore for FY 2014-15, the Commission has applied the same factor of 2.95% for interest capitalisation. Accordingly the derived IDC component of excess capitalisation works out to Rs. 56.20 crore. The Commission has allowed only 50% of this IDC component, amounting to Rs. 28.10 crore.

The capitalisation of non-DPR schemes is within the threshold limit of 20% of the capitalisation approved towards DPR schemes. Hence, it has been allowed.

Based on the above, the capitalisation approved for FY 2014-15 is as follows.

**Table 3-30: Capitalisation approved by Commission for FY 2014-15 (Rs. crore)**

Particulars	FY 2014-15
Excess Capitalisation	1905
50% of IDC @2.95% of capitalisation, for deduction	28.10
DPR Capitalisation disallowed	0
Total disallowance of capitalisation	28.10
Capitalisation claimed by MSEDCL	3,854
Less disallowance of capitalisation	(28.10)
Capitalisation allowed considering above disallowance	3,826
Capitalisation allowed towards schemes not forming part of any specific scheme	190
Capitalisation considered for Funding Plan (Debt & Equity)	4,016

**Table 3-31: Summary of Capitalisation for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Capitalisation	4,072	3,854	3,826

### 3.8 Depreciation for FY 2014-15

#### *MSEDCL's Submission*

Depreciation for FY 2014-15 has been calculated considering the opening balance of assets at the beginning of the year and the actual capitalisation in FY 2014-15. The

depreciation rates are as per the MYT Regulations, 2011. The amount of depreciation is as follows:

**Table 3-32 : Depreciation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Opening GFA	36,504	37,840
Depreciation	1,940	2,081
% Depreciation	5.31%	5.50%

### ***Commission's Analysis and Ruling***

In its previous MYT Petition, MSEDCL has expressed difficulty in complying with Regulation 31.2 (b) of the Tariff Regulations regarding computation of depreciation at different rates, depending on the useful life of assets beyond 70%, of the depreciated assets. MSEDCL had stated that it is practically difficult to calculate the depreciation in that manner in the absence of a computerized system for it. The implementation of ERP is under process, and MSEDCL may be able to calculate the depreciation as per the MYT Regulations once it is in place.

However, in the present Petition, MSEDCL has stated that Fixed Assets are depreciated under the 'Straight Line Method' to the extent of 90% of the cost of the assets at the rates and manner specified in the subsequent MYT Regulations, 2011. MSEDCL has applied these rates from 1st April 2013, as the Commission had relaxed the application of the MYT Regulations, 2011 to MSEDCL by two years vide its Order dated 23 August, 2011.

The Commission has noted MSEDCL's submission that, for assets whose depreciation has not been charged up to 70% after commissioning, it charges depreciation at the rates prescribed as per the norms till the end of the year in which the accumulated depreciation reaches 70%. Beyond 70%, it charges depreciation on the basis of the remaining useful life up to 90% of the cost of the asset in terms of the requirements of the above Regulations. Further, as per the clarification given by the Commission, the useful life of the assets has been taken as prescribed under the Companies Act, 2013.

MSEDCL clarified that, at the time of implementation of SAP-ERP, it had come to its notice that depreciation on Fixed Assets had not been properly charged in earlier years. It then re-computed the depreciation retrospectively as per the newly implemented SAP-ERP and the Regulations.

The Commission notes that MSEDCL has, during the implementation of the SAP-ERP, streamlined the calculation of depreciation in line with the MYT Regulations.

The Commission also asked MSEDCL to explain the difference between the Opening GFA as approved in the previous MYT Order and that considered by MSEDCL for



FY 2014-15. MSEDCL stated that the Opening GFA considered by it is on the basis of actual Audited Accounts. There is a difference between the approved and the actual Opening GFA considered by MSEDCL because of certain disallowances by the Commission in the past, as shown in the following Table.

**Table 3-33 : GFA Reconciliation submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Particulars	Rs. crore	Ref. Tariff Order
Closing GFA as per MSEDCL as on FY 2013-14	37,841	
Closing GFA as per MERC Order as on FY 2013-14	36,505	
<b>Difference</b>	<b>1,336</b>	
Disallowance of IDC on excess capitalisation	42	Order dated 26.06.2015 - Case No. 121 of 2014
Difference in GFA approved in FY 2007-08 - DPR / Non-DPR Schemes	815	17th August 2009 - Case No. 116 of 2008
GFA disallowed in FY 2009-10, Capitalisation undertaken by Corporate Office and not falling under Scheme	208	30th December 2011 - Case No. 100 of 2011
GFA disallowed in FY 2011-12, Capitalisation undertaken by Corporate Office and not falling under Scheme	112	11th June 2014 - Case No. 38 of 2014
Disallowed Capitalisation Expenses on Single Phasing (Rs. 9508 crore - Rs. 9428 crore)	80	17 August, 2009 - Case No. 116 of 2008
Opening Balance difference in FY 2007-08	80	
<b>Total Disallowed</b>	<b>1,336</b>	

The Commission has taken the GFA as approved by it earlier and not the GFA as submitted by MSEDCL. Thus, depreciation has been computed on a pro-rata basis considering the revised GFA for FY 2014-15. Accordingly, the Commission has reworked the depreciation as presented below.

**Table 3-34 : Depreciation approved by Commission for FY 2014-15 (Rs. crore)**

Particulars	FY 2014-15
Depreciation as per Audited Accounts	1,680
Opening GFA as per MSEDCL	37,840
Opening GFA as per Commission	36,504
Depreciation considered on prorata basis	1,620
Composite weighted average depreciation rate (depreciation as a % of Opening GFA)	4.44%

Accordingly, the depreciation approved for FY 2014-15 is as follows.

**Table 3-35: Summary of Depreciation for FY 2014-15, as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Depreciation	1,940	2,081	1,620

### 3.9 Interest Expenses for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has considered the figures as per audited Annual Accounts for outstanding loan at the beginning and end of the year, and the interest paid during the year. Weighted average interest rate has been calculated taking the average of the outstanding loan and interest paid during the year.

Regulation 33 of the MYT Regulations, 2011 specifies the rate for calculation of interest on long-term loans as the weighted average rate of interest on the basis of the actual loan portfolio at the beginning of each year, and on the normative average loan availed in that year. Accordingly, MSEDCL has calculated the interest on long-term at the weighted average rate of interest of 11.83% for FY 2014-15, and has claimed the interest charges for FY 2014-15 as tabulated below. For funding its capital expenditure, various sources of financing were relied upon, including Internal Accruals, GoM Equity, and GoM/GoI grants

**Table 3-36 : Calculation of Interest rate in FY 2014-15 by MSEDCL**

Outstanding Loan at the start of the year	Loan drawal during the year	Loan repayment during the year	Balance outstanding at the end of the year	Interest Expense incurred during the year	Weighted Average Interest rate
(1)	(2)	(3)	(4)=(1)+(2)-(3)	(5)	(6)= (5)/Avg[(1),(4)]
13,105	1,157	1,655	12,606	1,521	<b>11.83%</b>

Regarding details sought of the outstanding loans and Bank wise interest rates, MSEDCL has taken the audited figures. MSEDCL is availing long-term loan from financial institutions mainly from REC and PFC. As the rates of REC or PFC are revised twice a year or as per the rate revised by RBI, the rate for the each tranche of loan may be different.

#### *Commission's Analysis*

The opening loan for FY 2014-15 as per the Audited Accounts was Rs. 13,105 crore. However, the opening loan as per the previous MYT Order was Rs. 13,930 crore, higher by Rs. 825 crore. When asked for reconciliation, MSEDCL stated that the difference is due to the normative methodology adopted by the Commission and repayment considered as equal to depreciation.

MSEDCL has considered the weighted average interest rate as 11.83% for calculation of the interest rate, and the Commission asked for the details of calculation and of the outstanding loan and interest rate Bank-wise as on 1 April, 2014. MSEDCL stated that the weighted average interest rate has been calculated taking the average of the outstanding loan and interest paid during the year. The Commission asked MSEDCL for documentary evidence confirming the outstanding opening loan balance.

MSEDCL had stated that there had been retirement of assets during FY 2014-15 of Rs. 10 crore. It was observed that MSEDCL had not considered reduction of the normative loan part due to such retirement, and sought further details of the treatment and the revised computation if required. MSEDCL responded that generally old assets are retired and their loan term would have been completed. Hence, it has not considered reduction of the normative loan part due to retirement of assets.

The Commission has taken the funding pattern for capitalisation for FY 2014-15 in the same ratio as for the funding of capital expenditure, as per the MSEDCL methodology, with adjustments for the approved quantum of capitalisation. The funding pattern thus arrived at for capitalisation, based on MSEDCL's submissions, is as shown below.

**Table 3-37 : Funding of Capitalisation as submitted by MSEDCL for FY 2014-15 (Rs. crore)**

Particulars	Amount	%
Total Capitalisation	3826	
Consumer Contribution	430	
Grants received during the year	387	
Balance to be funded	3008	100%
Equity	1166	39%
Debt	1740	58%

It will be seen that the equity claimed by MSEDCL exceeds the normative level of 30%. Hence, while approving the funding pattern, the Commission has limited the equity component to 30%, and the excess equity is considered as normative debt.

**Table 3-38 : Funding of Capitalisation as approved by Commission for FY 2014-15 (Rs. crore)**

Particulars	Amount	%
Total Capitalisation	3826	
Consumer Contribution	430	
Grants received during the year	387	
Balance to be funded	<b>3008</b>	100%
Equity	903	30%
Debt	2106	70%

The rate of interest has been allowed, as per Regulation 33, as 11.83%, as claimed by MSEDCL. Under the Regulations, the rate for calculation of interest on long-term loans is the weighted average rate of interest on the basis of the actual loan portfolio at the beginning of the year. It has been approved accordingly. The opening loan balance considered is as approved in past Orders.

**Table 3-39 : Interest Expenses as approved by Commission for FY 2014-15(Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Opening Balance of Gross Normative Loan		
Cumulative Repayment till the year		
Opening Balance of Net Normative Loan	13,105	13,930
Less: Reduction of Normative Loan due to retirement or replacement of assets		
Addition of Normative Loan due to capitalisation during the year	1,423	2106
Repayment of Normative loan during the year	2,081	1621
Closing Balance of Net Normative Loan	12,447	14,415
Closing Balance of Gross Normative Loan		
Average Balance of Net Normative Loan	12,776	14,173
Weighted average Rate of Interest on actual Loans (%)	11.83%	11.83%
Interest Expenses	1,511	1,677
Expenses Capitalised		
<b>Total Interest &amp; Financing Charges</b>	<b>1,511</b>	<b>1,677</b>

Accordingly, the Interest Expenses approved for FY 2014-15 are as follows.

**Table 3-40: Interest Expense for FY 2014-15 (Rs crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Interest Expenses	1,591	1,511	1,677

### 3.10 Return on Equity for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has claimed RoE in accordance with Regulation 32.2 of the MYT Regulations, 2011. The return on equity capital is allocated in the proposed ratio of Fixed Assets between the Wires and Retail Supply Business, i.e. 90% to Wires Business and 10% to Supply Business, in accordance with the allocation ratio approved in the Business Plan Order in Case No. 134 of 2012. Therefore, the capital expenditure, grants, equity and capitalisation are divided between the Wires and Supply Business in the ratio of 90:10. Based on this, MSEDCL has claimed RoE for the Wires and Supply Businesses separately.

The RoE for Wires Business has been computed at 15.5% on the average equity based on the opening balance of equity and normative additions during the year, arrived at by taking 30% of the net capital expenditure (net of consumer contribution and grants as funded from equity). Accordingly, the RoE for the Wires Business is as under:

**Table 3-41 : RoE for Wires Business for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Regulatory Equity at the beginning of the year (Wires)	--	7,780
Capital Expenditure incurred (excl. Grants)	--	2,531
Equity portion of capital expenditure	--	858
% of Equity portion of capital expenditure	--	33.9 %
Assets Capitalisation	--	3,118
Equity portion of Assets Capitalisation	--	933
<b>Regulatory Equity at the end of the year</b>	<b>--</b>	<b>8,713</b>
<b>Return on Computation</b>		
Return on Regulatory Equity at the beginning of the year	--	1,206
Return on Normative Equity portion of Asset Capitalisation	--	72
Interest on Equity portion above 30% @ 11.83% p.a	--	7
<b>Total Return on Regulatory Equity</b>	<b>1,255</b>	<b>1,286</b>

For the Supply Business, the RoE has been computed @ 17.5% on the average equity taking the opening balance of equity and normative additions during the year. Accordingly, the RoE for the Retail Supply Business is as under:

**Table 3-42: RoE for Supply Business for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	FY 2014-15 (Actual)
Regulatory Equity at the beginning of the year (Supply)	--	864
Capital Expenditure incurred (excl. Grants)	--	281
Equity portion of capital expenditure	--	95
% of Equity portion of capital expenditure	--	33.90%
Assets Capitalisation	--	346
Equity portion of Assets Capitalisation	--	104
<b>Regulatory Equity at the end of the year</b>	<b>--</b>	<b>968</b>
<b>Return on Computation</b>	<b>--</b>	
Return on Regulatory Equity at the beginning of the year	--	151
Return on Normative Equity portion of Asset Capitalisation	--	9
Interest on Equity portion above 30% @ 11.83% p.a	--	1
<b>Total Return on Regulatory Equity</b>	<b>157</b>	<b>161</b>

**Commission's Analysis**

Even though the opening GFA claimed by MSEDCL for FY 2014-15 is different from the opening GFA approved in the previous MYT Order, MSEDCL has taken it as approved under that Order for computing the normative RoE for the year.

While calculating the RoE for FY 2014-15 for the Wires and Supply Business, MSEDCL has not considered the reduction in equity portion due to retirement of asset. In response to justification sought, MSEDCL stated that, considering the small amount of assets retired and its consequent negligible impact on the ARR, it has not considered any reduction in the equity portion due to retirement of asset. However, the Commission has not accepted this contention, and reduced the equity to the extent of the equity portion of assets retired during FY 2014-15.

The Commission has approved the funding pattern based on the approved capitalisation for FY 2014-15, as discussed in the earlier Section on interest expenses.

The regulatory equity approved as at the end of FY 2013-14 in the previous MYT Order has been taken as the opening regulatory equity for FY 2014-15. In accordance with Regulation 30, the equity contribution in excess of the norm of 30% of the allowed capitalised amount has been treated as a normative loan, and the interest on such loan has been allowed provisionally.

**Table 3-43: Return on Equity (Wires) for FY 2014-15 approved by Commission (Rs. crore)**

Particulars	%	FY 2014-15
Regulatory Equity at the beginning of the year		7,780
Equity portion of Assets Capitalisation		812
Equity portion of Assets retired during the year		(3)
Equity portion of Net Assets Capitalisation		809
<b>Regulatory Equity at the end of the year</b>		<b>8,589</b>
<b>Return on Computation</b>		
Return on Regulatory Equity at the beginning of the year - @ 15.5%	15.5%	1,206
Return on Normative Equity portion of Asset Capitalisation - @ 15.5%/2	15.5%	63
<b>Total Return on Regulatory Equity</b>		<b>1269</b>

**Table 3-44: Return on Equity (Supply) for FY 2014-15 approved by Commission (Rs. crore)**

Particulars	%	FY 2014-15
Regulatory Equity at the beginning of the year		864
Equity portion of Assets Capitalisation during the year		90
<b>Regulatory Equity at the end of the year</b>		<b>954</b>
<b>Return on Computation</b>		

Particulars	%	FY 2014-15
Return on Regulatory Equity at the beginning of the year - @17.5%	17.5%	151
Return on Normative Equity portion of Asset Capitalisation - @17.5%/2	17.5%	8
<b>Total Return on Regulatory Equity</b>		<b>159</b>

**Table 3-45: RoE approved by Commission for FY 2014-15 (Wires+Supply) (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
RoE for Wires	1255	1286	1269
RoE for Retail Supply Business	157	161	159
<b>Total RoE</b>	<b>1412</b>	<b>1447</b>	<b>1428</b>

### 3.11 Interest on Working Capital for FY 2014-15

#### *MSEDCL's Submission*

Regulations 35.3 and 35.4 of the MYT Regulations, 2011 specify the norms for IoWC for Wires and Supply Business. Accordingly, the IoWC and interest on Security Deposit for the Wires Business is as presented in the following Table.

**Table 3-46: Interest on Working Capital and Security Deposit for Wires Business for FY 14-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
<b>Computation of Working Capital</b>		
One-twelfth of the amount of Operations and Maintenance Expenses	343	400
One-twelfth of the sum of the book value of stores, materials and supplies	58	54
Two months of the expected revenue from charges for use of Distribution Wires at prevailing tariffs	1474	1543
<i>Less:</i>		
<b>Amount of Consumers' Security Deposit</b>		
From Distribution System users	(600)	(577)
<b>Total Working Capital</b>	<b>1275</b>	<b>1,420</b>
<b>Computation of working capital interest</b>		
Rate of Interest (% p.a.)	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>188</b>	<b>209</b>
<b>Interest on Consumers' Security Deposit</b>		
Rate of Interest (% p.a.)	9.00%	8.75%
<b>Interest on Consumers' Security Deposit</b>	<b>54</b>	<b>51</b>
<b>Total</b>	<b>242</b>	<b>260</b>



The provision in the Regulations of reducing the working capital by the total amount of CSD is resulting in the net working capital being negative for the Supply Business. Therefore, the working capital requirement based on normative principles works out to zero. However, the amount of CSD reflected in its Books of Accounts is just a notional amount. Although it is reflected in the Balance Sheet, in the Transfer Scheme MSEDCL has not physically received such deposits in cash from the erstwhile MSEB. However, as per the Audited Accounts, MSEDCL has paid IoWC. The working capital is mainly required to meet liabilities relating to fuel and power purchase, and is beyond its reasonable control. Accordingly, MSEDCL has claimed the balance IoWC in the Supply Business, i.e. IoWC as per Audited Accounts less the IoWC claimed in the Wires Business.

Out of the total Security Deposit, MSEDCL has allocated 10% to Wires and 90% to the Supply Business. It has calculated the interest at 9% per annum. However, as regards interest on CSD for the Supply Business for FY 2014-15, MSEDCL has limited it as per the Audited Accounts (i.e. Interest on CSD as per the Audited Accounts, less the interest Security Deposit claimed in the Wires Business). The IoWC for the Retail Supply Business is as shown below:

**Table 3-47: Interest on Working Capital and Consumers' Security Deposit for Supply Business for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	FY 2014-15	
	Previous MYT Order	MSEDCL Petition
Interest on Working Capital (Actual)	--	261
Interest on Consumers' Security Deposit		
Rate of Interest (% p.a.)	9.00%	
Interest on Consumers' Security Deposit	486	370
<b>Total</b>	<b>486</b>	<b>631</b>

### *Commission's Analysis*

MSEDCL was asked for the basis of the rate of interest considered for computation of Interest on Security Deposits. MSEDCL stated that, as per the Regulation 11.11 of the Supply CODE, 2005, the rate of interest on CSD is equivalent to the Bank Rate of the RBI. That has been considered.

The Commission asked MSEDCL for documentary evidence for the interest rate considered for computation of IoWC and interest on CSD. MSEDCL stated that it has claimed the actual IoWC. As per the Regulation 35 of the MYT Regulations, 2011, the IoWC shall be equal to the State Bank Advance Rate (SBAR) as on the date of application for determination of tariff. Accordingly, for FY 2014-15, MSEDCL has taken the SBAR of 14.75%, prevailing at the time the MYT Petition for the 2<sup>nd</sup> Control Period was filed.



MSEDCL also stated that it has claimed the actual interest paid on the CSD for FY 2014-15. As per the Regulation 11.11 of the Supply CODE, this rate shall be equivalent to the RBI BankRate. Accordingly, MSEDCL has applied the following interest rates as per its Circular No. 211 dated 16 April, 2015:

**Table 3-48: Interest Rate on CSD for FY 2014-15, as per MSEDCL**

Effective Period for Interest Rate	Applicable Rate (per annum)
01-04-2014 to 14-01-2015	9.00%
15-01-2015 to 03-03-2015	8.75%
04-03-2015 to 31-03-2015	8.50%

Since the actual IoWC expense presented as Rs. 471 crore for FY 2014-15 did not match the Audited Accounts (Rs. 326.84 crore as per Note 28), the Commission sought reconciliation. MSEDCL stated that, as per Note 28, it has considered the Interest on Medium-term Loans from REC amounting to Rs. 144 crore in the IoWC since it was availed for working capital. Accordingly the total IoWC expense works out to Rs. 471 crore as shown in the following Table.

**Table 3-49: Interest on Working Capital for FY 2014-15, as submitted by MSEDCL**

Particulars	Amount (Rs. crore)
Interest on Medium-term Loans from REC	143.87
Interest on Borrowings for Working Capital	326.84
<b>Total</b>	<b>470.71</b>

The Commission has reworked the IoWC in accordance with the MYT Regulations, 2011 norms and based on parameters such as the O&M Expenses, Wires ARR and Supply ARR approved in this Order.

**Table 3-50: Interest on Working Capital and Security Deposit for Wires Business as approved by Commission for FY 2014-15 (Rs. crore)**

Particulars	FY 2014-15	
	MSEDCL Petition	Approved in this Order
One-twelfth (1/12) of amount of O&M expenses	400	345
One-twelfth (1/12) of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of financial year	54	54
Two months of expected revenue from charges for use of Distribution Wires	1,543	1,379
Less: Amount held as Security Deposit from Distribution System Users	(577)	(577)
<b>Total Working Capital Requirement</b>	<b>1,420</b>	<b>1,200</b>
Rate of Interest (% p.a.)	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>209</b>	<b>177</b>

Particulars	FY 2014-15	
	MSEDCL Petition	Approved in this Order
<b>Interest on Security Deposit</b>		
Rate of Interest (% p.a.)	8.75%	8.75%
<b>Interest on Security Deposit</b>	<b>51</b>	<b>51</b>

**Table 3-51: Interest on Working Capital and Consumers' Security Deposit for SupplyBusiness as approved by Commission for FY 2014-15 (Rs crore)**

Particulars	FY 2014-15	
	MSEDCL Petition	Approved in this Order
One-twelfth (1/12) of amount of O&M expense	113	153
One-twelfth (1/12) of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of financial year	6	6
Two months of expected revenue from sale of electricity at prevailing	9,189	9,189
Less: Amount held as security deposit	(5,196)	(5,196)
Less: One month equivalent of cost of Power Purchase	(3,634)	(3,634)
<b>Total Working Capital Requirement</b>	<b>478</b>	<b>518</b>
Computation of working capital interest		
Rate of Interest (% p.a.)	14.75%	14.75%
Interest on Working Capital (Actual)	261	-
Interest on Working Capital (Normative)		76
Interest on Security Deposit		
Rate of Interest (% p.a.)		8.75%
<b>Interest on Security Deposit</b>	<b>370</b>	<b>370</b>

Accordingly, the IoWC and the Interest on Security Deposits from Consumers and Distribution System Users approved for FY 2014-15 is as follows:

**Table 3-52: IoWC and Interest on Security Deposit as approved by Commission FY 2014-15 (Wires+Supply) (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
IoWC & interest on CSD (wires)	244	260	228
IoWC & interest on CSD (supply)	486	631	446
<b>IoWC &amp; Interest on CSD</b>	<b>728</b>	<b>891</b>	<b>674</b>

Under the MYT Regulations, 2011, IoWC expense is a controllable parameter, and any difference between the actual and the normative IoWC should be considered as efficiency gain or efficiency loss to be shared among MSEDCL and consumers in accordance with Regulation 14. The efficiency loss to the extent of the difference between the actual IoWC as per the Audited Accounts and that allowed on normative basis for FY 2014-15 has been shared accordingly. The details of sharing of gains or losses are presented in subsequent Sections of this Order.

### 3.12 Other Finance Charges for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL incurred Other Finance Charges amounting to Rs. 30 crores in FY 2014-15. These are the Fund raising charges, i.e. Guarantee Charges, Finance Charges, Stamp Duty and Service Fee, and are as shown in the following Table.

**Table 3-53: Other Finance Charges for FY 14-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Guarantee Charges	7	6
Finance Charges	22	23
Stamp Duty	2	0
Service Fee i.e. Fund raising charges	2	2
Other Interest and Charges	4	--
<b>Total Other Finance Charges</b>	<b>38</b>	<b>30</b>

#### *Commission's Analysis and Ruling*

The Commission has verified the above Charges with the Audited Accounts, and found them to be in order. Hence, it has approved the Other Finance Charges as Rs 30 crore for FY 2014-15.

**Table 3-54: Other Finance Charges for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Other Finance Charges	38	30	30

### 3.13 Provision for Bad Debts for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has considered the provision for Bad and Doubtful Debts based on the last audited receivables for FY 2014-15 for the 2<sup>nd</sup> Control Period as given below:

**Table 3-55: Provision for Bad and Doubtful Debts for FY 2014-15 as per MSEDCL( Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Provision for Bad Debt	210	347
Receivables	13,983	17,216
% of Receivables	1.50%	2.02%

In reply to data gaps, MSEDCL stated that the gross amount of trade receivables in Note17 is Rs. 13203.21 crore, and long-term trade receivables in Note15 is Rs.4012.31 crore, amounting to Rs.17216 crore.

#### ***Commission's Analysis and Ruling***

The Commission asked MSEDCL to explain the difference between receivables considered by it for computation of Bad Debts and the Audited Accounts, as shown below, of Rs. 301 crore.

**Table 3-56: Receivables for FY 2014-15, as per MSEDCL (Rs. crore)**

Note No.	Particulars	As per Audited Accounts (Rs. crore)	As per Petition (Rs. crore)
Note 15	Long-term Trade Receivables	3949	
Note17	Total trade receivables (excluding amount of GOM subsidy)	12965	
	<b>Total Receivables</b>	<b>16,915</b>	<b>17,216</b>

In reply, MSEDCL stated that Rs. 16,915 crore is the net Receivables, whereas it has considered the gross amount of Trade Receivables in Note-17 and Long-term Trade Receivables in Note-15, as shown in the following Table.

**Table 3-57: Reconciliation of Receivables for FY 2014-15, submitted by MSEDCL (Rs. crore)**

Note No.	Particulars	Amount
Note 15	Long-term Trade Receivable	4,012
Note17	Total trade receivable (excluding amount of GOM subsidy)	13,203
	<b>Total Receivables</b>	<b>17,216</b>

Considering the above receivables, the Commission has computed the provision for Bad Debts to be allowed for FY 2014-15 as per the MYT Regulations, 2011 as shown below:

**Table 3-58: Provision for Bad Debts for FY 2014-15 as approved by Commission**

Particulars	MSEDCL Petition	Approved in this Order
Receivables for the year(Rs. crore)	17216	17216

Particulars	MSEDCL Petition	Approved in this Order
Opening Balance of Provision of Bad and Doubtful Debt as % of Receivables	2.02%	1.50%
Provision for Bad & Doubtful Debts during the year(Rs. crore)	347	258

The provision for Bad Debts approved for FY 2014-15 is summarised as follows.

**Table 3-59: Summary of approved Provision for Bad Debts for FY 2014-15 (Rs crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Provision for Bad Debts	210	347	258

### 3.14 Other Expenses

#### *MSEDCL's Submission*

MSEDCL has claimed 'Other Expenses' comprising interest to suppliers/contractors, rebate to consumers and Other Expenses, viz. compensation for injuries to staff and outsiders. The break-up is as shown below:

**Table 3-60: Other Expenses for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Compensation for injuries, death to staff	2	3
Compensation for injuries, death to others	7	6
Loss on obsolescence of Fixed Assets	--	10
Intangible assets written-off	11	10
Interest on Staff Welfare Fund	--	6
Non Moving Items	--	2
Interest to Suppliers/Contractors (O&M)	--	2
Small and Low value written off	--	0
Others	--	1
<b>Total</b>	<b>20</b>	<b>40</b>

#### *Commission's Analysis and Ruling*

In reply to a query regarding details of Staff Welfare Fund, MSEDCL stated that the rate of interest offered to the Staff Welfare Fund is 18%, and the balance of Fund as on 01 April, 2014 was Rs. 33.52 crore. Addition during the year was Rs. 10.73 crore, and the balance as on 31 April 2015 was Rs. 44.25 crore. MSEDCL further stated that the Fund is collected directly from the salary of employees and is utilized for cash

prizes, scholarships, educational expenses of the wards of its employees as well as medical and financial assistance to them.

MSEDCL has claimed Rs. 6 crore towards interest on the Staff Welfare Fund. Based on replies to queries, it is understood that MSEDCL collects funds from employees and retains the money which it could otherwise invest. It then gives interest on these collected funds. The cost in terms of the interest foregone has, therefore, to be borne by MSEDCL and not consumers. Hence, it has been disallowed by the Commission.

Under 'Other Expenses', MSEDCL has claimed Rs. 1 crore against the head 'other'. Upon enquiry, MSEDCL stated that this is the amount of Maharashtra Value-Added Tax (MVAT) credit disallowance/withdrawal, which the Commission has accordingly allowed.

MSEDCL has claimed Other Expenses on account of loss on obsolescence of Fixed Assets of Rs. 10 crore in FY 2014-15, and was asked for the details. MSEDCL stated that loss on obsolescence of Fixed Assets of Rs. 10 crore in FY 2014-15 is mainly due to loss of Lines Cables Networks, i.e. HT & LT lines, DTC Works. and plant & machinery, RSJ Poles, due to natural calamities such as flood cyclone, hailstorm, etc.

MSEDCL had claimed Rs. 10 crore towards intangible assets written off. However, upon verification of the Audited Accounts, no such amount was seen in the GFA Table. Hence, the claim for this amount is disallowed.

The Commission approved the Other Expenses to the extent of Rs. 24 crore for FY 2014-15.

**Table 3-61: Other Expenses for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Compensation for injuries, death to staff	2	3	3
Compensation for injuries, death to others	7	6	6
Loss on obsolescence of Fixed Assets	-	10	10
Loss on sale of scrap	-	-	-
Intangible assets written-off	11	10	-
Interest on Staff Welfare Fund		6	-
Non Moving Items		2	2
Refund refund of additional supply charges		-	-
Regular concession in tariff to Powerloom consumers		-	-
Interest to Suppliers/Contractors (O&M)		2	2
Small and Low value written- off items	0	0	0
Others		1	1
<b>TOTAL</b>	<b>20</b>	<b>40</b>	<b>24</b>

### 3.15 Income Tax

#### *MSEDCL's Submission*

The Commission had approved Income Tax of Rs. 0.04 crore for FY 2014-15 under the previous MYT Order. However, for truing-up, MSEDCL has not claimed any Income Tax during FY 2014-15.

#### *Commission's Analysis and Ruling*

The Commission has verified the Audited Accounts for FY 2014-15, and observed that Income Tax of Rs. 0.04 crore was reported.

MSEDCL clarified that it has not claimed any Income Tax for FY 2014-15. However, the Audited Accounts for FY 2014-15 show Rs.4.11 lakh as Tax Expenses. These are not Income Tax expenses, but Wealth Tax expenses for FY 2014-15. MSEDCL had inadvertently not considered the Wealth Tax of Rs. 4.11 lakh in FY 2014-15, which was requested to be allowed while determining the ARR for FY 2014-15.

Recovery of Income Tax in the electricity regulated business needs to be seen in the context of the regulated RoE. Under the regulated cost-plus regime, the Commission needs to ensure that the Licensee earns regulated RoE at the rates specified by it. For this purpose, RoE is grossed-up at the applicable Income Tax rate, or the Income Tax is allowed separately on actual basis. This principle is not applicable in case of Wealth Tax which is a levy linked to asset appreciation rather than RoE.

Hence, the Commission is of the view that separate recovery of Wealth Tax cannot be allowed. Besides, the MYT Regulations also do not explicitly provides for it. Accordingly, the Commission has not approved any Wealth Tax for FY 2014-15.

### 3.16 Transmission Charges for FY 2014-15

#### *MSEDCL's Submission*

The Commission has approved Transmission Charges for FY 2014-15 in its InSTS Tariff Order in Case No. 123 of 2014, and the MSLDC Charges in its Order in Case No. 178 of 2013. These have been applied for FY 2014-15. The Transmission Charges claimed by MSEDCL are as shown in the following Table:

**Table 3-62: Transmission Charges for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Transmission Charges paid to Transmission Licensee	5,490	5,475

#### *Commission's Analysis and Ruling*

The Commission has taken Transmission Charges as per the Audited Accounts, as submitted by MSEDCL.

**Table 3-63: Transmission Charges for FY 2014-15 as per Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Transmission Charges paid to Transmission Licensee	5,490	5,475	5,475

**3.17 Contribution to Contingency Reserves for FY 2014-15*****MSEDCL's Submission***

Considering its precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it was not feasible for MSEDCL to make any contribution to Contingency Reserves. Accordingly, it has not been claimed in the ARR of FY 2014-15.

***Commission's Analysis and Ruling***

The Commission asked for the details of accumulated Contingency Reserve Fund till FY 2015-16, which MSEDCL submitted as in the following Table.

**Table 3-64: Details of accumulated Contingency Reserves submitted by MSEDCL (Rs. crore)**

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Opening Balance of Contingency Reserve	298	381	476
Addition during the year	83	95	NA
Closing Balance of Contingency Reserve	381	476	
Opening GFA	33,268	37,840	41,873
Closing GFA	37,840	41,873	47,470

As per the Audited Accounts for FY 2014-15, Rs. 95 crore has been booked as contribution to Contingency Reserve. However, MSEDCL confirmed that no such contribution was made as is specified under the MYT Regulations because of its precarious financial condition. While a minimum contribution of 0.25% of GFA is expected every year for reasons of prudence, the Commission has considered MSEDCL's submission, and also notes that such annual contributions have now been proposed over the 3<sup>rd</sup> Control Period. Hence, the Commission has not considered any contribution to Contingency Reserve in FY 2014-15.



**Table 3-65: Contribution to Contingency Reserve for FY 2014-15 as per Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Contribution to Contingency Reserve	-	-	-

**3.18 Incentives and Discounts for FY 2014-15*****MSEDCL's Submission***

In FY 2014-15, MSEDCL has paid Rs. 246 crore as incentives/discounts to consumers for timely payment of bills, as against Rs. 230 crore approved in the previous MYT Order:

**Table 3-66: Incentives/discounts for FY 2014-15 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Incentives/Discounts	230	246

***Commission's Analysis and Ruling***

The Commission has verified the incentive/discounts from the Audited Accounts and taken the actuals as submitted by MSEDCL for FY 2014-15.

**Table 3-67: Incentives/discounts for FY 2014-15 approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Incentives/Discounts	230	246	246

**3.19 RLC Refund for FY 2014-15*****MSEDCL's Submission***

During FY 2014-15, MSEDCL has refunded Rs. 46 crore of Regulatory Liability Charge (RLC) as against the RLC Refund of Rs. 38 crore approved by Commission in its previous MYT Order.

***Commission's Analysis and Ruling***

The Commission asked for the year-wise break-up of RLC refund, and the remaining balance as on 1 April, 2015. MSEDCL submitted the year-wise break-up as follows.

**Table 3-68: RLC Refund for FY 2014-15, as submitted by MSEDCL**

<b>RLC Refund</b>	<b>Amount (Rs. crore)</b>
FY08-09	455
FY 09-10	639
FY 10-11	516
FY 11-12	419
FY 12-13	462
FY 13-14	402
FY 14-15	46
FY 15-16*	4
<b>Total</b>	<b>2,943</b>

\* Upto Feb-16

Under the Commission's directions in Order dated April 2, 2008 in Case Nos. 47 and 92 of 2007 on MSEDCL's Review Petition regarding refund of RLC, MSEDCL has to refund around Rs. 3227 crore collected through RLC from December, 2003 to September, 2006.

The Commission has verified the RLC refund made by MSEDCL from the Audited Accounts, and considered the RLC refund as submitted by it for FY 2014-15.

**Table 3-69: RLC Refund approved by Commission for FY 2014-15 (Rs. crore)**

<b>Particulars</b>	<b>Previous MYT Order</b>	<b>MSEDCL Petition</b>	<b>Approved in this Order</b>
RLC Refund	38	46	46

### 3.20 Additional Supply Charge Refund for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has refunded Rs. 2 crore of ASC during FY 2014-15 as per the Audited Accounts. The remaining ASC refund may be allowed as and when MSEDCL refunds it to eligible consumers in future.

#### *Commission's Analysis and Ruling*

The Commission asked for the year-wise break-up of ASC refund and remaining balance as on 1 April, 2015, which MSEDCL submitted as given in the following Table.

**Table 3-70: ASC Refund for FY 2014-15, as submitted by MSEDCL**

<b>ASC Refund</b>	<b>Amount (Rs. crore)</b>
FY 09-10	461

ASC Refund	Amount Rs. crore)
FY 10-11	213
FY 11-12	17
FY 12-13	2.42
FY 13-14	0.05
FY 14-15	1.92
FY 15-16*	0.88
<b>Total</b>	<b>697</b>

\* Upto Feb-16

The Commission has considered the ASC Refund as submitted by MSEDCL for FY 2014-15.

**Table 3-71: ASC Refund approved by Commission for FY 2014-15 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
ASC Refund	-	2	2

### 3.21 Net Prior Period Expenses/ (Income) and Exceptional Items for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL has claimed net Prior Period Expenses/ (Income) Rs. (1716.71) crore and Exceptional Items of Rs (1003.54) crore, totalling Rs. (2720.25) crore in FY 2014-15. As sought, MSEDCL the break-up of this amount showing the Prior Period Expenses and Prior Period Income considered for arriving at this figure and reconciliation of the heads forming Prior Period Expenses/Income with the Audited Accounts for FY 2014-15.

As per the Audited Annual Accounts, the Net Prior Period Expense/ (Income) credited is reported as Rs. 1213 crore. The prior period items as defined in the AS (Accounting Standards) - 5 are items of income or expenses which arise in the current period as result of errors or omissions in the financial statements of one or more prior periods. Further, even though the expenses claimed are prior period items, since they have been accounted for in the Books of Account in FY 2014-15, they have been claimed by MSEDCL for that year. The break-up of Prior Period Expenses is shown below:

**Table 3-72: Net Prior Period Expenses/ (Income) for FY 2014-15**

Particulars	Amount (Rs. crore)
<b>Income relating to Previous Year</b>	
Receipts from Consumers	124
Interest Income	0
Excess Provision for Depreciation	1,007
Other Excess Provision	134

Particulars	Amount (Rs. crore)
Other Income	823
<b>SUB TOTAL (A)</b>	<b>2,088</b>
<b>Expenses / Losses relating to Previous Year</b>	
Short Provision for Power Purchase	132
Adjustment to Past Billing	239
<b>SUB TOTAL (B)</b>	<b>372</b>
<b>Net prior period expenditure C = (B) - (A)</b>	<b>(1,717)</b>

### *Commission's Analysis and Ruling*

In reply to a query, MSEDCL stated that it has provided the details of Prior Period Expenses/ (Income) and Exceptional Items in the Petition. Considering the methodology adopted by Commission in the past, it has claimed the Prior Period Expenses/(income) for FY 2014-15 as per the details shown in the following Table along with reconciliation with the Audited Accounts.

**Table 3-73: Net Prior Period Expenses/Income for FY 2014-15 as per Annual Accounts and as claimed, submitted by MSEDCL (Rs. crore)**

Particulars	As per Annual Accounts ( 31 March, 2015)	MSEDCL Claim
<b>Income relating to Previous Year</b>		
Receipts from Consumers	124.43	124.43
Interest Income	0.26	0.26
Excess Provision for Depreciation	1,006.76	1,006.76
Excess Provision for Interest and Finance Charges	33.63	-
Other Excess Provision	133.58	133.58
Excess Provision for Power Purchase	-	-
Other Income	823.21	823.21
<b>SUB TOTAL (A)</b>	<b>2,121.87</b>	<b>2,088.24</b>
<b>Expenses / Losses relating to Previous Year</b>	-	-
Short Provision for Power Purchase	132.46	132.46
Operating Expenses	9.63	-
Depreciation under provided	494.21	-
Interest and Other Charges	10.08	-
Administration Expenses	15.11	-
Material Related Expenses	8.01	-
Adjustment to Past Billing	239.07	239.07
<b>SUB TOTAL (B)</b>	<b>908.56</b>	<b>371.53</b>
<b>Net Prior Period Expenditure/(Income) C = (B) - (A)</b>	<b>(1,213.31)</b>	<b>(1,716.71)</b>

From the Reconciliation Statement presented above, the Commission observes that MSEDCL has not claimed prior period items such as operating expenses, depreciation, interest and Finance Charges, material related expenses, etc., as these expenses have been approved in the respective years as per the applicable norms and upon detailed scrutiny. This is in line with the treatment given by the Commission in its earlier Order.

After scrutiny of the submissions and verifying these from the Audited Accounts, the Commission has approved the net Prior Period Income/Expense of Rs (1716.71) crore as claimed by MSEDCL.

### **3.22 Exceptional Items**

#### ***MSEDCL's Submission***

Due to change in the accounting policy for Government Grants, Subsidy and Consumer Contribution, an amount of Rs.1003.54 crore is booked as Other Income – Exceptional Item in FY 2014-15 as per Note 30.10 of the Annual Accounts.

During the year, it has changed its accounting policy for crediting amounts received as Government Grants, Subsidies and consumers' contribution towards the cost of Fixed Assets, which are credited to the capital reserve and transferred to the Statement of Profit and Loss over 15 years equally with effect from the financial year under consideration.

Earlier, an amount equal to depreciation on the assets created out of such unconditional Government grants and consumers' contributions used to be credited to the Statement of Profit and Loss. Grants received conditionally used to be treated as deferred income over fifteen years equally from the year of receipt of such grant.

The "Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies" defined in the AS 5 provides the guidance for change in accounting policies as under:

*"A change in an accounting policy should be made only if the adoption of a different accounting policy is required by statute or for compliance with an accounting standard or if it is considered that the change would result in a more appropriate presentation of the financial statements of the enterprise."*

In view of the attention invited in the independent Auditors' Report on the financial statements for the previous year and the practical difficulty in giving effect to the earlier policy of crediting an amount equal to depreciation on the assets created out of such Grants / Contributions to the Statement of Profit and Loss as per AS-12, the MSEDCL management believed that the adoption of the new accounting policy results in more relevant and reliable information about the financial position as the average useful life of the relevant assets ranges between 15 to 17 years, which fulfils the purpose of AS-12.

Therefore, due to the change in the accounting policy, an amount of Rs.1003.54 crore is booked as Other Income – Exceptional Item during the year.

### ***Commission's Analysis and Ruling***

The Commission has verified the submissions made by MSEDCL regarding Exceptional Items and has approved these as per the Audited Accounts for FY 2014-15.

## **3.23 Income from Wheeling Charges for FY 2014-15**

### ***MSEDCL's Submission***

MSEDCL had an income from Wheeling Charges of Rs. 3 crore during FY 2014-15.

**Table 3-74: Income from Wheeling Charges for FY 2014 -15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Income from Wheeling Charges	20	3

### ***Commission's Analysis and Ruling***

The Commission has verified the income from Wheeling Charges from the Audited Accounts and has considered them accordingly.

**Table 3-75: Income from Wheeling Charges approved for FY 2014 -15(Rs crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Income from Wheeling Charges	20	3	3

## **3.24 Income from Open Access Charges**

### ***MSEDCL's Submission***

MSEDCL received an income from OA Charges of Rs. 380 crore during FY 2014-15.

**Table 3-76: Income from Open Access Charges FY 2014 -15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Income from OA Charges	296	380

### ***Commission's Analysis and Ruling***

The Commission asked MSEDCL whether Wheeling Charges for such OA transactions within DF areas have been considered under the revenue in FY 2014-15 for distribution, and for details of revenue from OA sales. MSEDCL stated that the

Wheeling Charges for OA transactions within DF areas have been considered under the revenue from FY 2014-15 from DF as per the mutually agreed terms.

The Commission has approved the income from OA Charges as submitted by MSEDCL.

**Table 3-77: Income from OA Charges approved for FY 2014-15 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Income from OA Charges	296	380	380

### 3.25 Deemed Revenue on account of change of category

#### *Commission's Analysis and Ruling*

The Commission, in the previous MYT Order, had provisionally considered a deemed revenue of Rs. 102 crore in FY 2014-15 on account of MSEDCL allowing shifting of consumers from the HT-I Continuous to HT-I Non-Continuous category beyond the time limit earlier stipulated by the Commission. The Commission had directed MSEDCL to submit the actual loss of revenue on this account along with its next ARR Petition. However, MSEDCL has neither submitted any data on actual loss of revenue with the present Petition as was directed, nor has it considered any deemed revenue on that account.

However, the Commission's subsequent review Order dated 19 August, 2016 in Case No. 94 of 2016 deals with this issue. In that Order, MSEDCL has been directed to assess its impact after examining all the applications for change of category received by it which merit revision, based on the principles settled in the review Order, including the impact on account of any selective, inconsistent or discriminatory treatment given to different applicants, and to submit it to the Commission within three months, i.e. by 19 November, 2016. In reply to a query, MSEDCL stated these facts, and that the required details would be submitted in line with the directives in the review Order within the stipulated time.

The Commission shall take a final decision in the matter considering the submissions expected from MSEDCL. Hence, for the purpose of true-up of FY 2014-15, the Commission has not considered any revenue on account of such change of category from Continuous to Non-Continuous in the present Order.

**Table 3-78: Deemed Revenue on account of change in category for FY 2014-15, as considered by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Deemed Revenue on account of change of category	102	-	-

**3.26 Revenue for FY 2014-15*****MSEDCL's Submission***

The total revenue in FY 2014-15 based on Audited Accounts was Rs. 55,707 crore, which comprised revenue from sale of power of Rs. 55,135 crore, income from trading of surplus power of Rs. 189 crore, income from Wheeling Charges of Rs. 3 crore and income from OA of Rs. 380 crore.

**Table 3-79 : Revenue for FY 2014-15 as per MSEDCL (Rs crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Revenue from Sale of Power	55,259	55,135

***Commission's Analysis and Ruling***

The Commission verified the revenue from the Annual Accounts for FY 2014-15. The total revenue in FY 2014-15 was Rs. 55,707 crore, which comprises revenue from sale of power of Rs. 55,135 crore, as claimed by MSEDCL. The Commission has approved the revenue from sale of power accordingly.

**Table 3-80 : Revenue for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Revenue from Sale of Power	55,259	55,135	55,135

**3.27 Income from Trading of Surplus Power*****MSEDCL's Submission***

MSEDCL has received income of Rs.189 crore from trading of surplus power, as against Rs.180 crore earlier approved by the Commission, i.e. Rs..9 crore more.

***Commission's Analysis and Ruling***

The Commission has considered the income from trading of surplus power as submitted by MSEDCL.

MSEDCL has claimed Rs. 189 crore as income from trading of surplus power. It was asked for the month-wise surplus traded power quantum (MU) and rate at which it was traded in FY 2014-15. MSEDCL has submitted the month-wise break-up of the total quantum of 580 MU traded surplus as below:

**Table 3-81 : Month-wise Trading Surplus, as submitted by MSEDCL**

Month	Sale		
	MU	Amount	Rate/unit
Apr-14	2.4	0.57	2.38
May-14	10.25	2.5	2.44
Jun-14	32.54	7.84	2.41



Month	Sale		
	MU	Amount	Rate/unit
Jul-14	115.15	33.31	2.89
Aug-14	109.96	36.04	3.28
Sep-14	35.52	12.32	3.47
Oct-14	3.55	3.29	9.27
Nov-14	61.23	14.92	2.44
Dec-14	126.56	27.28	2.16
Jan-15	158.99	34.07	2.14
Feb-15	21.88	7.44	3.40
Mar-15	27.51	8.9	3.24
<b>Total</b>	<b>705.54</b>	<b>188.48</b>	<b>2.67</b>

The Commission has considered the income from trading of surplus power as submitted by MSEDCL.

**Table 3-82 : Income from Trading Surplus for FY 2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Income from Trading Surplus	180	189	189

### 3.28 Non-Tariff Income for FY 2014-15

#### *MSEDCL's Submission*

MSEDCL received Non-Tariff Income of Rs. 1,958 crores against Rs. 1,761 crore earlier approved, i.e. Rs. 197 crore more.

**Table 3-83 : Non-Tariff Income for FY 2014-15 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Non-Tariff Income	1,761	1,958

Non-Tariff Income increased by Rs. 333.38 crore over FY 2013-14 mainly because MSEDCL had changed its accounting policy for crediting amounts received as Government Grants, Subsidies and Consumers' Contribution towards cost of Fixed Assets in FY 2014-15. This amount increased to Rs. 455.30 crore from Rs. 46.56 crore in FY 2013-14.

***Commission's Analysis and Ruling***

The Commission has considered Non-Tariff Income as per the Audited Accounts for FY 2014-15.

**Table 3-84: Non-Tariff Income for FY2014-15 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Non-Tariff Income	1,761	1,958	1,958

### 3.29 Compensation paid by MSEDCL

***Commission's Analysis and Ruling***

The Commission asked for details of compensation/penalty paid as per the Orders of the Commission, CGRF, Electricity Ombudsman and other forums. MSEDCL submitted the following details.

**Table 3-85: Compensation/Penalty paid, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2014-15
Amount of Compensation / Penalty paid	0.07

By its very nature, no such compensation or penalty or compensation can be allowed to be recovered through the ARR. Accordingly, that amount has been reduced from the ARR.

### 3.30 Sharing of Efficiency Gains and Losses for FY 2014-15

***MSEDCL's Submission***

MSEDCL has considered the expense and revenue heads for FY 2014-15 taking the actual amounts as per the Audited Accounts. However, parameters such as O&M Expenses and IoWC, for which specific norms have been specified in the MYT Regulations, have been calculated on normative basis.

**O&M Expenditure**

The actual O&M expenses as per the Audited Accounts for FY2014-15 are higher than allowed on normative basis.

**Table 3-86: O&M Expenses Approved vs. Actual as per MSEDCL (Rs. crore)**

Particulars	Approved in Previous MYT Order	FY 2014-15 Actual	Gain/ (Loss)	2/3 of Efficiency Gains/ Losses retained by MSEDCL	1/3 of Efficiency Gains/losses passed on to Consumers	Net Entitlement after sharing
O&M Expenses	5,957	6,158	(201)	(134)	67	6,024

**Interest on Working Capital**

IoWC expenses as per the Audited Accounts are higher than allowed on normative basis.

**Table 3-87: Interest on Working Capital Approved vs. Actual as per MSEDCL (Rs. crore)**

Particulars	Approved Previous MYT Order	FY 2014-15 Actual	Gain/ (Loss)	2/3 of Efficiency Gains/ Losses retained by MSEDCL	1/3 of Efficiency Gains/losses passed on to consumer	Net Entitlement after sharing
IoWC	188	471	(283)	(188)	94	282

**Distribution Loss**

There is under-achievement of 0.42% against the Distribution Loss reduction target in FY 2014-15 compared to the trajectory approved in the MYT Business Plan Order. Therefore, this efficiency loss has to be shared between MSEDCL and the consumers in accordance with the MYT Regulations, 2011. Accordingly, MSEDCL has calculated this efficiency loss based on the actual average billing rate in FY 2014-15, as shown in the Table below:

**Table 3-88: Efficiency Loss due to higher Distribution Loss in FY 2014-15 as per MSEDCL**

Particulars	Unit	Amount (Rs. crore)
Normative Distribution Losses	%	13.75%
Actual Distribution Losses	%	14.17%
Actual energy input	MU	1,10,458
Normative sales	MU	95,270
Actual sales MU	MU	94,805
Additional/ (lower) sales due to lower Distribution Loss	MU	(466)
Average Billing Rate*	Rs/ kWh	5.81
Additional/ (lower) revenue due to higher Distribution Loss	Rs. crore	(270)
Efficiency Loss to be retained by MSEDCL	Rs. crore	180
Efficiency Loss passed on to consumers	Rs. crore	90

*\*Based on "Revenue from sale of power" as per Schedule 21 of Audited Accounts of MSEDCL excluding stand-by charges, Miscellaneous charges from consumers, Wheeling Charges and Line Maintenance Charges.*

The net impact of sharing of gains and losses is a reduction in the ARR by Rs.232 crore. The total impact of sharing of gains and losses of various components is summarised in the following Table.

**Table 3-89: Total Impact of sharing of Gains and Losses for FY 2014-15, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	FY2014-15 Actual	Gain/ (Loss)	2/3 of Efficiency Gains/ Losses retained by MSEDCL	1/3 of Efficiency Gains/losses passed on to consumers	Net Entitlement after sharing
O&M Expenses	5,957	6,158	(201)	(134)	67	6,024
Interest on Working Capital	188	471	(283)	(188)	94	282
Sharing of revenue due to higher Distribution Loss			(270)	(180)	90	90
<b>Total</b>	<b>6,145</b>	<b>6,628</b>	<b>(754)</b>	<b>(502)</b>	<b>251</b>	<b>6,396</b>

### ***Commission's Analysis and Ruling***

The impacts of sharing of gains and losses as reported in the text (Rs. 232 crore) and in the above Table (Rs. 251 crore) by MSEDCL are different. The Commission has, however, independently analysed the impact of sharing of gains and losses as elaborated below.

Regulations 12, 13 and 14 of the MYT Regulations, 2011 specify the controllable and uncontrollable parameters, mechanism of pass-through of gains and losses on account of uncontrollable parameters, and the mechanism for their sharing on account of controllable parameters as follows:

*“14.1 The approved aggregate gain to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:*

*(a) One-third of the amount of such gain shall be passed on as a rebate in tariff over such period as may be stipulated in the Order of the Commission under Regulation 11.6;*

*(b) The balance amount, which will amount to two-third of such gain, may be utilised at the discretion of the Generating Company or Transmission Licensee or Distribution Licensee.*

14.2 The approved aggregate loss to the Generating Company or Transmission Licensee or Distribution Licensee on account of controllable factors shall be dealt with in the following manner:

(a) One-third of the amount of such loss may be passed on as an additional charge in tariff over such period as may be stipulated in the Order of the Commission under Regulation 11.6; and

(b) The balance amount of loss shall be absorbed by the Generating Company or Transmission Licensee or Distribution Licensee.

14.3 Gains and losses on account of controllable factors during the 2nd Control Period shall be shared with the consumers at the time of Mid-term Performance Review and also at the time of tariff determination process of the Third Control Period.

The actual O&M Expenses and IoWC claimed by MSEDCL as per the Audited Accounts for FY 2014-15 are higher than the normative. One-third of the efficiency gain/ (loss) has been passed on to consumers and two-thirds allowed to be retained by MSEDCL. The summary of sharing of efficiency gains/(loss) on account of O&M Expenses, IoWC and Distribution Loss as approved by the Commission are shown in the Tables below.

**Table 3-90: Sharing of Gains/Loss on O&M and IoWC Expenses, approved by Commission (Rs. crore)**

Particulars	FY 2014-15 Approved in this Order	FY 2014-15 Actual	Gain/(Loss)	2/3 of Efficiency Gains/Losses retained by MSEDCL	1/3 of Efficiency Gains/Losses passed on to consumer	Net Entitlement after sharing
O&M Expenses	5979	6158	(179)	(119)	60	6038
IoWC	254	471	(217)	(145)	72	326

**Table 3-91: Sharing of Efficiency Loss due to higher Distribution Losses, as approved by Commission**

Particulars	FY 2014-15	
	MSEDCL Petition	Approved in this Order
Normative Distribution Losses	13.75%	13.75%
Actual Distribution Losses	14.17%	16.36%
Actual energy input at the dist. Periphery	110,458	110,458
Normative Loss	15188	15,188
Normative sales (incl. OA & credit sales)	95,270	95,270
Actual sales	94,805	
Approved sales (Incl. OA & credit sales)		92,391

Particulars	FY 2014-15	
	MSEDCL Petition	Approved in this Order
Additional/ (lower) sales due to higher Distribution Loss	(466)	2,879
Average Billing Rate	5.81	5.81
Loss of Revenue on account of lower energy sales	(270)	1,673
Efficiency Loss to be borne by the consumers	90	558
Efficiency Loss to be retained by MSEDCL	180	1,115

### 3.31 Segregation of Wires and Supply ARR

In its Business Plan Order dated 26 August, 2013 (Case No. 134 of 2012), the Commission approved the percentage segregation of the ARR into Wires Business and Supply Business. MSEDCL has considered the same in the present Petition. The Allocation Matrix is reproduced in the following Table. Based on this, MSEDCL has presented the Wires and Supply ARRs for FY 2014-15. As elaborated in earlier paragraphs, the Commission has undertaken a component-wise analysis of the respective ARRs in accordance with the Regulations, and has approved them as set out in the subsequent paragraphs.

**Table 3-92 : Ratio of allocation of expenses to Wires and Supply Businesses**

Sr. No.	Particulars	Wires Business	Supply Business
1.	Power purchase expenses – Fixed Charges	5%	95%
2.	Power purchase expenses – Variable Charges	0%	100%
3.	Employee expenses	75%	25%
4.	Administration and General expenses	75%	25%
5.	Repair and Maintenance expenses	95%	5%
6.	Depreciation	90%	10%
7.	Interest on long-term loan capital	90%	10%
8.	Interest on Working Capital	100%	0%
9.	Other Finance Charges	90%	10%
10.	Provision for Bad Debts	10%	90%
11.	Other Expenses	0%	100%
12.	Income Tax	90%	10%
13.	Transmission Charges paid to Transmission Licensee	0%	100%
14.	Contribution to Contingency Reserves	90%	10%
15.	Incentives and discounts	0%	100%
16.	Return on equity capital	90%	10%
17.	Non-Tariff Income	0%	100%
18.	Income from Wheeling Charges	100%	0%

**3.32 Aggregate Revenue Requirement for FY 2014-15**

Based on the analysis, the summary of ARR for the Wires Business and Supply Business, as claimed by MSEDCL and as trued-up by the Commission, for FY 2014-15 is presented in the Tables below.

**Table 3-93: ARR for Wires Business for FY 2014 -15 as approved by Commission (Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Operation & Maintenance Expenses	4,799	4,138
Depreciation	1,873	1,458
Interest on Loan Capital	1,360	1,509
Interest on Working Capital& Interest on deposit from Consumers and Distribution System Users	260	228
Other Finance Charges	27	27
Provision for Bad and Doubtful Debts	35	26
Income Tax	--	-
Contribution to Contingency Reserves	--	-
<b>Total Revenue Expenditure</b>	<b>8,353</b>	<b>7,386</b>
Add: Return on Equity Capital	1,286	1,269
<b>Aggregate Revenue Requirement</b>	<b>9,639</b>	<b>8,654</b>
Less: Income from Wheeling Charges	3	3
Less: Income from Open Access Charges	380	380
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>9,256</b>	<b>8,271</b>

**Table 3-94: ARR for Supply Business for FY 2014 -15 as approved by Commission (Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Power Purchase Expenses (incl. Inter-State Transmission Charges)	43,614	43,614
Operation & Maintenance Expenses	1,359	1,841
Depreciation	208	162
Interest on Loan Capital	151	168
Interest on Working Capital& Interest on deposit from Consumers and Distribution System Users	631	446
Other Finance Charges	3	3
Provision for Bad and Doubtful Debts	313	232
Other Expenses	40	24
Intra-State Transmission Charges incl. MSLDC Fees & Charges	5,475	5,475
Income Tax		-
Contribution to Contingency Reserves		-

Particulars	MSEDCL Petition	Approved in this Order
Incentives/Discounts	246	246
Prior Period Expenses/(Income) and Exceptional Items	(2,720)	(2,720)
DSM expenses		-
<b>Total Revenue Expenditure</b>	<b>49,319</b>	<b>49,490</b>
Add: Return on Equity Capital	161	159
<b>Aggregate Revenue Requirement</b>	<b>49,480</b>	<b>49,649</b>
Less: Non-Tariff Income	1,958	1,958
Less: Amount of Compensation paid by MSEDCL to consumers	-	0.07
Add: RLC refund	46	46
Add: ASC refund	2	2
<b>Aggregate Revenue Requirement from Retail Supply</b>	<b>47,570</b>	<b>47,740</b>

**Table 3-95 : ARR for FY 2014 -15 (Wires + Supply) as approved by Commission (Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Power Purchase Expenses	43,614	43,614
Operation & Maintenance Expenses	6,158	5,979
Depreciation Expenses	2,081	1,620
Interest on Loan Capital	1,511	1,677
Interest on Working Capital& Interest on deposit from Consumers and Distribution System Users	891	674
Other Finance Charges	30	30
Provision for Bad and Doubtful Debts	347	258
Other Expenses	40	24
Income Tax	-	-
Intra-State Transmission Charges MSLDC Charge	5,475	5,475
<b>Incentives/Discounts</b>	<b>246</b>	<b>246</b>
Contribution to Contingency Reserves	-	-
Prior Period Expenses and Exceptional Items	(2,720)	(2,720)
DSM expenses		-
<b>Total Revenue Expenditure</b>	<b>57,672</b>	<b>56,876</b>
Add: Return on Equity Capital	1,447	1,428
<b>Aggregate Revenue Requirement</b>	<b>59,119</b>	<b>58,304</b>
Less: Non-Tariff Income	1,958	1,958
Less: Income from Wheeling Charges	3	3
Less: Income from Open Access Charges	380	380
Less: Deemed Revenue on account of change of category	-	-



Particulars	MSEDCL Petition	Approved in this Order
Less: Amount of Compensation paid by MSEDCL to consumers	-	0.07
Add: RLC refund	46	46
Add: ASC refund	2	2
Add: Effect of sharing of gains/losses	(232)	(983)
<b>Aggregate Revenue Requirement from Retail Tariff</b>	<b>56,594</b>	<b>55,028</b>
Less: Revenue from Sale of Power	55,135	55,135
Less: Revenue from Trading Surplus	189	189
<b>Revenue Gap/(Surplus)</b>	<b>1,271</b>	<b>(296)</b>

## 4 PROVISIONAL TRUE-UP OF FY 2015-16

### 4.1 Provisional Sales in FY 2015-16

#### *MSEDCL's Submission*

MSEDCL has submitted the provisional Energy Sales as 87,901MU against 86,966 MU approved in the previous MYT Order. The category-wise provisional Energy Sales for FY 2015-16, excluding sales in two DF areas (Bhiwandi and Nagpur), are shown in the following Table:

**Table 4-1: Energy Sales (MU) for FY 2015-16 as submitted by MSEDCL**

Category	Previous MYT Order	MSEDCL Petition	Deviation
Residential	18,132	17,972	(160)
Commercial	6,217	6,196	(21)
HT-Industries	26,362	22,720	(3,642)
LT-Industries	6,286	6,260	(26)
PWW	2,054	2,073	19
Street Light	1,632	1,614	(18)
Agriculture	23,315	28,496	5,181
Public Services	1,063	1,174	111
Railways	1,505	983	(522)
Others	400	414	14
<b>Total</b>	<b>86,966</b>	<b>87,901</b>	<b>935</b>

Due to the overall economic conditions and OA, there has been a substantial decrease in the HT Industrial category sales. Moreover, from November, 2015, the consumption of Railway Traction in the Railways category has reduced significantly on account of recognition of the Deemed Distribution Licensee status of Railways.

There has been an increase of around 7% in the Agriculture category sales in FY 2015-16 over the actual sales reported for FY 2014-15. The Agriculture Consumption Committee is preparing a Report on assessment of un-metered agriculture consumption. Once the Report is finalised, the corresponding changes in the Agriculture sales may be carried out based on its findings.

#### *Commission's Analysis and Ruling*

The major variation in sales compared to the sales approved in the previous MYT Order is in the Industrial, Railways and Agriculture categories. As regards the Agriculture category, the Commission has re-estimated the AG Index (kWh/HP/Annum) based on Circle-wise Feeder-level data provided by MSEDCL for FY 2014-15. The rationale and methodology for estimation of the AG Index has been

elaborated in the earlier Chapter of this Order. Till the Report of the study becomes available, the Commission will consider the AG Index (kWh/HP/Annum) derived for FY 2014-15 for estimation of AG sales for FY 2015-16 as well. Accordingly, the following Table summarises MSEDCL's submissions and the now approved figures of AG Energy Sales, consumers, Connected Load and AG Indices for FY 2015-16.

**Table 4-2: AG Sales for FY 2015-16, as approved by Commission**

Particulars	MSEDCL Petition	Approved in this Order
<b>No. of Consumers (In lakh)*</b>		
Un-Metered	15.91	15.91
Metered	23.96	23.52
<b>Total</b>	<b>39.86</b>	<b>39.43</b>
<b>Connected Load (in lakh HP)*</b>		
Un-Metered	83.42	83.42
Metered	116.63	116.20
<b>Total</b>	<b>200.05</b>	<b>199.62</b>
<b>Energy Sales (MU)</b>		
Un-Metered	12,003	10,362
Metered	15,501	13,743
<b>Total</b>	<b>27,505</b>	<b>24,105</b>
<b>AG Index (kWh/HP/Annum)</b>		
Un-Metered	1,439	1,242
Metered	1,329	1,183
<b>Total</b>	<b>1,375</b>	<b>1,209</b>
<b>AG Index (Hours/Annum)</b>		
Un-Metered	1,929	1,665
Metered	1,782	1,585
<b>Total</b>	<b>1,843</b>	<b>1,620</b>

*\*Approved figures of No. of Consumers and Connected Load are as per the additional submissions of MSEDCL.*

Considering the above revision in the approved Agriculture sales, the approved total sales for MSEDCL have been revised as shown in the Table below.

**Table 4-3: Approved Sales (MU) for FY 2015-16**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
<b>HT Sales</b>			
HT Sales - MSEDCL	33,585	29,447	29,447
<b>LT Sales</b>			
LT Sales - Excluding AG Sales	30,938	30,950	30,950
LT Sales - AG Sales	22,443	27,505	24,105

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
<b>MSEDCL Sales(HT and LT)</b>	<b>86,966</b>	<b>87,901</b>	<b>84,502</b>
Energy Sales in DF Areas	5,250	4,115	4,115
HT Sales - Open Access (Conventional)		5,928	5,928
HT Sales - RE Open Access and HT Credit		420	420
<b>Total Energy Sales (including DF Areas, Open Access and Credit Sales)</b>	<b>92,216</b>	<b>98,364</b>	<b>94,965</b>

## 4.2 Energy Balance for FY 2015-16

### *MSEDCL's Submission*

MSEDCL has submitted the Energy Balance based on the power procurement (within and outside State), estimate of sales including sales within the DF area, energy units handled for OA, estimate of Transmission Loss (within and outside State) and Distribution Losses for FY 2015-16.

While calculating the Energy Balance as a whole, in the overall sales of MSEDCL it has also taken the sale to the consumers of the DF area. MSEDCL has also taken OA sales, HT and Renewable OA credit sales to arrive at the total energy available for sales. The HT Credit Sales refers to the excess sale reported due to difference in metering cycles and change in billing cycles, and captive OA sale shown in the Energy Balance. Renewable OA credit sale refers to the net units given to HT consumers as credit in their bills against the energy pumped by them into the grid (mainly wind energy Generators).

**Table 4-4: Energy Sales (MU) of MSEDCL for Energy Balance of FY2015-16, as submitted by MSEDCL**

Particulars	Previous MYT Order	MSEDCL Petition
Energy Sales by MSEDCL for FY 2015-16	86,966	87,901
Add: Category-wise sales in DF area	5,250	4,115
Add: OA Sales (Conventional)		5928
Add: HT and Renewable OA		420
<b>Total Energy Available for Sales</b>	<b>92216</b>	<b>98365</b>

Considering the above energy available for sale in FY 2015-16, MSEDCL has calculated the Energy Balance. While calculating the overall Distribution Loss, MSEDCL has taken the entire sales instead of voltage-wise sales.

The following Table shows the estimated Energy Balance for FY 2015-16 as submitted by MSEDCL.

**Table 4-5: Energy Requirement and Energy Balance for FY2015-16 as submitted by MSEDCL**

Sr. No.	Particulars	Units	MSEDCL Petition
<b>1</b>	<b>Power Purchase outside Maharashtra</b>		
1.1	NTPC	MU	23,889
1.2	NPCIL (KAPP)	MU	609
1.3	SSP	MU	565
1.4	PENCH	MU	118
1.5	CGPL	MU	4,717
	<b>Total (A)</b>	<b>MU</b>	<b>29,899</b>
2	Inter-State Transmission Loss	%	3.66%
2.1	Inter-State Transmission Loss	MU	1,093
<b>3</b>	<b>Total Purchase at State of Maharashtra periphery (B)</b>	<b>MU</b>	<b>28,806</b>
<b>4</b>	<b>Power Purchase within Maharashtra</b>		
4.1	MSPGCL	MU	43,776
4.2	NPCIL (TAPP)	MU	3,929
4.3	Dodson	MU	96
4.4	JSW	MU	1,805
4.5	Adani Power	MU	19,047
4.6	Emco Power	MU	1,504
4.7	Rattan India	MU	5,630
4.8	NCE	MU	8,544
4.9	CPP	MU	825
4.1	FBSM	MU	(260)
4.11	Traders	MU	1,278
4.12	Input for Open Access consumption	MU	6,307
	Total (C)	MU	92,481
5	Total Energy Handled (A+C)	MU	122,380
<b>6</b>	<b>Surplus Energy Traded (D)</b>	<b>MU</b>	<b>877</b>
<b>7</b>	<b>Total Power Purchase available at G&lt;&gt;T Periphery (B+C-D)</b>	<b>MU</b>	<b>120,410</b>
	<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>MU</b>	<b>120,410</b>
8	Intra-State Transmission Loss	%	3.89%
8.1	Intra-State Transmission Loss	MU	4,684
9	Sales at 220 kV/44 kV level	MU	2,837
10	Sales at 110 kV/132 kV level	MU	2,986
11	Sales at 66 kV level	MU	193
12	Energy Available for sale at 33kV	MU	109,709
13	Energy Injected and drawn at 33kV	MU	458

Sr. No.	Particulars	Units	MSEDCL Petition
14	<b>Total Energy Available for Sale at 33kV</b>	<b>MU</b>	<b>110,167</b>
15	Distribution Loss excluding EHV sales	%	16.17%
15.1	Distribution Loss excluding EHV sales	MU	17,819
16	<b>HT Sales</b>	<b>MU</b>	
16.1	Sales to Own Supply Consumers	MU	24,264
16.2	Sales by Licensee to Change-over consumers on other Licensee's network	MU	
16.3	HT and Renewable Open Access Credit	MU	420
16.4	Sales to Open Access Consumers (Conventional)	MU	5,928
17	<b>LT Sales</b>	<b>MU</b>	
17.1	Sales to Own Supply Consumers	MU	61,736

MSEDCL is procuring power from various sources, including MSPGCL, the Central Sector Generators including Nuclear Power Plants, Traders, CPPs and RE sources. These sources are both within and outside Maharashtra. It is difficult to differentiate which power is coming from which source at the Transmission periphery. Hence, applying individual the InSTS Losses for each Station would give a distorted picture. Therefore, the average InSTS Loss is taken for the whole year for power sourced from outside Maharashtra.

MSEDCL has taken the average of Transmission Losses for 52 weeks provided by WRLDC for arriving at the inter-State Loss of 3.66%,. The InSTS Loss of 3.89% is as approved in the InSTS Tariff Order dated 26 June 2015. MSEDCL has considered a provisional quantum of 877MU of “surplus energy traded” during FY 2015-16.

The Commission may approve the Energy Balance for FY 2015-16 as shown in the above Table.

#### ***Commission's Analysis and Ruling***

The Energy Balance submitted by MSEDCL is in Format F 1.4 approved for the 3<sup>rd</sup> Control Period, in which Distribution Loss has been estimated excluding EHV sales. However, in its previous MYT Order, the Commission had approved the Energy Balance in which the Distribution Loss included EHV sales for FY 2015-16. Thus, for comparison purposes, the Commission asked for the Energy Balance in the earlier format, which MSEDCL provided as follows.

**Table 4-6: Energy Balance for FY 2015-16 as submitted by MSEDCL in revised Format**

Sr. No.	Particulars	Units	Previous MYT Order	MSEDCL revised Submission
A	<b>Purchase within Maharashtra</b>			
A	<i>Purchase from MSPGCL</i>	MU	38,106	43776
B	<i>NPCIL Tarapur</i>	MU	4,500	3929

Sr. No.	Particulars	Units	Previous MYT Order	MSEDCL revised Submission
C	<i>Dodson</i>	MU	120	96
D	<i>Traders</i>	MU		1278
E	<i>IPP</i>	MU	25,333	27986
F	<i>NCE / CPP</i>	MU	13,195	9369
G	<i>IBSM + FBSM</i>	MU		(938)
H	<i>Other power on MSEDCL Network</i>	MU		6307
	<b>Total Purchase within Maharashtra</b>	<b>MU</b>	<b>81,255</b>	<b>91803</b>
<b>B</b>	<b>Purchase outside Maharashtra</b>			
A	<b>Central Generating Station +NPCIL+ UMPP +SSP + Pench</b>	MU	30,355	29,899
B	<i>Inter State Transmission Loss</i>	MU	3.79%	5.30%
<b>C</b>	<b>Total Purchase at Maharashtra periphery</b>	<b>MU</b>	<b>29,203</b>	<b>28,314</b>
<b>3</b>	<b>Total Power Handled</b>	<b>MU</b>	<b>110,458</b>	<b>120117</b>
D	<i>Surplus Energy Traded</i>	MU		877
E	<i>Total Purchase available at Transmission Periphery</i>	MU	110,458	119,240
	<b>Intra-State Loss</b>	<b>%</b>	3.89%	3.89%
	Energy at Distribution Periphery injected (above 33 kV)	MU	106,161	114601
4	Energy at Distribution Periphery injected and drawn (33 kV and below)	MU	447	458
A	<i>Energy at Distribution Periphery</i>	MU	106,608	115,059
B	<i>Distribution Losses</i>	%	13.50%	14.51%
C	<i>Distribution Losses</i>	MU	14,392	16,695
<b>D</b>	<b>Energy Available for Sale</b>	<b>MU</b>	<b>92,216</b>	<b>98,364</b>
E	Sale by MSEDCL	MU		92016
F	Open Access Sales	MU		5,928
G	Adjustments in billing due to AMR/Change in Billing Cycle & captive OA Sale, Credit Sale, PD Sales etc.	MU		420

In reply to a query on reconciliation with FBSM/IBSM bills, MSEDCL stated that FBSM bills for FY 2015-16 are not available and reconciliation can be possible only after the entire year's FBSM bills become available. Moreover, while submitting the above revised Energy Balance, MSEDCL had stated that the units shown towards (IBSM+FBSM) of 938 MU is based on extrapolation of data available for two months so as to arrive at the Inter-State Loss level for FY 2014-15 of 5.30%. However, while working out the Energy Balance for FY 2015-16, the Commission has approved the Inter-State Loss as the average of such Transmission Losses for 52 weeks in FY 2015-16 as provided by WRLDC. Thus for the provisional approval of Energy Balance, the

units towards (IBSM+FBSM) have been taken as 260 MU, based on the original submission by MSEDCL.

Further, based on the revised estimate of Agriculture sales by the Commission, the approved sales including the DF sale, OA sale and credit sale, as available for the Energy Balance of FY 2015-16 are as shown below:

**Table 4-7: Energy Sales for Energy Balance of FY 2015-16 as approved by Commission**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Energy Sales by MSEDCL for FY 2015-16	86,966	87,901	84,502
Add: Category-wise sales in DF area	5,250	4,115	4,115
Add: OA Sales (Conventional)		5,928	5,928
Add: HT and Renewable OA		420	420
<b>Total Energy Available for Sales</b>	<b>92,216</b>	<b>98,365</b>	<b>94,965</b>

In reply to a query for justification of the surplus energy available for trading, MSEDCL stated that it has taken the latest available information and that, considering the power scenario at various times, the Generators are backed down to technical minimum.

The Energy Balance reported by MSEDCL and approved by the Commission for FY 2015-16 is presented in the following Table. The difference is mainly on account of the difference in Agriculture sales approved by the Commission as against the sales considered by MSEDCL under the Energy Balance. Accordingly, the Distribution Loss level arrived at is 18.24% as against 14.51% claimed by MSEDCL.

Further, the InSTSLoss level of 3.92% as approved in the latest InSTS Tariff Order in Case No. 91 of 2016 has been taken by the Commission for reworking the Energy Balance for FY 2015-16

**Table 4-8: Energy Balance for FY 2015-16 as approved by Commission**

Particulars	Unit	Previous MYT Order	MSEDCL Petition	Approved in this Order
Retail Energy Sale to Consumers	MU	92,216	98,364	94,965
Distribution Losses	%	13.50%	14.51%	18.24%
Distribution Losses	MU	14,392	16,695	21,182
<b>Energy at Distribution Periphery</b>	<b>MU</b>	<b>1,06,608</b>	<b>1,15,059</b>	<b>116,148</b>
Energy at Distribution Periphery injected and drawn at 33 kV	MU	447	458	458
Energy at Distribution Periphery injected from 33 kV and above	MU	1,06,161	1,14,601	1,15,689
Intra-State loss	%	3.89%	3.89%	3.92%
<b>Total Energy required at Transmission Periphery</b>	<b>MU</b>	<b>1,10,458</b>	<b>1,19,240</b>	<b>1,20,410</b>



Particulars	Unit	Previous MYT Order	MSEDCL Petition	Approved in this Order
Surplus Energy Traded	MU	-	877	877
Total Power Purchase Quantum Handled	MU	1,10,458	1,20,118	1,21,287
Power Purchase Quantum from Intra-State sources	MU	81,255	91803	92,481
Power Purchase Quantum from Inter-State sources at Maharashtra Periphery	MU	29,203	28,314	28,806
Inter-State losses	%	3.79%	5.30%	3.66%
Power Purchase Quantum from Inter-State Sources	MU	30,355	29,899	29,899
<b>Total Energy Units Handled</b>	<b>MU</b>	<b>1,11,609</b>	<b>121702</b>	<b>1,22,380</b>

### 4.3 Distribution Loss for FY 2015-16

#### *MSEDCL's Submission*

The provisional Distribution Loss is 14.51% for FY 2015-16, which is 1.01% higher than the 13.50% level approved in the previous MYT Order. The reduction in HT sales and increase in LT sales has impacted the Distribution Losses, and the Commission may approve the estimated Distribution Loss for FY 2015-16.

#### *Commission's Analysis and Ruling*

The Commission had stipulated the trajectory for reduction of Distribution Loss in its Business Plan Order in Case No. 134 of 2012 for FY 2013-14 to FY 2015-16. The Distribution Loss level stipulated for FY 2015-16 was 13.50%. That formed the basis for provisional approval of Energy Balance in the previous MYT Order for that year. However, MSEDCL has now submitted a Distribution Loss level of 14.51% for FY 2015-16, which is higher than the stipulated target.

Upon being asked for the reasons MSEDCL stated that, due to increased supply at LT level, the Loss has increased as compared to that approved. Moreover, as per the directions in the previous MYT Order, it has withdrawn load shedding in areas where there is sufficient availability of power in the system. MSEDCL stated that, to the extent possible, it has ensured that the Load Shedding Protocol is used only as a load regulation measure in shortage situations and not as a matter of routine. It submitted details of the actual Loss level in all load shedding areas.

MSEDCL also submitted the various initiatives taken to reduce Distribution Loss, including multi-pronged activities such as development of new infrastructure, strengthening and up-gradation of the existing network, installation of Capacitor Banks, etc., at various levels across different regions to reduce Technical Losses. As regards Commercial Loss reduction, MSEDCL stated that it has taken up several initiatives such as implementation of theft detection drives through special flying

squads, establishment of separate Police Station for energy thefts, providing advanced IT technology based (IR/RF) energy meters to consumers, providing AMR meters to all HT consumers, and improvement in the consumer meter reading processes by means of photo meter reading at various levels.

Based on its analysis of Feeder-level consumption data, the Commission has recomputed the AG Index. Accordingly, the Commission has revised the estimate of sales during FY 2015-16 and assessed the Distribution Loss level for the year.

Thus, as discussed earlier, the Commission has approved the revised Energy available for sales of 94965 MU for FY 2015-16. Accordingly, the approved Distribution Loss for FY 2015-16 is as shown in the Table below:

**Table 4-9: Distribution Loss for FY 2015-16 as approved by Commission**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Distribution Loss	13.50%	14.51%	18.24%

#### 4.4 Power Purchase Expense for FY 2015-16

##### *MSEDCL's Submission*

MSEDCL procures power from different sources based on MOD Principles, and has estimated the power purchase expenses for FY2015-16 considering the unaudited power purchase quantum and cost. The source-wise estimated power purchase for FY 2015-16 is as shown in the following Table:

**Table 4-10: Source-wise estimated Power Purchase for 2015-16 as submitted by MSEDCL**

Source	Previous MYT Order		MSEDCL Petition	
	Quantum (MU)	Cost (Rs. crore)	Quantum (MU)	Cost (Rs. crore)
MSPGCL Total	38,106	14,410	43,776	18,132
NTPC Total	22,817	7,340	23,889	6,651
NPCIL	5,550	1,440	4,537	1,181
SSP	1,200	265	565	116
Pench	130	32	118	24
Dodson	120	26	96	26
JSW	1,913	595	1,805	515
Mundra UMPP	5,158	1,271	4,717	1,156
Adani Power	16,731	5,315	19,047	6,025
EMCO Power	1,370	388	1,504	488
Rattan India	5,319	1,894	5,630	2,329
Renewable excluding CPP	11,218	6,520	8,544	4,927
CPP	1,977	496	825	168

Source	Previous MYT Order		MSEDCL Petition	
	Quantum (MU)	Cost (Rs. crore)	Quantum (MU)	Cost (Rs. crore)
PGCIL Charges		1,258		1,947
Traders and FBSM			1,019	350
<b>Total</b>	<b>1,11,609</b>	<b>41,249</b>	<b>1,16,073</b>	<b>44,034</b>

The difference between the approved and provisional estimates of power purchase expense is mainly because the Commission had not considered some important parameters like technical minimum operating load, transmission constraints, etc., while applying the MOD for the power purchase quantum of FY2015-16. Hence, despite a higher rank in the MOD stack, MSEDCL had to procure costly power as per the MOD stack due to the requirement of technical minimum load, transmission constraints, etc. Thus, the actual power purchase cost incurred was more than approved in the previous MYT Order.

The Commission has considered the generation from Chandrapur-8 and 9, Parli- 8, Koradi-8, 9 and 10 Units based on the number of operating days post the expected COD in FY 2015-16, and their generation on provisional basis. Till the actual COD of these Stations, MSEDCL was required to procure power from sources which were not considered in the MOD stack, which resulted in increase in power purchase cost.

The Commission had approved 60% of power scheduled from MSPGCL. Out of the scheduled power, around 10407 MU were from new Plants which were yet to be commissioned and were expected to be commissioned in FY 2015-16. These were not reflected in the MSPGCL MTR Order. As a result, MSEDCL has been procuring power from some of the Units which are not included in the MOD stack to meet demand.

Other factors that have resulted in increase in power purchase cost are as follows:

- PGCIL cost has increased due to change in PoC Rates from October 2015.
- Impact of 'change in law' considered for Adani Power and RattanIndia Power which was not envisaged in the previous MYT Order.
- POC Charges to EMCO Power is also considered as a result of the ATE Judgment.
- Impact of Trading and FBSM is also considered which was not envisaged in the previous MYT Order.

### ***Commission's Analysis and Ruling***

The Commission had approved power purchase expenses for FY 2015-16 in its previous MYT Order based on MOD principles. Based on its analysis, by application of MOD principles around Rs. 3836 crore of projected power purchase expense corresponding to 18059 MU was disallowed. The Commission had directed MSEDCL to strictly follow MOD principles while procuring power during the year.

Aggrieved by the disallowance of power purchase expense, MSEDCL had sought review through its Petition in Case No. 121 of 2015. However, the Commission had rejected the review Petition stating that MOD is a well-accepted principle that has been followed since the first Tariff Order:

*“34. The Commission notes that the MOD principles have been in operation for a long time, and their implementation has been dealt with even in the first Tariff Order for MSEDCL in 2002. It is well settled that issues such as transmission constraints, technical minimum of Thermal Generating Stations etc. need to be considered while operating MOD. The power purchase cost approved for subsequent years in the Tariff Orders is an estimation based on various ex ante inputs. During the operating period of the Tariff Order, actual power purchase cost may vary on account of various factors. Power purchase cost is treated as an uncontrollable element for pass-through in the Tariff, provided the procurement meets the test of prudence. Variation in power purchase cost is passed on to consumers by MSEDCL through the FAC mechanism, which is subject to vetting. In this background, the Commission is of the view that no need for any further clarification as far as MOD is concerned.”*

In the present Petition, MSEDCL has categorically stated that it has followed MOD principles while estimating the power procurement and cost for FY 2015-16.

During the admission process of the present MYT Petition and during the public consultation process, several Objectors and CRs contended that MSEDCL had not strictly followed MOD principles while procuring power from various Stations during FY 2015-16.

To analyse this further, the Commission sought clarification from MSEDCL on the instances where it had not followed MOD, along with justification. MSEDCL stated that, during the period from April to December, 2015, thermal Availability of MSPGCL Stations was lower than their planned Availability. COD of upcoming Generation Projects of MSPGCL has not been achieved as per the planned schedule because of which power from other thermal Generating Stations was scheduled as per the MOD stack. From January, 2016, MSEDCL has requested MSLDC to give zero schedules to thermal Generating Stations as per the MOD stack from time to time. As per the MSLDC guidelines, if there were transmission constraints, the Units were not given zero schedules (in case of Nashik Station, Bhusawal Unit-2 and Unit-3).

Considering MSEDCL's reply, the Commission observes that several Stations were operated at zero schedule but no data regarding daily adherence to MOD based drawal was submitted by MSEDCL. Further, the MOD principle requires least-cost despatch based load-generation balance to be drawn up for the State as a whole. As per the State Grid Code and MOD principles, the least-cost despatch schedule is to be drawn up by MSLDC based on daily generation availability forecasts and scheduled drawal requirements furnished by Distribution Licensees. It is envisaged that Distribution

Licensees would align their power procurement strategy to achieve least-cost considering their contracted capacities and availability from all sources of power.

Whether the MOD principle has been adhered to or not would require detailed investigation of daily/hourly load-generation stack, availability declaration of contracted capacity, schedule drawal requirement, short-term power purchase/trade operations, operation of Must Run/constrained Stations including RE, and transmission constraints (if any). In the absence of such daily/hourly information, it is difficult to establish whether MSEDCL has entirely adhered to MOD principles or not. It would also not be proper to disallow power purchase expenses actually incurred without quantifying the extent of non-adherence to MOD principles and without clearly attributing the cause of deviation to actions of MSEDCL.

A detailed assessment would be necessary based on the actual daily data of load-generation balance during FY 2015-16. Hence, the Commission directs MSEDCL to submit data for each day of FY 2015-16, covering declared availability of its contracted capacity, the scheduled and actual drawal, and details of short-term procurement and surplus traded power. MSEDCL should also submit information regarding the non-scheduling or partial scheduling of contracted power falling in the MOD stack along with reasons. MSEDCL should submit this data within 3 months for further scrutiny. These details would be considered for the final truing-up of FY 2015-16.

In response to the Commission's query regarding the premise for its estimate of power purchase quantum and cost for FY 2015-16, MSEDCL stated that it has submitted the actual power purchase details till March, 2016.

Based on the above, for the truing-up, the Commission has approved the power purchase quantum and expense on a provisional basis. However, after scrutiny of the data to be submitted by MSEDCL, the Commission may, during the final truing-up of FY 2015-16, decide on the quantum and cost of any procurement outside the MOD principles and its treatment.

In the MYT Order in Case No. 46 of 2016 for MSPGCL, the Commission has approved the revised power purchase rates of MSPGCL. However, the impact is allowed to be adjusted in FY 2016-17.

The cumulative impact of truing-up and provisional truing-up of MSPGCL's cost of generation has been discussed in the Section on 'Additional Claim and Revenue Gap' in this Order, to be considered for adjustment of the net Revenue Gap of MSEDCL for passing on in FY 2016-17.

As MSEDCL had not projected how it has or would meet RE source specific RPO targets for FY 2015-16, the Commission had sought the relevant details. MSEDCL submitted the details of source-wise power purchase from RE sources only up to December, 2015. The Commission is separately initiating proceedings for verification of compliance of RPO targets by MSEDCL for FY 2015-16. In those proceedings, the

Commission would issue necessary directions in accordance with the RPO Regulations.

Regarding the power purchase of FY 2015-16, it was observed that the Variable Charge considered for IPPs was different from the PPA Schedules. For example, the Variable Charge considered for procurement from Adani Power(1320 MW PPA) is Rs 1.58/kWh, as against the Energy Charge under the PPA of Rs.1.44/kWh. Similarly, the Variable Charge considered for power procurement from Adani Power(1200 MW PPA) is Rs. 2.02/kWh against the PPA Energy Charge of Rs.1.55/kWh. MSEDCL was asked for a reconciliation of the Variable Charges considered for power procurement from IPPs. MSEDCL submitted the required details, and stated that the PPA rates are linked to various factors such as variation in monthly exchange rates, CERC index for inland handling of imported fuel and for inland transportation of fuel. MSEDCL submitted the following Table for the reconciliation.

**Table 4-11: Reconciliation of Variable Charges of IPPs as submitted by MSEDCL**

Station	Variable Charge as per PPA	Variable Charge as per Petition	Remarks
IPP – JSW	$0.1298 + 0.59 \times \text{monthly Dollar rate} + 0.01708 \times \text{Dollar rate} \times \text{monthly CERC index for fuel}$	1.77	The CERC index is applied for escalable factor on monthly basis. Exchange rate may vary in each month.
CGPL	$0.00707 \times \text{Monthly Dollar rate} + 0.00585 \times \text{Monthly dollar rate} \times \text{monthly CERC index for inland handling} + 0.048 + 0.046 \times \text{Monthly CERC index for inland handling} + 0.00284 \times \text{Monthly dollar rate} + 0.00109 \times \text{Monthly dollar rate} \times \text{monthly CERC index for transportation.}$	1.42	The CERC index is applied for escalable factor on monthly basis. Exchange rate may vary in each month.
Adani Power 1320	1.44	1.53	Includes impact of CIL bills paid to APML for 1320 MW
Adani Power 1200	$0.47 \times \text{Monthly CERC index for fuel} + 0.6310 + 0.0445 \times \text{monthly index for transportation.}$	2.21	The CERC index is applied for escalable factor on monthly basis. Also includes CIL bills paid to APML
Adani Power 125	$0.47 \times \text{Monthly CERC index for fuel} + 0.6310 + 0.0445 \times$	2.20	The CERC index is applied for escalable factor on monthly

Station	Variable Charge as per PPA	Variable Charge as per Petition	Remarks
	monthly index for transportation.		basis. Also includes CIL bills paid to APML
Emco Power	0.456 x Monthly CERC index for fuel+0.4920 x Monthly CERC index for transportation	1.43	The CERC index is applied for escalable factor on monthly basis.
Rattan India	0.592 x Monthly CERC index for fuel+1.15+0.334 x Monthly CERC index for transportation	2.80	The CERC index is applied for escalable factor on monthly basis. Also includes CIL bills paid to RPL

Accordingly, for provisional truing-up, the Commission approves the power purchase cost as submitted by MSEDCL, subject to further prudence check at the time of final truing-up of FY 2015-16.

The details of power purchase cost claimed by MSEDCL and approved by the Commission provisionally for FY 2015-16 is summarised below.

**Table 4-12: Power Purchase Expenses approved for FY 2015-16 (Rs. crore)**

Stations	MSEDCL Petition			Approved in this Order		
	Quantum	Cost	Per Unit Cost	Quantum	Cost	Per Unit Cost
	(MU)	(Rs. crore)	(Rs./kWh)	(MU)	(Rs. crore)	(Rs./kWh)
BHUSAWAL	1,536	617	4.02	1,536	617	4.02
BHUSAWAL 4 & 5	5,966	3,102	5.20	5,966	3,102	5.20
KHAPARKHEDA	4,420	1,714	3.88	4,420	1,714	3.88
KHAPARKHEDA 5	3,021	1,387	4.59	3,021	1,387	4.59
NASHIK	3,870	1,919	4.96	3,870	1,919	4.96
CHANDRAPUR	11,157	3,892	3.49	11,157	3,892	3.49
Paras Unit 3 and 4	3,174	1,284	4.04	3,174	1,284	4.04
PARALI	378	345	9.15	378	345	9.15
Parli Unit 6 and 7	766	800	10.44	766	800	10.44
KORADI	1,598	758	4.74	1,598	758	4.74
GTPS URAN	2,801	930	3.32	2,801	930	3.32
Hydro	3,856	713	1.85	3,856	713	1.85
Infirm Power	584	291	4.98	584	291	4.98
Koradi 8	649	378	5.82	649	378	5.82
<b>MSPGCL Total</b>	<b>43,776</b>	<b>18,132</b>	<b>4.14</b>	<b>43,776</b>	<b>18,132</b>	<b>4.14</b>
KSTPS	4,840	741	1.53	4,840	741	1.53
KSTPS III	975	227	2.32	975	227	2.32
VSTP I	2,769	633	2.29	2,769	633	2.29
VSTP II	2,233	497	2.22	2,233	497	2.22

Stations	MSEDCL Petition			Approved in this Order		
	Quantum	Cost	Per Unit Cost	Quantum	Cost	Per Unit Cost
	(MU)	(Rs. crore)	(Rs./kWh)	(MU)	(Rs. crore)	(Rs./kWh)
VSTP III	2,121	536	2.52	2,121	536	2.52
VSTP IV	2,231	767	3.44	2,231	767	3.44
VSTP V	421	127	3.02	421	127	3.02
KAWAS	296	178	6.02	296	178	6.02
GANDHAR	251	191	7.63	251	191	7.63
KhSTPS-II	761	282	3.70	761	282	3.70
Sipat I	4,205	1,063	2.53	4,205	1,063	2.53
Sipat II	2,188	516	2.36	2,188	516	2.36
MAUDA	600	894	14.92	600	894	14.92
<b>NTPC Total</b>	<b>23,889</b>	<b>6,651</b>	<b>2.78</b>	<b>23,889</b>	<b>6,651</b>	<b>2.78</b>
KAPP	609	148	2.43	609	148	2.43
TAPP 1&2	586	59	1.00	586	59	1.00
TAPP 3&4	3,343	974	2.92	3,343	974	2.92
<b>NPCIL</b>	<b>4,537</b>	<b>1,181</b>	<b>2.60</b>	<b>4,537</b>	<b>1,181</b>	<b>2.60</b>
SSP	565	116	2.05	565	116	2.05
Pench	118	24	2.05	118	24	2.05
Dodson I	49	13	2.59	49	13	2.59
Dodson II	47	13	2.80	47	13	2.80
JSW Energy	1,805	515	1.09	1,805	515	1.09
Mundra UMPP	4,717	1,156	12.59	4,717	1,156	12.59
Adani Power 125 MW	918	337	0.36	918	337	0.36
Adani Power 1320 MW	9,317	2,461	2.64	9,317	2,461	2.64
Adani Power 1200 MW	8,812	3,226	3.66	8,812	3,226	3.66
EMCO Power	1,504	488	3.24	1,504	488	3.24
RattanIndia	5,630	2,329	0.87	5,630	2,329	0.87
NCE excluding CPP	8,544	4,927	2.73	8,544	4,927	2.73
FBSM	(260)	(24)		(260)	(24)	
<b>Total Long-term</b>	<b>113,969</b>	<b>41,546</b>	<b>3.65</b>	<b>113,969</b>	<b>41,546</b>	<b>3.65</b>
<b>Short-term Sources</b>						
CPP	825	168	2.04	825	168	2.04
PXIL	255	76	2.98	255	76	2.98
IEX	732	215	2.93	732	215	2.93
Sai Wardha	291	83	2.83	291	83	2.83
<b>Total Short-term</b>	<b>2,104</b>	<b>541</b>	<b>2.57</b>	<b>2,104</b>	<b>541</b>	<b>2.57</b>
<b>Other Charges</b>						
Power Grid		1,956			1,956	
Reactive Energy Charges		(9)			(9)	
<b>Total</b>	<b>116,073</b>	<b>44,034</b>	<b>3.79</b>	<b>116,073</b>	<b>44,034</b>	<b>3.79</b>



#### 4.5 Transmission Charges and MSLDC Charges for FY2015-16

##### *MSEDCL's Submission*

MSETCL Transmission Charges are taken at actuals up to December, 2015, and for the remaining period as per the Commission's Order in Case No. 57 of 2015, based on which the comparison of approved and estimated Transmission cost for FY2015-16 is as shown in the following Table.

**Table 4-13: Transmission Charges for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Transmission Charges paid to Transmission Licensee	3,627	4,070

The revised lower Transmission Charges were applicable from June, 2015, whereas the Commission had approved the Transmission Charges on an annual basis. Due to this, there has been a difference in the figures.

##### *Commission's Analysis and Ruling*

While MSEDCL has shown the entire amount of Rs. 4070 crore as Transmission Charges paid to MSETCL, it also includes a component of MSLDC Charges paid by MSEDCL. The Commission has verified the charges paid by MSEDCL based on the share of such charges allocated to it in the respective InSTS Tariff Orders and MSLDC Budget Order applicable for FY 2015-16. The Table below summarises the various Orders and applicable Transmission and MSLDC Charges payable by MSEDCL during FY 2015-16.

**Table 4-14: Transmission and MSLDC Charge details and applicability for FY 2015-16, as per Commission (Rs. crore)**

Particulars	Amount	Case Reference
Share of Transmission Charges for MSEDCL from April 2015 to May 2015	524.47 x 2	Case 123 of 2014
Share of Transmission Charges for MSEDCL from June 2015 to March 2016	300.05 x 10	Case 57 of 2015
<b>Total Share of Transmission Charges</b>	<b>4049.44</b>	
Share of MSLDC Charges for MSEDCL from April 2015 to September 2015		
<i>Monthly</i>	1.64 x 6	Case 178 of 2013
<i>Bi Annual</i>	3.50	
Share of MSLDC Charges for MSEDCL from October 2015 to March 2016		
<i>Monthly</i>	0.94 x 6	Case 218 of 2014
<i>Bi Annual</i>	2.05	
<b>Total Share of MSLDC Charges</b>	<b>21.05</b>	
Total Transmission and MSLDC Charges during FY 2015-16	<b>4070.49</b>	

Accordingly, the Commission has allowed Transmission Charges and MSLDC Charges of Rs. 4070 crore for FY 2015-16.

**Table 4-15: Transmission and MSLDC Charges for FY 2015-16 as approved (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Transmission & MSLDC Charges	3,627	4,070	4,070

#### 4.6 O&M Expenses for FY 2015-16

##### *MSEDCL's Submission*

The provisional O&M expenses (net of capitalisation) for FY 2015-16 are estimated at Rs. 6,725 crores against the normative O&M Expenses of Rs. 6,712 crore approved in the previous MYT Order. This is inclusive of employee cost, R&M charges and A&G Expenses. Thus, there is a difference of Rs. 13 crore.

Comparison of the provisional O&M expenses for Wires and Supply Businesses against those earlier approved is given in the Table below.

**Table 4-16: Operation & Maintenance Expenses for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
O&M Expenditure for Wires Business	4,627	5,178
O&M Expenditure for Retail Supply Business	2,085	1,547
<b>Total</b>	<b>6,712</b>	<b>6,725</b>

MSEDCL has claimed O&M expenses for FY 2015-16 based on component-wise estimation of employee expenses, R&M expense and A&G expense rather than on normative basis. The rationale for this provisional estimate of O&M Expenses has been explained by MSEDCL as follows:

**Employee Expenses:** Projections are based on actual strength of employees, i.e. the posts filled. The assumptions for broad sub-heads of employee expenses are as under:

- **Basic Salary:** A normal increase of 4% per annum is assumed due to release of periodical increments and fitment of basic pay on promotions.
- **Dearness Allowance:** The rate of DA as on 01-04-2014 was 107%. It is assumed that the rate of DA will increase twice in a calendar year at intervals of six months. Normally there is a 6 to 7 % increase in D.A. during any 6 month period. Hence, an average increase of 13% is assumed considering the present trend.

- Overtime payment and other allowances: As a part of austerity measures, MSEDCL has stopped payment of overtime to office staff. Overtime is payable only for the line staff in the field, the incidence of which is not very high. Accordingly, the overtime payment has been projected to increase at a nominal rate of 11% p.a. over the previous year. Similarly, the other allowances and staff welfare expenses have also been projected to increase nominally at 4% p.a.
- Pension: Considering rise in D.A. rate and pay fixation, increase of 30% is considered in pension payments.
- Gratuity and Leave Encashment: Normal increase of 5% has been considered.
- Contribution to Provident Fund: Contribution to Provident Fund has been considered at the rate of 12% of closing balance of Basic & D.A.
- Capitalisation of Employee Cost: The ratio of capitalisation for the year 2014-15 has been applied for 2015-16 onwards.

**Administration & General Expenses:** Considering the present trend of inflation an annual increase of 10 % per annum over the previous year has been applied in most of the expenses heads. However, in case of conveyance and travel, computer stationary expenses, advertisement expenses, freight on capital equipment, vehicle running and vehicle hire expenses, an increase of 25% has been taken because of increase in number of consumers, special recovery drive, theft detection drive, public awareness etc. In case of rent, rate and taxes, 10% increase has been applied.

**Repairs & Maintenance Expenses:** Considering the present trend of inflation, an increase of 10% over the previous year has been considered.

### ***Commission's Analysis and Ruling***

MSEDCL has deviated from the O&M norms while estimating the O&M expenses for FY 2015-16. Many Objectors and TCRs have pointed out that the O&M expenses of MSEDCL are high and are steeply increasing, leading to higher tariff. Some stated that, inspite of such increase, there was no corresponding improvement in quality of supply.

While MSEDCL has claimed O&M Expenses applying inflation rates, it has also submitted the workings as per the norms specified in the MYT Regulations. Accordingly, it has worked out the O&M Expenses separately for Wires Business and Supply Business on a normative basis also for FY 2015-16.

For approval of O&M Expenses for the Wires Business and Supply Business, the Commission has applied the norms specified under Regulations 78.4.1 and 97.2.1 of the MYT Regulations, 2011. It has considered the revised sales, GFA and number of consumers for the normative O&M Expenses.

While projecting O&M Expenses, MSEDCL has taken parameters such as sales and GFA at the aggregate level, including those pertaining to the DF areas. However, O&M Expenses in the DF areas would be taken care of by the Franchisee and, therefore, allowing normative O&M Expenses on the parameter values on aggregate, including such DF areas, would not be correct. Hence, the Commission has not considered the sales and number of consumers pertaining to DFs, and adjusted the Opening GFA by deducting the GFA pertaining to these areas while determining the normative O&M Expenses allowable to MSEDCL.

**Table 4-17: O&M Expenses approved by Commission for FY 2015-16 (Wires)**

Particulars	Units	Previous MYT Order	MSEDCL working (Norm)	MSEDCL Estimate	Approved in this Order
<b>Composite O&amp;M Norms</b>					
<b>O&amp;M Expenses Norm specified in Regulations</b>					
For Wheeled Energy	paise/ kWh	14.34	14.34		14.34
For No. of Consumers in Wires Business	Rs lakh/ '000 Consumers	7.40	7.40		7.40
For R&M Expenses	% of GFA	4%	4%		4%
<b>Parameters for O&amp;M Expenses</b>					
Wheeled Energy	MU	100,092	116,096		111,028
No. of Consumers in Wires Business	'000 Consumers	23,391	23,129		22,330
Opening GFA	Rs. crore	36,511	37,686		32,073
<b>Total O&amp;M Expenses</b>	<b>Rs. crore</b>	<b>4,627</b>	<b>4,884</b>	<b>5,178</b>	<b>4,527</b>

**Table 4-18: O&M Expenses approved by Commission for FY 2015-16 (Supply)**

Particular	Units	MYT Order	MSEDCL working (Norm)	MSEDCL Estimate	Approved in this Order
<b>Composite O&amp;M Norms</b>					
<b>O&amp;M Expenses Norm specified in Regulations</b>					
For Sales in Supply Business	paise/kWh	9.94	9.94		9.94
For No. of Consumers in Supply Business	Rs lakh/ '000 Consumers	5.13	5.13		5.13
For R&M Expenses	% of GFA	0.50%	0.50%		0.50%
<b>Parameters for O&amp;M Expenses</b>					
Sales	MU	86,966	98,365		84,502
No. of Consumers in Supply Business	'000 Consumers	23,391	23,129		22,330
Opening GFA	Rs. crore	4,057	4,187		3,964

Particular	Units	MYT Order	MSEDCL working (Norm)	MSEDCL Estimate	Approved in this Order
Total O&M Expenses	Rs. crore	2,085	2,185	1,547	2,005

**Table 4-19: O&M Expenses approved by Commission (Wires+Supply) (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL working (Norm)	MSEDCL Estimate	Approved in this Order
O&M Expenditure for Retail Supply Business	2085	2185	1547	2005
O&M Expenditure for Wires Business	4627	4884	5178	4527
<b>Operation &amp; Maintenance Expenses</b>	<b>6712</b>	<b>7069</b>	<b>6725</b>	<b>6533</b>

#### 4.7 Capital Expenditure and Capitalisation for FY 2015-16

##### *MSEDCL's Submission*

The provisional capitalisation was Rs. 5,596 crore in FY 2015-16 as against the earlier approved capitalisation of Rs. 3,534 crore.

**Table 4-20: Capitalisation for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Capitalisation	3,534	5,596

The following Tables summarise the scheme-wise details of capital expenditure and capitalisation for DPR and Non-DPR schemes.

**Table 4-21: Summary of Capital Expenditure and Capitalisation submitted by MSEDCL for FY 2015-16 (Rs crore)**

Particulars	MSEDCL Petition
<b>Capital Expenditure</b>	
DPR Schemes	4,720
Non DPR Schemes	1423
<b>Total</b>	<b>6,143</b>
<b>Capitalisation</b>	
DPR Schemes	4294
Non DPR Schemes	1302
<b>Total</b>	<b>5596</b>

The detailed break-up of capex schemes and scheme-wise details of capital expenditure and capitalisation for DPR and Non-DPR schemes for FY 2015-16 is provided below:

**Table 4-22: DPR Scheme Capex and Capitalisation submitted by MSEDCL for FY 2015-16 (Rs. crore)**

DPR Scheme	Capital Expenditure	Capitalisation
<b>a) DPR Schemes</b>		
Infra Plan Works	100	102
Infra Plan Works – II	2,922	2,440
GFSS – I	-	1
GFSS – II	2	24
GFSS – III	5	5
GFSS IV	30	28
Fixed Capacitor Scheme	-	14
LT Capacitor Phase I & II	-	-
Single Phasing - Left out villages	5	12
Elimination of 66 KV Line	-	-
AMR	8	10
APDRP	-	-
Phase-I	-	232
Phase-II	-	5
RAPDRP A	50	159
RAPDRP B	950	613
SCADA Part A	31	24
DTC Metering	-	-
Phase-I & Phase-II	-	(0)
Phase-III	-	12
SPA:PE	236	213
P:SI	88	103
P:IE	-	1
RGVY	25	58
ERP	34	31
Agriculture Metering	154	142
Deogad Wind Power Project	45	36
Ag DSM-Pilot project in Mangalwedha, solapur	2	1
Star rated ceiling fan Phase-I	1	1
Star rated ceiling fan Phase-II ( HVAC)	8	6
Sinhanst Kumbmela Nashik	25	20
		-
<b>Total DPR Schemes (a)</b>	<b>4,720</b>	<b>4,294</b>

**Table 4-23: Non-DPR Scheme Capex and Capitalisation submitted by MSEDCL for FY 2015-16 (Rs. crore)**

Non-DPR Scheme	Capital Expenditure	Capitalisation
FMS	-	2
MIS / IT Backbone( Integrated system +Big Data + Communication Backbone)	-	-
Load Management	-	7
P.F.C.Urban Distribution Scheme	-	0
MIDC Interest free Loan Scheme	-	7
Evacuation	45	37
Evacuation Wind Generation**	30	30
DPDC / Non-Tribal	122	98
DPDC / SCP (Loan up to 2012-13)	77	72
DPDC / TSP + OTSP	104	91
Rural Electrification	-	5
JBIC	-	23
New consumers	-	3
Back log	220	263
Ag. Special Package for Vidabhrba /Marathwada	819	655
Single Phasing	6	11
<b>TotalNon DPR Schemes (b)</b>	<b>1,423</b>	<b>1,302</b>

***Commission's Analysis and Ruling***

The Commission has perused the capitalisation details of the schemes as claimed by MSEDCL for FY 2015-16. For the following DPR schemes, MSEDCL has claimed excess capitalisation over and above their approved cost.

**Table 4-24: Excess Capitalisation claimed by MSEDCL in FY 2015-16 (Rs. crore)**

Major Schemes	Excess Capitalisation in FY 2015-16
Infra Plan Works	102
GFSS	30
RAPDRP (A)	159
DTC Metering Phase-III	12
SPA:PE (Release of Agri. Connection)	213
P:SI (Project for System Improvement)	103
P:IE(Project for Intensive Electrification)	1
RGGVY	58
<b>Total</b>	<b>678</b>

As emphasised in earlier Orders also, significant excess capitalisation is due to time over-run of the schemes, and excess interest was incurred which would have been capitalised as IDC. Due to excess capitalisation, an undue burden of excess IDC is being passed on to consumers, which is not justifiable. Further, the Commission observes that MSEDCL does not maintain scheme-wise IDC computations. Instead, IDC is computed as a fixed percentage of 2.95% of the total capitalisation of each scheme. In case of schemes with excess capitalisation over and above the in-principle approved capital cost, in this Order the Commission has continued to disallow 50 % of the IDC worked out by MSEDCL.

MSEDCL has not furnished scheme-wise IDC computation figures, or any details of scheme-wise allocation of loans and phasing of expenditure, which is necessary for ascertaining scheme-wise excess capitalisation of IDC. However, MSEDCL has stated that interest capitalisation during FY 2015-16 amounts to 2.95% of the total capitalised amount. Thus, for estimating the IDC component included in the excess capitalisation of Rs. 678 crore for FY 2015-16, the Commission has considered the same percentage of 2.95%. Accordingly, the derived IDC component of excess capitalisation works out to Rs. 20.01 crore. The Commission has allowed only 50% of this IDC component, amounting to Rs. 10.01 crore.

MSEDCL has proposed Rs. 2440 crore towards capitalisation of the scheme 'Infra Plan Works-II'. However, upon verification of the actual capitalisation in FY 2015-16 under the scheme, it was reported that the actual capitalisation was only Rs. 483 crore, which has been allowed by the Commission.

As regards the scheme of 'Agriculture metering', MSEDCL has claimed capitalisation of Rs. 142 crore. The Commission has perused the DPR submitted by MSEDCL. MSEDCL has spread the capital investment on the scheme over the three years FY2015-16 to FY 2017-18. Rs. 141 crore has been proposed for FY 2015-16. Accordingly, the Commission has provisionally considered this amount, subject to prudence check at the time of truing-up.

MSEDCL has claimed capitalisation of Rs. 36 crore against the scheme of Deogad Wind Power Project. In its previous MYT Order, the Commission had disallowed the capitalisation of this scheme as follows.

*"The Commission notes that MSEDCL is availing the feed-in tariff for the Deogad Wind Power Project, which is a DPR scheme, determined under the RE Tariff Regulations. This preferential tariff has already been factored in the recovery of capital cost of the Project. Hence, allowing capitalisation towards this scheme separately in the ARR would amount to allowing such recovery twice. Accordingly, the Commission disallows the capitalisation claimed by MSEDCL towards this scheme in FY 2014-15 and FY 2015-16, amounting to Rs. 31.5 crore and Rs. 43.88 crore respectively."*

In view of the above, the Commission has disallowed the capitalisation claimed by MSEDCL towards this scheme.



MSEDCL has proposed to capitalise the expenditure towards a few pilot DSM schemes during FY 2015-16. However, in accordance with the DSM Regulations, 2010, the Commission considers it more appropriate to treat the expenditure on these schemes as revenue expenditure to be included as part of the ARR instead of allowing their capitalisation. Accordingly, the Commission has disallowed the capitalisation claimed towards these schemes, and allowed the amount as part of the ARR for FY 2015-16. The details of such schemes in FY 2015-16 have been summarised below:

**Table 4-25: DSM Schemes of revenue nature for which Capitalisation is disallowed, and added in ARR as Revenue Expenses (Rs. crore)**

Schemes	FY 2015-16
AG-DSM Pilot Project -Magalwedha Tal., Solapur Distt.	1.36
Star rated ceiling fan Phase-I	0.60
Star rated ceiling fan Phase-II	6.50
<b>Total</b>	<b>8.46</b>

For the purpose of provisional true-up for FY 2015-16, the Commission has not considered the capitalisation towards Simhasth Kumbh Mela as no DPR has been submitted by MSEDCL for in-principle approval, despite the fact that capital outlay for the scheme is around Rs 25 crore. This shall be considered at the time of MTR, subject to submission of the DPR by MSEDCL and the Commission's in-principle approval.

The capitalisation of non-DPR schemes is beyond the threshold limit of 20% of the approved DPR scheme capitalisation. Hence, capitalisation towards non-DPR schemes has been allowed only upto that threshold level

Based on the above, the capitalisation allowed for FY 2015-16 is as follows.

**Table 4-26: Capitalisation approved by Commission for FY 2015-16 (Rs crore)**

Particulars	Reference	FY 2015-16
Total DPR scheme capitalization allowed	a	2,272
Total Excess Capitalisation in the year	b	678
50% of IDC of excess capitalisation	$c = 50\% \times 2.95\% \times b$	10.01
<b>Net DPR Allowed after adjusting IDC of excess capitalisation</b>	<b>d=a-c</b>	<b>2,262</b>
Allowable non-DPR scheme capitalisation (considering 20% cap)	$e = 20\% \text{ of } d$	452
Non-DPR scheme capitalisation claimed	f	1,302
Excess claimed for non-DPR schemes	g	850
<b>Net Non-DPR capitalisation approved</b>	<b>h=min(e,f)</b>	<b>452</b>
<b>Total (DPR+non-DPR Capitalisation)</b>	<b>i=d+h</b>	<b>2,715</b>

Accordingly, the capitalisation approved for FY 2015-16 is summarised as below.

**Table 4-27: Capitalisation for FY 2015-16 (Rs crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Capitalisation	3,534	5,596	2,715

#### 4.8 Depreciation for FY 2015-16

##### *MSEDCL's Submission*

Depreciation has been calculated taking the opening balance of assets at the beginning of the year and the projected capitalisation. The depreciation rates are as per the MYT Regulations, 2011. The comparison of the depreciation approved in the previous MYT Order and the provisional depreciation for FY 2015-16 is as shown below:

**Table 4-28: Comparison of Depreciation earlier approved and as estimated by MSEDCL for FY 2015-16 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Opening GFA	40,576	41,873
<b>Depreciation</b>	<b>2,134</b>	<b>2,333</b>
% Depreciation	5.26%	5.57%

##### *Commission's Analysis and Ruling*

As elaborated in the earlier Chapter on truing-up of FY 2014-15, MSEDCL has, as part of the implementation of SAP-ERP, streamlined the calculation of depreciation in line with the MYT Regulations. Accordingly, MSEDCL had highlighted that Fixed Assets are depreciated under the 'Straight Line Method' to the extent of 90% of the cost of the assets at the rates and manner prescribed under the Regulations.

The Commission notes MSEDCL's submission that, in case of assets whose depreciation has not been charged up to 70% after their commissioning, it charges depreciation at the rates as per the norms till the end of such year in which the accumulated depreciation reaches up to 70%. After attainment of 70% accumulated depreciation, it charges depreciation on the basis of the remaining useful life up to 90% of the cost of asset in terms of the Regulations.

The Commission observed, however, that the Opening GFA taken by MSEDCL for computation of depreciation expense for FY 2015-16 is different from the closing GFA approved for FY 2014-15 in the previous MYT Order.

The Commission has considered the Opening GFA for FY 2015-16 as the Closing GFA of FY 2014-15 as trued-up in this Order, and not the GFA as submitted by MSEDCL. Accordingly, for provisional approval, depreciation has been reworked on

a pro rata basis on the approved Opening GFA for FY 2015-16 and the asset addition allowed during FY 2015-16. This is subject to prudence check and review during the truing-up exercise.

**Table 4-29: Depreciation approved by Commission for FY 2015-16 (Rs crore)**

Particulars	Approved in this Order
Opening GFA	40510
Depreciation	1857
% Depreciation	4.74%

Accordingly, the depreciation approved for FY 2015-16 is as follows.

**Table 4-30: Summary of Depreciation for FY 2015-16 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Depreciation	2,134	2,333	1,857

#### 4.9 Interest Expenses for FY 2015-16

##### *MSEDCL's Submission*

Regulation 33 of the MYT Regulations, 2011 specifies that the rate for calculation of interest on long-term loans to be the weighted average rate of interest on the actual loan portfolio at the beginning of each year, calculated on the normative average loan availed in a particular year. Accordingly, MSEDCL has calculated the interest on long-term loans considering the weighted average rate of interest of 11.83% for FY 2015-16, as shown in the following Table:

**Table 4-31: Interest Expense for FY 2015-16 submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Outstanding Loan at beginning of the year	14,987	12,447
Loan Drawal	2,307	3,539
Loan Repayment	2,134	2,333
Balance Outstanding at the end of the year	15,160	13,652
Interest Rate	11.90%	11.83%
<b>Gross Interest Expenses</b>	<b>1,794</b>	<b>1,544</b>
Less: Expenses Capitalised	113	--
<b>Net Interest Expenses</b>	<b>1,681</b>	<b>1,544</b>

In response to issues raised regarding detailed calculation of interest expense and details of outstanding loan and lender-wise applicable interest rates, MSEDCL has stated that it has calculated the interest on long-term loans considering the weighted average rate of interest of 11.83% for FY 2015-16 onwards. It has also provided the details of outstanding loan and applicable interest rates.

### ***Commission's Analysis and Ruling***

In response to the Commission's query, MSEDCL submitted documentary evidence confirming the outstanding opening loan balance as on 1st April of FY 2015-16 and corresponding interest rates considered for computation of weighted average interest rate, which the Commission has verified.

The Commission asked MSEDCL to confirm if any retirement of assets was envisaged in FY 2015-16 and, if so, to submit details and resubmit the computation of interest on long-term loan. MSEDCL stated that it is difficult to predict the retirement of assets during the year. However, after availability of the Audited Accounts for FY 2015-16, the details of retirement of assets will be reported and the revised computation of interest on long-term loan (if required) will be submitted during the true-up of FY 2015-16.

The Commission does not agree that it is not possible to project the retirement of assets. In fact, there are several schemes relating to renovation and modernisation, life extension, etc., for distribution assets which are undertaken upon assessing the balance useful life and serviceability of particular assets. Hence, it would be possible to project the retirement of assets. The Commission directs MSEDCL to maintain in its Asset Register the details of useful life for each asset, and consider retirement of assets once it is over. The Commission shall consider the retirement of the assets on actual basis at the time of true-up of the respective years.

The funding pattern for FY 2015-16 for the capitalisation is provisionally approved by the Commission, in proportion to the funding pattern of capital expenditure adopted by MSEDCL and considering the approved capitalisation for the respective years, is presented in the following Table, subject to prudence check and review during the true-up exercise.

**Table 4-32: Funding of Capitalisation approved by Commission for FY 2015-16**

Particular	Amount (Rs. crore)	Funding Mix (%)
Total Capitalisation	2715	
Less: Consumer Contribution	49	
Less: Grants	405	
Balance to be funded	2261	100%
Equity	286	13%
Debt	1975	87%

The rate of interest has been allowed as per Regulation 33 of the MYT Regulations as 11.83%, as claimed by MSEDCL. Under the Regulations, the rate for calculation of interest on long-term loans is the weighted average rate of interest on the basis of the actual loan portfolio at the beginning of each year. The same has been allowed accordingly. The opening loan balance is as approved in past Orders.

**Table 4-33: Interest Expenses approved by Commission for FY 2015-16 (Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Opening Balance of Gross Normative Loan		
Cumulative Repayment till the year		
Opening Balance of Net Normative Loan	12,447	14,415
Less: Reduction of Normative Loan due to retirement or replacement of assets		
Addition of Normative Loan due to capitalisation during the year	3,539	1,975
Repayment of Normative Loan during the year	2,333	1,857
Closing Balance of Net Normative Loan	13,652	14,533
Closing Balance of Gross Normative Loan		
Average Balance of Net Normative Loan	13,050	14,474
Weighted average Rate of Interest on actual Loans (%)		11.83%
Interest Expenses	1,544	1,712
Expenses Capitalised	-	-
<b>Total Interest Expenses</b>	<b>1,544</b>	<b>1,712</b>

Accordingly, the Interest Expenses approved for FY 2015-16 are summarised as follows.

**Table 4-34: Interest Expenses for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Interest Expenses	1,681	1,544	1,712

#### 4.10 Return on Equity for FY 2015-16

##### *MSEDCL's Submission*

MSEDCL has claimed RoE in accordance with Regulation 32.2 of the MYT Regulations, 2011 for both Wires and Supply Business. The return on equity capital is allocated in the proposed ratio of Fixed Assets as between the Wires and Supply Business, i.e. 90% to Wires Business and 10% to Supply Business, in accordance with the allocation ratio approved in the Business Plan Order in Case No. 134 of 2012. Therefore, the capital expenditure, grants, equity and capitalisation are divided between the Wires and Supply Business in the ratio of 90:10. Based on this, MSEDCL has claimed the RoE for the Wires and Supply Businesses separately.

The RoE for Wires Business has been computed by MSEDCL at 15.5% on the average equity based on the opening balance of equity and normative additions during the year, which has been arrived at by taking 30% of the net capital expenditure (net of consumer contribution and grants as funded from equity). Accordingly, the RoE for the Wires Business is as under:

**Table 4-35: RoE for Wires Business for FY 2015- 16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Regulatory Equity at the beginning of the year (Wires)	8410	8713
Capital Expenditure incurred (excl Grants)	--	4276
Equity portion of capital expenditure	--	582
% of Equity portion of capital expenditure	--	13.60%
Assets Capitalisation	--	3895
Equity portion of Assets Capitalisation	720	530
<b>Regulatory Equity at the end of the year</b>	<b>9131</b>	<b>9242</b>
<b>Return on Computation</b>		
Return on Regulatory Equity at the beginning of the year	1304	1350
Return on Normative Equity portion of Asset Capitalisation	56	41
Interest on Equity portion above 30% @ 11.83% p.a	--	15
<b>Total Return on Regulatory Equity for Wires</b>	<b>1359</b>	<b>1406</b>

The RoE for the Supply Business has been computed at 17.5% on the average equity taking the opening balance of equity and normative additions during the year, and has been arrived at considering 30% of the net capital expenditure (net of consumer contribution and grants as funded from equity). Accordingly, the RoE for the Retail Supply Business is as under:

**Table 4-36: RoE for Supply Business for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Regulatory Equity at the beginning of the year (Wires)	934	968
Capital Expenditure incurred (excl Grants)	--	475
Equity portion of capital expenditure	--	65
% of Equity portion of capital expenditure	--	13.60%
Assets Capitalisation	--	433
Equity portion of Assets Capitalisation	80	59
<b>Regulatory Equity at the end of the year</b>	<b>1015</b>	<b>1026</b>

Particulars	Previous MYT Order	MSEDCL Petition
<b>Return on Computation</b>		
Return on Regulatory Equity at the beginning of the year	164	169
Return on Normative Equity portion of Asset Capitalisation	7	5
Interest on Equity portion above 30%	--	2
<b>Total Return on Regulatory Equity for Supply</b>	<b>171</b>	<b>176</b>

### *Commission's Analysis and Ruling*

The Commission asked MSEDCL to confirm whether any asset was retired in FY 2015-16, and if so to submit the details and revise the computation of RoE considering reduction in the equity due to such retirement. In reply, MSEDCL stated that it is difficult to predict the retirement of assets during the year. However, after availability of Audited Accounts for FY 2015-16, the details of retirement of assets will be reported and the revised computation of RoE (if required) will be submitted during the true-up of FY 2015-16.

The regulatory equity approved by the Commission at the end of FY 2014-15 has been taken by the Commission as the opening regulatory equity for FY 2015-16, and the RoE approved as follows:

**Table 4-37: Return on Equity (Wires) for FY 2015-16 approved by Commission (Rs. crore)**

Particulars	%	FY 2015-16
Regulatory Equity at the beginning of the year		8,589
Equity portion of Assets Capitalisation		257
<b>Regulatory Equity at the end of the year</b>		<b>8,846</b>
<b>Return on Computation</b>		
Return on Regulatory Equity at the beginning of the year - @ 15.5%	15.5%	1,331
Return on Normative Equity portion of Asset Capitalisation - @ 15.5%/2	15.5%	20
<b>Total Return on Regulatory Equity</b>		<b>1,351</b>

**Table 4-38: Return on Equity (Supply) for FY 2015-16 approved by Commission (Rs. crore)**

Particulars	%	FY 2015-16
Regulatory Equity at the beginning of the year		954
Equity portion of Assets Capitalisation		29
<b>Regulatory Equity at the end of the year</b>		<b>983</b>
<b>Return on Computation</b>		



Particulars	%	FY 2015-16
Return on Regulatory Equity at the beginning of the year - @17.5%	17.5%	167
Return on Normative Equity portion of Asset Capitalisation - @17.5%/2	17.5%	2
<b>Total Return on Regulatory Equity</b>		<b>169</b>

**Table 4-39: RoE approved by Commission (Wires+Supply) (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
RoE for Wires Business	1359	1406	1,351
RoE for Retail Supply Business	171	176	169
<b>Return on Equity</b>	<b>1530</b>	<b>1582</b>	1,521

**4.11 Interest on Working Capital for FY 2015-16*****MSEDCL's Submission***

Regulations 35.3 and 35.4 of the MYT Regulations, 2011 specify the norms for IoWC for Wires and Supply Business respectively. MSEDCL has stated that it has computed the IoWC for Wires and Supply Business based on these Regulations. Accordingly, the IoWC and interest on Security Deposits for the Wires Business is presented in the following Table.

**Table 4-40: Interest on Working Capital for WiresBusiness for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
<b>Computation of Working Capital (Wires Business)</b>		
One-twelfth of amount of O&M expenses	386	432
One-twelfth of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of such financial year	61	57
Two months of expected revenue from charges for use of Distribution Wires	1,639	1667
Less: Amount held as Security Deposit from Distribution System Users	(660)	(606)
<b>Total Working Capital Requirement</b>	1,426	1549
Rate of Interest (% p.a.)	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>210</b>	<b>229</b>
<b>Actual Working Capital Interest</b>		
<b>Interest on Security Deposit</b>		



Particulars	Previous MYT Order	MSEDCL Petition
Rate of Interest (% p.a.)	8.75%	7.75%
<b>Interest on Security Deposit</b>	<b>58</b>	<b>47</b>

The provision in the MYT Regulations, 2011 for reducing the working capital by the total amount of CSD renders the net working capital negative for the Supply Business. Therefore, the working capital requirement based on normative principles works out to zero. The amount of CSD reflected in the Books of Accounts is only a notional amount. Although it is reflected in the Balance Sheet, in the Transfer Scheme MSEDCL has not physically received such deposits in cash from the erstwhile MSEB, but has to pay IoWC. Working capital is mainly required to meet liabilities relating to fuel and power purchase, and is beyond MSEDCL's reasonable control.

MSEDCL has calculated the IoWC at 14.75%, i.e. the SBAR, and the interest on CSD at 7.75% per annum, i.e. the RBI Bank Rate.

The IoWC for the Retail Supply Business is as shown below:

**Table 4-41: Interest on Working Capital for Supply Business for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Approved	MSEDCL Petition
<b>Computation of Working Capital (Supply Business)</b>		
One-twelfth of amount of O&M expense	178	129
One-twelfth of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month of such financial year	7	6
Two months of expected revenue from sale of electricity at prevailing	8246	9152
Less: Amount held as security deposit from retail supply consumers	(5938)	(5455)
Less: One month equivalent of cost of Power Purchase	(3437)	(3670)
<b>Total Working Capital Requirement</b>	<b>(944)</b>	<b>162</b>
<b>Computation of working capital interest</b>		
Rate of Interest (% p.a.)	14.75%	14.75%
<b>Interest on Working Capital (Normative Basis)</b>	<b>--</b>	<b>24</b>
<b>Actual Working Capital Interest</b>		
<b>Interest on Security Deposit</b>		
Rate of Interest (% p.a.)	8.75%	7.75%
<b>Interest on Security Deposit</b>	<b>520</b>	<b>423</b>

**Commission's Analysis and Ruling**

The Commission asked MSEDCL for documentary evidence for the interest rate considered for computation of IoWC and Interest on Security Deposits for FY 2015-16. MSEDCL stated that, as per Regulation 35, the IoWC is to be equal to the SBAR as on the date of application for determination of tariff. Accordingly, for FY 2015-16, MSEDCL has applied the SBAR of 14.75%, prevailing when the previous Petition for Tariff determination for FY 2015-16 was filed.

MSEDCL further stated that, as per the Regulations, the interest on CSD is the Bank Rate as on the date on which the application for determination of Tariff is made. Since the interest will be paid on the CSD at the end of FY 2015-16, MSEDCL has applied the Bank Rate applicable as on the date of filing of the present MYT Petition, i.e. 7.75%.

The Commission has reworked the IoWC in accordance with the norms specified in the MYT Regulations and based on parameters such as the O&M Expenses, Wires ARR and Supply ARR approved in this Order.

**Table 4-42: Interest on Working Capital and Security Deposit for Wires Business approved by Commission for FY 2015-16 (Rs crore)**

Particulars	FY 2015-16		
	Previous MYT Order	MSEDCL Petition	Approved in this Order
One-twelfth of amount of O&M expenses	386	432	377
One-twelfth of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month	61	57	57
Two months of expected revenue from charges for use of Distribution Wires	1,639	1,667	1,467
Less: Amount held as Security Deposit from Distribution System Users	(660)	(606)	(606)
<b>Total Working Capital Requirement</b>	<b>1,426</b>	<b>1549</b>	<b>1,295</b>
Rate of Interest (% p.a.)	14.75%	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>210</b>	<b>229</b>	<b>191</b>
<b>Interest on Security Deposit</b>			
Rate of Interest (% p.a.)	8.75%	7.75%	7.75%
<b>Interest on Security Deposits</b>	<b>58</b>	<b>47</b>	<b>47</b>

**Table 4-43: Interest on Working Capital and Security Deposit for Supply Business approved by Commission for FY 2015-16 (Rs. crore)**

Particulars	FY 2015-16		
	Previous MYT Order	MSEDCL Petition	Approved In this Order
One-twelfth of amount of O&M expense	178	129	167

Particulars	FY 2015-16		
	Previous MYT Order	MSEDCL Petition	Approved In this Order
One-twelfth of sum of the book value of stores, materials and supplies including fuel on hand at the end of each month	7	6	6
Two months of expected revenue from sale of electricity at prevailing tariff	8246	9,152	9,152
Less: Amount held as Security Deposit	(5938)	(5,455)	(5,455)
Less: One month equivalent of cost of Power Purchase	(3437)	(3,670)	(3,670)
<b>Total Working Capital Requirement</b>	<b>(944)</b>	<b>162</b>	<b>200</b>
<b>Computation of Working Capital interest</b>			
Rate of Interest (% p.a.)	14.75%	14.75%	14.75%
<b>Interest on Working Capital</b>		<b>24</b>	<b>30</b>
<b>Interest on Security Deposit</b>			
Rate of Interest (% p.a.)	8.75%	7.75%	7.75%
<b>Interest on Security Deposit</b>	<b>520</b>	<b>423</b>	<b>423</b>

**Table 4-44: Interest on Working Capital and Security Deposit approved by Commission (Wires+Supply) (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Interest on Working Capital and Security Deposit - Wires Business	268	275	239
Interest on Working Capital and Security Deposit - Supply Business	520	447	452
<b>Interest on Working Capital and Security Deposit (Supply+Wires Business)</b>	<b>788</b>	<b>722</b>	<b>691</b>

#### 4.12 Other Finance Charges for FY 2015-16

##### *MSEDCL's Submission*

MSEDCL has estimated Other Finance Charges amounting to Rs. 31 crore for FY 2015-16 applying an increase of 5% over the previous year. These are the fund raising charges, i.e., Guarantee charges, Finance Charges, Stamp Duty and Service Fee.

**Table 4-45: Other Finance Charges for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Guarantee Charges	7	6
Finance Charges	23	24

Particulars	Previous MYT Order	MSEDCL Petition
Stamp Duty	2	0
Service Fee	2	2
Other Interest and Charges	4	--
<b>Total Other Finance Charges</b>	<b>39</b>	<b>31</b>

### *Commission's Analysis and Ruling*

The Commission has accepted the estimation of MSEDCL for the purpose of provisional truing-up of Other Finance Charges for FY 2015-16. Accordingly, the Other Finance Charges approved for FY 2015-16 are as follows.

**Table 4-46: Other Finance Charges for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Other Finance Charges	39	31	31

## **4.13 Provision for Bad Debts for FY 2015-16**

### *MSEDCL's Submission*

MSEDCL has claimed provisioning towards Bad Debts for FY 2015-16 in line with Regulations 78.6 and 92.9 of the MYT Regulations, 2011, under which provision for Bad and Doubtful Debts may be allowed up to 1.5% of the receivables as per the Audited Annual Accounts, duly allocated between the Wires and Supply Business.

The provision for Bad and Doubtful Debts at 1.5% of the receivables for FY 2014-15 has been made for FY 2015-16 as shown in the following Table:

**Table 4-47: Provision for Bad Debts for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Provision for Bad Debts	210	258
Receivables	13983	17216
% of Receivables	1.50%	1.50%

### *Commission's Analysis and Ruling*

For the provisional truing-up of FY 2015-16, the Commission has approved the provision for Bad Debts as approved for FY 2014-15, at Rs. 258 crore, subject to subsequent truing-up after prudence check.

**Table 4-48: Provision for Bad Debts for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Provision for Bad and Doubtful Debts	210	258	258

**4.14 Other Expenses for FY 2015-16*****MSEDCL's Submission***

The Other Expenses of MSEDCL comprise interest to suppliers/ contractors, rebate to consumers and other expenditure, viz. compensation for injuries to staff and outsiders. Other Expenses earlier approved and now claimed provisionally by MSEDCL are as tabulated below.

**Table 4-49: Other Expenses FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Other Expenses	21	42

***Commission's Analysis and Ruling***

For provisional truing-up of FY 2015-16, the Commission has disallowed the heads Loss on obsolescence of Fixed Assets, Intangible Assets written-off and Interest on Staff Welfare Fund for the reasons elaborated in the truing-up of FY 2014-15.

Accordingly, the Commission has approved the following towards Other Expenses, subject to prudence check at the time of true-up.

**Table 4-50: Other Expenses for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Compensation for injuries, death to staff	2	3	3
Compensation for injuries, death to others	7	6	6
Loss on obsolescence of Fixed Assets		11	-
Loss on sale of scrap		-	-
Intangible assets written-off	12	11	-
Interest on Staff Welfare Fund		6	-
Non Moving Items		2	2
Refund of Additional Supply Charge		-	-
Regular concession in tariff to Powerloom consumers		-	-
Interest to Suppliers/Contractors (O&M)		2	2
Small and low value write-offs	0	0	0
Others		1	1
<b>TOTAL</b>	<b>21</b>	<b>42</b>	<b>14</b>

**4.15 Contribution to Contingency Reserves for FY 2015-16*****MSEDCL's Submission***

Considering its precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it was not feasible for MSEDCL to invest in Contingency Reserves. Accordingly, it has not been claimed in ARR of the FY 2015-16.

***Commission's Analysis and Ruling***

Regulation 36 of the MYT Regulations, 2011 provides for appropriation to the Contingency Reserve of not less than 0.25 per cent and not more than 0.5 per cent of the original cost of Fixed Assets annually towards in the calculation of ARR. The amount is to be invested in securities authorised under the Indian Trusts Act, 1882 within six months of the close of the financial year. MSEDCL has neither provisioned for any addition in Contingency Reserve in FY 2015-16 nor planned for investment within the timelines stipulated. Accordingly, for provisional true-up, taking into account MSEDCL's submissions and the considerations explained in the true-up for FY 2014-15, the Commission has not considered any amount towards contribution to Contingency Reserve in FY 2015-16 either.

**Table 4-51: Contribution to Contingency Reserve for FY 2015-16 as considered by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Contribution to Contingency Reserve	101	-	-

**4.16 Incentives and Discounts for FY 2015-16*****MSEDCL's Submission***

MSEDCL has estimated the incentives and discounts at 5% over the previous year.

**Table 4-52: Incentives and Discounts for FY 2015-16 submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Incentives/Discounts	242	258

***Commission's Analysis and Ruling***

The Commission has provisionally approved incentives and discounts as estimated by MSEDCL, subject to true-up after prudence check.

**Table 4-53: Incentives and Discounts approved for FY 2015-16 (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Incentives/Discounts	242	258	258

**4.17 Non-Tariff Income for FY 2015-16*****MSEDCL's Submission***

MSEDCL has certain sources of Non-Tariff Income, viz. interest on arrears of consumers, DPC, interest on staff loans and advances, sale of scrap, interest on investments, rebate on power purchase, etc. It has estimated Non-Tariff Income with an escalation of 5% over the actual income received during FY 2014-15. Comparison of Non-Tariff Income as estimated by MSEDCL and as earlier approved by the Commission is presented in the Table below.

**Table 4-54: Non-Tariff Income as per MSEDCL (Rs. crore)**

Particulars	MYT Approved	MSEDCL Petition
Non-Tariff Income	1847	2055

***Commission's Analysis and Ruling***

The Commission has examined the various heads under which MSEDCL has proposed Non-Tariff Income. DPC, Interest on Delayed Payment Charges and other miscellaneous receipts form the major heads of Non-Tariff Income and amount to Rs. 239 crore, Rs. 1094 crore and Rs. 609 crore respectively. These have been projected by MSEDCL with an increase of 5% over the actual income received in FY 2014-15. Commission has accepted the projections against these heads on a provisional basis, subject to truing-up after prudence check.

MSEDCL has not projected any income on account of theft recovery although, as in past years, it would be likely recovery some amount on this count in FY 2015-16 also. Moreover, during the public consultation process, MSEDCL reiterated its commitment towards curbing theft of electricity. Accordingly, for provisional truing-up, the Commission has taken an amount of Rs. 67 crore as the expected revenue from theft recovery during FY 2015-16, equivalent to the actual of the previous year.

In the light of the above, the Commission has approved the following Non-Tariff Income provisionally for FY 2015-16.

**Table 4-55: Non-Tariff Income for FY 2015-16, as approved by Commission (Rs. crore)**

Particulars	MSEDCL Petition	Approved in this Order
Non-Tariff Income	2055	2123

**4.18 Income from Wheeling Charges for FY 2015-16*****MSEDCL's Submission***

MSEDCL has estimated income from Wheeling Charges with a 5% increase over the actual income received in FY 2014-15. The comparison of income from Wheeling Charges as estimated by MSEDCL and as earlier approved by the Commission is presented in the Table below:

**Table 4-56: Income from Wheeling Charges for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Income From Wheeling Charges	21	3

***Commission's Analysis and Ruling***

OA sale estimated for FY 2015-16 is 5928 MU as against 3909 MU in FY 2014-15, i.e. a growth of around 50%. Considering this high growth rate, the Commission does not accept the escalation rate of 5% assumed by MSEDCL for projecting the revenue from Wheeling Charges.

For provisional truing-up, the Commission has considered an increase in the revenue from Wheeling Charges commensurate with the annual growth in OA sales, which works out to Rs. 4 crore. This shall be trued-up at the MTR stage subject to prudence check.

**Table 4-57: Income from Wheeling Charges for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Income From Wheeling Charges	21	3	4

**4.19 Income from Open Access Charges for FY 15-16*****MSEDCL's Submission***

MSEDCL has estimated income from OA Charges with an escalation of 5% over the actual income received in FY 2014-15. The comparison of income from OA Charges



as estimated by MSEDCL and as earlier approved by the Commission for FY 2015-16 is presented in the Table below:

**Table 4-58: Income from Open Access Charges for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Income from Open Access Charges	311	399

***Commission's Analysis and Ruling***

As in the case of the income from Wheeling Charges and for the same reasons, the Commission does not accept the escalation rate of 5% assumed by MSEDCL for projecting the revenue from OA sales. Instead, for provisional truing-up, it has considered an increase in revenue from OA commensurate to the annual growth in OA sales, which works out to Rs. 576 crore. However, this will be subsequently trued-up subject to prudence check.

**Table 4-59: Income from Open Access Charges for FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Income from Open Access Charges	311	399	576

#### **4.20 Compensation and Penalties paid by MSEDCL**

***MSEDCL's Submission***

As sought by the Commission, MSEDCL has submitted the compensation and penalty amount paid as per Orders of the Commission, CGRF, Ombudsman and other forums as follows.

**Table 4-60: Compensation and Penalties paid in FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Amount
Amount of Compensation / penalty paid	0.12

***Commission's Analysis and Ruling***

As explained earlier, by its very nature no such compensation or penalty paid can be recovered from consumers through the ARR. Accordingly, that amount has been deducted from the ARR approved for FY 2015-16.

#### 4.21 Sharing of Efficiency Loss on account of Distribution Loss restatement

As elaborated earlier in this Order, the sales for FY 2015-16 have been reassessed based on the revised Agriculture Index approved for the year. Accordingly, the Distribution Loss has been restated as 18.24%, as against 14.51% claimed by MSEDCL. At the same time, the power purchase quantum and expense reported for FY 2015-16 by MSEDCL has been provisionally allowed, as it is said to be the actual procurement till March, 2016. However, while doing so, the effect of restatement of a higher Distribution Loss has not been passed on to the consumers.

The impact of restatement of Distribution Loss as compared to the earlier approved target will have to be provisionally estimated and the efficiency loss on this account shared by MSEDCL and the consumers. Sharing of gains and losses on account of controllable factors is normally done at the time of subsequent truing-up of expenses. However, the impact of the sharing of efficiency loss on account of Distribution Loss restatement is significant. In case it is deferred, the future impact in terms of the additional carrying/holding cost may also be very substantial.

In view of the above, and considering its circumstances, the Commission has considered it appropriate to undertake the sharing of efficiency loss on account of the restatement of Distribution Loss in FY 2015-16 on a provisional basis.

Accordingly, the Commission has worked out the efficiency loss due to under-achievement of the original Distribution Loss reduction target based on the ABR in FY 2015-16, as shown in the Table below:

**Table 4-61: Efficiency Loss due to restatement of Distribution Loss in FY 2015-16, as determined by Commission**

Particulars	Unit	Value
Normative Distribution Losses	%	13.50%
Actual Distribution Losses	%	18.24%
Actual energy input at the distribution periphery	MU	1,16,184
Normative Loss	MU	15,685
Normative sales (incl. OA & credit sales)	MU	100,499
Approved sales (Incl. OA & credit sales)	MU	94,965
Lower sales due to higher Distribution Loss	MU	5,534
Average Billing Rate	Rs/ kWh	6.20
Lower sales due to higher Distribution Loss	Rs. crore	3,429
Efficiency Loss to be retained by MSEDCL	Rs. crore	2,286
Efficiency Loss to be passed on to consumers	Rs. crore	1,143

## 4.22 Revenue for FY 2015-16

### *MSEDCL's Submission*

MSEDCL has taken the provisional revenue available up to December, 2015 and estimated the revenue for January to March, 2016 considering the estimated number of consumers, sales and Connected Load/Contract Demand, applying the prevailing tariff, including FAC. The comparison of revenue as estimated by MSEDCL and as approved in the previous MYT Order for FY 2015-16 is presented in the Table below.

**Table 4-62: Revenue for FY 2015-16, as submitted by MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition
Revenue	55,602	54,911

There has been a substantial decrease in the Industrial category sales due to the overall economic conditions and OA. Further, from November, 2015, Railways has opted for OA, and that has resulted in reduction of sale in the Railways category. This has resulted in lower revenue.

### *Commission's Analysis and Ruling*

After the close of 2015-16, the Commission sought details of actual revenue for the full year. MSEDCL submitted the actual revenue of Rs 54,911 crore for the provisional true-up.

The Commission has verified the revenue estimate taking the actual unaudited sales during the year and the approved tariff, including the actual revenue from FAC and other charges. On this basis, the revenue for FY 2015-16 works out to much higher than estimated by MSEDCL, for which reconciliation was sought. MSEDCL stated that the revenue from sale of power reported by it is based on the actual billing information available for FY 2015-16. It also stated that the revised tariffs pursuant to the previous MYT Order were effected from 1 June, 2015. In the months of April and May, 2015, MSEDCL has charged the tariffs as per the Tariff Order dated 16 August, 2012, which were lower. Further, the information reported in Format F 13 A regarding the number of consumers and Connected Load/Contract Demand for FY 2015-16 are as in March, 2016. These figures vary from month to month and are not constant throughout the year. The calculation of Demand Charges is based on the assumed average Load Factor, which may also differ from consumer to consumer and from month to month depending on actual usage. The information submitted by MSEDCL for FY 2015-16 is based on the actual billing as recorded in its IT system.

In view of the above, for provisional true-up, the Commission has considered the revenue as claimed by MSEDCL for FY 2015-16.

**Table 4-63: Revenue for FY 2015-16, as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Revenue	55,602	54,911	54,911

**4.23 Income from Trading of Surplus Power*****MSEDCL's Submission***

MSEDCL has estimated the income from trading of surplus power as Rs. 189 crore, as in FY 2014-15. In response to data gaps, MSEDCL has submitted the month-wise traded units (MU) and the actual rate at which surplus power was traded.

To the clarification sought by the Commission for availability of surplus power for trading in FY 2015-16 when none was envisaged in the previous MYT Order, MSEDCL stated that surplus power was available during night hours which needed to be sold in order to maintain the stability of the system. MSEDCL had sold 579.97 MU power through the Power Exchanges in 2014-15 and around 880 MU in 2015-16. The month-wise quantum and rate at which surplus power was traded in FY 2015-16, up to February, 2016, is as shown in the following Table.

**Table 4-64: Quantum and Rates of Traded Surplus Power in FY 2015-16, as submitted by MSEDCL**

Month	IEX 2015-16			PXIL 2015-16			Total FY 2015-16		
	MU	Amt	Rate /unit	MU	Amt	Rate /unit	MU	Amt	Rate /unit
Apr-15	26.98	6.23	2.31	0.00	0.00	0.00	26.98	6.23	2.31
May-15	12.68	2.45	1.93	0.00	0.00	0.00	12.68	2.45	1.93
Jun-15	71.16	12.15	1.71	8.42	1.48	1.76	79.58	13.63	1.71
Jul-15	12.17	2.10	1.73	5.35	0.97	1.82	17.52	3.07	1.75
Aug-15	33.21	6.55	1.97	3.15	0.68	2.17	36.36	7.23	1.99
Sep-15	137.79	38.84	2.82	1.60	0.50	3.10	139.39	39.34	2.82
Oct-15	18.48	5.13	2.77	0.00	0.00	0.00	18.48	5.13	2.77
Nov-15	41.69	8.90	2.13	4.97	0.87	1.76	46.65	9.77	2.09
Dec-15	188.20	38.04	2.02	19.57	4.53	2.31	207.77	42.57	2.05
Jan-16	161.31	27.78	1.72	13.90	2.90	2.09	175.21	30.68	1.75
Feb-16	73.38	12.28	1.67	0.00	0.00	0.00	73.38	12.28	1.67
<b>Total</b>	<b>777.05</b>	<b>160.45</b>	<b>2.06</b>	<b>56.95</b>	<b>11.93</b>	<b>2.10</b>	<b>834.00</b>	<b>172.39</b>	<b>2.07</b>

To the Commission's query as to why, inspite of the increase in surplus power traded, it had projected the income at the same level as in FY 2014-15, MSEDCL stated that even though the rates were lower than in the previous year.

***Commission's Analysis and Ruling***

Based on the actual data of surplus power traded upto February, 2016, the total revenue works out to Rs. 172.39 crore. Extrapolated for 12 months, the revenue from

the trading surplus would be around Rs. 189 crore. Hence, the Commission has provisionally approved the income from trading of surplus power as submitted by MSEDCL, at Rs. 189 crore, subject to true-up after prudence check.

**Table 4-65: Income from Trading Surplus in FY 2015-16 as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Revenue	-	189	189

#### 4.24 Segregation of Wires and Supply ARR

In its Business Plan Order dated 26 August, 2013 (Case No. 134 of 2012), the Commission had approved the percentage allocation of the ARR between the Wires Business and Supply Business. The Allocation Matrix is set out in the previous Chapter on the true-up for FY 2014-15, and MSEDCL has presented the Wires and Supply ARRs for FY 2015-16 based on it. As elaborated in earlier paragraphs, the Commission has analysed the various components of the respective ARRs in accordance with the Regulations, and has approved the ARR for FY 2015-16 as set out below.

#### 4.25 Aggregate Revenue Requirement for FY 2015-16

##### *MSEDCL's Submission*

Considering the discussion of the ARR parameters presented in MSEDCL's Petition and in its additional submissions, the ARR for the Wires and the Supply Business is as presented in the following Tables:

**Table 4-66: ARR for Wires Business for FY 2015-16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Difference
Operation & Maintenance Expenses	4627	5178	551
Depreciation	1920	2100	180
Interest on Loan Capital	1512	1389	(123)
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	268	275	7
Other Finance Charges	35	28	(7)
Provision for Bad and Doubtful Debts	21	26	5
Income Tax	0	--	(0)
Contribution to Contingency Reserves	91	--	(91)
<b>Total Revenue Expenditure</b>	<b>8474</b>	<b>8997</b>	<b>523</b>
Add: Return on Equity Capital	1359	1406	47
<b>Aggregate Revenue Requirement</b>	<b>9833</b>	<b>10403</b>	<b>570</b>
Less: Income from Wheeling Charges	21	3	(18)
Less: Income from Open Access Charges	311	399	88
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>9501</b>	<b>10001</b>	<b>500</b>

**Table 4-67: ARR for Supply Business for FY 2015 -16 as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Difference
Power Purchase Expenses (including Inter-State Transmission Charges)	41249	44034	2785
Operation & Maintenance Expenses	2085	1547	(538)
Depreciation	213	233	20
Interest on Loan Capital	168	154	(14)
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	520	447	(73)
Other Finance Charges	4	3	(1)
Provision for Bad and Doubtful Debts	189	232	43
Other Expenses	21	42	21
Intra-State Transmission Charges including MSLDC Fees & Charges	3627	4070	443
Income Tax	0	--	(0)
Contribution to Contingency Reserves	10	--	(10)
Incentives/Discounts	242	258	16
Prior Period Expenses and Exceptional Items	0	--	
DSM expenses	8	--	(8)
<b>Total Revenue Expenditure</b>	<b>48336</b>	<b>51022</b>	<b>2686</b>
Add: Return on Equity Capital	171	176	5
<b>Aggregate Revenue Requirement</b>	<b>48507</b>	<b>51198</b>	<b>2691</b>
Less: Non-Tariff Income	1847	2055	208
Add: RLC refund	450	--	(450)
<b>Aggregate Revenue Requirement from Retail Supply</b>	<b>47110</b>	<b>49143</b>	<b>2033</b>

**Table 4-68: ARR for FY 2015-16 (Wires + Supply) as per MSEDCL (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Difference
Power Purchase Expenses	41249	44034	2785
Operation & Maintenance Expenses	6712	6725	13
Depreciation Expenses	2134	2333	199
Interest on Loan Capital	1680	1544	(136)
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	788	722	(66)
Other Finance Charges	39	31	(8)
Provision for Bad and Doubtful Debts	210	258	48
Other Expenses	21	42	21
Income Tax	0.04	--	(0)
Intra-State Transmission Charges, MSLDC Charges	3627	4070	443

Particulars	Previous MYT Order	MSEDCL Petition	Difference
Incentives/Discounts	242	258	16
Contribution to Contingency Reserves	101	--	(101)
DSM expenses	8	--	(8)
<b>Total Revenue Expenditure</b>	<b>56812</b>	<b>60019</b>	<b>3207</b>
Add: Return on Equity Capital	1530	1582	52
<b>Aggregate Revenue Requirement</b>	<b>58342</b>	<b>61601</b>	<b>3259</b>
Less: Non-Tariff Income	1847	2055	208
Less: Income from Wheeling Charges	21	3	(18)
Less: Income from Open Access Charges	311	399	88
Add: RLC refund	450	--	(450)
<b>Aggregate Revenue Requirement from Retail Tariff</b>	<b>56613</b>	<b>59144</b>	<b>2531</b>

### *Commission's Analysis and Ruling*

Based on the component-wise analysis set out in earlier Sections, the summary of the ARR for the Wires Business and Supply Business, as claimed by MSEDCL and as provisionally approved by the Commission, for FY 2015-16 is presented in the Tables below.

**Table 4-69 : ARR for Wires Business for FY 2015-16, as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Operation & Maintenance Expenses	4,627	5,178	4,527
Depreciation	1,920	2,100	1,671
Interest on Loan Capital	1,512	1,389	1,541
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	268	275	238
Other Finance Charges	35	28	28
Provision for Bad and Doubtful Debts	21	26	26
Income Tax	0		0
Contribution to Contingency Reserves	91		0
<b>Total Revenue Expenditure</b>	<b>8,474</b>	<b>8,997</b>	<b>8,032</b>
Add: Return on Equity Capital	1359	1,406	1,351
<b>Aggregate Revenue Requirement</b>	<b>9833</b>	<b>10,403</b>	<b>9,383</b>
Less: Income from Wheeling Charges	21	3	4
Less: Income from Open Access Charges	311	399	576
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>9501</b>	<b>10,001</b>	<b>8,803</b>



**Table 4-70 : ARR for Supply Business for FY 2015-16, as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Power Purchase Expenses (incl. Inter-State Transmission Charges)	41249	44,034	44,034
Operation & Maintenance Expenses	2085	1,547	2,005
Depreciation	213	233	186
Interest on Loan Capital	168	154	171
Interest on Working Capital& Interest on Deposits from Consumers and Distribution System Users	520	447	452
Other Finance Charges	4	3	3
Provision for Bad and Doubtful Debts	189	232	232
Other Expenses	21	42	14
Intra-State Transmission Charges, incl. MSLDC Fees & Charges	3627	4,070	4,070
Income Tax	0	-	0
Contribution to Contingency Reserves	10	-	0
Incentives/Discounts	242	258	258
DSM expenses	8		8
<b>Total Revenue Expenditure</b>	<b>48336</b>	<b>51,022</b>	<b>51,436</b>
Add: Return on Equity Capital	171	176	169
<b>Aggregate Revenue Requirement</b>	<b>48507</b>	<b>51,198</b>	<b>51,606</b>
Less: Non-Tariff Income	1847	2,055	2,123
Less: Amount of Compensation Paid			0.12
Add: RLC refund	450		5
<b>Aggregate Revenue Requirement from Retail Supply</b>	<b>47110</b>	<b>49,143</b>	<b>49,488</b>

**Table 4-71 : Combined ARR for FY 2015-16 (Wires + Supply), as approved by Commission (Rs. crore)**

Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Power Purchase Expenses	41249	44,034	44,034
Operation & Maintenance Expenses	6712	6,725	6,533
Depreciation Expenses	2134	2,333	1,857
Interest on Loan Capital	1681	1,544	1,712
Interest on Working Capital& Interest on Deposits from Consumers and Distribution System Users	788	722	690
Other Finance Charges	39	31	31
Provision for Bad and Doubtful Debts	210	258	258
Other Expenses	21	42	14
Income Tax	0.04	-	-
Intra-State Transmission Charges andMSLDC Charges	3627	4,070	4,070



Particulars	Previous MYT Order	MSEDCL Petition	Approved in this Order
Incentives/Discounts	242	258	258
Contribution to Contingency Reserves	101	-	-
DSM expenses	8	-	8
<b>Total Revenue Expenditure</b>	<b>56,812</b>	<b>60,019</b>	<b>59,468</b>
Add: Return on Equity Capital	1530	1,582	1,521
<b>Aggregate Revenue Requirement</b>	<b>58,342</b>	<b>61,601</b>	<b>60,989</b>
Less: Non-Tariff Income	1847	2,055	2,123
Less: Income from Wheeling Charges	21	3	4
Less: Income from Open Access Charges	311	399	576
Less: Amount of compensation paid to consumers	-	-	0.12
Add: RLC refund		-	5
Add: Effect of Provisional sharing of gains/losses		-	(2,286)
<b>Aggregate Revenue Requirement from Retail Tariff</b>	<b>56,613</b>	<b>59,144</b>	<b>56,004</b>
Add: Past Period Surplus	(1,011)		(1,011)
Less: Revenue from Sale of Power	55,602	54,911	<b>54,911</b>
Less: Revenue from Trading Surplus		189	189
<b>Revenue Gap/(Surplus)</b>	<b>-</b>	<b>4044</b>	<b>(107)</b>

## **5 AGGREGATE REVENUE REQUIREMENT FOR 3<sup>rd</sup> CONTROL PERIOD**

### **5.1 Background**

MSEDCL has sought approval for the projection of ARR for the 3<sup>rd</sup> Control Period FY 2016-17 to FY 2019-20 based on the MYT Regulations, 2015.

The Commission's analysis and approval of various ARR components over the 3<sup>rd</sup> Control Period is set out in the following Sections.

### **5.2 Segregation of Wires and Supply Business**

#### ***MSEDCL's Submission***

MSEDCL has not undertaken any actual accounting separation between the Distribution Wires Business and Retail Supply Business. It has segregated the expenses based on the Allocation Matrix provided in the MYT Regulations, 2015.

#### ***Commission's Analysis and Ruling***

Regulation 68 of the MYT Regulations, 2015 outlines the requirement of separation of accounts of Distribution Licensee into Distribution Wires Business and Retail Supply Business. It also stipulates that, in the absence of separate accounting records, the Allocation Matrix specified in the Regulations should be used for apportioning the ARR:

*"68. Separation of Accounts of Distribution Licensee -*

*Every Distribution Licensee shall maintain separate accounting records for the Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement to enable the Commission to determine the Tariff separately for:—*

*(a) Distribution Wires Business;*

*(b) Retail Supply of electricity:*

*Provided that in case complete accounting segregation has not been done between the Distribution Wires Business and Retail Supply Business of the Distribution Licensee, the Aggregate Revenue Requirement of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the following Allocation Matrix:*

*...Provided further that the above Allocation Matrix shall be applied for all or any of the heads of expenditure and revenue, where actual accounting separation has not been done between the Distribution Wires Business and Retail Supply Business;*

*...Provided also that the Commission may require the Distribution Licensee to file separate Petitions for determination of Tariff for the Distribution Wires Business and Retail Supply Business. “*

The Allocation Matrix specified in the Regulations for segregation of expenses is as follows:

**Table 5-1: Allocation Matrix for Retail Supply and Wires Business Expenses**

Particulars	Distribution Wires Business	Retail Supply Business
Power Purchase Expenses	0%	100%
Operation & Maintenance Expenses	65%	35%
Depreciation	90%	10%
Interest on Long-term Loan Capital	90%	10%
Interest on Working Capital	10%	90%
Interest on Consumer Security Deposits	10%	90%
Provision for Bad and Doubtful Debts	10%	90%
Income Tax	90%	10%
Contribution to Contingency Reserves	90%	10%
Return on Equity	90%	10%
Non-Tariff Income	10%	90%
Inter-State Transmission Charges	0%	100%
Intra-State Transmission Charges	0%	100%

Accordingly, while approving the expenses, the Commission has segregated them based on the above Allocation Matrix for determining the Wires ARR and Supply ARR for the 3<sup>rd</sup> Control Period.

### 5.3 Sales Projections for 3rd Control Period

#### *MSEDCL's Submission*

MSEDCL has estimated the energy consumption for the different consumer categories primarily based on the consumer category-wise CAGR trend of past years. Wherever it observed that the trend is unreasonable or unsustainable, the growth factors have been corrected to arrive at more realistic projections.

MSEDCL has considered FY 2014-15 sales as the base, and applied specified annual growth rates on the provisional sales for FY 2015-16 to arrive at the projected sales for the 3<sup>rd</sup> Control Period. The broad category-wise CAGR considered by MSEDCL is summarised in the Table below.

**Table 5-2: Category-wise CAGR applied by MSEDCL for Sales Projections for 3<sup>rd</sup> Control Period**

Consumer Category	Growth Rate	Remarks
<b>HT Category</b>		
HT I Industry	4%	YoY growth rate is 3%, hence a marginally higher rate is considered

Consumer Category	Growth Rate	Remarks
HT-II Commercial	8%	YoY growth rate is 7%, hence a marginally higher rate is considered
HT-III Railways	0%	Energy Sales of March 2016 have been considered for the entire MYT Control Period
HT-IV Public Water Works (PWW)	10%	YoY growth rate is 9%, hence a marginally higher rate is considered
HT-V Agricultural	5%	YoY growth rate of 5% is considered
HT-VI Bulk Supply/Group Housing	0%	YoY growth rate of 0% is considered
HT-VIII Temporary Supply	0%	Zero growth rate is considered
HT-IX Public Services	8%	YoY growth rate is 14%, hence a normalised growth rate of 8% is considered
HT-X Ports	5%	YoY growth rate has been very high on account of creation of this new category, hence a normalised growth rate of 5% is considered
<b>LT Category</b>		
LT-I Residential	8%	3-year CAGR of 8% is considered
LT-II Non-Residential	5%	3-year and 5-year CAGR of 5% is considered
LT-III Public Water Works	6%	5-year CAGR and YoY growth rate of 6% is considered
LT-IV Agriculture		
AG: Un-metered	0%	No growth considered
AG: Metered (Including Poultry Farms)	11%	3-year CAGR of 11% is considered
LT-V Industry - Powerlooms	11%	11% growth rate is considered
LT-V Industry - General	6%	3-year CAGR is 5%, hence a marginally higher rate is considered
LT-VI Street Lights	10%	YoY growth rate is 13%, hence a normalised rate of 10% is considered
LT-VII Temporary Supply	0%	No growth considered
LT-VIII Advertisements and Hoardings	0%	No growth considered
LT-IX Crematorium & Burial Grounds	0%	No growth considered
LT-X Public Services	7%	Due to lack of past growth data, a normal growth rate of 10% is considered

There has been a significant growth in the total sales in the last five years. This is primarily due to reduced load shedding and additional supply availability. Additional availability of power enabled uninterrupted supply of power to most consumers, and resulted in considerable increase in the consumption and, in turn, the sales.

MSEDCL has considered a growth rate of 4% for HT Industrial category consumption considering recent trend and increase in OA. Further, despite the fact that Railways now have Deemed Licensee status, a few of the Railways consumer connections are still with MSEDCL. Thus, MSEDCL has considered that the sales to Railways as in March, 2016 may not increase but would remain at the current level (77 MU).

MSEDCL has sufficient power to meet the current and future demand. It has taken an optimistic view on sales and considered positive or zero growth for certain categories on that basis. In some case, negative growth projected is due to re-categorisation (i.e. carving out of new category from the earlier category).

MSEDCL has proposed to convert 1 lakh un-metered Agriculture consumers per year to the metered category. It has calculated the consumption of these unmetered consumers considering the average load of 4HP and unmetered Index of 1,185 units / HP/annum, and added it to the metered category. As regards the recently created category of LT Agriculture-Others, there is insufficient data available at present for projections, and it has therefore considered its sales equivalent to 1% of the sales of LT Agriculture-Pumpsets category.

Based on the provisional sales for FY 2015-16 and CAGR rates set out in the above Table, MSEDCL has projected the sales in the 3<sup>rd</sup> Control Period as follows:-

**Table 5-3: Sales Projections for 3rd Control Period, as submitted by MSEDCL (MU)**

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT Category</b>				
HT I- Industry	23,629	24,574	25,557	26,579
HT-II Commercial	2,254	2,435	2,629	2,840
HT-III Railways	77	77	77	77
HT-IV Public Water Works (PWW)	1,541	1,695	1,865	2,051
HT-V Agricultural	1,041	1,093	1,148	1,205
HT-VI Bulk Supply/ Group Housing	226	226	226	226
HT VIII - Temporary Supply	5	5	5	5
HT-IX Public Services	934	1,009	1,090	1,177
HT X –Port	76	80	84	88
HT-MSPGCL AUX.SUPPLY	83	83	83	83
<b>Total HT Category</b>	<b>29,867</b>	<b>31,277</b>	<b>32,764</b>	<b>34,331</b>
<b>HT Growth</b>		<b>5%</b>	<b>5%</b>	<b>5%</b>
<b>LT Category</b>				
LT I Residential	19,403	20,950	22,619	24,423
LT II Non Residential	4,314	4,529	4,756	4,994
Public Water Works (LT-III)	712	755	800	848
LT-IV Ag Unmetered	11,529	11,055	10,581	10,107

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
LT-IV Ag Metered	17,680	20,099	22,784	25,764
LT-V Industries Powerloom	1,740	1,932	2,144	2,380
LT-V Industries General	4,974	5,272	5,588	5,924
Street Light (LT-VI)	1,776	1,953	2,148	2,363
LT-VII Temporary Supply	18	18	18	18
LT-VIII Advertising and Hording	3	3	3	3
LT-IX Crematorium & Burial	1	1	1	1
LT X - Public Services	317	339	363	388
LT – Prepaid	15	16	18	20
P.D. Consumers	-	-	-	-
<b>Total LT Category</b>	<b>62,483</b>	<b>66,924</b>	<b>71,826</b>	<b>77,234</b>
<b>MSEDCL Sales</b>	<b>92,350</b>	<b>98,201</b>	<b>1,04,590</b>	<b>1,11,565</b>
<b>Growth rate</b>		<b>6%</b>	<b>7%</b>	<b>7%</b>
<b>DF Category-wise Sales</b>	4,461	4,852	5,280	5,749
<b>Total Sales, including DF Sales</b>	<b>96,811</b>	<b>103,053</b>	<b>109,870</b>	<b>117,315</b>
<b>Growth Rate</b>		6%	7%	7%

As regards sales projection for the DF areas, since the distribution operations of Aurangabad and Jalgaon DF areas have been taken over by MSEDCL, it has included these area sales in the category-wise sales of MSEDCL.

MSEDCL has computed the category-wise sales for remaining two DFs, i.e., Bhiwandi and Nagpur, applying the same category-wise CAGR as for MSEDCL's other consumers. Further, for projecting the input sales for DFs taking the present level of Distribution Loss, MSEDCL has considered a realistic growth for the DFs and accordingly projected the Distribution Loss for each year. Sales projection for DF areas are summarised as follows.

**Table 5-4: Sales Projections by MSEDCL for Bhiwandi and Nagpur Distribution Franchisees (MU)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Bhiwandi</b>				
Category-wise Sales	3,108	3,397	3,715	4,064
Distribution Loss	19.54%	18.54%	17.54%	16.54%
Input sales	3,863	4,170	4,505	4,870
<b>Nagpur</b>				
Category-wise Sales	1,353	1,455	1,566	1,685
Distribution Loss	14.82%	14.32%	13.82%	13.32%
Input sales	1,589	1,699	1,817	1,943

In line with the projection of sales, MSEDCL has also projected the number of consumers for the 3rd Control Period based on the historical trend. It has applied the 5-year CAGR foFY 2014-15 from FY 2008-09 for all major categories. Wherever the trend is unreasonable or unsustainable, the growth factors have been corrected to arrive at more realistic projections considering the year on year growth rate. The category-wise CAGRs applied by MSEDCL for projecting the number of consumers is shown in the following Table.

**Table 5-5: Category-wise CAGRs applied by MSEDCL for number of Consumers in 3<sup>rd</sup> Control Period**

<b>Consumer Category</b>	<b>CAGR</b>
<b>HT Category</b>	
HT I Industry	4%
HT-II Commercial	5%
HT-III Railways	0%
HT-IV Public Water Works (PWW)	3%
HT-V Agricultural	2%
HT-VI Bulk Supply/ Group Housing	2%
HT-VIII Temporary Supply	0%
HT-IX Public Services	5%
HT-X Ports	0%
<b>LT Category</b>	
LT-I Residential	5%
LT-II Non-Residential	3%
LT-III Public Water Works	3%
LT-IV AG: Un-metered	0%
LT-IV AG: Metered	8%
LT-V Industry Powerlooms	4%
LT-V Industry General	3%
LT-VI Street Light	5%
LT-VII Temporary Supply	0%
LT-VIII Advertisements and Hoardings	1%
LT-IX Crematorium & Burial Grounds	0%
LT-X Public Services	5%

Based on the estimated the number of consumers in FY2015-16 and CAGRs shown in the above Table, MSEDCL has projected the category-wise number of consumers (excluding two Franchisees) for the 3rd Control Period as shown in the following Table.

**Table 5-6: Category-wise number of Consumers in 3<sup>rd</sup> Control Period, as projected by MSEDCL**

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT Category</b>				
HT I- Industry	13,421	13,894	14,383	14,888
HT-II Commercial	3,076	3,236	3,404	3,580
HT-III Railways	9	9	9	9
HT-IV Public Water Works (PWW)	975	1,006	1,038	1,071
HT-V Agricultural	1,410	1,446	1,483	1,522
HT-VI Bulk Supply/ Group Housing	361	366	371	376
HT VIII - Temporary Supply	7	7	7	7
HT-IX Public Services	1,227	1,290	1,357	1,426
HT X –Port	3	3	3	3
HT-MSPGCL AUX.SUPPLY	24	24	24	24
<b>TOTAL HT Category</b>	<b>20,513</b>	<b>21,281</b>	<b>22,079</b>	<b>22,906</b>
<b>Growth</b>		4%	4%	4%
<b>LT Category</b>				
LT I Residential	1,78,30,815	1,87,08,698	1,96,30,455	2,05,98,278
LT II Non Residential	16,39,623	16,96,954	17,56,290	18,17,701
Public Water Works (LT-III)	51,149	52,676	54,248	55,867
LT-IV Ag Unmetered	14,90,617	13,90,617	12,90,617	11,90,617
LT-IV Ag Metered	26,74,715	30,00,979	33,54,843	37,38,641
LT-V Industries Powerloom	35,261	36,507	37,797	39,132
LT-V Industries General	3,08,952	3,17,519	3,26,324	3,35,373
Street Light (LT-VI)	90,349	94,550	98,946	1,03,546
LT-VII Temporary Supply	2,596	2,596	2,596	2,596
LT-VIII Advertising and Hording	2,077	2,100	2,123	2,146
LT-IX Crematorium & Burial	143	143	143	143
LT X - Public Services	80,191	84,203	88,417	92,840
LT – Prepaid	14,090	14,090	14,090	14,090
P.D. Consumers				
<b>Total LT Category</b>	<b>2,42,20,578</b>	<b>2,54,01,632</b>	<b>2,66,56,889</b>	<b>2,79,90,970</b>
<b>MSEDCL Total</b>	<b>2,42,41,091</b>	<b>2,54,22,913</b>	<b>2,66,78,968</b>	<b>2,80,13,876</b>
<b>Growth rate</b>		5%	5%	5%

For projecting the category-wise Connected Load/Contract Demand, a similar approach has been adopted. MSEDCL has considered the 5-year CAGR for FY 2014-15 over FY 2008-09 for all major categories, correcting the growth factor to arrive at more realistic projections where the trend seemed unreasonable or unsustainable. The



following Tables set out the CAGRs considered for projecting Connected Load/ Contract Demand for the HT and LT categories.

**Table 5-7: HT Category-wise CAGRs applied by MSEDCL for Connected Load/Contract Demand Projections for 3<sup>rd</sup> Control Period**

Consumer Category	CAGR
<b>HT Category</b>	
HT I Industry	6%
HT-II Commercial	8%
HT-III Railways	0%
HT-IV Public Water Works (PWW)	6%
HT-V Agricultural	6%
HT-VI Bulk Supply/ Group Housing	0%
HT-VIII Temporary Supply	0%
HT-IX Public Services	7%
HT-X Ports	0%

**Table 5-8: LT Category-wise CAGRs applied by MSEDCL for Connected Load/Contract Demand Projections for 3<sup>rd</sup> Control Period**

Consumer Category	CAGR
<b>LT Category</b>	
LT-I Residential	6%
LT-II Non-Residential	5%
LT-III Public Water Works	3%
LT-IV AG: Un-metered	0%
LT-IV AG: Metered	10%
LT-V Industry Powerlooms	8%
LT-V Industry General	3%
LT-VI Street Light	5%
LT-VII Temporary Supply	0%
LT-VIII Advertisements and Hoardings	1%
LT-IX Crematorium & Burial Grounds	0%
LT-X Public Services	5%

MSEDCL has projected the Connected Load/Contract Demand for different consumer categories in the following Tables (excluding the two DFs) for the 3<sup>rd</sup> Control Period, based on the Connected Load/ Contract Demand for FY 2015-16 and the CAGRs considered.

**Table 5-9: HT Category-wise Connected Loaded/Contract Demandprojected for 3<sup>rd</sup> Control Period by MSEDCL (in kVA)**

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT Category</b>				
HT I- Industry	10,809,940	11,453,950	12,136,328	12,859,360
HT-II Commercial	1,414,094	1,530,383	1,656,235	1,792,437
HT-III Railways	61,000	61,000	61,000	61,000
HT-IV Public Water Works (PWW)	387,771	411,696	437,097	464,065
HT-V Agricultural	663,021	716,565	775,830	841,639
HT-VI Bulk Supply/ Group Housing	98,949	98,949	98,949	98,949
HT VIII - Temporary Supply	3,323	3,323	3,323	3,323
HT-IX Public Services	424,550	454,270	486,071	520,098
HT X –Port	19,362	19,362	19,362	19,362
HT-MSPGCL AUX.SUPPLY	159,030	159,030	159,030	159,030
<b>Total HT Category</b>	<b>14,041,040</b>	<b>14,908,528</b>	<b>15,833,225</b>	<b>16,819,263</b>
<b>Growth</b>		6%	6%	6%

**Table 5-10: LT Category-wise Connected Load/Contract Demandprojected for 3<sup>rd</sup> Control Periodby MSEDCL (in kW)**

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>LT Category</b>				
LT-I Residential	17,890,953	18,885,941	19,936,347	21,045,258
LT-II Non-Residential	3,898,133	4,087,409	4,285,875	4,493,979
LT-III Public Water Works	323,211	331,770	340,556	349,574
LT-IV AG: Un-metered	7,942,018	7,542,018	7,142,018	6,742,018
LT-IV AG: Metered	13,212,135	14,933,349	16,826,684	18,909,353
LT-V Industry Powerlooms	687,686	744,359	805,702	872,100
LT-V Industry General	6,337,721	6,539,616	6,747,943	6,962,907
LT-VI Street Light	381,928	399,864	418,642	438,302
LT-VII Temporary Supply	15,019	15,019	15,019	15,019
LT-VIII Advertisements and Hoardings	5,445	5,505	5,565	5,626
LT-IX Crematorium & Burial Grounds	1,223	1,223	1,223	1,223
LT-X Public Services	262,644	275,778	289,570	304,051
P.D. Consumers				
<b>Total LT Category</b>	<b>50,990,528</b>	<b>53,795,884</b>	<b>56,850,879</b>	<b>60,176,932</b>
<b>MSEDCL Total</b>	<b>65,031,568</b>	<b>68,704,412</b>	<b>72,684,104</b>	<b>76,996,195</b>
<b>Growth rate</b>		6%	6%	6%

***Commission's Analysis and Ruling***

Since, at the time of analysis of the MYT Petition, provisional Energy Sales figures for the entire year were available, for approval of sales for the 3<sup>rd</sup> Control Period the Commission has taken the category-wise sales approved for FY 2015-16 as the base, as against FY 2014-15 considered by MSEDCL in its Petition. To that, the Commission has applied, in most cases, the 4-four year CAGR for projection of sales for the four years of the 3<sup>rd</sup> Control Period. Where it considered necessary because of aberrations in the reported year-on-year growth rates of certain consumer categories, the Commission has corrected the growth factors, or considered MSEDCL's projection of sales in absolute terms for such categories on merits, to arrive at more realistic projections. The growth rates considered by the Commission are discussed in the following paragraphs.

**HT-I Industry**

The Commission has applied a growth rate of 4% for the 3<sup>rd</sup> Control Period, as proposed by MSEDCL. The Commission has noted that the increase in OA sales in the recent past has resulted in a decrease in sales to the HT – Industry category. Hence, for this category, the Commission has taken the combined growth rate of sales by MSEDCL as well as that of Industry OA consumption. Moreover, several initiatives of GoM, such as 'Make in Maharashtra' and providing subsidy against the tariff to Industrial consumers in certain regions subject to 100% sourcing from MSEDCL, may increase the sales to this category.

**HT-II Commercial**

The 3-year combined CAGR for HT Commercial and HT Public Services (considered together on account of past re-categorisation resulting in the new Public Services category) works out to 7%, which the Commission has applied for projecting the sales in the 3<sup>rd</sup> Control Period.

**HT-III Railways**

The Commission has not considered any growth in sales in this category, in line with MSEDCL's projection.

**HT-IV Public Water Works**

The 4-year CAGR for the HT PWW category works out to 4%, which the Commission has applied for projecting the sales.

**HT-V Agriculture**

The 3-year CAGR for HT-V Agriculture category works out to 5%, which the Commission has considered for projecting the sales.

**HT-VI Bulk Supply and Group Housing Society**

The 4-year CAGR for the HT-VI Bulk Supply and Group Housing category is negative. The Commission expects no growth in this category, in line with MSEDCL's projection for the 3<sup>rd</sup> Control Period.

#### **HT-VIII Temporary**

The 4-year CAGR for the HT-VIII Temporary category is also negative. The Commission has considered zero growth in the 3<sup>rd</sup> Control Period, in line with MSEDCL's projection.

#### **HT-IX Public Service**

The 3-year CAGR for the combined HT Public Service and HT Commercial (considered together as they were separated after re-categorisation) works out to 7%, which the Commission has applied for projecting the sales.

#### **HT-X Ports**

The HT Ports category was created in August, 2013 following the Commission's Order in Case No. 136 of 2012. Hence, three- or four-year CAGRs cannot be estimated. If one has to consider a y-o-y growth rate, it works out to 97% in FY 2014-15. This is not a realistic representation of the growth in this segment. For the purpose of projection, the Commission has considered zero growth in this segment over the Control Period, which would be reviewed during the MTR. In any event, the HT Ports category has now been merged in this Order with the HT Public Services– Others category for the 3<sup>rd</sup> Control Period.

#### **LT-I Residential**

The 4-year CAGR for the LT Residential category is 8%, which the Commission has considered for projecting the sales.

#### **LT-II Non-Residential**

The 4-year CAGR is 7%, which has been applied for projecting the sales.

#### **LT-III Public Water Works**

The 4-year CAGR is 3%, which the Commission has considered for projecting the sales.

#### **LT-IV Agriculture**

The Commission has elaborated in Chapter 3 the rationale and the methodology for assessment of the AG Index based on Circle-wise Feeder-based Energy Accounting which will be the basis for assessment of Agriculture consumption until the findings of Agriculture Consumption Committee and the IIT, Mumbai study become available. The Commission has also considered a higher conversion of un-metered to metered Agriculture connections (2 lakh per annum, instead of 1 lakh per annum

envisaged by MSEDCL) for projecting Agriculture sales and revenue for the 3<sup>rd</sup> Control Period. It may be noted that even this higher level of annual conversion is less than required to meet the Commission's earlier stipulation for metering, but is both realistically achievable as well as substantially higher than in previous years.

In addition, the Commission directs MSEDCL to instal meters on all un-metered LT Agriculture pumpsets with Connected Load above 7.5 HP within a year (from out of the target of conversion of un-metered to metered connections). The number of such consumers being relatively small (around 74,000), it should not be difficult to procure appropriate meters of good quality in a short period. Failure to implement this direction by the stipulated period may compel the Commission not to consider the input energy required for such consumers. The Commission expects MSEDCL to demonstrate its seriousness by prioritising this in the process of metering of all un-metered Agriculture consumers. The Commission notes that MSEDCL has not submitted any information as to the steps it has taken for conversion such as purchase plan, supply of meters by vendors, etc. even after the issue of the directions in the previous MYT Order.

In the light of the earlier discussion, the Commission has applied the re-estimated AG Index (kWh/HP/Annum) computed considering the Circle-wise agricultural Feeder data provided by MSEDCL for FY 2014-15. Till the Agriculture Consumption Committee Report and IIT study findings become available, the Commission will apply the Circle-wise AG Index (kWh/HP/Annum) for assessment of both metered as well as un-metered Agriculture sales as per the methodology elaborated in Chapter 3.

The following Table summarises MSEDCL's submission and the Commission-approved figures of AG Energy Sales, number of consumers, Connected Load and AG Indices for the 3<sup>rd</sup> Control Period.

**Table 5-11: AG Sales for 3<sup>rd</sup> Control Period (excluding DF Areas), as approved by Commission**

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved
<b>No. of Consumers (lakh)</b>								
Un-Metered	14.91	13.91	13.91	11.91	12.91	9.91	11.91	7.91
Metered	26.75	27.75	30.01	32.01	33.55	36.55	37.39	41.39
<b>Total</b>	<b>41.65</b>	<b>41.65</b>	<b>43.92</b>	<b>43.92</b>	<b>46.45</b>	<b>46.45</b>	<b>49.29</b>	<b>49.29</b>
<b>Connected Load (lakh HP)</b>								
Un-Metered	79.42	72.93	75.42	62.44	71.42	51.95	67.42	41.46
Metered	132.12	127.07	149.33	146.59	168.27	167.37	189.09	189.53
<b>Total</b>	<b>211.54</b>	<b>200.00</b>	<b>224.75</b>	<b>209.03</b>	<b>239.69</b>	<b>219.32</b>	<b>256.51</b>	<b>230.99</b>
<b>Energy Sales (MU)</b>								

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved
Un-Metered	11,529	9,059	11,055	7,756	10,581	6,453	10,107	5,150
Metered	17,680	15,029	20,099	17,337	22,784	19,796	25,764	22,416
<b>Total</b>	<b>29,210</b>	<b>24,088</b>	<b>31,154</b>	<b>25,094</b>	<b>33,365</b>	<b>26,249</b>	<b>35,872</b>	<b>27,566</b>
<b>AG Index (kWh/HP/Annum)</b>								
Un-Metered	1,452	1,242	1,466	1,242	1,482	1,242	1,499	1,242
Metered	1,338	1,183	1,346	1,183	1,354	1,183	1,363	1,183
<b>Total</b>	<b>1,381</b>	<b>1,209</b>	<b>1,386</b>	<b>1,209</b>	<b>1,392</b>	<b>1,209</b>	<b>1,398</b>	<b>1,209</b>
<b>AG Index (Hours/Annum)</b>								
Un-Metered	1,946	1,665	1,965	1,665	1,986	1,665	2,010	1,665
Metered	1,794	1,585	1,804	1,585	1,815	1,585	1,826	1,585
<b>Total</b>	<b>1,851</b>	<b>1,620</b>	<b>1,858</b>	<b>1,620</b>	<b>1,866</b>	<b>1,620</b>	<b>1,875</b>	<b>1,620</b>

### LT-V Industry

The 3-year CAGR for LT Industry is 5%, which the Commission has applied for projecting sales in the 3rd Control Period. The Commission has considered the likelihood of revival of economic and industrial growth, the steps being taken by GoM as discussed earlier, and the improved availability of power which would be reflected in a higher growth rate of industrial consumption than in the more recent past.

For the LT Industry – Powerlooms sub-category, which was carved out only in the last MYT Order, a higher growth rate of 7%, in line with MSEDCL's proposal, has been considered by the Commission for projecting the sales.

### LT-VI Street Lights

The four year CAGR is 14%. However, the Commission has considered a more moderate growth rate of 10%, as suggested by MSEDCL.

### LT Temporary; LT Advertisements and Hoardings; LT Crematorium and Burial Grounds; LT Public Services and LT Prepaid

The 4-year CAGR for the first four categories is negative. The Commission has not considered any growth in these categories, in line with MSEDCL's projection.

As regards LT Prepaid, the Commission has applied a y-o-y growth rate of 7% over the Control Period, expecting also that MSEDCL would encourage, and more consumers would become more aware of the advantages of pre-paid connections.

### Sales in Distribution Franchisee Area

The Commission has applied the category-wise growth rates as above for projection of sales in the two operational DF areas of Bhiwandi and Nagpur as well.

However, the term of the Agreement with the Bhiwandi DF is ending in January, 2017. The Bhiwandi DF has applied for extension of the Franchise in January, 2016, as envisaged in the Agreement. However, MSEDCL has not yet informed the Commission of its decision on assigning the Bhiwandi area to this or any other DF in future. Hence, the sales of the Bhiwandi DF area from FY 2017-18 onwards have been merged with the MSEDCL sales, which would be reviewed at the time of the MTR depending on the decision taken in the meantime. However, the sales of the Nagpur DF area have been considered separately throughout the 3<sup>rd</sup> Control Period.

The following Table sets out the category-wise sales projections approved by the Commission (excluding DF area sales) from FY 2016-17 to FY 2019-20:

**Table 5-12: Category-wise Sales in 3rd Control Period(excluding DF areas), as approved by Commission(MU)**

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT CATEGORY</b>				
HT I- Industry	23,629	24,934	25,931	26,969
HT-II Commercial	2,232	2,406	2,573	2,751
HT-III Railways	77	77	77	77
HT-IV Public Water Works	1,456	1,837	1,907	1,980
HT-V Agriculture	1,044	1,100	1,159	1,221
HT-VI Group Housing	226	226	226	226
HT VIII - Temporary Supply	5	5	5	5
HT-IX Public Services – Government	192	205	219	234
HT-IX Public Services –Others	733	784	839	897
<u>HT X –Ports(merged with HT-IX Public Services-Others)</u>	72	72	72	72
HT-MSPGCL Auxiliary Supply	83	83	83	83
P.D. Consumers	-	-	-	-
HT Credit Sales & OA Offset				
<b>Total HT Category</b>	<b>29,749</b>	<b>31,731</b>	<b>33,092</b>	<b>34,515</b>
<b>LT CATEGORY</b>				
-- BPL (0-30 Units) (LT-I)	77	77	77	
> 30 Units per month (LT-I)	19,097	20,763	22,386	24,135
LT-I -Residential (Total)	19,174	20,840	22,463	24,213
LT-II Non-Residential	4,416	4,874	5,239	5,632
LT-III Public Water Works	693	716	739	763
LT-IV Agriculture (Total)	24,088	25,101	26,257	27,576
Unmetered - Pumpsets	9,059	7,756	6,453	5,150

Consumer Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Metered – Pumpsets	14,924	17,230	19,677	22,286
Metered – Others	105	115	127	139
LT V – Industry	4,928	5,441	5,715	6,003
LT V –Powerlooms	1,678	3,708	3,968	4,246
LT-VI - Street Lights	1,776	1,965	2,161	2,377
LT-VII - Temporary	18	18	18	18
LT-VIII - Advertisements and Hoardings	3	3	3	3
LT-IX - Crematorium & Burial Grounds	1	1	1	1
LT X - Public Services – Government	21	22	24	26
LT X - Public Services - Other	298	320	344	370
LT – Prepaid	14	14	15	15
P.D. Consumers	-	-	-	-
<b>Total LT Category</b>	<b>57,108</b>	<b>63,025</b>	<b>66,949</b>	<b>71,243</b>
<b>MSEDCL Total Sales (excluding DF Sales)</b>	<b>86,858</b>	<b>94,756</b>	<b>100,040</b>	<b>105,757</b>

The following Table summarises the sales projections approved by the Commission (including DF area sales) from FY 2016-17 to FY 2019-20:

**Table 5-13: Sales for 3rd Control Period (including DF areas), as approved by Commission (MU)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
MSEDCL Sales	86,858	94,756	100,040	105,757
Bhiwandi DF Sales	3,020	-	-	-
Nagpur DF Sales	1,351	1,450	1,557	1,671
<b>Total Sales</b>	<b>91,229</b>	<b>96,206</b>	<b>101,597</b>	<b>107,429</b>

#### 5.4 Distribution Loss

##### *MSEDCL's Submission*

MSEDCL has achieved a significant reduction in Distribution Loss in recent years. Although the efforts to reduce the Distribution Loss would continue, loss reduction is a slow process and becomes increasingly difficult as the loss levels decline. Hence, MSEDCL expects the Distribution Loss to reduce by 0.25% per year during the 3<sup>rd</sup> Control Period from the earlier approved level for FY 15-16.



**Table 5-14: Distribution Loss for 3rd Control Period, as submitted by MSEDCL**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Distribution Loss	13.25%	13.00%	12.75%	12.50%

***Commission's Analysis and Ruling***

MSEDCL has submitted its Distribution Loss reduction trajectory, both including EHV sales (as above) and excluding EHV sales (as submitted under the Energy Balance) for the 3<sup>rd</sup> Control Period.

For determining the Distribution Loss and reduction trajectory, the energy units handled at the distribution periphery need to be included and the EHV sales forming a part of the total sales need to be excluded. Accordingly, for the 3<sup>rd</sup> Control Period, the Commission has revised the format and method of computation of Distribution Loss by considering the sales at the distribution periphery excluding EHV sales. The Distribution Loss as a performance parameter and its reduction trajectory would be monitored through the revised reporting requirements specified for 3<sup>rd</sup> Control Period.

For the provisional truing-up of FY 2015-16, MSEDCL had submitted the Distribution Loss both including and excluding EHV sales. Based on the format under the MYT Regulations, 2011, the Distribution Loss reduction trajectory set for the 2<sup>nd</sup> Control Period was specified including EHV sales. However, while approving the Distribution Loss for FY 2015-16, the Commission had to restate the Loss level on account of the revision in approved sales consequent to correction in AG sales as elaborated earlier in this Order. Accordingly, the Distribution Loss including EHV sales was restated as 18.24% in FY 2015-16, as against 14.51% claimed by MSEDCL.

MSEDCL has also submitted the Distribution Loss for FY 2015-16 excluding EHV sales as per the format requirements of the MYT Regulation, 2015. It has submitted a Loss level of 16.17%, excluding EHV sales for FY 2015-16. Based on the revised sales approved by the Commission for FY 2015-16 in this Order, the Distribution Loss, excluding EHV sales, has been restated, and is now approved as 19.26% as against 16.17% claimed by MSEDCL.

For the Distribution Loss reduction trajectory, the Commission has taken the Loss level after excluding EHV sales as per the format prescribed in the MYT Regulations, 2015. The Loss level approved for FY 2015-16, excluding EHV sales, has been taken as the base for setting the year-wise trajectory for the 3<sup>rd</sup> Control Period.

The following Tables summarise the Loss reduction trajectory proposed by MSEDCL and that approved by the Commission for FY the 3<sup>rd</sup> Control Period.

**Table 5-15: Distribution Loss trajectory proposed by MSEDCL for 3rd Control Period**

Particulars	FY 2015-16 Base Year	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Distribution Loss (including EHV sales)	14.51%	13.25%	13.00%	12.75%	12.50%
Distribution Loss (excluding EHV sales)	16.17%	13.73%	13.49%	13.26%	13.01%

**Table 5-16: Distribution Loss trajectory approved by Commission for 3rd Control Period**

Particulars	FY 2015-16 Base Year	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Distribution Loss (including EHV sales)	18.24%				
Distribution Loss (excluding EHV sales)	19.26%	17.76%	16.26%	14.76%	13.26%

The revision in sales in FY 2015-16 consequent to the correction in Agriculture sales has resulted in a significant upward revision of Distribution Loss. Had the Loss level of FY 2015-16 not been restated, the appropriate reduction trajectory for the 3rd Control Period would have been similar to that proposed by MSEDCL, or at least lower than the earlier approved target Distribution Loss for FY 2015-16, say, 13.50% excluding EHV sales (The earlier approved target Loss for FY 2015-16 was 13.50% including EHV sales, and would have been higher excluding EHV sales.)

However, since a downward revision in sales of FY 2015-16 was necessary as discussed earlier, and the Loss level (excluding EHV sales) consequently revised upwards to 19.26%, the Loss trajectory for the 3<sup>rd</sup> Control Period has to be set considering this restated base Loss level, gradually reducing over the four years. Hence, the trajectory now approved and shown in the Table above is also steeper than in the earlier scenario, with a targeted reduction of 1.50% in each year of the 3<sup>rd</sup> Control Period.

The Commission has also carried out an exercise for past years, in which the Distribution Loss at lower voltage levels, excluding sales of Express Feeders and MIDC Feeders, was assessed. For FY 2014-15, this works out to 22.44%, which indicates that the Loss level at lower voltage levels is even higher. The Commission notes that for the size and geographic spread of the distribution network of MSEDCL covering large urban and rural areas would require concerted efforts and an action plan for the reduction of the Distribution Loss level. The Commission notes in this context that MSEDCL has planned significant capital outlay towards system

strengthening, capacity augmentation, metering and IT infrastructure, loss improvement measures etc. Considering these aspects also, the Commission has stipulated a Loss reduction trajectory of 1.50% in each year over the 3rd Control Period.

Comparing the loss trajectory now approved and the lower trajectory had there been no restatement of the loss level of the base year (FY 2015-16), there would be an additional burden on consumers arising from the larger power purchase requirements to meet the higher loss over the 3<sup>rd</sup> Control Period. The additional power purchase expense arising from higher losses is significant, and passing on its entire impact to consumers would not be justified. Hence, the Commission has provisionally shared this impact between consumers and MSEDCL in the ratio of 1:2. This approach is also in line with the provisions of the MYT Regulations, 2015 for sharing of efficiency loss on account of controllable expenses. The sharing computation is set out in the subsequent Section, and would be reviewed at the time of truing-up.

## 5.5 Energy Balance

### *MSEDCL's Submission*

For calculating the Energy Balance as a whole, in the overall sales MSEDCL has taken the salesto DF consumers instead of the sales at input level to the DF.

The Distribution Loss shown in the Energy Balance as per the format prescribed by the Commission indicates only the losses excluding EHV sales.

**Table 5-17: Energy Balance for 3rd Control Period,as submitted by MSEDCL**

Sl. No.	Particulars	Unit	Ensuing Years			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>1</b>	<b>Power Purchase outside State of Maharashtra</b>					
1.1	NTPC	MU	24,229	24,581	25,656	26,217
1.2	NPCIL (KAPP)	MU	1,095	1,095	1,095	1,098
1.3	SSP	MU	1,210	1,210	1,210	1,213
1.4	PENCH	MU	136	136	136	137
1.5	CGPL	MU	5,158	5,158	5,158	5,172
	<b>Total (A)</b>	<b>MU</b>	<b>31,828</b>	<b>32,180</b>	<b>33,255</b>	<b>33,837</b>
2	Inter-State Transmission loss	%	3.66%	3.66%	3.66%	3.66%
2.1	Inter-State Transmission loss	MU	1,164	1,176	1,216	1,237
<b>3</b>	<b>Total Purchase at State of Maharashtra periphery (B)</b>	<b>MU</b>	<b>30,664</b>	<b>31,003</b>	<b>32,040</b>	<b>32,600</b>
<b>4</b>	<b>Power Purchase within Maharashtra</b>					
4.1	MSPGCL	MU	46,683	50,173	54,116	59,106
4.2	NPCIL (TAPP)	MU	4,375	4,375	4,375	4,387
4.3	Dodson	MU	116	116	116	116
4.4	JSW	MU	1,934	1,934	1,934	1,940
4.5	Adani Power	MU	18,358	19,054	19,228	18,996
4.6	Emco Power	MU	1,489	1,489	1,489	1,493

Sl. No.	Particulars	Unit	Ensuing Years			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
4.7	Rattan India	MU	48	-	-	211
4.8	Renewable Energy	MU	12,957	15,617	18,256	21,192
4.9	Input for Open Access consumption	MU	6,307	6,307	6,307	6,307
	<b>Total (C)</b>	<b>MU</b>	<b>92,268</b>	<b>99,066</b>	<b>1,05,820</b>	<b>1,13,747</b>
5	Total Energy Handled (A+C)	MU	1,24,096	1,31,245	1,39,076	1,47,585
6	<b>Surplus Energy Traded (D)</b>	<b>MU</b>				
7	<b>Total Power Purchase available at G&lt;T Periphery (B+C-D)</b>	<b>MU</b>	<b>1,22,932</b>	<b>1,30,069</b>	<b>1,37,860</b>	<b>1,46,348</b>
	<b>Energy Requirement at G&lt;T Periphery</b>	<b>MU</b>	<b>1,22,932</b>	<b>1,30,069</b>	<b>1,37,860</b>	<b>1,46,348</b>
8	Intra-State Transmission Loss	%	3.89%	3.89%	3.89%	3.89%
8.1	Intra-State Transmission Loss	MU	4,782	5,060	5,363	5,693
9	Sales at 220 kV/44 kV level	MU	2,881	3,019	3,165	3,318
10	Sales at 110 kV/132 kV level	MU	3,032	3,178	3,331	3,493
11	Sales at 66 kV level	MU	196	205	215	226
12	Energy Available for sale at 33kV	MU	1,12,041	1,18,607	1,25,787	1,33,618
13	Energy Injected and drawn at 33kV	MU	458	458	458	458
14	<b>Total Energy Available for Sale at 33kV</b>	<b>MU</b>	<b>1,12,499</b>	<b>1,19,066</b>	<b>1,26,245</b>	<b>1,34,076</b>
15	Distribution Loss	%	13.73%	13.49%	13.26%	13.01%
15.1	Distribution Loss	MU	15,449	16,066	16,737	17,449
16	<b>HT Sales</b>	<b>MU</b>				
16.1	<i>Sales to Own Supply Consumers</i>	MU	24,637	25,817	27,063	28,378
16.2	<i>HT and Renewable Open Access Credit</i>	MU	420	420	420	420
16.3	<i>Sales to Open Access Consumers (Conventional)</i>	MU	5,928	5,928	5,928	5,928
17	<b>LT Sales</b>	<b>MU</b>				
17.1	<i>Sales to Own Supply Consumers</i>	MU	66,065	70,834	76,097	81,901

MSEDCL is procuring power from various sources, including MSPGCL, the Central Sector Generators including Nuclear Power Plants, Traders, CPPs and RE sources, both within and outside Maharashtra. As stated earlier, it is difficult to differentiate which power is coming from which source at the Transmission periphery. Hence, applying individual Inter-State Transmission Losses for each Station would give a distorted picture. Therefore, the average Inter-State Loss is considered for the whole year for power sourced from outside Maharashtra.

MSEDCL has considered the average of Transmission Losses for 52 weeks provided by WRLDC and the InSTS Loss of 3.89% approved in the InSTS Tariff Order dated 26 June, 2015. MSEDCL has not envisaged any surplus power during the 3<sup>rd</sup> Control Period as it has applied MOD principles for power procurement.

***Commission's Analysis and Ruling***

The Commission has followed a bottom-up approach while approving the Energy Balance for the 3rd Control Period. The quantum of sales to consumers is projected first. This energy requirement provides the basis for further grossing up for Distribution Loss, Intra-State loss and Inter-State loss to arrive at the actual energy input requirement to be procured.

Considering the total sales as approved earlier in this Chapter, the Commission has approved the pro rata voltage-wise sales for the 3rd Control Period for calculating the Energy Balance. The voltage-wise sale approved for the Energy Balance is shown in the following Table:

**Table 5-18: Voltage-wise sales approved considered in Energy Balance for 3rd Control Period (MU)**

Voltage Level	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved	MSEDCL Petition	Approved
Sales at 440 kV	0	0	0	0	0	0	0	0
Sales at 400 kV	70	70	74	73	77	76	81	80
Sales at 220 kV	2,810	2,797	2,945	2,917	3,087	3,042	3,237	3,174
Sales at 132 kV	1,940	1,931	2,033	2,014	2,131	2,100	2,235	2,191
Sales at 110 kV	30	30	31	31	33	32	34	34
Sales at 100 kV	1,062	1,057	1,113	1,103	1,167	1,150	1,224	1,200
Sales at 66 kV	196	195	205	203	215	212	226	221
Sales at 33 kV	7,981	7,944	8,363	8,285	8,767	8,641	9,193	9,013
Sales at 25 kV	13	13	13	13	14	14	15	14
Sales at 22 kV	9,537	9,493	9,994	9,900	10,476	10,326	10,985	10,770
Sales at 11 kV	7,106	7,074	7,447	7,377	7,806	7,694	8,185	8,025
<b>Total Sales at HT level</b>	<b>30,746</b>	<b>30,605</b>	<b>32,219</b>	<b>31,916</b>	<b>33,773</b>	<b>33,287</b>	<b>35,414</b>	<b>34,721</b>
<b>Sales at LT Level</b>	<b>66,065</b>	<b>60,624</b>	<b>70,834</b>	<b>64,294</b>	<b>76,097</b>	<b>68,314</b>	<b>81,901</b>	<b>72,713</b>
<b>Total</b>	<b>96,811</b>	<b>91,229</b>	<b>103,053</b>	<b>96,210</b>	<b>109,870</b>	<b>101,602</b>	<b>117,315</b>	<b>107,434</b>

The Commission has considered the approved sales comprising sales in the DF areas for calculation of the Energy Balance of each year of the 3rd Control Period. The Commission has considered a Distribution Loss reduction trajectory as approved in the earlier Section. As regards Intra-State losses, the Commission has considered the actual loss levels of FY 2015-16 of 3.92% as per the InSTS Order in Case No. 91 of 2016 dated 22 July, 2016. As regards Inter-State losses, the Commission has

considered the average of weekly losses published by WRLDC during FY 2015-16, which works out to 3.66% as claimed by MSEDCL.

**Table 5-19: Energy Balance for 3rd Control Period approved by Commission**

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
LT sales	MU	60,624	64,294	68,314	72,713
HT sales	MU	24,524	25,575	26,674	27,823
HTand Renewable Open Access Credit	MU	420	420	420	420
Sales to Open Access Consumers (Conventional)	MU	6,165	6,412	6,668	6,935
<b>Total Sales to Consumers</b>	<b>MU</b>	<b>91,733</b>	<b>96,701</b>	<b>102,076</b>	<b>107,890</b>
Distribution Loss	%	17.76%	16.26%	14.76%	13.26%
Distribution Loss	MU	18,872	17,941	16,946	15,876
<b>Total Energy Available for Sale at 33kV</b>	<b>MU</b>	<b>110,606</b>	<b>114,642</b>	<b>119,023</b>	<b>123,766</b>
Energy injected and drawn at 33kV	MU	458	458	458	458
<b>Net Energy Available for Sale at 33kV</b>	<b>MU</b>	<b>110,147</b>	<b>114,184</b>	<b>118,564</b>	<b>123,308</b>
Sales at 66 kV level	MU	195	203	212	221
Sales at 110 kV/132 kV level	MU	3,018	3,148	3,283	3,424
Sales at 220 kV/44 kV level	MU	2,868	2,991	3,119	3,254
<b>Net Energy requirement at T&lt;&gt;D Periphery</b>	<b>MU</b>	<b>116,228</b>	<b>120,525</b>	<b>125,179</b>	<b>130,207</b>
Intra-State Transmission Loss	%	3.92%	3.92%	3.92%	3.92%
Intra-State Transmission Loss	MU	4,742	4,917	5,107	5,312
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>MU</b>	<b>120,970</b>	<b>125,443</b>	<b>130,286</b>	<b>135,519</b>
Less: Input for OA consumption	MU	6,826	7,099	7,383	7,679
<b>Net Energy Requirement at G&lt;&gt;T Periphery</b>	<b>MU</b>	<b>114,144</b>	<b>118,343</b>	<b>122,902</b>	<b>127,841</b>
Power Purchase Quantum from Intra-State sources	MU	81,573	87,001	90,932	94,627
Power Purchase Quantum from Inter-State sources at Maharashtra Periphery	MU	32,571	31,342	31,970	33,214
Inter-State Losses	%	3.66%	3.66%	3.66%	3.66%
Power Purchase Quantum from Inter-State sources	MU	33,807	32,531	33,183	34,474
<b>Total Power Purchase Quantum payable</b>	<b>MU</b>	<b>115,380</b>	<b>119,533</b>	<b>124,116</b>	<b>129,101</b>

## 5.6 Power Purchases Expenses for 3rd Control Period

### *MSEDCL's Submission*

MSEDCL has considered the following sources of firm power for projecting the power purchase expenses for the 3rd Control Period:

- MSPGCL
- Central Generating Stations
- JSW (Ratnagiri)
- Mundra UMPP - CGPL
- Adani Power Ltd.
- Rattanindia Ltd.
- Emco Power Ltd.; etc.

MSEDCL also buys power from trading companies, Power Exchanges and other sources such as Sardar Sarovar and Pench Hydro Stations, and RE sources such as co-generation, wind power and surplus power from CPPs.

MSEDCL procures power on MOD principles. It has considered the entire power available from all tied up sources for projection of availability for the 3rd Control Period, but no procurement from Traders or Power Exchanges is envisaged considering the capacity available.

MSPGCL: MSEDCL has considered the projections (of power generation, operational factors and cost) of existing thermal Stations as per the MYT Petition of MSPGCL for the 3rd Control Period. For new Stations, the PLF has been taken as 30% for the first 5 months after COD, and thereafter as 65% for the rest of the year. Further, in order to discard higher-cost Units while mitigating the impact of fixed cost obligations, MSEDCL has proposed to shut down the following Units and has proposed reduced or no fixed cost payments for such Units as follows:

**Table 5-20: Reduction in Fixed Cost obligation for Units shut down on MOD Principles, as proposed by MSEDCL**

Generating Units	Arrangement for Fixed Cost
Chandrapur Unit 1&2	Shut down without any fixed cost obligation
Koradi Unit 5&6	Koradi Unit 6 shut down for FY 2016-17 and Unit 5 for FY 2017-18 to FY 2019-20. Fixed cost @20% or as approved by Commission
Parli Unit 3	Shut down for all 4 years with no Fixed Charge payable
Parli Unit 4&5	20% Capacity Charge (as provided by MSPGCL) or as approved by Commission
Bhusawal Unit 2	Shut down for all 4 years with no Fixed Charge payable



NTPC: Since the new CERC Tariff Order for FY 2013-14 to FY 2018-19 is awaited, MSEDCL has taken the actual Fixed Charges paid to CGS on the basis of the CERC Order issued in July, 2011 for FY 2009-10 to FY 2013-14. The Variable Charges and any other charges are estimated based on the actuals for FY 2015-16 (9 months' actuals' and 3 months estimated). No escalation has been considered on the Variable Charges and the Fixed Cost.

NPCIL: MSEDCL has the projected 5550 MU generation for the 3<sup>rd</sup> Control Period on provisional basis with an average variable rate of 2.34 per kWh.

SSP and Pench: MSEDCL has projected 600 MU and 150 MU from SSP and Pench, respectively, for the 3rd Control Period at the current Tariff of Rs 2.05 per kWh.

Dodson I and II: MSEDCL has projected purchase of 120 MU from Dodson I and II, and has considered the Annual Fixed Charge as approved in Case no 105 of 2009 as well as the water cess in the total cost of Dodson II. An average purchase rate of Rs. 2.47 per unit for Dodson I has been taken for the Control Period, based on the actual average rate of 2015-16.

RGPL: Due to non-availability of gas, no procurement is envisaged.

RE Sources: MSEDCL has projected the purchase as per the RPO Regulations, 2016 and the Solar and Non-Solar rates as per the RE Tariff Order dated 29th April 2016. For non-Solar sources, MSEDCL has assumed the Feed-in Tariff for projects in Wind Zone 1 as stipulated in the RE Tariff Order for FY 2016-17. The following Table shows the projection of purchase from RE Sources over the 3rd Control Period.

**Table 5-21: RE Purchase projected for 3rd Control Period by MSEDCL**

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Solar	MU	1178	2499	3651	4945
Non-Solar	MU	11779	13119	14605	16247
<b>Total RPO Quantum</b>	<b>MU</b>	<b>12957</b>	<b>15617</b>	<b>18256</b>	<b>21192</b>
Solar Tariff	Rs/kWh	6.54	6.54	6.54	6.54
Non-Solar Tariff	Rs/kWh	5.56	5.56	5.56	5.56
Solar purchase cost	Rs. crore	770	1634	2388	3234
Non-Solar purchase cost	Rs. crore	6549	7294	8120	9033
Total RE Purchase Cost	Rs. crore	7319	8928	10508	12267
RE purchase cost Per Unit	Rs/kWh	5.65	5.72	5.76	5.79

Although MSEDCL has projected the RE purchase over the 3rd Control Period so as to meet the RPO targets as per the RPO Regulations, 2015, it would not always be possible to meet the RPO targets. MSEDCL has executed long-term Energy Purchase Agreements (EPAs) with RE Generators, but the actual RE generation is not as per the expected Capacity Utilisation Factor (CUF). Thus, either the CUF projections are to be rationalized or the RE Generator's efficiency has to be improved. Further, the



Gross Energy Consumption (GEC) of the Distribution Licensees is constantly increasing in line with the load growth and also the RPO targets, but corresponding RE capacity addition is not taking place. Hence, since FY 2012-13 onwards, there has been a shortfall in meeting the RPO target by MSEDCL. However, it shall endeavour to achieve RPO targets set out by the Commission in the RPO Regulations, 2016.

IPPs (JSW, CGPL Mundra, Adani Power Ltd., Rattan India Ltd. and EMCO): The quantum from these sources has been taken as per the normative Availability of 80%, or 85% as per the PPA. The Fixed Charge and Energy Charge are taken as per the price Schedules in the PPAs and applying the CERC escalation factor wherever applicable. MSEDCL has not included the impact of Orders regarding Compensatory Tariff (in case of CGPL, Adani, Rattan India) as it has filed Appeals against these Orders. This may be allowed to be recovered through FAC depending on the outcome of the Appeals. As allowed in Case No. 163 of 2014, an impact of 'change in law' of around 22 to 30 paise per unit has been considered as part of the Energy Charges for power purchase from Adani Power Ltd. Similarly, an impact of 'change in law' of around 28 paise per unit is included in the Variable Charges of Rattan India Ltd.. MSEDCL requested the same may be allowed to be recovered through FAC when the same is finalised.

Short-term sources and FBSM: No power purchase from Traders or Power Exchanges has been projected. Due to difficulty in prediction of incremental/decremental quantum and the market price, FBSM is also taken as 'nil'.

Transmission Charges: MSEDCL has projected PGCIL Transmission Charges considering the Transmission Charges and the Unified Load Dispatch & Communication (ULDC) charges.

The source-wise power purchase projected is summarised in the following Table.

**Table 5-22: Source-wise Power Purchase submitted by MSEDCL for 3rd Control Period**

Source	FY 2016-17			FY 2017-18			FY 2018-19			FY 2019-20		
	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)
MSPGCL	46,683	19,722	4.22	50,173	20,828	4.15	54,116	22,622	4.18	59,106	24,084	4.07
NTPC	24,229	6,981	2.88	24,581	7,318	2.98	5,656	7,397	2.88	26,217	7,536	2.87
NPCIL	5,470	1,318	2.41	5,470	1,318	2.41	5,470	1,283	2.35	5,485	1,322	2.41
SSP	1,210	248	2.05	1,210	248	2.05	1,210	248	2.05	1,213	249	2.05
Pench	136	28	2.05	136	28	2.05	136	28	2.05	137	28	2.05
JSW Power	1,934	510	2.64	1,934	504	2.61	1,934	500	2.58	1,940	503	2.59
Dodson	116	26	2.29	116	27	2.33	116	28	2.41	116	23	1.97
Renewable	12,957	7,319	5.65	15,617	8,928	5.72	18,256	10,508	5.76	21,192	12,267	5.79
CGPL	5,158	1,213	2.35	5,158	1,222	2.37	5,158	1,231	2.39	5,172	1,248	2.41
Adani	18,358	6,197	3.38	19,054	6,874	3.61	19,228	6,953	3.62	18,996	6,958	3.66
Rattan India	48	997			983			983		211	1,045	
EMCO	1,489	496	3.33	1,489	499	3.35	1,489	502	3.37	1,493	506	3.39

Source	FY 2016-17			FY 2017-18			FY 2018-19			FY 2019-20		
	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)	Quantum (MU)	Cost (Rs. Crs)	Rate (Rs./ Unit)
Powergrid		2,240			2,600			2,840			3,080	
Total	1,17,789	47,297	4.02	1,24,939	51,376	4.11	1,32,769	55,124	4.15	1,41,278	58,848	4.17

### ***Commission's Analysis and Ruling***

As set out in the Section on Energy Balance, the Commission has approved the following Energy Input requirement for the 3<sup>rd</sup> Control Period, as against MSEDCL's projection:

**Table 5-23: Energy Input for 3<sup>rd</sup> Control Period, as approved by Commission (MU)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Energy Input Requirement (MSEDCL)	1,22,932	1,30,069	1,37,860	1,46,348
Energy Input Requirement (Approved)	1,20,970	1,25,443	1,30,286	1,35,519

Accordingly, for estimating the power purchase quantum and cost for the 3<sup>rd</sup> Control Period, the Commission has adopted the following two-step approach:

Step-1: Station-wise analysis of projection of energy quantum and rates, as against the MSEDCL projections.

Step-2: Approval of Station-wise energy quantum and cost based on MOD principles for each month of the Control Period, and approval of total power purchase quantum and cost for respective periods.

### **A] Step-1 Analysis: Projection of available Power Purchase Quantum and Rate**

#### **MSPGCL**

MSEDCL has provided the break-up of Station-wise power purchase quantum and cost of MSPGCL that it has considered for its projections.

In its recent MYT Order for MSPGCL in Case No. 46 of 2016, the Commission has approved the cost and quantum of power purchase of its existing Stations/Units for the 3<sup>rd</sup> Control Period as shown below.

**Table 5-24: Generation Quantum of MSPGCL Stations approved in Case No. 46 of 2016 (in MU)**

Station/Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Bhusawal	1007	1007	1007	1010
Chandrapur	12289	12289	12289	12322
Khaperkheda	5648	5648	5648	5663
Koradi	2048	2089	2089	2095

Station/Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Nashik	3929	3929	3929	3940
Uran	3566	3566	3566	3576
Paras Units 3 and 4	3407	3407	3407	3416
Parli Units 6 and 7	2557	3407	3407	3416
Khaperkheda Unit 5	3500	3500	3500	3509
Bhusawal Units 4 and 5	6999	6999	6999	7018

**Table 5-25: Generation Cost of MSPGCL Stations approved in Case No. 46 of 2016**

Station/Unit	FY 2016-17		FY 2016-17		FY 2016-17		FY 2016-17	
	AFC (Rs.Crore)	ECR (Rs./kWh)	AFC (Rs.Crore)	ECR (Rs./kWh)	AFC (Rs.Crore)	ECR (Rs./kWh)	AFC (Rs.Crore)	ECR (Rs./kWh)
Bhusawal	79.57	3.182	84.13	3.194	91.17	3.207	95.78	3.218
Chandrapur	668.12	2.559	698.19	2.571	801.4	2.584	819.94	2.596
Khaperkheda	378.28	2.803	389.05	2.814	490.38	2.825	495.44	2.836
Koradi	173.05	3.234	197.45	2.625	220.33	2.628	222.71	2.63
Nashik	335.93	3.172	372	3.188	399.61	3.204	413.16	3.22
Parli	-	3.323	-	3.333		3.344		3.354
Uran	133.87	2.603	138.55	2.608	168.4	2.613	170.04	2.618
Paras Units 3 and 4	468.78	2.406	464.28	2.408	534.69	2.411	525.71	2.413
Parli Units 6 and 7	343.64	2.996	454.52	2.984	528.28	2.987	519.95	2.989
Khaperkheda Unit 5	494.97	2.794	481.74	2.797	530.55	2.8	517.67	2.803
Bhusawal Units 4 and 5	1066.86	2.899	1041.36	2.901	1133.95	2.904	1108.95	2.907

For projecting the power purchase quantum and cost of existing Stations of MSPGCL, the Commission has taken the rates, quantum and cost approved under in the MSPGCL MYT Order in Case No. 46 of 2016, as shown above.

For the upcoming Generating Units of MSPGCL, viz., Chandrapur-8 and 9, Parli-8, Koradi-9 and 10, the Commission has considered the generation based on the number of operating days post the expected COD in FY 2016-17 and the Availability on a provisional basis. The Fixed Cost of these Units have been approved based on the annual Fixed Cost allowed in the earlier MSPGCL MYT Order in Case No. 54 of 2013, adjusted on a pro rata basis depending on the number of operating days in FY 2016-17 subsequent to their COD. The Variable Charge of these Units is also as approved in that Order. The Commission had sought the latest position of expected COD of these Units from MSPGCL, which has been considered for the above estimations.

The net generation and AFC have also been approved in the latest MSPGCL MYT Order for Koyna, Bhira and Tillari Hydro Stations, and the AFC for the other Hydro Stations. For its projection, the Commission has taken the AFC approved in that Order. That Order has also approved the net generation for the 3<sup>rd</sup> Control Period based on design energy, which is lower than MSEDCL's projections. However, the Commission notes that the rainfall in the current year has been good, and hence higher generation can be expected from the Hydro Stations over and above the design energy. Accordingly, for the purpose of projection for 3<sup>rd</sup> Control Period, the Commission has accepted the higher projection of net generation presented by MSEDCL.

The projected quantum of energy generation of MSPGCL Stations and their Variable Cost has been limited to the extent of application of MOD principles for the Control Period for allowing the power purchase quantum and cost for the year.

### **NTPC**

The units from NTPC Stations are projected at a PLF of 85% for thermal Stations, as per the CERC Tariff Regulations, 2014.

For the upcoming NTPC Units, viz., Solapur STPS (2 x 660 MW), Gadawara STPS (2 x 660 MW), Khargone STPP (2 x 660 MW), Lara Chhatisgarh (2x800 MW) and Mouda (2 x 660 MW), MSEDCL has submitted the expected COD and projected the quantum and cost over the Control Period. However, the monthly Central Electricity Authority (CEA) report on 'Broad Status of Thermal Power Projects in the Country' for June, 2016 states that the expected COD of some of the upcoming Stations/Units is likely to be delayed further. The expected COD indicated by MSEDCL and as considered by the Commission on the basis of the CEA report are shown in the Table below.

**Table 5-26: COD of upcoming NTPC Stations, as considered by Commission**

Station/Unit	Expected COD indicated by MSEDCL	Expected COD considered by Commission as per CEA Report
Solapur STPS (2 x 660 MW)	Feb- 2017 & Aug - 2017	June 2017 & Oct- 2017
Gadawara STPS (2 x 660 MW)	March - 2017 & Sept - 2017	Aug - 2017 & Feb -2018
Khargone STPP (2 x 660 MW)	March - 2019 & Sept - 2019	July - 2019 & Jan – 2020
NTPC Lara Chhatisgarh(2x800 MW)	Dec-2016 & June - 2017	Feb-2017 & Sept – 2017
Mouda (2 x 660 MW)	May 2016 & Sept - 2016	Oct 2016 & April – 2017

The projected generation from these new Generating Units has been computed on a provisional basis considering the number of operating days post the expected COD in

the 3<sup>rd</sup> Control Period. The Commission has approved the Fixed Charges payable to the NTPC Plants as projected by MSEDCL. However, they have been adjusted pro rata depending on the number of operating days in the respective years subsequent to their expected COD. The Variable Charge of these Units has been taken at the rate of NTPC's new Station VSTPS V, as proposed by MSEDCL.

The power purchase quantum and Variable Charge of the NTPC Generating Stations have been limited to the extent of application of MOD Principles.

MSEDCL has also claimed expenses on power purchase from NTPC on account of other charges, supplementary bills and Income Tax related adjustments for each year of the Control Period. For the power purchase cost projection for the Control Period, the Commission has provisionally approved these charges, but the actuals will be considered at the time of truing-up for each year subject to prudence check.

### **NPCIL**

The Commission has approved the power purchase quantum and cost for NPCIL Generating Stations as submitted by MSEDCL. NPCIL Stations have been considered as 'Must Run' while applying MOD principles for the Control Period.

MSEDCL has also claimed expenses on power purchase from NPCIL on account of other charges, supplementary bills and Income Tax related adjustments. As in the case of NTPC, the Commission has provisionally approved these charges subject to truing-up considering the actuals.

### **SSP, Pench, Dodson I & II**

The Commission has approved the power purchase quantum and cost of power purchase from SSP, Pench, and Dodson I & II as proposed by MSEDCL. These Stations are included as Must Run Stations while applying the MOD principles for approval of power purchase. Truing-up will be undertaken considering actuals, subject to prudence check.

### **Renewable Purchase Obligation**

The Commission has specified the RPO targets for the period FY 2016-17 to FY 2019-20 under the RPO Regulations, 2016 as follows:

**Table 5-27: RPO Targets for 3rd Control Period**

Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Solar	1%	2%	2.75%	3.50%
Non-Solar (Other RE)	10%	10.50%	11.00%	11.50%
Mini/MicroHydro (as a % of Non-Solar RPO)	0.2%	0.2%	0.2%	0.2%

To a query with regard to meeting the RPO targets, MSEDCL stated that, with a RPO of 15% in FY 2019-20 (Solar and Non-Solar), MSEDCL consumers will be burdened

with a huge power purchase cost resulting in high consumer Tariffs. Moreover, the envisaged capacity addition as per the increased targets may not happen, but its impact will be passed on to consumers without any benefits. In view of this, MSEDCL had requested that fulfilment of RPO not be insisted upon. However, it will enter into EPAs with all RE Generators who would approach MSEDCL in order to meet its RPO.

**Table 5-28: RPO purchase projected by MSEDCL for 3rd Control Period**

Particulars	Units	2016-17	2017-18	2018-19	2019-20
Power Purchase	MU	117789	124939	132769	141278
Solar	%	1%	2%	2.75%	3.50%
Non-Solar	%	10%	10.50%	11.00%	11.50%
Total RPO Quantum	%	11.00%	12.50%	13.75%	15.00%
Solar	MU	1178	2499	3651	4945
Non-Solar	MU	11779	13119	14605	16247
<b>Total RPO Quantum</b>	<b>MU</b>	<b>12957</b>	<b>15617</b>	<b>18256</b>	<b>21192</b>

The RPO target specified under the RPO Regulations, 2016 was finalised after due public consultations, and the Commission has finalised the Regulations along with an explanatory Statement of Reasons. During the RPO compliance verification proceedings, delays in signing of EPAs with RE Projects have been pointed out inspite of MSEDCL's shortfalls against the RPO targets in the past. In its recent Orders, the Commission has pointed out that MSEDCL chose not to purchase RECs to meet its procurement shortfalls either, which it could have done at times of its own choosing to obtain the most advantageous rates. In any case, revision or review of the RPO targets is outside the scope of the present proceedings under the MYT Regulations. MSEDCL has to comply with the targets stipulated in the RPO Regulations, 2016.

In its projections, MSEDCL has estimated the RE purchase required to meet its RPO targets. However, since the overall power purchase allowed for the Control Period is lower than proposed by MSEDCL owing to the application of MOD principles, as discussed in the subsequent Section, the RE procurement against the RPO target in absolute terms is also lower than estimated by MSEDCL.

The Commission has accordingly approved the RE purchase towards meeting RPO targets over the Control Period as shown in the Table below. For estimation, the Mini/Micro Hydro targets are included in the overall non-Solar RE purchase. The Tariffs for Solar and non-Solar RE purchase are as approved in the RE Tariff Order dated 29 April, 2016. At the time of compliance verification, the Commission shall assess the position for the respective years of the Control Period.

**Table 5-29: Purchase against RPO approved for 3rd Control Period**

Particulars	Units	2016-17	2017-18	2018-19	2019-20
Power Purchase	MU	115380	119533	124116	129101
Solar	%	1%	2%	2.75%	3.50%
Non-Solar	%	10%	10.50%	11.00%	11.50%
Total RE purchase Quantum	%	11.00%	12.50%	13.75%	15.00%
Solar	MU	1154	2391	3413	4519
Non-Solar	MU	11538	12551	13653	14847
<b>Total RE purchase Quantum</b>	<b>MU</b>	<b>12692</b>	<b>14942</b>	<b>17066</b>	<b>19365</b>
Solar Tariff	Rs/kWh	6.54	6.54	6.54	6.54
Non-Solar Tariff	Rs/kWh	5.56	5.56	5.56	5.56
Solar	Rs. crore	755	1563	2232	2955
Non-Solar	Rs. crore	6415	6978	7591	8255
Total RE purchase Cost	Rs. crore	7170	8542	9823	11210
RE purchase Cost Per Unit	Rs/kWh	5.65	5.72	5.76	5.79

**RGPPPL and Traders**

MSEDCL has not projected any power purchase from these sources, and the Commission has accepted its submission accordingly.

**Independent Power Producers and Ultra Mega Power Projects (UMPPs)**

MSEDCL has considered power purchase from Mundra UMPP and IPPs, viz., JSW, EMCO Power, India Bulls Power and Adani Power, with PPA capacity as shown in the following Table.

**Table 5-30: Capacity contracted under PPA with IPPs by MSEDCL (MW)**

Station/Unit	PPA Capacity Contracted (MW)
CGPL UMPP Mundra	800
Adani Power 1320 MW	1320
Adani Power 1200 MW	1200
EMCO Energy	200
RattanIndia (Previously India Bulls Power)	1200
Adani Power 125 MW	125
Adani Power 440 MW	440
JSW Energy	300



The Commission had sought justification for the proposed Capacity Charges, Variable Charges and Energy Charges of IPPs for each year considering the approved PPAs. MSEDCL stated that the Capacity Charge and Energy Charge in case of IPPs are calculated by applying the CERC escalation rates for Generating Stations, and submitted the detail computation. The Commission has verified the power purchase rates and other conditions outlined in the PPAs. It has projected the available generation from these Units considering normative Availability and Auxiliary Consumption.

Considering the normative generation computed for each Station and the estimated per unit Capacity Charge as submitted by MSEDCL based on the PPAs, the total Capacity Charge of each Station for the respective years of the Control Period has been reworked as shown in the following Table.

**Table 5-31: Capacity Charge amount approved for purchase from IPPs for 3<sup>rd</sup> Control Period (Rs. crore)**

Station/Unit	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Petition	Approved	Petition	Approved	Petition	Approved	Petition	Approved
IPP - JSW	164	164	154	154	154	143	142	142
CGPL	469	468	468	468	468	468	469	469
Adani Power125	129	119	127	117	127	115	124	114
Adani Power1320	950	947	947	947	947	947	950	950
Adani Power1200	1,242	1,123	1,221	1,106	1,221	1,090	1,188	1,077
Adani Power440	-	-	461	424	461	418	448	413
EMCO Power	188	173	183	169	183	164	173	159
Rattan India	983	904	983	904	983	904	983	907

The per unit Energy Charge rates for power purchase from these Stations were found to be in line with the provisions of the PPA, and the Commission has considered them for projecting the MOD stack of Generating Stations for the 3<sup>rd</sup> Control Period.

The power purchase quantum and variable cost of these Generating Stations have been limited to the extent of application of MOD Principles for the 3<sup>rd</sup> Control Period. This will be trued-up considering actuals at the end of the Control Period, subject to prudence check.

#### **Short-term Power Purchase and FBSM**

The Energy Balance for each year of the 3<sup>rd</sup> Control Period has been considered as nil as the entire demand would be met through the projected sources of power. However, in case of any shortfall from approved sources or when demand exceeds availability, MSEDCL may have to source power from Traders or other sources at the market price. The weighted average rate at which MSEDCL procured power from Traders in FY 2014-15 was 4.15 Rs/kWh. In FY 2015-16, the weighted average rate of power procured by MSEDCL from Power Exchanges was 2.94 Rs/kWh (as



provisionally approved for FY 2015-16). The average power purchase cost approved for each year of the Control Period is in the range of Rs. 3.79 /kWh to Rs. 4.13 /kWh. Based on these, the Commission approves a ceiling rate of Rs. 4.00 per kWh for power procurement from short-term sources over the 3<sup>rd</sup> Control Period, if required and subject to the conditions set out in the following paragraphs.

The MoP, vide Resolution dated 15 May, 2012, has issued Guidelines for short-term power procurement by Distribution Licensees through tariff-based competitive bidding. The Commission directs MSEDCL to procure all short-term power (beyond the stipulated minimum period), as approved and additionally as the need arises, through competitive bidding in accordance with these Guidelines, except in case of power procured from the Power Exchanges or under the Banking mechanism.

The Commission will consider the actual short-term power purchase and FBSM adjustment, if any, subject to prudence check at the time of true-up.

### **Transmission Charges**

MSEDCL has projected the PGCIL and ULDC charges for the Control Period as follows:

**Table 5-32: Transmission Charges for 3rd Control Period, as submitted by MSEDCL**

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
PGCIL Charges	Rs.Crore/ month	170	200	220	240
ULDC Charges	Rs. crore/ Quarter	50	50	50	50
Total	Rs. crore/ Year	2240	2600	2840	3080

The actual amount under this head for FY 2014-15 was only Rs. 1419 crore. Further, the provisional amount approved for FY 2015-16 is only Rs. 1947 crore. Therefore, the projections for the 3rd Control Period by MSEDCL appear to be too high. Hence, the Commission has applied an increase of 10% per annum over the aggregate level of FY 2015-16 to project these expenses over the Control Period. Accordingly, the Commission approves Transmission Charges as shown in the following Table for the 3rd Control Period, subject to subsequent true-up based on actuals.

**Table 5-33: Transmission Charges for 3rd Control Period as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Transmission Charges	2142	2356	2592	2851

### **B] Step-2 Analysis: Application of Merit Order Despatch Principle**

In Step-2, the Commission has applied the MOD principles and prepared a MOD Order Stack of all thermal Generating Stations/sources in the ascending order of their

per unit Energy Charges. The quantum of energy generation from each source is provisionally allowed along with the corresponding Variable Charge until the projected Energy Input requirement as approved, as per the Energy Balance, is met as per the MOD Stack.

The Commission has also worked out the monthly MOD stack for each month of the 3rd Control Period. For running the monthly MOD stack, the projected annual Energy Input requirement as approved is translated into the monthly requirement based on the monthly consumption pattern as submitted by MSEDCL.

Although the despatch from Generating Stations shall be subject to Merit Order, the recovery of Fixed Cost of such Stations shall be linked to its Availability. In view of this, the Commission has provisionally allowed the Fixed Charges for all the Stations as approved in Step-1 above.

The following Table sets out the details of the power purchase approved from Stations/Units to be treated as 'Must Run' during the 3rd Control Period.

**Table 5-34: Power Purchase from 'Must Run' Stations/Units in 3rd Control Period, as approved by Commission**

Station/Unit	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Energy Charges (Rs/kWh)	Power Purchase Approved (MU)	Energy Charges (Rs/kWh)	Power Purchase Approved (MU)	Energy Charges (Rs/kWh)	Power Purchase Approved (MU)	Energy Charges (Rs/kWh)	Power Purchase Approved (MU)
<b>Must Run Stations</b>								
KAPP	2.28	1,095	2.28	1,095	2.28	1,095	2.28	1,098
TAPP 1&2	0.97	1,144	0.97	1,144	0.97	1,144	0.97	1,147
TAPP 3&4	2.85	3,232	2.85	4,711	2.85	3,232	2.85	3,240
SSP	2.05	1,210	2.05	1,210	2.05	1,210	2.05	1,213
Pench	2.05	136	2.05	136	2.05	136	2.05	137
Dodson I	2.47	52	2.47	52	2.47	52	2.47	52
Dodson II	1.40	64	1.40	64	1.40	64	1.40	64
NCE excluding CPP	5.65	12,692	5.72	14,942	5.76	17,066	5.79	19,365
MSPGCL Hydro*	-	4186	-	4212	-	4214	-	4254
<b>Excluded from MOD</b>		<b>23,810</b>		<b>27,565</b>		<b>28,212</b>		<b>30,570</b>

\* Includes Koyna, Bhira, Tillari and other Hydro Stations of MSPGCL

The power purchase from Thermal Generating Stations/Units as per MOD principles followed in the 3rd Control Period, as provisionally approved by the Commission, is shown in the Tables below:

**Table 5-35: Approved Power Purchase from Thermal Stations/Units for FY 2016-17**

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KSTPS III	922	151	1.04	96	9.48	257	2.79

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KSTPS	4,497	243	1.06	477	36.74	757	1.68
SIPAT TPS 2	2,015	603	1.07	216	6.00	825	4.10
SIPAT TPS 1	4,211	265	1.08	455	23.85	744	1.77
VSTP III	2,027	232	1.37	278	19.62	530	2.61
VSTP IV	2,216	319	1.41	312	85.82	717	3.23
CGPL	5,158	468	1.44	743	0.36	1,212	2.35
VSTP I	3,149	202	1.47	462	24.94	689	2.19
EMCO Power	1,370	173	1.53	209	79.62	462	3.37
VSTP II	2,443	161	1.49	363	18.98	543	2.22
VSTP V	1,200	162	1.52	182	0.34	344	2.87
Lara	126	16	1.52	19	-	36	2.82
IPP - JSW	1,934	164	1.72	333	12.45	510	2.63
Adani Power 1320 MW	8,511	947	1.76	1,500	-	2,447	2.88
Chandrapur 8	1,747	420	2.09	364	-	785	4.49
Chandrapur 9	1,212	252	2.09	253	-	505	4.16
Koradi R U-8	3,533	694	2.33	823	-	1,516	4.29
Koradi 9	1,600	346	2.33	373	-	718	4.49
Koradi10	871	171	2.33	203	-	374	4.29
PARAS UNIT-3	1,703	234	2.41	410	-	644	3.78
PARAS UNIT-4	1,703	234	2.41	410	-	644	3.78
Adani Power 125 MW	856	119	2.41	207	-	325	3.80
Adani Power 1200 MW	8,220	1,123	2.41	1,984	-	3,107	3.78
CHANDRAPUR - 6	3,200	134	2.56	819	-	953	2.98
CHANDRAPUR - 7	3,200	134	2.56	819	-	953	2.98
CHANDRAPUR - 5	3,200	134	2.56	819	-	953	2.98
CHANDRAPUR - 4	1,344	134	2.56	344	-	478	3.55
CHANDRAPUR - 3	1,344	134	2.56	344	-	478	3.55
KhSTPS-II	1,014	125	2.50	253	6.00	384	3.78
GTPS URAN	3,494	134	2.60	910	-	1,043	2.99
Parli replacement U 8	362	165	2.76	100	-	265	
KHAPARKHEDA 5	3,200	495	2.79	894	-	1,389	4.34
Mauda	2,388	114	2.70	645	16.32	775	3.24
KHAPARKHEDA - 1to 4	3,402	378	2.80	954	-	1,332	3.91
Rattanindia Amravati	3,532	904	2.90	1,023	-	1,927	
BHUSAWAL 4	470	533	2.90	136	-	670	
BHUSAWAL 5	194	533	2.90	56	-	590	
PARLI UNIT-6	-	172	3.00	-	-	172	-
PARLI UNIT-7	-	172	3.00	-	-	172	-
NASHIK- 3,4 & 5	-	336	3.17	-	-	336	-
BHUSAWAL - 3	-	80	3.18	-	-	80	-
KORADI - 5	-	87	3.23	-	-	87	-
KORADI - 7	-	87	3.23	-	-	87	-
KAWAS	-	116	3.22	-	6.00	122	-
GANDHAR	-	145	3.24	-	6.00	151	-

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
PARLI -4	-	16	3.33	-	-	16	-
PARLI -5	-	16	3.33	-	-	16	-
<b>Total Thermal</b>	<b>91,570</b>	<b>12,974</b>		<b>18,789</b>	<b>353</b>	<b>32,116</b>	

**Table 5-36: Approved Power Purchase from Thermal Stations/Units for FY 2017-18**

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KSTPS III	922	151	1.04	96	9.48	257	2.79
KSTPS	4,497	243	1.06	477	36.74	757	1.68
SIPAT TPS 1	4,211	265	1.07	451	23.85	740	1.76
SIPAT TPS 2	2,015	603	1.08	218	6.00	827	4.10
VSTP III	2,027	232	1.37	278	19.62	530	2.61
VSTP IV	2,216	319	1.41	312	85.82	717	3.23
CGPL	5,158	468	1.46	753	0.36	1,221	2.37
VSTP I	3,149	202	1.47	462	24.94	689	2.19
VSTP II	2,443	161	1.49	363	18.98	543	2.22
VSTP V	1,200	162	1.52	182	0.34	344	2.87
Gadarwara	142	18	1.52	22	-	40	2.79
Lara	1,235	156	1.52	188	-	343	2.78
EMCO Power	1,370	169	1.58	216	79.62	465	3.39
IPP - JSW	1,934	154	1.75	338	12.45	505	2.61
Adani Power 1320 MW	8,511	947	1.78	1,515	-	2,462	2.89
Chandrapur 8	3,500	581	2.09	730	-	1,311	3.75
Chandrapur 9	3,500	581	2.09	730	-	1,311	3.75
Koradi R U-8	4,619	705	2.33	1,076	-	1,781	3.85
Koradi 9	4,619	705	2.33	1,076	-	1,781	3.85
Koradi10	4,619	705	2.33	1,076	-	1,781	3.85
PARAS UNIT-3	1,703	232	2.41	410	-	642	3.77
PARAS UNIT-4	1,703	232	2.41	410	-	642	3.77
Adani Power 125 MW	856	117	2.47	212	-	328	3.84
Adani Power 1200 MW	8,220	1,106	2.47	2,030	-	3,137	3.82
Adani Power 440 MW	3,014	424	2.47	744	-	1,168	3.88
CHANDRAPUR - 3	1,260	140	2.57	324	-	463	3.68
CHANDRAPUR - 4	1,234	140	2.57	317	-	457	3.70
CHANDRAPUR - 5	2,809	140	2.57	722	-	862	3.07

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
CHANDRAPUR - 6	2,567	140	2.57	660	-	800	3.12
CHANDRAPUR - 7	2,252	140	2.57	579	-	719	3.19
KhSTPS-II	632	125	2.50	158	6.00	288	4.56
GTPS URAN	1,852	139	2.61	483	-	622	3.36
KORADI - 6	442	99	2.63	116	-	215	4.86
KORADI - 7	389	99	2.63	102	-	201	
Parli replacement U 8	325	346	2.76	90	-	435	
KHAPARKHEDA 5	297	482	2.80	83	-	565	
Mauda	244	455	2.70	66	16.32	537	
KHAPARKHEDA - 1to 4	283	389	2.81	80	-	469	
BHUSAWAL 4	-	521	2.90	-	-	521	-
BHUSAWAL 5	-	521	2.90	-	-	521	-
Rattanindia Amravati	-	904	2.93	-	-	904	-
PARLI UNIT-6	-	227	2.98	-	-	227	-
PARLI UNIT-7	-	227	2.98	-	-	227	-
NTPC solapur	-	202	3.00	-	-	202	-
NASHIK- 3,4 & 5	-	372	3.19	-	-	372	-
BHUSAWAL - 3	-	84	3.19	-	-	84	-
KAWAS	-	116	3.22	-	6.00	122	-
GANDHAR	-	145	3.24	-	6.00	151	-
PARLI -4	-	16	3.33	-	-	16	-
PARLI -5	-	16	3.33	-	-	16	-
<b>Total Thermal</b>	<b>91,968</b>	<b>15,816</b>		<b>18,144</b>	<b>353</b>	<b>34,313</b>	

**Table 5-37: Approved Power Purchase from Thermal Stations/Units for FY 2018-19**

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KSTPS III	922	151	1.04	96	9.48	257	2.79
KSTPS	4,497	243	1.06	477	36.74	757	1.68
SIPAT TPS 2	2,015	603	1.07	216	6.00	825	4.10
SIPAT TPS 1	4,211	265	1.08	455	23.85	744	1.77
VSTP III	2,027	232	1.37	278	19.62	530	2.61
VSTP IV	2,216	319	1.41	312	85.82	717	3.23
VSTP I	3,149	202	1.47	462	24.94	689	2.19
CGPL	5,158	468	1.48	764	0.36	1,232	2.39
VSTP II	2,443	161	1.49	363	18.98	543	2.22
VSTP V	1,200	162	1.52	182	0.34	344	2.87
Gadarwara	343	43	1.52	52	-	95	2.78

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
Lara	1,562	197	1.52	237	-	434	2.78
EMCO Power	1,370	164	1.64	224	79.62	468	3.41
IPP – JSW	1,934	143	1.77	343	12.45	499	2.58
Adani Power 1320 MW	8,511	947	1.80	1,529	-	2,477	2.91
Chandrapur 8	3,500	581	2.09	730	-	1,311	3.75
Chandrapur 9	3,500	581	2.09	730	-	1,311	3.75
Koradi R U-8	4,619	705	2.33	1,076	-	1,781	3.85
Koradi 9	4,619	705	2.33	1,076	-	1,781	3.85
Koradi10	4,619	705	2.33	1,076	-	1,781	3.85
PARAS UNIT-3	1,703	267	2.41	411	-	678	3.98
PARAS UNIT-4	1,703	267	2.41	411	-	678	3.98
Adani Power 125 MW	856	115	2.52	216	-	331	3.87
Adani Power 1200 MW	8,220	1,090	2.52	2,071	-	3,161	3.85
Adani Power 440 MW	3,014	418	2.52	759	-	1,177	3.91
CHANDRAPUR - 3	1,344	160	2.58	347	-	508	3.78
CHANDRAPUR - 4	1,344	160	2.58	347	-	508	3.78
CHANDRAPUR - 5	3,074	160	2.58	794	-	955	3.11
CHANDRAPUR - 6	2,928	160	2.58	757	-	917	3.13
CHANDRAPUR - 7	2,681	160	2.58	693	-	853	3.18
KhSTPS-II	756	125	2.50	189	6.00	319	4.22
GTPS URAN	2,471	168	2.61	646	-	814	3.29
KORADI - 6	680	110	2.63	179	-	289	4.25
KORADI - 7	609	110	2.63	160	-	270	4.44
Parli replacement U 8	585	346	2.76	161	-	507	-
KHAPARKHEDA 5	662	531	2.80	185	-	716	-
Mauda	244	455	2.70	66	16.32	537	-
KHAPARKHEDA - 1to 4	480	490	2.83	136	-	626	-
BHUSAWAL 4	135	567	2.90	39	-	606	-
BHUSAWAL 5	-	567	2.90	-	-	567	-
Rattanindia Amravati	-	904	2.92	-	-	904	-
PARLI UNIT-6	-	264	2.99	-	-	264	-
PARLI UNIT-7	-	264	2.99	-	-	264	-
NTPC solapur	-	303	3.00	-	-	303	-
NASHIK- 3,4 & 5	-	400	3.20	-	-	400	-
BHUSAWAL - 3	-	91	3.21	-	-	91	-
KAWAS	-	116	3.22	-	6.00	122	-
GANDHAR	-	145	3.24	-	6.00	151	-
PARLI -4	-	15	3.34	-	-	15	-
PARLI -5	-	15	3.34	-	-	15	-
<b>Total Thermal</b>	<b>95,903</b>	<b>16,520</b>		<b>19,245</b>	<b>353</b>	<b>36,117</b>	

**Table 5-38: Approved Power Purchase from Thermal Stations/Units for FY 2019-20**

Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KSTPS III	925	141	1.04	96	9.48	247	2.67
KSTPS	4,509	238	1.06	478	36.74	753	1.67
SIPAT TPS 2	2,020	254	1.07	217	6.00	476	2.36
SIPAT TPS 1	4,223	578	1.08	456	23.85	1,058	2.50
VSTP III	2,033	222	1.37	279	19.62	521	2.56
VSTP IV	2,222	341	1.41	313	85.82	740	3.33
VSTP I	3,157	194	1.47	463	24.94	682	2.16
VSTP II	2,449	154	1.49	364	18.98	537	2.19
CGPL	5,172	469	1.50	778	0.36	1,248	2.41
VSTP V	1,203	151	1.52	183	0.34	334	2.78
Lara	1,566	197	1.52	238	2.00	437	2.79
Gadarwara	343	43	1.52	52	2.00	97	2.83
NTPC Khargone (2*660MW)	172	1	1.52	26	-	27	1.57
EMCO Power	1,374	159	1.70	233	79.62	472	3.44
IPP - JSW	1,940	142	1.80	349	12.45	503	2.59
Adani Power1320 MW	8,534	950	1.82	1,551	-	2,500	2.93
Chandrapur 8	3,509	610	2.09	732	-	1,342	3.82
Chandrapur 9	3,509	610	2.09	732	-	1,342	3.82
Koradi R U-8	4,632	736	2.33	1,079	-	1,815	3.92
Koradi 9	4,632	736	2.33	1,079	-	1,815	3.92
Koradi10	4,632	733	2.33	1,079	-	1,812	3.91
PARAS UNIT-3	1,708	263	2.41	412	-	675	3.95
PARAS UNIT-4	1,708	263	2.41	412	-	675	3.95
Adani Power 125 MW	859	114	2.58	221	-	335	3.91
Adani Power 1200 MW	8,243	1,077	2.58	2,126	-	3,202	3.89
Adani Power 440 MW	3,022	413	2.58	780	-	1,192	3.95
KhSTPS-II	1,017	120	2.50	254	6.00	380	3.73
CHANDRAPUR - 3	1,348	164	2.60	350	-	514	3.81
CHANDRAPUR - 4	1,348	164	2.60	350	-	514	3.81
CHANDRAPUR - 5	3,085	164	2.60	801	-	965	3.13
CHANDRAPUR - 6	2,937	164	2.60	762	-	926	3.15
CHANDRAPUR - 7	2,803	164	2.60	728	-	892	3.18
GTPS URAN	2,727	170	2.62	714	-	884	3.24
KORADI - 6	774	111	2.63	203	-	315	4.07
KORADI - 7	657	111	2.63	173	-	284	4.32
Parli replacement U 8	844	362	2.76	233	-	595	-
Mauda	1,014	455	2.70	274	16.32	745	-
KHAPARKHEDA 5	708	518	2.80	198	-	716	-



Generator Name	Energy Purchase	Capacity Charges	Variable Cost per unit	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Rate per unit of power procured
	(MU)	(Rs. Crore)	(Rs /kWh)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs /kWh)
KHAPARKHEDA - 1to 4	480	495	2.84	136	-	631	-
BHUSAWAL 4	297	554	2.91	86	-	641	-
BHUSAWAL 5	195	554	2.91	57	-	611	-
Rattanindia Amravati	-	907	2.96	-	-	907	-
PARLI UNIT-6	-	260	2.99	-	-	260	-
PARLI UNIT-7	-	260	2.99	-	-	260	-
NTPC solapur	-	303	3.00	-	-	303	-
BHUSAWAL - 3	-	96	3.22	-	-	96	-
NASHIK- 3,4 & 5	-	413	3.22	-	-	413	-
KAWAS	-	110	3.22	-	6.00	116	-
GANDHAR	-	135	3.24	-	6.00	141	-
PARLI -4	-	12	3.35	-	-	12	-
PARLI -5	-	12	3.35	-	-	12	-
<b>Total Thermal</b>	<b>98,531</b>	<b>16,565</b>		<b>20,047</b>	<b>357</b>	<b>36,968</b>	

The total power purchase cost and quantum provisionally approved by the Commission over the 3rd Control Period is summarised below, subject to truing-up for the respective years considering the actuals and after prudence check.

**Table 5-39: Approved Power Purchase Cost for FY 2016-17**

Generator Name	Energy Purchase	Capacity Charges	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Per Unit Cost
	(MU)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs/ kWh)
Total Thermal	91,570	12,974	18,789	353	32,116	3.51
Total Must Run	23,810	711	8,750	35	9,497	3.99
Power Grid & Reactive Charges					2,142	
<b>Total</b>	<b>115,380</b>	<b>13,685</b>	<b>27,539</b>	<b>388</b>	<b>43,754</b>	<b>3.79</b>



**Table 5-40: Approved Power Purchase Cost for FY 2017-18**

Generator Name	Energy Purchase	Capacity Charges	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Per Unit Cost
	(MU)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs/ kWh)
Total Thermal	91,968	15,816	18,144	353	34,313	3.73
Total Must Run	27,565	703	10,549	37	11,289	4.10
Power Grid & Reactive Charges					2,356	
<b>Total</b>	<b>119,533</b>	<b>16,519</b>	<b>28,694</b>	<b>389</b>	<b>47,958</b>	<b>4.01</b>

**Table 5-41: Approved Power Purchase Cost for FY 2018-19**

Generator Name	Energy Purchase	Capacity Charges	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Per Unit Cost
	(MU)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs/ kWh)
Total Thermal	95,903	16,520	19,245	353	36,117	3.77
Total Must Run	28,212	696	11,411	1	12,108	4.29
Power Grid & Reactive Charges					2,592	
<b>Total</b>	<b>124,116</b>	<b>17,215</b>	<b>30,655</b>	<b>354</b>	<b>50,817</b>	<b>4.09</b>

**Table 5-42: Approved Power Purchase Cost for FY 2019-20**

Generator Name	Energy Purchase	Capacity Charges	Total Variable Charge	Other Charges (incl. suppl. & IT)	Total Cost	Per Unit Cost
	(MU)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs. Crore)	(Rs/ kWh)
Total Thermal	98,531	16,565	20,047	357	36,968	3.76
Total Must Run	30,570	683	12,795	36	13,514	4.42
Power Grid & Reactive Charges					2,851	
<b>Total</b>	<b>129,101</b>	<b>17,248</b>	<b>32,842</b>	<b>393</b>	<b>53,334</b>	<b>4.13</b>

Considering the above, the Commission observes that a large quantum of surplus power is expected in the 3rd Control Period. The Table below shows the projected energy availability as against the energy requirement, and the corresponding surplus available which may have to be backing down over some or all of the 3rd Control Period.

**Table 5-43: Surplus Energy Availability in 3<sup>rd</sup> Control Period, as estimated by Commission**

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Energy Available	MU	140,985	166,090	168,768	171,683
Energy Procured	MU	115,380	119,533	124,116	129,101
Surplus Energy/Backed Down	MU	25,605	46,558	44,653	42,582

Thus, surplus energy of around 25,000 MU in the first year and increasing up to around 42,000 MU in the last year is likely in the 3rd Control Period. Hence, MSEDCL should explore various options for selling the surplus power through short-term/ medium-term bilateral contracts or through Power Exchanges in an optimal and efficient manner such that the revenue gained can cushion the effective cost of power procurement. Another option might be to provide tariff rebates to certain consumer categories, which would be advantageous to them and also assist higher power demand for meeting additional production and other requirements. The MYT Regulations, 2015 allow such rebates provided there is no discrimination between consumers within any category, and MSEDCL bears the impact of the higher revenue foregone. There may be scenarios in which this may still be beneficial to MSEDCL. Indeed, on the basis of clarifications sought separately, the Commission understands that MSEDCL is considering this option also. In any case, in view of the likely surplus, any future long-term/medium-term contracting for power procurement during the 3<sup>rd</sup> Control Period will have to show how it meets the test of actual requirement and optimum cost.

As per MSEDCL's projection of the long-term demand/supply position (Form 1.5) and based on its contracted capacity, a surplus power scenario is expected until FY 2023-24 (310 MW). In these circumstances, MSEDCL should also review its PPAs and explore options to optimise the impact of the fixed cost of the contracted capacity, including deferment in cases where no significant work execution has taken place so far.

## **5.7 Operation & Maintenance Expenses**

### ***MSEDCL's Submission***

Regulations 72 and 81 of the MYT Regulations, 2015 specify the O&M expenses norms for the Wires and Supply Business, respectively. As per the Regulations, MSEDCL has computed the inflation factor, considering the Consumer Price Index (CPI) and Wholesale Price Index (WPI), for FY 2014-15 as 2.76%. Taking FY 2015-

16 as the base year and applying the escalation factor, MSEDCL has calculated the normative O&M expenses for 3rd Control Period as shown in the following Table:

**Table 5-44: Normative O&M Expenses for 3<sup>rd</sup> Control Period, as computed by MSEDCL (Rs. crore)**

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Normative O&M Expenses for Wires Business	3,761	3,865	3,971	4,081	4,194
Normative O&M Expenses for Supply Business	2,025	2,081	2,138	2,197	2,258
<b>Total</b>	<b>5,786</b>	<b>5,946</b>	<b>6,110</b>	<b>6,278</b>	<b>6,452</b>

However, the normative O&M expenses arrived at as per the MYT Regulations will lead to under-estimation of such expenses, and is not realistic considering the past trends and inflationary indices. Therefore, MSEDCL has computed more realistic O&M expenses based on the following assumptions:

- (a) Employee Expenses: A normal increase of 4% per annum is assumed due to periodical increments and fitment of basic pay on promotions. Additional increase due to revisions of pay scales from April 1, 2018 has been considered from FY 2018-19. Contribution to Provident Fund has been taken at 12% of the closing balance of basic pay and DA.
- (b) Administration and General Expenses: An annual increase of 10% has been considered for most of the expense heads. However, in case of conveyance and travel, computer stationery expenses, advertisement expenses, freight on capital equipment, vehicle running and vehicle hire expenses, an increase of 25% per annum has been applied because of the increase in the number of consumers, special recovery drive, theft detection drive, public awareness, etc.
- (c) Repairs and Maintenance Expenses: Considering the historical trend and inflation, an increase of about 10% over the previous year has been considered for projection for the Control Period.

Considering the above assumptions, MSEDCL has projected the realistic O&M expenses for FY 2016-17 to FY 2019-20 as shown in the following Table, which may be approved by the Commission.

**Table 5-45: O&M Expenses for 3rd Control Period, as proposed by MSEDCL (Rs. crore)**

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
O&M Expenses for Wires Business	5,178	4,802	5,325	6,116	6,756

Particulars	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
O&M Expenses for Supply Business	1,547	2,586	2,867	3,293	3,638
<b>Total</b>	<b>6,725</b>	<b>7,388</b>	<b>8,192</b>	<b>9,410</b>	<b>10,394</b>

### **Commission's Analysis and Ruling**

The MYT Regulations, 2015 specify that:

*“72.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three years ending March 31, 2015, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission.*

*72.3 The average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the year ended March 31, 2014, and shall be escalated at the escalation rate of 5.72% to arrive at the Operation and Maintenance expenses for the base year commencing April 1, 2015.”*

Considering these provisions, the base O&M expenses for FY 2015-16 work out to Rs. 5786 crore.

The Regulations specify further that:

*“72.4 The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for FY 2015-16, at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1%, to arrive at permissible O&M expenses for each year of the Control Period:...*

*81.4 The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for FY 2015-16, at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1%, to arrive at permissible O&M expenses for each year of the Control Period:...”*

The escalation factor for O&M expenses from FY 2016-17 is to be worked out on the inflation factor considering 60% and 40 % weightage for actual point to point WPI and CPI, respectively, in the previous year, reduced by an efficiency factor of 1%.

The Commission has analysed the WPI and CPI data for the previous year FY 2015-16. By applying 60% weightage to WPI and 40% weightage to CPI for FY 2015-16, the inflation factor works out to 0.74%. After applying the efficiency factor of 1%, the escalation factor for projecting O&M expenses from FY 2016-17 works out to (-) 0.26%.

The Commission recognises that the escalation rates based on actual WPI and CPI have reduced significantly during the last two years as compared to previous years. It may not be appropriate to apply this negative inflation factor for projecting the O&M Expenses from FY 2016-17 onwards as some such expenses are likely to increase on a year-to-year basis. The Commission also notes that, for the O&M expenses for its Tariff Regulations, 2014, the CERC considered the escalation rate computed based on the 5-year average WPI and CPI from FY 2008-09 to FY 2012-13 applying 60% and 40% weightage, respectively, and compared these with the actual increase in O&M expenses.

The inflation factor based on the provisions of the MYT Regulations, 2015 is negative due to the reduction in WPI in FY 2015-16 over FY 2014-15. The Commission is of the view that it would be more appropriate at this stage to apply the WPI and CPI variation over a period longer than a year so that wide fluctuations in any particular year are smoothened. Hence, the Commission has applied the three-year average variation in WPI and CPI to arrive at the inflation factor for projecting the O&M Expenses from FY 2016-17 onwards.

Based on this approach, the inflation factor considering 60% and 40% weightage to WPI and CPI, respectively, works out to 3.97%. After applying the efficiency factor of 1%, the escalation factor to be considered for projecting O&M expenses from FY 2016-17 to FY 2019-20 would be 2.97%. Hence, in exercise of its powers under Regulation 102 of the MYT Regulations, 2015 to remove difficulties, the Commission has computed the O&M Expenses for FY 2016-17 to FY 2019-20 applying an escalation factor of 2.97% considering the three-year instead of one-year average variation in WPI and CPI.

Accordingly, the O&M expenses approved for each year of the Control Period are as follows:

**Table 5-46: Operation & Maintenance Expenses for 3<sup>rd</sup> Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Total O&M Expenses	5912	6088	6268	6455

## 5.8 Capital Expenditure and Capitalisation

### *MSEDCL's Submission*

MSEDCL has submitted the projected capital expenditure and capitalisation from FY 2016-17 to FY 2019-20, as summarised in the following Table:

**Table 5-47: Summary of Capital Expenditure and Capitalisation for the 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17 (Projected)	FY 2017-18 (Projected)	FY 2018-19 (Projected)	FY 2019-20 (Projected)
<b>Capital Expenditure</b>				
DPR Schemes	7,592	7,669	6,318	6,151
Non DPR Schemes	2,398	1,247	713	713
<b>Total</b>	<b>9,990</b>	<b>8,917</b>	<b>7,031</b>	<b>6,864</b>
<b>Capitalisation</b>				
DPR Schemes	7,126	7,510	6,511	6,238
Non DPR Schemes	2,174	1,534	775	816
<b>Total</b>	<b>9,300</b>	<b>9,044</b>	<b>7,286</b>	<b>7,055</b>

The scheme-wise details of capital expenditure and capitalisation for DPR and Non-DPR Schemes are provided below:

**Table 5-48: Capital Expenditure and Capitalisation of DPR Schemes for 3<sup>rd</sup> Control Period, as submitted by MSEDCL (Rs. crore)**

Schemes	Capital Expenditure				Capitalisation			
	FY 17	FY 18	FY 19	FY 20	FY 17	FY 18	FY 19	FY 20
<b>a) DPR Schemes</b>								
Infra Plan Works	-	-	-	-	20	5	-	-
Infra Plan Works - II	3,500	1,502	-	-	3,384	1,761	352	88
Additional Infra - II	600	994	-	-	480	891	178	45
<b>Gaothan Feeder Separation Scheme (GFSS)</b>								
GFSS – I	-	-	-	-	0	-	-	-
GFSS – II	-	-	-	-	6	-	-	-
GFSS – III	-	-	-	-	1	-	-	-
GFSS IV	-	-	-	-	6	1	-	-
<b>Fixed Capacitor Scheme</b>								
LT Fixed Capacitor Scheme	-	-	-	-	3	1	-	-
<b>Other Allied Works</b>								
Single Phasing - Left out villages	-	-	-	-	1	0	-	-
AMR	-	-	-	-	2	0	-	-
<b>APDRP</b>								

Schemes	Capital Expenditure				Capitalisation			
	FY 17	FY 18	FY 19	FY 20	FY 17	FY 18	FY 19	FY 20
Phase-II	-	-	-	-	1	0	0	0
RAPDRP A	20	-	-	-	94	31	-	-
RAPDRP B	900	-	-	-	982	245	61	15
SCADA Part A	50	-	-	-	44	15	-	-
<b>Internal Reform</b>								
<b>DTC Metering</b>								
Phase-I &Phase-II	-	-	-	-	(0)	(0)	(0)	(0)
Phase-III	-	-	-	-	1	-	-	-
SPA:PE(Release of Agri. Connection)	-	-	-	-	21	2	-	-
P:SI(Project for System Improvement)	40	-	-	-	46	5	-	-
P:IE(Project for Intensive Electrification)	-	-	-	-	0	-	-	-
DRUM	-	-	-	-	(0)	(0)	(0)	(0)
RGGVY	-	-	-	-	6	-	-	-
ERP	-	-	-	-	3	0	0	0
<b>Agriculture Metering</b>	523	553	99	-	485	547	143	14
<b>New Schemes</b>								
Deogad Wind Power Project	45	-	-	-	-	-	-	-
Ag DSM-Pilot project in Mangalwedha, Solapur	-	-	-	-	0.34	-	-	-
Star rated ceiling fan Phase-I	-	-	-	-	0.15	-	-	-
Star rated ceiling fan Phase-II ( HVAC)	-	-	-	-	1.62	-	-	-
DeenDayalUpadhyayGram JyotiYojana (DDUGJY)	926	710	517	-	741	716	557	111
Integrated Power Development Scheme (IPDS)	989	759	552	-	791	765	595	119
Sinhanst Kumbmela Nashik	-	-	-	-	4	1	-	-
Infrastructure not yet sanctioned	-	3,151	5,151	6,151	-	2,521	4,625	5,846
					-	-	-	-
<b>Total DPR Schemes</b>	<b>7,592</b>	<b>7,669</b>	<b>6,318</b>	<b>6,151</b>	<b>7,126</b>	<b>7,510</b>	<b>6,511</b>	<b>6,238</b>

**Table 5-49: Non-DPR Scheme Capex and Capitalisation for 3<sup>rd</sup> Control Period, as submitted by MSEDCL (Rs. crore)**

Schemes	Capital Expenditure				Capitalisation			
	FY 17	FY 18	FY 19	FY 20	FY 17	FY 18	FY 19	FY 20
FMS	-	-	-	-	1	0	0	0
Load Management	-	-	-	-	1	-	-	-
Distribution Scheme	-	-	-	-	-	-	-	-
P.F.C.Urban Distribution Scheme	-	-	-	-	0	-	-	-
MIDC Interest free Loan Scheme	-	-	-	-	2	-	-	-
Evacuation	70	80	70	70	63	77	80	71
Evacuation Wind Generation	40	35	30	30	38	36	35	31
DPDC / Non-Tribal	388	390	390	390	330	425	394	390
DPDC / SCP (Loan up to 2012-13)	96	95	95	95	91	106	96	95
DPDC / TSP + OTSP	128	128	128	128	121	143	130	129
Rural Electrification	-	-	-	-	1	-	-	-
Backlog Removal scheme	259	-	-	-	260	58	6	1
Ag Special Package for Vidarbha /Marathwada & Maharashtra	916	-	-	-	864	194	22	-
Single Phasing	-	-	-	-	3	-	-	-
Drought fund from Govt.	500	519	-	-	400	495	12	100

***Commission's Analysis and Ruling***

MSEDCL has claimed excess capitalisation over and above the in-principle approved cost for certain schemes in some years. Some of these schemes are those on which excess capitalisation had also been claimed in FY 2015-16, for which the Commission has disallowed 50% of the IDC on account of delay. The Commission has taken the same view on these schemes for the 3rd Control Period as well, and has disallowed 50% of the IDC. In addition to the old schemes, MSEDCL has proposed excess capitalisation under the scheme for Agriculture metering during the 3rd Control Period. Although the Commission has approved a revised capitalisation for this scheme in subsequent paragraphs, 50% of its IDC in the respective years has been disallowed on account of excess capitalisation.



**Table 5-50: Excess Capitalisation claimed by MSEDCL in 3rd Control Period (Rs. crore)**

Major Schemes	FY 17	FY 18
Infra Plan Works	20	5
GFSS	7	
RAPDRP A	94	31
DTC Metering Phase-III	1	
SPA:PE (Release of Agri. Connection)	21	
P:SI (Project for System Improvement)	46	2
P:IE(Project for Intensive Electrification)	0	5
RGGVY	6	
Agriculture Metering	127	455
<b>Total</b>	<b>325</b>	<b>499</b>

MSEDCL has not furnished the scheme-wise IDC computation figures, or any details of scheme-wise allocation of loans and phasing of expenditure, which are necessary for ascertaining scheme-wise excess capitalisation of IDC. However, it has stated that interest capitalisation amounts to 2.95% of the total capitalised amount. Thus, for estimating the IDC component included in the excess capitalisation during the 3rd Control Period, the Commission has applied 2.95% for interest capitalisation. Accordingly the derived IDC component of excess capitalisation works out to Rs. 9.59 crore in FY 2016-17 and Rs. 14.72 crore in FY 2017-18. The Commission has allowed only 50% of this IDC component, amounting to Rs. 4.79 crore in FY 2016-17 and Rs. 7.36 crore in FY 2017-18.

As regards the scheme 'Additional Infra II', MSEDCL has proposed capitalisation of Rs. 1594 crore in the 3rd Control Period against the amount of Rs. 1461 crore approved in principle under the Commission's 2005 Guidelines. The phasing proposed is Rs. 480 crore, Rs. 891 crore, Rs. 178 crore and Rs. 45 crore in the respective years of the Control Period. The Commission has reduced the capitalisation claimed in the respective years pro rata such that the total capitalisation allowed matches with the amount approved in-principle. Thus, the Commission has approved Rs. 440 crore, Rs. 817 crore, Rs. 163 crore and Rs. 41 crore for FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20, respectively.

Under 'Agriculture metering' scheme, MSEDCL has claimed capitalisation of Rs. 485 crore, Rs. 547 crore, Rs. 143 crore and Rs. 14 crore in the respective years of the Control Period. An earlier scheme for such metering had been given in-principle approval for Rs. 614 crore. MSEDCL has now proposed capitalisation against a similar scheme of Agriculture metering for which it has submitted a DPR for approval. The Commission has referred back the proposal for want of certain

clarifications, particularly with regard to the inclusion of capacitors, whose cost has to be borne by the concerned Agriculture consumers and cannot be passed on to the consumers at large. Nevertheless, considering the importance of this scheme and the need for implementing iturgently, the Commission has provisionally approved its capitalisation over the Control Period subject to separate in-principle approval and subsequent truing-up after prudence check. In the DPR which was submitted, MSEDCL has spread the capital expenditure over the three yearsFY 2015-16 to FY 2017-18, of which capitalisation of Rs. 457 crore and Rs. 455 crore has been proposed for FY 2016-17 and FY 2017-18, respectively, which the Commission has now considered.

MSEDCL has proposed to capitalise expenditure towards a few pilot DSM schemes during FY 2016-17. However, in accordance with the DSM Regulations, 2010, the Commission considers it more appropriate to treat the expenditure on these schemes as revenue expenditure to be included as part of the ARR instead of allowing their capitalisation. Accordingly, it has disallowed the capitalisation claimed towards these schemes, and allowed the amount as part of the ARRs for the 3rd Control Period. These schemes are listed below:

**Table 5-51: Schemes of revenue nature for which Capitalisation is disallowed, and added in ARR as Revenue Expense (Rs. crore)**

Schemes	FY 2016-17
AG-DSM Pilot Project -Magalwedha Tal., Solapur District.	0.34
Star rated ceiling fan Phase-I	0.15
Star rated ceiling fan Phase-II	1.62
<b>Total</b>	<b>2.11</b>

MSEDCL has also proposed capitalisation against “Infrastructure not yet Sanctioned” of Rs. 2521 Core, Rs. 4625 crore and Rs. 5846 crore in FY 2017-18 , FY 2018-19 and FY 2019-20, respectively. MSEDCL has not submitted any DPR for this scheme for in-principle approval inspite of the large capital outlay of Rs. 14452 crore (of which capitalisation of 12,991 crore is proposed in the 3<sup>rd</sup> Control Period). Therefore, the Commission has not considered the capitalisation proposed against this scheme for the time being pending submission of the DPR and its in-principle approval.

Capitalisation towards non-DPR schemeshas been approved upto the threshold limit of 20% of the capitalisation approved towards DPR schemes in the respective years.

Accordingly, the capitalisation approved for FY 2016-17 to FY 2019-20 is as shown inthe Tablebelow:

**Table 5-52: Capitalisation approved by Commission for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
DPR Scheme	7,047	4,815	1,728	375
Non-DPR Scheme	1,409	963	346	75
Capitalisation	8457	5778	2074	449

## 5.9 Depreciation

### *MSEDCL's Submission*

Regulation 27.1 of the MYT Regulations, 2015 provides for recovery of depreciation and the method of computing it.

MSEDCL has taken the useful life of assets as per the provisions of the Companies Act. Since it may not be possible to calculate the depreciation as per Regulation 31.2 (b) of MYT Regulation 2011 due to unavailability of the useful life of all assets, MSEDCL will write off the individual assets at the rates specified in those Regulations to the extent of 90% of the values of the assets under the Straight Line Method.

MSEDCL has calculated the depreciation considering the opening balance of assets and the projected capitalisation. The depreciation rates as per the MYT Regulations, 2015 have been applied.

The depreciation projected for the Control Period is shown in the following Table:

**Table 5-53: Depreciation for 3rd Control Period as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	47,470	56,770	65,814	73,100
Depreciation	2,723	3,202	3,628	4,003
% Depreciation	5.74%	5.64%	5.51%	5.48%

### *Commission's Analysis and Ruling*

The Commission has taken the Opening GFA as the closing GFA approved for FY 2015-16 in the provisional true-up for computing the depreciation for the 3rd Control Period, and on the revised capitalisation approved for the respective years. Further, as per Regulation 25.2 (c), depreciation has been not been allowed to the extent of GFA established through Consumer Contribution and Grants. The depreciation rates are as per the MYT Regulations, 2015.

The depreciation amount approved for the 3rd Control Period is as shown in the Table below:

**Table 5-54: Depreciation as approved by Commission for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA (adjusted for grant & consumer contribution)	43,224	49,711	54,294	56,064
Depreciation	2,063	2,308	2,449	2,498
% Depreciation	4.77%	4.64%	4.51%	4.46%

**5.10 Interest on Long-term Loan*****MSEDCL's Submission***

The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. The addition to loans has been considered in proportion to the capital expenditure and capitalisation.

Regulation 29.5 of the MYT Regulations, 2015 specifies that the rate of interest for calculation of interest on long-term loans be the weighted average rate of interest computed on the basis of the actual loan portfolio at the beginning of each year. The interest on long-term loans has been considered as the weighted average rate of interest of 11.83% for FY 2014-15.

Accordingly, the Interest Expenses for the 3rd Control Period are as projected in the following Table:

**Table 5-55: Interest Expenses on Long-Term Loan, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Outstanding Loan at beginning of the Year	13,652	15,669	16,320	15,250
Loan Drawal	4,739	3,852	2,559	2,529
Loan Repayment	2,723	3,202	3,628	4,003
Balance Outstanding at the end of the Year	15,669	16,320	15,250	13,776
Interest Rate	11.83%	11.83%	11.83%	11.83%
<b>Interest Expenses</b>	<b>1,734</b>	<b>1,892</b>	<b>1,867</b>	<b>1,717</b>

***Commission's Analysis and Ruling***

The Commission has considered the funding pattern for capitalisation for the 3rd Control Period in the same ratio as for the funding of proposed capital expenditure, in line with the methodology adopted by MSEDCL, and after considering the approved quantum of capitalisation. This would be subject to prudence check and reviewed during the MTR and at the end of the Control Period.

**Table 5-56: Funding of Capitalisation approved by Commission for 3rd Control Period**

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Amount (Rs. crore)	%	Amount (Rs. crore)	%	Amount (Rs. crore)	%	Amount (Rs. crore)	%
Total Capitalisation	8,457		5,778		2,074		449	
Less: Consumer Contribution	93		32		15		3	
Less: Grant received during the year	1,877		1,162		289		36	
Capitalisation to be funded by debt & equity	<b>6,487</b>	100%	<b>4,583</b>	100%	<b>1,770</b>	100%	<b>410</b>	100%
Equity	747	12%	335	7%	34	2	-	0
Debt	5,739	88%	4,248	93%	1,736	98%	410	100%

The approved interest expenses for FY 2016-17 to FY 2019-20 (Rs. crore) are as shown in the Table below:

**Table 5-57: Interest Expenses as approved by Commission for 3rd Control Period (Rs crore)**

Particular	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening Balance of Net Normative Loan	14,533	18,210	20,149	19,435
Addition of Normative Loan due to capitalisation during the year	5,739	4,248	1,736	410
Repayment of Normative loan during the year	2,063	2,308	2,449	2,498
Closing Balance of Net Normative Loan	18,210	20,149	19,435	17,347
Average Balance of Net Normative Loan	16,372	19,180	19,792	18,391
Weighted average Rate	11.83%	11.83%	11.83%	11.83%

Particular	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
of Interest on actual Loans (%)				
<b>Total Interest &amp; Financing Charges</b>	<b>1,937</b>	<b>2,269</b>	<b>2,341</b>	<b>2,176</b>

## 5.11 Return on Equity

### *MSEDCL's Submission*

Regulation 28.2 of the MYT Regulations, 2015 provides for RoE for both the Wires and Supply Business. The return on equity capital has been allocated in the proposed ratio of Fixed Assets between Wires and Retail Supply Business, i.e., 90% to Wires Business and 10% to Supply Business.

MSEDCL has considered projection of consumer contribution as well as grant while arriving at the funding pattern of capitalisation and for working out the RoE for the 3rd Control Period.

As a short-term measure to reduce the overall tariff in Maharashtra, MSEDCL has claimed RoE of 7.5% on the approved equity instead of the permitted RoE of 17.5% and 15.5% for the Supply and Wires Business, respectively.

In order to safeguard its financial viability and to maintain its credit rating, MSEDCL may be allowed to review this claim during the finalization of Accounts for the respective years, and the presently deferred RoE may be allowed to be recovered depending on the financial position in the respective years.

The RoE for the Wires Business and Supply Business is projected as shown in the Tables below.

**Table 5-58: RoE for Wires Business for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year (Wires)	9,242	9,982	10,455	10,563
Capital Expenditure incurred (excl. Grants)	5,574	3,974	2,418	2,304
Equity portion of capital expenditure	794	466	105	0
% of Equity portion of capital expenditure	14%	12%	4%	0%
Assets Capitalisation	5,189	4,031	2,505	2,368
Equity portion of Assets Capitalisation	740	473	109	0
<b>Regulatory Equity at the end of the year</b>	<b>9,982</b>	<b>10,455</b>	<b>10,563</b>	<b>10,563</b>

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Return on Computation</b>				
Return on Regulatory Equity at the beginning of the year	693	749	1,620	1,637
Return on Normative Equity portion of Asset Capitalisation	28	18	8	0
Interest on Equity portion above 30%	15	15	15	15
<b>Total Return on Regulatory Equity for Wires</b>	<b>736</b>	<b>781</b>	<b>1,644</b>	<b>1,652</b>

**Table 5-59: RoE for Supply Business for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year (Supply)	1,026	1,109	1,161	1,173
Capital Expenditure incurred (excl. Grants)	619	442	269	256
Equity portion of capital expenditure	88	52	12	0
% of Equity portion of capital expenditure	14%	12%	4%	0%
Assets Capitalisation	577	448	278	263
Equity portion of Assets Capitalisation	82	53	12	0
<b>Regulatory Equity at the end of the year</b>	<b>1,109</b>	<b>1,161</b>	<b>1,173</b>	<b>1,173</b>
<b>Return on Computation</b>				
Return on Regulatory Equity at the beginning of the year	77	83	203	205
Return on Normative Equity portion of Asset Capitalisation	3	2	1	0
Interest on Equity portion above 30%	2	2	2	2
<b>Total Return on Regulatory Equity for Supply</b>	<b>82</b>	<b>87</b>	<b>206</b>	<b>207</b>

### *Commission's Analysis and Ruling*

MSEDCL has proposed RoE at 7.5% for FY 2016-17 and FY 2017-18, as against 17.5% and 15.5% for the Supply and Wires Business, respectively, allowed by the MYT Regulations, 2015. In this context, the Commission had made certain observations on the directions of GoM to reduce the RoE similarly for two years in respect of MSETCL and MSPGCL, in its MTR Orders dated 26 June, 2015. In the MSETCL MTR Order (Case No. 207 of 2014), the Commission had stated as follows:

*“6.9.9. Section 61 of the EA, 2003 provides that the State Commission, while specifying (i.e. through Regulations) the terms and conditions for tariff determination, shall be guided, inter alia, by the Tariff Policy and the principles and methodologies of the Central Electricity Regulatory Commission (CERC) for tariff determination of Transmission Licensees. Under Section 86(1) (a), tariff determination is a function of the State Commission. Sections 62 and 63 provide that the Commission has to determine the tariff for transmission, distribution, etc. in accordance with the provisions of the Act. While stating that a balance needs to be maintained between the interests of consumers and the need for investments, Clause 5.3(a) of the Tariff Policy sets out the objectives behind providing RoE, viz. attracting investments and generating a reasonable surplus. The rate of RoE stipulated for transmission projects by CERC is to be adopted by the State Commissions. Accordingly, this Commission’s MYT Regulations, 2011 provide for RoE of 15.5% for Transmission Licensees...*

*6.9.11..The Commission is of the view that, without further clarification, such a move may constrain MSETCL’s ability to fund its equity requirement for capital expenditure on ongoing or new works and would also negatively affects its credit rating. It will also severely reduce MSETCL’s capacity to meet any financial short fall it may face.”*

*6.9.14...The Commission suggests, therefore, that in the Petition for the next Control Period, which is due for submission by November 2015, MSETCL may indicate the required rate of RoE and also indicate how any shortfall inRoE will be compensated, either by in-house economy, State Government intervention, or other Non-Tariff Income, so as to ensure that its financial health is maintained.*

(Subsequently, in its recent MYT Orders in respect of MSPGCL and MSETCL, the Commission has accepted their proposals for some reduction in the rate of RoE for a limited period, based on an analysis of their submissions in the above context.)

In this background, MSEDCL was asked to justify its proposal for lower RoE and address the issues flagged earlier in the MTR Orders of MSPGCL and MSETCL. In reply, MSEDCL stated that the decision to claim lower than the normative RoE is a conscious decision taken by the MSEBHCL and GoM for its subsidiary companies. The proposal had been made keeping in view not only the interest of its consumers by attempting to avoid over-burdening them with higher tariffs, but also to subject itself to stringent financial discipline and increasing its own operational efficiency. MSEDCL is hopeful that in-house economy through better financial and operational discipline will help it to compensate for the shortfall in RoE to some extent, and still retain a cushion for any emergency or contingencies. In case the reduction of RoE, results, even after these efforts, in financial liquidity issues requiring an increase in the RoE back to normative levels, an appropriate decision would be taken and proposal made at the time of the MTR.



The Commission notes that MSEDCL has not given any clear and specific response as to whether it would seek carrying cost in case it claims deferred RoE at a later stage. MSEDCL has only stated that it would strive to minimize the impact of the deferred RoE through efficiency improvements. MSEDCL stated that it expects that the impact of such deferment of RoE to be minimal. Based on the actual impact, MSEDCL would decide the matter of the deferred RoE at the time of MTR.

Section 61 of the EA, 2003 provides that the State Commission, while specifying (i.e., through Regulations) the terms and conditions for tariff determination, shall be guided, inter alia, by the Tariff Policy and the principles and methodologies of the CERC for tariff determination of Generating Companies. Sections 62 and 63 provide that the Commission has to determine the tariff for generation, transmission, distribution, etc. in accordance with the provisions of the Act. While stating that a balance needs to be maintained between the interests of consumers and the need for investments, Clause 5.3 (a) of the Tariff Policy, 2005 as well as Clause 5.11(a) of the Tariff Policy, 2016 set out the objectives behind providing RoE, viz., attracting investments and generating a reasonable surplus. Accordingly, the Commission's MYT Regulations, 2015 provide for RoE of 17.5% and 15.5% for the Supply and Wires Business, respectively, for a Distribution Licensee.

The Commission has assessed the total impact of the lower RoE claimed by MSEDCL to be around Rs. 873 crore in FY 2016-17 and Rs. 923 crore in FY 2017-18. This amount is significant and contributes to approximately 1.5% of the ARR of MSEDCL in those years. However, MSEDCL has merely stated that it has taken a conscious decision to claim a lower ARR to this extent and to make up for the shortfall through efficiency improvements and greater financial discipline.

Nevertheless, the Commission has serious concerns about MSEDCL's proposal for a lower rate of RoE and its impact on the annual ARRs. These concerns cannot be addressed by general statements regarding efficiency improvements and greater financial discipline, which are expected of MSEDCL in any case. In several Cases before the Commission, MSEDCL has stated that it is not able to service the payments due to various Generators, including RE Generators, due to its severe cash constraints. The Commission is of the considered view that such reduction may also constrain MSEDCL's ability to fund its equity requirements for capital expenditure on ongoing or new works, may negatively affect its credit rating, and also severely reduce its capacity to meet any financial shortfalls. Moreover, it does not take into account the disallowances or other revisions which have now been determined in this Order subsequent to the filing of MSEDCL's Petition.

Under these circumstances, accepting MSEDCL's claim for a lower RoE or its deferment would be grossly imprudent, and cannot be accepted by the Commission. Hence, the Commission has approved the RoE for FY 2016-17 and FY 2017-18 at the regulated rate of 17.5% and 15.5% for the Supply and Wires Business, respectively, as against MSEDCL's claim for a lower RoE of 7.5% for these two years. For the

remaining two years of FY 2018-19 and FY 2019-20 also, the Commission has approved the RoE at the regulated rates, as also sought by MSEDCL.

The Commission has considered the funding pattern as discussed in the previous Section for approving the RoE for the 3rd Control Period. It has taken the regulatory equity at the end of FY 2015-16, as approved in this Order, as the opening balance for FY 2016-17. The approved closing balance of equity for FY 2016-17 in this Order is taken as the opening balance for FY 2017-18, and so on for the remaining years of the 3rd Control Period.

The following Tables show the RoE approved by the Commission for the 3rd Control Period for the Wires and Supply Business:

**Table 5-60: Return on Equity for Wires Business for 3<sup>rd</sup> Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year	8,846	9,519	9,821	9,852
Equity portion of Assets Capitalisation	-	-	-	-
Equity portion of Assets retired during the year	-	-	-	-
Equity portion of Net Assets Capitalisation during the year	673	302	31	-
Regulatory Equity at the end of the year	<b>9,519</b>	<b>9,821</b>	<b>9,852</b>	<b>9,852</b>
Return on Computation				
Return on Regulatory Equity at the beginning of the year - @15.5%	1,371	1,475	1,522	1,527
Return on Normative Equity portion of Asset Capitalisation - @15.5%*/2	52	23	2	-
Total Return on Regulatory Equity	<b>1,423</b>	<b>1,499</b>	<b>1,525</b>	<b>1,527</b>

**Table 5-61: Return on Equity for Supply Business for 3<sup>rd</sup> Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year	983	1,058	1,091	1,095
Equity portion of Assets Capitalisation	75	34	3	0
Equity portion of Assets retired during the year				
Equity portion of Net Assets Capitalisation during the year	75	34	3	0
Regulatory Equity at the end of the year	<b>1,058</b>	<b>1,091</b>	<b>1,095</b>	<b>1,095</b>

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Return on Equity Computation				
Return on Regulatory Equity at the beginning of the year - @17.5%	172	185	191	192
Return on Normative Equity portion of Asset Capitalisation - @17.5%/2	7	3	0	0
Total Return on Regulatory Equity	179	188	191	192

## 5.12 Interest on Working Capital

### *MSEDCL's Submission*

Regulation 31.3 of the MYT Regulations, 2015 provides for IoWC for the Wires Business. Accordingly, MSEDCL has calculated the IoWC for the Control Period @10.80% for the Wires Business as shown in the following Table:

**Table 5-62: Interest on Working Capital and Security Deposits for Wires Business for 3<sup>rd</sup> Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Computation of Working Capital (Wires Business)</b>				
O&M expenses for a month	400	444	510	563
Maintenance Spares at 1% of Opening GFA	427	511	592	658
One and half months of the expected revenue from charges for use of Distribution Wires	1,238	1,387	1,647	1,759
Less: Amount held as Security Deposit from Distribution System Users	(636)	(668)	(702)	(737)
<b>Total Working Capital Requirement</b>	<b>1,429</b>	<b>1,674</b>	<b>2,047</b>	<b>2,243</b>
<b>Computation of Working Capital Interest</b>				
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Working Capital</b>	<b>154</b>	<b>181</b>	<b>221</b>	<b>242</b>
<b>Interest on Security Deposit</b>				
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Security Deposit</b>	<b>69</b>	<b>72</b>	<b>76</b>	<b>80</b>

MSEDCL has allocated the total CSD in the proportion of 10% to Wires and 90% to the Supply Business. The IoWC for the Supply Business is as shown in following Table.

**Table 5-63: Interest on Working Capital and Security Deposits for Supply Business for 3<sup>rd</sup> Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Computation of Working Capital (Supply Business)</b>				
O&M expenses for a month	215	239	274	303
Maintenance Spares at 1% of Opening GFA	47	57	66	73
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	6,956	7,389	7,857	8,363
Less: Amount held as security deposit	(5,728)	(6,015)	(6,315)	(6,631)
Less: One month equivalent of cost of power purchase, Transmission Charges and MSLDC Charges	(4,292)	(4,675)	(5,053)	(5,387)
<b>Total Working Capital Requirement</b>	<b>(2,802)</b>	<b>(3,006)</b>	<b>(3,171)</b>	<b>(3,279)</b>
<b>Computation of Working Capital Interest</b>				
Interest Rate (%) - SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Working Capital</b>	--	--	--	--
<b>Interest on Security Deposit</b>				
Interest Rate (%) - SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Security Deposit</b>	<b>619</b>	<b>650</b>	<b>682</b>	<b>716</b>

***Commission's Analysis and Ruling***

The Commission has reworked the IoWC in accordance with the norms specified in the MYT Regulations, 2015 and based on the parameters such as O&M Expenses, Wires ARR and Supply ARR approved in this Order.

As regards the rate for computing the interest on CSD for the 3rd Control Period as well as IoWC, the Commission has considered 10.80%, as per the Base Rate of State Bank of India (SBI) at the time of filing of the MYT Petition, in accordance with the MYT Regulations, 2015.

The IoWC approved for the Wires and Supply Business for the Control Period is shown in the following Tables.

**Table 5-64: Interest on Working Capital and Security Deposits for Wires Business, as approved for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
O&M expenses for a month	320	330	340	350
Maintenance Spares at 1% of Opening GFA	389	447	489	505
One and half months equivalent of the expected revenue from charges for use of Distribution Wires	1,072	1,162	1,204	1,204
Less: Amount held as Security Deposit from Distribution System Users	(636)	(668)	(702)	(737)
<b>Total Working Capital Requirement</b>	<b>1,145</b>	<b>1,271</b>	<b>1,330</b>	<b>1,321</b>
		-	-	-
<b>Computation of Working Capital Interest</b>		-	-	-
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Working Capital</b>	<b>124</b>	<b>137</b>	<b>144</b>	<b>143</b>
		-	-	-
<b>Interest on Security Deposit</b>		-	-	-
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Security Deposit</b>	<b>69</b>	<b>72</b>	<b>76</b>	<b>80</b>

**Table 5-65: Interest on Working Capital and Security Deposits for Supply Business, as approved for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>Computation of Working Capital (Supply Business)</b>				
O&M expenses for a month	172	178	183	188
Maintenance Spares at 1% of Opening GFA	43	50	54	56
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	6,828	7,233	7,640	8,075
Less: Amount held as security deposit	(5,728)	(6,015)	(6,315)	(6,631)
Less: One month equivalent of cost of power purchase, Transmission Charges and	4,030	4,482	4,780	4,996

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
MSLDC Charges				
<b>Total Working Capital Requirement</b>	(2,715)	(3,036)	(3,218)	(3,308)
		-	-	-
<b>Computation of Working Capital Interest</b>		-	-	-
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Working Capital</b>	-	-	-	-
		-	-	-
<b>Interest on Security Deposit</b>		-	-	-
Interest Rate (%) = SBI Base Rate +150 basis points	10.80%	10.80%	10.80%	10.80%
<b>Interest on Security Deposit</b>	619	650	682	716

### 5.13 Other Finance Charges

#### *MSEDCL's Submission*

Regulation 29.8 of MYT Regulations, 2015 provides for Finance Charges only at the time of true-up of the respective years, and they have therefore not been projected by MSEDCL.

#### *Commission's Analysis and Ruling*

The Commission shall consider the Other Finance Charges at the time of true-up of the respective years, in accordance with Regulation 29.8 which reads as follows.

*"29.8 The Finance Charges incurred for obtaining loans from financial institutions for any year shall be allowed by the Commission at the time of Truing-up, subject to prudence check."*

### 5.14 Provision for Bad Debts

#### *MSEDCL's Submission*

Regulations 73 and 82 of the MYT Regulations, 2015 specify that a provision for Bad and Doubtful Debts may be allowed up to 1.5% of the amount of trade receivables or receivables from sale of electricity as shown in the Audited Accounts. The provision is duly allocated in the ratio of 10% to Wires business and 90% to Supply Business.

MSEDCL has claimed provision for Bad and Doubtful Debts at 1.5% of the last audited receivables for FY 2014-15 as shown below:

**Table 5-66: Provision for Bad and Doubtful Debts for Wires Business, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Receivables	1,722	1,722	1,722	1,722
Provisioning for Bad & Doubtful Debts (Wires Business )	26	26	26	26

**Table 5-67: Provision for Bad and Doubtful Debts for Supply Business, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Receivables	15,494	15,494	15,494	15,494
Provisioning for Bad & Doubtful Debts (Supply Business )	232	232	232	232

***Commission's Analysis and Ruling***

The Commission has considered receivables as per the latest available audited figures. It has approved the provisioning towards Bad and Doubtful Debts as per Regulation 73, as shown in the Tables below.

**Table 5-68: Provision for Bad and Doubtful Debts for Wires Business, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Receivables	1,722	1,722	1,722	1,722
Provisioning for Bad & Doubtful Debts (Wires Business )	26	26	26	26

**Table 5-69: Provision for Bad and Doubtful Debts for Supply Business, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Receivables	15,494	15,494	15,494	15,494
Provisioning for Bad & Doubtful Debts (Supply Business )	232	232	232	232

**Table 5-70: Provision for Bad and Doubtful Debts for Wire+Supply Business, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Provisioning for Bad & Doubtful Debts (Supply Business )	258	258	258	258

**5.15 Other Expenses*****MSEDCL's Submission***

The Other Expenses of MSEDCL comprise interest to suppliers/contractors, rebate to consumers and other expense items such as compensation for injuries to staff and outsiders. MSEDCL has projected Other Expenses on the basis of an annual 5% increase over the previous years, for the 3rd Control Period, as shown in the following Table:

**Table 5-71: Other Expenses for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Other Expenses	44	46	49	51

***Commission's Analysis and Ruling***

The Commission has disallowed the Other Expenses shown under the heads of loss on obsolescence of Fixed Assets, intangible assets written-off and interest on Staff Welfare Fund, for the reasons elaborated in the truing-up of FY 2014-15.

The Commission has approved the Other Expenses as shown in the Table below:

**Table 5-72: Other Expenses for 3<sup>rd</sup> Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Compensation for injuries, death to staff	3	3	3	3
Compensation for injuries, death to others	7	7	7	8
Loss on obsolescence of Fixed Assets				
Loss on sale of scrap	-	-		
Intangible assets written-off	-	-	-	-
Interest on Staff Welfare Fund	-	-	-	-
Non Moving Items	2	2	2	2
Expenditure on refund of Addition	-	-	-	-



Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Supply Charge				
Regular concession in tariff to Powerloom consumers	-	-	-	-
Interest to Suppliers/Contractors (O&M)	3	3	3	3
Small and Low value write offs	0	0	0	0
Others	1	1	1	1
<b>TOTAL</b>	<b>15</b>	<b>16</b>	<b>16</b>	<b>17</b>

### 5.16 Intra-State Transmission Charges and MSLDC Charges

#### *MSEDCL's Submission*

MSEDCL has taken the InSTS Charges in line with the submission made by MSETCL in its MYT Petition, and for other Transmission Licensees a 5% escalation has been applied over the Transmission Charges approved in the InSTS Tariff Order in Case No. 57 of 2015 for FY 2015-16. MSLDC Charges as approved for FY 2015-16 have also been escalated by 5% for the 3rd Control Period.

**Table 5-73: Intra-State Transmission Charges for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Transmission Licensee	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
MSETCL cost as per Petition	3,318	3,855	4,703	4,950
Others (with escalation of 5%)	1,735	1,821	1,912	2,008
<b>Total</b>	<b>5,053</b>	<b>5,676</b>	<b>6,615</b>	<b>6,958</b>
Share of MSEDCL in MSETCL - 83.05%	2,756	3,202	3,906	4,111
Share of MSEDCL in Others - 83.05%	1,441	1,513	1,588	1,668
<b>Share of MSEDCL - 83.05%</b>	<b>4,196</b>	<b>4,714</b>	<b>5,494</b>	<b>5,779</b>
MSLDC Charges - escalation of 5%	15	16	17	18
<b>Total Intra-State Transmission Charges</b>	<b>4,212</b>	<b>4,730</b>	<b>5,511</b>	<b>5,796</b>

#### *Commission's Analysis and Ruling*

The Commission's recent InSTS Tariff Order dated 22 July, 2016 in Case No. 91 of 2016 approves the InSTS Charges for each year of the 3<sup>rd</sup> Control Period. It also stipulates MSEDCL's share of such Charges in these years. In its Order dated 22 July,

2016 in Case No. 20 of 2016, the Commission has also approved the MSLDC Charges to be borne by MSEDCL over the 3rd Control Period. Based on these Orders, the share of InSTS Transmission Charges and MSLDC Charges to be borne by MSEDCL over the 3rd Control Period is as shown in the Table below.

**Table 5-74: MSEDCL's share of InSTS Charges and MSLDC Charges, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
MSEDCL's share of InSTS Charges	4596	5806	6519	6600
MSEDCL's share of MSLDC Charges	15	19	19	19
<b>Total</b>	<b>4611</b>	<b>5824</b>	<b>6539</b>	<b>6619</b>

### 5.17 Contribution to Contingency Reserves

#### *MSEDCL's Submission*

Regulation 34.1 of the MYT Regulations, 2015 provides for contribution to Contingency Reserve. The contribution has been proposed at 0.25% of the GFA and allocated in the ratio of 90% to the Wires Business and 10% to the Supply Business. Accordingly, MSEDCL has claimed the expenses towards contribution to Contingency Reserves for the Control Period as shown in the following Table:

**Table 5-75: Contribution to Contingency Reserve for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Contribution to Contingency Reserve	119	142	165	183

#### *Commission's Analysis and Ruling*

The Commission has approved the contribution to Contingency Reserve as per Regulation 34 of MYT Regulations, 2015 at 0.25% of the opening GFA approved in this Order, for the respective years of the 3rd Control Period as shown in the Table below:

**Table 5-76: Contribution to Contingency Reserve as approved by Commission for the 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Contribution to Contingency Reserves	108	129	144	149

## 5.18 Incentives and Discounts

### *MSEDCL's Submission*

MSEDCL has projected the incentives and discounts considering a 5% nominal increase in each year as shown in the Table below:

**Table 5-77: Incentives/Discounts for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Incentives/discounts	271	285	299	314

### *Commission's Analysis and Ruling*

The annual escalation of 5% for projecting Incentives and Discounts by MSEDCL appears to be reasonable. The Commission has approved the projection, accordingly, as shown in the Table below:

**Table 5-78: Incentives/Discounts approved by Commission for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Incentives/discounts	271	285	299	314

## 5.19 Non-Tariff Income

### *MSEDCL's Submission*

Regulation 74.1 of the MYT Regulations, 2015 provides for Non-Tariff Income. MSEDCL has projected Non-Tariff Income from various sources such as interest on arrears from consumers, interest on staff loans and advances, sale of scrap, interest on investment, rebate on power purchase, etc., with an annual increase of 5% as shown in the following Table:

**Table 5-79: Non-Tariff Income for 3rd Control Period as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Non-Tariff Income	758	796	836	878

### *Commission's Analysis and Ruling*

MSEDCL has not projected any income from recovery from theft/malpractices. MSEDCL clarified that such income is a part of 'Note 21: Revenue from operations', and is unpredictable in nature. Hence, it has not projected any income from recovery from theft/malpractices.

The Commission is of the view that, as in past years, MSEDCL would be receiving some income from theft recovery during the 3rd Control Period as well. Moreover, during the public consultation process, MSEDCL has reiterated its commitment towards curbing theft of electricity. Accordingly, the Commission has included an amount of Rs. 67 crore as the expected revenue from theft recovery in each year, based on the actual recovery in FY 2014-15, as part of the Non-Tariff Income.

The Commission has accepted MSEDCL's projection of Non-Tariff Income on account of the other heads cited by it. Accordingly, the Non-Tariff Income approved for the 3rd Control Period is shown in the Table below.

**Table 5-80: Non-Tariff Income approved by Commission for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Non-Tariff Income	826	864	903	945

## 5.20 RLC Refund

### *MSEDCL's Submission*

MSEDCL has not projected any RLC refund during the 3rd Control Period.

### *Commission's Analysis and Ruling*

The Commission had asked for the status of the RLC refund made till FY 2015-16 and the outstanding, if any. MSEDCL stated that Rs. 284 crore is outstanding for refund, as shown below.

**Table 5-81: RLC Refund collected and outstanding, as submitted by MSEDCL (Rs. crore)**

Particulars	MERC Approved	Actual as per Accounts
<b>Total RLC Collected</b>	<b>3,227</b>	
RLC Refund in FY 2008-09	500	455
RLC Refund in FY 2009-10	500	639
RLC Refund in FY 2010-11	519	516
RLC Refund in FY 2011-12	443	419
RLC Refund in FY 2012-13	500	462
RLC Refund in FY 2013-14	402	402
<b>Till FY 2013-14</b>	<b>2,864</b>	<b>2,893</b>
RLC Refund in FY 2014-15	38	46
RLC Refund in FY 2015-16	450	5
Balance RLC Refund		284
		<b>3,227</b>

According to the approval given in the previous MYT Order, the outstanding RLC should have been refunded in FY 2015-16 itself. However, MSEDCL has provisioned only Rs. 5 crore in FY 2015-16, and a balance of Rs. 284 crore is outstanding in FY 2016-17. Hence, the Commission has accounted for refund of this entire remaining amount of RLC refund in FY 2016-17.

**Table 5-82: RLC Refund for 3rd Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
RLC Refund	284	-	-	-

## 5.21 Income from Wheeling Charges from Open Access Consumers

### *MSEDCL's Submission*

A nominal increase of 5% per annum has been applied to project the income from Wheeling Charges over the 3rd Control Period, as follows.

**Table 5-83: Income from Wheeling Charges for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income From Wheeling Charges	3	3	3	4

### *Commission's Analysis and Ruling*

As discussed earlier, the Commission has taken a growth rate of 4% per annum in OA consumption over the 3rd Control Period. Accordingly, there would be a commensurate increase in the income from Wheeling Charges. Hence, the Commission has considered growth of 4% per annum in the income from Wheeling Charges over the Control Period. For estimating such income for FY 2016-17, the has considered the revised approved income from Wheeling Charges in FY 2015-16 (the base year), which is higher than that estimated by MSEDCL.

The approved income from Wheeling Charges is shown in the Table below:

**Table 5-84: Income from Wheeling Charges for the 3rd Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income From Wheeling Charges	5	5	5	5

**5.22 Income from Open Access Charges*****MSEDCL's Submission***

MSEDCL has projected the income from CSS and OACharges considering an escalation of 5% per annum, as shown in the following Table:

**Table 5-85: Income from Open Access Charges for the 3rd Control Period, as submitted by MSEDCL (in Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income from Open Access Charges	419	440	462	485

***Commission's Analysis and Ruling***

The head 'OACharges' includes charges such as CSS, Transmission Charges on account of OA and other charges collected from OA consumers. The Commission has re-determined the CSS for the Control Period, as elaborated subsequently in this Order. The income from OA Charges projected by MEDCL does not include income from Additional Surcharge, which has been determined and allowed separately in this Order.

The Commission has applied the growth rate of 4% per annum in OA consumption. As in the approval of income from Wheeling Charges above, the Commission has taken the revised approved income in FY 2015-16 considered for projection of such income over the Control Period.

Accordingly, the Commission has approved the projection of income from OACharges over the Control Period as shown in the Table below:

**Table 5-86: Income from Open Access Charges for 3rd Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income from Open Access Charges	599	623	648	674

**5.23 Impact of Sharing of additional Power Purchase burden*****MSEDCL's Submission***

While approving the Distribution Loss trajectory, the Commission had discussed the excess power purchase in the 3rd Control Period due to the Distribution Loss restatement necessitated in FY 2015-16. Such additional power purchase expenditure owing to the higher loss level is significant, and passing on its entire burden to consumers cannot be justified. Hence, the Commission has decided on the sharing of the impact between consumers and MSEDCL in the ratio of 1:2, i.e. two-thirds would be borne by MSEDCL and the remaining by consumers, on a provisional basis. This

is also in line with the provisions of the MYT Regulations, 2015 relating to sharing of efficiency loss on account of controllable expenses.

The computation of the sharing of impact of additional power purchase expense is shown in the Table below, and the Commission has considered it while approving the ARR for the 3rd Control Period.

**Table 5-87: Impact of Sharing of additional Power Purchase burden owing to restatement of Distribution Loss, as approved by Commission**

Particular	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Approved Distribution Loss Trajectory	%	17.76%	16.26%	14.76%	13.26%
Target Loss level at the end of FY 2015-16	%	13.50%	13.50%	13.50%	13.50%
Projected Sales excluding. EHV sales	MU	85,568	90,285	95,403	100,950
Projected EHV Sales	MU	6,081	6,342	6,614	6,899
Projected Total Sales	MU	91,649	96,626	102,018	107,849
InSTS loss (Approved)	%	3.92%	3.92%	3.92%	3.92%
Power Requirement at Ex-Bus Periphery (at Approved Distribution Loss Level)	MU	114,621	118,815	123,374	128,312
Power Requirement at Ex-Bus Periphery (at Target Loss Level at the end of FY 2015-16)	MU	109,288	115,234	121,677	128,648
Additional/ (lower) Power purchase due to higher Distribution Loss	MU	5,333	3,581	1,697	(336)
Marginal Variable Cost of Power Purchase	Rs/kWh	2.90	2.67	2.76	2.84
Additional Power Purchase Cost due to higher Distribution Loss	Rs. crore	1,545	954	468	(95)
Efficiency Loss to be borne by MSEDCL	Rs. crore	1,030	636	312	-
Efficiency Loss to be borne by consumers	Rs. crore	515	318	156	-

The marginal variable cost of power purchase that has been considered is that of the marginal Generating Stations (i.e., Stations ranked last in the approved MOD stack) in the respective years of the 3rd Control Period

## 5.24 Revenue at Existing Tariff

### *MSEDCL's Submission*

Considering the projected sales, number of consumers, and Connected Load/ Contract Demand and prevailing tariff, MSEDCL has projected the year-wise revenue for the Control Period as summarised in the following Table.

**Table 5-88: Revenue at existing Tariff for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Revenue at Existing Tariff	55,226	58,671	62,392	66,416

***Commission's Analysis and Ruling***

Considering the revised approved projected sales, number of consumers, and Connected Load/ Contract Demand and the prevailing tariff, the Commission has approved the Revenue from the existing Tariff over the 3rd Control Period as shown in the following Table:

**Table 5-89: Revenue at existing Tariff for 3rd Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Revenue at Existing Tariff	54,027	57,244	60,471	63,929

**5.25 Income from Additional Surcharge*****MSEDCL's Submission***

MSEDCL has projected the income from the proposed Additional Surcharge over the 3rd Control Period as shown in the Table below.

**Table 5-90: Income from Additional Surcharge for 3rd Control Period, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income from Additional Surcharge	1,015	788	899	930

***Commission's Analysis and Ruling***

The detailed analysis of the Additional Surcharge and proposed by MSEDCL is elaborated in the Chapter on Tariff Philosophy. Based on that analysis, the Commission has approved the following income from Additional Surcharge over the 3rd Control Period as shown in the following Table.

**Table 5-91: Income from Additional Surcharge for 3rd Control Period, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income from Additional Surcharge	284	710	738	768



**5.26 Aggregate Revenue Requirement for 3rd Control Period*****MSEDCL's Submission***

The Allocation Matrix for segregation of the ARR between the Wires and Supply Business has been specified in Regulation 68 of the MYT Regulations, 2015. Based on this, MSEDCL has projected the Wires and Supply ARRs for each year of the 3rd Control Period as shown in the following Tables:

**Table 5-92: Aggregate Revenue Requirement for Wires Business, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operation & Maintenance Expenses	4,802	5,325	6,116	6,756
Depreciation	2,450	2,882	3,266	3,603
Interest on Loan Capital	1,561	1,703	1,681	1,545
Interest on Working Capital & Interest on deposit from Consumers and Distribution System Users	223	253	297	322
Other Finance Charges	-	-	-	-
Provision for Bad and Doubtful Debts	26	26	26	26
Contribution to Contingency Reserves	107	128	148	164
<b>Total Revenue Expenditure</b>	<b>9,169</b>	<b>10,316</b>	<b>11,533</b>	<b>12,416</b>
Add: Return on Equity Capital	736	781	1,644	1,652
<b>Aggregate Revenue Requirement</b>	<b>9,905</b>	<b>11,097</b>	<b>13,177</b>	<b>14,068</b>
Less: Income from Wheeling Charges	3.16	3.31	3.48	3.65
Less: Income from Open Access Charges	419	440	462	485
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>9,483</b>	<b>10,654</b>	<b>12,712</b>	<b>13,580</b>

**Table 5-93: Aggregate Revenue Requirement for Supply Business, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses (including Inter-State Transmission Charges)	47,297	51,376	55,124	58,848
Operation & Maintenance Expenses	2,586	2,867	3,293	3,638
Depreciation	272	320	363	400
Interest on Loan Capital	173	189	187	172
Interest on Working Capital & Interest on deposit from	619	650	682	716

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Consumers and Distribution System Users				
Other Finance Charges	-	-	-	-
Provision for Bad and Doubtful Debts	232	232	232	232
Other Expenses	44	46	49	51
Intra-State Transmission Charges incl. MSLDC Fees & Charges	4,212	4,730	5,511	5,796
<b>Contribution to Contingency Reserves</b>	12	14	16	18
Incentives/Discounts	271	285	299	314
<b>Total Revenue Expenditure</b>	<b>55,718</b>	<b>60,710</b>	<b>65,757</b>	<b>70,187</b>
Add: Return on Equity Capital	82	87	206	207
<b>Aggregate Revenue Requirement</b>	<b>55,800</b>	<b>60,797</b>	<b>65,963</b>	<b>70,394</b>
Less: Non-Tariff Income	758	796	836	878
Less: Income from Additional Surcharge	1,015	788	899	930
<b>Aggregate Revenue Requirement from Retail Supply</b>	<b>54,026</b>	<b>59,213</b>	<b>64,228</b>	<b>68,586</b>

**Table 5-94: Aggregate Revenue Requirement for Wires+Supply Business, as submitted by MSEDCL (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses	47,297	51,376	55,124	58,848
Operation & Maintenance Expenses	7,388	8,192	9,410	10,394
Depreciation Expenses	2,723	3,202	3,628	4,003
Interest on Loan Capital	1,734	1,892	1,867	1,717
Interest on Working Capital & Interest on CSD	842	903	979	1,038
Other Finance Charges	-	-	-	-
Provision for Bad and Doubtful Debts	258	258	258	258
Other Expenses	44	46	49	51
Intra-State Transmission Charges MSLDC Charge	4,212	4,730	5,511	5,796
Incentives/Discounts	271	285	299	314
Contribution to Contingency Reserves	119	142	165	183
<b>Total Revenue Expenditure</b>	<b>64,888</b>	<b>71,026</b>	<b>77,290</b>	<b>82,603</b>
Add: Return on Equity Capital	817	868	1,849	1,859
<b>Aggregate Revenue Requirement</b>	<b>65,705</b>	<b>71,894</b>	<b>79,140</b>	<b>84,462</b>
Less: Non-Tariff Income	758	796	836	878

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Less: Income from Wheeling Charges	3	3	3	4
Less: Income from Open Access Charges	419	440	462	485
<b>Aggregate Revenue Requirement from Retail Tariff</b>	<b>64,525</b>	<b>70,655</b>	<b>77,838</b>	<b>83,096</b>
Less: Revenue from Sale of Power	55,226	58,671	62,392	66,416
Less: Income from Additional Surcharge	1,015	788	899	930
<b>Revenue Gap/(Surplus)</b>	<b>8,284</b>	<b>11,196</b>	<b>14,548</b>	<b>15,750</b>

### *Commission's Analysis and Ruling*

As elaborated in earlier paragraphs, the Commission has undertaken component-wise analysis of the ARR for the respective years in accordance with the Regulations, and has approved them as set out earlier. On that basis, the ARRs determined for each year of the 3<sup>rd</sup> Control Period are as shown in the following Tables:

**Table 5-95: Aggregate Revenue Requirement for WiresBusiness, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operation & Maintenance Expenses	3,843	3,957	4,074	4,195
Depreciation	1,856	2,078	2,205	2,248
Interest on Loan Capital	1,743	2,042	2,107	1,958
Interest on Working Capital & Interest on CSD	192	209	219	222
Other Finance Charges				
Provision for Bad and Doubtful Debts	26	26	26	26
Contribution to Contingency Reserves	97	116	129	134
<b>Total Revenue Expenditure</b>	<b>7,758</b>	<b>8,428</b>	<b>8761</b>	<b>8,784</b>
Add: Return on Equity Capital	1,423	1,499	1525	1,527
<b>Aggregate Revenue Requirement</b>	<b>9,181</b>	<b>9,927</b>	<b>10,285</b>	<b>10,311</b>
Less: Income from Wheeling Charges	4.52	4.70	4.88	5.08
Less: Income from Open Access Charges	599	623	648	674
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>8,577</b>	<b>9,299</b>	<b>9,632</b>	<b>9,631</b>

**Table 5-96: Aggregate Revenue Requirement for Supply Business approved by the Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses (including Inter-State Transmission Charges)	43,754	47,958	50,817	53,334
Operation & Maintenance Expenses	2,069	2,131	2,194	2,259
Depreciation	206	231	245	250
Interest on Loan Capital	194	227	234	218
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	619	650	682	716
Other Finance Charges				
Provision for Bad and Doubtful Debts	232	232	232	232
Other Expenses	15	16	16	17
Intra-State Transmission Charges and MSLDC Fees & Charges	4,611	5,824	6,539	6,619
<b>Contribution to Contingency Reserves</b>	11	13	14	15
Incentives/Discounts	271	285	299	314
DSM expenses	2	-	-	-
<b>Total Revenue Expenditure</b>	<b>51,985</b>	<b>57,566</b>	<b>61,273</b>	<b>63,975</b>
Add: Return on Equity Capital	179	188	191	192
<b>Aggregate Revenue Requirement</b>	<b>52,163</b>	<b>57,754</b>	<b>61,464</b>	<b>64,166</b>
Less: Non-Tariff Income	826	864	903	945
Add: RLC refund	284	-	-	-
Less: Income from Additional Surcharge	284	710	738	768
<b>Aggregate Revenue Requirement from Retail Supply</b>	<b>51,337</b>	<b>56,181</b>	<b>59,822</b>	<b>62,453</b>

**Table 5-97: Aggregate Revenue Requirement for Wires+Supply Business, as approved by Commission (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses	43,754	47,958	50,817	53,334
Operation & Maintenance Expenses	5,912	6,088	6,268	6,455
Depreciation Expenses	2,063	2,308	2,449	2,498
Interest on Loan Capital	1,937	2,269	2,341	2,176
Interest on Working Capital & Interest on Deposits from Consumers and Distribution System Users	811	859	902	938

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Other Finance Charges	0	0	0	0
Provision for Bad and Doubtful Debts	258	258	258	258
Other Expenses	15	16	16	17
Intra-State Transmission Charges and MSLDC Charges	4,611	5,824	6,539	6,619
Incentives/Discounts	271	285	299	314
Contribution to Contingency Reserves	108	129	144	149
DSM expenses	2	0	0	0
<b>Total Revenue Expenditure</b>	<b>59,743</b>	<b>65,994</b>	<b>70,033</b>	<b>72,758</b>
Add: Return on Equity Capital	1,602	1,687	1,716	1,719
<b>Aggregate Revenue Requirement</b>	<b>61,344</b>	<b>67,681</b>	<b>71,749</b>	<b>74,477</b>
Less: Non-Tariff Income	826	864	903	945
Less: Income from Wheeling Charges	5	5	5	5
Less: Income from Open Access Charges	599	623	648	674
Add: RLC refund	284	0	0	0
Add: Effect of sharing of gains/losses	(1,030)	(635)	(311)	-
Add: Impact of payment to MPECS in future years	0	46	43	40
<b>Aggregate Revenue Requirement from Retail Tariff</b>	<b>59,169</b>	<b>65,601</b>	<b>69,924</b>	<b>72,892</b>
Less: Revenue from Sale of Power	<b>54,027</b>	<b>57,244</b>	<b>60,471</b>	<b>63,929</b>
Less: Income from Additional Surcharge	284	710	738	768
<b>Revenue Gap/(Surplus)</b>	<b>4,857</b>	<b>7,647</b>	<b>8,715</b>	<b>8,196</b>

### 5.27 Stand-alone Average Cost of Supply over 3rd Control Period

The following Tables summarise the stand-alone ACoS derived as per the submissions of MSEDCL and as approved by the Commission.

**Table 5-98: Stand-alone ACoS for 3<sup>rd</sup> Control Period, as derived from MSEDCL submissions (Rs./kWh)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ACoS	6.56	6.78	7.00	7.00

**Table 5-99: Stand-alone ACoS for 3<sup>rd</sup> Control Period, as approved by Commission (Rs./kWh)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ACoS	6.45	6.74	6.81	6.71

## 6 ADDITIONAL CLAIMS AND REVENUE GAP TO BE RECOVERED

In addition to the ARR determined above for the 3rd Control Period, various other claims have been made by MSEDCL relating to previous Orders. This Section analyses those claims and the relevant rulings which need to be considered for determination of the consolidated Revenue Gap.

### 6.1 Carrying Cost on previous Gap

#### *MSEDCL's Submission*

MSEDCL has computed the carrying cost on the Revenue Gap of FY 2014-15 and FY 2015-16, and has claimed it for recovery in the 3rd Control Period. It has calculated the carrying cost considering the interest rate of 10.80% (9.30% Base Rate + 150 basis points) for 18 months, i.e., from 1 October, 2014 to 31 March, 2016, for the Revenue Gap of FY 2014-15; and 6 months, i.e., from 1 October, 2015 to 31 March, 2016 for the Revenue Gap of FY 15-16.

**Table 6-1: Computation of Carrying Cost by MSEDCL**

Particulars	Amount (Rs. crore)	Delay in Recovery (Months)	Interest Rate	Interest (Rs. crore)
Revenue Gap for FY14-15	1,271	18	10.80%	206
Revenue Gap for FY15-16	4,044	6	10.80%	218

#### *Commission's Analysis and Ruling*

The principles for allowing carrying/holding cost have been laid down by the ATE in its Judgment dated 8 April, 2015 in Appeal No. 160 of 2012. The interest should be calculated for the period from the middle of the financial year in which the Revenue Gap/(Surplus) arose upto the middle of the financial year in which the recovery has been proposed. Thus, for the Revenue Gap/(Surplus) of FY 2014-15, the Commission has considered interest from the middle of FY 2014-15 to the middle of FY 2016-17. It has determined the carrying/holding cost on the approved Revenue Gap/(surplus) of FY 2014-15 only, for which final true-up has been undertaken in this Order. The Commission has also allowed holding cost on the net difference between the Revenue Surplus approved for FY 2014-15 in the previous MYT Order, and the higher Revenue Surplus now determined for FY 2014-15 in this Order after final true-up.

The Commission has not considered carrying cost on the Revenue Gap/(surplus) of FY 2015-16, as the final true-up for that financial year is to be undertaken subsequently at the time of MTR.

The Commission has computed the holding cost for the yearly periods at simple rate of interest equivalent to the weighted average of the SBI Prime Lending Rate (PLR) for FY 2014-15 to FY 2015-16. As regards interest rate to be applied for computing

the holding cost in FY 2016-17, the following provision of the MYT Regulations, 2015 (Regulation 33) has been followed.

*“The Commission shall allow Carrying Cost or Holding Cost, as the case may be, on the admissible amounts, with simple interest, at the weighted average Base Rate prevailing during the concerned Year, plus 150 basis points.”*

On that basis, the Commission has approved the holding cost worked out as shown in the Tables below:

**Table 6-2: Differential Revenue Surplus for FY 2014-15 after final True-up, as approved by Commission (Rs. crore)**

Particulars	Amount
Revenue Surplus for FY 2014-15 allowed in Case No. 121 of 2014	268
Revenue Surplus for FY 2014-15 allowed in present Order in Case No. 48 of 2016	296
<b>Differential Revenue Surplus</b>	<b>27</b>

**Table 6-3: Holding Cost on differential Revenue Surplus for FY 2014-15, as approved by Commission**

Particulars	Period for which Holding Cost is computed	Rate of Interest	Holding Cost (Rs. crore)
Holding Cost on differential Revenue Surplus allowed after trueing-up of FY 2014-15	FY 2014-15 (half year)	14.75%	(1.98)
	FY 2015-16 (full year)	14.29%	(3.83)
	FY 2016-17 (half year)	10.80%	(1.45)
<b>Total</b>			<b>(7.25)</b>

## 6.2 Impact of Review Order

### *MSEDCL's Submission*

MSEDCL had filed a Petition in Case No.121 of 2015 for review of certain aspects of the previous MYT Order. In its Order dated 29 January 2016, the Commission had allowed MSEDCL to claim the impact of disallowed IDC in its next tariff Petition:

*“Deduction of Interest during Construction from Interest Expenses: The Commission notes that two distinct approaches have been adopted for computing interest on long-term loan in its impugned Order in respect of MSEDCL on the one hand, and in its MTR Order in Case No. 207 of 2014, also dated 26 June, 2015, pertaining to MSETCL on the other. The Commission is of the view that its ruling in the MSETCL Order that interest capitalised is not to be deducted from the interest expenses since addition in loans is considered only on account of capitalised assets is the correct approach for determining the interest on long-term loan.”*



In view of the above, MSEDCL has claimed Rs. 140 crore of disallowed IDC from the interest expenses, along with carrying cost.

In the same Order, the Commission had allowed MSEDCL to claim the impact of provisioning for Bad Debts on disallowed Trade Receivables:

*“As regards MSEDCL’s claim of error in considering the Trade Receivables in Note-17 and Long-term Trade Receivables in Note-15, the Commission finds the amount of net Receivables after deducting provision for Bad Debts has been inadvertently considered instead of the gross amount of Rs. 10,333 crore for Trade Receivables in Note-17 and Rs. 4,006 crore for Long-term Trade Receivables in Note-15. MSEDCL may claim the impact in its next Tariff Petition, which it is expected to file shortly.”*

In the view of the above, MSEDCL has claimed the provision for Bad Debts on the disallowed Trade Receivables (1.5% of Rs. 177+176 crore) along with carrying cost.

**Table 6-4: Impact of Review Order and Carrying Cost, as submitted by MSEDCL**

Particulars	Amount (Rs. crore)	Delay in Recovery (Months)	Interest Rate	Interest (Rs. crore)
Deduction of Interest Capitalised	140	24	10.80%	30
Provision for Bad Debts on Trade Receivables	5	24	10.80%	1

### ***Commission’s Analysis and Ruling***

In its review Order dated 29 January, 2016 cited by MSEDCL, the Commission had upheld the claims made under the heads of Interest Capitalised and Provision for Bad Debts on Trade Receivables. Accordingly, these have been accounted for in the present Order.

In addition, the Commission has reworked the O&M expenses of FY 2013-14 as trued-up in the previous MYT Order and the corresponding impact on sharing of gains and losses. This has been done on account of the impact of deduction of GFA of DFs from the total GFA used for computing normative O&M expenses, based on the recent data submitted by MSEDCL.

The following Tables shows the revision in O&M expenses for FY 2013-14 and the consequent impact on the sharing of gains and losses.

**Table 6-5: Impact of disallowance of Distribution Franchisees' GFA in O&M Expenses for FY 2013-14**

Particulars	FY 2013-14		
	Previous MYT Order	Review Order (48 of 2016)	Difference
	Incl. DF GFA	Excl. DF GFA	
O&M Wire	3,717.65	3,688.92	(28.72)
O&M Supply	1,685.93	1,685.53	(0.40)
Total	<b>5,403.58</b>	<b>5,374.46</b>	<b>(29.12)</b>

**Table 6-6: Impact of disallowance of Distribution Franchisees' GFA in Sharing of Gains & Losses (Wires+Supply)for O&M Expenses for FY 2013-14**

Particulars	MSEDCL (Actual)	Normative for trueing-up	Gains/(Loss)	Impact of Efficiency Gains /losses passed on to consumers	Net Entitlement after sharing of Gains and Losses
O&M Expenses (allowed in previous MYT Order)	5,319.84	5,403.58	83.74	(27.91)	5,375.67
O&M Expenses (Revised in Case 48 of 2016)	5,319.84	5,374.46	54.62	(18.21)	5,356.25
<b>Difference</b>		<b>(29.12)</b>		<b>9.71</b>	<b>(19.42)</b>

The Commission has referred to Regulation 33 of the MYT Regulations, 2015 and has worked out the carrying cost on the allowed heads accordingly. Further, based on the principles set out by ATE, the Commission has computed carrying cost from the middle of FY 2015-16 to the middle of FY 2016-17 (12 months).

**Table 6-7: Impact of Review Order including Carrying Cost, as approved by Commission**

Particulars	Amount (Rs. crore)	Delay in recovery (months)	%	Carrying Cost
Deduction of Interest Capitalised	140	12	10.80%	15.12
Provision for Bad Debts on Trade Receivables	5	12	10.80%	0.54
Revision in O&M expense for FY 2013-14	(19)	12	10.80%	(2.10)
Total	126			13.56
<b>Net Impact including Carrying Cost</b>	<b>139</b>			

### 6.3 Impact of Commission's Order regarding Mula Pravara

#### *MSEDCL's Submission*

As per the Commission's Order dated 2 May, 2016 in Case No. 24 of 2012 on the determination of charges payable to Mula Pravara Electric Co-operative Society (MPECS) by MSEDCL in pursuance of ATE's Judgment in Appeal No. 221 of 2014,

1. *"The total payout due as on 10 May, 2016 for all charges due from February, 2011 to April, 2016 will be Rs. 360.79 Crs, which includes the following:*

- i. Rs. 247.54 Crs as the accumulated user charges (total user charges for the period - Rs. 311.18 Crs, adjusted to the extent of the amount deposited with the Commission by MSEDCL (Rs. 63.64 Crs);*

- ii. Rs. 112.65 Crs as the accumulated carrying cost for the unpaid due amount (for obvious reasons, no carrying cost has been applied on the amount deposited by MSEDCL with the Commission).*

*The Commission also directs MSEDCL to pay this amount in at most three monthly installments starting from 10 June, 2016, with the subsequent installments due by 10 July, 2016 and 10 August, 2016. Carrying cost, consistent with the principles stated in the Report, will apply for the overdue amount starting 11 May, 2016.*

2. *MSEDCL shall pay the user charges for the month of May, 2016, amounting to Rs. 4.20 crore, by 10 June, 2016. All subsequent monthly user charges shall be paid by MSEDCL before the 10th day of the following month, as per the payout schedule at Annexure B of this Order. The payouts will continue until the payment due for the month of January, 2025."*

Thus, MSEDCL will have to pay the following amounts to MPECS and the Commission:

- 1) Rs. 1 crore per month on 10<sup>th</sup> of every month from June, 2016, to MPECS.
- 2) Rs. 247.54 crore+ Rs. 112.65 crore = (Rs. 360.19 crore) /3 = Rs. 120.06 crore to be paid in 3 instalments on 10th on every month starting from June, 2016, to be deposited with the Commission.
- 3) Rs. 4.20 crore to be deposited with the Commission against user charges from 10 June, 2016 onwards and on the 10th of every successive month thereafter.

Thus, MSEDCL will have to pay Rs. 124.26 crore per month in addition to Rs.1 crore to MPECS from June to August, 2016, and thereafter the monthly user charges specified by the Commission.

Due to the above Order, MSEDCL will have to bear the interest costs to make the monthly payments to MPECS and deposit, as it is going through a cash crunch and

would have to borrow from financial institutions on short-term basis to meet its requirement. Hence, MSEDCL has claimed this same as a Revenue Requirement for the 3rd Control Period till the matter is finally resolved by the higher Courts.

The total amount claimed as proposed above is as follows:

- 1) Rs.120.06 crore - for June 2016 to March 2017, 10 months @ 9.5 % p.a. will be Rs. 9.50 crore.
- 2) Rs.120.06 crore -for July 2016 to March 2017, 9 months @ 9.5 % p.a. will be Rs. 8.55 crore.
- 3) Rs.120.06 crore- for August 2016 to March 2017, 8 months @ 9.5 % p.a. will be Rs. 7.60 crore.
- 4) Rs. 64.64 crore already deposited and being released to MPECS -from May 2016 to March 2017 for 11 months @ 9.5 % p.a. will be Rs. 5.61 crore.
- 5) Monthly deposit payable - from May 16 to March 17 for 11 months 45.00 crore and interest @ 9.5 % p.a. will be Rs. 3.91 crore.
- 6) Rs. 1 crore to MPECS x 11 = 11 crore for May 2016 to March 2017 for 11 months @ 9.5 % p.a. will be Rs. 0.96 crore.

Based on the above, for FY 2016-17, MSEDCL has claimed the principal amount at (1) to (3) above of Rs. 360.18 crore + at (4) to (6) of Rs.120.64 crore = Rs. 480.82 crore + Interest of Rs.31.70 crore = Total of Rs. 512.52 crore.

In addition, the principal and interest payable from FY 2017-18 to FY 2019-20 is calculated as per the schedule of payments set out in the Commission's Order. Accordingly, the amount payable towards this will be as mentioned below:-

**Table 6-8: Impact of Review Order over 3<sup>rd</sup> Control Period, as submitted by MSEDCL (Rs. crore)**

Year	Deposit	User Charges	Interest @ 9.5%	Total
FY 2017-18	46.20	12	0.46	58.66
FY 2018-19	43.18	12	0.44	55.62
FY 2019-20	40.17	12	0.41	52.58

Accordingly, MSEDCL has claimed a total of Rs. 679 crore (512.52+58.66+55.62+52.58) for the 3<sup>rd</sup> Control Period towards the impact of the MPECS Order in Case No. 24 of 2012.

### ***Commission's Analysis and Ruling***

The Commission has verified the computations presented by MSEDCL for working out the total impact of the MPECS Order over the 3rd Control Period.

However, the Commission does not find any merit in the contention of MSEDCL that, for making payments to MPECS, it would have to take short-term loan and bear the interest cost, the additional interest on which ought to be allowed by the

Commission. Since the entire principal amount and accumulated holding cost on that amount to be paid to MPECS is allowed for recovery through the tariff, there is no case for allowing MSEDCL any additional interest cost for funding it. Hence, MSEDCL's claim on account of short-term loans for servicing such payments and allowing the consequent interest cost cannot be approved.

Moreover, the Commission observes that the entire amount pertaining to the period FY 2016-17 to FY 2019-20 has been claimed by MSEDCL for recovery in FY 2016-17 itself. The Commission has allowed the recovery of the amount in the years in which it is due and not in a single year.

As regards MSEDCL's claim of Rs. 1 crore per month, that amount was only an interim arrangement until the Commission's final Order was issued, and has hence not been allowed for FY 2016-17 to FY 2019-20 as claimed by MSEDCL.

As regards the amount of 360.19 crore to be paid in three equal monthly instalments, the Commission has allowed the holding cost on the outstanding amount till the amount is fully paid. Its computation based on the payment schedule approved in the Order in Case No. 24 of 2012 is shown in the following Table.

**Table 6-9: Carrying Cost on monthly instalments, as approved by Commission (Rs. crore)**

Start date		11-May-16	11-Jun-16	11-Jul-16	11-Aug-16
Due date		10-Jun-16	10-Jul-16	10-Aug-16	10-Sep-16
Opening	Rs. crore	360.19	360.19	240.13	120.06
Payment	Rs. crore	0	120.06	120.06	120.06
Outstanding	Rs. crore	360.19	240.13	120.06	-
No. of days	No.	31	30	31	31
Rate of Interest	%	10.80%	10.80%	10.80%	10.80%
Interest	Rs. crore	3.30	2.13	1.10	0.00
<b>Total</b>	Rs. crore	<b>6.54</b>			

Based on the above, the Commission has allowed the following to be recovered in FY 2016-17.

**Table 6-10: Recovery of impact of MPECS Order in FY 2016-17, as approved by Commission (Rs. crore)**

Particulars	Amount
Monthly share of accumulated user charge (1 <sup>st</sup> month)	120.06
Monthly share of accumulated user charge (2 <sup>nd</sup> month)	120.06
Monthly share of accumulated user charge (3 <sup>rd</sup> month)	120.06
Amount already deposited with Commission by MSEDCL	63.64
Monthly user charge in FY 2016-17	45.00
<b>Total</b>	<b>468.82</b>

Accordingly the Commission has approved an amount of Rs. 475 crore (Rs.468.82 crore +Rs. 6.54 crore) towards the impact of the MPECS Order in FY 2016-17.

In addition, the Commission has allowed Rs. 46.20 crore, Rs. 43.18 crore and Rs. 40.17 crore, respectively, for FY 2017-18, FY 2018-19 and FY 2019-20 towards user charges payable by MSEDCL to MPECS as per the payment schedule approved in Case No. 24 of 2012. This amount has been included in the respective years' ARR allowed in this Order.

#### **6.4 Impact of MSPGCL MYT Order**

In its MYT Order for MSPGCL dated 30 August, 2016 in Case No. 46 of 2016, the net impact of the Revenue Surplus of Rs. 1108 crore has been allowed from the truing-up of FY 2014-15 and provisional truing-up of FY 2015-16 to be passed on to MSEDCL. Accordingly, that amount has been considered in this Order for recovery in the 3rd Control Period.

#### **6.5 RPO Regulatory Charge for Shortfall in RPO Compliance for FY 2013-14**

In its Order dated 4 August, 2015 in Case 190 of 2014 verifying the RPO compliance of MSEDCL for FY 2013-14, the Commission invoked Regulation 12 (provision for imposing RPO Regulatory Charges) of the RPO Regulations, 2010 with regard to the shortfall in compliance of RPO targets to the extent of 281.75 MU against the Solar RPO target for FY 2013-14 and a cumulative shortfall of 1078.13 MU against the Non-Solar RPO target upto FY 2013-14::

*“54. In the light of the facts set out at paras. 46 to 50 above and the provisions of the RPO-REC Regulations, 2010, the Commission finds no justification or mitigating circumstances (except in case of Mini/Micro Hydro power) for MSEDCL's shortfall, in spite of RECs being available, against its Solar RPO target for FY 2013-14, and cumulative Non-Solar RPO shortfall of FY 2013-14 and previous years. This is, therefore, a fit case for applying Regulation 12 of the RPO-REC Regulations, as envisaged by the ATE.”*

The Commission estimated the cost of compliance if such shortfall is met by way of purchase of RECs at the floor price as Rs 260.33 Crore (Rs 161.72 Crore for Non-Solar + Rs 98.61 Crore for Solar).

The Commission allowed MSEDCL to meet the shortfall by purchase of Solar and non-Solar RECs and/or by purchase of RE power to fully meet the shortfall against the RPO targets by the end of March 2016.

The Commission also clarified that, considering the circumstances set out in the said Order which have led to it invoking the provisions of Regulation 12, the expenditure on purchase of RECs and/or actual power procurement shall not be passed through to consumers to the extent of the shortfall not met by MSEDCL by the end of FY 2015-16.

Subsequently, the Commission has also undertaken verification of RPO compliance by MSEDCL for FY 2014-15 in its Order dated 14 September, 2016 in Case 16 of 2016. In that this Order, the Commission determined a shortfall in fulfilment of RPO for FY 2014-15 as well. The cumulative shortfall against the Solar RPO at the end of FY 2014-15 stands at 1201.81 MU, and the cumulative shortfall for Non-Solar RPO is 1724.49 MU.

The Commission is yet to verify RPO compliance by MSEDCL for FY 2015-16. For FY 2015-16, MSEDCL has submitted RE procurement as 8544 MU out of the total energy procurement of 116,073 MU, which amounts to 7.36% as against the RPO target of 9% (0.5% for Solar and 8.5% for Non-Solar). While the detailed break-up of RE procurement between Solar, Non-Solar and Mini/Micro Hydro sources for FY 2015-16 will be scrutinised will be taken up at the time of verification of RPO compliance, it is evident from the information submitted for provisional true-up for FY 2015-16 by MSEDCL that there would be a shortfall in compliance of RPO targets for FY 2015-16 as well.

Thus, it appears that MSEDCL has not taken any substantive or effective action towards fulfilment of the shortfall in RPO targets, as per the directions in Case 190 of 2014, by the end of March, 2016, inspite of availability of RECs (Solar and Non-Solar) in the market.

Accordingly, in the present Order, the Commission has dis-allowed the RPO compliance cost of Rs 260.33 Crore to the extent of the shortfall in RPO compliance by MSEDCL, as directed in Case 190 of 2014, on a provisional basis. This would be reviewed at the time of MTR for truing-up on the basis of the RPO compliance verification Order which would be passed by the Commission with regard to FY 2015-16.

## **6.6 Impact of FAC Revenue**

While computing the Revenue Gap for the 3rd Control Period, MSEDCL has not included the FAC component as part of the revenue from the existing tariff, although a substantial FAC is being levied on each consumer category. While projecting the power purchase cost from various sources during the 3rd Control Period, the Commission has considered the Variable Cost alongwith applicable escalation factors. Accordingly, in computing the Revenue Gap/(Surplus), the Commission has also taken the FAC component as a part of revenue. That component has been computed considering the consumer category-wise FAC for June, 2016 (applicable at the time of submission of the revised MYT Petition) and the approved energy sales. This FAC component has a cumulative impact of Rs. 19,373 crore during the 3rd Control Period.

## 6.7 Total Revenue Gap to be recovered

### *MSEDCL's Submission*

The total Revenue Gap, considering the Revenue Gap and carrying cost for FY 2014-15 to FY 2019-20, is as shown in the following Table.

**Table 6-11: Total Revenue Gap to be recovered, as submitted by MSEDCL**

Particulars	Amount (Rs. crore)
Revenue Gap from FY 2014-15	1,271
Revenue Gap from FY 2015-16	4,044
Revenue Gap from FY 2016-17	8,284
Revenue Gap from FY 2017-18	11,196
Revenue Gap from FY 2018-19	14,548
Revenue Gap from FY 2019-20	15,750
Impact of Review of MYT Order including carrying cost	177
Carrying Cost on Gap of FY 14-15 and FY 15-16	424
Impact of Mula Pravara Case No. 24 of 2012	679
<b>Total Revenue Gap</b>	<b>56,372</b>

### *Commission's Analysis and Ruling*

MSEDCL has claimed the stand-alone Revenue Gap for FY 2014-15 to be recovered as part of the total Revenue Gap. However, a Revenue Surplus of Rs. 268 crore was already allowed for FY 2014-15 in the previous MYT Order. While truing-up in the present Order, the Commission has approved a higher Revenue Surplus of Rs. 296 crore for FY 2014-15, thus resulting in over-recovery of the difference of Rs. 27 crore. Accordingly, for the computation of the net Revenue Gap for the 3rd Control Period, the Commission has considered a net differential Revenue Surplus of Rs. 27 crore for FY 2014-15 against MSEDCL's claim for a stand-alone Revenue Gap of Rs. 1,271 crore.

The Commission has considered the stand-alone Revenue Gap for the remaining years as part of the net Revenue Gap to be recovered in the 3rd Control Period.

Based on the above, the Commission has approved the following net Revenue Gap to be recovered in 3rd Control Period.

**Table 6-12: Revenue Gap to be recovered in 3rd Control Period, as approved by Commission**

Particulars	Amount (Rs. crore)
Revenue Gap from FY 2014-15	(27)
Revenue Gap from FY 2015-16	(107)
Revenue Gap from FY 2016-17	4,857



<b>Particulars</b>	<b>Amount (Rs. crore)</b>
Revenue Gap from FY 2017-18	7,647
Revenue Gap from FY 2018-19	8,715
Revenue Gap from FY 2019-20	8,196
Impact of Review of MYT Order incl. carrying cost	139
Carrying Cost On Gap of FY 14-15 and FY 15-16	(7)
Impact of Mula Pravara Case No. 24 of 2012	475
Impact of MSPGCL MYT Order	(1,108)
Impact of non-Compliance of RPO as per Case 190 of 2014	(260)
<b>Total</b>	<b>28,522</b>
Impact of FAC Revenue (estimated.)	<b>19,373</b>
<b>Total Revenue Gap</b>	<b>9,149</b>

## **7 COMPLIANCE OF EARLIER DIRECTIVES**

The status of compliance by MSEDCL of the directives given in the previous MYT Order is set out below.

### **7.1 Load Shedding**

#### **Directive**

The load shedding protocol was devised as a load regulation measure to address significant power shortage situation then prevalent in the State. In case there is sufficient availability of power, no consumer should be subjected to load shedding. Reducing The technical and Commercial Losses and improving collection efficiency is the responsibility of the Distribution Licensee. Hence, the Commission rejects MSEDCL's stand to apply the load shedding protocol even when there is sufficient availability of power in the system. The Commission directs MSEDCL to ensure that the load shedding protocol is used only as a load regulation measure in shortage situations and not as a matter of routine.

#### ***MSEDCL's Response***

MSEDCL has withdrawn load shedding throughout the State as sufficient power is available. The withdrawal is irrespective of the Technical and Commercial Losses and collection efficiency. MSEDCL has submitted sample withdrawal details.

#### ***Commission's Ruling***

The Commission has noted the submission of MSEDCL.

### **7.2 Quality of Power Supply**

#### **Directive**

The Commission directs MSEDCL to update the performance indices on a monthly basis on its website and also submit quarterly reports to the Commission in accordance with Regulation 10.3 of the Standards of Performance Regulations, 2014.

#### ***MSEDCL's Response***

MSEDCL has submitted the data for FY 2014-15 and FY 2015-16 (up to December, 2015). Reliability Indices for this period are also available on its website.

#### ***Commission's Ruling***

MSEDCL has now uploaded on its website the details of Reliability Indices up to June, 2016. MSEDCL should also ensure timely updating of the performance indices and regularly submit its quarterly reports.

### **7.3 Applicability of Local Body Tax**

#### **Directive**

Levy of Local Body Tax (LBT) over and above the approved Energy Charges on the electricity consumption amounts to modification of the tariff. No component of the Tariff can be modified or levied without prior approval of the Commission. The Commission directs MSEDCL not to levy LBT on consumers. MSEDCL may separately file a Petition with regard to recovery of the costs associated with LBT.

***MSEDCL's Response***

MSEDCL has issued instructions to stop levying and recovering the LBT from consumers situated in Amravati and Aurangabad Municipal Corporation areas from 1 June, 2015.

***Commission's Ruling***

The Commission has noted the compliance.

**7.4 Depreciation**

**Directive**

The Commission directs MSEDCL to maintain in its Asset Register the details of useful life for each asset, and consider the retirement of assets once it is over.

***MSEDCL's Response***

The Asset Register up to FY 13-14 is maintained in the ERP system. Updation of the Asset Register for FY 14-15 is in progress. Although the useful life of assets is not shown in the Asset Register, it is considered for calculating depreciation. Further, an asset is retired from the Register once it is found that it is no longer workable and is declared as scrap.

***Commission's Ruling***

From the clarifications provided in the Petition, the Commission notes that MSEDCL has, as part of the implementation of SAP-ERP, streamlined the calculation of depreciation in line with the MYT Regulations. That is also reflected in the Notes to the Audited Accounts for FY 2014-15.

However, the Commission directs MSEDCL to maintain in its Asset Register the details of useful life for each asset, and consider the retirement of assets once their useful life is over. The Commission shall consider the retirement of assets on actual basis at the time of the true-up of the respective years.

**7.5 Metering of un-metered Agriculture consumers**

**Directive**

The Commission directs MSEDCL to complete the metering of un-metered Agriculture consumers within 3 years so that, by the end of FY 2017-18, the entire un-metered consumption is converted to metered consumption. MSEDCL should modify its current metering plan in accordance with above timelines and submit the

detailed Circle-wise/sub-Division-wise revised metering plan for Agriculture consumers within 60 days.

Priority should be accorded for metering of un-metered connections with Connected Load in excess of 5 HP. The region-wise planned metering programme should not pose constraints for installation of meters for farmers who opt for conversion to metered connections.

### ***MSEDCL's Response***

MSEDCL has proposed the funding for 100% metering plan as below.

**Table 7-1: Funding for conversion of Agriculture un-metered Connections, as submitted by MSEDCL**

<b>Sr. No.</b>	<b>Financial Year</b>	<b>Un-metered Agriculture consumers proposed to be metered (nos.)</b>	<b>Estimated cost of Metering (Rs. crore)</b>
1	2015-16	2,14,520	158.41
2	2016-17	6,95,405	755.18
3	2017-18	6,91,922	736.38
	<b>Total</b>	<b>16,01,847</b>	<b>1,649.97</b>

However, the Circle-wise metering plan will be prepared and submitted to the Commission for approval and to REC for financial sanction. On approval, the metering plan for FY 2016-17 and FY 2017-18 will be executed.

### ***Commission's Ruling***

As mentioned earlier in this Order, MSEDCL has submitted a DPR for its Metering for in-principle approval. The DPR included the cost towards Capacitors, which is actually a cost to be borne by consumers and not by MSEDCL. Hence, the DPR was referred back to MSEDCL for revision and re-submission. MSEDCL has not reverted with a revised DPR so far. Nevertheless, in order to expedite implementation of metering of Agriculture consumers without further delay, capitalisation for the scheme has been allowed in this Order on a provisional basis till FY 2017-18, in line with the investment proposed by MSEDCL in its original DPR but subject to the issue of bearing of expenditure on Capacitors flagged by the Commission. The position will be re-assessed at the time of the MTR considering the in-principle approval that may be granted to the DPR Scheme after its revision and re-submission by MSEDCL.

The Commission has revised its earlier stipulation for metering of all Agriculture consumers by the end of FY 2017-18, as elaborated elsewhere in this Order.

## **7.6 Feeder-level Metering**

### **Directive**

MSEDCL has carried out metering of all the existing 17,131 Feeders. However, information on energy consumption on the separated Agriculture Feeders is yet to be submitted. Agriculture consumption can be decided based on the readings of these Feeders. Therefore, the Commission directs MSEDCL to submit the energy consumption on these separated Agriculture Feeders for FY 2013-14 and FY 2014-15 within 60 days.

***MSEDCL's Response***

MSEDCL has submitted the requisite data for FY 2013-14 and FY 2014-15.

***Commission's Ruling***

The Commission has analysed the data submitted by MSEDCL, details of which have been presented in the relevant truing-up Chapters of this Order.

**7.7 DTC Metering**

**Directive**

100% DTC metering, irrespective of urban or rural areas, will have to be carried out by MSEDCL. This is vital for energy accounting. In this context, MSEDCL is again directed to submit the detailed status of Circle-wise DTC metering, and its action plan for 100% DTC metering, with time-lines, within 60 days. MSEDCL should also submit the updated status report of DTC metering and energy accounting report of metered DTCs in its next Tariff Petition.

***MSEDCL's Response***

MSEDCL has proposed an action plan to implement DTC Metering. All DTCs sanctioned after 1 April, 2016 shall be provided with appropriate meter, which would be commissioned along with such DTC. The cost of such DTC metering would be included in the scheme under which the DTC is sanctioned.

Necessary schemes/ DPRs are being prepared and will be submitted to the Commission by 30<sup>th</sup> June, 2016. On approval, the tendering process would be initiated and quarterly progress report for the July 2016 quarter onwards submitted.

As per its additional submission during these proceedings, MSEDCL will be approaching the Commission separately with a Petition highlighting certain issues in the implementation of DTC metering.

***Commission's Ruling***

The Commission has noted MSEDCL's submission.

**7.8 Action Plan for reduction of Distribution Loss**

**Directive**

MSEDCL has targeted reduction of Distribution Loss to less than 20% in 21 high-Loss Divisions by March, 2015. The Commission directs MSEDCL to submit the status of

implementation of the action plan for reducing Distribution Losses in these 21 Divisions within 60 days.

### ***MSEDCL's Response***

For reducing the high level of Distribution Losses in some Divisions, MSEDCL has undertaken multi-pronged activities, viz. new infrastructure development under infrastructure schemes, strengthening and up-gradation of the existing network, installation of Capacitor Banks etc., at various levels.

MSEDCL's further action plan to reduce Distribution Loss includes initiatives like implementation of theft detection drive through special flying squads, establishment of Special Police Stations to lodge FIRs against energy thefts, advanced IT technology-based IR/RF energy meters to consumers, AMR meters to all HT consumers, improvement in the consumer meter reading processes by photo meter reading etc.. The Distribution Losses are being monitored at the at the Division level.

To reduce the AT&C Losses, several measures are being implemented. One such measure is to provide reliable infrastructure. MSEDCL has implemented the Infrastructure Plan- II in all Divisions. It has submitted the scope and achievements of Infrastructure Plan II up to 31 July, 2015.

### ***Commission's Ruling***

The Commission has noted MSEDCL's submission. The Commission has restated the Distribution Loss levels of FY 2014-15 and FY 2015-16 as elaborated in Sections 3.4 and 4.3 of this Order. Based on the restated Distribution Loss levels, a Loss reduction trajectory has been set for the 3rd Control Period.

## **7.9 Recovery of Arrears**

### **Directive**

The Commission directs MSEDCL to submit its action plan for recovery of arrears and also publish on its website the quarterly report on the status of arrears and recoveries made during the quarter against each consumer category and across all Circles.

### ***MSEDCL's Response***

The status of category-wise arrears payable by consumers as on June, 2015 is as below.

**Table 7-2: Consumer Category-wise Arrears as on 20.6.2015, as submitted by MSEDCL**

Category	Arrears as on 30.06.2015 (in Rs. crore)	As percentage of total Arrears
Agriculture	10,917	53.83%
Street Light	1,148	5.66%
Public Water Works	940	4.64%

Category	Arrears as on 30.06.2015 (in Rs. crore)	As percentage of total Arrears
Residential	737	3.63%
Commercial	187	0.92%
Industrial	406	2.00%
Poultry, Hoardings, Etc	67	0.33%
PD Consumers	3,563	17.57%
<b>SUB – TOTAL</b>	<b>17,966</b>	<b>88.58%</b>
Mula-Pravara	2,317	11.42%
<b>GRAND TOTAL</b>	<b>20,283</b>	

The total arrears payable by consumers as on 30<sup>th</sup> June, 2015 amounted to Rs. 20,283 crore. In the MYT Petition (Annexure-15), MSEDCL has also submitted the consumer category-wise arrears as on November 2015, as Rs 24,662 crore. The arrears are increasing, but MSEDCL has been taking effective steps and making concentrated efforts for their recovery.

MSEDCL has submitted details of the procedure followed for recovery of arrears. An effective tool for recovery of electricity bills is disconnection of power supply, and MSEDCL is regularly undertaking disconnection drives for recovery of arrears. It has also undertaken theft detection drives to ensure that consumers whose power supply has been disconnected for default in payment are not using power unauthorizedly. In case disconnection of power supply does not prompt the consumer to pay the arrears, power supply agreement is terminated after six months and legal action taken by filing a recovery suit. The Courts would be requested to attach the property of the defaulting consumer (to extent of the claim).

As regards the arrears of MPECS, the MPECS area has been merged in the area of MSEDCL from February, 2011 and since then MSEDCL is supplying power in its area. MSEDCL had filed a recovery suit (5 of 2011) in the Court of the Civil Judge Senior Division, Shrirampur against MPECS for recovery of arrears of Rs. 2,316.98 crore, which is pending since long. MSEDCL has applied to the Court for prohibiting MPECS from disposing of its assets in the meantime. MSEDCL cannot indicate any time frame within which it would be able to recover the arrears payable by MPECS.

The principal amount of arrears payable by the Local Self Government Bodies has not shown any alarming increase in trend in last 2/3 years. For recovery of past arrears, MSEDCL is exploring alternatives like waiver of interest and DPC to encourage the defaulting bodies to liquidate the receivables.

In most of the cases of industrial / commercial consumers, the assets are already mortgaged with the financial institutions which have a priority claim over their sale

proceedings. As such, the claim of MSEDCL being unsecured does not get priority and remains on paper for want of execution of decree.

Wherever the outstanding amount is found to be irrecoverable due to the failure of the legal proceedings or exhaustion of efforts, the process of writing off the outstanding would be initiated.

The Circle-wise and category-wise demand collection and arrears report upto the March, 2016 quarter has been published on MSEDCL's website.

### ***Commission's Ruling***

The Commission has noted MSEDCL's submissions. MSEDCL's additional submission shows that arrears as on March, 2016 are Rs. 28098.78 crore, which has increased to Rs. 30221.48 crore by June, 2016. The arrears have reached alarming levels which would affect its operations. In its earlier Tariff Orders, the Commission had stated that, although arrears do not affect the determination of ARR directly, timely collection is essential to maintain liquidity and reduce the working capital needed.

## **7.10 Infrastructure requirements for Malegaon**

### **Directive**

MSEDCL should take all necessary steps, including infrastructure development, in its area so as to ensure that consumers do not suffer on the quality of service. In this context, MSEDCL is directed to undertake detailed technical study about adequacy of distribution infrastructure considering future load growth in the region and take up suitable measures, including setting up necessary distribution infrastructure in the Malegaon area.

### ***MSEDCL's Response***

MSEDCL has submitted the details of the technical study on the adequacy of the existing distribution infrastructure. It has listed the various works it would undertake in the Malegaon area under the already approved schemes of Infra-II, R-APDRP, DDUGJY, IPDS-I and IPDS-II. MSEDCL has also submitted its assessment of future load growth in Malegaon region, the remedial action planned and the status of the implementation in the present Petition. As part of its study, MSEDCL has assessed the capacity of around 23 distribution sub-stations in the area, its existing loading level, and projected the load-growth in the near future. Based on these, MSEDCL has identified specific sub-station capacity enhancement requirements or need for establishment of new distribution substations that would cater to the prevailing deficiencies and additional load growth in the area. Accordingly, MSEDCL has proposed installation of 10 new distribution substations, augmentation of 14 existing distribution sub-stations, installation of 531 new DTC and augmentation of 209 DTC in the area.

### ***Commission's Ruling***



The Commission has noted MSEDCL's submission.

## **7.11 Fatal system incidents and safety system upgradation**

### **Directive**

Strict adherence to safety standards and protocol need to be followed to avoid any accident and regular monitoring and upkeep of safety devices, training of operating staff and consumers is equally important. In this context, the Commission directs MSEDCL to develop a comprehensive plan for consumer awareness programmes at Circle/sub-Division level and annual training/grading system for its team. Safety guidelines and a manual should be published on the website.

### ***MSEDCL's Response***

MSEDCL imparts orientation, induction and need based trainings to engineers and staff from human resources, finance and accounts departments at its Department of Training and Safety at Nashik. There are four regional training centres at Nashik, Aurangabad, Sangli and Amravati to impart training mainly to Technicians and Sub-Station Operators. 25 training centres cater to the need for short term local training. MSEDCL also conducts one day safety seminars for employees and public for safety awareness.

The MSEDCL Training Centre is accredited by MoP and CEA, and is ISO 9001:2008 certified. It is also a partner institute with REC and PFC under the National Training Programme for conducting various training. MSEDCL collects information from the field and studies the lacunae in transformer failure ratio, need based practices and safety, and accordingly prepares the syllabus for training. The various training programmes have helped MSEDCL achieving safety standards in the following manner:

- (a) Change of Mindset / Work Culture, Broadening of Vision, Knowledge Sharing
- (b) Team Building, Sharpening of Working Tools
- (c) Sample Tool-kit to Line Staff is given to promote Safety Awareness
- (d) Consumer Relation Management
- (e) Revenue Management – All Billing Matters
- (f) ATC loss brought down to 14 %
- (g) Collection efficiency improved to 98 %
- (h) Transformer Failure rate reduced from 16.17% (2005-06) to 8.85% (2014-15)
- (i) Implementation of ZLS (Zero load shedding) model helped to make Maharashtra load-shedding free
- (j) Centralized MIS system to be in place for better information flow
- (k) Advanced technology: Smart grid, AMR, SCADA etc.
- (l) Consumer satisfaction: 24X7 call centre, consumer facility centres

MSEDCL has submitted data regarding the infrastructure, list of training centres and trainings conducted. Seminars on awareness about energysavings are conducted in Schools / Institutes at Zonal level. MSEDCL has published the safety guidelines and manual on its website.

***Commission's Ruling***

The Commission has noted MSEDCL's submission.

**7.12 Payment discipline**

**Directive**

The Commission is deeply concerned about the persistent delays in payments by MSEDCL, reflected in unacceptably large and mounting DPC liabilities. Such payment delays also jeopardise the finances and working of other Utilities.

***MSEDCL's Response***

MSEDCL is reeling under a critical financial position and not in a position to pay the power purchase and transmission bills, for following reasons:

- (a) Many times the Commission has disallowed certain legitimate expenses of MSEDCL such as capital expenditure and capitalisation, capex related expenses, O&M expenses, etc. due to which financial losses increase and MSEDCL has to rely on working capital. This has compelled MSEDCL to take working capital (in the form of Overdraft or Short-term Loan) for smooth cash flow and to meet inevitable payments
- (b) The recovery of legitimate expenses already incurred by MSEDCL gets delayed, affecting the financial position because of the time involved in legal proceedings as well as delay in judgments.
- (c) In the past, the Commission has approved certain amounts to MSPGCL and MSETCL but not provided any specific back to back mechanism for MSEDCL to pass-on the additional financial burden to its consumers. Due to this, MSEDCL had to avail short-term loans and deferred payments to Generators/contractors/employees etc., which sometimes gets accumulated to the tune of thousands of crores of rupees.
- (d) The Commission has not been approving the expenditure incurred on IoWC loan, which has resulted in further reduction of internal cash available for payments for debt servicing.
- (e) Due to drought and overall economic slow-down, the recovery of receivables from consumers is delayed and reduced, resulting in accumulation of arrears.

- (f) Some large consumers have opted for OA, and this has had an additional impact on the financial position of MSEDCL

In FY 2015-16, MSEDCL had tried to reduce the outstanding amount by borrowing short-term loans. It had also requested MSETCL MSPGCL and other Generators to waive DPC claimed by them, or else the payments made by MSEDCL would get adjusted against the DPC amount and the principal amount would remain the same. MSEDCL will endeavour to pay the current monthly bills within the due date so that no further DPC amount becomes applicable.

### ***Commission's Ruling***

The Commission has noted MSEDCL's endeavour to pay its monthly bills on time so as to avoid further DPC accrual.

As regards disallowances of certain MSEDCL claims for recovery through the ARR and tariff, the Commission approves the legitimate expenses and revenue in accordance with the Regulations and based on prudence check through its speaking Orders. While approving recovery of any approved expenses, the Commission also has to strike a balance between the interest of consumers and the interest of the Utility. Further, as observed in the previous MYT Order, the operating cash flow of MSEDCL in past years has also been adversely affected because timely revision in tariff could not take place due to delays in filing of Tariff Petitions.

## **7.13 Metering of un-metered Agriculture consumers**

### **Directive**

Various difficulties highlighted by MSEDCL in implementing the metering plan should be addressed through suitable technical and management solutions and also by fixing responsibilities at appropriate levels at THE Circle/sub-Division level to ensure proper functioning and reporting of metering facilities. The Commission directs MSEDCL to submit its report to the Commission on the progress of implementation of the metering plan in its next Tariff Petition."

### ***MSEDCL's Response***

The Board of MSEDCL has already accorded approval for executing the project of providing Energy Meters along with LT Capacitors to all the unmetered agricultural consumers. MSEDCL has submitted the DPR for the metering programme to the Commission for in-principle approval since the cost exceeds Rs 10 crore. Although the work of installation of meters was expected to start from FY 2015-16, no physical progress is achieved so far since formal approval of the Commission is awaited.

### ***Commission's Ruling***

MSEDCL has submitted a DPR for the Metering Programme for in-principle approval. The Commission has perused the DPR and observed that it includes the cost towards of Capacitors, which is actually a cost to be borne by the concerned

consumers and thus not to be accounted for by MSEDCL and passed on to consumers at large. The DPR was accordingly referred back to MSEDCL for revision and resubmission. However, MSEDCL has not resubmitted the revised DPR so far. Nevertheless, in order to expedite implementation of the scheme without further delay, capitalisation for the scheme has been allowed on a provisional basis till FY 2017-18, in line with the investment scheme proposed by MSEDCL in its original DPR. This will be subject to the observation made regarding Capacitors, and will be reviewed at the time of the MTR on the basis of the in-principle approval that may be given after the submission of the revised DPR and the actual progress under the scheme.

#### **7.14 Agriculture Sales in FY 2013-14 to FY 2015-16**

##### **Directive**

The Commission has not accepted the Agriculture sales reported by MSEDCL for FY 2014-15. Therefore, while approving the sales, the Commission has worked out total sales based on the actual sales for 11 months for all categories, except Agriculture. For Agriculture sales, the Commission has considered the projections of MSEDCL in its Petition. The Commission directs MSEDCL to submit, in its next tariff Petition, the reasons for such increase in Agriculture consumption along with the Circle-wise number of consumers (metered/un-metered), Connected Load (metered/un-metered), assessment of Agriculture Consumption Index, and sales (metered/un-metered) for FY 2013-14 and FY 2014-15.

##### ***MSEDCL's Response***

MSEDCL has submitted the supporting data for the increase in agricultural sales in FY 2013-14 and FY 2014-15, and the comparison of the Consumption Index of metered and unmetered consumers for FY 2013-14 and 2014-15. Metered consumption in FY 2014-15 appeared to have increased on account of the increase in number of consumers and also due to the efforts taken by MSEDCL to strengthen the meter reading system, as a consequence of which more correct agriculture consumption would have been captured.

The detailed submission of MSEDCL in this regard has been set out in Section 3.2 of this Order.

##### ***Commission's Ruling***

As detailed in Chapter 3 of this Order, the Commission has observed that there is no convincing justification for the significant increase of 23% in AG Sales and 19% in the AG Index, despite only 4-5% growth in the number of consumers and Connected Load, in FY 2014-15 over FY 2013-14. Hence, the Commission has revised the methodology for assessing AG consumption by utilizing Feeder-wise data.

MSEDCL should ensure that Feeder-based metering with AMR facilities at least for AG separated and SDT Feeders is in place within a period of 18 months. The

Commission has also set out the monthly data MSEDCL should publish on its website and other requirements elsewhere in this Order.

### **7.15 EHV Rebate on total Bill**

#### **Directive**

The Commission observes that it is necessary to undertake detailed analysis of Voltage-wise Cost of Supply (VCoS) to be able to make a rational judgment for creation of a separate tariff category for EHV consumers. At present, the Commission has decided to continue with the current practice of extending rebate at the rate of 3% on Base Energy Charge plus ToD charge for all EHV consumers availing supply at 66 kV and above, as currently under operation. However, the Commission shall scrutinize and explore the need for creation of a separate tariff category for EHV consumers in future. The Commission directs MSEDCL to account for all relevant data for EHV consumers such as their consumption, revenue, rebates, etc. and submit the same at the time of the next tariff determination process.

#### ***MSEDCL's Response***

MSEDCL has submitted the requisite data of EHV consumers regarding consumption, revenue, and rebate for FY 2013-14, FY 2014-15 and FY 2015-16 (up to December, 2015).

#### ***Commission's Ruling***

The Commission has noted MSEDCL's Submission. As detailed in Chapter 8 of this Order the Commission has determined separate tariffs for EHV, 33 kV and 22/11 kV voltage levels.

### **7.16 O&M Expenses from FY 2013-14 to FY 2015-16**

#### **Directive**

Since the data on GFA pertaining to DF areas was not separately available, it has not been deducted. The Commission directs MSEDCL to submit the detailed break-up of GFA for each Franchisee separately for true-up.

#### ***MSEDCL's Response***

MSEDCL has submitted the requisite data on GFA pertaining to DF areas.

#### ***Commission's Ruling***

The Commission has noted the compliance. The Commission has approved the O&M expenses for FY 2013-14 to FY 2015-16 in accordance with Regulations 78 and 92 of the MYT Regulations, 2011 and considering the details submitted by MSEDCL.

## 7.17 Other Finance Charges

### Directive

The Commission is deeply concerned about the persistent delays in payments by MSEDCL, reflected by unacceptably large and mounting DPC liabilities which MSEDCL itself has to bear. Such payment delays also jeopardise the finances and working of the Transmission Licensees and the private and public Utilities providing power to MSEDCL, which are critical for its own functions. The Commission has dealt with the issue of delay in payment of Transmission Charges by Transmission System Users (TSUs) in its Order in Case No. 57 of 2015. In that Order, the Commission has issued directions to State Transmission Utility to approach the Commission, with its suggestions for dealing with past payment arrears and minimising future delays, through a Petition. In case of Generating Companies, the PPAs provide for payment security mechanism. The Commission directs MSEDCL to submit the status of operationalisation of such payment security mechanisms under the PPAs with its next Tariff Petition.”

### MSEDCL's Response

MSEDCL has submitted the requisite details of payment security mechanisms under the PPAs, as shown in the following Tables.

**Table 7-3: Entity-wise Payment Security details, as submitted by MSEDCL**

Name of Company	Name of Bank	L/CNo.	Amt of L/C inRs crore	Periodicity	Valid upto
JSW ENERGY (LONG-TERM)	Canara Bank	IO2IORU122710001	42.91	Monthly	31-Mar-17
NVVN (SOLAR COMM)	Canara Bank	IO2IORU113440001	39.32	Monthly	31-Mar-17
NTPC	Canara Bank	IO2IRUU130850001	656.72	Monthly	25-Mar-17
NPCIL - Tarapur 3&4	Canara Bank	IO2IRUU100890004	85.31	Monthly	31-Mar-17
CGPL	Canara Bank	IO2IORU121090001	106.86	Monthly	31-Mar-17
EMCO	Canara Bank	IO2IRUU141060002	37.13	Monthly	31-Mar-17
ADANI 1320 MW	Canara Bank	IO2IRUU142230002	212.98	Monthly	31-Mar-17
ADANI 1200 MW	Canara Bank	IO2IRUU142620002	292.11	Monthly	31-Mar-17
ADANI 125 MW	Canara Bank	IO2IRUU143430004	30.63	Monthly	31-Mar-17
RattanIndia 450	Canara Bank	1903REVILC001-16	47.16	Monthly	31-Mar-17
RattanIndia 750	Canara Bank	1903REVILC002-16	57.00	Monthly	31-Mar-17
PGCIL	Bank of India	0160ILCRE140002	143.16	Monthly	31-Mar-17

Name of Company	Name of Bank	L/CNo.	Amt of L/C inRs crore	Periodicity	Valid upto
POSOCO	Bank of India	0160ILCRE140003	0.00	Monthly	31-Mar-17
NPCIL - Tarapur 1&2	Bank of Maharashtra	0000297LC0000012	4.71	Monthly	27-Mar-17
NPCIL - Kakrapara	Bank of Maharashtra	0000297LC0000011	12.08	Monthly	27-Mar-17
<b>TOTAL</b>			<b>1768.08</b>		

**Table 7-4: Bank-wise Payment Security details, as submitted by MSEDCL**

Bank	Total Amount of LC issued (Rs in crore)	Sanction LC Limit as per BR No 123 dtd. 30.05.2012 (Rs in crore)	Balance Available
Canara Bank	1608.13	1850.00	241.87
Bank of India	143.16	850.00	706.84
Bank of Maharashtra	16.79	92.00	75.21
<b>Total LC amount</b>	<b>1768.08</b>	<b>2792.00</b>	<b>1023.92</b>

***Commission's Ruling***

The Commission has noted the MSEDCL's submission.

**7.18 Revenue on account of change of Category from Continuous to Non-Continuous Directive**

The Commission has worked out the approximate loss of revenue on account of allowing such shifting even after the time limit stipulated by it, at Rs. 85.07 crore and Rs. 102.06 crore in FY2013-14 and FY 2014-15, respectively. The Commission has decided to consider these amounts as the deemed revenue of MSEDCL for the respective years. However, MSEDCL is directed to submit the actual loss of revenue on this account for the respective years in its next ARR Petition.

***MSEDCL's Response***

The Commission has passed an Order dated 19 August, 2016 in Case No. 94 of 2016 on the review sought by MSEDCL on this issue in respect of the previous MYT Order. In Review Order, the Commission has directed MSEDCL to assess its impact after examining all applications received by it which merit revision, based on the principles settled in the said Order, including the impact on account of any selective,

inconsistent or discriminatory treatment given to different applicants, and to submit it to the Commission within three months. Accordingly, it shall be submitted shortly.

### ***Commission's Ruling***

The Commission expects MSEDCL to provide the details by 19 November, 2016, as directed in the Review Order dated 19 August, 2016 in Case No. 94 of 2015.

## **7.19 Outstanding arrears from Distribution Franchisees**

### **Directive**

The amount to be recovered from DFs is significant and adversely affects the cash flow position of MSEDCL. The Franchisee Agreements provide for a Payment Security Mechanism in the form of Letter of Credit covering payments equivalent to an average of two months of billing. The Commission directs MSEDCL to submit the steps taken by it to recover the pending arrears as per the DF Agreements, including details of its implementation of the Payment Security Mechanism, in its next Tariff Petition.”

### ***MSEDCL's Response***

Due to failure to clear the outstanding dues of MSEDCL by the Aurangabad DF (GTL) and Jalgaon DF (Crompton Greaves Ltd), the DFAs have been terminated on 10 November, 2014 and 10 August, 2015, respectively, and the areas taken over by MSEDCL. The final Termination Accounts as per the provision of the DFAs are under process. As per provisions of the DFAs, penal interest is charged @ 18% p.a on a quarterly compounded basis. Accordingly, while finalizing the final accounts of these DFs, penal interest has been charged.

The status of outstanding dues recoverable from the DFs as on 31 January, 2016 as against the available payment security is as follows:

**Table 7-5: Outstanding arrears from Distribution Franchisees (Rs. crore)**

<b>Sr. No.</b>	<b>Name of Franchisee &amp; Area</b>	<b>Outstanding Amount</b>	<b>Stand-By Letter of Credit</b>
1	TPL, Bhiwandi	Nil	151.53
2	SNDL, Nagpur	91.37	74.5
3	CGL, Jalgaon	35	75*
4	GTL Ltd. Aurangabad	126	151*

*\*Stand By Letter of Credit (SBLC) encashed and the settlement of final termination account is in process.*

### ***Commission's Ruling***

MSEDCL should update the Commission further regarding the finalisation of arrears recovery from the terminated DFs, as well as the status of the Payment Security mechanism in respect of ongoing DFs, at the time of the MTR.



## **7.20 High acquittal rate in theft cases**

### **Directive**

MSEDCL should devise an action plan, undertake management reviews, and provide guidance/training to field officers to reduce the high acquittal rate in theft cases. The Commission directs MSEDCL to study the reasons for the high acquittal rate and submit its report with its next Tariff Petition.

### ***MSEDCL's Response***

Some of the reasons for high acquittal rate in theft cases are as follows:

- (a) Absence of independent witness on the spot panchanama
- (b) Non-examination of neighbours and independent witnesses
- (c) Absence of documents regarding title or occupation of the concerned premises by the concerned person/accused in case of theft by hooking or otherwise
- (d) Non-production of documents showing the fact that the concerned accused is either proprietor or in charge of the industry or firm at the concerned premises
- (e) Non-examination of complainant
- (f) Non-production of documents to show that the complainant is a person authorized to lodge the complaint on behalf of MSEDCL
- (g) Non-examination of meter by the appropriate authority/testing lab even though it is alleged that the meter was tampered
- (h) Non-production of seized property, i.e. the electric meter before the Court at the time of evidence.

MSEDCL has proposed the following action plan for reducing the high acquittal rate in theft of electricity cases:

- a) At the time of detection of theft and preparing spot panchanama, MSEDCL will take independent witness for spot panchanama.
- b) At the time of detection of theft and preparing spot panchanama, MSEDCL will prefer neighbors as witnesses of panchanama.
- c) In case of theft of electricity by hooking or otherwise, documents establishing title or occupation of the concerned premises of the person/accused, so as to show that the premises is owned or occupied by accused persons will be collected and produced.
- d) The documents showing that the person present at the time of detection of theft of electricity is connected with the concerned premises will be produced.
- e) The complainants in theft cases will be examined by MSEDCL at the time of trial without fail.
- f) Notification will be produced showing that the complainant is authorized person to lodge the complaint.
- g) Tampered meters will be tested in approved/authorized testing laboratory and such testing reports will be produced.

- h) In case of tampering of meter, the meter and other foreign parts will be seized with necessary panchanama and will be produced before the Court.
- i) In high-stake cases, the services of a Special Public Prosecutor will be engaged.

### ***Commission's Ruling***

The Commission has noted MSEDCL's submissions.

## **7.21 Cash Flow Statements**

### **Directive**

From the cash flow statements submitted by MSEDCL, the Commission observes that significant increase in capitalisation and consequent rise in debt service obligations to fund these investments has put a severe strain on the cash flow position from FY 2010-11 to FY 2012-13. The operating cash flow in these years has also suffered because timely revision in tariff could not take place due to delay in filing of the MYT Petition. Besides, the cash flow position highlights the need for concerted and focused efforts for recovery of arrears and improvement in collection efficiency across consumer categories, which would help ease the liquidity position. The Commission directs MSEDCL to submit a status report on the consumer category-wise arrears position and specific efforts taken for recovery of arrears in its next Tariff Petition”

### ***MSEDCL's Response***

The collection and collection efficiency of MSEDCL (including DFs) in FY 2012-13, FY 2013-14 and FY 2014-15 are Rs. 42,502.58 crore (Collection efficiency-95.31%), Rs. 42,803.34 crore (Collection efficiency- 95.63%) and Rs. 46,996.76 crore (Collection efficiency-94.71%), respectively.

MSEDCL has continued to maintain collection efficiency in the range of 94% to 95 % though the overall collection has increased by 10 % as compared to last year. In case of Street Lights and PWW consumers, there is are 4.46 % and 4.34 % arrears as on 31 March, 2014, which MSEDCL is receiving from the concerned authorities in due course as per the availability of funds. Being public utility services, the disconnection of such consumers may create unrest in the area. In case of arrears of Residential, Commercial, Industrial and other consumers, although the percentage of the arrears is low, the amount is very large, and MSEDCL is taking timely measures for recovery. MSEDCL is constantly conducting disconnection drives and maintaining the yearly collection efficiency above 95%.

Further, apart from its own collection centres, MSEDCL had extended various facilities for making the payment of bills and arrears like online payment, 24 hrs ATP Machines in urban areas, private bill collection agencies in various localities, District

Co-Operative Banks in rural areas, etc. MSEDCL has submitted the consumer category-wise arrears position.

***Commission's Ruling***

The Commission has noted the response by MSEDCL. The Commission also sought the quarterly Cash Flow Statements for FY 2014-15 and FY 2015-16, which were perused.

The total arrears (as on June, 2016) have further accumulated to Rs. 30221.48 crore. MSEDCL needs to redouble its ongoing efforts.

**7.22 Two-part Tariff for Railways**

**Directive**

HT III-Railways is the only metered category having a single-part tariff with no Demand/Fixed Charges, and only Energy Charges are applicable to this category for historical reasons. The rationale for recovery of Fixed Cost through Fixed Charges applies to this category as well. A two-part tariff structure (i.e. Demand Charge and Energy Charge) exists for Railways in other States as well as other Distribution Licensees in Maharashtra. However, MSEDCL has not submitted any proposal in this regard. Further, introduction of any new tariff structure would require careful examination of all aspects, including modification to metering facilities, billing mechanism, revenue and tariff implications for consumers and other technical considerations. The Commission directs MSEDCL to study the possibility of introducing a two-part tariff for HT III-Railways in future, and submit a proposal in its next Tariff Petition.

***MSEDCL's Response***

Railways has opted for OA for its connections and, therefore, Railways is no longer a consumer of MSEDCL from November, 2015 (except for a small quantum). Hence, the proposal may not be necessary.

***Commission's Ruling***

As detailed in Chapter 8 of this Order, the Commission has merged the two categories of Railways and Metro/Monorail. It has also decided to apply a two-part tariff to this merged category, and has set Demand Charges at par with other major HT Categories.

**7.23 Rationalisation of Power Factor Incentive**

**Directive**

The Commission directs MSEDCL to study selected cases of PF (lead/lag) incentive/penalty along with their voltage profiles, and explore the possibility of implementing kVAh metering for selected categories. MSEDCL should submit its study report along with case scenarios with its next Petition for Tariff determination.

***MSEDCL's Response***

The matter is under consideration and appropriate compliance is being submitted separately.

***Commission's Ruling***

As detailed in Chapter 8 of this Order, the Commission has kept the existing incentive/penalties structure unchanged. However, MSEDCL should submit its report with the MTR Petition.

**7.24 Load Factor Incentive**

**Directive**

With the changes approved in the retail tariff design, including ToD rebate, the impact on Load Factor Incentive need to be assessed separately. The Commission directs MSEDCL to submit data on Load Factor during different ToD time-slots, viz. 0600 hours to 2200 hours, and 2200 hours to 0600 hours, and the Load Factor Incentive availed by consumers. The Commission may consider the issue in future after examining the data submitted by MSEDCL.

***MSEDCL's Response***

The requisite data has been submitted.

***Commission's Ruling***

The Commission has noted MSEDCL's submission. As detailed in Chapter 8 of this Order, the Commission has kept the existing incentive/penalties structure unchanged.

**7.25 Voltage-wise Cost of Supply**

**Directive**

The Commission has taken a considered decision to continue the determination of category-wise tariff and cross-subsidy on the basis of the ACoS for the present Control Period. A similar approach has been followed by the Commission for all other Distribution Licensees in the State. However, the Commission directs MSEDCL to undertake a detailed study for determination of VCoS and submits its findings in its next Petition for Tariff determination.

***MSEDCL's Response***

MSEDCL has been complying with the directives of the Commission regarding VCoS in previous Tariff Orders. It has provided the methodology and calculations of VCoS, and has proposed the following approach.

The first and foremost requirement for VCoS would be proper accounting data which will reflect segregation of all costs at different voltage levels. The present Books of Accounts maintained by MSEDCL currently do not reflect the Fixed Assets, costs or revenue pertaining to Distribution Wires and Retail Supply at different voltage levels

separately. The Trial Balance of MSEDCL is maintained at the Division level and reflects the details for the entire business as a whole.

Bifurcation of assets and O&M costs at different voltage levels for certain elements has a very thin line of interpretation. The accounting of GFA at the field level and the compiling/ classification of GFA data at the head office level for the purpose of computation of depreciation (as required under the law) needs to be analogous or akin. The Transfer Scheme is at the final stage, and hence certain values in the Balance Sheet would undergo change.

The process for appointment of an agency for undertaking VCoS assessment has been initiated. Once the report is available from the agency, MSEDCL would submit it to the Commission, and believes that such a VCoS model would become the base for future computations.

***Commission's Ruling***

The Commission has noted MSEDCL's submission. MSEDCL should submit the outcome of its VCoS at the time of the MTR. Further, as explained in Chapter-8, the Commission has determined the tariff based on ACoS, in line with the provisions of the MYT Regulations, 2015.

## **8 TARIFF PHILOSOPHY, TARIFF DESIGN AND CATEGORY-WISE TARIFFS FOR 3<sup>rd</sup> CONTROL PERIOD**

### **8.1 Overall Approach for Tariff Design**

The Commission has kept in view the main objects of the EA, 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also enjoins the Commission to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also kept in view the principles of tariff determination set out in Sections 61 and 62 of the EA, 2003, the Tariff Policy and the MYT Regulations, 2015, and also taken into consideration MSEDCL's submissions as well as the public responses in these proceedings.

The provision of electricity is an essential driver for development, and also influences social and economic change. The Commission has endeavoured to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society. The Commission has also sought to ensure regulatory consistency for all stake-holders and a reasonable return for the Licensee.

In its previous MYT Order, the Commission had undertaken tariff determination for MSEDCL only for the ensuing FY 2015-16. In the present MYT Order, it has determined the tariff for the entire 3<sup>rd</sup> Control Period from FY 2016-17 to FY 2019-20, to be effective from 1 November, 2016. The relevant provisions of the MYT Regulations, 2015 for retail tariff determination state as follows:

*"3. Scope of Regulations—*

*3.1 The Commission shall determine the Aggregate Revenue Requirement, Tariff and Fees and Charges, including terms and conditions thereof, in accordance with these Regulations for all matters for which the Commission has jurisdiction under the Act, including the following :—*

*.....(iv) For Wheeling of electricity;*

*(v) For Retail supply of electricity;*

*....(vii) For Surcharge in addition to the charges for wheeling under the first proviso to sub-Section (2) of Section 42 of the Act, in accordance with the Regulations of the Commission governing Distribution Open Access and Orders issued by the Commission ;*

*(viii) For Additional Surcharge on the charges for wheeling under sub-Section (4) of Section 42 of the Act, in accordance with the Regulations of the Commission governing Distribution Open Access and Orders of the Commission:...*

*4. Multi-Year Tariff Framework —*

*4.1 The Commission shall determine the Tariff and Fees and Charges for matters covered under clauses (i), (ii), (iii), (iv), (v), (vi), (vii), and (viii) of Regulation 3.1, under a Multi-Year Tariff framework with effect from April 1, 2016.*

*4.2 The Multi-Year Tariff framework shall be based on the following elements, for computation of Aggregate Revenue Requirement and expected revenue from Tariff and Charges for Generating Companies, Transmission Licensees, Distribution Wires Business, Retail Supply Business, and Fees and Charges of MSLDC:*

*(i) A Multi-Year Tariff Petition comprising the forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff or Fees and Charges in case of MSLDC, expected Revenue Gap, and proposed Tariff or Fees and Charges for each year of the Control Period, shall be submitted by the Generating Company or Licensee or MSLDC:*

*Provided that the Distribution Licensee shall propose the category-wise Tariffs for each year of the Control Period:..."*

Accordingly, the Commission has determined the ARR as well as the category-wise tariff, Wheeling Charge, CSS and Additional Surcharge for each year of the 3rd Control Period.

## **8.2 Applicability of revised Tariffs**

The revised tariffs as per this Order shall be applicable from 1 November, 2016. Where the billing cycle of a consumer is different from the date of applicability of the revised tariffs, the tariffs should be applied for the consumption on a pro rata basis. The bills for the respective periods as per the existing and revised tariffs shall be calculated based on the pro rata consumption (units consumed during the respective periods arrived at on the basis of the average unit consumption per day multiplied by the number of days in the respective periods falling under the billing cycle).

The Commission has determined the revenue from the revised tariffs as if they were applicable for the entire year. Any shortfall or surplus in actual revenue vis-à-vis the approved Revenue Requirement will be trued-up in the MTR, as specified in the MYT Regulations, 2015.

## **8.3 Average Cost of Supply**

Considering the approved Wires and Supply ARR, past period adjustments and Energy Sales as approved by the Commission, the following Table summarises the approved ACoS of MSEDCL for the 3rd Control Period.

**Table 8-1: Projected ARR and ACoS as approved by Commission for 3rd Control Period (Rs. crore)**

Sr. No.	Particulars	Reference	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	ARR for Distribution Wire Business		8,577	9,299	9,632	9,631
2	ARR for Retail Supply Business		50,308	55,592	59,554	62,493
3	ARR for Combined Wire Business and Retail Supply Business	(3) = (1)+(2)	58,885	64,891	69,186	72,125

Sr. No.	Particulars	Reference	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
4	Revenue at Existing Tariff (including FAC component)		58,418	61,946	65,465	69,214
5	Revenue Gap/(Surplus)	(5) = (3)-(4)	467	2,945	3,721	2,911
6	Net Impact of Past Period and MSPGCL MYT Order in Case No. 46 of 2016		(894)			
7	Net ARR including past Adjustments	(7) = (3)+(6)	57,990	64,891	69,186	72,125
8	Projection of Energy Sales (MU)		91,229	96,210	101,602	107,434
9	Average Cost of Supply (Rs./kWh)	(9) = (7) / (8) x 10	<b>6.36</b>	<b>6.74</b>	<b>6.81</b>	<b>6.71</b>

#### 8.4 Voltage-wise Cost of Supply

MSEDCL has stated that, since the actual data based on voltage-wise cost has not been maintained, it has undertaken the bifurcation of the cost on the basis of certain assumptions, which are also in line with the ATE Order. The power purchase and transmission costs were bifurcated on the basis of the input at voltage level, which is computed based on the energy loss of 0% at EHV level, 6.0% at HT level and the balance 20.86% (for FY 2016-17) at the LT Level. All other costs were computed in the ratio of sales. Accordingly, MSEDCL submitted the voltage-wise cost segregation as summarised below.

**Table 8-2: Voltage-wise Cost of Supply computation by MSEDCL for FY 2016-17**

Particulars	Units	EHV	HT	LT	Total
Sales	%	6.86%	25.55%	67.59%	100.00%
	MU	6,645	24,732	65,433	96,811
Technical & Commercial Loss	%	0.00%	6.00%	20.86%	16.28%
	MU	-	1,579	17,248	18,827
Energy Input	MU	6,645	26,311	82,682	115,638
Net Power Purchase Cost - Allocation based on Input at Voltage-wise	Rs. Crs	2,960	11,719	36,829	51,508
Other Costs - allocated based on voltage-wise sales	Rs. Crs	824	3,066	8,111	12,001
Stand-alone Costs	Rs. Crs	3,784	14,785	44,940	63,509
Stand-alone Cost to Serve at Voltage Level	Rs. / kWh	5.69	5.98	6.87	6.56
Recoveries of Past (allocated in the ratio of Sales)	Rs. Crs	103	382	1,010	1,495
kTotal Cost to Serve at Voltage Level	Rs. Crs	3,886	15,167	45,950	65,004
Total Cost to Serve at Voltage Level	<b>Rs. / kWh</b>	<b>5.85</b>	<b>6.13</b>	<b>7.02</b>	<b>6.71</b>



MSEDCL has worked out the VCoS for each year of the 3rd Control Period considering the Energy Balance, energy input identified at different voltage levels and segregated costs for the respective financial years. Accordingly, the summary of the VCoS for the 3rd Control Period is as below:

**Table 8-3: Voltage-wise Cost of Supply for 3<sup>rd</sup> Control Period as submitted by MSEDCL**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
EHV	5.85	6.06	6.28	6.30
HT	6.13	6.35	6.58	6.59
LT	7.02	7.24	7.46	7.46
<b>Total</b>	<b>6.71</b>	<b>6.93</b>	<b>7.16</b>	<b>7.16</b>

In its previous MYT Order, the Commission had stated that:

*“...there is a need to work out the VCoS in a more scientific manner, wherein the actual data based on technical studies is ascertained and subjectivity or assumptions in the determination of VCoS are minimised...”*

However, MSEDCL has not worked out the VCoS in a more scientific manner and has continued with the methodology adopted in its previous MYT Petition. In the absence of any scientific data or technical studies for ascertaining the voltage-wise loss levels, the Commission has considered MSEDCL's assumptions and methodology as against the ARR components approved by the Commission, and determined the VCoS as under:

**Table 8-4: Details of Commission's computation of Voltage-wise Cost of Supply for FY 2016-17**

Particulars	Units	EHV	HT	LT	Total
Sales	%	6.60%	26.95%	66.45%	<b>100.00%</b>
	MU	6,017	24,588	60,624	<b>91,229</b>
Technical & Commercial Loss	%	0.00%	6.00%	26.79%	<b>20.66%</b>
	MU	-	1,569	22,181	<b>23,750</b>
Energy Input	MU	6,017	26,158	82,805	<b>114,979</b>
Net Power Purchase Cost - Allocation based on Input at Voltage-wise	Rs. Crs	2,289	9,953	31,506	<b>43,748</b>
Other Costs - allocated based on voltage-wise sales	Rs. Crs	998	4,080	10,059	<b>15,137</b>
Stand-alone Costs	Rs. Crs	3,288	14,032	41,565	<b>58,885</b>
Stand-alone Cost to Serve at Voltage Level	Rs. / kWh	5.46	5.71	6.86	<b>6.45</b>
Recoveries of Past (allocated in the ratio of Sales)	Rs. Crs	(59)	(241)	(594)	<b>(894)</b>
<b>Total Cost to Serve at Voltage Level</b>	<b>Rs. Crs</b>	<b>3,229</b>	<b>13,791</b>	<b>40,971</b>	<b>57,990</b>
<b>Total Cost to Serve at Voltage Level</b>	<b>Rs. / kWh</b>	<b>5.37</b>	<b>5.61</b>	<b>6.76</b>	<b>6.36</b>

Similarly, the Commission has worked out the VCoS for the remaining years of the 3rd Control Period, based on the approved figures for the respective years in this Order. The following Table summarises the VCoS computed by the Commission for the 3rd Control Period.

**Table 8-5: Voltage-wise Cost of Supply for 3rd Control Period as computed by Commission**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
EHV	5.37	5.79	5.92	5.90
HT	5.61	6.04	6.18	6.17
LT	6.76	7.12	7.14	7.00
<b>Total</b>	<b>6.36</b>	<b>6.74</b>	<b>6.81</b>	<b>6.71</b>

The above computation shows that the VCoS for EHV supply is lower by around Rs. 0.99 per kWh (FY 2016-17) to Rs 0.81 per kWh (FY 2019-20) than the ACoS for the respective years. On the other hand, the difference between the VCoS at EHV and HT levels is around Rs 0.25 per kWh (FY 2016-17) to Rs 0.26 per kWh (FY 2019-20). As explained in the subsequent Sections, with the un-bundling of the tariff components into Demand Charge, Energy (Supply) Charge and Wheeling Charge components, and applying Wheeling Charges at the respective voltage levels, the Commission has sought to address the principle that the retail tariff should reflect the underlying variation in cost of supply at different voltage levels in the different categories. However, as per the MYT Regulations, 2015, the Retail Supply Tariff for different consumer categories is to be determined on the basis of the ACoS, while keeping in view the cost of supply at different voltage levels:

"88. *Determination of Retail Supply Tariff –*

88.1 *The Commission may categorize consumers on the basis of their Load Factor, Power Factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.*

88.2 *The retail supply tariff for different consumer categories shall be determined on the basis of the Average Cost of Supply, computed as the ratio of the Aggregate Revenue Requirement of the Distribution Licensee for the Year determined in accordance with Regulation 78, and including unrecovered Revenue Gaps of previous years to the extent proposed to be recovered, to the total sales of the Distribution Licensee for the respective Year.*

88.3 *The Commission shall endeavour to gradually reduce the cross-subsidy between consumer categories with respect to the Average Cost of Supply in accordance with the provisions of the Act.*

88.4 *While determining the tariff, the Commission shall also keep in view the cost of supply at different voltage levels and the need to minimise tariff shock to consumers."*

## 8.5 Balancing of ABR and ACoS for Revenue Recovery over the 3rd Control Period

From Table No. 8-1 it will be seen that the overall Revenue Gap of Rs. 9,149 crore in the 3rd Control Period is not evenly spread across the four years. The revenue gap in FY 2016-17 is only Rs. 467 crore, which, when combined with the net impact of the past period and MSPGCL's latest MYT Order amounting to Rs. 894 crore, works out to an approved net Surplus of Rs. 428 crore for FY 2016-17. However, in the subsequent FY 2017-18, FY 2018-19 and FY 2019-20, the approved Revenue Gaps amount to Rs. 2,945 crore, Rs. 3,721 crore and 2,911 crore respectively. This variation from year to year is also evident in the ACoS figures shown in Table 8-1 above.

However, while determining the tariff over the Control Period, the Commission has to ensure that several objectives are met simultaneously, such as (a) revising the tariff to meet the approved ARR for the respective years, (b) smoothen the retail tariff revision trajectory to protect any consumer category from tariff shock, and (c) to meet the goal of gradual reduction in cross-subsidy levels. Considering these different objectives harmoniously, the Commission by re-adjusted and spread the overall Revenue Gap of Rs. 9,149 crore more evenly over the 3rd Control Period. It has reworked the modified ARR for revenue recovery and the modified ACoS thereof for each year accordingly, as summarised below:

**Table 8-6: Modified ARR recovery and modified ACoS for 3<sup>rd</sup> Control Period, as approved by Commission (Rs. crore)**

Sr. No.	Particulars	Reference	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	3rd Control Period
1	ARR for Combined Wire Business and Retail Supply Business		58,885	64,891	69,186	72,125	<b>265,086</b>
2	Revenue at Existing Tariff (including FAC component)		58,418	61,946	65,465	69,214	<b>255,043</b>
3	Revenue Gap / (Surplus)	(3) = (1) – (2)	467	2,945	3,721	2,911	10,043
4	Less: Net Impact of Past Period and MSPGCL MYT Order in Case No. 46 of 2016		(894)				(894)
5	Net ARR including past Adjustments	(5) = (2)+(3)+(4)	57,990	64,891	69,186	72,125	<b>264,192</b>
6	Cumulative Revenue Gap / (Surplus)		(428)	2,517	6,238	9,149	<b>9,149</b>
7	Adjustment of Revenue Gap / (Surplus) for proposed revenue recovery		902	1,734	2,458	3,608	8,700
8	Adjusted Revenue Gap/(Surplus)	(8) = (3)+(4)-(7)	(1,329)	1,211	1,263	(697)	
9	Cumulative Revenue Gap/(Surplus) Adjustment		(1,329)	(118)	1,145	448	

Sr. No.	Particulars	Reference	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	3rd Control Period
10	Carrying Cost / (Holding Cost)	(10) = (9)x10.8%	(144)	(13)	124	48	16
11	Estimated Revenue Impact due to discontinuation of EHV Rebate		108	108	108	108	433
12	Adjustment of Revenue Gap / (Surplus) incl. carrying /(holding) cost	(12) = (7)+(10)+(11)	866	1,829	2,689	3,764	<b>9,149</b>
13	Modified ARR for Revenue Recovery	(13) = (2) + (12)	59,284	63,775	68,155	72,978	<b>264,192</b>
14	Energy Sales, (MU)		91,229	96,210	101,602	107,434	396,475
<b>15</b>	<b>Modified ACoS (Rs/kWh)</b>	<b>(15) = (13) / (14) x 10</b>	<b>6.50</b>	<b>6.63</b>	<b>6.71</b>	<b>6.79</b>	<b>6.66</b>

The modified ARR and ACoS has been worked out above solely for the purpose of smoothening the revenue recovery while ensuring that there is no significant variation in retail tariffs of any consumer category in any particular year over the 3rd Control Period, and accordingly meeting the overall objective of gradually reducing cross-subsidy levels. While effecting tariff recovery based on this modified ARR and ACoS, the Commission has also taken into consideration the carrying / (holding) cost impact of the projected under/over-recovery for each year. Accordingly, the net carrying cost amounting to Rs. 16 crore has also been adjusted as part of the overall ARR recovery during the 3rd Control Period. Therefore, there is very minor impact on the consumers on account of this approach.

Further, the Commission has also discontinued EHV rebate, which has been discussed in Section 8.33 of this Chapter. As per provisional revenue figures for FY 2015-16, the EHV rebate amounts to Rs. 108 crore. Therefore, the Commission has also considered revenue impact on account of adjustment due to discontinuation of EHV Rebate amounting to Rs. 108 crore for each year of the Control Period, as mentioned at Sr. No. 11 in Table 8-6 above.

## 8.6 Key Considerations for Tariff Design

The Commission has ensured a gradual reduction in the cross-subsidy levels across all consumer categories in the 3rd Control Period as compared to the levels determined in the previous MYT Order for FY 2015-16.

As against MSEDCL's projected total Revenue Gap of Rs. 56,372 crore for the 3rd Control Period, which is approximately 19% of its projected cumulative ARR, the Commission has determined the total Revenue Gap as Rs. 9,149 crore, which is only around 3.5% of the approved cumulative ARR.

MSEDCL has proposed an increase in Fixed Charges and Energy Charges for various categories in order to bridge the Revenue Gap over the Control Period. The increase in Energy Charge proposed by MSEDCL varies from 5.5% (FY 2016-17), 10% (FY 2017-18), 10% (FY 2018-19), and 4.45% (FY 2019-20), whereas the proposed increase in Demand Charge varies from 6.9% (FY 2016-17), 8.5% (FY 2017-18), 9.8% (FY 2018-19), and 5.5% (FY 2019-20). In some categories (e.g. Residential, Commercial), the proposed increase in Demand Charge varies from 20% to 35% between FY 2017-18 and FY 2018-19.

While determining the revised tariffs, the Commission has to consider the revision in the Demand Charges, Energy Charges and Wheeling Charge components and their impact on the overall ABR for any particular consumer category while keeping in view the principles outlined in the Tariff Policy, 2016 and MYT Regulations, 2015 for the reduction in the cross-subsidy levels.

As elaborated in subsequent Sections, an upward revision in Demand Charges/Fixed Charges is necessary since, at their existing level, the revenue recovery from these Charges cover less than 28% of the Fixed Cost of MSEDCL's operations. The Commission has approved an increase in Demand Charges / Fixed Charges of around 7% p.a. for FY 2016-17 and FY 2018-19, and 8% p.a. for FY 2018-19 to FY 2019-20. The detailed rationale for revision in Demand Charges/Fixed Charges is elaborated in Section 8.10. Out of the approved Revenue Gap of Rs 9,149 crore, around 42% will be met by the increase in revenue from Demand/Fixed Charges consequent to their upward revision.

The Commission has ensured recovery of the Wires ARR through Wheeling Charges, and the rationale for determination of voltage-wise Wheeling Charges has been elaborated in Section 8.26. The approved revision in Wheeling Charges has contributed towards meeting a part of the Revenue Gap, thereby limiting the upward revision in the Energy (Supply) Charge component of the tariff. The Energy (Supply) Charges have been revised such that the resultant ABR for any particular category is not significantly increased so as to avoid any tariff shock, and the overall objective of cross-subsidy level reduction is met.

As explained earlier in this Order, the Commission has determined the Agriculture Consumption Index, based on Feeder based energy accounting data, for the purpose of energy accounting and assessment of the Distribution Loss level thereof. However, for the levy of tariff for un-metered Agriculture consumers, the classification of the Zones based on consumption norms has not been revised at this stage. Upon consideration of the findings of the Agriculture Consumption Committee and IIT, and further analysis of the Circle-wise Feeder level data, the Commission may revise the Zone-based classification at the time of MTR.

In this context, some of the main tariff-related features of this Order are summarised below:

**A] Rationalising Tariff for Industries**

The Commission has taken note of the views expressed during the public consultation process that the MSEDCL tariff for industries is higher than in neighbouring States. The price of electricity, in both absolute and in relative terms, is an important factor in the competitiveness of industry, which is vital for employment generation in the State and also impacts the service and other sectors of the economy. With a view to give an impetus to industries and support the 'Make in Maharashtra' initiative, the Commission has continued with its endeavour of rationalising the industrial tariff to the extent possible within the constraints, which it started in its last MYT Order by reducing the Energy Charge rates. In this Order also, the Commission has reduced the Energy Charges for industry, albeit with a marginal increase in Demand Charges. It is envisaged that, over the four years of the Control Period, the overall ABR for HT and LT Industry would increase only marginally.

**B] Tariff for EHV consumers and un-bundling of Variable Tariff Components – Wheeling Charge / Energy Charge:**

For determination of the tariff for EHV consumers, it is necessary to undertake detailed analysis of the VCoS to be able to make a rational judgment for creation of a separate tariff category for EHV consumers. In its previous MYT Order, the Commission had directed MSEDCL to submit the relevant data in respect of EHV consumers such as their consumption, revenue, rebate, etc. MSEDCL has submitted the data. MSEDCL has continued to derive VCoS based on the methodology and assumptions underlying its previous MYT submissions. The Commission has worked out the VCoS based on its approved figures and as per the methodology adopted by MSEDCL, in the absence of voltage-wise network cost details, only for purposes of comparison. MSEDCL's submission on VCoS and Commission's computation have been detailed in this Chapter.

However, in pursuance of the methodology for tariff design specified in the MYT Regulations, 2015, the Commission has un-bundled the Energy Charge (now termed as Variable Charge) into a 'Wheeling Charge' component and an 'Energy (Supply) Charge' component. This segregation of Wheeling Charges from the Energy Charges would result in tariff differentiation for HT consumers connected at EHV (66 kV and above), 33 kV and 22kV and 11 kV. The tariffs of HT consumers connected at EHV and at 33 kV levels, constituting approx. 46% of the total HT energy sales, have been reduced significantly due to this segregation of Wheeling Charges. In effect, HT consumers have been further classified based on voltage levels, i.e. EHV, 33 kV and 22 kV and 11 kV. To that extent, the Commission has in effect operationalised ATE's direction for creating a separate consumer category for EHV consumers.

**C] Merging of Continuous and Non-Continuous Supply sub-Categories**

In its previous MYT Order, the Commission had decided to continue with separate Continuous and non-Continuous sub-categories for the time being, but to reduce the

tariff gap between them. The Commission also stated its intention to bridge this gap gradually so as to avoid any tariff shock or windfall gain to either sub-category.

The Commission has noted MSEDCL's submission of improved power availability. It has also noted MSEDCL's projection that the power surplus situation would continue through the 3<sup>rd</sup> MYT Control Period. In fact, the availability of surplus power has resulted in Generating Stations/Units with long-term PPAs with MSEDCL having to be backed down or kept stranded for insufficient demand.

Considering the surplus power supply situation and MSEDCL's submission that there has been no load-shedding for HT Industry, the Commission is of the view that there is no longer any reason to charge a differential tariff for Continuous and Non-Continuous supply, since even consumers who are not on Express Feeders now also have continuous power supply. Therefore, the Commission has decided to merge Continuous and Non-Continuous sub-categories of the respective HT consumer categories.

#### **D] Merging of Railways and Metro / Monorail Categories**

The Commission notes the ongoing development of Metro rail services in Maharashtra for public transportation. Further, with the Railways operationalising its option of being a deemed Distribution Licensee, MSEDCL is left with very little Energy Sales to Railways. Therefore, the Commission considers it appropriate to merge the two categories of Railways and Metro/Monorail. While the Railways in the MSEDCL area had a single-part tariff, unlike in Mumbai, the Commission has also applied a two-part tariff to the newly formed category, and Demand Charge at par with other major HT categories. However, in order to avoid any tariff shock, the Commission has made suitable adjustments in the Energy Charge component.

#### **E] Categorising Tyre Retreading, Remoulding and Vulcanisation units in Industrial Category**

During the public consultation process, many representations were received for categorising tyre retreading, remoulding and vulcanisation units as industrial consumers. Till the Tariff Order in Case No. 19 of 2012, these units were in the Industry category. Considering the detailed submissions regarding the nature of operations of these units, the Commission has concluded that they are in the nature of manufacturing processes. Therefore, the Commission has now included the activities of tyre retreading, remoulding and vulcanisation in the Industry category.

#### **F] LT Agriculture (Metered / Un-metered):**

The cross-subsidy levels of LT Agriculture – Pumpsets: Metered and Un-metered categories are high, with the ratio of ABR to ACoS at 47% and 56%, respectively. With their existing share in consumption of around 30% of the overall energy sales of MSEDCL, such high cross-subsidy levels cast a very heavy high burden on the tariffs

of cross-subsidising categories and cannot be sustained for a long time. At the same time, agricultural activities are very vulnerable and require support for food security and other requirements. Hence, the Commission has striven to strike a balance by increasing the tariffs of LT Agriculture – Pumpsets only gradually. The ratio of ABR to ACoS for this category is projected to increase from existing 47% to 52% (for Metered Pumpsets) and from 56% to 66% (for Un-metered Pumpsets) by the end of the 3rd Control Period. While the Commission has stipulated the tariff for the Un-metered Pumpsets category for the Control Period, the Commission expects that, with the conversion of un-metered to metered connections that is envisaged, there would no longer any need for a tariff for Un-metered Pumpsets by the end of the 3<sup>rd</sup> Control Period.

**G] Creation of a new sub-Category in LT Agriculture – Pumpsets (Un-metered) (Above 7.5 HP):**

The Commission sought data from MSEDCL on LT Agriculture – Pumpsets (Un-metered) with Connected Load of ‘Above 7.5 HP, which have around 74,000 connections and estimated energy sales of 1,400 MU. Pumpsets with higher Connected Load are usually taken for relatively large farm areas, often irrigating cash crops. Moreover, there is a fit case for targeting, as the Commission has done, the conversion of such connections with higher Connected Load from un-metered to metered on priority. Therefore, the Commission has decided to create a new sub-category for Pumpsets with Connected Loads of ‘Above 7.5 HP’, keeping its Fixed Charges higher than for the sub-category of connections above 5 HP and upto 7.5 HP. This would also incentivise early conversion to the metered category.

**H] Rationalisation of Tariff for HT/LT Temporary (Other Purpose) and Advertisements and Hoardings:**

The existing tariffs for HT/LT Temporary (Other Purpose) and Advertisements and Hoardings are exorbitant by any standards. The cross-subsidy levels for HT Temporary, LT Temporary (Other Purpose) and LT Advertisements and Hoardings at the existing tariffs are as high as 256%, 264% and 334%, respectively. In the past, the tariffs of these categories have been kept high levels partly on account of the power shortage scenario prevailing then. In fact, their tariffs are now even higher than the generation cost of power from Diesel Generator sets, thereby encouraging these consumers to opt for DG sets and adding to environmental and noise pollution. In the changed power scenario, and considering these factors,, the Commission has decided to reduce the Energy Charges for these categories to the level applicable to the highest slab of the Commercial category, and to keep the Fixed /Demand Charges unchanged over the 3rd Control Period.

**I] Merging of Ports with Public Services - Others:**

The separate category of HT Ports, which was earlier part of the HT Commercial category, was created by the Commission in its Order in Case No. 136 of 2012 dated 16 August 2013 in the light of the ATE Judgment dated 19 December 2012 in Appeal



Nos. 225, 226, 230 and 264 of 2012 (although the ATE did not direct the creation of a separate category as such.) However, the ABR of the HT Port category continued to remain close to the ABR of the HT Commercial category. As per the information provided by MSEDCL for FY 2014-15, the ABR for HT Public Services (Rs. 9.44/kWh) is higher than for HT Industry (Rs.7.67/kWh), but lower than HT Commercial (Rs. 12.46/kWh) and HT Ports (Rs. 11.61/kWh). The Commission is of the view that Ports provide essential infrastructure services, and it is not justified to charge tariff rates virtually equivalent to the Commercial category.

In its Tariff Order dated 16 August 2012 in Case No. 19 of 2012, the Commission created a 'Public Services' category. In its last MYT Order, it separated Public Services – Govt. Hospitals and Educational Institutions from the other Public Services. Similar infrastructure services activities like Airports, etc. are also covered under the sub-category for such other Public Services. Therefore, the Commission has merged the HT Ports category into HT Public Services – Others.

**J] Start-up Power for Generating Units:**

Start-up power supply is required by Generating Units before COD during their synchronisation with the Grid, and after COD to re-start generation after planned and/or forced shutdowns. Such 'Start up' Power supply is essential for Generating Units, though utilised infrequently. However, the Generating Unit is required to take a supply connection from the Distribution Licensee for such infrequent occasions, and to pay Demand Charges on monthly basis irrespective of whether or not the supply from the Distribution Licensee is actually availed or not.

Hence, the Commission has decided that the start-up power requirement for Power Plants may be availed from the Distribution Licensee through a separate connection or through the existing evacuation infrastructure. In the case of a separate connection, all the terms and conditions applicable to any consumer would be applicable. If a separate connection is not taken, the Power Plant shall have to enter into an agreement with the Distribution Licensee for contracting the demand for such start-up power. In either case, the Demand Charge rate will be 25% of the rate approved for the HT Industry category, to the extent of the start-up demand contracted by the Power Plant for Black Start, or start-up after forced or planned outage. However, this dispensation shall not be applicable to Power Plants having PPAs with the Distribution Licensee under Section 62 of the EA, 2003 which provide for netting off the energy drawn by the Generator with the energy injected into the grid.

**K] Unbundling of Components of Tariff: Demand Charge, Energy (Supply) Charge and Wheeling Charge**

For the first time, the Commission has unbundled the Variable Charges component (earlier termed as Energy Charges) of the tariff into a Wheeling Charge component and Energy (Supply) Charge component. As discussed earlier in this Chapter, this has enabled the Commission to introduce voltage-based differential tariffs for the same categories of HT consumers at EHV, 33 kV, and 22 kV&11 kV levels by computing a

different Wheeling Charge component and keeping the Supply Charge component the same for all corresponding HT consumer categories at the respective voltage levels.

**L] Increase in Connected Load for Below-Poverty-Line consumers**

The applicability of the BPL tariff category has been extended to Residential consumers with a Sanctioned Load upto 0.25 kW, from the existing level of 0.1 kW, in line with the revised dispensation under the Deen Dayal Upadhyay Grameen Jyoti Yojana, without any change in the consumption limit.

As enunciated in earlier Tariff Orders, while undertaking the rationalisation of tariff of different categories, the Commission has kept in view Section 62 (3) of the EA, 2003, which stipulates that:

*“The Appropriate Commission shall not, while determining the Tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer’s Load Factor, Power Factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.”*

In this background, the broad manner in which the different criteria on which differentiation among consumers may be based have been applied by the Commission as set out below:

- The ‘Load Factor’ and ‘Power Factor’ criteria have been applied to provide rebates and disincentives, such as Load Factor Incentive for Load Factor above certain specified levels, and Power Factor rebates and disincentives which are provided to consumers who maintain their Power Factor above certain levels;
- The consumer categories are broadly classified under the EHV, 33 kV, 22 kV and 11 kV and Low Voltage categories, in accordance with the ‘voltage’ criterion;
- The ‘time of supply’ criterion has been applied to specify ToD tariffs, so that consumers are incentivised to shift their consumption to off-peak periods, while ensuring revenue balance and passing on the financial benefit from rebate reduction to all consumers across categories with ToD tariffs;
- The criterion of ‘purpose of supply’ has been used to differentiate between consumer categories, with categories such as residential, non-residential /commercial purposes, industrial purpose, agricultural purpose, street lighting, Public Services, etc.

While all consumers would like reduction in their tariffs, the reasonable costs incurred by the Licensee also have to be met and, irrespective of the number of consumer categories or sub-categories, the cross-subsidies also have to be reduced gradually.

The comparison of the existing tariffs, the tariffs proposed by MSEDCL and the tariffs approved by the Commission, as well as the percentage increase for each consumer category and the cross-subsidy trajectory for the 3rd Control Period are given in the Tables below:

**Table 8-7: Average Billing Rate and Cross-subsidy Trajectory as proposed by MSEDCL over 3rd Control Period**

Category	Average Billing Rate(Rs. / kWh)					Increase (%)				Ratio = ABR / ACoS (MSEDCL - Proposed)				
	Existing Tariff	MSEDCL (Proposed)				MSEDCL (Proposed)				Existing Tariff	MSEDCL (Proposed) ABR / ACoS			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	(a)	(b)	(c)	(d)	(e)	(f)=(b)/(a)	(g)=(c)/(b)	(h)=(d)/(c)	(i)=(e)/(d)	(j)	(k)	(l)	(m)	(n)
<b>LT Category</b>														
LT I: Residential	5.82	6.49	7.27	8.10	8.61	11%	12%	11%	6%	96%	105%	108%	111%	112%
LT II: Non Residential	10.32	12.18	13.32	14.62	15.27	18%	9%	10%	4%	171%	198%	198%	200%	199%
LT III: Public Water Works (PWW)	3.34	3.54	3.92	4.33	4.51	6%	11%	11%	4%	55%	57%	58%	59%	59%
LT IV (A): Agriculture Unmetered Pumpsets	2.88	3.04	3.31	3.59	3.71	5%	9%	9%	3%	59%	49%	49%	49%	48%
LT IV (B): Agriculture Meterd - Pumpsets	2.76	2.92	3.22	3.56	3.71	6%	10%	10%	4%	47%	47%	48%	49%	48%
LT IV (C) - Agriculture Metered - Others	4.05	4.29	4.80	5.34	5.58	6%	12%	11%	5%	69%	70%	71%	73%	73%
LT V (A): Industry - Powerlooms														
LT V : Industry	7.11	7.50	8.00	8.53	8.88	6%	7%	7%	4%	118%	122%	119%	117%	116%
LT VI: Street Lights	5.16	5.45	6.01	6.62	6.91	6%	10%	10%	4%	86%	88%	90%	91%	90%
LT VII : Temporary Supply Others (TSO)	13.14	13.86	15.24	16.76	17.51	6%	10%	10%	4%	260%	225%	227%	229%	229%
LT VIII: Advertisements and Hoardings	21.41	22.62	24.81	27.23	28.56	6%	10%	10%	5%	355%	367%	370%	373%	373%
LT IX: Crematorium & Burial Grounds	4.25	4.48	4.93	5.42	5.66	6%	10%	10%	5%	68%	73%	73%	74%	74%
LT X: Public Services	8.19	8.66	9.51	10.43	10.87	6%	10%	10%	4%	129%	141%	142%	143%	142%
<b>Total LT Category</b>	<b>4.83</b>	<b>5.30</b>	<b>5.83</b>	<b>6.40</b>	<b>6.72</b>	<b>10%</b>	<b>10%</b>	<b>10%</b>	<b>5%</b>	<b>85%</b>	<b>86%</b>	<b>87%</b>	<b>88%</b>	<b>88%</b>
<b>HT Category</b>														
<b>HT I: Industry (Express + Non-Express</b>	7.85	8.31	8.92	9.59	10.07	6%	7%	8%	5%	129%	135%	133%	131%	131%
HT I (A): Industry (Express Feeder)	8.87	8.64	9.26	9.96	10.46	-3%	7%	8%	5%					

Category	Average Billing Rate(Rs. / kWh)					Increase (%)				Ratio = ABR / ACoS (MSEDCL - Proposed)				
	Existing Tariff	MSEDCL (Proposed)				MSEDCL (Proposed)				Existing Tariff	MSEDCL (Proposed) ABR / ACoS			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	(a)	(b)	(c)	(d)	(e)	(f)=(b)/(a)	(g)=(c)/(b)	(h)=(d)/(c)	(i)=(e)/(d)	(j)	(k)	(l)	(m)	(n)
HT I (B): Industry (Non-Express Feeder)	8.25	8.03	8.62	9.27	9.73	-3%	7%	8%	5%					
HT I (C ): Seasonal Industry	12.42	12.22	13.27	14.40	15.22	-2%	9%	9%	6%					
HT II: Commercial	11.96	12.75	13.63	14.59	15.35	7%	7%	7%	5%	201%	207%	203%	200%	200%
HT III: Railways	8.46	8.93	9.51	10.13	10.58	5%	7%	7%	4%	140%	0%	0%	0%	0%
HT IV: Public Water Works (PWW)	6.03	6.39	7.01	7.70	8.03	6%	10%	10%	4%	100%	104%	104%	105%	105%
HT V: Agricultural	3.55	3.77	4.20	4.68	4.91	6%	12%	11%	5%	59%	61%	63%	64%	64%
HT VI: Bulk Supply (Residential)	6.07	6.41	7.05	7.75	8.10	6%	10%	10%	4%	114%	104%	105%	106%	106%
HT VIII : Temporary (Others)	15.01	15.87	17.41	19.11	20.00	6%	10%	10%	5%	272%	257%	259%	262%	261%
HT IX: Public Services	11.54	12.18	10.56	11.62	12.14	6%	-13%	10%	5%	154%	156%	157%	159%	159%
HT X: Ports	12.54	12.22	13.43	14.77	15.43	-3%	10%	10%	5%					
<b>Total HT Category</b>	<b>7.93</b>	<b>8.41</b>	<b>9.05</b>	<b>9.76</b>	<b>10.25</b>	<b>5.9%</b>	<b>7.6%</b>	<b>7.8%</b>	<b>5.0%</b>	<b>132%</b>	<b>136%</b>	<b>135%</b>	<b>134%</b>	<b>134%</b>
<b>Average Cost of Supply</b>	<b>6.03</b>	<b>6.17</b>	<b>6.71</b>	<b>7.31</b>	<b>7.66</b>									

**Table 8-8: Average Billing Rate and Cross-subsidy Trajectory as approved by Commission over 3rd Control Period**

Category	Average Billing Rate (Rs. / kWh)					Increase (%)				Ratio = ABR / ACoS (Approved)				
	Existing Tariff (including FAC)	Approved Tariff				Approved Tariff				Existing Tariff (including FAC)	Approved ABR / ACoS			
		FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2016- 17	FY 2017-18	FY 2018-19	FY 2019-20		FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20
	(a)	(b)	(c )	(d)	(e)	(f)= (b)/ (a)	(g)= (c )/(b)	(h)= d)/(c)	(i)= (e)/(d)	(j)	(k)	(l)	(m)	(n)
<b>LT Category</b>														
LT I: LT - Residential	6.33	6.41	6.49	6.56	6.63	1.3%	1.3%	1.1%	1.0%	99%	99%	98%	98%	98%
LT II: LT - Non Residential	11.19	11.23	11.29	11.35	11.40	0.4%	0.5%	0.5%	0.4%	175%	173%	170%	169%	168%
LT III: LT - Public Water Works (PWW)	3.63	3.83	3.95	4.07	4.23	5.5%	3.0%	2.9%	4.0%	57%	59%	60%	61%	62%
LT IV (A): LT - Agriculture Un-metered - Pumpsets	3.57	3.77	3.96	4.17	4.36	5.5%	5.2%	5.2%	4.6%	56%	58%	60%	62%	64%
LT IV (B): LT - Agriculture Metered - Pumpsets	3.04	3.17	3.28	3.39	3.53	4.3%	3.5%	3.4%	4.2%	47%	49%	49%	51%	52%
LT IV (C): LT - Agriculture Metered - Others	4.55	4.79	5.01	5.21	5.45	5.3%	4.6%	4.0%	4.6%	71%	74%	76%	78%	80%
LT V (A): LT - Industry - Power Looms	6.54	6.57	6.60	6.63	6.66	0.5%	0.4%	0.4%	0.4%	102%	101%	100%	99%	98%
LT V (B): LT - Industry – General	7.99	8.03	8.06	8.10	8.14	0.5%	0.4%	0.5%	0.4%	125%	124%	122%	121%	120%
LT VI: LT - Street Lights	5.61	5.75	5.93	6.00	6.04	2.5%	3.2%	1.2%	0.6%	88%	88%	89%	89%	89%
LT VII (B): LT - Temporary Supply Others (TSO)	16.90	14.26	14.24	14.37	14.46	-15.6%	-0.1%	0.9%	0.6%	264%	219%	215%	214%	213%
LT VIII: LT - Advertisements and Hoardings	21.37	18.03	18.01	18.14	18.23	-15.6%	-0.1%	0.7%	0.5%	334%	277%	272%	270%	268%
LT IX: LT - Crematorium & Burial Grounds	4.25	4.51	4.68	4.75	4.84	6.2%	3.8%	1.5%	1.8%	66%	69%	71%	71%	71%
LT X(A): LT - Public Services – Govt. Educational Institutes and Hospitals	9.33	8.50	8.55	8.55	8.54	-8.8%	0.6%	0.0%	-0.1%	146%	131%	129%	127%	126%

Category	Average Billing Rate (Rs. / kWh)					Increase (%)				Ratio = ABR / ACoS (Approved)				
	Existing Tariff (including FAC)	Approved Tariff				Approved Tariff				Existing Tariff (including FAC)	Approved ABR / ACoS			
		FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2016- 17	FY 2017-18	FY 2018-19	FY 2019-20		FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20
	(a)	(b)	(c)	(d)	(e)	(f)= (b)/ (a)	(g)= (c) /(b)	(h)= d)/(c)	(i)= (e)/(d)	(j)	(k)	(l)	(m)	(n)
LT X(B): LT - Public Services - Others	8.72	8.85	8.95	8.95	8.89	1.4%	1.2%	0.0%	-0.7%	136%	136%	135%	133%	131%
<b>Total LT Category</b>	<b>5.51</b>	<b>5.62</b>	<b>5.77</b>	<b>5.87</b>	<b>5.96</b>	<b>2.0%</b>	<b>2.8%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>86%</b>	<b>86%</b>	<b>87%</b>	<b>87%</b>	<b>88%</b>
<b>HT Category</b>														
HT I(A): HT - Industry (General) - (Express + Non-Express)	8.52	8.56	8.60	8.63	8.67	0.4%	0.5%	0.4%	0.4%	133%	132%	130%	129%	128%
HT I (B): Seasonal Industry	12.42	11.99	11.96	11.73	11.60	-3.5%	-0.3%	-1.9%	-1.2%	194%	185%	180%	175%	171%
HT II: HT - Commercial	12.97	13.13	13.24	13.36	13.41	1.3%	0.8%	0.9%	0.4%	203%	202%	200%	199%	197%
HT III: HT - Railways/Metro/Monorail	9.19	9.18	9.16	9.14	9.03	0.0%	-0.3%	-0.1%	-1.2%	143%	141%	138%	136%	133%
HT IV: HT - Public Water Works (PWW)	6.59	6.67	6.84	6.99	7.07	1.3%	2.6%	2.1%	1.2%	103%	103%	103%	104%	104%
HT V(A): HT - Agricultural – Pumpsets	3.85	3.99	4.19	4.37	4.56	3.7%	5.0%	4.1%	4.3%	60%	61%	63%	65%	67%
HT VI: HT -Group Housing Societies (Residential)	7.56	7.56	7.58	7.57	7.55	0.0%	0.3%	-0.1%	-0.3%	118%	116%	114%	113%	111%
HT VIII (B): HT - Temporary Supply Others (TSO)	16.42	13.13	13.24	13.36	13.42	-20.0%	0.8%	0.9%	0.4%	256%	202%	200%	199%	198%
HT IX(A): HT - Public Services - Government	8.35	8.43	8.57	8.61	8.49	1.0%	1.6%	0.4%	-1.4%	130%	130%	129%	128%	125%
HT IX(B): HT - Public Services - Others	10.44	10.40	10.55	10.56	10.40	-0.4%	1.4%	0.1%	-1.5%	163%	160%	159%	157%	153%
<b>Total HT Category</b>	<b>8.63</b>	<b>8.68</b>	<b>8.73</b>	<b>8.79</b>	<b>8.84</b>	<b>0.6%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>0.6%</b>	<b>135%</b>	<b>134%</b>	<b>132%</b>	<b>131%</b>	<b>130%</b>
<b>Average Cost of Supply (Modified)</b>	<b>6.40</b>	<b>6.50</b>	<b>6.63</b>	<b>6.71</b>	<b>6.79</b>	<b>1.49%</b>	<b>2.00%</b>	<b>1.20%</b>	<b>1.27%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

In the above Table,

- (a) 'Approved Tariff' refers to the tariff approved by the Commission in this Order for each year of the 3rd Control Period;
- (b) Ratio of Average Billing Rate (ABR) to Average Cost of Supply (ACoS):  
'Existing Tariff - ABR/ACoS' refers to the ratio of ABR at Existing Tariff, including FAC, to the ACoS derived based on Revenue at Existing Tariff worked out for FY 2016-17, i.e., Rs. 6.40 per kWh.  
'Approved Tariff' to current ACoS' refers to the ratio of ABR approved in this Order to the modified ACoS approved for each year of the 3rd Control Period as per Table 8-6, i.e., Rs. 6.50 per kWh (FY 2016-17), Rs 6.63/kWh (FY 2017-18), Rs 6.71/kWh (FY 2018-19) and Rs 6.79/kWh (FY 2019-20).

### **8.7 Tariff Philosophy proposed by MSEDCL and Commission's Rulings**

MSEDCL has proposed certain changes in the Tariff Philosophy and Tariff Design in its Petition. MSEDCL's submissions and the Commission's rulings are set out in the following paragraphs.

### **8.8 Full Cost Recovery, excluding Carrying Cost**

#### ***MSEDCL's Submission***

MSEDCL's Petition is based on almost full cost recovery of the total Revenue Gap computed for the 3rd Control Period. Since the available period for recovery is the four years from FY 2016-17 to FY 2019-20, that period can be utilised to evolve a methodology to determine the commercial principles to sustain growth, ensure MSEDCL's financial viability, avoid any financial losses, and at the same time protect consumers from tariff shock.

#### ***Commission's Ruling***

Based on its analysis in the earlier Chapters – 3, 4 and 5, the Commission has projected the total revenue requirement for the 3<sup>rd</sup> Control Period, including necessary adjustments for past years' Revenue Gaps and Surpluses. Although the revised tariffs for the the first year (FY 2016-17) are applicable from 1 November, 2016, the Commission has determined the revenue from such tariffs for the entire year. Any shortfall/surplus in actual revenue vis-à-vis the approved Revenue Requirement will be trued-up in the MTR process.

The Commission has allowed full recovery of the estimated Revenue Gap of Rs. 9,149 crore over the 3rd Control Period. There is a year to year variation in the matching of ARR vis-a-vis the projected revenue. However, such annual variation in Revenue Gap/(Surplus) has been evened out and the cumulative impact, along with carrying or holding cost, as the case may be, has been allowed.

## 8.9 Economical Use of Electricity

### *MSEDCL's Submission*

The Commission include provisions in its Order so that electricity is used efficiently by all consumers and consumers pay reasonable tariffs. Appropriate price signals may be given for restricting consumption by encouraging efficient use of electricity.

### *Commission's Ruling*

The Commission has kept in view the key objectives of the EA, 2003, including promotion of competition, protection of the interest of consumers and encouraging economy and efficiency in the use of electricity. The Commission has to strike a balance between promoting efficient use of electricity through appropriate price signals and the reasonableness of tariff, without tariff shock to any category. Moreover, the Commission has separately approved DSM expenses which would promote adoption of energy efficiency measures. MSEDCL should encourage its consumers, particularly new establishments, townships and growth centres, directly and through the developers, to deploy and use energy-efficient and BEE certified star rated appliances. MSEDCL should also undertake consumer education and awareness campaigns and systematically deploy such appliances at its own establishments.

## 8.10 Rationalization of Fixed Cost

### *MSEDCL's Submission*

MSEDCL has proposed increases in Fixed/Demand Charges for all consumer categories. The following Table summarises the consumer category-wise Fixed Charges/ Demand Charges at existing tariffs, and as proposed by MSEDCL.

**Table 8-9: Category-wise Fixed/ Demand Charges – Existing, and Proposed by MSEDCL**

Categories	Unit	Existi ng	Proposed			
			FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20
<b>HT Category</b>						
HT I: Industry	Rs./ kVA/Month	220	235	255	280	295
HT II: Commercial	Rs./ kVA/Month	220	235	255	280	295
HT III: Railways	Rs./ kVA/Month	Nil	Nil	Nil	Nil	Nil
HT IV: Public Water Works (PWW)	Rs./ kVA/Month	220	235	255	280	295
<b>HT V: Agriculture</b>						
Pumpsets	Rs./ kVA/Month	30	35	45	55	58
Others	Rs./ kVA/Month	30	50	64	79	83
HT VI: Bulk Supply (Residential)	Rs./ kVA/Month	220	235	255	280	295
HT VIII: Temporary Supply	Rs./ kVA/Month	290	310	335	365	386
HT IX: Public Services -	Rs./ kVA/Month	220	235	255	280	295



Categories	Unit	Existing	Proposed			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Government						
HT IX: Public Services - Others	Rs./ kVA/Month	220	235	255	280	295
HT X: Ports	Rs./ kVA/Month	220	235	255	280	295
HT XI: Mono Rail / Metro		220	235	255	280	295
<b>LT Category</b>						
<b>LT I: Residential</b>						
(A)BPL (0-30 Units)	Rs./Connection/Month	10	11	12	13	13
(B) Consumption>30 Units/ month						
1-100 Units	Rs./Connection/Month	50	75	100	125	150
101-300 Units	Rs./Connection/Month	50	100	125	150	175
301-500 Units	Rs./Connection/Month	50	100	125	150	175
500-1000 Units	Rs./Connection/Month	50	125	150	175	200
Above 1000 Units	Rs./Connection/Month	50	125	150	175	200
Three Phase	Rs./Connection/Month	150	160	185	210	235
<b>LT II: Non-Residential</b>						
(A) 0-20 kW	Rs./Connection/Month	220	235	255	280	295
(B)> 20 kW and $\leq 50$ kW	Rs./ kVA/Month	220	235	255	280	295
(C)> 50 kW	Rs./ kVA/Month	220	235	255	280	295
<b>LT III: Public Water Works (PWW)</b>						
(A) 0-20 kW	Rs./ kVA/Month	60	65	80	95	101
(B)> 20 kW and $\leq 40$ kW	Rs./ kVA/Month	70	75	90	105	111
(C)> 40 kW and $\leq 50$ kW	Rs./ kVA/Month	105	115	135	155	163
<b>LT IV: Agriculture</b>						
<b>Un-Metered Tariff</b>						
<b>Zones with (Above 1318 Hrs/HP/Annum)</b>						
0-5 HP	Rs./HP/Month	374	395	434	477	498
Above 5 HP	Rs./HP/Month	406	428	471	518	541
<b>Zones with (Below 1318</b>						

Categories	Unit	Existing	Proposed			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<i>Hrs/HP/Annum)</i>						
<i>0-5 HP</i>	Rs./HP/Month	283	299	327	359	375
<i>Above 5 HP</i>	Rs./HP/Month	310	327	359	394	411
<i>Metered Tariff - Pumpsets</i>	Rs./kW/Month	20	22	25	30	31
<i>Agriculture Metered - Others</i>	Rs./kW/Month	50	55	70	85	89
<b>LT V: Industry (Powerloom)</b>						
<i>0-20 kW (up to and including 27 HP)</i>	Rs./Connection/Month	220	235	260	285	300
<i>Above 20 kW (above 27 HP)</i>	Rs./ kVA/Month	150	160	180	200	211
<b>LT V: Industry (General)</b>						
<i>0-20 kW (up to and including 27 HP)</i>	Rs./Connection/Month	220	235	260	285	300
<i>Above 20 kW (above 27 HP)</i>	Rs./ kVA/Month	150	160	180	200	211
<b>LT VI: Street Lights</b>						
Grampanchayat A B & C Class Municipal Council	Rs./ kVA/Month	50	55	70	85	89
Municipal corporation Area	Rs./ kVA/Month	50	55	70	85	89
<b>LT VII: Temporary Supply</b>						
(A)Temporary Supply Religious (TSR)	Rs./Connection/Month	290	380	415	450	475
(B)Temporary Supply Others (TSO)	Rs./Connection/Month	360	310	340	370	390
LT VIII: Advertisements and Hoardings	Rs./Connection/Month	575	610	655	705	744
LT IX: Crematorium & Burial Grounds	Rs./Connection/Month	290	310	340	370	390
<b>LT X: Public Services – Government</b>						
(A)0-20 kW	Rs./Connection/Month	220	235	260	285	300
(B)> 20 kW and $\leq$ 50 kW	Rs./ kVA/Month	220	235	260	285	300
(C)> 50 kW	Rs./ kVA/Month	220	235	260	285	300
<b>LT X: Public Services - Others</b>						
(A)0-20 kW	Rs./Connection/M	220	235	260	285	300

Categories	Unit	Existing	Proposed			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	onth					
(B)> 20 kW and $\leq$ 50 kW	Rs./ kVA/Month	220	235	260	285	300
(C)> 50 kW	Rs./ kVA/Month	220	235	260	285	300
<b>LT XI Port</b>	Rs./ kVA/Month	220	235	260	285	300

Considering the surplus availability of power resulting in uninterrupted power supply to most consumers, the Fixed Charges need to be gradually increased so as to recover the fixed component of its expenses through such Charges. The following rulings of the Commission are relevant in this context.

Order of December 2003: “...The Commission has continued the process of increasing the recovery of fixed costs by levy of Fixed Charges to consumers, to safeguard the MSEB from steep fluctuations in revenue with varying consumption over time....”

Order in Case No. 72 of 2007: “...As and when sufficient power is available and contracted by the Licensees, the Fixed Charges can again be increased, and Energy Charges reduced correspondingly.”

Order in Case No. 111 of 2009: “...once sufficient power is available and contracted by the Licensees, the Fixed/ Demand Charges can again be increased, and Energy Charges reduced correspondingly.”

MSEDCL has contracted enough power to meet the increasing demand. Segregating its proposed ARR for FY 2016-17, based on certain assumptions, MSEDCL has worked out 39% of its total cost as fixed, against which the Commission has allowed only 17% recovery through the fixed components of tariffs. This lower recovery of fixed costs through Fixed Charges is against the basic principles of recovery, as accepted by the Commission itself.

### ***Commission's Ruling***

In its Order in Case No. 72 of 2007, the Commission had reduced the Fixed/ Demand Charges on account of the high power deficit in MSEDCL's area.

During the public consultation process, many consumers have opposed the proposal of MSEDCL to increase Fixed/ Demand Charges. However, it should be noted that the approved expenses of MSEDCL need to be recovered through the tariff, by way of Fixed Charges or Energy Charges or both. Therefore, not increasing the Fixed Charges will result in a corresponding impact on Energy Charges.

With regard to the levy of Fixed Charges / Demand Charges, the Commission has explained the rationale in previous Tariff Orders. This is also in accordance with the EA, 2003 and the Tariff Policy. Considering the same assumptions based on which MSEDCL has stated 39% of its total ARR as fixed cost, the approved fixed cost component works out to 40% of the ARR of MSEDCL, whereas revenue recovery

through Fixed Charges contributes around 16% of the total revenue. Levy of Fixed Charges and Demand Charges does not result in any windfall gain to MSEDCL, since it is recovering only a part of its Fixed Costs through such Charges. With the increase now approved, revenue recovery from Fixed Charges would marginally increase to only around 17% of the total revenue. As rationalization of Energy Charges has also been undertaken simultaneously, the rationalization of Fixed Charges is unlikely to result in a significant tariff burden for consumers.

The Commission has noted the increase in the supply availability of MSEDCL and, therefore, there is now a strong case for increase in the Fixed / Demand Charges, which were substantially reduced from the Order in Case No. 72 of 2007. However, such increase in Fixed Charges should be gradual and not steep. Therefore, the Commission has approved a gradual increase in Fixed / Demand Charges over the 3rd Control Period, just sufficient to keep the revenue recovery from Fixed Charges at around 17% of the total revenue of MSEDCL. The consumer category-wise Fixed/Demand Charges approved for the 3rd Control Period are as summarised in the Table below:

**Table 8-10: Category-wise Fixed/ Demand Charges – Existing and Approved by Commission**

Categories	Unit	Existing	Approved			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT Category</b>						
HT I: HT- Industry	Rs./ kVA/Month	220	235	250	270	290
HT II: HT - Commercial	Rs./ kVA/Month	220	235	250	270	290
HT III: HT - Railways/Metro/ Monorail	Rs./ kVA/Month	Nil	235	250	270	290
HT IV: HT - Public Water Works (PWW)	Rs./ kVA/Month	220	235	250	270	290
HT V(A): HT - Agricultural - Pumpsets	Rs./ kVA/Month	30	35	40	45	50
HT V(B): Agricultural - Others	Rs./ kVA/Month		35	40	45	50
HT VI: HT - Group Housing Society (Residential)	Rs./ kVA/Month	220	220	220	220	220
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/Month	290	310	330	355	385
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs./ kVA/Month	290	290	290	290	290
HT IX(A): HT - Public Services- Government	Rs./ kVA/Month	220	235	250	270	290
HT IX(B): HT - Public Services- Others	Rs./ kVA/Month	220	235	250	270	290
HT X: HT - Ports	Rs./ kVA/Month	220	Merged with HT IX (B): Public Services - Others			
<b>LT Category</b>						

Categories	Unit	Existing	Approved			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>LT I: LT - Residential</b>						
LT I(A): LT - Residential-BPL Category (0-30 units)	Rs./Month	10	11	12	13	15
LT I(B): LT - Residential						
1-100 units	Rs./Month	50	55	60	65	70
101-300 units	Rs./Month	50	55	60	65	70
301-500 units	Rs./Month	50	55	60	65	70
501-1000 units	Rs./Month	50	55	60	65	70
Above 1000 units	Rs./Month	50	55	60	65	70
<b>Three Phase Connection</b>	Rs./Month	150	160	170	185	200
<b>LT II: LT - Non-Residential</b>						
(A): 0 – 20 kW	Rs./Month	220	235	250	270	290
(B): >20 kW and ≤ 50 kW	Rs./ kVA/Month	220	235	250	270	290
(C): >50 KW	Rs./ kVA/Month	220	235	250	270	290
<b>LT III: LT - Public Water Works (PWW)</b>						
(A): 0-20 KW	Rs./ kVA/Month	60	70	75	80	85
(B): > 20 kW and ≤ 40 kW	Rs./ kVA/Month	70	80	85	90	100
(C): > 40 kW	Rs./ kVA/Month	105	115	125	135	145
<b>LT IV: LT - Agriculture</b>						
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>						
Category 1 Zones (Above 1318 Hrs/HP/Annum)						
(a) 0-5 HP	Rs./HP/Month	390	409	434	456	478
(b) Above 5 HP - 7.5 HP	Rs./HP/Month	422	442	466	487	513
(c) Above 7.5 HP	Rs./HP/Month	422	479	506	522	558
Category 2 Zones (Below 1318 Hrs/HP/Annum)						
(a) 0-5 HP	Rs./HP/Month	312	326	337	358	366
(b) Above 5 HP - 7.5 HP	Rs./HP/Month	339	356	372	388	408
(c) Above 7.5 HP	Rs./HP/Month	339	379	400	416	436
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs./HP/Month	20	21	22	24	26
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs./kW/Month	50	55	60	65	70
<b>LT V (A): LT - Industry - Powerlooms</b>						
(i): 0-20 kW	Rs./Connection/Month	220	235	250	270	290

Categories	Unit	Existing	Approved			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
(ii): Above 20 KW	Rs./ kVA/Month	150	160	170	185	200
<b>LT V(B): LT - Industry – General</b>						
(i): 0-20 KW	Rs./Connection/Month	220	235	250	270	290
(ii): Above 20 KW	Rs./ kVA/Month	150	160	170	185	200
<b>LT VI: LT - Street Light</b>						
(A): Grampanchayat A B & C Class Municipal Council	Rs./ kVA/Month	50	55	60	65	70
(B): Municipal corporation Area	Rs./ kVA/Month	50	55	60	65	70
<b>LT VII: LT - Temporary Connection</b>						
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	290	310	330	355	385
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	360	360	360	360
<b>LT VIII: LT - Advertisements and Hoardings</b>	Rs./Connection/ Month	575	575	575	575	575
<b>LT IX: LT - Crematorium and Burial Grounds</b>	Rs./Connection/ Month	290	310	330	355	385
<b>LT X (A) - Public Services - Government</b>						
(i): $\geq 20$ kW	Rs./Connection/ Month	220	220	220	220	220
(ii): $>20 - \leq 50$ kW	Rs./ kVA/Month	220	220	220	220	220
(iii): $>50$ kW	Rs./ kVA/Month	220	220	220	220	220
<b>LT X(B) - Public Services – Others</b>						
(i): $\geq 20$ kW	Rs./Connection/ Month	220	235	250	270	290
(ii): $>20 - \leq 50$ kW	Rs./ kVA/Month	220	235	250	270	290
(iii): $>50$ kW	Rs./ kVA/Month	220	235	250	270	290

In its previous MYT Order, the Commission had directed MSEDCL to study the possibility of introducing a two-part tariff for HT Railways in future, and submit a proposal in its next Tariff Petition. Owing to subsequent developments during the FY 2015-16, wherein Indian Railway has itself becoming a Distribution Licensee, the MSEDCL has not submitted any proposal on this aspect. However, the Commission has now merged the HT Railways, Metro and Monorail into a single category with a two-part tariff, as discussed earlier in this Chapter.

## 8.11 Cross-Subsidy Reduction

### *MSEDCL's submission*

The proposed tariff increase is based on economic rationale, i.e. the expected average inflation during the Control Period. The increase is to meet the increase in the cost due to inflation and meet additional costs which are beyond the control of MSEDCL.

Considering the far reaching implications on subsidised consumers, it would be imperative to study in detail the following factors while deciding the Cross-subsidy Road-map:

- No Tariff Shock to any Consumer Category;
- Capacity to Pay of weaker Consumer Categories;
- Expected increase in the Network and Supply Costs;
- Financial impact of OA on MSEDCL;
- Change in consumer mix due to OA.

### *Commission's Ruling*

The Commission has elaborated on the issue of the tariff increase required to meet the approved Revenue Gap earlier in this Chapter. Regarding reduction in Cross-Subsidy, the MYT Regulations, 2015 specify as follows:

**88.2** *The retail supply tariff for different consumer categories shall be determined on the basis of the Average Cost of Supply, computed as the ratio of the Aggregate Revenue Requirement of the Distribution Licensee for the Year determined in accordance with Regulation 78, and including unrecovered Revenue Gaps of previous years to the extent proposed to be recovered, to the total sales of the Distribution Licensee for the respective Year.*

**88.3** *The Commission shall endeavour to gradually reduce the cross-subsidy between consumer categories with respect to the Average Cost of Supply in accordance with the provisions of the Act.*

**88.4** *While determining the tariff, the Commission shall also keep in view the cost of supply at different voltage levels and the need to minimise tariff shock to consumers."*

The tariff design entails careful consideration in the determination of Fixed Charge/Demand Charge, Energy Charge and Wheeling Charge, and assessment of the likely impact of such Tariff components across consumer categories. The ABR for a consumer category and its cross-subsidy level would also depend upon the number of consumers, consumer mix, and consumption mix. Thus, while the tariff design exercise may strive to bring the ABR for each consumer category close to ACoS, some degree of cross-subsidy across consumer categories is unavoidable at present.

Owing to the historical legacy and background of the present tariff for various consumer categories, it is not possible for the Commission to eliminate entirely the

cross-subsidy for certain categories without giving a tariff shock. Although the Commission has endeavoured to minimise the level of cross-subsidy over the 3rd Control Period, as reflected in Table 8-8, it is not possible to bring all the categories within the desired range + 20% of the ACoS, as stipulated in the Tariff Policy, in this Control Period.

## 8.12 Incentives/Discounts and Penalties

### *MSEDCL's submission*

In order to boost industrial growth, MSEDCL provides various incentives in electricity tariffs to the Industry category consumers which are probably the highest in the country, such as ToD rebate for night consumption of Rs. 1.50 / kWh, Load Factor incentive up to 15%, PF incentive upto 7%, prompt payment discount of 1% and EHV rebate of 3%. MSEDCL has proposed no change in these incentives and penalties.

Some stake-holders have stated that, although MSEDCL has not proposed any modification in the ToD Slots or tariff, analysis of its own data shows that the actual peak hours are different from the peak hour slots. They have stated that the Commission should undertake a detailed analysis of MSEDCL's load management and rationalisation of ToD slots.

### *Commission's Ruling*

The Commission has analysed the share of incentives and rebates for FY 2015-16 from the Revenue break-up submitted by MSEDCL.

**Table 8-11: Share of Incentives/Penalties in MSEDCL Revenue in FY 2015-16, as assessed by Commission**

Category	Revenue excl. Incentives, Rebates and Penalties (Rs. Crore)	Incentives, Rebates, etc. (Rs. Crore)	Net Revenue (Rs. Crore)	Incentive, Rebate, etc. as a % of Net Revenue	Energy Sales as submitted by MSEDCL (MU)	Incentive, Rebate, etc. per unit of Sales (Rs./kWh)
HT Category	23,824	(1,694)	22,131	7.65%	29,447	0.58
LT Category	30,076	(97)	29,979	7.65%	58,454	0.02
<b>Total</b>	<b>53,900</b>	<b>(1,791)</b>	<b>52,109</b>	<b>7.65%</b>	<b>87,901</b>	<b>0.20</b>

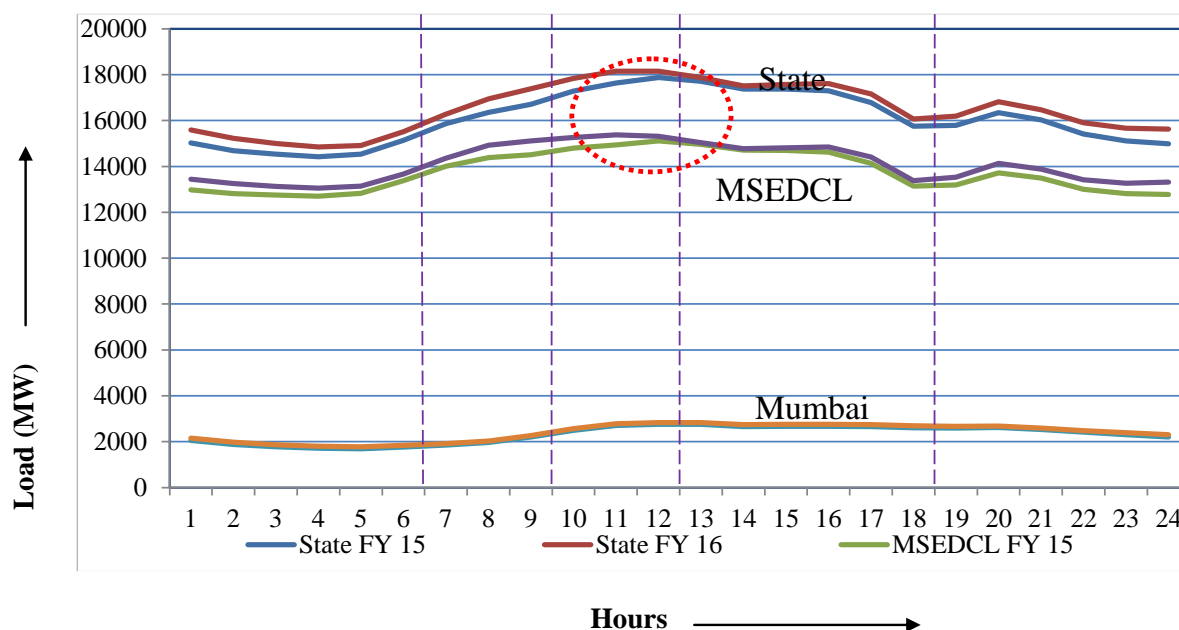
The total Incentives and Rebates made available to the HT category in FY 2015-16 was 7.65% of the Net Revenue billed to the HT category, which translates to Rs. 0.58 / kWh for each unit of Energy Sales to HT category. The present level of Incentives and Rebates are already significant, and the Commission is of the view that no enhancement is required. Therefore, the Commission kept the existing incentive/penalties structure unchanged.



ToD tariffs were introduced as a DSM measure to mitigate diurnal variation in the load curve. Further, the ToD tariff is designed to address the State-wide demand pattern rather than the demand patterns of individual Licensees.

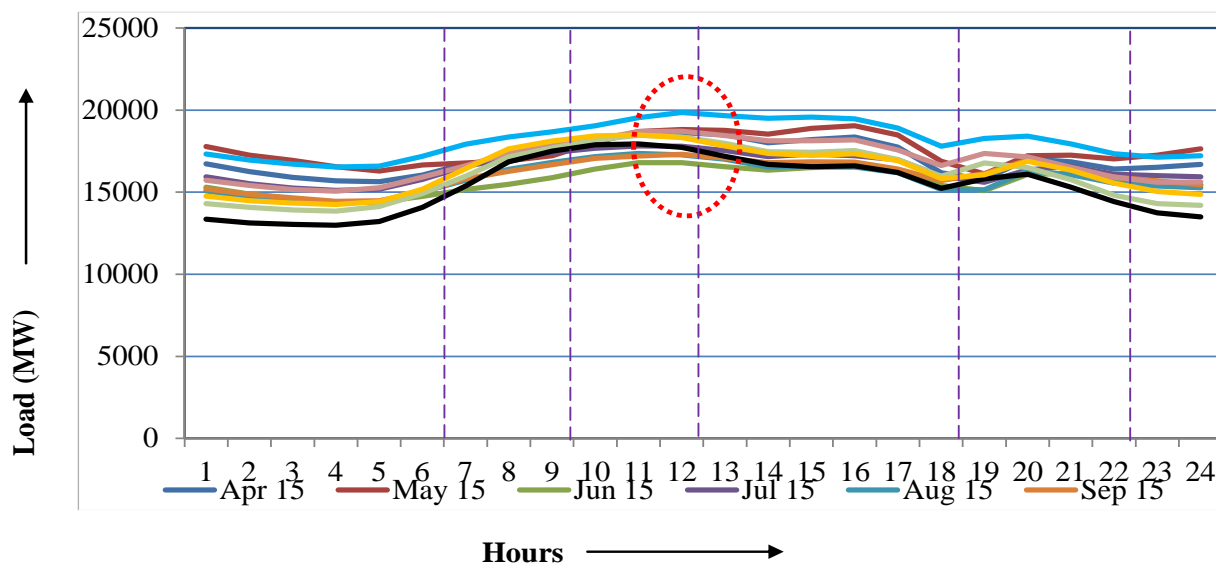
The Commission had conducted a Load Curve analysis of system demand in Maharashtra. The hourly load curve analysis of FY 2014-15 and FY 2015-16 shows that the peak load of the system demand has shifted to the afternoon from the evening hours.

**Figure 8-1: Hourly Load Curve for Maharashtra for FY 2014-15 and FY 2015-16**



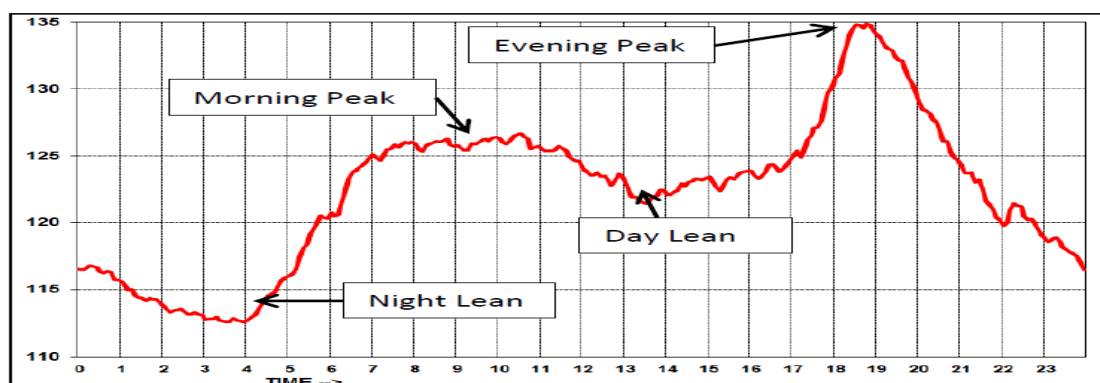
Source: MSLDC

The seasonal variation in the load curve in FY 2015-16 also suggests that the peak load of the system has shifted to the afternoon.

**Figure 8-2: Seasonal Variation in Load Curve of Maharashtra in FY 2015-16**

Source: MSLDC

The Commission's analysis also suggests that the major reason behind this shift in system demand is due to a change in the method of recording demand of MSEDCL. However, when compared to the All-India Load Curve, it is seen that the peak load of the national system demand is in the evening, in contrast to Maharashtra's peak load in the afternoon hours.

**Figure 8-3: National Load Curve****Figure 2: Typical All India Load Curve**

Source: NLDC

The objective of ToD tariffs is to incentivise shifting of consumption from peak to off-peak hours primarily in order to optimise the power purchase costs. The present structure of ToD tariffs is intended to shift the load from the morning peak (09:00 hrs – 12:00 hrs) and evening peak (18:00 hrs – 22:00 hrs) to night off-peak (22:00 hrs – 06:00 hrs) and afternoon hours. As shown above, the present ToD tariff structure has indeed contributed to shifting the peak load from the evening hours. However, instead

of the load curve shifting to the night off-peak hours (22:00 hrs – 06:00 hrs), it has shifted to the afternoon time-slot. Hence, there is a demand to change the ToD tariff structure.

However, the Commission is of the view that, in the absence of a substantive study setting out the likely outcome of a revised ToD tariff structure and taking into account the impact of this shift in the load curve, it would not be prudent and might not even be beneficial to change the ToD tariff structure. Further, a load curve weighted towards the afternoon hours might well be helpful for the Distribution Licensees in optimising their power purchase costs, as power available at that time in the markets will be cheaper as the Figure above indicates that the all-India system still has an evening peak load.

Hence, for the time being, the Commission has not changed the existing ToD tariff structure and maintained it uniformly across the State.

However, MSEDCL may submit its detailed analysis indicating the benefits, if any, due to shift in peak load and other considerations at the time of the MTR. The Commission may revisit the issue after public consultation on this aspect.

#### **8.13 Concession in Demand Charges for Electric Arc Furnace Industry**

Steel Industries using Electric Arc Furnaces have stated that, due to inherent nature of their load profile, they have to maintain a high Contract Demand but their Load Factor of operations is very low. Thus, there is a significant per-unit impact on account of Demand Charges, and they are unable to claim Load Factor incentive either.

The Commission notes that the Load Factor of Electric Arc Furnace units is around 28%. Further, because of the typical characteristics of the operation of the Electric Arc Furnaces, a high Contract Demand will have to be maintained to meet peak current requirements which is actually utilised for a very limited period. This typical nature of usage results in a higher burden of Demand Charge on these consumers.

Therefore, to mitigate the impact of Demand Charges in these circumstances, the Commission has decided to apply concessional Demand Charges of 75% of the Demand Charges applicable to EHV/HT Industry category, so that the ABR for the Electric Arc Furnace industrial units is almost at par with the ABR for other EHV/HT Industrial units.

#### **8.14 Stand-by Charges from Mumbai Distribution Licensees**

In its MYT Orders for the three Mumbai Distribution Licensees, viz. Tata Power Co. Ltd. (Case No. 179 of 2011), Reliance Infrastructure Ltd. (Case No. 9 of 2013) and BEST (Case No. 26 of 2013), the Commission has decided their Stand-by Demand contribution based on the average of Coincident Peak Demand (CPD) and Non-Coincident Peak Demand (NCPD) used for sharing the Total Transmission System Charges. Based on the revised average of CPD and NCPD as approved in the latest InSTS Tariff Order dated 22 July, 2016 in Case No. 91 of 2016, the Commission has

determined the share of these three Licensees in the Stand-by Charges for the 3rd Control Period payable to MSEDCL, as below:

**Table 8-12: Stand-by Charges for 3rd Control Period, as approved by Commission**

<b>Distribution Licensee</b>	<b>% Share of Base TCR</b>	<b>Share of Utilities other than MSEDCL</b>	<b>Annual Share of Stand-by Charges</b>	<b>Per Month Share of Stand-by Charges</b>
<b>FY 2016-17</b>				
MSEDCL	83.47%			
MBPPL	0.09%			
Indian Railways (Central Railway)	0.00%			
TPC-D	4.73%	28.77%	113.93	9.49
RInfra-D	7.25%	44.09%	174.57	14.55
BEST	4.46%	27.14%	107.49	8.96
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>396.00</b>	<b>33.00</b>
<b>FY 2017-18</b>				
MSEDCL	82.62%			
MBPPL	0.09%			
Indian Railways (Central Railway)	1.26%			
TPC-D	4.83%	30.10%	119.21	9.93
RInfra-D	6.93%	43.21%	171.12	14.26
BEST	4.28%	26.68%	105.66	8.81
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>396.00</b>	<b>33.00</b>
<b>FY 2018-19</b>				
MSEDCL	82.86%			
MBPPL	0.09%			
Indian Railways (Central Railway)	1.22%			
TPC-D	4.98%	31.47%	124.63	10.39
RInfra-D	6.70%	42.32%	167.60	13.97
BEST	4.15%	26.21%	103.77	8.65
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>396.00</b>	<b>33.00</b>
<b>FY 2019-20</b>				
MSEDCL	83.08%			
MBPPL	0.09%			
Indian Railways (Central Railway)	1.17%			
TPC-D	5.15%	32.87%	130.18	10.85
RInfra-D	6.49%	41.41%	164.00	13.67
BEST	4.03%	25.71%	101.82	8.49
<b>Total</b>	<b>100.01%</b>	<b>100.00%</b>	<b>396.00</b>	<b>33.00</b>

**8.15 Clarification on HT I Seasonal Category*****MSEDCL's submission***

MSEDCL has sought clarification as to whether the activities mentioned under the HT Seasonal category need to be necessarily billed under that category or whether the conditions relating to maximum of 9 months working and consumer opting for Seasonal tariff need to be satisfied.

***Commission's Ruling***

For the applicability of Tariff under HT Seasonal category, the period of operation in a financial year should be limited upto 9 months, and the category should be opted for by the consumer. The list of activities in the Tariff Schedule is only by way of illustration.

**8.16 Need for creation of new Categories for HT Agriculture - Others and LT Ports*****MSEDCL's submission***

In its previous MYT Order, the Commission has created an 'Agriculture Metered – Others' LT category, whose Energy Charges were Rs. 1.02 per kWh higher than that of the 'Agriculture Metered – Pumpsets' category. However, on similar principles, the Commission has not created a separate HT category for Agriculture consumers for activities other than pumping. The Commission may do so, with a tariff slightly higher than the 'HT Agricultural pumpsets' category.

A separate category of LT Port consumers, similar to that of HT Ports, may be created, with the same tariff.

The data pertaining to the newly proposed categories is currently not available separately and need not be a precondition for carving them out. The overall sales and revenue generated from these categories would be taken care of in truing-up.

***Commission's Ruling***

The Commission has accepted MSEDCL's proposal for creation of a new category of HT Agriculture – Others, with tariff slightly higher than for HT – Agriculture – Pumpsets, considering the logic advanced by MSEDCL. Its coverage and tariff-related details have been provided in the Tariff Schedule.

Regarding the proposal for creation of a separate category of LT Ports similar to HT Ports and with the same tariff, the Commission has merged HT Ports into the HT Public Services – Others category. Similarly, LT Ports has been included in LT Public Services – Others category.

**8.17 Amendment to LT Agriculture (Other) Category*****MSEDCL's submission***

Since Cane Crushers and/or Fodder Cutters are directly linked to the agricultural produce and in order to link the direct agricultural processing units under the main Agriculture category, the following provision as presently specified in the LT

Agriculture - Others category needs to be shifted to the LT - Agriculture Metered – Pumpsets category:

*“Cane crusher and/or fodder cutter for self-use for agricultural processing purpose, but shall not be applicable for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or change of belt drive.”*

***Commission’s Ruling***

The Commission has accepted MSEDCL’s proposal, and has incorporated it in the Tariff Schedule.

**8.18 Clarification regarding Bulk Supply: Commercial Category**

***MSEDCL’s submission***

In order to provide connections to shopping malls and other commercial complexes, the following provision needs to be added in the HT / LT Commercial Category.

*“Commercial category consumers requiring a single point supply will have to either operate through a Franchisee route or take individual connections under relevant category.”*

***Commission’s Ruling***

A consumer in the HT II (Commercial) category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them. This has accordingly been clarified in the Tariff Schedule.

**8.19 Change in Slab rate of LT Commercial Category**

***MSEDCL’s submission***

The first slab, i.e. ‘0-200 Units’ under the LT Commercial category of 0-20 kW may be restricted to ‘0-100 Units’ only.

***Commission’s Ruling***

The LT-Commercial category of 0 to 20 kW is further sub-divided into two sub-categories with slabs of ‘0-200 Units’ and ‘Above 200 Units’. The number of consumers, Connected Load, as well as energy sales between the two slabs is almost equally distributed. Further, there is a significant difference between the Energy Charge of ‘0-200 Units’ (Rs 6.60 per unit) and ‘Above 200 Units’ (Rs 9.62 per unit) slabs. MSEDCL has not submitted any rationale for its proposal for restricting the slab to ‘0-100 Units’ but, in proposing this revision, MSEDCL has proposed to apply the Energy Charge as applicable for the slab of ‘Above 200 units’ also for consumption ‘Above 100 units’. As such the ABR for the ‘0-200 Units’ slab is also substantially higher (around 135%) than ACoS.

Over the Control Period, the difference in Energy Charges for the two slabs as proposed by MSEDCL varies from Rs 3.49 per unit (FY 2016-17) to Rs 4.40 per unit (FY 2019-20). Thus, MSEDCL's proposed Energy Charges restricting the first slab to '0-100 Units' would severely affect around 8 lakh LT Commercial category consumers presently covered under this slab with monthly consumption upto 200 Units. Hence, the Commission has not accepted MSEDCL's proposal.

## **8.20 Tariff Categorisation for CCTV Cameras**

### ***MSEDCL's Submission***

All connections to CCTV Cameras at public places may be included in the Public Services category depending on ownership since it is a service-oriented purpose.

### ***Commission's Ruling***

The coverage of CCTV Cameras in the Public Services category has practical difficulties. The definition of 'public places' might range from shopping malls, hotel lobbies, etc. (covered under Commercial Category) to Railway Stations (covered under Public Services) and further to Traffic Signals (covered under Street Lights). Further, the electricity consumption of CCTV Cameras may not be significant in comparison to that of the host consumers under the parent categories. Therefore, the Commission does not see the need for separating the consumption of CCTV Cameras from their parent category..

## **8.21 Tariff for Charging of Hybrid Vehicles**

### ***MSEDCL's Submission***

The Commission has categorized the Electrical Charging Centers of Hybrid Vehicles under the Commercial Category. The following qualification may be added:

*"Electrical Charging Centers of Hybrid Vehicle and allied activities  
(However in case the consumer uses the electricity for charging own Vehicle  
at his premises, the tariff shall be as per parent category of supply)."*

### ***Commission's Ruling***

The Tariff Schedule includes this qualification.

## **8.22 Tariff for Tyre Remoulding/Retreading**

Many suggestions were made during the public consultation process for categorising tyre retreading, remoulding and vulcanisation units as industrial consumers. As discussed earlier in this Chapter, the Commission has included these activities in the Industry category, and this is reflected in the Tariff Schedule.

## **8.23 Tariff for Telecommunication Towers:**

The issue of tariff category applicable to telecommunications towers has been decided by the Commission in its previous MYT Order as follows:

*"6.24.4 The Commission, in its Order in Case No. 116 of 2008 dated August 17, 2009, had discussed the categorisation of Mobile Towers in detail as follows:*

*“As regards MSEDCL’s proposal to classify certain telecom towers, etc., under commercial category, irrespective of whether they were covered under the IT & ITES Policy of the Government of Maharashtra, no rationale has been submitted by MSEDCL for this specific proposal. The Commission had consciously included IT and IT enabled Services (IT & ITES) under industrial category (HT and LT as applicable) in the Tariff Order for the erstwhile MSEB in 2004. Since then, the IT & ITES category continues to be charged under industrial tariffs. In the existing Tariff Schedule of MSEDCL as well as the approved Tariff Schedule for the distribution licensees in Mumbai issued in June 2009, the Commission has included IT & ITES category under industrial category. Hence, the Commission does not agree with MSEDCL’s proposal in this regard and rules that IT & ITeS will be charged at industrial rates (HT and LT rates, as applicable), without getting into the details of whether mobile towers and commercial broadcasting towers and all other similar activities are covered under the Government of Maharashtra Policy on IT & ITeS.”*

*The Commission is of the view that the rationale and ruling of its earlier Order in Case No. 116 of 2008 should continue to apply. In other words, the Industrial tariff will apply to Mobile Towers or other activities cited by MSEDCL only if they are covered as IT/ ITES and the provisions of GoM’s Policy apply to them.”*

Considering the above, Telecommunications Towers shall be covered under the Commercial category, unless specifically included in the IT & ITeS Policy of the Government of Maharashtra for coverage under the Industry category.

## **8.24 Proposal for Schedule of Charges**

### ***MSEDCL’s Submission***

As per Regulation 18 of the Supply Code, 2005, Distribution Licensees are required to file their Schedule of Charges along with applications for determination of tariff under Section 64 of the EA, 2003. Accordingly, with its Tariff Petition for FY 2012-13 (Case No. 19 of 2012), MSEDCL had filed its Schedule of Charges for various activities, which the Commission had approved vide its Order dated 16 August, 2012.

The Schedule of Charges approved by the Commission is based on recent data and there has been no substantial increase in the cost elements. Therefore, MSEDCL is not proposing any revision in the existing Schedule of Charges. It may file a separate Petition seeking revision as and when the need arises.

### ***Commission’s Ruling***

The Commission has noted MSEDCL’s submission. However, since the rates and items in the Schedule of Charges must be reviewed at reasonable intervals, MSEDCL should present the updated details and data in respect of each item of the Schedule of Charges with its MTR Petition for evaluation by the Commission (unless it opts to do so earlier through a separate Petition).



## 8.25 Other key components of Tariff

The issue of increase in Fixed Charges has been discussed earlier in this Chapter.

The Commission has continued to determine tariffs with an in-built incentive to reduce consumption. The impact on consumer bills is designed to increase as the consumption increases, on account of the higher telescopic tariffs applicable to higher consumption slabs. At the same time, it has been ensured that even the consumers falling in the higher consumption slabs are charged less to the extent of the consumption corresponding to the lower slabs.

The ToD tariffs are mandatorily applicable to HT Industries, HT Commercial, HT PWW and HT Public Services categories among the HT categories, and to LT Commercial (except 0-20 kW), LT Industries (except 0-20 kW) and LT Public Services (except 0-20 kW) categories among the LT categories having ToD meters; and available at their option to LT Commercial (0-20 kW), LT Industries (0-20 kW) and LT Public Services (0-20 kW) category consumers who have ToD meters. The approved ToD Tariffs are as follows:

**Table 8-13: ToD Time Slots and Tariffs approved by Commission**

Time Slot	ToD Tariff (Rs. per kWh)
2200 Hrs-0600 Hrs	-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs	0.00
0900 Hrs-1200 Hrs	0.80
1800 Hrs-2200 Hrs	1.10

Additional Demand Charges of Rs 20 per kVA per month are chargeable for the Stand-by component for CPPs, only to the extent of the actual recorded demand exceeding the Contract Demand.

The Billing Demand definition in case of HT categories has been retained at the existing levels, i.e.,

Monthly Billing Demand will be the higher of the following:

- Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- 75% of the highest Billing Demand/Contract Demand, whichever is lower, recorded during the preceding eleven months;
- 50% of the Contract Demand.

It may be noted that all previous clarifications given by the Commission through its various Orders continue to be applicable, unless they are specifically contrary to anything that has been stated in this Order, in which case the clarifications in this Order shall prevail.

The detailed computation of category-wise revenue with revised tariffs is provided in the Revenue Schedule annexed to this Order (**Annexure I to IV**).

The applicability of tariffs for different consumer categories has been stipulated in the Tariff Schedule, which is annexed as a part of this Order (**Annexure V to VIII**).

The revenue shortfall/surplus, if any, will be trued-up, subject to prudence check, at the time of the MTR.

## 8.26 Wheeling Charges

### *MSEDCL's Submission*

In the previous MYT Order, the Commission had approved the Wheeling Charges and wheeling losses at HT and LT levels for FY 2015-16 as under:

**Table 8-14: Approved Wheeling Charges and Losses for FY 2015-16**

Particulars	Wheeling Charges (Rs./kWh)	Wheeling Losses (%)
33 kV	0.15	6.00%
22 kV / 11 kV	0.83	9.00%
LT Level	1.43	12.50%

In previous Orders pertaining to MSEDCL, the Commission had observed that separate accounting of network and supply-related costs was essential for un-bundling of cost and tariff components, and was a pre-requisite for appropriate determination of Wheeling Charges. Network costs also needed to be further segregated in terms of voltage level (33 kV, 22 kV and 11 kV, and LT). The Commission had directed MSEDCL to submit voltage-wise segregated Wires cost components. It had also directed MSEDCL to maintain the accounts for expenses incurred on the Wires Business and Supply Business separately, and to submit them.

However, MSEDCL has still not maintained the network and supply-related costs separately. MSEDCL has stated that it has applied the same ratio of network and supply cost segregation as approved by the Commission in its previous MYT Order to arrive at the network-related costs:

*“MSEDCL does not maintain Audited Accounts for voltage-wise assets. However, based on the engineering study of its assets MSEDCL has arrived at the following segregation. MSEDCL would like to emphasize that this statement is only based on engineering estimate as it does not have accurate audited data. MSEDCL would like to submit that it does not have segregation between GFA of 22/11 V level and LT level assets. Hence, MSEDCL for the purpose of projection has segregated 22/11 kV level GFA as shown in the Table below...”*

MSEDCL has submitted its network cost and average Wheeling Charges for the 3<sup>rd</sup> Control Period, which is summarised in the Table below:

**Table 8-15: Network Cost for FY 2016-17 to FY 2019-20, as submitted by MSEDCL**

Particulars	Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ARR from WiresBusiness	Rs. crore	9,483	10,654	12,712	13,580
Total Sales	MU	96,811	103,053	109,870	117,315
<b>Average Wheeling Charges</b>	<b>Rs. / kWh</b>	<b>0.98</b>	<b>1.03</b>	<b>1.16</b>	<b>1.16</b>

MSEDCL has applied the voltage-wise GFA ratio as approved in the previous MYT Order. The GFA of MSEDCL has been segregated in terms of various voltage levels, and the estimated sales at each level projected by MSEDCL are as shown below.

**Table 8-16: Voltage-wise GFA ratio, estimated Sales and Apportioned Network Cost, as submitted by MSEDCL for FY 2016-17**

Particulars	Voltage-wise GFA Ratio	Network Cost Apportioned for FY 2016-17 (Rs. crore)	Sales (% of Total)	Sales (MU)
33 kV	14%	1,328	14.55%	14,090
22 kV & 11 kV	56%	5,310	17.21%	16,656
LT Level	30%	2,845	68.24%	66,064

To arrive at the cost of wheeling at the various voltage levels, the total Wires network cost at various voltage levels has been apportioned to different voltage levels (i.e., 33 kV, 22 kV and 11 kV, and LT) in the ratio of sales at the respective levels. The Wires costs at higher voltage levels has been further apportioned to lower voltage levels, since the HT system is also being used for LT supply.

Subsequently, MSEDCL has calculated the share of each voltage category in the NCPD using percentage sales for each category. The Wheeling Charges (in Rs./kW/month) were then derived by dividing the wheeling cost of each voltage category by the NCPD for that category and dividing it by 12 (months). Finally, the Wheeling Charges for each category were computed by dividing the Wheeling Charges (in Rs./kW/month) for each category by the Load Factor (assumed to be 66%) and 720 hrs (24 x 30).

The following Table summarises the Wheeling Charges and Wheeling Losses at each voltage level for the 3<sup>rd</sup> Control Period as proposed by MSEDCL:

**Table 8-17: Wheeling Charges and Wheeling Losses proposed by MSEDCL for FY 2016-17 and 2019-20**

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Wheeling Losses (%)	Wheeling Charges (Rs./kWh)	Wheeling Losses (%)	Wheeling Charges (Rs./kWh)	Wheeling Losses (%)	Wheeling Charges (Rs./kWh)	Wheeling Losses (%)	Wheeling Charges (Rs./kWh)
33 kV	6%	0.15	6%	0.17	6%	0.20	6%	0.22
22 kV & 11 kV	9%	0.86	9%	0.96	9%	1.15	9%	1.22
LT Level	12%	1.33	12%	1.49	12%	1.77	12%	1.89

***Commission's Ruling***

Several Objectors have sought separate determination of Wheeling Charges for 22 kV voltage level as well, which is presently being merged with the 11 kV voltage level, or else merging the Wheeling Charge of the 22 kV level with that of the 33 kV instead of the 11 kV level.

For FY 2015-16, MSEDCL has reported higher energy sales of 9,393 MU at 22 kV level as compared to 7,860 MU and 6,999 MU at the 33 kV and 11 kV levels, respectively. Therefore, there is a strong case for determining separate Wheeling Charges for the 22 kV level, similar to that for 33 kV and 11 kV. However, for determination of voltage-wise Wheeling Charges, the network cost data needs to be segregated into different voltage levels based on the voltage-wise GFA ratio. MSEDCL has been unable to provide the voltage-wise break-up of its GFA, instead presenting the same ratio as used in earlier Tariff Orders. In the absence of reliable data and a scientific methodology for ascertaining the voltage-wise cost/loss for the network, it would not be proper to merge the Wheeling Charge of 22 kV with that of 33 kV, as there is a substantial difference between the Charges at 33 kV and 22 & 11 kV voltage levels which would result in significant variation in the revenue assessment for MSEDCL.

Therefore, the Commission has been constrained in determining a separate Wheeling Charge for the 22 kV voltage level, and has had to continue with the existing practise of determining it along with that at 11 kV voltage level. However, the Commission directs MSEDCL to submit the voltage-wise break-up of GFA and voltage-wise loss levels separately for all major voltage levels, i.e. EHV (above 33 kV), 33 kV, 22 kV, 11 kV and LT, in its MTR Petition to enable the Commission to determine the Wheeling Charges for all these voltage levels separately.

In the present Order, the Commission is, however, and for the first time, separately determining the Wheeling Charges for HT consumer categories, segregated into EHV, 33 kV, and 22 kV /11 kV voltage levels, and the Supply component for all consumer categories of HT and LT voltage levels. The consumers connected at EHV voltage levels (above 33 kV) will not be subject to any Wheeling Charges or wheeling losses. Therefore, while computing the Wheeling Charges applicable for the 3rd Control

Period, in the absence of voltage-wise network cost details from MSEDCL, the Commission has taken the voltage-wise GFA ratio and the ratio of energy sales (excluding voltage levels above 33 kV) across the categories as proposed by MSEDCL, which is summarised below.

**Table 8-18: GFA and Sales Ratio considered by Commission**

Particulars	Voltage-wise GFA Ratio (%)	Sales (% of Total)
33 kV	14%	9%
22 kV & 11 kV	56%	19%
LT Level	30%	72%

Based on this sales ratio, the Commission has worked out the voltage-wise energy sales, excluding EHV sales, for the 33 kV, 22 kV & 11 kV, and LT levels for the 3rd Control Period as summarised below.

**Table 8-19: Voltage-wise Energy Sales for computation of Wheeling Charges for 3<sup>rd</sup> Control Period, as considered by Commission**

Sr. No.	Particulars	Sales (%)	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Total Energy Sales		91,229	96,211	101,602	107,434
2	Less: Energy Sales at EHV Level		6,081	6,342	6,614	6,899
3	Energy Sales to be considered for Wheeling Charges	100%	85,148	89,869	94,988	100,535
4	<b>Voltage-wise Energy Sales considered for Wheeling Charges</b>					
5	33 kV	9%	7,944	8,285	8,641	9,013
6	22 kV and 11 kV	19%	16,580	17,290	18,033	18,810
7	LT Level	72%	60,624	64,294	68,314	72,713

The network ARR, as approved for the 3rd Control Period in Chapter 5, is the basis for the determination of Wheeling Charges, as reproduced below.

**Table 8-20: Network ARR for 3rd Control Period (Rs. crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ARR for Distribution Wire Business as submitted by MSEDCL	9,483	10,654	12,712	13,580
ARR for Distribution Wire Business as approved by Commission	8,577	9,299	9,632	9,631

The Commission has computed the share of each voltage category in the NCPD using the percentage sales for each category.

**Table 8-21: Voltage-wise Share of Network Cost for 3rd Control Period, as considered by Commission**

Particulars	Network Cost (in the ratio of GFA) (Rs. Crore)	Sales (MU)	% of Sales between three levels	% of Sales between 22 kV & 11 kV and LT Level	Wheeling Cost break-up for 33 kV (Rs. Crore)	Wheeling Cost break-up for 22 kV & 11 kV (Rs. Crore)	Wheeling Cost break-up for LT Level (Rs. Crore)	Total Wheeling Cost (Rs. Crore)
<b>FY 2016-17</b>								
33 kV	1,201	7,944	9%		112			112
22 kV / 11 kV	4,803	16,580	19%	21%	234	1,031		1,265
LT Level	2,573	60,624	72%	79%	855	3,772	2,573	7,200
<b>Total</b>	<b>8,577</b>	<b>85,148</b>	<b>100%</b>	<b>100%</b>	<b>1,201</b>	<b>4,803</b>	<b>2,573</b>	<b>8,577</b>
<b>FY 2017-18</b>								
33 kV	1,302	8,285	9%		120			120
22 kV / 11 kV	5,207	17,290	19%	21%	250	1,104		1,354
LT Level	2,790	64,294	72%	79%	931	4,103	2,790	7,825
<b>Total</b>	<b>9,299</b>	<b>89,869</b>	<b>100%</b>	<b>100%</b>	<b>1,302</b>	<b>5,207</b>	<b>2,790</b>	<b>9,299</b>
<b>FY 2018-19</b>								
33 kV	1,349	8,641	9%		123			123
22 kV / 11 kV	5,394	18,033	19%	21%	256	1,127		1,383
LT Level	2,890	68,314	72%	79%	970	4,268	2,890	8,127
<b>Total</b>	<b>9,632</b>	<b>94,988</b>	<b>100%</b>	<b>100%</b>	<b>1,349</b>	<b>5,394</b>	<b>2,890</b>	<b>9,632</b>
<b>FY 2019-20</b>								
33 kV	1,348	9,013	9%		121			121
22 kV / 11 kV	5,394	18,810	19%	21%	252	1,108		1,361
LT Level	2,889	72,713	72%	79%	975	4,285	2,889	8,150
<b>Total</b>	<b>9,631</b>	<b>100,535</b>	<b>100%</b>	<b>100%</b>	<b>1,348</b>	<b>5,394</b>	<b>2,889</b>	<b>9,631</b>

The Wheeling Charge (in Rs./kW/month) has been derived by dividing the wheeling cost of each voltage category by the average of CPD and NCPD for that voltage level as per the latest InSTS Tariff Order Order, and dividing it by 12 for per month computation. The Wheeling Charges for each category were calculated by dividing the Wheeling Charge (in Rs./kW/month) for each category by the Load Factor (assumed to be 66%) and 720 hrs (24 x 30). Thus, the approved Wheeling Charges and Losses for the 3rd Control Period are as shown below.

**Table 8-22: Wheeling Charges approved for 3rd Control Period**

Particulars	Wheeling Loss (%)	Total Wheeling Cost (Rs. Crore)	Share in Average of CPD and NCPD (MW)	Wheeling Charge (Rs./kW/ Month)	Wheeling Charges @ 66% Load Factor (Rs. / kWh)
<b>FY 2016-17</b>					
33 kV	6.00%	112	2,279	41	0.09
22 kV / 11 kV	9.00%	1,265	2,694	392	0.82
LT Level	12.00%	7,200	10,685	562	1.18
<b>Total</b>		<b>8,577</b>	<b>15,657</b>	<b>457</b>	<b>0.96</b>
<b>FY 2017-18</b>					
33 kV	6.00%	120	2,425	41	0.09

Particulars	Wheeling Loss (%)	Total Wheeling Cost (Rs. Crore)	Share in Average of CPD and NCPD (MW)	Wheeling Charge (Rs./kW/ Month)	Wheeling Charges @ 66% Load Factor (Rs. / kWh)
<b>FY 2016-17</b>					
22 kV / 11 kV	9.00%	1,354	2,867	394	0.83
LT Level	12.00%	7,825	11,371	573	1.21
<b>Total</b>		<b>9,299</b>	<b>16,663</b>	<b>465</b>	<b>0.98</b>
<b>FY 2018-19</b>					
33 kV	6.00%	123	2,581	40	0.08
22 kV / 11 kV	9.00%	1,383	3,051	378	0.79
LT Level	12.00%	8,127	12,102	560	1.18
<b>Total</b>		<b>9,632</b>	<b>17,734</b>	<b>453</b>	<b>0.95</b>
<b>FY 2019-20</b>					
33 kV	6.00%	121	2,747	37	0.08
22 kV / 11 kV	9.00%	1,361	3,247	349	0.73
LT Level	12.00%	8,150	12,880	527	1.11
<b>Total</b>		<b>9,631</b>	<b>18,874</b>	<b>425</b>	<b>0.89</b>

In this Order, the Commission has also determined the Wires and Supply components of the tariff separately for each consumer category. Accordingly, the Wheeling Charge component and Energy Charge component have been shown separately while computing the category-wise tariffs, with the exception of the Residential BPL category. In case of the BPL category, no Wheeling Charges are apportioned considering the consumer profile of this category.

## 8.27 Revised Tariffs with effect from 1 November, 2016

**Table 8-23: Summary of LT Tariffs for FY 2016-17, effective from 1 November, 2016**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate			
<b>LT I: LT - Residential</b>					
LT I(A): LT - Residential-BPL Category (0-30 units)	Rs./Month	11	1.03	-	1.03
LT I(B): LT - Residential					
1-100 units	Rs./Month	55	2.98	1.18	4.16
101-300 units	Rs./Month	55	6.73	1.18	7.91
301-500 units	Rs./Month	55	9.69	1.18	10.87
501-1000 units	Rs./Month	55	11.17	1.18	12.35
Above 1000 units	Rs./Month	55	12.45	1.18	13.63
<b>Three Phase Connection<sup>\$\$</sup></b>	Rs./Month	160	-	-	-
<b>LT II: LT - Non-Residential</b>					



Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
(A) (i): 0 – 20 kW (0-200 units per month)	Rs./Month	235	6.09	1.18	7.27
(A) (ii): 0 – 20 kW (Above 200 units per month - Only balance above 200 units)	Rs./Month	235	9.32	1.18	10.50
(B): >20 kW and $\leq$ 50 kW	Rs. / kVA/Month	235	9.99	1.18	11.17
(C): >50 kW	Rs. / kVA/Month	235	12.97	1.18	14.15
<b>LT III: LT - Public Water Works (PWW)</b>					
(A): 0-20 kW	Rs. / kVA/Month	70	1.92	1.18	3.10
(B): > 20 kW and $\leq$ 40 kW	Rs. / kVA/Month	80	3.14	1.18	4.32
(C): > 40 kW	Rs. / kVA/Month	115	4.44	1.18	5.62
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>					
Category 1 Zones (Above 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	287		122*	409*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	320		122*	442*
(c) Above 7.5 HP	Rs. / HP/Month	357		122*	479*
Category 2 Zones (Below 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	204		122*	326*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	234		122*	356*
(c) Above 7.5 HP	Rs. / HP/Month	257		122*	379*
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs./HP/Month	21	1.76	1.18	2.94
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs./kW/Month	55	2.96	1.18	4.14
<b>LT V (A): LT - Industry - Powerlooms</b>					
(i): 0-20 kW	Rs./Connection /Month	235	4.33	1.18	5.51
(ii): Above 20 kW	Rs. / kVA/Month	160	5.67	1.18	6.85
<b>LT V(B): LT - Industry - General</b>					
(i): 0-20 kW	Rs./Connection/ Month	235	4.80	1.18	5.98
(ii): Above 20 kW	Rs. / kVA/Month	160	6.50	1.18	7.68
<b>LT VI: LT - Street Light</b>					



Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kVA/Month	55	4.15	1.18	5.33
(B): Municipal corporation Area	Rs. / kVA/Month	55	5.25	1.18	6.43
<b>LT VII: LT - Temporary Connection</b>					
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	310	3.00	1.18	4.18
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	12.52	1.18	13.70
<b>LT VIII: LT - Advertisements and Hoardings</b>	Rs./Connection/ Month	575	12.48	1.18	13.66
<b>LT IX: LT - Crematorium and Burial Grounds</b>	Rs./Connection/ Month	310	2.97	1.18	4.15
<b>LT X (A) - Public Services - Government</b>					
(i): ≥ 20 kW (0-200 units)	Rs./Connection/ Month	220	3.14	1.18	4.32
(i): ≥ 20 kW (Above 200 units)	Rs./Connection/ Month	220	4.36	1.18	5.54
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	220	5.27	1.18	6.45
(iii): >50 kW	Rs. / kVA/Month	220	5.91	1.18	7.09
<b>LT X(B) - Public Services - Others</b>					
(i): ≥ 20 kW (0-200 units)	Rs./Connection/ Month	235	4.30	1.18	5.48
(i): ≥ 20 kW (Above 200 units)	Rs./Connection/ Month	235	6.79	1.18	7.97
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	235	6.91	1.18	8.09
(iii): >50 kW	Rs. / kVA/Month	235	7.29	1.18	8.47

**Table 8-24: Summary of LT Tariffs for FY 2017-18, effective from 1 April, 2017**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
LT I: LT - Residential					
LT I(A): LT - Residential-BPL Category (0-30 units)	Rs./Month	12	1.05	-	1.05
LT I(B): LT - Residential					
1-100 units	Rs./Month	60	3.00	1.21	4.21
101-300 units	Rs./Month	60	6.73	1.21	7.94
301-500 units	Rs./Month	60	9.70	1.21	10.91
501-1000 units	Rs./Month	60	11.20	1.21	12.41

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
Above 1000 units	Rs./Month	60	12.48	1.21	13.69
<b>Three Phase Connection<sup>\$\$</sup></b>	Rs./Month	170	-	-	-
<b>LT II: LT - Non-Residential</b>					
(A) (i): 0 – 20 kW (0-200 units per month)	Rs./Month	250	6.09	1.21	7.30
(A) (ii): 0 – 20 kW (Above 200 units per month - Only balance above 200 units)	Rs./Month	250	9.32	1.21	10.53
(B): >20 kW and ≤ 50 kW	Rs. / kVA/Month	250	9.98	1.21	11.19
(C): >50 KW	Rs. / kVA/Month	250	12.55	1.21	13.76
<b>LT III: LT - Public Water Works (PWW)</b>					
(A): 0-20 KW	Rs. / kVA/Month	75	1.97	1.21	3.18
(B): > 20 kW and ≤ 40 kW	Rs. / kVA/Month	85	3.24	1.21	4.45
(C): > 40 kW	Rs. / kVA/Month	125	4.53	1.21	5.74
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>					
Category 1 Zones (Above 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	309		125*	434*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	341		125*	466*
(c) Above 7.5 HP	Rs. / HP/Month	381		125*	506*
Category 2 Zones (Below 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	212		125*	337*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	247		125*	372*
(c) Above 7.5 HP	Rs. / HP/Month	275		125*	400*
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs./HP/Month	22	1.83	1.21	3.04
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs./kW/Month	60	3.09	1.21	4.30
<b>LT V (A): LT - Industry - Powerlooms</b>					
(i): 0-20 KW	Rs./Connection /Month	250	4.54	1.21	5.75
(ii): Above 20 KW	Rs. / kVA/Month	170	5.91	1.21	7.12
<b>LT V(B): LT - Industry - General</b>					
(i): 0-20 KW	Rs./Connection/	250	4.74	1.21	5.95

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
	Month				
(ii): Above 20 KW	Rs. / kVA/Month	170	6.39	1.21	7.60
<b>LT VI: LT - Street Light</b>					
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kVA/Month	60	4.29	1.21	5.50
(B): Municipal corporation Area	Rs. / kVA/Month	60	5.39	1.21	6.60
<b>LT VII: LT - Temporary Connection</b>					
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	3.10	1.21	4.31
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	12.47	1.21	13.68
<b>LT VIII: LT - Advertisements and Hoardings</b>	Rs./Connection/ Month	575	12.42	1.21	13.63
<b>LT IX: LT - Crematorium and Burial Grounds</b>	Rs./Connection/ Month	330	3.07	1.21	4.28
<b>LT X (A) - Public Services - Government</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/ Month	220	3.17	1.21	4.38
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/ Month	220	4.39	1.21	5.60
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	220	5.31	1.21	6.52
(iii): $>50$ kW	Rs. / kVA/Month	220	5.96	1.21	7.17
<b>LT X(B) - Public Services - Others</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/ Month	250	4.31	1.21	5.52
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/ Month	250	6.84	1.21	8.05
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	250	6.90	1.21	8.11
(iii): $>50$ kW	Rs. / kVA/Month	250	7.26	1.21	8.47

**Table 8-25: Summary of LT Tariffs for FY 2018-19, effective from 1 April, 2018**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>LT I: LT - Residential</b>					
LT I(A): LT - Residential-BPL Category (0-30 units)	Rs./Month	13	1.06	-	1.06
LT I(B): LT - Residential					
1-100 units	Rs./Month	65	3.07	1.18	4.25

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
101-300 units	Rs./Month	65	6.81	1.18	7.99
301-500 units	Rs./Month	65	9.76	1.18	10.94
501-1000 units	Rs./Month	65	11.25	1.18	12.43
Above 1000 units	Rs./Month	65	12.53	1.18	13.71
<b>Three Phase Connection<sup>\$\$</sup></b>	Rs./Month	185	-	-	-
<b>LT II: LT - Non-Residential</b>					
(A) (i): 0 – 20 kW (0-200 units per month)	Rs./Month	270	6.10	1.18	7.28
(A) (ii): 0 – 20 kW (Above 200 units per month - Only balance above 200 units)	Rs./Month	270	9.32	1.18	10.50
(B): >20 kW and ≤ 50 kW	Rs. / kVA/Month	270	9.98	1.18	11.16
(C): >50 KW	Rs. / kVA/Month	270	12.58	1.18	13.76
<b>LT III: LT - Public Water Works (PWW)</b>					
(A): 0-20 KW	Rs. / kVA/Month	80	2.09	1.18	3.27
(B): > 20 kW and ≤ 40 kW	Rs. / kVA/Month	90	3.37	1.18	4.55
(C): > 40 kW	Rs. / kVA/Month	135	4.69	1.18	5.87
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>					
Category 1 Zones (Above 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	334		122*	456*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	365		122*	487*
(c) Above 7.5 HP	Rs. / HP/Month	400		122*	522*
Category 2 Zones (Below 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	236		122*	358*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	266		122*	388*
(c) Above 7.5 HP	Rs. / HP/Month	294		122*	416*
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs./HP/Month	24	1.95	1.18	3.13
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs./kW/Month	65	3.26	1.18	4.44
<b>LT V (A): LT - Industry - Powerlooms</b>					
(i): 0-20 KW	Rs./Connection /Month	270	4.59	1.18	5.77

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
(ii): Above 20 KW	Rs. / kVA/Month	185	5.95	1.18	7.13
<b>LT V(B): LT - Industry - General</b>					
(i): 0-20 KW	Rs./Connection/Month	270	4.76	1.18	5.94
(ii): Above 20 KW	Rs. / kVA/Month	185	6.38	1.18	7.56
<b>LT VI: LT - Street Light</b>					
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kVA/Month	65	4.39	1.18	5.57
(B): Municipal corporation Area	Rs. / kVA/Month	65	5.48	1.18	6.66
<b>LT VII: LT - Temporary Connection</b>					
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/Month	355	3.20	1.18	4.38
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/Month	360	12.63	1.18	13.81
<b>LT VIII: LT - Advertisements and Hoardings</b>	Rs./Connection/Month	575	12.58	1.18	13.76
<b>LT IX: LT - Crematorium and Burial Grounds</b>	Rs./Connection/Month	355	3.14	1.18	4.32
<b>LT X (A) - Public Services - Government</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/Month	235	3.15	1.18	4.33
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/Month	235	4.32	1.18	5.50
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	235	5.10	1.18	6.28
(iii): $>50$ kW	Rs. / kVA/Month	235	5.81	1.18	6.99
<b>LT X(B) - Public Services - Others</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/Month	270	4.24	1.18	5.42
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/Month	270	6.79	1.18	7.97
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	270	6.85	1.18	8.03
(iii): $>50$ kW	Rs. / kVA/Month	270	7.21	1.18	8.39

**Table 8-26: Summary of LT Tariffs for FY 2019-20, effective from 1 April, 2019**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>LT I: LT - Residential</b>					
LT I(A): LT - Residential-BPL Category (0-30 units)	Rs./Month	15	1.08	-	1.08

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>LT I(B): LT - Residential</b>					
1-100 units	Rs./Month	70	3.18	1.11	4.29
101-300 units	Rs./Month	70	6.91	1.11	8.02
301-500 units	Rs./Month	70	9.86	1.11	10.97
501-1000 units	Rs./Month	70	11.37	1.11	12.48
Above 1000 units	Rs./Month	70	12.65	1.11	13.76
<b>Three Phase Connection<sup>\$\$</sup></b>	Rs./Month	200	-	-	-
<b>LT II: LT - Non-Residential</b>					
(A) (i): 0 – 20 kW (0-200 units per month)	Rs./Month	290	6.15	1.11	7.26
(A) (ii): 0 – 20 kW (Above 200 units per month - Only balance above 200 units)	Rs./Month	290	9.37	1.11	10.48
(B): >20 kW and ≤ 50 kW	Rs. / kVA/Month	290	9.98	1.11	11.09
(C): >50 KW	Rs. / kVA/Month	290	12.63	1.11	13.74
<b>LT III: LT - Public Water Works (PWW)</b>					
(A): 0-20 KW	Rs. / kVA/Month	85	2.31	1.11	3.42
(B): > 20 kW and ≤ 40 kW	Rs. / kVA/Month	100	3.54	1.11	4.65
(C): > 40 kW	Rs. / kVA/Month	145	4.81	1.11	5.92
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>					
Category 1 Zones (Above 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	363		115*	478*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	398		115*	513*
(c) Above 7.5 HP	Rs. / HP/Month	443		115*	558*
Category 2 Zones (Below 1318 Hrs/HP/Annum)					
(a) 0-5 HP	Rs. / HP/Month	251		115*	366*
(b) Above 5 HP - 7.5 HP	Rs. / HP/Month	293		115*	408*
(c) Above 7.5 HP	Rs. / HP/Month	321		115*	436*
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs./HP/Month	26	2.14	1.11	3.25
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs./kW/Month	70	3.51	1.11	4.62

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>LT V (A): LT - Industry - Powerlooms</b>					
(i): 0-20 KW	Rs./Connection /Month	290	4.69	1.11	5.80
(ii): Above 20 KW	Rs. / kVA/Month	200	6.02	1.11	7.13
<b>LT V(B): LT - Industry - General</b>					
(i): 0-20 KW	Rs./Connection/ Month	290	4.81	1.11	5.92
(ii): Above 20 KW	Rs. / kVA/Month	200	6.42	1.11	7.53
<b>LT VI: LT - Street Light</b>					
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kVA/Month	70	4.49	1.11	5.60
(B): Municipal corporation Area	Rs. / kVA/Month	70	5.58	1.11	6.69
<b>LT VII: LT - Temporary Connection</b>					
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	385	3.27	1.11	4.38
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	12.79	1.11	13.90
<b>LT VIII: LT - Advertisements and Hoardings</b>	Rs./Connection/ Month	575	12.74	1.11	13.85
<b>LT IX: LT - Crematorium and Burial Grounds</b>	Rs./Connection/ Month	385	3.26	1.11	4.37
<b>LT X (A) - Public Services - Government</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/ Month	250	3.12	1.11	4.23
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/ Month	250	4.26	1.11	5.37
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	250	5.03	1.11	6.14
(iii): $>50$ kW	Rs. / kVA/Month	250	5.74	1.11	6.85
<b>LT X(B) - Public Services - Others</b>					
(i): $\geq 20$ kW (0-200 units)	Rs./Connection/ Month	290	4.19	1.11	5.30
(i): $\geq 20$ kW (Above 200 units)	Rs./Connection/ Month	290	6.74	1.11	7.85
(ii): $>20 - \leq 50$ kW	Rs. / kVA/Month	290	6.75	1.11	7.86
(iii): $>50$ kW	Rs. / kVA/Month	290	7.11	1.11	8.22

**Notes:**

1. \$\$: Additional Fixed Charge of Rs. 160, Rs. 170, Rs. 185 and Rs. 200 per 10 kW load or part thereof above 10 kW load shall be applicable for FY 2016-17 (Applicable from 1 November 2016), FY 2017-18, FY 2018-19, FY 2019-20. .

2. \*: Wheeling and Total Charges for LT IV(A): LT - AG Un-metered - Pumpsets are in Rs./HP/Month only
3. #: Street lights having automatic timers for switching on/off would be levied Demand Charges on the lower of the following:
  - A. 50% of the Contract Demand
  - B. Actual Recorded Demand
4. Billing Demand for all LT categories where Demand based Tariff is applicable: Monthly Billing Demand will be the higher of the following:
  - A. 65% of the Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
  - B. 40% of the Contract Demand

**Table 8-27: Summary of HT Tariffs for FY 2016-17, effective from 1 November, 2016**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Paise Rs. per kWh		
<b>HT Category – EHV (66 kV &amp; Above)</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	235	7.13	-	7.13
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	235	7.83	-	7.83
HT II: HT - Commercial	Rs. / kVA/Month	235	11.35	-	11.35
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	235	6.51	-	6.51
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	235	5.60	-	5.60
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	35	3.15	-	3.15
HT V(B): Agricultural - Others	Rs. / kVA/Month	35	4.35	-	4.35
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	-	5.82
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	310	3.00	-	3.00
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.04	-	10.04
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	235	7.10	-	7.10
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	235	9.00	-	9.00
<b>HT Category –33 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	235	7.13	0.09	7.22
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	235	7.83	0.09	7.92
HT II: HT - Commercial	Rs. / kVA/Month	235	11.35	0.09	11.44
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	235	6.51	0.09	6.60
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	235	5.60	0.09	5.69
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	35	3.15	0.09	3.24



Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Paaise Rs. per kWh		
HT V(B): Agricultural - Others	Rs. / kVA/Month	35	4.35	0.09	4.44
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.09	5.91
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	310	3.00	0.09	3.09
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.04	0.09	10.13
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	235	7.10	0.09	7.19
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	235	9.00	0.09	9.09
<b>HT Category –22 kV and 11 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	235	7.13	0.82	7.95
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	235	7.83	0.82	8.65
HT II: HT - Commercial	Rs. / kVA/Month	235	11.35	0.82	12.17
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	235	6.51	0.82	7.33
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	235	5.60	0.82	6.42
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	35	3.15	0.82	3.97
HT V(B): Agricultural - Others	Rs. / kVA/Month	35	4.35	0.82	5.17
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.82	6.64
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	310	3.00	0.82	3.82
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.04	0.82	10.86
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	235	7.10	0.82	7.92
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	235	9.00	0.82	9.82

**Table 8-28: Summary of HT Tariffs for FY 2017-18, effective from 1April, 2017**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
HT Category – EHV (66 kV & Above)					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	250	7.07	-	7.07
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	250	7.67	-	7.67
HT II: HT - Commercial	Rs. / kVA/Month	250	11.40	-	11.40
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	250	6.01	-	6.01
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	250	5.75	-	5.75
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	40	3.30	-	3.30

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
HT V(B): Agricultural - Others	Rs. / kVA/Month	40	4.56	-	4.56
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	-	5.82
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	3.10	-	3.10
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.14	-	10.14
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	250	7.20	-	7.20
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	250	9.10	-	9.10
<b>HT Category –33 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	250	7.07	0.09	7.16
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	250	7.67	0.09	7.76
HT II: HT - Commercial	Rs. / kVA/Month	250	11.40	0.09	11.49
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	250	6.01	0.09	6.10
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	250	5.75	0.09	5.84
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	40	3.30	0.09	3.39
HT V(B): Agricultural - Others	Rs. / kVA/Month	40	4.56	0.09	4.65
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.09	5.91
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	3.10	0.09	3.19
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.14	0.09	10.23
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	250	7.20	0.09	7.29
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	250	9.10	0.09	9.19
<b>HT Category –22 kV and 11 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	250	7.07	0.83	7.90
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	250	7.67	0.83	8.50
HT II: HT - Commercial	Rs. / kVA/Month	250	11.40	0.83	12.23
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	250	6.01	0.83	6.84
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	250	5.75	0.83	6.58
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	40	3.30	0.83	4.13
HT V(B): Agricultural - Others	Rs. / kVA/Month	40	4.56	0.83	5.39
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.83	6.65
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	3.10	0.83	3.93
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.14	0.83	10.97

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	250	7.20	0.83	8.03
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	250	9.10	0.83	9.93

**Table 8-29: Summary of HT Tariffs for FY 2018-19, effective from 1 April, 2018**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>HT Category – EHV (66 kV &amp; Above)</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	270	6.98	-	6.98
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	270	7.37	-	7.37
HT II: HT - Commercial	Rs. / kVA/Month	270	11.45	-	11.45
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	270	5.80	-	5.80
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	270	5.85	-	5.85
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	45	3.44	-	3.44
HT V(B): Agricultural - Others	Rs. / kVA/Month	45	4.75	-	4.75
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	-	5.82
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	355	3.20	-	3.20
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.27	-	10.27
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	270	7.20	-	7.20
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	270	9.07	-	9.07
<b>HT Category –33 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	270	6.98	0.09	7.07
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	270	7.37	0.09	7.46
HT II: HT - Commercial	Rs. / kVA/Month	270	11.45	0.09	11.54
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	270	5.80	0.09	5.89
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	270	5.85	0.09	5.94
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	45	3.44	0.09	3.53
HT V(B): Agricultural - Others	Rs. / kVA/Month	45	4.75	0.09	4.84
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.09	5.91
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	355	3.20	0.09	3.29

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.27	0.09	10.36
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	270	7.20	0.09	7.29
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	270	9.07	0.09	9.16
<b>HT Category –22 kV and 11 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	270	6.98	0.82	7.80
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	270	7.37	0.82	8.19
HT II: HT - Commercial	Rs. / kVA/Month	270	11.45	0.82	12.27
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	270	5.80	0.82	6.62
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	270	5.85	0.82	6.67
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	45	3.44	0.82	4.26
HT V(B): Agricultural - Others	Rs. / kVA/Month	45	4.75	0.82	5.57
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.82	0.82	6.64
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	355	3.20	0.82	4.02
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.27	0.82	11.09
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	270	7.20	0.82	8.02
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	270	9.07	0.82	9.89

**Table 8-30: Summary of HT Tariffs for FY 2019-20, effective from 1 April, 2019**

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
<b>HT Category – EHV (66 kV &amp; Above)</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	290	6.93	-	6.93
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	290	7.20	-	7.20
HT II: HT - Commercial	Rs. / kVA/Month	290	11.50	-	11.50
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	290	5.55	-	5.55
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	290	5.95	-	5.95
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	50	3.65	-	3.65
HT V(B): Agricultural - Others	Rs. / kVA/Month	50	5.02	-	5.02
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.86	-	5.86

Category	Fixed / Demand Charge		Energy Charges	Wheeling Charges	Total Variable Charges
	Unit	Rate	Rs. per kWh		
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	385	3.27	-	3.27
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.39	-	10.39
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	290	7.10	-	7.10
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	290	8.93	-	8.93
<b>HT Category –33 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	290	6.93	0.08	7.01
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	290	7.20	0.08	7.28
HT II: HT - Commercial	Rs. / kVA/Month	290	11.50	0.08	11.58
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	290	5.55	0.08	5.63
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	290	5.95	0.08	6.03
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	50	3.65	0.08	3.73
HT V(B): Agricultural - Others	Rs. / kVA/Month	50	5.02	0.08	5.10
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.86	0.08	5.94
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	385	3.27	0.08	3.35
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.39	0.08	10.47
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	290	7.10	0.08	7.18
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	290	8.93	0.08	9.01
<b>HT Category –22 kV and 11 kV</b>					
HT I(A): HT - Industry (General)	Rs. / kVA/Month	290	6.93	0.73	7.66
HT I(B): HT - Industry (Seasonal)	Rs. / kVA/Month	290	7.20	0.73	7.93
HT II: HT - Commercial	Rs. / kVA/Month	290	11.50	0.73	12.23
HT III: HT - Railways/Metro/Monorail	Rs. / kVA/Month	290	5.55	0.73	6.28
HT IV: HT - Public Water Works (PWW)	Rs. / kVA/Month	290	5.95	0.73	6.68
HT V(A): HT - Agricultural - Pumpsets	Rs. / kVA/Month	50	3.65	0.73	4.38
HT V(B): Agricultural - Others	Rs. / kVA/Month	50	5.02	0.73	5.75
HT VI: HT - Group Housing Society (Residential)	Rs. / kVA/Month	220	5.86	0.73	6.59
HT VIII (A): HT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	385	3.27	0.73	4.00
HT VIII(B): HT - Temporary Supply Others (TSO)	Rs. / kVA/Month	290	10.39	0.73	11.12
HT IX(A): HT - Public Services-Government	Rs. / kVA/Month	290	7.10	0.73	7.83
HT IX(B): HT - Public Services-Others	Rs. / kVA/Month	290	8.93	0.73	9.66

**Notes:**

1. Billing Demand for all HT categories (except HT I (B): HT - Industry Seasonal category): the Monthly Billing Demand will be the higher of the following:
  - i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
  - ii. 75% of the highest Billing Demand recorded during the preceding eleven months
  - iii. 50% of the Contract Demand
2. Billing Demand for HT Seasonal Category (HT I) –  
During Declared Season, Monthly Billing Demand will be the higher of the following:
  - i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
  - ii. 75% of the Contract Demand
  - iii. 50 kVA.

During Declared Off-season, Monthly Billing Demand will be the Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours.

3. Additional Demand Charges for HT Industrial Consumers with CPPs
  - i. High Tension Industrial consumers having captive generation facility synchronised with the grid will pay Additional Demand Charges of Rs. 20/kVA/Month only on the extent of stand-by the Contract Demand component and not on the entire Contract Demand.
  - ii. Stand-by Charges will be levied on such consumers on the Stand-by component, only if the consumer's demand exceeds the Contract Demand.
  - iii. This Additional Demand Charge will not be applicable if there is no stand-by demand and the CPP is synchronised with the Grid only for the export of power.

**8.28 Incentives and Disincentives**

**Power Factor Incentive** - Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories.

Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly bill excluding Taxes and Duties.

**Table 8-31: Power Factor Incentive approved for the 3rd Control Period**

Sl. No.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

*Note: PF is to be measured/computed up to 3 decimals, after universal rounding off*

**Power Factor Penalty-** Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories.

Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly bill excluding Taxes and Duties.

**Table 8-32: Power Factor Penalty approved for 3<sup>rd</sup> Control Period**

Sl. No.	Range of Power Factor	Power Factor Level	Incentive
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

*Note: PF is to be measured/computed up to 3 decimals, after universal rounding off*

## 8.29 Prompt Payment Discount

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

**8.30 Delayed Payment Charges**

In case the electricity bills are not paid within the due date mentioned in the bill, DPC of 1.5% on the total amount of the electricity bill (including Taxes and Duties) shall be levied. However, if a consumer makes part payment of a bill within the due date, the DPC shall apply only on the amount which was not paid within the due date.

**8.31 Rate of Interest on Arrears**

The rate of interest chargeable on payment of arrears will be as shown below.

**Table 8-33: Rate of Interest on Arrears, as approved for 3rd MYT Control Period**

Sl. No.	Delay in Payment (Months)	Interest Rate per Annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

**8.32 Load Factor Incentive**

Consumers having a Load Factor over 75% and upto 85% will be entitled to a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor over 85% will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges for that consumer.

This incentive is applicable only to the HT I, HT II and HT IX tariff categories. Further, the Load Factor rebate will be available only if the consumer has no arrears with MSEDCL, and payment is made within seven days from the date of the bill. However, it will be applicable to consumers where payment of arrears in instalments has been granted by MSEDCL, and such payment is being made as scheduled.

The Load Factor has been defined as below:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption Possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hrs during the month less planned load shedding hours\*)

\* - Interruption/non-supply to the extent of 60 hours in a 30 day month has been built in the scheme.

In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e. 22:00 hrs to



06:00 hrs. Even if the Maximum Demand exceeds the Contract Demand in that duration, the Load Factor incentive would be applicable. However, the consumer would have to pay the penal charges for exceeding the Contract Demand.).

### **8.33 EHV Supply Rebate**

As the Commission has determined separate tariffs for EHV, 33 kV and 22 kV & 11 kV voltage levels, the EHV Supply Rebate of 3% on Energy Charges, which was earlier applicable to consumers availing supply at Extra High Voltage (66 kV and above) having no arrears with MSEDCL, has now been discontinued.

### **8.34 Pass-through of variations in cost of power purchase**

In case of any variation cost of power purchase, MSEDCL will pass on the corresponding increase to the consumers through the Fuel Adjustment Charge (FAC) component of the Z-factor Charge ( $Z_{FAC}$ ), as an adjustment in its Tariff on a monthly basis under the existing FAC mechanism, subject to the condition that the overall monthly  $Z_{FAC}$  shall not exceed 20% of the variable component of tariff or such other ceiling as may be stipulated by the Commission from time to time.

### **8.35 Vetting of Fuel Adjustment Charge levied on consumers**

The levy of  $Z_{FAC}$  charged to different consumers and the under-recovery/over-recovery of the corresponding costs will be vetted by the Commission on a post-facto basis, considering the submissions made by MSEDCL. However, for the first month after the issue of the present MYT Order, MSEDCL should obtain the Commission's prior approval for levy of  $Z_{FAC}$ , to ensure that it is being levied correctly. MSEDCL should submit the  $Z_{FAC}$  computations and details of under-recovery/over-recovery of fuel cost variations on a quarterly basis, within 60 days of the close of each quarter, for post-facto approval.

### **8.36 Cross-Subsidy Surcharge**

#### ***MSEDCL's Submission***

Section 2(47) of the EA, 2003 defines 'Open Access', while Section 42 requires the Distribution Licensee to provide OA to eligible consumers subject to payment of CSS, Additional Surcharge and other applicable charges. Section 86(1) mandates the Commission to determine the CSS and other charges.

The CSS formula stipulated in the revised Tariff Policy notified on 28 January, 2016, is as follows:

*“SERCs may calculate the cost of supply of electricity by the distribution Licensee to consumers of the applicable class as aggregate of (a) per unit weighted average cost of power purchase including meeting the Renewable Purchase Obligation; (b) transmission and Distribution Losses applicable to the relevant voltage level and Commercial Losses allowed by the SERC; (c)*

*transmission, distribution and Wheeling Charges up to the relevant voltage level; and (d) per unit cost of carrying Regulatory Assets, if applicable*

*Surcharge formula:*

$$S = T - [C/(1-L/100) + D + R]$$

*Where,*

*S is the surcharge*

*T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation*

*C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation*

*D is the aggregate of transmission, distribution and Wheeling Charge applicable to the relevant voltage level*

*L is the aggregate of transmission, distribution and Commercial Losses, expressed as a percentage applicable to the relevant voltage level*

*R is the per unit cost of carrying Regulatory Assets.*

*Above formula may not work for all distribution Licensees, particularly for those having power deficit, the State Regulatory Commissions, while keeping the overall objectives of the Electricity Act in view, may review and vary the same taking into consideration the different circumstances prevailing in the area of distribution Licensee*

*Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of consumers seeking open access."*

In accordance with the revised Tariff Policy, 2016 MSEDCL has computed the various components of the CSS formula and submitted the category-wise CSS for the 3rd Control Period, as follows.

- Computation of 'C': Computation of "C" for MSEDCL is based on the approved power purchase quantum and cost, including cost for meeting the RPO for each year.
- Average Billing Rate "T": ABR for each consumer category for each year.
- "L": L is the addition of the wheeling losses and Intra-State Transmission Losses considered by the Commission.
- "D": D is the addition of Transmission and Wheeling Charges applicable to the relevant voltage level.

[The Commission has determined the common Wheeling Charges for HT as well as LT.]

**Table 8-34: Computation of System Losses 'L' for 3rd MYT Control Period**

Particulars	EHV Level	33 kV Level	22 & 11 kV Level	LT Level
<b>MSEDCL's Submission</b>				
Transmission Losses	3.89%	3.89%	3.89%	3.89%
Distribution Losses	0.00%	6.00%	9.00%	12.00%
<b>Total System Losses</b>	<b>3.89%</b>	<b>9.66%</b>	<b>12.54%</b>	<b>15.42%</b>
<b>Commission's Approved</b>				
Transmission Losses	3.92%	3.92%	3.92%	3.92%
Distribution Losses	0.00%	6.00%	9.00%	12.00%
<b>Total System Losses</b>	<b>3.92%</b>	<b>9.68%</b>	<b>12.57%</b>	<b>15.45%</b>

**Table 8-35: Weighted Average Power Purchase Cost ('C'), and Wheeling and Transmission Charges ('D') for the 3rd Control Period, as submitted by MSEDCL**

Particulars	Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Cost	Rs. crore	45,056	52,284	52,284	55,768
Power Purchase Units	MU	117,789	124,939	132,769	141,278
<b>Average Cost of Power Purchase-'C'</b>	<b>Rs./kWh</b>	<b>3.83</b>	<b>4.18</b>	<b>3.94</b>	<b>3.95</b>
Intra-State Transmission Charges	Rs. crore				
Energy Sales	MU				
<b>Average Cost of Transmission Charges</b>	<b>Rs./kWh</b>	<b>0.67</b>	<b>0.71</b>	<b>0.76</b>	<b>0.76</b>
<b>Wheeling Charges</b>					
EHV Level	Rs./kWh	-	-	-	-
33 kV Level	Rs./kWh	0.15	0.17	0.20	0.22
22 kV and 11 kV Level	Rs./kWh	0.86	0.96	1.15	1.22
LT Level	Rs./kWh	1.33	1.49	1.77	1.89
<b>Wheeling and Transmission Charges - 'D'</b>					
EHV Level	Rs./kWh	0.67	0.71	0.76	0.76
33 kV Level	Rs./kWh	0.82	0.88	0.96	0.98
22 kV and 11 kV Level	Rs./kWh	1.53	1.67	1.91	1.98
LT Level	Rs./kWh	2.00	2.20	2.53	2.65

Accordingly, the consumer category-wise CSS as submitted by MSEDCL is summarised as below:

**Table 8-36: Consumer Category-wise Cross Subsidy Surcharge (CSS) for the 3rd Control Period, as submitted by MSEDCL (Rs. per kWh)**

Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>HT Category - 66 kV and Above</b>				
HT-I - Industry				
HT-I - Cont (Express Feeders)	1.77	1.90	2.04	2.14
HT-I - NonCont (Non Express Feeders)	1.65	1.77	1.90	1.99
HT-I - Seasonal Category	2.49	2.68	2.91	3.07
HT-II Commercial				
Express Feeder	2.67	2.85	3.05	3.19
Non-Express Feeder	2.54	2.71	2.90	3.03
HT-III Railways				
HT-IV Public Water Works (PWW)				
Express Feeders	1.31	1.43	1.57	1.64
Non-Express Feeders	1.38	1.50	1.64	1.71
HT-V Agricultural	-	-	-	0.17
HT-VI Bulk Supply (Residential) / Group Housing Society	1.28	1.41	1.55	1.62
HT VIII - Temporary Supply Others	3.17	3.48	3.82	4.00
HT-IX Public Services-Government				
Express Feeders	1.66	1.82	2.00	2.09
Non-Express Feeders	1.67	1.83	2.01	2.10
HT-IX Public Services-Others				
Express Feeders	2.04	2.24	2.46	2.57
Non-Express Feeders	2.03	2.22	2.44	2.55
HT Ports	2.44	2.67	2.93	3.05
<b>HT Category - 33 kV</b>				
HT-I - Industry				
HT-I - Cont (Express Feeders)	1.77	1.90	2.04	2.14
HT-I - NonCont (Non Express Feeders)	1.65	1.77	1.90	1.99
HT-I - Seasonal Category	2.49	2.68	2.91	3.07
HT-II Commercial				
Express Feeder	2.67	2.85	3.05	3.19
Non-Express Feeder	2.54	2.71	2.90	3.03
HT-III Railways				
HT-IV Public Water Works (PWW)				

Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Express Feeders	1.31	1.43	1.57	1.64
Non-Express Feeders	1.38	1.50	1.64	1.71
HT-V Agricultural	-	-	-	-
HT-VI Bulk Supply (Residential) / Group Housing Society	1.28	1.41	1.55	1.62
HT VIII - Temporary Supply Others	3.17	3.48	3.82	4.00
HT-IX Public Services- Government				
Express Feeders	1.66	1.82	2.00	2.09
Non-Express Feeders	1.67	1.83	2.01	2.10
HT-IX Public Services-Others				
Express Feeders	2.04	2.24	2.46	2.57
Non-Express Feeders	2.03	2.22	2.44	2.55
HT Ports	2.44	2.67	2.93	3.05
<b>HT Category - 22 kV and 11 kV</b>				
HT-I - Industry				
HT-I - Cont (Express Feeders)	1.77	1.90	2.04	2.14
HT-I - NonCont (Non Express Feeders)	1.65	1.77	1.90	1.99
HT-I - Seasonal Category	2.49	2.68	2.91	3.07
HT-II Commercial				
Express Feeder	2.67	2.85	3.05	3.19
Non-Express Feeder	2.54	2.71	2.90	3.03
HT-III Railways				
HT-IV Public Water Works (PWW)				
Express Feeders	0.65	1.12	1.57	1.64
Non-Express Feeders	0.98	1.46	1.64	1.71
HT-V Agricultural	-	-	-	-
HT-VI Bulk Supply (Residential) / Group Housing Society	0.51	1.00	1.47	1.62
HT VIII - Temporary Supply Others	3.17	3.48	3.82	4.00
HT-IX Public Services- Government				
Express Feeders	1.66	1.82	2.00	2.09
Non-Express Feeders	1.67	1.83	2.01	2.10
HT-IX Public Services-Others				
Express Feeders	2.04	2.24	2.46	2.57
Non-Express Feeders	2.03	2.22	2.44	2.55
HT Ports	2.44	2.67	2.93	3.05

Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
<b>LT Category</b>				
<b>Residential (LT-I)</b>				
101-300 Units	-	1.91	2.11	2.23
301-500 Units	1.72	2.55	2.82	2.97
500-1000 Units	2.30	2.96	3.26	3.43
Above 1000 Units	2.68	3.22	3.55	3.73
<b>Non Residential (LT-2)</b>				
0-20 KW : 0-100 Units	2.06	2.24	2.46	2.57
0-20 KW : Above 100 Units	2.38	2.61	2.87	2.99
>20-50 KW	2.83	3.11	3.41	3.57
>50 KW	3.18	3.45	3.76	3.93
<b>Public Water Works (LT-III)</b>				
Above 40-kW	-	-	0.10	0.29
<b>LT Industry (LT-V) Powerloom</b>				
0-20 KW	-	-	-	-
Above 20 KW	1.12	1.43	1.65	1.82
<b>LT Industry (LT-V) General</b>				
0-20 KW	-	-	-	0.13
Above 20 KW	1.75	1.88	2.01	2.09
<b>Street Light (LT-VI)</b>				
Grampanchayat A B & C Class Municipal Council	-	-	-	-
Municipal Corporation Area	-	0.33	0.72	0.94
Temporary Connection (Other Purposes) (LT-VII)	4.52	3.61	2.97	4.15
Advertisements and Hoardings (LT-VIII)	3.28	4.96	5.45	5.71
<b>LT X - Public Services - Government</b>				
0-200 Units	1.83	2.01	2.18	2.27
>200 units	1.64	1.80	1.97	2.05
>20-50 kW	2.30	2.52	2.74	2.86
>50 kW	2.30	2.51	2.75	2.86
<b>LT X - Public Services - Others</b>				
0-200 Units	-	0.31	0.65	0.87
>200 units	1.70	1.86	2.05	2.13
>20-50 kW	2.00	2.19	2.39	2.50
>50 kW	2.06	2.26	2.48	2.58

After the public consultation process had been concluded, MSEDCL filed additional submissions stating that, as per Section 42(2) of the EA, 2003, the CSS needs to be

based on the current level of cross-subsidy. Accordingly, consumers who opt for OA need to be charged to the extent of compensation for the current level of cross-subsidy which prevailed during that period and in order to avoid its burden being passed on to other consumers who remain with the Distribution Licensee.

MSEDCL stated that the meaning of 'current level of cross-subsidy' should be considered in the letter and spirit of the statute. As per the well settled financial principles, the saving accrued due to OA consumers needs to be considered as equivalent to the saving in the Variable Charge component of the marginal cost of power purchase, including T&D Losses as may be determined by the Commission. Accordingly, the CSS for OA consumer should be determined by the following formula:

$$\text{CSS} = \text{ABR} - \text{ACoS}_1 - \text{Wheeling Charge for OA Consumer} - \text{any other charges payable by OA Consumer};$$

$$\text{Where, } \text{ACoS}_1 = \text{Marginal Saving in Variable Cost of Power Purchase} + \text{T\&D Losses}$$

Only if the CSS is determined as per the above formula would the OA consumer be said to be compensating for the current level of cross-subsidy. MSEDCL also stated that the Commission, in its previous MYT Order, citing the enabling provision in the DOA Regulations, 2014, worked out the CSS as 75% of (ABR – ACoS). In case of an OA consumer sourcing power from RE sources, the CSS was even lower, i.e. 25% of this formula.

MSEDCL stated that the Commission has not only approved a much lower CSS but also erred in considering the appropriate value of ACoS while calculating the CSS. Such revenue deficit due to the lower CSS approved is being passed on to the consumers of MSEDCL during the true-up exercise, which results in substantial delay in getting this revenue since it comes only after the true-up exercise, as well as in further increase in the tariff of MSEDCL consumers. This lower level of CSS has also resulted in undue benefit to OA consumers, raising tariffs of the cross-subsidising Industrial consumers, leading to more consumers opting for OA, leading to a vicious cycle. MSEDCL also stated that OA has increased manifold in the last 2-3 years, which has adversely impacted the revenue of MSEDCL resulting in further tariff increase becoming necessary.

MSEDCL stated further that the ATE has held that CSS is not only to compensate the Distribution Licensee for the loss of cross-subsidy, but also to compensate the remaining consumers of the Distribution Licensee who have not or cannot take OA. Therefore, the Commission may determine the CSS based on the current level of cross-subsidy.

MSEDCL also stated that, even though the Tariff Policy, 2016 has certain provisions for arriving at the CSS for OA consumers, Section 86(4) of the EA, 2003 states that, while discharging its functions, the State Commission shall be guided by the National

Electricity Policy, National Electricity Plan and Tariff Policy. The Commission may approve the CSS based on the formula proposed by the MSEDCL.

***Commission's Ruling***

The revised Tariff Policy, 2016 has specific provisions for CSS computation, which the Commission has decided to broadly adopt in this Order.

In accordance with the revised Tariff Policy, 2016, the Commission has worked out the various components of CSS formulae based on the approved values for the 3rd Control Period and computed the consumer category-wise CSS for the 3rd Control Period.

**Table 8-37: Weighted Average Power Purchase Cost ( 'C'), and Wheeling and Transmission Charges ('D') for 3rd Control Period, as approved by Commission**

Particulars	Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Cost	Rs. crore	43,754	47,958	50,817	53,334
Power Purchase Units	MU	115,380	119,533	124,116	129,101
<b>Average Cost of Power Purchase-'C'</b>	<b>Rs./kWh</b>	<b>3.79</b>	<b>4.01</b>	<b>4.09</b>	<b>4.13</b>
Intra-State Transmission Charges	Rs. crore	4,611	5,824	6,539	6,619
Energy Sales	MU	91,229	96,210	101,602	107,434
<b>Average Cost of Transmission Charges</b>	<b>Rs./kWh</b>	<b>0.51</b>	<b>0.61</b>	<b>0.64</b>	<b>0.62</b>
<b>Wheeling Charges</b>					
EHV Level	Rs./kWh	-	-	-	-
33 kV Level	Rs./kWh	0.09	0.09	0.08	0.08
22 kV and 11 kV Level	Rs./kWh	0.82	0.83	0.79	0.73
LT Level	Rs./kWh	1.18	1.21	1.18	1.11
<b>Wheeling and Transmission Charges - 'D'</b>					
EHV Level	Rs./kWh	-	-	-	-
33 kV Level	Rs./kWh	0.59	0.69	0.73	0.69
22 kV and 11 kV Level	Rs./kWh	1.33	1.43	1.44	1.35
LT Level	Rs./kWh	1.69	1.81	1.82	1.73

The category-wise CSS computed broadly as per the formula specified in the revised Tariff Policy, 2016 is given in the Table below:



**Table 8-38: Cross-Subsidy Surcharge approved by Commission for FY 2016-17 as per revised Tariff Policy, 2016**

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
<b>HT Category - EHV (66 kV and above)</b>							
HT I(A): HT - Industry (General)	8.12	3.79	3.92%	0.51	3.67	1.62	1.62
HT I(B): HT - Industry (Seasonal)	11.56	3.79	3.92%	0.51	7.11	2.31	2.31
HT II: HT - Commercial	13.13	3.79	3.92%	0.51	8.68	2.63	2.63
HT III: HT - Railways/Metro/Monorail	9.18	3.79	3.92%	0.51	4.73	1.84	1.84
HT IV: HT - Public Water Works (PWW)	6.67	3.79	3.92%	0.51	2.22	1.33	1.33
HT V(A): HT - Agriculture Pumpsets	3.99	3.79	3.92%	0.51	-	0.80	-
HT VI: HT - Group Housing Society (Residential)	7.56	3.79	3.92%	0.51	3.11	1.51	1.51
HT VIII(B): HT - Temporary Supply Others (TSO)	13.13	3.79	3.92%	0.51	8.68	2.63	2.63
HT IX(A): HT - Public Services-Government	8.43	3.79	3.92%	0.51	3.98	1.69	1.69
HT IX(B): HT - Public Services- Others	10.40	3.79	3.92%	0.51	5.95	2.08	2.08
<b>HT Category - 33 kV</b>							
HT I(A): HT - Industry (General)	8.21	3.79	9.68%	0.59	3.42	1.64	1.64
HT I(B): HT - Industry (Seasonal)	11.65	3.79	9.68%	0.59	6.86	2.33	2.33
HT II: HT - Commercial	12.64	3.79	9.68%	0.59	7.85	2.53	2.53
HT III: HT - Railways/Metro/Monorail	8.69	3.79	9.68%	0.59	3.90	1.74	1.74
HT IV: HT - Public Water Works (PWW)	6.18	3.79	9.68%	0.59	1.39	1.24	1.24
HT V(A): HT - Agriculture Pumpsets	3.50	3.79	9.68%	0.59	-	0.70	-
HT V: HT - Group Housing Societies	7.06	3.79	9.68%	0.59	2.28	1.41	1.41
HT VIII(B): HT - Temporary Supply Others (TSO)	12.64	3.79	9.68%	0.59	7.85	2.53	2.53
HT IX(A): HT - Public Services-Government	7.94	3.79	9.68%	0.59	3.15	1.59	1.59
HT IX(B): HT - Public Services- Others	9.91	3.79	9.68%	0.59	5.12	1.98	1.98
<b>HT Category - 22 kV &amp; 11 kV</b>							
HT I(A): HT - Industry (General)	8.94	3.79	12.57%	1.33	3.28	1.79	1.79
HT I(B): HT - Industry (Seasonal)	12.38	3.79	12.57%	1.33	6.71	2.48	2.48
HT II: HT - Commercial	13.37	3.79	12.57%	1.33	7.71	2.67	2.67
HT III: HT - Railways/Metro/Monorail	9.42	3.79	12.57%	1.33	3.76	1.88	1.88
HT IV: HT - Public Water Works	6.91	3.79	12.57%	1.33	1.24	1.38	1.24

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
(PWW)							
HT V(A): HT - Agriculture Pumpsets	4.23	3.79	12.57%	1.33	-	0.85	-
HT V: HT - Group Housing Societies	7.79	3.79	12.57%	1.33	2.13	1.56	1.56
HT VIII(B): HT - Temporary Supply Others (TSO)	13.37	3.79	12.57%	1.33	7.70	2.67	2.67
HT IX(A): HT - Public Services- Government	8.67	3.79	12.57%	1.33	3.01	1.73	1.73
HT IX(B): HT - Public Services- Others	10.64	3.79	12.57%	1.33	4.98	2.13	2.13
<b>LT Category</b>							
<b>LT I: LT - Residential</b>							
(A): BPL Category (0-30 units)	1.48	3.79	15.45%	1.69	-	0.30	-
(B): Consumption Above 30 units	6.43	3.79	15.45%	1.69	0.26	1.29	0.26
<b>LT II: LT - Non-Residential</b>							
(A): (0-20 kW)	10.25	3.79	15.45%	1.69	4.08	2.05	2.05
(B): (>20-50 kW)	13.18	3.79	15.45%	1.69	7.01	2.64	2.64
(C): (Above 50 kW)	16.12	3.79	15.45%	1.69	9.95	3.22	3.22
<b>LT III: LT - Public Water Works (PWW)</b>							
(A): 0-20 kW	3.49	3.79	15.45%	1.69	-	0.70	-
(B): >20 kW-40 kW	4.75	3.79	15.45%	1.69	-	0.95	-
(C): Above 40 kW	6.25	3.79	15.45%	1.69	0.08	1.25	0.08
<b>LT IV: LT - Agriculture</b>							
(A): Un-metered-Pumpsets							
Category 1 Zones with (Above 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	4.05	3.79	15.45%	1.69	-	0.81	-
(b) > 5 HP - 7.5 HP	4.38	3.79	15.45%	1.69	-	0.88	-
(c) Above 7.5 HP	4.74	3.79	15.45%	1.69	-	0.95	-
Category 2 Zones with (Below 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	3.03	3.79	15.45%	1.69	-	0.61	-
(b) > 5 HP - 7.5 HP	3.31	3.79	15.45%	1.69	-	0.66	-
(c) Above 7.5 HP	3.52	3.79	15.45%	1.69	-	0.70	-
(B): Metered-Pumpsets	3.17	3.79	15.45%	1.69	-	0.63	-
(C): Metered-Others	4.79	3.79	15.45%	1.69	-	0.96	-
<b>LT V(A): LT - Industry-Powerlooms</b>							
(i): 0 - 20 kW	5.62	3.79	15.45%	1.69	-	1.12	-
(ii): Above 20 kW	7.33	3.79	15.45%	1.69	1.16	1.47	1.16

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
<b>LT V(B): LT- Industry-General</b>							-
(i): 0 - 20 kW	6.33	3.79	15.45%	1.69	0.16	1.27	0.16
(ii): Above 20 kW	9.17	3.79	15.45%	1.69	3.00	1.83	1.83
<b>LT VI: LT - Street Light</b>							
(A): Grampanchayat A, B & C Class Municipal Councils	5.43	3.79	15.45%	1.69	-	1.09	-
(B): Municipal Corporation Areas	6.70	3.79	15.45%	1.69	0.53	1.34	0.53
<b>LT VI - Temporary Supply</b>							
(A): Temporary Supply Religious	4.89	3.79	15.45%	1.69	-	0.98	-
(B): Temporary Supply Others	14.26	3.79	15.45%	1.69	8.09	2.85	2.85
LT VIII: Advertisements and Hoardings	18.03	3.79	15.45%	1.69	11.86	3.61	3.61
LT IX: Crematorium & Burial Grounds	4.51	3.79	15.45%	1.69	-	0.90	-
<b>LT X (A) Public Services- Government</b>							
(i) 0-20 kW	7.69	3.79	15.45%	1.69	1.52	1.54	1.52
(ii) 20 kW-50 kW	10.61	3.79	15.45%	1.69	4.44	2.12	2.12
(iii) Above 50 kW	10.54	3.79	15.45%	1.69	4.37	2.11	2.11
<b>LT X - Public services Others</b>							
(i) 0-20 kW	8.10	3.79	15.45%	1.69	1.93	1.62	1.62
(ii) 20 kW-50 kW	10.16	3.79	15.45%	1.69	3.99	2.03	2.03
(iii) Above 50 kW	10.51	3.79	15.45%	1.69	4.34	2.10	2.10

**Table 8-39: Cross- Subsidy Surcharge approved by Commission for FY 2017-18 as per revised Tariff Policy, 2016**

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
<b>HT Category - EHV (66 kV and above)</b>							
HT I(A): HT - Industry (General)	8.16	4.01	3.92%	0.61	3.38	1.63	1.63
HT I(B): HT - Industry (Seasonal)	11.52	4.01	3.92%	0.61	6.74	2.30	2.30
HT II: HT - Commercial	13.24	4.01	3.92%	0.61	8.47	2.65	2.65
HT III: HT - Railways/Metro/Monorail	9.16	4.01	3.92%	0.61	4.38	1.83	1.83
HT IV: HT - Public Water Works (PWW)	6.84	4.01	3.92%	0.61	2.06	1.37	1.37
HT V(A): HT - Agriculture Pumpsets	4.19	4.01	3.92%	0.61	-	0.84	-

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
HT VI: HT - Group Housing Society (Residential)	7.58	4.01	3.92%	0.61	2.80	1.52	1.52
HT VIII(B): HT - Temporary Supply Others (TSO)	13.24	4.01	3.92%	0.61	8.46	2.65	2.65
HT IX(A): HT - Public Services-Government	8.57	4.01	3.92%	0.61	3.79	1.71	1.71
HT IX(B): HT - Public Services- Others	10.55	4.01	3.92%	0.61	5.77	2.11	2.11
<b>HT Category - 33 kV</b>							
HT I(A): HT - Industry (General)	8.25	4.01	9.68%	0.69	3.11	1.65	1.65
HT I(B): HT - Industry (Seasonal)	11.61	4.01	9.68%	0.69	6.48	2.32	2.32
HT II: HT - Commercial	12.74	4.01	9.68%	0.69	7.61	2.55	2.55
HT III: HT - Railways/Metro/Monorail	8.66	4.01	9.68%	0.69	3.52	1.73	1.73
HT IV: HT - Public Water Works (PWW)	6.34	4.01	9.68%	0.69	1.21	1.27	1.21
HT V(A): HT - Agriculture Pumpsets	3.69	4.01	9.68%	0.69	-	0.74	-
HT V: HT - Group Housing Societies	7.08	4.01	9.68%	0.69	1.94	1.42	1.42
HT VIII(B): HT - Temporary Supply Others (TSO)	12.74	4.01	9.68%	0.69	7.61	2.55	2.55
HT IX(A): HT - Public Services-Government	8.07	4.01	9.68%	0.69	2.94	1.61	1.61
HT IX(B): HT - Public Services- Others	10.05	4.01	9.68%	0.69	4.92	2.01	2.01
<b>HT Category - 22 kV &amp; 11 kV</b>							
HT I(A): HT - Industry (General)	8.99	4.01	12.57%	1.43	2.97	1.80	1.80
HT I(B): HT - Industry (Seasonal)	12.35	4.01	12.57%	1.43	6.33	2.47	2.47
HT II: HT - Commercial	13.48	4.01	12.57%	1.43	7.46	2.70	2.70
HT III: HT - Railways/Metro/Monorail	9.40	4.01	12.57%	1.43	3.38	1.88	1.88
HT IV: HT - Public Water Works (PWW)	7.08	4.01	12.57%	1.43	1.06	1.42	1.06
HT V(A): HT - Agriculture Pumpsets	4.43	4.01	12.57%	1.43	-	0.89	-
HT V: HT - Group Housing Societies	7.82	4.01	12.57%	1.43	1.80	1.56	1.56
HT VIII(B): HT - Temporary Supply Others (TSO)	13.48	4.01	12.57%	1.43	7.46	2.70	2.70
HT IX(A): HT - Public Services-Government	8.81	4.01	12.57%	1.43	2.79	1.76	1.76
HT IX(B): HT - Public Services- Others	10.79	4.01	12.57%	1.43	4.77	2.16	2.16
<b>LT Category</b>							
<b>LT I: LT - Residential</b>							
(A): BPL Category (0-30 units)	1.54	4.01	15.45%	1.81	-	0.31	-

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
(B): Consumption Above 30 units	6.51	4.01	15.45%	1.81	-	1.30	-
<b>LT II: LT - Non-Residential</b>							
(A): (0-20 kW)	10.33	4.01	15.45%	1.81	3.77	2.07	2.07
(B): (>20-50 kW)	13.32	4.01	15.45%	1.81	6.76	2.66	2.66
(C): (Above 50 kW)	15.79	4.01	15.45%	1.81	9.23	3.16	3.16
<b>LT III: LT - Public Water Works (PWW)</b>							
(A): 0-20 kW	3.60	4.01	15.45%	1.81	-	0.72	-
(B): >20 kW-40 kW	4.90	4.01	15.45%	1.81	-	0.98	-
(C): Above 40 kW	6.41	4.01	15.45%	1.81	-	1.28	-
<b>LT IV: LT - Agriculture</b>							
(A): Un-metered-Pumpsets							
Category 1 Zones with (Above 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	4.26	4.01	15.45%	1.81	-	0.85	-
(b) > 5 HP - 7.5 HP	4.58	4.01	15.45%	1.81	-	0.92	-
(c) Above 7.5 HP	4.97	4.01	15.45%	1.81	-	0.99	-
Category 2 Zones with (Below 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	3.17	4.01	15.45%	1.81	-	0.63	-
(b) > 5 HP - 7.5 HP	3.50	4.01	15.45%	1.81	-	0.70	-
(c) Above 7.5 HP	3.76	4.01	15.45%	1.81	-	0.75	-
(B): Metered-Pumpsets	3.28	4.01	15.45%	1.81	-	0.66	-
(C): Metered-Others	5.01	4.01	15.45%	1.81	-	1.00	-
<b>LT V(A): LT - Industry-Powerlooms</b>							
(i): 0 - 20 kW	5.81	4.01	15.45%	1.81	-	1.16	-
(ii): Above 20 kW	7.39	4.01	15.45%	1.81	0.84	1.48	0.84
<b>LT V(B): LT- Industry-General</b>							-
(i): 0 - 20 kW	6.35	4.01	15.45%	1.81	-	1.27	-
(ii): Above 20 kW	9.15	4.01	15.45%	1.81	2.59	1.83	1.83
<b>LT VI: LT - Street Light</b>							
(A): Grampanchayat A, B & C Class Municipal Councils	5.61	4.01	15.45%	1.81	-	1.12	-
(B): Municipal Corporation Areas	6.88	4.01	15.45%	1.81	0.32	1.38	0.32
<b>LT VI - Temporary Supply</b>							
(A): Temporary Supply Religious	5.07	4.01	15.45%	1.81	-	1.01	-
(B): Temporary Supply Others	14.24	4.01	15.45%	1.81	7.68	2.85	2.85
LT VIII: Advertisements and Hoardings	18.01	4.01	15.45%	1.81	11.45	3.60	3.60
LT IX: Crematorium & Burial	4.68	4.01	15.45%	1.81	-	0.94	-

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
Grounds							
<b>LT X (A) Public Services- Government</b>							
(i) 0-20 kW	7.75	4.01	15.45%	1.81	1.19	1.55	1.19
(ii) 20 kW-50 kW	10.64	4.01	15.45%	1.81	4.08	2.13	2.13
(iii) Above 50 kW	10.59	4.01	15.45%	1.81	4.03	2.12	2.12
<b>LT X - Public services Others</b>							
(i) 0-20 kW	8.21	4.01	15.45%	1.81	1.66	1.64	1.64
(ii) 20 kW-50 kW	10.30	4.01	15.45%	1.81	3.75	2.06	2.06
(iii) Above 50 kW	10.59	4.01	15.45%	1.81	4.04	2.12	2.12

**Table 8-40: Cross-Subsidy Surcharge approved by Commission for FY 2018-19 as per revised Tariff Policy, 2016**

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
<b>HT Category - EHV (66 kV and above)</b>							
HT I(A): HT - Industry (General)	8.20	4.09	3.92%	0.64	3.30	1.64	1.64
HT I(B): HT - Industry (Seasonal)	11.30	4.09	3.92%	0.64	6.40	2.26	2.26
HT II: HT - Commercial	13.36	4.09	3.92%	0.64	8.46	2.67	2.67
HT III: HT - Railways/Metro/Monorail	9.14	4.09	3.92%	0.64	4.24	1.83	1.83
HT IV: HT - Public Water Works (PWW)	6.99	4.09	3.92%	0.64	2.09	1.40	1.40
HT V(A): HT - Agriculture Pumpsets	4.37	4.09	3.92%	0.64	-	0.87	-
HT VI: HT - Group Housing Society (Residential)	7.57	4.09	3.92%	0.64	2.67	1.51	1.51
HT VIII(B): HT - Temporary Supply Others (TSO)	13.36	4.09	3.92%	0.64	8.46	2.67	2.67
HT IX(A): HT - Public Services- Government	8.61	4.09	3.92%	0.64	3.71	1.72	1.72
HT IX(B): HT - Public Services- Others	10.56	4.09	3.92%	0.64	5.66	2.11	2.11
<b>HT Category - 33 kV</b>							
HT I(A): HT - Industry (General)	8.29	4.09	9.68%	0.73	3.03	1.66	1.66
HT I(B): HT - Industry (Seasonal)	11.39	4.09	9.68%	0.73	6.13	2.28	2.28
HT II: HT - Commercial	12.87	4.09	9.68%	0.73	7.61	2.57	2.57
HT III: HT - Railways/Metro/Monorail	8.65	4.09	9.68%	0.73	3.40	1.73	1.73
HT IV: HT - Public Water Works	6.49	4.09	9.68%	0.73	1.24	1.30	1.24

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
(PWW)							
HT V(A): HT - Agriculture Pumpsets	3.87	4.09	9.68%	0.73	-	0.77	-
HT V: HT - Group Housing Societies	7.08	4.09	9.68%	0.73	1.82	1.42	1.42
HT VIII(B): HT - Temporary Supply Others (TSO)	12.87	4.09	9.68%	0.73	7.61	2.57	2.57
HT IX(A): HT - Public Services- Government	8.12	4.09	9.68%	0.73	2.86	1.62	1.62
HT IX(B): HT - Public Services- Others	10.07	4.09	9.68%	0.73	4.81	2.01	2.01
<b>HT Category - 22 kV &amp; 11 kV</b>							
HT I(A): HT - Industry (General)	9.02	4.09	12.57%	1.44	2.90	1.80	1.80
HT I(B): HT - Industry (Seasonal)	12.12	4.09	12.57%	1.44	6.00	2.42	2.42
HT II: HT - Commercial	13.60	4.09	12.57%	1.44	7.48	2.72	2.72
HT III: HT - Railways/Metro/Monorail	9.38	4.09	12.57%	1.44	3.26	1.88	1.88
HT IV: HT - Public Water Works (PWW)	7.22	4.09	12.57%	1.44	1.11	1.44	1.11
HT V(A): HT - Agriculture Pumpsets	4.60	4.09	12.57%	1.44	-	0.92	-
HT V: HT - Group Housing Societies	7.81	4.09	12.57%	1.44	1.69	1.56	1.56
HT VIII(B): HT - Temporary Supply Others (TSO)	13.60	4.09	12.57%	1.44	7.48	2.72	2.72
HT IX(A): HT - Public Services- Government	8.85	4.09	12.57%	1.44	2.73	1.77	1.77
HT IX(B): HT - Public Services- Others	10.80	4.09	12.57%	1.44	4.68	2.16	2.16
<b>LT Category</b>							
<b>LT I: LT - Residential</b>							
(A): BPL Category (0-30 units)	1.60	4.09	15.45%	1.82	-	0.32	-
(B): Consumption Above 30 units	6.58	4.09	15.45%	1.82	-	1.32	-
<b>LT II: LT - Non-Residential</b>							
(A): (0-20 kW)	10.37	4.09	15.45%	1.82	3.71	2.07	2.07
(B): (>20-50 kW)	13.43	4.09	15.45%	1.82	6.78	2.69	2.69
(C): (Above 50 kW)	15.93	4.09	15.45%	1.82	9.27	3.19	3.19
<b>LT III: LT - Public Water Works (PWW)</b>							
(A): 0-20 kW	3.71	4.09	15.45%	1.82	-	0.74	-
(B): >20 kW-40 kW	5.02	4.09	15.45%	1.82	-	1.00	-
(C): Above 40 kW	6.59	4.09	15.45%	1.82	-	1.32	-
<b>LT IV: LT - Agriculture</b>							
(A): Un-metered-Pumpsets							
Category 1 Zones with (Above							

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	4.44	4.09	15.45%	1.82	-	0.89	-
(b) > 5 HP - 7.5 HP	4.72	4.09	15.45%	1.82	-	0.94	-
(c) Above 7.5 HP	4.96	4.09	15.45%	1.82	-	0.99	-
Category 2 Zones with (Below 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	3.48	4.09	15.45%	1.82	-	0.70	-
(b) > 5 HP - 7.5 HP	3.69	4.09	15.45%	1.82	-	0.74	-
(c) Above 7.5 HP	3.93	4.09	15.45%	1.82	-	0.79	-
(B): Metered-Pumpsets	3.39	4.09	15.45%	1.82	-	0.68	-
(C): Metered-Others	5.21	4.09	15.45%	1.82	-	1.04	-
<b>LT V(A): LT - Industry-Powerlooms</b>							
(i): 0 - 20 kW	5.83	4.09	15.45%	1.82	-	1.17	-
(ii): Above 20 kW	7.51	4.09	15.45%	1.82	0.85	1.50	0.85
<b>LT V(B): LT- Industry-General</b>							-
(i): 0 - 20 kW	6.37	4.09	15.45%	1.82	-	1.27	-
(ii): Above 20 kW	9.29	4.09	15.45%	1.82	2.63	1.86	1.86
<b>LT VI: LT - Street Light</b>							
(A): Grampanchayat A, B & C Class Municipal Councils	5.68	4.09	15.45%	1.82	-	1.14	-
(B): Municipal Corporation Areas	6.95	4.09	15.45%	1.82	0.29	1.39	0.29
<b>LT VI - Temporary Supply</b>							
(A): Temporary Supply Religious	5.19	4.09	15.45%	1.82	-	1.04	-
(B): Temporary Supply Others	14.37	4.09	15.45%	1.82	7.71	2.87	2.87
LT VIII: Advertisements and Hoardings	18.14	4.09	15.45%	1.82	11.48	3.63	3.63
LT IX: Crematorium & Burial Grounds	4.75	4.09	15.45%	1.82	-	0.95	-
<b>LT X (A) Public Services- Government</b>							
(i) 0-20 kW	7.77	4.09	15.45%	1.82	1.11	1.55	1.11
(ii) 20 kW-50 kW	10.58	4.09	15.45%	1.82	3.92	2.12	2.12
(iii) Above 50 kW	10.56	4.09	15.45%	1.82	3.91	2.11	2.11
<b>LT X - Public services Others</b>							
(i) 0-20 kW	8.18	4.09	15.45%	1.82	1.53	1.64	1.53
(ii) 20 kW-50 kW	10.35	4.09	15.45%	1.82	3.69	2.07	2.07
(iii) Above 50 kW	10.64	4.09	15.45%	1.82	3.98	2.13	2.13



**Table 8-41: Cross - Subsidy Surcharge approved by Commission for FY 2019-20 as per revised Tariff Policy, 2016**

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
<b>HT Category - EHV (66 kV and above)</b>							
HT I(A): HT - Industry (General)	8.28	4.13	3.92%	0.62	3.37	1.66	1.66
HT I(B): HT - Industry (Seasonal)	11.21	4.13	3.92%	0.62	6.29	2.24	2.24
HT II: HT - Commercial	13.41	4.13	3.92%	0.62	8.50	2.68	2.68
HT III: HT - Railways/Metro/Monorail	9.03	4.13	3.92%	0.62	4.12	1.81	1.81
HT IV: HT - Public Water Works (PWW)	7.07	4.13	3.92%	0.62	2.16	1.41	1.41
HT V(A): HT - Agriculture Pumpsets	4.56	4.13	3.92%	0.62	-	0.91	-
HT VI: HT - Group Housing Society (Residential)	7.55	4.13	3.92%	0.62	2.63	1.51	1.51
HT VIII(B): HT - Temporary Supply Others (TSO)	13.42	4.13	3.92%	0.62	8.50	2.68	2.68
HT IX(A): HT - Public Services-Government	8.49	4.13	3.92%	0.62	3.57	1.70	1.70
HT IX(B): HT - Public Services- Others	10.40	4.13	3.92%	0.62	5.49	2.08	2.08
<b>HT Category - 33 kV</b>							
HT I(A): HT - Industry (General)	8.36	4.13	9.68%	0.69	3.10	1.67	1.67
HT I(B): HT - Industry (Seasonal)	11.29	4.13	9.68%	0.69	6.02	2.26	2.26
HT II: HT - Commercial	12.97	4.13	9.68%	0.69	7.71	2.59	2.59
HT III: HT - Railways/Metro/Monorail	8.60	4.13	9.68%	0.69	3.33	1.72	1.72
HT IV: HT - Public Water Works (PWW)	6.63	4.13	9.68%	0.69	1.37	1.33	1.33
HT V(A): HT - Agriculture Pumpsets	4.12	4.13	9.68%	0.69	-	0.82	-
HT V: HT - Group Housing Societies	7.11	4.13	9.68%	0.69	1.84	1.42	1.42
HT VIII(B): HT - Temporary Supply Others (TSO)	12.98	4.13	9.68%	0.69	7.71	2.60	2.60
HT IX(A): HT - Public Services-Government	8.05	4.13	9.68%	0.69	2.78	1.61	1.61
HT IX(B): HT - Public Services- Others	9.96	4.13	9.68%	0.69	4.70	1.99	1.99
<b>HT Category - 22 kV &amp; 11 kV</b>							
HT I(A): HT - Industry (General)	9.01	4.13	12.57%	1.35	2.94	1.80	1.80
HT I(B): HT - Industry (Seasonal)	11.94	4.13	12.57%	1.35	5.86	2.39	2.39
HT II: HT - Commercial	13.62	4.13	12.57%	1.35	7.55	2.72	2.72
HT III: HT - Railways/Metro/Monorail	9.25	4.13	12.57%	1.35	3.17	1.85	1.85
HT IV: HT - Public Water Works (PWW)	7.28	4.13	12.57%	1.35	1.21	1.46	1.21

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
HT V(A): HT - Agriculture Pumpsets	4.77	4.13	12.57%	1.35	-	0.95	-
HT V: HT - Group Housing Societies	7.76	4.13	12.57%	1.35	1.68	1.55	1.55
HT VIII(B): HT - Temporary Supply Others (TSO)	13.63	4.13	12.57%	1.35	7.55	2.73	2.73
HT IX(A): HT - Public Services- Government	8.70	4.13	12.57%	1.35	2.62	1.74	1.74
HT IX(B): HT - Public Services- Others	10.61	4.13	12.57%	1.35	4.54	2.12	2.12
<b>LT Category</b>							
<b>LT I: LT - Residential</b>							
(A): BPL Category (0-30 units)	1.70	4.13	15.45%	1.73	-	0.34	-
(B): Consumption Above 30 units	6.64	4.13	15.45%	1.73	0.03	1.33	0.03
<b>LT II: LT - Non-Residential</b>							
(A): (0-20 kW)	10.40	4.13	15.45%	1.73	3.79	2.08	2.08
(B): (>20-50 kW)	13.51	4.13	15.45%	1.73	6.90	2.70	2.70
(C): (Above 50 kW)	16.05	4.13	15.45%	1.73	9.44	3.21	3.21
<b>LT III: LT - Public Water Works (PWW)</b>							
(A): 0-20 kW	3.88	4.13	15.45%	1.73	-	0.78	-
(B): >20 kW-40 kW	5.16	4.13	15.45%	1.73	-	1.03	-
(C): Above 40 kW	6.68	4.13	15.45%	1.73	0.07	1.34	0.07
<b>LT IV: LT - Agriculture</b>							
(A): Un-metered-Pumpsets							
Category 1 Zones with (Above 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	4.64	4.13	15.45%	1.73	-	0.93	-
(b) > 5 HP - 7.5 HP	4.97	4.13	15.45%	1.73	-	0.99	-
(c) Above 7.5 HP	5.36	4.13	15.45%	1.73	-	1.07	-
Category 2 Zones with (Below 1318 Hrs/HP/Annum)							
(a) 0 - 5 HP	3.57	4.13	15.45%	1.73	-	0.71	-
(b) > 5 HP - 7.5 HP	3.99	4.13	15.45%	1.73	-	0.80	-
(c) Above 7.5 HP	4.21	4.13	15.45%	1.73	-	0.84	-
(B): Metered-Pumpsets	3.53	4.13	15.45%	1.73	-	0.71	-
(C): Metered-Others	5.45	4.13	15.45%	1.73	-	1.09	-
<b>LT V(A): LT - Industry-Powerlooms</b>							
(i): 0 - 20 kW	5.86	4.13	15.45%	1.73	-	1.17	-
(ii): Above 20 kW	7.53	4.13	15.45%	1.73	0.92	1.51	0.92
<b>LT V(B): LT- Industry-General</b>							-

Category	T (ABR)	C (Total Power Purchase Cost)	L	D	CSS Comp uted (a)	20% of Tariff (b)	Minim um of (a) and (b)
	Rs. / kWh		%		Rs. kWh		
(i): 0 - 20 kW	6.37	4.13	15.45%	1.73	-	1.27	-
(ii): Above 20 kW	9.35	4.13	15.45%	1.73	2.74	1.87	1.87
<b>LT VI: LT - Street Light</b>							
(A): Grampanchayat A, B & C Class Municipal Councils	5.71	4.13	15.45%	1.73	-	1.14	-
(B): Municipal Corporation Areas	6.98	4.13	15.45%	1.73	0.37	1.40	0.37
<b>LT VI - Temporary Supply</b>							
(A): Temporary Supply Religious	5.26	4.13	15.45%	1.73	-	1.05	-
(B): Temporary Supply Others	14.46	4.13	15.45%	1.73	7.85	2.89	2.89
LT VIII: Advertisements and Hoardings	18.23	4.13	15.45%	1.73	11.62	3.65	3.65
LT IX: Crematorium & Burial Grounds	4.84	4.13	15.45%	1.73	-	0.97	-
<b>LT X (A) Public Services- Government</b>							
(i) 0-20 kW	7.75	4.13	15.45%	1.73	1.14	1.55	1.14
(ii) 20 kW-50 kW	10.62	4.13	15.45%	1.73	4.01	2.12	2.12
(iii) Above 50 kW	10.57	4.13	15.45%	1.73	3.96	2.11	2.11
<b>LT X - Public services Others</b>							
(i) 0-20 kW	8.12	4.13	15.45%	1.73	1.51	1.62	1.51
(ii) 20 kW-50 kW	10.30	4.13	15.45%	1.73	3.69	2.06	2.06
(iii) Above 50 kW	10.59	4.13	15.45%	1.73	3.98	2.12	2.12

With the rationalisation effected by the DOA Regulations in 2016, adoption of the CSS Formula broadly in accordance with the Tariff Policy (which also provides for a cap of 20% of the applicable tariff) and the preferential tariff approved for purchase from RE sources, no further concession needs to be provided to the RE sector in terms of a discounted CSS levy. Hence, the Commission has decided that, from 1 April, 2017 (FY 2017-18) onwards, in case an OA consumer purchases power from a RE source, the full CSS as determined above shall be payable. However, for FY 2016-17 (till 31 March, 2017), only 25% (as at present) of the above CSS shall be payable, in order to provide a sufficient transition period to OA consumers availing power from RE sources to make future purchase decisions in an informed manner. The CSS approved as above shall be applicable on the energy actually consumed by the OA consumer, i.e., on the metered consumption.

**8.40 Additional Surcharge*****MSEDCL's Submission***

On the one hand, MSEDCL has tied up considerable quantum of power, after approval of the Commission, by considering the overall growth in the State; and on the other hand, the OA users, who are now buying considerable quantum of power under OA, are not availing power supply from MSEDCL. As a result, the generation capacity tied up by MSEDCL remains idle. In this situation, MSEDCL needs to back down the generation and also has to pay Fixed Charges (or Capacity Charges) to the Generators as per the terms and conditions of the PPAs irrespective of utilization of generation. The burden of fixed cost is affecting the viability and sustainability of operations of MSEDCL, which ultimately adversely affects the consumers who are buying power from MSEDCL. Hence, to mitigate this, it would be appropriate to determine an Additional Surcharge for OA consumers, as per Section 42 of the EA, 2003.

Section 8.5 of the Tariff Policy, 2016, Regulation 14.8 of the Commission's DOA Regulations, 2016, Clause 5.8.3 of the National Electricity Policy, and the Tariff Orders of various States like Andhra Pradesh, Gujarat, Haryana, Delhi, etc., where Additional Surcharge is applicable, may be referred to for justification of the proposal for Additional Surcharge.

MSEDCL has submitted the following methodology for computation of Additional Surcharge for the 3rd Control Period. It has considered the OA impact in FY 2015-16 and proposed that any variation can be adjusted at the time of the MTR.

- a) Computation of the power availability based on the contracted capacity, and the power requirement based on the demand projection for the consumers of MSEDCL;
- b) Estimation of back down capacity and volume (in MW and MUs) based on the MOD principle to be made applicable for optimum utilisation of the resources;
- c) Estimation of the OA Capacity (in MW) and volume (MU) (which is considered at the same level as during FY 2015-16)
- d) Estimation of the Fixed Charges obligation due to the backed down capacity on MSEDCL;
- e) Calculation of the Fixed Charges obligation due to OA capacity, resulting in the assets being stranded, on pro-rata basis.

Based on the above methodology and considering MOD principles, MSEDCL has computed the Additional Surcharge to be levied on OA consumers in the 3rd Control Period as given in the following Table:

**Table 8-42: Additional Surcharge Proposed by MSEDCL**

Particulars	Units	Formula	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Back down Capacity	MW	1	6,379	8,961	7,257	6463
Capacity Charges related to Back down	Rs. crore	2	3,988	4,357	4,027	3,710
Open Access Quantum	MW	3	1,620	1,620	1,620	1,620
	MU	4	6,348	6,348	6,348	6,348
Additional Surcharge proposed on pro-rata basis on stranded capacity	Rs.Crore	$5=(2)/(1)*(3)$	1,015	788	899	930
	Rs./Unit	$6=(5)/(4)*10$	1.60	1.24	1.46	1.42

### ***Commission's Analysis and Ruling***

The Commission has carefully examined the submissions of MSEDCL, as well as the objections filed by stake-holders with regard to the determination of Additional Surcharge and MSEDCL's replies. In light of these various submissions, the following issues are to be considered by the Commission:

- Whether MSEDCL is entitled to claim Additional Surcharge as per the provisions of the EA, 2003, National Tariff Policy and the DOA Regulations, 2016?
- Whether Additional Surcharge can be levied on OA based captive users and OA consumers sourcing power from RE sources?
- What should be the methodology for determination of Additional Surcharge?

#### **A] Issue-1: Entitlement for Additional Surcharge**

The Commission has examined the relevant provisions of EA, 2003, Clause 8.5.4 of the Tariff Policy, 2016 and Regulation 14.8 of the DOA Regulations, 2016 on which MSEDCL has relied. The relevant extracts read as follows:

#### ***Section 42 (4) of EA, 2003***

#### ***“(Duties of distribution Licensee and open access):”***

*Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution Licensee of his area of supply, such consumer shall be liable to pay an Additional Surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution Licensee arising out of his obligation to supply.”*

#### ***Clauses 8.5.1 and 8.5.4 of Tariff Policy, 2016***

*“8.5.1 The amount of cross-subsidy surcharge and the Additional Surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition...”*

*8.5.4 The Additional Surcharge for obligation to supply as per Section 42 (4) of the Act should become applicable only if it is conclusively demonstrated that the*

*obligation of the Licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through Wheeling Charges.”*

***Regulation 14.8 of DOA Regulations, 2016***

*“a. An Open Access Consumer receiving supply of electricity from a person other than the Distribution Licensee of his area of supply shall pay to the Distribution Licensee an Additional Surcharge on the charges of wheeling and Cross-Subsidy Surcharge to meet the fixed cost of such Distribution Licensee arising out of its obligation to supply, as provided in sub-Section (4) of Section 42 of the Act.*

*b. The Additional Surcharge shall become applicable only when, due to the Open Access being granted or having been granted, the obligation of the Distribution Licensee in terms of power purchase commitments has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such commitments.*

*c. The Distribution Licensee shall submit to the Commission, with its Petitions under the Commission’s Regulations governing Multi-Year Tariff, detailed computations of the fixed cost which it is incurring towards its obligation to supply, and the actual expenses incurred vis-à-vis those approved by the Commission.*

*d. The Commission shall determine the category-wise Additional Surcharge to be recovered by the Distribution Licensee from an Open Access Consumer, based on the following principles:*

*i. The cost must have been incurred by or be expected, with reasonable certainty, to be incurred by the Distribution Licensee on account of such Consumer; and*

*ii. The cost has not been or cannot be recovered from such Consumer, or from other Consumers who have been given supply from the same assets or facilities, through Wheeling Charges, stand-by charges or other charges approved by the Commission:*

*Provided that such Additional Surcharge shall be applicable to all Consumers who have availed Open Access to receive supply from a source other than the Distribution Licensee to which they are connected.*

*e. The Additional Surcharge determined on a per Unit basis shall be payable monthly by the Open Access Consumer based on the actual energy drawn during the month through Open Access.*

*f. The Additional Surcharge shall not be payable by Generating Station Trading Licensee or Power Exchange.”*

For the purpose of approving power purchase for the 3rd Control Period, the Commission has adopted the MOD principle. Accordingly, the Generators would be despatched as per MOD principles subject to technical constraints. Thus, a few Generating Stations/Units would be completely despatched as per the declared availability, or partially despatched/backed down, or completely backed down (zero schedule). As per MSEDCL estimates, around 25% to 30% of the generation capacity (around 4000 to 5000 MW) is projected to be backed down, being surplus to its projected power requirement during the 3rd Control Period. This indicates that some

of the Generating Stations/Units that are tied up by MSEDCL through PPAs would be backed down, resulting in stranded generation capacity to that extent.

On the other hand, the Commission observes that OA consumption has increased. As per MSEDCL's submission, around 1620 MW of OA capacity is already operational in the State. While it is a matter of detailed scrutiny as to whether and to what extent OA has resulted in or would contribute to backing down of contracted generation capacity, there is no denying the fact that the Distribution Licensee's obligation to discharge the fixed cost of power purchase would remain. Under-utilisation or non-utilisation of contracted generation capacity, when declared to be available, would result in the fixed cost of such contracted generation capacity being stranded to that extent.

With the increase in OA transactions, the obligation of the Distribution Licensee in terms of power purchase commitments has been and shall continue to be stranded, and there will be an unavoidable obligation and incidence to bear the fixed costs consequent to such commitments. Such fixed cost of power purchase has to be expected to be incurred with reasonable certainty, and also that such fixed cost of power purchase cannot be recovered from OA consumers through Wheeling Charges or Stand-by Charges.

The Commission is of the considered view that, unless such fixed costs are recovered from OA consumers, this burden would be loaded onto other consumers remaining with the Distribution Licensee (viz. consumers who are not eligible for OA, and eligible OA Consumers not availing power through OA). The Commission believes it would be unfair and unwarranted to pass on the burden of such fixed cost recovery to other consumers through Other Charges.

Thus, the Commission is of the view that, under the circumstances and in pursuance of Regulation 18.4 of the DOA Regulations, 2016, there is a case for recovery of the part of fixed cost towards the stranded capacity arising from the power purchase obligation through levy of Additional Surcharge from OA consumers.

#### B] Applicability of Additional Surcharge:

During the public consultation process, some stake-holders have argued that Additional Surcharge should not be levied on RE-based transactions and captive transactions of CPPs. In support of their contention, they have referred to the Orders of other State Commissions that have exempted captive consumption from levy of Additional Surcharge.

On the other hand, MSEDCL has stated that the Additional Surcharge, being a compensatory amount payable towards the fixed cost of stranded power resulting from approved power purchase contracts, has to be determined commonly for all the OA Users, including captive consumers.

As per Section 42(4) of the EA, 2003, the levy of Additional Surcharge arises where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the Distribution Licensee of his area of supply. However, as per Section 9 of the EA, 2003, CPPs have been given the right to carry electricity from the Generating Plants to the destination of their own use. The question of 'permit' and 'supply' does not arise to the extent of 'self-consumption' by Captive Users of the CPPs. Thus, the is of the view that Additional Surcharge is not applicable to Captive Users of CPPs to the extent of their self-consumption from such Plants.

As per the second proviso to Section 9(1), the electricity generated from a CPP may be supplied to any consumer subject to regulations made under Section 42(2). Additional Surcharge shall be applicable in case of such supply from a CPP to OA Consumers.

Further, as per Regulation 14.8 of the DOA Regulations, 2016, Additional Surcharge shall be applicable to all consumers who have availed OA to receive supply from a source other than the Distribution Licensee to which they are connected. No exemption or specific dispensation has been provided in the case of RE-based transactions as far as levy of Additional Surcharge is concerned. No such exemption is provided for such transactions in the EA, 2003 either. Therefore, the OA consumers/users sourcing power from RE Generating Plants come squarely within the purview of Section 42 (4) of the EA, 2003 and are liable to pay Additional Surcharge.

C] Methodology for determination of Additional Surcharge:

Regulation 14.8 (c) and (d) of the DOA Regulations, 2016 outline the guiding principles for determination of Additional Surcharge, under which the Distribution Licensee shall submit to the Commission a Petition under the MYT Regulations covering the detailed computations of the fixed cost which it is incurring towards its obligation to supply. However, in this present Order, the Commission shall be determining Additional Surcharge for any Licensee for the first time, and no specific format and formulation for Additional Surcharge determination has been stipulated as yet.

In response to the Commission's query, MSEDCL submitted the following additional information and data pertaining to hourly OA volume for five months of FY 2015-16 and FY 2016-17 (from April to August, 2016) as under:



**TABLE 8-43: Open Access Volume and Capacity for April-August, 2016, as submitted by MSEDCL**

Time Slots	Duration	Open Access Volume (MU) (FY 2015-16)	OA Capacity (derived) FY2015-16 (MW)	Open Access Volume (MU) (Apr-16 to Aug-16)	OA Capacity (derived) (MW) (Apr-16 to Aug-16)
Time Slot – A	22.00hr to 6.00hr	2119	726	1289	1053
Time Slot-B	6.00hr to 9.00hr and 12.00hrs to 18.00hr	2393	728	1459	1060
Time Slot-C	9.00hr to 12.00hr	798	729	488	1062
Time Slot-D	18.00hr to 22.00hr	1067	731	656	1071
<b>Total</b>		<b>6378</b>	<b>728</b>	<b>3892</b>	<b>1060</b>

The Commission observes that there has been a significant increase in OA transactions since the notification of the DOA Regulations, 2016 on 30<sup>th</sup> March, 2016. Hence, the Commission considers it appropriate that determination of Additional Surcharge as per DOA Regulations, 2016 should be based on the most relevant data for the period since April, 2016.

MSEDCL has stated that many of the OA transactions relate to partial OA transactions of embedded consumers, for which it has submitted the ToD slot-wise consumption details, and 15-minute time-block or hourly data is not readily available. Besides, around 50% of the OA transactions are in the nature of Captive OA transactions to which Additional Surcharge will not be applicable. MSEDCL has also furnished hourly backing down details of the Generating Stations/Units, including details of those with 'Zero Schedule' or 'Reserve Shutdown' (RSD) for the same period. The details furnished by MSEDCL are summarised below:

**TABLE 8-44: Generation Volume and Capacity backed down compared to OA Volume and Capacity for April-August, 2016, as submitted by MSEDCL**

Time Slots	Duration	Open Access Volume (MU)	Open Access Capacity (derived) (MW)	Backing down/RSD volume (MU)	Backing down/RSD Capacity (MW) (derived)	Ratio = OA volume / BD Volume
Time Slot -A	22.00hr to 6.00hr	1289	1053	5289	4321	24%
Time Slot-B	6.00hr to 9.00hr and 12.00hrs to 18.00hr	1459	1060	5555	4034	26%

<b>Time Slots</b>	<b>Duration</b>	<b>Open Access Volume (MU)</b>	<b>Open Access Capacity (derived) (MW)</b>	<b>Backing down/RSD volume (MU)</b>	<b>Backing down/RSD Capacity (MW) (derived)</b>	<b>Ratio = OA volume / BD Volume</b>
<b>Time Slot-C</b>	9.00hr to 12.00hr	488	1062	1715	3736	28%
<b>Time Slot-D</b>	18.00hr to 22.00hr	656	1071	2535	4143	26%
<b>Total</b>		<b>3892</b>	<b>1060</b>	<b>15094</b>	<b>4110</b>	<b>26%</b>

Accordingly, the Commission has verified the hourly data backing down/RSD of the contracted capacity of the Generating Stations and ToD slot-wise details of the OA transactions as submitted by MSEDCL. The Commission observes that, during the period from April to August, 2016 of FY 2016-17, the total quantum of back-down/RSD of Generating Stations amounted to 15,094 MU, whereas the OA volume was 3892 MU during the same period. In capacity terms, the average OA capacity under operation was 1060 MW as against the backing down/RSD capacity of Generating Stations of around 4110 MW. The Commission also observes that, for all time-blocks, the backing down/RSD capacity far exceeds the OA capacity. The ratio of OA volume to the backing down quantum is around 26%. Any increment in the OA transactions would result in further backing down/RSD capacity and corresponding increase in the volume of backing down.

While the operation of thermal Generating Stations/Units shall be governed as per MOD principles subject to technical considerations, the extent of backing down of each Station/Unit would also depend upon load-generation balancing, demand-supply projections, OA volume, planned/forced outages, etc. and cannot be projected with certainty in the monthly MOD stack for the ensuing year. However, such analysis can be undertaken on a post-facto basis based on the actual data of Stations or Units that have been backed down or under reserve shutdown. Hence, while it is important to ascertain the fixed cost of Stations that are backed down or under reserve shutdown, it will not be possible to pinpoint the same for the ensuing year.

Hence, in order to arrive at a more realistic calculation of the effective per unit fixed cost of the Generator, the Commission has considered the weighted average fixed cost per unit for all contracted capacity as approved under this Order.

Based on the above methodology, the Commission has calculated the stranded capacity and corresponding fixed cost as below to determine the Additional Surcharge:

**Table 8-45: Approved Additional Surcharge for FY 2016-17**

Particulars	Reference	Unit	Value (FY 2016-17)
<b>Step-1: Establishing contribution of OA to backing-down/stranded capacity</b>			
Avg. OA volume(Apr to Aug-16)	(a)	MU	3,892
Avg. Backing Down quantum (Apr to Aug-16)	(b)	MU	15,094
Ratio to OA to Backed down	(c)=(b)/(a)	%	26%
<b>Step-2: Ascertaining Cost of Stranded Capacity</b>			
Approved Fixed Cost of Thermal Generating Sources for Year (FY 2016-17)	(d)	Rs crore	12,974
Total Available MU from Thermal Generating Stations for Year (FY 2016-17)	(e )	MU	1,17,422
Wt. Avg. Per Unit FC of Thermal Generating Stations	(f)=(d)/(e ) x10	Rs/kWh	1.10
Total Projected Backdown/RSD Volume for year(FY 2016-17)	(g)	MU	25,605
Fixed Cost pertaining to Backdown/RSD capacity	(h)=(f) x(g)x10	Rs crore	2,828
Cost attributable to OA as stranded capacity cost	(i)=(h)x(c )	Rs crore	729
<b>Step-3: Segregating impact of Captive/non-Captive OA</b>			
Projected Open Access Volume for year (FY 2016-17)	(j)	MU	6,585
Ratio of non-Captive OA to total OA volume	(k)	%	50%
Projected Captive OA Volume for year (FY 2016-17) (est @ 50%)	(l)=(j) x (k)	MU	3,293
Cost attributable to non-Captive OA as stranded capacity cost	(m)=(i) / (j) x (l)	Rs crore	365
<b>Step-4: Determination of Additional Surcharge</b>			
<b>Per Unit Additional Surcharge (to be applicable on Non-Captive OA)</b>	<b>(n)=(m)/(l)x 10</b>	<b>Rs/Unit</b>	<b>1.11</b>

In view of the above, the Commission has approved the Additional Surcharge of Rs. 1.11 per unit to be applicable with effect from 1 November, 2016. The Additional Surcharge determined through this Order shall be applicable until revised through further Orders. The Commission shall re-determine the Additional Surcharge for the last two years of the Control Period at the time of the MTR, based on actual data of stranded capacity, the approved fixed cost of such stranded capacity, and the OA volume over the yearly period.

#### 8.41 APPLICABILITY OF ORDER

This Order shall come into force with effect from 1 November, 2016.

The Petition of Maharashtra State Electricity Distribution Co. Ltd. in Case No. 48 of 2016 stands disposed of accordingly.

Sd/-  
(Deepak Lad)  
Member

Sd/-  
(Azeez M. Khan)  
Member

  
(Ashwani Kumar Sinha)  
Secretary



**ANNEXURE I****Revenue from revised Tariffs effective from 1 November, 2016\***

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>HT Category</b>														
HT I(A): HT - Industry (General)	12,982	Rs./kVA/Month	235	713	44	23,543	10,678,010	2,831	16,792	1,030	20,653	(506)	20,147	8.56
HT I(B): HT - Industry (Seasonal)	503	Rs./kVA/Month	220	783	44	86	136,257	34	67	4	105	(2)	103	11.99
<b>HT I - Industry (Sub-Total)</b>	<b>13,485</b>					<b>23,629</b>	<b>10,814,267</b>	<b>2,864</b>	<b>16,859</b>	<b>1,034</b>	<b>20,758</b>	<b>(508)</b>	<b>20,249</b>	<b>8.57</b>
HT II: HT - Commercial	2,998	Rs./kVA/Month	235	1,135	58	2,232	1,358,907	307	2,532	130	2,969	(38)	2,931	13.13
HT III: HT - Railways/Metro/Monorail Traction	9	Rs./kVA/Month	235	651	58	77	61,000	16	50	5	71	-	71	9.18
HT IV: HT - Public Water Works (PWW)	959	Rs./kVA/Month	235	560	58	1,456	376,193	103	815	85	1,003	(31)	971	6.67
HT V(A): HT - Agriculture Pumpsets	1,403	Rs./kVA/Month	35	315	58	1,044	658,735	28	329	61	417	-	417	3.99
HT VI: HT - Group Housing Societies (Residential)	363	Rs./kVA/Month	220	582	58	226	98,949	26	131	13	171	-	171	7.56
HT VIII(B): HT - Temporary Supply Others (TSO)	7	Rs./kVA/Month	290	1,004	58	5	3,323	1	5	0	6	-	6	13.13
HT IX(A): HT - Public Services-Government	294	Rs./kVA/Month	235	710	58	192	78,541	18	136	11	165	(3)	162	8.45
HT IX(B): HT - Public Services-Others	903	Rs./kVA/Month	235	900	58	806	351,482	80	725	47	852	(13)	839	10.42
HT - MSPGCL-Aux Supply	24					83	159,030							
<b>Sub-Total HT Category</b>	<b>20,445</b>					<b>29,750</b>	<b>13,960,427</b>	<b>3,443</b>	<b>21,582</b>	<b>1,386</b>	<b>26,411</b>	<b>(593)</b>	<b>25,818</b>	<b>8.68</b>

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>LT Category</b>														
LT I(A): LT - Residential-BPL Category (0-30 units)	265,058	Rs./Month	11	103	-	77	26,868	3	8	-	11	-	11	1.48
<b>LT I(B): LT - Residential</b>	<b>17,398,846</b>					<b>19,097</b>	<b>17,733,828</b>	<b>1,160</b>	<b>8,865</b>	<b>2,253</b>	<b>12,279</b>	<b>-</b>	<b>12,279</b>	<b>6.43</b>
0-100	11,642,049	Rs./Month	55	298	118	12,374	11,866,195	768	3,688	1,460	5,916	-	5,916	4.78
101-300	4,192,530	Rs./Month	55	673	118	5,089	4,273,249	277	3,425	600	4,302	-	4,302	8.45
301-500	691,099	Rs./Month	55	969	118	812	704,405	46	786	96	928	-	928	11.43
501-1000	432,298	Rs./Month	55	1,117	118	446	440,621	29	498	53	579	-	579	12.99
Above 1000	347,977	Rs./Month	55	1,245	118	376	354,677	23	468	44	536	-	536	14.24
Three Phase Connection	92,894	Rs./Month	160	-	-	-	94,682	18	-	-	18	-	18	
<b>LT I: LT - Residential (Sub-Total)</b>	<b>17,663,904</b>					<b>19,174</b>	<b>17,760,696</b>	<b>1,164</b>	<b>8,873</b>	<b>2,253</b>	<b>12,290</b>	<b>-</b>	<b>12,290</b>	<b>6.41</b>
LT II(A): LT - Non-Residential (0-20 kW) (0-200 units)	808,087	Rs./Month	235	609	118	1,679	1,444,481	228	1,023	198	1,449	-	1,449	8.63
LT II(A): LT - Non-Residential (0-20 kW) (Above 200 units)	816,270	Rs./Month	235	932	118	1,657	1,459,109	230	1,544	196	1,970	-	1,970	11.89
LT II(A): LT - Non-Residential (0-20 kW) (Sub-Total)	1,624,357					3,336	2,903,590	458	2,567	394	3,418	-	3,418	10.25
LT II(B): LT - Non-Residential (>20 kW and ≤ 50 kW)	18,861	Rs./kVA/Month	235	999	118	682	659,460	149	681	80	910	(12)	899	13.18
LT II(C): LT - Non-Residential (Above 50 kW)	4,379	Rs./kVA/Month	235	1,297	118	398	377,629	85	517	47	649	(7)	642	16.12
<b>LT II: LT - Non-Residential (Sub-Total)</b>	<b>1,647,597</b>					<b>4,416</b>	<b>3,940,679</b>	<b>692</b>	<b>3,765</b>	<b>521</b>	<b>4,978</b>	<b>(18)</b>	<b>4,960</b>	<b>11.23</b>

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT III(A): LT - Public Water Works (0-20 kW)	49,131	Rs./kVA/Month	70	192	118	567	263,119	22	109	67	198	-	198	3.49
LT III(B): LT - Public Water Works (>20 kW-40 kW)	927	Rs./kVA/Month	80	314	118	73	32,451	3	23	9	35	-	35	4.75
LT III (C): LT - Public Water Works (Above 40 kW)	353	Rs./kVA/Month	115	444	118	53	24,026	3	24	6	33	-	33	6.25
<b>LT III: LT - Public Water Works (Sub-Total)</b>	<b>50,411</b>					<b>693</b>	<b>319,596</b>	<b>29</b>	<b>155</b>	<b>82</b>	<b>266</b>	<b>-</b>	<b>266</b>	<b>3.83</b>
LT IV(A): LT - AG Un-metered-Pumpsets (Category 1 Zones)						<b>5,483</b>	<b>4,521,731</b>	<b>1,618</b>	<b>-</b>	<b>662</b>	<b>2,280</b>	<b>-</b>	<b>2,280</b>	<b>4.16</b>
(a) 0 - 5 HP		Rs./HP/Month	287		122	3,838	3,165,211	1,091		463	1,555	-	1,555	4.05
(b) > 5 HP - 7.5 HP		Rs./HP/Month	320		122	1,494	1,231,889	474		180	654	-	654	4.38
(c) Above 7.5 HP		Rs./HP/Month	357		122	151	124,630	53		18	72	-	72	4.74
LT IV(A): LT - AG Un-metered-Pumpsets (Category 2 Zones)						<b>3,577</b>	<b>2,771,383</b>	<b>726</b>	<b>-</b>	<b>406</b>	<b>1,132</b>	<b>-</b>	<b>1,132</b>	<b>3.16</b>
(a) 0 - 5 HP		Rs./HP/Month	204		122	2,504	1,939,968	475		284	759	-	759	3.03
(b) > 5 HP - 7.5 HP		Rs./HP/Month	234		122	244	188,815	53		28	81	-	81	3.31
(c) Above 7.5 HP		Rs./HP/Month	257		122	829	642,600	198		94	292	-	292	3.52
<b>LT IV(A): LT - AG Un-metered-Pumpsets (Sub-Total)</b>	<b>1,390,617</b>					<b>9,059</b>	<b>7,293,114</b>	<b>2,344</b>	<b>-</b>	<b>1,068</b>	<b>3,412</b>	<b>-</b>	<b>3,412</b>	<b>3.77</b>
LT IV(B): LT -AG Metered-Pumpsets	2,750,371	Rs./HP/Month	21	176	118	14,924	13,404,800	338	2,627	1,761	4,725	-	4,725	3.17
LT IV(C): LT - AG Metered-Others	24,344	Rs./kW/Month	55	296	118	105	103,286	7	31	12	50	-	50	4.79

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>LT IV - LT - Agriculture (Sub-Total)</b>	<b>4,165,332</b>					<b>24,088</b>	<b>20,801,199</b>	<b>2,689</b>	<b>2,658</b>	<b>2,841</b>	<b>8,187</b>	<b>-</b>	<b>8,187</b>	<b>3.40</b>
LT V(A)(i) - Industry - Powerlooms (0 - 20 kW)	31,109	Rs./Connection/ Month	235	433	118	783	374,446	9	339	92	440	-	440	5.62
LT V(A)(ii) - Industry - Powerlooms (Above 20 kW)	4,203	Rs./kVA/Month	160	567	118	894	308,864	36	507	106	648	7	656	7.33
<b>LT V(A) - Industry - Powerlooms (Sub-Total)</b>	<b>35,312</b>					<b>1,678</b>	<b>683,311</b>	<b>44</b>	<b>846</b>	<b>198</b>	<b>1,089</b>	<b>7</b>	<b>1,096</b>	<b>6.53</b>
LT V(B)(i) - Industry - General (0 - 20 kW)	253,255	Rs./Connection/ Month	235	480	118	2,040	2,771,922	71	979	241	1,291	-	1,291	6.33
LT V(B)(ii) - Industry - General (Above 20 kW)	56,145	Rs./kVA/Month	160	650	118	2,888	3,525,476	406	1,877	341	2,624	23	2,648	9.17
<b>LT V(B) - Industry - General (Sub-Total)</b>	<b>309,400</b>					<b>4,928</b>	<b>6,297,398</b>	<b>478</b>	<b>2,857</b>	<b>582</b>	<b>3,916</b>	<b>23</b>	<b>3,939</b>	<b>7.99</b>
<b>LT V - Industry (Sub-Total)</b>	<b>344,712</b>					<b>6,606</b>	<b>6,980,709</b>	<b>522</b>	<b>3,703</b>	<b>779</b>	<b>5,004</b>	<b>31</b>	<b>5,035</b>	<b>7.62</b>
LT VI (A) Street Light-Gram Panchayat, A,B&C Class MCs	63,948	Rs./Connection/ Month	55	415	118	1,331	201,969	13	553	157	723	-	723	5.43
LT VI (B) Street Light - Municipal Corporation Areas	26,703	Rs./Connection/ Month	55	525	118	444	181,068	12	233	52	298	-	298	6.70
<b>LT VI Street Light (Sub-Total)</b>	<b>90,651</b>					<b>1,776</b>	<b>383,037</b>	<b>25</b>	<b>786</b>	<b>210</b>	<b>1,021</b>	<b>-</b>	<b>1,021</b>	<b>5.75</b>
LT VII (A) - Temporary Supply Religious	753	Rs./Connection/ Month	310	300	118	4	3,447	0	1	0	2	-	2	4.89
LT VII (B) - Temporary Supply Others	1,843	Rs./Connection/ Month	360	1,252	118	14	11,571	1	18	2	20	-	20	14.26
<b>LT VII - Temporary Supply</b>	<b>2,596</b>					<b>18</b>	<b>15,018</b>	<b>1</b>	<b>19</b>	<b>2</b>	<b>22</b>	<b>-</b>	<b>22</b>	<b>12.23</b>
LT VIII - Advertisements	2,054	Rs./Connection/	575	1,248	118	3	5,386	1	4	0	6	-	6	18.03



Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
and Hoardings		Month												
LT IX - Crematorium & Burial Grounds	143	Rs./Connection/ Month	310	297	118	1	1,223	0	0	0	1	-	1	4.51
<b>LT X (A) Public Services-Government</b>														
(i) 0-20 kW (0-200 Units)	5,515	Rs./Connection/ Month	220	314	118	4	6,875	1	1	0	3	-	3	8.41
(i) 0-20 kW (Above 200 Units)	7,563	Rs./Connection/ Month	220	436	118	10	9,427	2	5	1	8	-	8	7.45
(ii) 20 kW-50 kW	193	Rs./kVA/Month	220	527	118	3	6,560	1	2	0	3	(0)	3	10.61
(iii) Above 50 kW	79	Rs./kVA/Month	220	591	118	3	5,850	1	2	0	4	(0)	4	10.54
<b>LT X (A) Public Services-Government (Sub-Total)</b>	<b>13,350</b>					<b>21</b>	<b>28,712</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>18</b>	<b>(0)</b>	<b>18</b>	<b>8.62</b>
<b>LT X (B) Public Services- Others</b>														
(i) 0-20 kW (0-200 Units)	27,211	Rs./Connection/ Month	235	430	118	63	51,617	8	27	7	42	-	42	6.70
(i) 0-20 kW (Above 200 Units)	37,314	Rs./Connection/Month	235	679	118	122	70,782	11	83	14	107	-	107	8.84
(ii) 20 kW-50 kW	1,644	Rs./kVA/Month	235	691	118	56	56,154	13	39	7	58	(1)	57	10.16
(iii) Above 50 kW	670	Rs./kVA/Month	235	729	118	57	55,378	12	41	7	60	(1)	59	10.51
<b>LT X (B) Public Services- Others</b>	<b>66,839</b>					<b>298</b>	<b>233,930</b>	<b>43</b>	<b>190</b>	<b>35</b>	<b>268</b>	<b>(2)</b>	<b>267</b>	<b>8.95</b>
<b>LT X Public Services</b>	<b>80,189</b>					<b>318</b>	<b>262,642</b>	<b>49</b>	<b>199</b>	<b>38</b>	<b>286</b>	<b>(2)</b>	<b>284</b>	<b>8.93</b>
LT Prepaid	14,090					14	30,868							
<b>Sub-Total LT Category</b>	<b>24,061,679</b>					<b>57,108</b>		<b>5,172</b>	<b>20,162</b>	<b>6,727</b>	<b>32,061</b>	<b>10</b>	<b>32,071</b>	<b>5.62</b>
<b>Distribution Franchisees</b>														

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
Bhiwandi				388	82	3,754			1,456	308	1,764		1,764	4.70
Nagpur				481	82	1,586			763	130	893		893	5.63
Stand By Charges													420	
LF/PF Incentives/EHV Rebate													(1,683)	
MSEDCL Total Revenue	24,082,124					92,197		8,615	43,964	8,551	61,130	(583)	59,284	6.43

\*Though the tariff is effective from 1 November 2016, the Revenue has been computed for the entire FY 2016-17

\$Wheeling Charges in Paise/kWh for HT Category are weighted average of Wheeling Charges for EHV (66 kV and Above), 33 kV and 22 kV & 11 kV Voltage Levels and not the actual rate.

\*\*ABR, considering sales at input level for DF's

**ANNEXURE II****Revenue from revised Tariffs effective from 1 April, 2017**

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ kWh) \$			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>HT Category</b>														
HT I(A): HT - Industry (General)	13,753	Rs./kVA/Month	250	707	44	24,845	11,460,811	3,232	17,565	1,096	21,893	(534)	21,359	8.60
HT I(B): HT - Industry (Seasonal)	533	Rs./kVA/Month	220	767	44	89	146,246	36	68	4	109	(2)	107	11.96
<b>HT I - Industry (Sub-Total)</b>	<b>14,286</b>					<b>24,934</b>	<b>11,607,057</b>	<b>3,268</b>	<b>17,634</b>	<b>1,100</b>	<b>22,002</b>	<b>(536)</b>	<b>21,466</b>	<b>8.61</b>
HT II: HT - Commercial	3,111	Rs./kVA/Month	250	1,140	59	2,406	1,428,005	343	2,743	142	3,228	(41)	3,187	13.24
HT III: HT - Railways/Metro/Monorail Traction	10	Rs./kVA/Month	250	601	59	77	70,000	20	46	5	71	-	71	9.16
HT IV: HT - Public Water Works (PWW)	982	Rs./kVA/Month	250	575	59	1,837	453,141	132	1,057	108	1,297	(40)	1,257	6.84
HT V(A): HT - Agriculture Pumpsets	1,433	Rs./kVA/Month	40	330	59	1,100	698,427	34	363	65	462	-	462	4.19
HT VI: HT - Group Housing Societies (Residential)	372	Rs./kVA/Month	220	582	59	226	99,966	26	132	13	171	-	171	7.58
HT VIII(B): HT - Temporary Supply Others (TSO)	7	Rs./kVA/Month	290	1,014	59	5	3,323	1	5	0	6	-	6	13.24
HT IX(A): HT - Public Services-Government	303	Rs./kVA/Month	250	720	59	205	81,369	20	148	12	179	(3)	176	8.57
HT IX(B): HT - Public Services-Others	925	Rs./kVA/Month	250	910	59	857	363,445	88	780	51	918	(13)	905	10.56
HT - MSPGCL-Aux Supply	24					83	159,030	-						

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total HT Category</b>	<b>21,453</b>					<b>31,731</b>	<b>14,963,763</b>	<b>3,931</b>	<b>22,907</b>	<b>1,496</b>	<b>28,334</b>	<b>(633)</b>	<b>27,700</b>	<b>8.73</b>
<b>LT Category</b>														
LT I(A): LT - Residential-BPL Category (0-30 units)	265,060	Rs./Month	12	105	-	77	26,868	4	8	-	12	-	12	1.54
<b>LT I(B): LT - Residential</b>	<b>18,305,144</b>					<b>20,763</b>	<b>18,627,080</b>	<b>1,331</b>	<b>9,672</b>	<b>2,512</b>	<b>13,516</b>	<b>-</b>	<b>13,516</b>	<b>6.51</b>
0-100	12,248,478	Rs./Month	60	300	121	13,448	12,530,797	882	4,034	1,627	6,544	-	6,544	4.87
101-300	4,410,917	Rs./Month	60	673	121	5,535	4,512,585	318	3,725	670	4,712	-	4,712	8.51
301-500	727,098	Rs./Month	60	970	121	885	743,857	52	858	107	1,018	-	1,018	11.50
501-1000	454,816	Rs./Month	60	1,120	121	487	465,299	33	545	59	637	-	637	13.08
Above 1000	366,103	Rs./Month	60	1,248	121	408	374,541	26	510	49	585	-	585	14.34
Three Phase Connection	97,732	Rs./Month	170	-	-	-	-	20	-	-	20	-	20	
<b>LT I: LT - Residential (Sub-Total)</b>	<b>18,570,204</b>					<b>20,840</b>	<b>18,653,948</b>	<b>1,335</b>	<b>9,680</b>	<b>2,512</b>	<b>13,527</b>	<b>-</b>	<b>13,527</b>	<b>6.49</b>
LT II(A): LT - Non-Residential (0-20 kW) (0-200 units)	1,067,857	Rs./Month	250	609	121	1,845	1,570,460	320	1,124	223	1,667	-	1,667	9.04
LT II(A): LT - Non-Residential (0-20 kW) (Above 200 units)	670,643	Rs./Month	250	932	121	1,831	1,586,364	201	1,706	221	2,129	-	2,129	11.63
<b>LT II(A): LT - Non-Residential (0-20 kW) (Sub-Total)</b>	<b>1,738,500</b>					<b>3,676</b>	<b>3,156,824</b>	<b>522</b>	<b>2,830</b>	<b>445</b>	<b>3,796</b>	<b>-</b>	<b>3,796</b>	<b>10.33</b>
LT II(B): LT - Non-Residential (>20 kW and ≤ 50 kW)	20,187	Rs./kVA/Month	250	998	121	750	716,974	172	748	91	1,011	(13)	998	13.32

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT II(C): LT - Non-Residential (Above 50 kW)	4,688	Rs./kVA/Month	250	1,255	121	449	410,564	99	563	54	716	(8)	708	15.79
<b>LT II: LT - Non-Residential (Sub-Total)</b>	<b>1,763,375</b>					<b>4,874</b>	<b>4,284,362</b>	<b>792</b>	<b>4,141</b>	<b>590</b>	<b>5,523</b>	<b>(20)</b>	<b>5,502</b>	<b>11.29</b>
LT III(A): LT - Public Water Works (0-20 kW)	49,993	Rs./kVA/Month	75	197	121	586	270,480	24	115	71	211	-	211	3.60
LT III(B): LT - Public Water Works (>20 kW-40 kW)	945	Rs./kVA/Month	85	324	121	75	33,359	3	24	9	37	-	37	4.90
LT III (C): LT - Public Water Works (Above 40 kW)	359	Rs./kVA/Month	125	453	121	55	24,699	4	25	7	35	-	35	6.41
<b>LT III: LT - Public Water Works (Sub-Total)</b>	<b>51,297</b>					<b>716</b>	<b>328,538</b>	<b>31</b>	<b>165</b>	<b>87</b>	<b>283</b>	<b>-</b>	<b>283</b>	<b>3.95</b>
LT IV(A): LT - AG Un-metered-Pumpsets (Category 1 Zones)	-					<b>4,729</b>	<b>3,871,411</b>	<b>1,479</b>	<b>10</b>	<b>581</b>	<b>2,070</b>	<b>-</b>	<b>2,070</b>	<b>4.38</b>
(a) 0 - 5 HP		Rs./HP/Month	309		125	3,310	2,709,987	998	5	406	1,410	-	1,410	4.26
(b) > 5 HP - 7.5 HP		Rs./HP/Month	341		125	1,308	1,070,783	439	7	161	607	-	607	4.64
(c) Above 7.5 HP		Rs./HP/Month	381		125	111	90,640	42	(1)	14	54	-	54	4.86
LT IV(A): LT - AG Un-metered-Pumpsets (Category 2 Zones)	-					<b>3,027</b>	<b>2,372,800</b>	<b>664</b>	<b>(25)</b>	<b>356</b>	<b>995</b>	<b>-</b>	<b>995</b>	<b>3.29</b>
(a) 0 - 5 HP		Rs./HP/Month	212		125	2,119	1,660,960	435	(13)	249	671	-	671	3.17
(b) > 5 HP - 7.5 HP		Rs./HP/Month	247		125	225	176,340	53	(12)	26	67	-	67	3.00
(c) Above 7.5 HP		Rs./HP/Month	275		125	683	535,500	177	(1)	80	256	-	256	3.75
<b>LT IV(A): LT - AG Un-metered-Pumpsets (Sub-Total)</b>	<b>1,190,617</b>					<b>7,756</b>	<b>6,244,211</b>	<b>2,143</b>	<b>(15)</b>	<b>937</b>	<b>3,065</b>	<b>-</b>	<b>3,065</b>	<b>3.95</b>

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT IV(B): LT -AG Metered-Pumpsets	3,175,956	Rs./HP/Month	22	183	121	17,230	15,483,590	409	3,153	2,085	5,647	-	5,647	3.28
LT IV(C): LT - AG Metered-Others	26,778	Rs./kW/Month	60	309	121	115	113,614	8	36	14	58	-	58	5.01
<b>LT IV - LT - Agriculture (Sub-Total)</b>	<b>4,393,351</b>					<b>25,101</b>	<b>21,841,415</b>	<b>2,560</b>	<b>3,174</b>	<b>3,035</b>	<b>8,770</b>	<b>-</b>	<b>8,770</b>	<b>3.49</b>
LT V(A)(i) - Industry - Powerlooms (0 - 20 kW)	37,703	Rs./Connection/ Month	250	454	121	2,040	446,619	11	926	247	1,185	-	1,185	5.81
LT V(A)(ii) - Industry - Powerlooms (Above 20 kW)	5,095	Rs./kVA/Month	170	591	121	1,668	368,396	45	986	202	1,233	14	1,246	7.47
LT V(A) - Industry - Powerlooms (Sub-Total)	42,798					3,708	815,015	56	1,912	449	2,417	14	2,431	6.55
LT V(B)(i) - Industry - General (0 - 20 kW)	304,687	Rs./Connection/ Month	250	474	121	2,273	3,151,775	91	1,078	275	1,444	-	1,444	6.35
LT V(B)(ii) - Industry - General (Above 20 kW)	67,548	Rs./kVA/Month	170	639	121	3,168	4,008,593	491	2,024	383	2,898	26	2,924	9.23
LT V(B) - Industry - General (Sub-Total)	372,235					5,441	7,160,368	582	3,102	658	4,342	26	4,368	8.03
<b>LT V - Industry (Sub-Total)</b>	<b>415,033</b>					<b>9,150</b>	<b>7,975,383</b>	<b>638</b>	<b>5,014</b>	<b>1,107</b>	<b>6,760</b>	<b>39</b>	<b>6,799</b>	<b>7.43</b>
LT VI (A) Street Light-Gram Panchayat, A,B&C Class MCs	67,501	Rs./Connection/ Month	60	429	121	1,464	214,437	15	628	177	821	-	821	5.61
LT VI (B) Street Light - Municipal Corporation Areas	28,188	Rs./Connection/ Month	60	539	121	500	192,246	14	270	61	344	-	344	6.88
<b>LT VI Street Light (Sub-Total)</b>	<b>95,689</b>					<b>1,965</b>	<b>406,683</b>	<b>29</b>	<b>898</b>	<b>238</b>	<b>1,165</b>	<b>-</b>	<b>1,165</b>	<b>5.93</b>
LT VII (A) - Temporary Supply Religious	755	Rs./Connection/ Month	330	310	121	4	3,462	0	1	0	2	-	2	5.07
LT VII (B) - Temporary	1,848	Rs./Connection/	360	1,247	121	14	11,621	1	18	2	20	-	20	14.24

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
Supply Others		Month												
<b>LT VII - Temporary Supply</b>	<b>1,848</b>					<b>14</b>	<b>11,621</b>	<b>1</b>	<b>18</b>	<b>2</b>	<b>20</b>	<b>-</b>	<b>20</b>	<b>14.24</b>
LT VIII - Advertisements and Hoardings	2,060	Rs./Connection/ Month	575	1,242	121	3	5,399	1	4	0	6	-	6	18.01
LT IX - Crematorium & Burial Grounds	150	Rs./Connection/ Month	330	307	121	1	1,227	0	0	0	1	-	1	4.68
<b>LT X (A) Public Services- Government</b>														
(i) 0-20 kW (0-200 Units)	5,914	Rs./Connection/ Month	220	317	121	4	7,316	2	1	0	3	-	3	8.46
(i) 0-20 kW (Above 200 Units)	8,110	Rs./Connection/ Month	220	439	121	11	10,032	2	5	1	8	-	8	7.51
(ii) 20 kW-50 kW	207	Rs./kVA/Month	220	531	121	3	6,981	1	2	0	4	(0)	4	10.64
(iii) Above 50 kW	85	Rs./kVA/Month	220	596	121	4	6,226	1	2	0	4	(0)	4	10.59
<b>LT X (A) Public Services- Government (Sub-Total)</b>	<b>14,316</b>					<b>22</b>	<b>30,555</b>	<b>6</b>	<b>10</b>	<b>3</b>	<b>19</b>	<b>(0)</b>	<b>19</b>	<b>8.67</b>
<b>LT X (B) Public Services- Others</b>														
(i) 0-20 kW (0-200 Units)	29,182	Rs./Connection/ Month	250	431	121	69	54,928	9	30	8	47	-	47	6.79
(i) 0-20 kW (Above 200 Units)	40,017	Rs./Connection/ Month	250	684	121	133	75,323	12	91	16	119	-	119	8.95
(ii) 20 kW-50 kW	1,764	Rs./kVA/Month	250	690	121	61	59,756	14	42	7	64	(1)	63	10.30
(iii) Above 50 kW	719	Rs./kVA/Month	250	726	121	62	58,930	14	45	7	66	(1)	65	10.59
<b>LT X (B) Public Services- Others</b>	<b>71,682</b>					<b>324</b>	<b>248,936</b>	<b>49</b>	<b>207</b>	<b>39</b>	<b>296</b>	<b>(2)</b>	<b>294</b>	<b>9.06</b>
<b>LT X Public Services</b>	<b>85,998</b>					<b>347</b>	<b>279,491</b>	<b>56</b>	<b>218</b>	<b>42</b>	<b>315</b>	<b>(2)</b>	<b>313</b>	<b>9.03</b>
LT Prepaid	14,090					14	30,868							

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total LT Category</b>	<b>25,393,095</b>					<b>63,026</b>		<b>5,444</b>	<b>23,312</b>	<b>7,613</b>	<b>36,369</b>	<b>17</b>	<b>36,386</b>	<b>5.77</b>
<b>Distribution Franchisees</b>														
Bhiwandi				387	83	-			-	-	-		-	
Nagpur				480	83	1,673			803	139	941		941	5.63
Stand By Charges													420	
LF/PF Incentives/EHV Rebate													(1,683)	
<b>MSEDCL Total Revenue</b>	<b>25,414,548</b>					<b>92,197</b>		<b>8,615</b>	<b>43,964</b>	<b>8,551</b>	<b>61,130</b>	<b>(583)</b>	<b>59,284</b>	<b>6.43</b>

\$Wheeling Charges in Paise/kWh for HT Category are weighted average of Wheeling Charges for EHV (66 kV and Above), 33 kV and 22 kV & 11 kV Voltage Levels and not the actual rate.

\*\*ABR, considering sales at input level for DF's



**ANNEXURE III****Revenue from revised Tariffs effective from 1 April, 2018**

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>HT Category</b>														
HT I(A): HT - Industry (General)	14,302	Rs./kVA/Month	270	698	44	25,839	12,148,459	3,700	18,036	1,125	22,861	(556)	22,305	8.63
HT I(B): HT - Industry (Seasonal)	555	Rs./kVA/Month	220	737	44	93	155,021	38	68	4	111	(2)	109	11.73
<b>HT I - Industry (Sub-Total)</b>	<b>14,857</b>					<b>25,932</b>	<b>12,303,480</b>	<b>3,738</b>	<b>18,104</b>	<b>1,129</b>	<b>22,972</b>	<b>(558)</b>	<b>22,414</b>	<b>8.64</b>
HT II: HT - Commercial	3,189	Rs./kVA/Month	270	1,145	58	2,573	1,485,125	385	2,946	150	3,481	(44)	3,437	13.36
HT III: HT - Railways/Metro/Monorail Traction	10	Rs./kVA/Month	270	580	58	77	70,000	21	45	5	71	-	71	9.14
HT IV: HT - Public Water Works (PWW)	997	Rs./kVA/Month	270	585	58	1,907	466,735	147	1,116	111	1,374	(41)	1,333	6.99
HT V(A): HT - Agriculture Pumpsets	1,462	Rs./kVA/Month	45	344	58	1,159	740,333	40	399	68	506	-	506	4.37
HT VI: HT - Group Housing Societies (Residential)	379	Rs./kVA/Month	220	582	58	226	99,966	26	132	13	171	-	171	7.57
HT VIII(B): HT - Temporary Supply Others (TSO)	7	Rs./kVA/Month	290	1,027	58	5	3,323	1	5	0	6	-	6	13.36
HT IX(A): HT - Public Services-Government	312	Rs./kVA/Month	270	720	58	219	84,218	22	158	13	192	(4)	189	8.61
HT IX(B): HT - Public Services-Others	948	Rs./kVA/Month	270	907	58	911	375,487	98	826	53	978	(14)	964	10.57
HT - MSPGCL-Aux Supply	24					83	159,030	-						

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total HT Category</b>	<b>22,185</b>					<b>33,092</b>	<b>15,787,697</b>	<b>4,479</b>	<b>23,730</b>	<b>1,542</b>	<b>29,751</b>	<b>(660)</b>	<b>29,091</b>	<b>8.79</b>
<b>LT Category</b>														
LT I(A): LT - Residential-BPL Category (0-30 units)	265,060	Rs./Month	13	106	-	77	26,868	4	8	-	12	-	12	1.60
<b>LT I(B): LT - Residential</b>	<b>19,037,350</b>					<b>22,386</b>	<b>19,521,180</b>	<b>1,500</b>	<b>10,588</b>	<b>2,642</b>	<b>14,729</b>	<b>-</b>	<b>14,729</b>	<b>6.58</b>
0-100	12,738,417	Rs./Month	65	307	118	14,499	13,132,275	994	4,451	1,711	7,156	-	7,156	4.94
101-300	4,587,354	Rs./Month	65	681	118	5,967	4,729,190	358	4,064	704	5,126	-	5,126	8.59
301-500	756,182	Rs./Month	65	976	118	954	779,562	59	931	113	1,103	-	1,103	11.56
501-1000	473,008	Rs./Month	65	1,125	118	525	487,633	37	590	62	689	-	689	13.13
Above 1000	380,747	Rs./Month	65	1,253	118	440	392,519	30	552	52	633	-	633	14.38
Three Phase Connection	101,642	Rs./Month	185	-	-	-	-	23	-	-	23	-	23	
<b>LT I: LT - Residential (Sub-Total)</b>	<b>19,302,410</b>					<b>22,463</b>	<b>19,548,048</b>	<b>1,504</b>	<b>10,596</b>	<b>2,642</b>	<b>14,742</b>	<b>-</b>	<b>14,742</b>	<b>6.56</b>
LT II(A): LT - Non-Residential (0-20 kW) (0-200 units)	1,110,571	Rs./Month	270	610	118	1,983	1,664,687	360	1,210	234	1,804	-	1,804	9.09
LT II(A): LT - Non-Residential (0-20 kW) (Above 200 units)	697,468	Rs./Month	270	932	118	1,968	1,681,546	226	1,834	232	2,292	-	2,292	11.65
<b>LT II(A): LT - Non-Residential (0-20 kW) (Sub-Total)</b>	<b>1,808,039</b>					<b>3,951</b>	<b>3,346,233</b>	<b>586</b>	<b>3,044</b>	<b>466</b>	<b>4,096</b>	<b>-</b>	<b>4,096</b>	<b>10.37</b>
LT II(B): LT - Non-Residential (>20 kW and ≤ 50 kW)	20,996	Rs./kVA/Month	270	998	118	806	759,993	197	804	95	1,096	(14)	1,083	13.43

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT II(C): LT - Non-Residential (Above 50 kW)	4,875	Rs./kVA/Month	270	1,258	118	482	435,198	113	607	57	776	(8)	768	15.93
<b>LT II: LT - Non-Residential (Sub-Total)</b>	<b>1,833,910</b>					<b>5,239</b>	<b>4,541,424</b>	<b>896</b>	<b>4,455</b>	<b>618</b>	<b>5,969</b>	<b>(22)</b>	<b>5,947</b>	<b>11.35</b>
LT III(A): LT - Public Water Works (0-20 kW)	50,742	Rs./kVA/Month	80	209	118	605	274,537	26	126	71	224	-	224	3.71
LT III(B): LT - Public Water Works (>20 kW-40 kW)	959	Rs./kVA/Month	90	337	118	78	33,859	4	26	9	39	-	39	5.02
LT III (C): LT - Public Water Works (Above 40 kW)	366	Rs./kVA/Month	135	469	118	57	25,070	4	27	7	37	-	37	6.59
<b>LT III: LT - Public Water Works (Sub-Total)</b>	<b>52,067</b>					<b>739</b>	<b>333,466</b>	<b>34</b>	<b>179</b>	<b>87</b>	<b>301</b>	<b>-</b>	<b>301</b>	<b>4.07</b>
LT IV(A): LT - AG Un-metered-Pumpsets (Category 1 Zones)	-					<b>3,966</b>	<b>3,221,090</b>	<b>1,329</b>	<b>(4)</b>	<b>472</b>	<b>1,797</b>	<b>-</b>	<b>1,797</b>	<b>4.53</b>
(a) 0 - 5 HP		Rs./HP/Month	334		122	2,776	2,254,763	904	-	330	1,234	-	1,234	4.44
(b) > 5 HP - 7.5 HP		Rs./HP/Month	365		122	1,120	909,677	398	(3)	133	528	-	528	4.72
(c) Above 7.5 HP		Rs./HP/Month	400		122	70	56,650	27	(1)	8	35	-	35	4.96
LT IV(A): LT - AG Un-metered-Pumpsets (Category 2 Zones)	-					<b>2,487</b>	<b>1,974,217</b>	<b>595</b>	<b>10</b>	<b>289</b>	<b>894</b>	<b>-</b>	<b>894</b>	<b>3.59</b>
(a) 0 - 5 HP		Rs./HP/Month	236		122	1,741	1,381,952	391	12	202	605	-	605	3.48
(b) > 5 HP - 7.5 HP		Rs./HP/Month	266		122	206	163,865	52	(0)	24	76	-	76	3.69
(c) Above 7.5 HP		Rs./HP/Month	294		122	540	428,400	151	(2)	63	212	-	212	3.93
<b>LT IV(A): LT - AG Un-metered-Pumpsets (Sub-Total)</b>	<b>990,617</b>					<b>6,453</b>	<b>5,195,307</b>	<b>1,924</b>	<b>6</b>	<b>761</b>	<b>2,690</b>	<b>-</b>	<b>2,690</b>	<b>4.17</b>

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT IV(B): LT -AG Metered-Pumpsets	3,625,387	Rs./HP/Month	24	195	118	19,677	17,673,985	509	3,837	2,322	6,668	-	6,668	3.39
LT IV(C): LT - AG Metered-Others	29,456	Rs./kW/Month	65	326	118	127	124,975	10	41	15	66	-	66	5.21
<b>LT IV - LT - Agriculture (Sub-Total)</b>	<b>4,645,460</b>					<b>26,257</b>	<b>22,994,267</b>	<b>2,443</b>	<b>3,884</b>	<b>3,097</b>	<b>9,424</b>	<b>-</b>	<b>9,424</b>	<b>3.59</b>
LT V(A)(i) - Industry - Powerlooms (0 - 20 kW)	39,091	Rs./Connection/ Month	270	459	118	2,183	480,151	13	1,002	258	1,272	-	1,272	5.83
LT V(A)(ii) - Industry - Powerlooms (Above 20 kW)	5,283	Rs./kVA/Month	185	595	118	1,785	396,056	53	1,062	211	1,325	14	1,340	7.51
<b>LT V(A) - Industry - Powerlooms (Sub-Total)</b>	<b>44,374</b>					<b>3,968</b>	<b>876,207</b>	<b>65</b>	<b>2,064</b>	<b>468</b>	<b>2,598</b>	<b>14</b>	<b>2,612</b>	<b>6.58</b>
LT V(B)(i) - Industry - General (0 - 20 kW)	313,588	Rs./Connection/ Month	270	476	118	2,388	3,230,155	102	1,137	282	1,520	-	1,520	6.37
LT V(B)(ii) - Industry - General (Above 20 kW)	69,522	Rs./kVA/Month	185	638	118	3,328	4,108,282	547	2,123	393	3,063	27	3,090	9.29
<b>LT V(B) - Industry - General (Sub-Total)</b>	<b>383,110</b>					<b>5,715</b>	<b>7,338,437</b>	<b>649</b>	<b>3,259</b>	<b>674</b>	<b>4,583</b>	<b>27</b>	<b>4,610</b>	<b>8.07</b>
<b>LT V - Industry (Sub-Total)</b>	<b>427,484</b>					<b>9,683</b>	<b>8,214,644</b>	<b>714</b>	<b>5,323</b>	<b>1,143</b>	<b>7,180</b>	<b>41</b>	<b>7,222</b>	<b>7.46</b>
LT VI (A) Street Light-Gram Panchayat, A,B&C Class MCs	70,876	Rs./Connection/ Month	65	439	118	1,611	225,158	18	707	190	915	-	915	5.68
LT VI (B) Street Light - Municipal Corporation Areas	29,597	Rs./Connection/ Month	65	548	118	550	201,859	16	302	65	382	-	382	6.95
<b>LT VI Street Light (Sub-Total)</b>	<b>100,473</b>					<b>2,161</b>	<b>427,017</b>	<b>33</b>	<b>1,009</b>	<b>255</b>	<b>1,297</b>	<b>-</b>	<b>1,297</b>	<b>6.00</b>
LT VII (A) - Temporary Supply Religious	755	Rs./Connection/ Month	355	320	118	4	3,462	0	1	0	2	-	2	5.19
LT VII (B) - Temporary	1,848	Rs./Connection/	360	1,263	118	14	11,621	1	18	2	21	-	21	14.37

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
Supply Others		Month												
<b>LT VII - Temporary Supply</b>	<b>1,848</b>					<b>14</b>	<b>11,621</b>	<b>1</b>	<b>18</b>	<b>2</b>	<b>21</b>	<b>-</b>	<b>21</b>	<b>14.37</b>
LT VIII - Advertisements and Hoardings	2,060	Rs./Connection/ Month	575	1,258	118	3	5,399	1	4	0	6	-	6	18.14
LT IX - Crematorium & Burial Grounds	150	Rs./Connection/ Month	355	314	118	1	1,227	0	0	0	1	-	1	4.75
<b>LT X (A) Public Services- Government</b>														
(i) 0-20 kW (0-200 Units)	6,210	Rs./Connection/ Month	235	315	118	4	7,682	2	1	0	4	-	4	8.59
(i) 0-20 kW (Above 200 Units)	8,516	Rs./Connection/ Month	235	432	118	12	10,534	2	5	1	9	-	9	7.49
(ii) 20 kW-50 kW	219	Rs./kVA/Month	235	510	118	4	7,330	2	2	0	4	(0)	4	10.58
(iii) Above 50 kW	90	Rs./kVA/Month	235	581	118	4	6,538	1	2	0	4	(0)	4	10.56
<b>LT X (A) Public Services- Government (Sub-Total)</b>	<b>15,035</b>					<b>24</b>	<b>32,084</b>	<b>7</b>	<b>11</b>	<b>3</b>	<b>21</b>	<b>(0)</b>	<b>21</b>	<b>8.67</b>
<b>LT X (B) Public Services- Others</b>														
(i) 0-20 kW (0-200 Units)	30,640	Rs./Connection/ Month	270	424	118	74	57,674	10	31	9	50	-	50	6.76
(i) 0-20 kW (Above 200 Units)	42,016	Rs./Connection/ Month	270	679	118	143	79,088	14	97	17	128	-	128	8.92
(ii) 20 kW-50 kW	1,853	Rs./kVA/Month	270	685	118	65	62,744	16	45	8	69	(1)	68	10.35
(iii) Above 50 kW	756	Rs./kVA/Month	270	721	118	66	61,876	16	48	8	72	(1)	71	10.64
<b>LT X (B) Public Services- Others</b>	<b>75,265</b>					<b>349</b>	<b>261,382</b>	<b>56</b>	<b>221</b>	<b>41</b>	<b>318</b>	<b>(2)</b>	<b>316</b>	<b>9.06</b>
<b>LT X Public Services</b>	<b>90,300</b>					<b>372</b>	<b>293,466</b>	<b>63</b>	<b>232</b>	<b>44</b>	<b>339</b>	<b>(2)</b>	<b>336</b>	<b>9.03</b>
LT Prepaid	14,090					15	30,868							

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total LT Category</b>	<b>26,470,252</b>					<b>66,949</b>		<b>5,689</b>	<b>25,701</b>	<b>7,888</b>	<b>39,278</b>	<b>17</b>	<b>39,296</b>	<b>5.87</b>
<b>Distribution Franchisees</b>														
Bhiwandi				391	79	-			-	-	-		-	
Nagpur				497	79	1,786			887	141	1,028		1,028	5.76
Stand By Charges													420	
LF/PF Incentives/EHV Rebate													(1,791)	
<b>MSEDCL Total Revenue</b>	<b>26,492,437</b>					<b>101,828</b>		<b>10,168</b>	<b>50,318</b>	<b>9,572</b>	<b>70,058</b>	<b>(643)</b>	<b>68,044</b>	<b>6.68</b>

\$Wheeling Charges in Paise/kWh for HT Category are weighted average of Wheeling Charges for EHV (66 kV and Above), 33 kV and 22 kV & 11 kV Voltage Levels and not the actual rate.

\*\*ABR, considering sales at input level for DF's

**ANNEXURE IV****Revenue from revised Tariffs effective from 1 April, 2019**

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>HT Category</b>														
HT I(A): HT - Industry (General)	14,876	Rs./kVA/Month	290	693	39	26,872	12,877,366	4,212	18,623	1,041	23,876	(578)	23,298	8.67
HT I(B): HT - Industry (Seasonal)	577	Rs./kVA/Month	220	720	39	97	164,323	41	70	4	114	(2)	112	11.60
<b>HT I - Industry (Sub-Total)</b>	<b>15,453</b>					<b>26,969</b>	<b>13,041,689</b>	<b>4,253</b>	<b>18,692</b>	<b>1,045</b>	<b>23,990</b>	<b>(580)</b>	<b>23,410</b>	<b>8.68</b>
HT II: HT - Commercial	3,269	Rs./kVA/Month	290	1,150	52	2,751	1,544,530	430	3,164	143	3,737	(47)	3,690	13.41
HT III: HT - Railways/Metro/Monorail Traction	10	Rs./kVA/Month	290	555	52	77	70,000	23	43	4	70	-	70	9.03
HT IV: HT - Public Water Works (PWW)	1,012	Rs./kVA/Month	290	595	52	1,980	480,737	162	1,178	103	1,443	(43)	1,400	7.07
HT V(A): HT - Agriculture Pumpssets	1,491	Rs./kVA/Month	50	365	52	1,221	784,753	47	446	63	556	-	556	4.56
HT VI: HT - Group Housing Societies (Residential)	387	Rs./kVA/Month	220	586	52	226	99,966	26	133	12	171	-	171	7.55
HT VIII(B): HT - Temporary Supply Others (TSO)	7	Rs./kVA/Month	290	1,039	52	5	3,323	1	5	0	6	-	6	13.42
HT IX(A): HT - Public Services-Government	319	Rs./kVA/Month	290	710	52	234	87,167	24	166	12	203	(4)	199	8.49
HT IX(B): HT - Public Services-Others	972	Rs./kVA/Month	290	893	52	969	387,950	109	866	50	1,025	(15)	1,010	10.42
HT - MSPGCL-Aux Supply	24					83	159,030	-						

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total HT Category</b>	<b>22,944</b>					<b>34,515</b>	<b>16,659,145</b>	<b>5,076</b>	<b>24,692</b>	<b>1,432</b>	<b>31,200</b>	<b>(688)</b>	<b>30,512</b>	<b>8.84</b>
<b>LT Category</b>														
LT I(A): LT - Residential-BPL Category (0-30 units)	265,060	Rs./Month	15	108	-	77	26,868	5	8	-	13	-	13	1.70
<b>LT I(B): LT - Residential</b>	<b>19,798,844</b>					<b>24,135</b>	<b>20,458,196</b>	<b>1,680</b>	<b>11,675</b>	<b>2,679</b>	<b>16,034</b>	<b>-</b>	<b>16,034</b>	<b>6.64</b>
0-100	13,247,954	Rs./Month	70	318	111	15,633	13,762,624	1,113	4,971	1,735	7,819	-	7,819	5.00
101-300	4,770,848	Rs./Month	70	691	111	6,434	4,956,191	401	4,446	714	5,561	-	5,561	8.64
301-500	786,429	Rs./Month	70	986	111	1,029	816,981	66	1,014	114	1,195	-	1,195	11.61
501-1000	491,929	Rs./Month	70	1,137	111	566	511,040	41	643	63	747	-	747	13.21
Above 1000	395,977	Rs./Month	70	1,265	111	475	411,360	33	600	53	686	-	686	14.46
Three Phase Connection	105,707	Rs./Month	200	-	-	-	-	25	-	-	25	-	25	
<b>LT I: LT - Residential (Sub-Total)</b>	<b>20,063,904</b>					<b>24,213</b>	<b>20,485,064</b>	<b>1,684</b>	<b>11,683</b>	<b>2,679</b>	<b>16,047</b>	<b>-</b>	<b>16,047</b>	<b>6.63</b>
LT II(A): LT - Non-Residential (0-20 kW) (0-200 units)	1,154,992	Rs./Month	290	615	111	2,132	1,764,568	402	1,311	237	1,950	-	1,950	9.15
LT II(A): LT - Non-Residential (0-20 kW) (Above 200 units)	725,366	Rs./Month	290	937	111	2,115	1,782,438	252	1,982	235	2,469	-	2,469	11.67
<b>LT II(A): LT - Non-Residential (0-20 kW) (Sub-Total)</b>	<b>1,880,358</b>					<b>4,247</b>	<b>3,547,005</b>	<b>654</b>	<b>3,293</b>	<b>471</b>	<b>4,419</b>	<b>-</b>	<b>4,419</b>	<b>10.40</b>
LT II(B): LT - Non-Residential (>20 kW and ≤ 50 kW)	21,836	Rs./kVA/Month	290	998	111	866	805,593	224	864	96	1,185	(15)	1,170	13.51



Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT II(C): LT - Non-Residential (Above 50 kW)	5,071	Rs./kVA/Month	290	1,263	111	518	461,310	128	655	58	841	(9)	832	16.05
<b>LT II: LT - Non-Residential (Sub-Total)</b>	<b>1,907,265</b>					<b>5,632</b>	<b>4,813,909</b>	<b>1,007</b>	<b>4,812</b>	<b>625</b>	<b>6,445</b>	<b>(24)</b>	<b>6,421</b>	<b>11.40</b>
LT III(A): LT - Public Water Works (0-20 kW)	51,502	Rs./kVA/Month	85	231	111	624	278,655	28	144	69	242	-	242	3.88
LT III(B): LT - Public Water Works (>20 kW-40 kW)	973	Rs./kVA/Month	100	354	111	80	34,367	4	28	9	42	-	42	5.16
LT III (C): LT - Public Water Works (Above 40 kW)	372	Rs./kVA/Month	145	481	111	59	25,446	4	28	6	39	-	39	6.68
<b>LT III: LT - Public Water Works (Sub-Total)</b>	<b>52,847</b>					<b>763</b>	<b>338,468</b>	<b>37</b>	<b>201</b>	<b>85</b>	<b>323</b>	<b>-</b>	<b>323</b>	<b>4.23</b>
LT IV(A): LT - AG Un-metered-Pumpsets (Category 1 Zones)	-					<b>3,193</b>	<b>2,570,770</b>	<b>1,153</b>	<b>5</b>	<b>355</b>	<b>1,513</b>	<b>-</b>	<b>1,513</b>	<b>4.74</b>
(a) 0 - 5 HP		Rs./HP/Month	363		115	2,235	1,799,539	784	4	248	1,037	-	1,037	4.64
(b) > 5 HP - 7.5 HP		Rs./HP/Month	398		115	930	748,571	358	1	103	462	-	462	4.97
(c) Above 7.5 HP		Rs./HP/Month	443		115	28	22,660	12	(0)	3	15	-	15	5.36
LT IV(A): LT - AG Un-metered-Pumpsets (Category 2 Zones)	-					<b>1,957</b>	<b>1,575,633</b>	<b>509</b>	<b>6</b>	<b>217</b>	<b>733</b>	<b>-</b>	<b>733</b>	<b>3.74</b>
(a) 0 - 5 HP		Rs./HP/Month	251		115	1,370	1,102,943	332	5	152	490	-	490	3.57
(b) > 5 HP - 7.5 HP		Rs./HP/Month	293		115	188	151,390	53	1	21	75	-	75	3.99
(c) Above 7.5 HP		Rs./HP/Month	321		115	399	321,300	124	-	44	168	-	168	4.21
<b>LT IV(A): LT - AG Un-metered-Pumpsets (Sub-Total)</b>	<b>790,617</b>					<b>5,150</b>	<b>4,146,404</b>	<b>1,663</b>	<b>11</b>	<b>572</b>	<b>2,246</b>	<b>-</b>	<b>2,246</b>	<b>4.36</b>

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
LT IV(B): LT -AG Metered-Pumpsets	4,106,239	Rs./HP/Month	26	214	111	22,286	20,017,566	625	4,769	2,474	7,867	-	7,867	3.53
LT IV(C): LT - AG Metered-Others	32,402	Rs./kW/Month	70	351	111	139	137,473	12	49	15	76	-	76	5.45
<b>LT IV - LT - Agriculture (Sub-Total)</b>	<b>4,929,258</b>					<b>27,576</b>	<b>24,301,443</b>	<b>2,299</b>	<b>4,829</b>	<b>3,061</b>	<b>10,190</b>	<b>-</b>	<b>10,190</b>	<b>3.70</b>
LT V(A)(i) - Industry - Powerlooms (0 - 20 kW)	40,530	Rs./Connection/ Month	290	469	111	2,336	516,088	14	1,096	259	1,369	-	1,369	5.86
LT V(A)(ii) - Industry - Powerlooms (Above 20 kW)	5,478	Rs./kVA/Month	200	602	111	1,910	425,700	61	1,150	212	1,423	15	1,438	7.53
<b>LT V(A) - Industry - Powerlooms (Sub-Total)</b>	<b>46,008</b>					<b>4,246</b>	<b>941,787</b>	<b>75</b>	<b>2,245</b>	<b>471</b>	<b>2,792</b>	<b>15</b>	<b>2,807</b>	<b>6.61</b>
LT V(B)(i) - Industry - General (0 - 20 kW)	322,749	Rs./Connection/ Month	290	481	111	2,508	3,309,764	112	1,206	278	1,597	-	1,597	6.37
LT V(B)(ii) - Industry - General (Above 20 kW)	71,552	Rs./kVA/Month	200	642	111	3,495	4,209,531	606	2,244	388	3,238	28	3,266	9.35
<b>LT V(B) - Industry - General (Sub-Total)</b>	<b>394,301</b>					<b>6,003</b>	<b>7,519,296</b>	<b>718</b>	<b>3,450</b>	<b>666</b>	<b>4,835</b>	<b>28</b>	<b>4,863</b>	<b>8.10</b>
<b>LT V - Industry (Sub-Total)</b>	<b>440,309</b>					<b>10,248</b>	<b>8,461,083</b>	<b>794</b>	<b>5,695</b>	<b>1,138</b>	<b>7,627</b>	<b>44</b>	<b>7,670</b>	<b>7.48</b>
LT VI (A) Street Light-Gram Panchayat, A,B&C Class MCs	74,420	Rs./Connection/ Month	70	449	111	1,772	236,416	20	796	197	1,012	-	1,012	5.71
LT VI (B) Street Light - Municipal Corporation Areas	31,077	Rs./Connection/ Month	70	558	111	605	211,952	18	338	67	423	-	423	6.98
<b>LT VI Street Light (Sub-Total)</b>	<b>105,497</b>					<b>2,377</b>	<b>448,368</b>	<b>38</b>	<b>1,133</b>	<b>264</b>	<b>1,435</b>	<b>-</b>	<b>1,435</b>	<b>6.04</b>
LT VII (A) - Temporary Supply Religious	755	Rs./Connection/ Month	385	327	111	4	3,462	0	1	0	2	-	2	5.26
LT VII (B) - Temporary	1,848	Rs./Connection/	360	1,279	111	14	11,621	1	18	2	21	-	21	14.46

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
Supply Others		Month												
<b>LT VII - Temporary Supply</b>	<b>1,848</b>					<b>14</b>	<b>11,621</b>	<b>1</b>	<b>18</b>	<b>2</b>	<b>21</b>	<b>-</b>	<b>21</b>	<b>14.46</b>
LT VIII - Advertisements and Hoardings	2,060	Rs./Connection/ Month	575	1,274	111	3	5,399	1	4	0	6	-	6	18.23
LT IX - Crematorium & Burial Grounds	150	Rs./Connection/ Month	385	326	111	1	1,227	0	0	0	1	-	1	4.84
<b>LT X (A) Public Services- Government</b>														
(i) 0-20 kW (0-200 Units)	6,520	Rs./Connection/ Month	250	312	111	4	8,066	2	1	0	4	-	4	8.66
(i) 0-20 kW (Above 200 Units)	8,941	Rs./Connection/ Month	250	426	111	13	11,061	3	6	1	10	-	10	7.44
(ii) 20 kW-50 kW	230	Rs./kVA/Month	250	503	111	4	7,697	2	2	0	4	(0)	4	10.62
(iii) Above 50 kW	95	Rs./kVA/Month	250	574	111	4	6,865	2	2	0	5	(0)	4	10.57
<b>LT X (A) Public Services- Government (Sub-Total)</b>	<b>15,786</b>					<b>26</b>	<b>33,689</b>	<b>8</b>	<b>11</b>	<b>3</b>	<b>22</b>	<b>(0)</b>	<b>22</b>	<b>8.66</b>
<b>LT X (B) Public Services- Others</b>														
(i) 0-20 kW (0-200 Units)	32,171	Rs./Connection/ Month	290	419	111	80	60,557	11	33	9	53	-	53	6.71
(i) 0-20 kW (Above 200 Units)	44,116	Rs./Connection/ Month	290	674	111	154	83,042	15	104	17	136	-	136	8.85
(ii) 20 kW-50 kW	1,945	Rs./kVA/Month	290	675	111	70	65,881	18	47	8	73	(1)	72	10.30
(iii) Above 50 kW	794	Rs./kVA/Month	290	711	111	71	64,970	18	51	8	77	(1)	75	10.59
<b>LT X (B) Public Services- Others</b>	<b>79,026</b>					<b>375</b>	<b>274,450</b>	<b>63</b>	<b>235</b>	<b>42</b>	<b>340</b>	<b>(2)</b>	<b>337</b>	<b>9.00</b>
<b>LT X Public Services</b>	<b>94,812</b>					<b>400</b>	<b>308,139</b>	<b>71</b>	<b>246</b>	<b>44</b>	<b>362</b>	<b>(3)</b>	<b>359</b>	<b>8.97</b>
LT Prepaid	14,090					15	30,868							

Category	No. of Consumers	Fixed/Demand Charge		Variable Charges		Energy Sales (MU)	Connected Load/ Contract Demand	Revenue (Rs. Crore)						Average Billing Rate (Rs./ kWh)
		Unit	Rate	Energy Charge (paise/ kWh)	Wheeling Charge (paise/ \$ kWh)			Fixed / Demand Charge	Energy Charge	Wheeling Charge	Total Revenue	ToD Rebate	Net Revenue	
<b>Sub-Total LT Category</b>	<b>27,612,040</b>					<b>71,243</b>		<b>5,932</b>	<b>28,624</b>	<b>7,898</b>	<b>42,454</b>	<b>18</b>	<b>42,472</b>	<b>5.96</b>
<b>Distribution Franchisees</b>														
Bhiwandi				470	73	-			-	-	-		-	
Nagpur				586	73	1,907			1,117	139	1,256		1,256	6.59
Stand By Charges													420	
LF/PF Incentives/EHV Rebate													(1,683)	
<b>MSEDCL Total Revenue</b>	<b>27,634,984</b>					<b>107,666</b>		<b>11,008</b>	<b>54,432</b>	<b>9,470</b>	<b>74,910</b>	<b>(671)</b>	<b>72,977</b>	<b>6.78</b>

\$Wheeling Charges in Paise/kWh for HT Category are weighted average of Wheeling Charges for EHV (66 kV and Above), 33 kV and 22 kV & 11 kV Voltage Levels and not the actual rate.

\*\*ABR, considering sales at input level for DF's

**ANNEXURE - V**

**MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.**

**APPROVED TARIFF SCHEDULE**

**(With effect from 1 November, 2016)**

Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **3 November, 2016** in Case No.48 of 2016, the tariff for supply of electricity by the Distribution Licensee, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) to various classes of consumers as applicable from **1 November, 2016**.

**General**

1. These tariffs supersede all tariffs so far in force.
2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.
3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.
4. The tariffs are applicable for supply at one point only.
5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.
6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.
7. Unless specifically stated to the contrary, the figures of Energy Charge and Wheeling Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.
8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

**LOW TENSION (LT) TARIFF****LT I (A): LT – Residential (BPL)****Applicability:**

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
BPL Category	11	-	1.03

**LT I (B): LT – Residential****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

- Private residential premises, Government/semi-Government residential quarters;
- Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for

- a consideration or used for commercial activities would be charged at the applicable LT-II tariff;
- c) All Students Hostels affiliated to Educational Institutions;
  - d) All other Students' or Working Men/Women's Hostels;
  - e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;
  - f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;
  - g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;
  - h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;
  - i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;
  - j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;
  - k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

Note:

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

- l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and

annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case consumption has exceeded 3600 units in the previous financial year, the consumer will thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

- m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:
- (i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
  - (ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
0-100 units	Single Phase : Rs.55 per month Three Phase - Rs. 160 per month <sup>\$\$</sup>	1.18	2.98
101 – 300 units		1.18	6.73
301 – 500 units		1.18	9.69
501-1000 units		1.18	11.17
Above 1000 units		1.18	12.45

Note:

- a) <sup>\$\$</sup> An Additional Fixed Charge of Rs. 160 per 10 kW load or part thereof above 10 kW load shall also be payable.
- b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.



## **LT II: LT – Non-Residential or Commercial**

### **LT II (A): 0 – 20 kW**

#### **Applicability:**

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;
- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

- l) Milk Collection Centres;
- m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT II (A) 0-20 kW</b>			
(i) 0 to 200 units per month	235	1.18	6.09
(ii) Above 200 units per month (only balance consumption)	235	1.18	9.32

**LT II (B): > 20 kW and ≤ 50 kW and (C) > 50 kW**

Applicability:

As per the applicability described in LT II (A) and for the Sanctioned Load in the range applicable in this sub-category, i.e. LT II (B) and LT II (C).

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./kVA/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
LT II (B) > 20 kW and ≤ 50 kW	235	1.18	9.99
LT II (C ) > 50 kW		1.18	12.97
TOD Tariffs (in addition to above base Tariffs)			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs &			0.00

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./kVA/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
1200 Hrs-1800 Hrs			
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

### **LT III: LT-Public Water Works (PWW) and Sewage Treatment Plants**

#### **Applicability:**

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT V category tariff, as the case may be.

#### **Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kVA/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT III (A): 0 - 20 kW</b>	70	1.18	1.92
<b>LT III (B): &gt; 20 kW and ≤ 40 kW</b>	80	1.18	3.14
<b>LT III (C): &gt; 40 kW</b>	115	1.18	4.44
<b>TOD Tariffs (in addition to above base tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**LT IV: Agriculture****LT IV (A): LT - Agriculture Un-metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

**Rate Schedule**

Consumer Category	Fixed / Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/HP/Month)	Energy Charge (Rs./kWh)
<b>LT IV (A): LT - Agriculture Un-metered Tariff - Pumpsets</b>			
Category 1 Zones*			
(a) 0-5 HP	287	122	NIL
(b) > 5 HP and ≤ 7.5 HP	320	122	NIL
(c) > 7.5 HP	357	122	NIL
Category 2 Zones #			
(a) 0-5 HP	204	122	NIL
(b) > 5 HP and ≤ 7.5 HP	234	122	NIL
(c) > 7.5 HP	257	122	NIL

*Category 1 Zones (with consumption norm above 1,318 hours/HP/year)		
1) Bhandup (U)	2) Pune	3) Nashik
# Category 2 Zones (with consumption norm below 1,318 hours/HP/year)		
1) Amaravati	2) Aurangabad	3) Kalyan
4) Konkan	5) Kolhapur	6) Latur
7) Nagpur (U)	8) Nagpur	

**Note:**

- The Flat Rate Tariff as above will remain in force only till meters are installed; once meter is installed, the consumer will be billed as per the Tariff applicable to metered agricultural consumers.
- The list of Category 1 Zones (with consumption norm above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given above.
- Supply under this Tariff will be given for a minimum load of 2 HP. If any consumer requires any load less than 2 HP for agricultural purposes, he shall be required to pay the Fixed Charge/Energy Charge on this basis as if a load of 2 HP is connected.

**LT IV (B): LT – Agriculture metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./HP/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	21	1.18	1.76

**LT IV (C): LT – Agriculture – Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

- Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- Poulties exclusively undertaking layer and broiler activities, including Hatcheries;
- High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./kW/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	55	1.18	2.96

**LT V: LT- Industry:****LT-V (A): LT – Industry – Power looms****Applicability:**

This category shall be applicable for power supply to Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V(A): LT – Industry – Powerlooms</b>			
(i) 0-20 kW	Rs. 235 per connection per month	1.18	4.33
(ii) Above 20 kW	Rs. 160 per kVA per month	1.18	5.67
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is compulsorily applicable for LT V (A) (ii) (i.e., above 20 kW), and optionally available to LT- V (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT-V (B): LT - Industry - General****Applicability:**

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT V(B) tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
- b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units; and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units;
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
- h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under LT IV (C) – Agriculture (Others);
- l) Food (including seafood) Processing units.
- m) Seed manufacturing

#### **Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V (B): LT – Industry – General</b>			
(i) 0-20 kW	Rs. 235 per connection per month	1.18	4.80
(ii) Above 20 kW	Rs. 160 per kVA per month	1.18	6.50

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

- a) The ToD Tariff is compulsorily applicable to LT V (B) (i.e., above 20 kW), and optionally available to LT- V (A) (i.e., up to 20 kW) having ToD meter installed.

### **LT VI: LT – Street Light**

#### **Applicability:**

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

- Lighting in Public Gardens (i.e. which are open to the general public free of charge);
- Traffic Signals and Traffic Islands;
- Public Sanitary Conveniences;
- Public Water Fountains; and
- Such other public places open to the general public free of charge.

#### **Rate Schedule**

Consumer Category	Fixed/Demand Charge (Rs per kW per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT VI: LT – Street Light</b>			
(A) Gram Panchayat, A, B & C	55	1.18	4.15



Consumer Category	Fixed/Demand Charge (Rs per kW per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
Class Municipal Councils			
(B) Municipal Corporation Areas	55	1.18	5.25

**Note:**

The above street and other lighting facilities having 'Automatic Timers' for switching On/Off would be levied Demand Charges on the lower of the following–

- i) 50 percent of 'Contract Demand' or
- ii) Actual 'Recorded Demand'.

**LT VII: LT-Temporary Supply****LT VII (A): LT - Temporary Supply - Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
LT VII (A) – All Units	310	1.18	3.00

**LT VII (B): LT - Temporary Supply - Others (TSO)****Applicability:**

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

- a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;

- b) Any construction or renovation activity in existing premises;
- c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,
- d) Any other activity not covered under LT VII (A).

**Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge ( Rs./kWh)</b>
LT VII (B) – All Units	360	1.18	12.52

**Note:**

- (a) Additional Fixed Charges of Rs. 160 per 10 kW load or part thereof above 10 kW load shall be payable.
- (b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

**LT VIII: LT - Advertisements and Hoardings****Applicability:**

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

**Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge ( Rs./kWh)</b>
All Units	575	1.18	12.48

**Note:**

- a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.
- b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and

historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.

c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

### **LT IX: LT- Crematorium and Burial Grounds**

#### **Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

#### **Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge ( Rs./kWh)</b>
All Units	310	1.18	2.97

### **LT X: LT - Public Services**

#### **LT X (A): LT - Government Educational Institutions and Hospitals**

#### **Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT X (A): LT - Public Services –Government Educational Institutions and Hospitals</b>			
<b>(i) <math>\leq 20</math> kW</b>			
0-200 units	Rs. 220 per connection per month	1.18	3.14
Above 200 units	Rs. 220 per connection per month	1.18	4.36
<b>(ii) <math>&gt;20 - \leq 50</math> kW</b>	Rs. 220 per kVA per month	1.18	5.27
<b>(iii) <math>&gt; 50</math> kW</b>	Rs. 220 per kVA per month	1.18	5.91
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (A) (ii) and LT-X (A) (iii) (i.e., above 20 kW) and optionally available to LT- X (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT X (B): LT - Public Services - Others****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for

- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.
- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats;

Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

d) Service-oriented Spiritual Organisations;

e) State or Municipal/Local Authority Transport establishments, including their Workshops;

f) Fire Service Stations; Jails, Prisons; Courts;

g) Airports;

h) Ports and Jetties;

i) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

### **Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/ Demand Charge</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>LT X (B): LT - Public Services – Others</b>			
<b>(i) <math>\leq 20</math> kW</b>			
0-200 units	Rs. 235 per connection per month	1.18	4.30
Above 200 units	Rs. 235 per connection per month	1.18	6.79
<b>(ii) <math>&gt;20 - \leq 50</math> kW</b>	Rs. 235 per kVA per month	1.18	6.91
<b>(iii) <math>&gt; 50</math> kW</b>	Rs. 235 per kVA per month	1.18	7.29
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

#### **Note:**

The ToD Tariff is applicable for LT-X (B) (ii) and LT-X (B) (iii) (i.e. above 20 kW), and optionally available to LT- X (A) (i) (i.e. up to 20 kW) having ToD meter installed.

## **HIGH TENSION (HT) TARIFF**

### **HT I: HT – Industry**

#### **HT I (A): Industry – General**

##### **Applicability:**

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
- b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units, and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
- h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);

- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under HT V (B)– Agriculture (Others);
- l) Food (including Seafood) Processing units.
- m) Seed manufacturing

### **HT I (B): Industry - Seasonal**

#### **Applicability:**

Applicable to Seasonal consumers, who are defined as those who normally work during a part of the year up to a maximum of 9 months, such as Cotton Ginning Factories, Cotton Seed Oil Mills, Cotton Pressing Factories, Salt Manufacturers, Khandsari/Jaggery Manufacturing Units, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature.

### **Rate Schedule**

#### **Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
<b>HT I: HT – Industry</b>		
HT I (A): Industry - General	235	7.13
HT I (B): Industry - Seasonal	235	7.83
<b>ToD Tariffs (in addition to above base Tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

- i. High Tension Industrial consumers having captive generation facility synchronised with the grid will pay additional Demand Charges of Rs. 20/kVA/Month only on the extent of Stand-by Contract Demand component and not on the entire Contract Demand.
- ii. Stand-by Charges will be levied on such consumers on the Stand-by component, only if the consumer's demand exceeds the Contract Demand.
- iii. This additional Demand Charge will not be applicable if there is no Stand-by demand and the Captive Unit is synchronised with the Grid only for the export of power.
- iv. Demand Charge shall be applicable at 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.
- v. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.

**HT II: HT- Commercial**

**Applicability:**

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -



- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

- l) Milk Collection Centres;
- m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT- PWW category or HT I - Industry
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	235	11.35
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

**HT III - Railways/Metro/Monorail****Applicability:**

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	235	6.51

**HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	235	5.60
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT V: HT – Agriculture****HT V(A) : HT – Agriculture Pumpsets****Applicability:**

This category shall be applicable for Electricity / Power Supply at High Tension for pumping of water exclusively for the purpose of Agriculture / cultivation of crops including HT Lift Irrigation Schemes (LIS) irrespective of ownership.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**HT V(B) : HT – Agriculture Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at High Voltage for:

- Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- Poulties exclusively undertaking layer and broiler activities, including Hatcheries;
- High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
<b>HT V : HT Agriculture</b>		
HT V (A) : HT Agriculture Pumpsets	35	3.15
HT V (B) : HT Agriculture Others	35	4.35

**HT VI: HT - Group Housing Society (Residential)****Applicability:**

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

- a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
- a person, for making electricity available to its employees residing in the same premises for residential purposes.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	220	5.82

**HT VIII- HT - Temporary Supply****HT VIII (A) - HT - Temporary Supply Religious (TSR)**Applicability:

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ connection/ month)	Energy Charge (Rs./kWh)
All Units	310	3.00

**HT VIII (B): HT - Temporary Supply Others (TSO)****Applicability:**

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

- a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;
- b) Any construction or renovation activity in existing premises;
- c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	10.04

**Note:**

Additional Fixed Charges of Rs.230 per 10 kW load or part thereof above 10 kW load shall be payable.

**HT IX: HT Public Services****HT IX – (A): HT - Government Educational Institutions and Hospitals****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals,

Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

### **Rate Schedule**

#### **Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

### **PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	235	7.10
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

#### **HT IX - (B): Public Service - Others**

##### **Applicability:**

This tariff category is applicable for electricity supply at High Voltage for

- a) Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State



- or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.
- b) Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
  - c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
  - d) Service-oriented Spiritual Organisations;
  - e) State or Municipal/Local Authority Transport establishments, including their Workshops;
  - f) Fire Service Stations; Jails, Prisons; Courts.
  - g) Airports
  - h) Ports and Jetties

### **Rate Schedule**

#### **Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	235	9.00
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

## **MISCELLANEOUS AND GENERAL CHARGES**

### **Fuel Adjustment Charge (FAC) Component of Z-factor Charge**

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable  $Z_{FAC}$  for each month shall be available on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Electricity Duty and Tax on Sale of Electricity**

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Power Factor Computation**

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{\text{Total}(kWH)}{\text{Total}(kVAh)}$$

$$\text{Wherein the } kVAh \text{ is } = \sqrt{\sum (kWh)^2 + \sum (RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh )

### **Power Factor Incentive**

1. Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT

VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].

- Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Power Factor Penalty**

- Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].
- Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%

Sl.	Range of Power Factor	Power Factor Level	Penalty
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Prompt Payment Discount**

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

### **Delayed Payment Charges**

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

### **Rate of Interest on Arrears**

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

### **Load Factor Incentive**

1. Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85% will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.
2. This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT IX: Public Services.

3. The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. The Distribution Licensee shall take a commercial decision on the schedule for such payments.
4. The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption Possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours\*)

\* - Interruption/non-supply to the extent of 60 hours in a 30-day month.

5. In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e., 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.)

#### **Penalty for exceeding Contract Demand**

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. In case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

#### **Additional Demand Charges for Consumers having Captive Power Plant**

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and

not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

### **Consumers' Security Deposit**

- 1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).
- 2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered
- 3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.
- 4) MSEDCL shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.
- 5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.
- 6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;
- 7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.
- 8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for

additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

- 9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.
- 10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.
- 11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.
- 12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

## **Definitions**

### **Maximum Demand**

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

### **Contract Demand**

Contract Demand means the demand in kilo-Watt (kW) or kilo-Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

### **Sanctioned Load**

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

In case the meter is installed on the LV/MV side, the methodology to be followed for billing purpose is as follows

- 2% to be added to MV demand reading, to determine the kW or kVA billing demand, and
- 'X' units to the MVA reading to determine the total energy compensation to compensate the transformation losses, where is calculated as follows  
$$'X' = (730 * \text{kVA rating of transformer}) / 500 \text{ Units/month}$$
to compensate for the iron losses, plus one percent of units registered on the LT side for copper losses.

### **Billing Demand - LT tariff categories**

Billing Demand for LT Non-Residential / Commercial [LT: II (B) , LT II (C)] , LT III: Public Water Works , LT V (A) (ii): Industry - Power Looms (above 20 kW) , LT V (B) (ii): Industry - General (above 20 kW), LT X (A) Public Services - Government Owned Educational Institutes and Hospitals [LT X (A) (ii) and LT X (A) (iii)] , LT X (B) Public Services - Others [LT X (B) (ii) and LT X (B) (iii)] category having MD based Tariff:-

Monthly Billing Demand will be the higher of the following:

- a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 40% of the Contract Demand.

#### Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

### **Billing Demand - HT tariff categories**

Billing Demand for HT I: Industry, HT II: Commercial, HT III Railway/Metro/Monorail, HT IV: Public Water Works, HT V: Agriculture, HT VI: Group Housing Society (Residential), HT VIII: Temporary Supply, HT IX: Public Services.

Monthly Billing Demand will be the higher of the following:

- a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;



c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

HT Seasonal Category (HT I)

During Declared Season, Monthly Billing Demand will be the higher of the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
- ii. 75% of the Contract Demand
- iii. 50 kVA.

During Declared Off-season, Monthly Billing Demand will be the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours

The Billing Demand for the consumers with CPP will be governed as per the CPP Order in Case No. 55 and 56 of 2003.

## **ANNEXURE - VI**

### **MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.**

#### **APPROVED TARIFF SCHEDULE**

**(With effect from 1 April, 2017)**

Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **3 November, 2016** in Case No.48 of 2016, the tariff for supply of electricity by the Distribution Licensee, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) to various classes of consumers as applicable from **1 April, 2017**.

#### **General**

1. These tariffs supersede all tariffs so far in force.
2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.
3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.
4. The tariffs are applicable for supply at one point only.
5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.
6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.
7. Unless specifically stated to the contrary, the figures of Energy Charge and Wheeling Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.
8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

**LOW TENSION (LT) TARIFF****LT I (A): LT – Residential (BPL)****Applicability:**

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
BPL Category	12	-	1.05

**LT I (B): LT – Residential****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

- Private residential premises, Government/semi-Government residential quarters;
- Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

- c) All Students Hostels affiliated to Educational Institutions;
- d) All other Students' or Working Men/Women's Hostels;
- e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;
- f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;
- g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;
- h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;
- i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;
- j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;
- k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

Note:

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

- l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case

consumption has exceeded 3600 units in the previous financial year, the consumer will thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

- m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:
- (i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
  - (ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
0-100 units	Single Phase : Rs.60 per month Three Phase - Rs. 170 per month <sup>\$\$</sup>	1.21	3.00
101 – 300 units		1.21	6.73
301 – 500 units		1.21	9.70
501-1000 units		1.21	11.20
Above 1000 units		1.21	12.48

Note:

- a) <sup>\$\$</sup> An Additional Fixed Charge of Rs. 170 per 10 kW load or part thereof above 10 kW load shall also be payable.
- b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

**LT II: LT – Non-Residential or Commercial**

**(A) 0 - 20 kW**

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking,

washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;
- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

- l) Milk Collection Centres;

- m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT II (A) 0-20 kW</b>			
(i) 0 to 200 units per month	250	1.21	6.09
(ii) Above 200 units per month (only balance consumption)	250	1.21	9.32

**(B) > 20 kW and ≤ 50 kW and (C) > 50 kW**

Applicability:

As per the applicability described in LT II (A) and for the Sanctioned Load in the range applicable in this sub-category, i.e. LT II (B) and LT II (C).

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./kVA/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
LT II (B) > 20 kW and ≤ 50 kW	250	1.21	9.98
LT II (C ) > 50 kW		1.21	12.55
TOD Tariffs (in addition to above base Tariffs)			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

**LT III: LT-Public Water Works (PWW) and Sewage Treatment Plants**Applicability:

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT V category tariff, as the case may be.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kVA/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT III (A): 0 - 20 kW</b>	75	1.21	1.97
<b>LT III (B): &gt; 20 kW and ≤ 40 kW</b>	85	1.21	3.24
<b>LT III (C): &gt; 40 kW</b>	125	1.21	4.53
<b>TOD Tariffs (in addition to above base tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**LT IV: Agriculture****LT IV (A): LT - Agriculture Un-metered - Pumpsets**Applicability:

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

**Rate Schedule**

Consumer Category	Fixed / Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/HP/Month)	Energy Charge (Rs./kWh)
<b>LT IV (A): LT - Agriculture Un-metered Tariff – Pumpsets</b>			
Category 1 Zones*			
(a) 0-5 HP	309	125	NIL



Consumer Category	Fixed / Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/HP/Month)	Energy Charge (Rs./kWh)
(b) > 5 HP and ≤ 7.5 HP	341	125	NIL
(c) > 7.5 HP	381	125	
Category 2 Zones #			
(a) 0-5 HP	212	125	NIL
(b) > 5 HP and ≤ 7.5 HP	247	125	NIL
(c) > 7.5 HP	275	125	NIL

*Category 1 Zones (with consumption norm above 1,318 hours/HP/year)		
1) Bhandup (U)	2) Pune	3) Nashik
# Category 2 Zones (with consumption norm below 1,318 hours/HP/year)		
1) Amaravati	2) Aurangabad	3) Kalyan
4) Konkan	5) Kolhapur	6) Latur
7) Nagpur (U)	8) Nagpur	

**Note:**

- i. The Flat Rate Tariff as above will remain in force only till meters are installed; once meter is installed, the consumer will be billed as per the Tariff applicable to metered agricultural consumers.
- ii. The list of Category 1 Zones (with consumption norm above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given above.
- iii. Supply under this Tariff will be given for a minimum load of 2 HP. If any consumer requires any load less than 2 HP for agricultural purposes, he shall be required to pay the Fixed Charge/Energy Charge on this basis as if a load of 2 HP is connected.

**LT IV (B): LT – Agriculture metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	22	1.21	1.83

**LT IV (C): LT – Agriculture – Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

- a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;
- c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kW/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	60	1.21	3.09

**LT V: LT- Industry:****LT-V (A): LT – Industry – Power looms****Applicability:**

This category shall be applicable for power supply to Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V(A): LT – Industry – Powerlooms</b>			
(i) 0-20 kW	Rs. 250 per connection per month	1.21	4.54
(ii) Above 20 kW	Rs. 170 per kVA per month	1.21	5.91
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is compulsorily applicable for LT V (A) (ii) (i.e., above 20 kW), and optionally available to LT- V (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT-V (B): LT - Industry - General****Applicability:**

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT V(B) tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
- b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units; and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units;
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
- h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under LT IV (C) – Agriculture (Others);
- l) Food (including seafood) Processing units.
- m) Seed manufacturing

#### **Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V (B): LT – Industry – General</b>			
(i) 0-20 kW	Rs. 250 per connection per month	1.21	4.74
(ii) Above 20 kW	Rs. 170 per kVA per month	1.21	6.39
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

- a) The ToD Tariff is compulsorily applicable to LT V (B) (i.e., above 20 kW), and optionally available to LT- V (A) (i.e., up to 20 kW) having ToD meter installed.

**LT VI: LT – Street Light****Applicability:**

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

- a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);
- b) Traffic Signals and Traffic Islands;
- c) Public Sanitary Conveniences;
- d) Public Water Fountains; and
- e) Such other public places open to the general public free of charge.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge (Rs per kW per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT VI: LT – Street Light</b>			
(A) Gram Panchayat, A, B & C Class Municipal Councils	60	1.21	4.29
(B) Municipal Corporation Areas	60	1.21	5.39

**Note:**

The above street and other lighting facilities having ‘Automatic Timers’ for switching On/Off would be levied Demand Charges on the lower of the following–

- i) 50 percent of ‘Contract Demand’ or
- ii) Actual ‘Recorded Demand’.

**LT VII: LT-Temporary Supply****LT VII (A): LT - Temporary Supply - Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
LT VII (A) – All Units	330	1.21	3.10

**LT VII (B): LT - Temporary Supply - Others (TSO)****Applicability:**

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

- Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;
- Any construction or renovation activity in existing premises;
- Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,
- Any other activity not covered under LT VII (A).

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
LT VII (B) – All Units	360	1.21	12.47

**Note:**

- (a) Additional Fixed Charges of Rs. 170 per 10 kW load or part thereof above 10 kW load shall be payable.
- (b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

**LT VIII: LT - Advertisements and Hoardings****Applicability:**

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
All Units	575	1.21	12.42

**Note:**

- a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.
- b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.
- c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

**LT IX: LT- Crematorium and Burial Grounds****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

### **Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
All Units	330	1.21	3.07

### **LT X: LT - Public Services**

#### **LT X (A): LT - Government Educational Institutions and Hospitals**

#### **Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

### **Rate Schedule**

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT X (A): LT - Public Services –Government Educational Institutions and Hospitals</b>			
<b>(i) ≤ 20 kW</b>			
0-200 units	Rs. 220 per connection per month	1.21	3.17
Above 200 units	Rs. 220 per connection per month	1.21	4.39
<b>(ii) &gt;20 - ≤ 50 kW</b>	Rs. 220 per kVA per month	1.21	5.31
<b>(iii) &gt; 50 kW</b>	Rs. 220 per kVA per month	1.21	5.96



Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (A) (ii) and LT-X (A) (iii) (i.e., above 20 kW) and optionally available to LT- X (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT X (B): LT - Public Services - Others****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for

- a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.
- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- c) Service-oriented Spiritual Organisations;
- d) State or Municipal/Local Authority Transport establishments, including their Workshops;
- e) Fire Service Stations; Jails, Prisons; Courts;
- f) Airports;

- g) Ports and Jetties;
- h) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT X (B): LT - Public Services – Others</b>			
<b>(i) <math>\leq 20</math> kW</b>			
0-200 units	Rs. 250 per connection per month	1.21	4.31
Above 200 units	Rs. 250 per connection per month	1.21	6.84
<b>(ii) <math>&gt;20 - \leq 50</math> kW</b>	Rs. 250 per kVA per month	1.21	6.90
<b>(iii) <math>&gt; 50</math> kW</b>	Rs. 250 per kVA per month	1.21	7.26
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (B) (ii) and LT-X (B) (iii) (i.e. above 20 kW), and optionally available to LT- X (A) (i) (i.e. up to 20 kW) having ToD meter installed.

## **HIGH TENSION (HT) TARIFF**

### **HT I: HT – Industry**

#### **HT I (A): Industry – General**

##### **Applicability:**

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
- b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units, and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
- h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);

- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under HT V (B)– Agriculture (Others);
- l) Food (including Seafood) Processing units.
- m) Seed manufacturing

### **HT I (B): Industry - Seasonal**

#### **Applicability:**

Applicable to Seasonal consumers, who are defined as those who normally work during a part of the year up to a maximum of 9 months, such as Cotton Ginning Factories, Cotton Seed Oil Mills, Cotton Pressing Factories, Salt Manufacturers, Khandsari/Jaggery Manufacturing Units, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature.

### **Rate Schedule**

#### **Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumer Category</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>HT I: HT – Industry</b>		
HT I (A): Industry - General	250	7.07
HT I (B): Industry - Seasonal	250	7.67
<b>ToD Tariffs (in addition to above base Tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

- i. High Tension Industrial consumers having captive generation facility synchronised with the grid will pay additional Demand Charges of Rs. 20/kVA/Month only on the extent of Stand-by Contract Demand component and not on the entire Contract Demand.
- ii. Stand-by Charges will be levied on such consumers on the Stand-by component, only if the consumer's demand exceeds the Contract Demand.
- iii. This additional Demand Charge will not be applicable if there is no Stand-by demand and the Captive Unit is synchronised with the Grid only for the export of power.
- iv. Demand Charge shall be applicable at 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.
- v. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.

**HT II: HT- Commercial**

**Applicability:**

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

- l) Milk Collection Centres;
- m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT- PWW category or HT I - Industry
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

**Rate Schedule****Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumer Category</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	250	11.40
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

**HT III - Railways/Metro/Monorail****Applicability:**

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	250	6.01

**HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS**



**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	250	5.75
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT V: HT – Agriculture****HT V(A) : HT – Agriculture Pumpsets****Applicability:**

This category shall be applicable for Electricity / Power Supply at High Tension for pumping of water exclusively for the purpose of Agriculture / cultivation of crops including HT Lift Irrigation Schemes (LIS) irrespective of ownership.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**HT V(B) : HT – Agriculture Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at High Voltage for:

- Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- Poulties exclusively undertaking layer and broiler activities, including Hatcheries;
- High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule**

**Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
<b>HT V : HT Agriculture</b>		
HT V (A) : HT Agriculture Pumpsets	40	3.30
HT V (B) : HT Agriculture Others	40	4.56

**HT VI: HT - Group Housing Society (Residential)**

**Applicability:**

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

- c) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
- d) a person, for making electricity available to its employees residing in the same premises for residential purposes.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	220	5.82

**HT VIII- HT - Temporary Supply****HT VIII (A) - HT - Temporary Supply Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ connection/ month)	Energy Charge (Rs./kWh)
All Units	330	3.10

**HT VIII (B): HT - Temporary Supply Others (TSO)****Applicability:**

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

- Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;
- Any construction or renovation activity in existing premises;
- Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	10.14

**Note:**

Additional Fixed Charges of Rs.230 per 10 kW load or part thereof above 10 kW load shall be payable.

**HT IX: HT Public Services****HT IX – (A): HT - Government Educational Institutions and Hospitals****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	250	7.20
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT IX - (B): Public Service - Others****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for

- a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.
- b) Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- d) Service-oriented Spiritual Organisations;
- e) State or Municipal/Local Authority Transport establishments, including their Workshops;
- f) Fire Service Stations; Jails, Prisons; Courts.
- g) Airports
- h) Ports and Jetties

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.83

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	250	9.10
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

## **MISCELLANEOUS AND GENERAL CHARGES**

### **Fuel Adjustment Charge (FAC) Component of Z-factor Charge**

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable  $Z_{FAC}$  for each month shall be available on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Electricity Duty and Tax on Sale of Electricity**

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Power Factor Computation**

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{\text{Total}(kWH)}{\text{Total}(kVAh)}$$

$$\text{Wherein the } kVAh \text{ is} = \sqrt{\sum (kWh)^2 + \sum (RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh )

### **Power Factor Incentive**

1. Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT



VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].

- Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Power Factor Penalty**

- Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].
- Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%

Sl.	Range of Power Factor	Power Factor Level	Penalty
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Prompt Payment Discount**

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

### **Delayed Payment Charges**

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

### **Rate of Interest on Arrears**

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

### **Load Factor Incentive**

1. Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85% will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.
2. This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT IX: Public Services.

3. The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. The Distribution Licensee shall take a commercial decision on the schedule for such payments.
4. The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption Possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours\*)

\* - Interruption/non-supply to the extent of 60 hours in a 30-day month.

5. In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e., 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.)

#### **Penalty for exceeding Contract Demand**

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. In case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

#### **Additional Demand Charges for Consumers having Captive Power Plant**

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and

not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

### **Consumers' Security Deposit**

- 1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).
- 2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered
- 3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.
- 4) MSEDCL shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.
- 5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.
- 6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;
- 7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.
- 8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for

additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

- 9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.
- 10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.
- 11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.
- 12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

## **Definitions**

### **Maximum Demand**

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

### **Contract Demand**

Contract Demand means the demand in kilo-Watt (kW) or kilo-Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

### **Sanctioned Load**

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

In case the meter is installed on the LV/MV side, the methodology to be followed for billing purpose is as follows

- 2% to be added to MV demand reading, to determine the kW or kVA billing demand, and
- 'X' units to the MVA reading to determine the total energy compensation to compensate the transformation losses, where is calculated as follows  
$$'X' = (730 * \text{kVA rating of transformer}) / 500 \text{ Units/month}$$
to compensate for the iron losses, plus one percent of units registered on the LT side for copper losses.

### **Billing Demand - LT tariff categories**

Billing Demand for LT Non-Residential / Commercial [LT: II (B) , LT II (C)] , LT III: Public Water Works , LT V (A) (ii): Industry - Power Looms (above 20 kW) , LT V (B) (ii): Industry - General (above 20 kW), LT X (A) Public Services - Government Owned Educational Institutes and Hospitals [LT X (A) (ii) and LT X (A) (iii)] , LT X (B) Public Services - Others [LT X (B) (ii) and LT X (B) (iii)] category having MD based Tariff:-

Monthly Billing Demand will be the higher of the following:

- a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 40% of the Contract Demand.

#### Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

### **Billing Demand - HT tariff categories**

Billing Demand for HT I: Industry, HT II: Commercial, HT III Railway/Metro/Monorail, HT IV: Public Water Works, HT V: Agriculture, HT VI: Group Housing Society (Residential), HT VIII: Temporary Supply, HT IX: Public Services.

Monthly Billing Demand will be the higher of the following:

- a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;

c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

HT Seasonal Category (HT I)

During Declared Season, Monthly Billing Demand will be the higher of the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
- ii. 75% of the Contract Demand
- iii. 50 kVA.

During Declared Off-season, Monthly Billing Demand will be the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours

The Billing Demand for the consumers with CPP will be governed as per the CPP Order in Case No. 55 and 56 of 2003.

## **ANNEXURE - VII**

### **MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.**

#### **APPROVED TARIFF SCHEDULE**

**(With effect from 1 April, 2018)**

Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **3 November, 2016** in Case No.48 of 2016, the tariff for supply of electricity by the Distribution Licensee, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) to various classes of consumers as applicable from **1 April, 2018**.

#### **General**

1. These tariffs supersede all tariffs so far in force.
2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.
3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.
4. The tariffs are applicable for supply at one point only.
5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.
6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.
7. Unless specifically stated to the contrary, the figures of Energy Charge and Wheeling Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.
8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.



**LOW TENSION (LT) TARIFF****LT I (A): LT – Residential (BPL)****Applicability:**

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
BPL Category	13	-	1.06

**LT I (B): LT – Residential****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

- Private residential premises, Government/semi-Government residential quarters;
- Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

- c) All Students Hostels affiliated to Educational Institutions;
- d) All other Students' or Working Men/Women's Hostels;
- e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;
- f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;
- g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;
- h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;
- i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;
- j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;
- k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

Note:

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

- l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case

consumption has exceeded 3600 units in the previous financial year, the consumer will thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

- m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:
- (i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
  - (ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
0-100 units	Single Phase : Rs.65 per month Three Phase - Rs. 185 per month <sup>\$\$</sup>	1.18	3.07
101 – 300 units		1.18	6.81
301 – 500 units		1.18	9.76
501-1000 units		1.18	11.25
Above 1000 units		1.18	12.53

Note:

- a) <sup>\$\$</sup> An Additional Fixed Charge of Rs. 185 per 10 kW load or part thereof above 10 kW load shall also be payable.
- b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

**LT II: LT – Non-Residential or Commercial**

**LTH (A): 0 - 20 kW**

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking,

washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;
- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

- l) Milk Collection Centres;

- m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT II (A) 0-20 kW</b>			
(i) 0 to 200 units per month	270	1.18	6.10
(ii) Above 200 units per month (only balance consumption)	270	1.18	9.32

**LT II (B): > 20 kW and ≤ 50 kW and (C) > 50 kW**

Applicability:

As per the applicability described in LT II (A) and for the Sanctioned Load in the range applicable in this sub-category, i.e. LT II (B) and LT II (C).

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./kVA/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
LT II (B) > 20 kW and ≤ 50 kW	270	1.18	9.98
LT II (C ) > 50 kW		1.18	12.58
TOD Tariffs (in addition to above base Tariffs)			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

**LT III: LT-Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT V category tariff, as the case may be.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kVA/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT III (A): 0 - 20 kW</b>	80	1.18	2.09
<b>LT III (B): &gt; 20 kW and <math>\leq</math> 40 kW</b>	90	1.18	3.37
<b>LT III (C): &gt; 40 kW</b>	135	1.18	4.69
<b>TOD Tariffs (in addition to above base tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**LT IV: Agriculture****LT IV (A): LT - Agriculture Un-metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

**Rate Schedule**

Consumer Category	Fixed / Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/HP/Month)	Energy Charge (Rs./kWh)
<b>LT IV (A): LT - Agriculture Un-metered Tariff - Pumpsets</b>			
Category 1 Zones*			
(a) 0-5 HP	334	122	NIL
(b) > 5 HP and ≤ 7.5 HP	365	122	NIL
(c) > 7.5 HP	400	122	
Category 2 Zones #			
(a) 0-5 HP	236	122	NIL
(b) > 5 HP and ≤ 7.5 HP	266	122	NIL
(c) > 7.5 HP	294	122	NIL

*Category 1 Zones (with consumption norm above 1,318 hours/HP/year)		
1) Bhandup (U)	2) Pune	3) Nashik
# Category 2 Zones (with consumption norm below 1,318 hours/HP/year)		
1) Amaravati	2) Aurangabad	3) Kalyan
4) Konkan	5) Kolhapur	6) Latur
7) Nagpur (U)	8) Nagpur	

**Note:**

- The Flat Rate Tariff as above will remain in force only till meters are installed; once meter is installed, the consumer will be billed as per the Tariff applicable to metered agricultural consumers.
- The list of Category 1 Zones (with consumption norm above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given above.
- Supply under this Tariff will be given for a minimum load of 2 HP. If any consumer requires any load less than 2 HP for agricultural purposes, he shall be required to pay the Fixed Charge/Energy Charge on this basis as if a load of 2 HP is connected.

**LT IV (B): LT – Agriculture metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	24	1.18	1.95

**LT IV (C): LT – Agriculture – Others**

**Applicability:**

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

- a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;
- c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kW/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	65	1.18	3.26

**LT V: LT- Industry:**

**LT-V (A): LT – Industry – Power looms**

**Applicability:**

This category shall be applicable for power supply to Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.



**Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V(A): LT – Industry – Powerlooms</b>			
(i) 0-20 kW	Rs. 270 per connection per month	1.18	4.59
(ii) Above 20 kW	Rs. 185 per kVA per month	1.18	5.95
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is compulsorily applicable for LT V (A) (ii) (i.e., above 20 kW), and optionally available to LT- V (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT-V (B): LT - Industry - General****Applicability:**

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT V(B) tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
- b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units; and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units;
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
- h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under LT IV (C) – Agriculture (Others);
- l) Food (including seafood) Processing units.
- m) Seed manufacturing

#### **Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V (B): LT – Industry – General</b>			
(i) 0-20 kW	Rs. 270 per connection per month	1.18	4.76
(ii) Above 20 kW	Rs. 185 per kVA per month	1.18	6.38
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

- a) The ToD Tariff is compulsorily applicable to LT V (B) (i.e., above 20 kW), and optionally available to LT- V (A) (i.e., up to 20 kW) having ToD meter installed.

**LT VI: LT – Street Light****Applicability:**

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

- a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);
- b) Traffic Signals and Traffic Islands;
- c) Public Sanitary Conveniences;
- d) Public Water Fountains; and
- e) Such other public places open to the general public free of charge.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge (Rs per kW per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT VI: LT – Street Light</b>			
(A) Gram Panchayat, A, B & C Class Municipal Councils	65	1.18	4.39
(B) Municipal Corporation Areas	65	1.18	5.48

**Note:**

The above street and other lighting facilities having ‘Automatic Timers’ for switching On/Off would be levied Demand Charges on the lower of the following–

- i) 50 percent of ‘Contract Demand’ or
- ii) Actual ‘Recorded Demand’.

**LT VII: LT-Temporary Supply****LT VII (A): LT - Temporary Supply - Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
LT VII (A) – All Units	355	1.18	3.20

**LT VII (B): LT - Temporary Supply - Others (TSO)****Applicability:**

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

- Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;
- Any construction or renovation activity in existing premises;
- Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,
- Any other activity not covered under LT VII (A).

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
LT VII (B) – All Units	360	1.18	12.63

**Note:**

- (c) Additional Fixed Charges of Rs. 185 per 10 kW load or part thereof above 10 kW load shall be payable.
- (d) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

**LT VIII: LT - Advertisements and Hoardings****Applicability:**

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
All Units	575	1.18	12.58

**Note:**

- a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.
- b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.
- c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

**LT IX: LT- Crematorium and Burial Grounds****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	355	1.18	3.14

**LT X: LT - Public Services****LT X (A): LT - Government Educational Institutions and Hospitals****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT X (A): LT - Public Services –Government Educational Institutions and Hospitals</b>			
(i) ≤ 20 kW			
0-200 units	Rs. 235 per connection per month	1.18	3.15

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
Above 200 units	Rs. 235 per connection per month	1.18	4.32
(ii) >20 - ≤ 50 kW	Rs. 235 per kVA per month	1.18	5.10
(iii) > 50 kW	Rs. 235 per kVA per month	1.18	5.81
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

The ToD Tariff is applicable for LT-X (A) (ii) and LT-X (A) (iii) (i.e., above 20 kW) and optionally available to LT- X (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT X (B): LT - Public Services - Others**Applicability:

This tariff category is applicable for electricity supply at Low/Medium Voltage for

- a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.
- b) -- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- d) Service-oriented Spiritual Organisations;

- e) State or Municipal/Local Authority Transport establishments, including their Workshops;
- f) Fire Service Stations; Jails, Prisons; Courts;
- g) Airports;
- h) Ports and Jetties;
- i) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

### **Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/ Demand Charge</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>LT X (B): LT - Public Services – Others</b>			
<b>(i) <math>\leq 20</math> kW</b>			
0-200 units	Rs. 270 per connection per month	1.18	4.24
Above 200 units	Rs. 270 per connection per month	1.18	6.79
<b>(ii) <math>&gt;20 - \leq 50</math> kW</b>	Rs. 270 per kVA per month	1.18	6.85
<b>(iii) <math>&gt; 50</math> kW</b>	Rs. 270 per kVA per month	1.18	7.21
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (B) (ii) and LT-X (B) (iii) (i.e. above 20 kW), and optionally available to LT- X (A) (i) (i.e. up to 20 kW) having ToD meter installed.



## **HIGH TENSION (HT) TARIFF**

### **HT I: HT – Industry**

#### **HT I (A): Industry – General**

##### **Applicability:**

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
- b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units, and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
- h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);

- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under HT V (B)– Agriculture (Others);
- l) Food (including Seafood) Processing units.
- m) Seed manufacturing

### **HT I (B): Industry - Seasonal**

#### **Applicability:**

Applicable to Seasonal consumers, who are defined as those who normally work during a part of the year up to a maximum of 9 months, such as Cotton Ginning Factories, Cotton Seed Oil Mills, Cotton Pressing Factories, Salt Manufacturers, Khandsari/Jaggery Manufacturing Units, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature.

### **Rate Schedule**

#### **Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumer Category</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>HT I: HT – Industry</b>		
HT I (A): Industry - General	270	6.98
HT I (B): Industry - Seasonal	270	7.37
<b>ToD Tariffs (in addition to above base Tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

- i. High Tension Industrial consumers having captive generation facility synchronised with the grid will pay additional Demand Charges of Rs. 20/kVA/Month only on the extent of Stand-by Contract Demand component and not on the entire Contract Demand.
- ii. Stand-by Charges will be levied on such consumers on the Stand-by component, only if the consumer's demand exceeds the Contract Demand.
- iii. This additional Demand Charge will not be applicable if there is no Stand-by demand and the Captive Unit is synchronised with the Grid only for the export of power.
- iv. Demand Charge shall be applicable at 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.
- v. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.

**HT II: HT- Commercial**

**Applicability:**

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

- l) Milk Collection Centres;
- m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT- PWW category or HT I - Industry
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	270	11.45
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

**HT III - Railways/Metro/Monorail****Applicability:**

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	270	5.80

**HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	270	5.85
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT V: HT – Agriculture****HT V(A) : HT – Agriculture Pumpsets****Applicability:**

This category shall be applicable for Electricity / Power Supply at High Tension for pumping of water exclusively for the purpose of Agriculture / cultivation of crops including HT Lift Irrigation Schemes (LIS) irrespective of ownership.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**HT V(B) : HT – Agriculture Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at High Voltage for:

- a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;
- c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule**

**Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
<b>HT V : HT Agriculture</b>		
HT V (A) : HT Agriculture Pumpsets	45	3.44
HT V (B) : HT Agriculture Others	45	4.75

**HT VI: HT - Group Housing Society (Residential)**

**Applicability:**

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

- e) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
- f) a person, for making electricity available to its employees residing in the same premises for residential purposes.



**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	220	5.82

**HT VIII- HT - Temporary Supply****HT VIII (A) - HT - Temporary Supply Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ connection/ month)	Energy Charge (Rs./kWh)
All Units	355	3.20

**HT VIII (B): HT - Temporary Supply Others (TSO)****Applicability:**

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

- Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;
- Any construction or renovation activity in existing premises;
- Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	10.27

**Note:**

Additional Fixed Charges of Rs.230 per 10 kW load or part thereof above 10 kW load shall be payable.

**HT IX: HT Public Services****HT IX – (A): HT - Government Educational Institutions and Hospitals****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	270	7.20
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT IX - (B): Public Service - Others****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for

- a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.
  - Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- c) Service-oriented Spiritual Organisations;
- d) State or Municipal/Local Authority Transport establishments, including their Workshops;
- e) Fire Service Stations; Jails, Prisons; Courts.
- f) Airports
- g) Ports and Jetties

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.82

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	270	9.07
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

## **MISCELLANEOUS AND GENERAL CHARGES**

### **Fuel Adjustment Charge (FAC) Component of Z-factor Charge**

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable  $Z_{FAC}$  for each month shall be available on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Electricity Duty and Tax on Sale of Electricity**

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Power Factor Computation**

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{\text{Total}(kWH)}{\text{Total}(kVAh)}$$

$$\text{Wherein the } kVAh \text{ is } = \sqrt{\sum (kWh)^2 + \sum (RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh )

### **Power Factor Incentive**

1. Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT

VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].

- Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

#### **Power Factor Penalty**

- Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].
- Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%

Sl.	Range of Power Factor	Power Factor Level	Penalty
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Prompt Payment Discount**

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

### **Delayed Payment Charges**

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

### **Rate of Interest on Arrears**

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

### **Load Factor Incentive**

1. Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85% will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.
2. This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT IX: Public Services.



3. The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. The Distribution Licensee shall take a commercial decision on the schedule for such payments.
4. The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption Possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor  
x (Total no. of hours during the month, less planned load shedding hours\*)

\* - Interruption/non-supply to the extent of 60 hours in a 30-day month.

5. In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e., 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.)

#### **Penalty for exceeding Contract Demand**

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. In case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

#### **Additional Demand Charges for Consumers having Captive Power Plant**

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and

not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

### **Consumers' Security Deposit**

- 1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).
- 2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered
- 3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.
- 4) MSEDCL shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.
- 5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.
- 6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;
- 7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.
- 8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for

additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

- 9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.
- 10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.
- 11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.
- 12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

## **Definitions**

### **Maximum Demand**

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

### **Contract Demand**

Contract Demand means the demand in kilo-Watt (kW) or kilo-Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

### **Sanctioned Load**

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

In case the meter is installed on the LV/MV side, the methodology to be followed for billing purpose is as follows

- 2% to be added to MV demand reading, to determine the kW or kVA billing demand, and
- 'X' units to the MVA reading to determine the total energy compensation to compensate the transformation losses, where is calculated as follows  
$$'X' = (730 * \text{kVA rating of transformer}) / 500 \text{ Units/month}$$
to compensate for the iron losses, plus one percent of units registered on the LT side for copper losses.

### **Billing Demand - LT tariff categories**

Billing Demand for LT Non-Residential / Commercial [LT: II (B) , LT II (C)] , LT III: Public Water Works , LT V (A) (ii): Industry - Power Looms (above 20 kW) , LT V (B) (ii): Industry - General (above 20 kW), LT X (A) Public Services - Government Owned Educational Institutes and Hospitals [LT X (A) (ii) and LT X (A) (iii)] , LT X (B) Public Services - Others [LT X (B) (ii) and LT X (B) (iii)] category having MD based Tariff:-

Monthly Billing Demand will be the higher of the following:

- a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 40% of the Contract Demand.

#### Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

### **Billing Demand - HT tariff categories**

Billing Demand for HT I: Industry, HT II: Commercial, HT III Railway/Metro/Monorail, HT IV: Public Water Works, HT V: Agriculture, HT VI: Group Housing Society (Residential), HT VIII: Temporary Supply, HT IX: Public Services.

Monthly Billing Demand will be the higher of the following:

- a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;

c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

HT Seasonal Category (HT I)

During Declared Season, Monthly Billing Demand will be the higher of the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
- ii. 75% of the Contract Demand
- iii. 50 kVA.

During Declared Off-season, Monthly Billing Demand will be the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours

The Billing Demand for the consumers with CPP will be governed as per the CPP Order in Case No. 55 and 56 of 2003.

## **ANNEXURE - VIII**

### **MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO. LTD.**

#### **APPROVED TARIFF SCHEDULE**

**(With effect from 1 April, 2019)**

Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **3 November, 2016** in Case No.48 of 2016, the tariff for supply of electricity by the Distribution Licensee, Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) to various classes of consumers as applicable from **1 April, 2019**.

#### **General**

1. These tariffs supersede all tariffs so far in force.
2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.
3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.
4. The tariffs are applicable for supply at one point only.
5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.
6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.
7. Unless specifically stated to the contrary, the figures of Energy Charge and Wheeling Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.
8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

**LOW TENSION (LT) TARIFF****LT I (A): LT – Residential (BPL)****Applicability:**

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
BPL Category	15	-	1.08

**LT I (B): LT – Residential****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

- Private residential premises, Government/semi-Government residential quarters;
- Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

- c) All Students Hostels affiliated to Educational Institutions;
- d) All other Students' or Working Men/Women's Hostels;
- e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;
- f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;
- g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;
- h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;
- i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;
- j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;
- k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

Note:

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

- l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case



consumption has exceeded 3600 units in the previous financial year, the consumer will thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

- m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:
- (i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
  - (ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
0-100 units	Single Phase : Rs.70 per month Three Phase - Rs. 200 per month <sup>\$\$</sup>	1.11	3.18
101 – 300 units		1.11	6.91
301 – 500 units		1.11	9.86
501-1000 units		1.11	11.37
Above 1000 units		1.11	12.65

Note:

- a) <sup>\$\$</sup> An Additional Fixed Charge of Rs. 200 per 10 kW load or part thereof above 10 kW load shall also be payable.
- b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

**LT II: LT – Non-Residential or Commercial**

**LT II (A): 0 - 20 kW**

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking,

washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;
- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;
- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

- l) Milk Collection Centres;

- m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge (Rs. per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT II (A) 0-20 kW</b>			
(i) 0 to 200 units per month	290	1.11	6.15
(ii) Above 200 units per month (only balance consumption)	290	1.11	9.37

**LT II (B): > 20 kW and ≤ 50 kW and (C) > 50 kW**

Applicability:

As per the applicability described in LT II (A) and for the Sanctioned Load in the range applicable in this sub-category, i.e. LT II (B) and LT II (C).

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./kVA/month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
LT II (B) > 20 kW and ≤ 50 kW	290	1.11	9.98
LT II (C ) > 50 kW		1.11	12.63
TOD Tariffs (in addition to above base Tariffs)			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

**LT III: LT-Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT V category tariff, as the case may be.

**Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kVA/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT III (A): 0 - 20 kW</b>	85	1.11	2.31
<b>LT III (B): &gt; 20 kW and ≤ 40 kW</b>	100	1.11	3.54
<b>LT III (C): &gt; 40 kW</b>	145	1.11	4.81
<b>TOD Tariffs (in addition to above base tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**LT IV: Agriculture****LT IV (A): LT - Agriculture Un-metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

**Rate Schedule**

Consumer Category	Fixed / Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/HP/Month)	Energy Charge (Rs./kWh)
<b>LT IV (A): LT - Agriculture Un-metered Tariff - Pumpsets</b>			
Category 1 Zones*			
(a) 0-5 HP	363	115	NIL
(b) > 5 HP and ≤ 7.5 HP	398	115	NIL
(c) > 7.5 HP	443	115	
Category 2 Zones #			
(a) 0-5 HP	251	115	NIL
(b) > 5 HP and ≤ 7.5 HP	293	115	NIL
(c) > 7.5 HP	321	115	NIL

*Category 1 Zones (with consumption norm above 1,318 hours/HP/year)		
1) Bhandup (U)	2) Pune	3) Nashik
# Category 2 Zones (with consumption norm below 1,318 hours/HP/year)		
1) Amaravati	2) Aurangabad	3) Kalyan
4) Konkan	5) Kolhapur	6) Latur
7) Nagpur (U)	8) Nagpur	

**Note:**

- The Flat Rate Tariff as above will remain in force only till meters are installed; once meter is installed, the consumer will be billed as per the Tariff applicable to metered agricultural consumers.
- The list of Category 1 Zones (with consumption norm above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given above.
- Supply under this Tariff will be given for a minimum load of 2 HP. If any consumer requires any load less than 2 HP for agricultural purposes, he shall be required to pay the Fixed Charge/Energy Charge on this basis as if a load of 2 HP is connected.

**LT IV (B): LT – Agriculture metered - Pumpsets****Applicability:**

This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

#### **Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ HP/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	26	1.11	2.14

#### **LT IV (C): LT – Agriculture – Others**

##### **Applicability:**

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

- a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- b) Poultry exclusively undertaking layer and broiler activities, including Hatcheries;
- c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

#### **Rate Schedule**

Consumption Slab ( kWh)	Fixed/ Demand Charge (Rs./ kW/ month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	70	1.11	3.51

#### **LT V: LT- Industry:**

##### **LT-V (A): LT – Industry – Power looms**

##### **Applicability:**

This category shall be applicable for power supply to Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V(A): LT – Industry – Powerlooms</b>			
(i) 0-20 kW	Rs. 290 per connection per month	1.11	4.69
(ii) Above 20 kW	Rs. 200 per kVA per month	1.11	6.02
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is compulsorily applicable for LT V (A) (ii) (i.e., above 20 kW), and optionally available to LT- V (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT-V (B): LT - Industry - General****Applicability:**

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT V(B) tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
- b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units; and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units;
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
- h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under LT IV (C) – Agriculture (Others);
- l) Food (including seafood) Processing units.
- m) Seed manufacturing

#### **Rate Schedule**

Consumer Category	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT-V (B): LT – Industry – General</b>			
(i) 0-20 kW	Rs. 290 per connection per month	1.11	4.81
(ii) Above 20 kW	Rs. 200 per kVA per month	1.11	6.42
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

Note:

- a) The ToD Tariff is compulsorily applicable to LT V (B) (i.e., above 20 kW), and optionally available to LT- V (A) (i.e., up to 20 kW) having ToD meter installed.



**LT VI: LT – Street Light****Applicability:**

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

- a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);
- b) Traffic Signals and Traffic Islands;
- c) Public Sanitary Conveniences;
- d) Public Water Fountains; and
- e) Such other public places open to the general public free of charge.

**Rate Schedule**

Consumer Category	Fixed/Demand Charge (Rs per kW per month)	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT VI: LT – Street Light</b>			
(A) Gram Panchayat, A, B & C Class Municipal Councils	70	1.11	4.49
(B) Municipal Corporation Areas	70	1.11	5.58

**Note:**

The above street and other lighting facilities having ‘Automatic Timers’ for switching On/Off would be levied Demand Charges on the lower of the following–

- i) 50 percent of ‘Contract Demand’ or
- ii) Actual ‘Recorded Demand’.

**LT VII: LT-Temporary Supply****LT VII (A): LT - Temporary Supply - Religious (TSR)****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge ( Rs./kWh)</b>
LT VII (A) – All Units	385	1.11	3.27

**LT VII (B): LT - Temporary Supply - Others (TSO)****Applicability:**

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

- Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;
- Any construction or renovation activity in existing premises;
- Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,
- Any other activity not covered under LT VII (A).

**Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge ( Rs./kWh)</b>
LT VII (B) – All Units	360	1.11	12.79

**Note:**

- (a) Additional Fixed Charges of Rs. 200 per 10 kW load or part thereof above 10 kW load shall be payable.
- (b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

**LT VIII: LT - Advertisements and Hoardings****Applicability:**

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

**Rate Schedule**

Consumption Slab (kWh)	Fixed/Demand Charge (Rs./connection/month)	Wheeling Charge (Rs/kWh)	Energy Charge ( Rs./kWh)
All Units	575	1.11	12.74

**Note:**

- a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.
- b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.
- c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

**LT IX: LT- Crematorium and Burial Grounds****Applicability:**

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

### **Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/Demand Charge (Rs./connection/month)</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	385	1.11	3.26

### **LT X: LT - Public Services**

#### **LT X (A): LT - Government Educational Institutions and Hospitals**

##### **Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

### **Rate Schedule**

<b>Consumption Slab (kWh)</b>	<b>Fixed/ Demand Charge</b>	<b>Wheeling Charge (Rs/kWh)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>LT X (A): LT - Public Services –Government Educational Institutions and Hospitals</b>			
<b>(i) ≤ 20 kW</b>			
0-200 units	Rs. 250 per connection per month	1.11	3.12
Above 200 units	Rs. 250 per connection per month	1.11	4.26
<b>(ii) &gt;20 - ≤ 50 kW</b>	Rs. 250 per kVA per month	1.11	5.03
<b>(iii) &gt; 50 kW</b>	Rs. 250 per kVA per month	1.19	5.74

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (A) (ii) and LT-X (A) (iii) (i.e., above 20 kW) and optionally available to LT- X (A) (i) (i.e., up to 20 kW) having ToD meter installed.

**LT X (B): LT - Public Services - Others****Applicability:**

This tariff category is applicable for electricity supply at Low/Medium Voltage for

- a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.
- b) -- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- d) Service-oriented Spiritual Organisations;
- e) State or Municipal/Local Authority Transport establishments, including their Workshops;
- f) Fire Service Stations; Jails, Prisons; Courts;
- g) Airports;

- h) Ports and Jetties;
- i) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

**Rate Schedule**

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
<b>LT X (B): LT - Public Services – Others</b>			
<b>(i) <math>\leq 20</math> kW</b>			
0-200 units	Rs. 290 per connection per month	1.11	4.19
Above 200 units	Rs. 290 per connection per month	1.11	6.74
<b>(ii) <math>&gt;20 - \leq 50</math> kW</b>	Rs. 290 per kVA per month	1.11	6.75
<b>(iii) <math>&gt; 50</math> kW</b>	Rs. 290 per kVA per month	1.11	7.11
<b>ToD Tariffs (in addition to above base Tariffs)</b>			
2200 Hrs-0600 Hrs			-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs			0.00
0900 Hrs-1200 Hrs			0.80
1800 Hrs-2200 Hrs			1.10

**Note:**

The ToD Tariff is applicable for LT-X (B) (ii) and LT-X (B) (iii) (i.e. above 20 kW), and optionally available to LT- X (A) (i) (i.e. up to 20 kW) having ToD meter installed.

## **HIGH TENSION (HT) TARIFF**

### **HT I: HT – Industry**

#### **HT I (A): Industry – General**

##### **Applicability:**

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

- a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
- b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
- c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Retreading units, and Vulcanizing units;
- d) Mining, Quarrying and Stone Crushing units;
- e) Garment Manufacturing units
- f) LPG/CNG bottling plants, etc.;
- g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
- h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);

- i) Brick Kiln (Bhatti);
- j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
- k) Cold Storages not covered under HT V (B)– Agriculture (Others);
- l) Food (including Seafood) Processing units.
- m) Seed manufacturing

### **HT I (B): Industry - Seasonal**

#### **Applicability:**

Applicable to Seasonal consumers, who are defined as those who normally work during a part of the year up to a maximum of 9 months, such as Cotton Ginning Factories, Cotton Seed Oil Mills, Cotton Pressing Factories, Salt Manufacturers, Khandsari/Jaggery Manufacturing Units, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature.

### **Rate Schedule**

#### **Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS**

#### **Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumer Category</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
<b>HT I: HT – Industry</b>		
HT I (A): Industry - General	290	6.93
HT I (B): Industry - Seasonal	290	7.20
<b>ToD Tariffs (in addition to above base Tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10



**Note:**

- i. High Tension Industrial consumers having captive generation facility synchronised with the grid will pay additional Demand Charges of Rs. 20/kVA/Month only on the extent of Stand-by Contract Demand component and not on the entire Contract Demand.
- ii. Stand-by Charges will be levied on such consumers on the Stand-by component, only if the consumer's demand exceeds the Contract Demand.
- iii. This additional Demand Charge will not be applicable if there is no Stand-by demand and the Captive Unit is synchronised with the Grid only for the export of power.
- iv. Demand Charge shall be applicable at 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.
- v. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.

**HT II: HT- Commercial**

**Applicability:**

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

- a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;
- b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;
- c) Offices, including Commercial Establishments;
- d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;

- e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -
- f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;
- g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;
- h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;
- i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;
- j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;
- k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

- l) Milk Collection Centres;
- m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT- PWW category or HT I - Industry
- n) Stand-alone Research and Development units not covered under any other category;
- o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

**Rate Schedule****Wheeling Charge**

<b>Supply Voltage Level</b>	<b>(Rs./kWh)</b>
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumer Category</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	290	11.50
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**Note:**

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

**HT III - Railways/Metro/Monorail****Applicability:**

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	5.55

**HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants****Applicability:**

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, Zilla Parishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	290	5.95
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT V: HT – Agriculture****HT V(A) : HT – Agriculture Pumpsets****Applicability:**

This category shall be applicable for Electricity / Power Supply at High Tension for pumping of water exclusively for the purpose of Agriculture / cultivation of crops including HT Lift Irrigation Schemes (LIS) irrespective of ownership.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

**HT V(B) : HT – Agriculture Others****Applicability:**

This tariff category is applicable for use of electricity / power supply at High Voltage for:

- Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;
- Poulties exclusively undertaking layer and broiler activities, including Hatcheries;
- High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;
- Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumer Category	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
<b>HT V : HT Agriculture</b>		
HT V (A) : HT Agriculture Pumpsets	50	3.65
HT V (B) : HT Agriculture Others	50	5.02

**HT VI: HT - Group Housing Society (Residential)****Applicability:**

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

- a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and
- a person, for making electricity available to its employees residing in the same premises for residential purposes.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	220	5.86

**HT VIII- HT - Temporary Supply****HT VIII (A) - HT - Temporary Supply Religious (TSR)**Applicability:

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ connection/ month)	Energy Charge (Rs./kWh)
All Units	385	3.27

**HT VIII (B): HT - Temporary Supply Others (TSO)****Applicability:**

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

- a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;
- b) Any construction or renovation activity in existing premises;
- c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Fixed/Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	10.39

**Note:**

Additional Fixed Charges of Rs.290 per 10 kW load or part thereof above 10 kW load shall be payable.



**HT IX: HT Public Services****HT IX – (A): HT - Government Educational Institutions and Hospitals****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.09
22 kV or 11 kV	0.73

**PLUS****Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

Consumption Slab ( kWh)	Demand Charge (Rs./ kVA/ month)	Energy Charge (Rs./kWh)
All Units	290	7.10
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

**HT IX - (B): Public Service - Others****Applicability:**

This tariff category is applicable for electricity supply at High Voltage for

- a) Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.
- b) Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;
- c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;
- d) Service-oriented Spiritual Organisations;
- e) State or Municipal/Local Authority Transport establishments, including their Workshops;
- f) Fire Service Stations; Jails, Prisons; Courts.
- g) Airports
- h) Ports and Jetties

**Rate Schedule****Wheeling Charge**

Supply Voltage Level	(Rs./kWh)
66 kV and above	NIL
33 kV	0.08
22 kV or 11 kV	0.73

**PLUS**

**Demand/Fixed Charge and Energy Charge (for all Supply Voltage Levels)**

<b>Consumption Slab ( kWh)</b>	<b>Demand Charge (Rs./ kVA/ month)</b>	<b>Energy Charge (Rs./kWh)</b>
All Units	290	8.93
<b>TOD Tariffs (in addition to above base tariffs)</b>		
2200 Hrs-0600 Hrs		-1.50
0600 Hrs-0900 Hrs & 1200 Hrs-1800 Hrs		0.00
0900 Hrs-1200 Hrs		0.80
1800 Hrs-2200 Hrs		1.10

## **MISCELLANEOUS AND GENERAL CHARGES**

### **Fuel Adjustment Charge (FAC) Component of Z-factor Charge**

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable  $Z_{FAC}$  for each month shall be available on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Electricity Duty and Tax on Sale of Electricity**

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website [www.mahadiscom.in](http://www.mahadiscom.in).

### **Power Factor Computation**

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{\text{Total}(kWH)}{\text{Total}(kVAh)}$$

$$\text{Wherein the } kVAh \text{ is } = \sqrt{\sum (kWh)^2 + \sum (RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh )

### **Power Factor Incentive**

1. Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT

VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].

2. Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Power Factor Penalty**

1. Applicable for HT-I :Industry, HT II - Commercial, HT-III: Railways, Metro & Monorail, HT-IV : PWW, HT-V: Agriculture, HT-VI: Group Housing Society, HT VIII - Temporary Supply, HT IX: Public Service, LT II: Non-Residential/Commercial [LT II (B), LT II (C)], LT III: Public Water Works , LT V (A) (ii): Industry – Powerlooms (above 20 kW) , LT V (B) (ii): Industry – General (above 20 kW), LT X : Public Services [LT X (A) (ii) , LT X (A) (iii) , LT X (B) (ii) and LT X (B) (iii) categories].
2. Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%

Sl.	Range of Power Factor	Power Factor Level	Penalty
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

### **Prompt Payment Discount**

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

### **Delayed Payment Charges**

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

### **Rate of Interest on Arrears**

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

### **Load Factor Incentive**

1. Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85% will be entitled to a rebate of 1% on the Energy Charges for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.
2. This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT IX: Public Services.

3. The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. The Distribution Licensee shall take a commercial decision on the schedule for such payments.
4. The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption Possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours\*)

\* - Interruption/non-supply to the extent of 60 hours in a 30-day month.

5. In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e., 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.)

#### **Penalty for exceeding Contract Demand**

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. In case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

#### **Additional Demand Charges for Consumers having Captive Power Plant**

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and

not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

**Consumers' Security Deposit**

- 1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).
- 2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered
- 3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.
- 4) MSEDCL shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.
- 5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.
- 6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;
- 7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.
- 8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for



additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

- 9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.
- 10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.
- 11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.
- 12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

## **Definitions**

### **Maximum Demand**

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

### **Contract Demand**

Contract Demand means the demand in kilo-Watt (kW) or kilo-Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

### **Sanctioned Load**

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

In case the meter is installed on the LV/MV side, the methodology to be followed for billing purpose is as follows

- 2% to be added to MV demand reading, to determine the kW or kVA billing demand, and
- 'X' units to the MVA reading to determine the total energy compensation to compensate the transformation losses, where is calculated as follows  
$$'X' = (730 * \text{kVA rating of transformer}) / 500 \text{ Units/month}$$
to compensate for the iron losses, plus one percent of units registered on the LT side for copper losses.

### **Billing Demand - LT tariff categories**

Billing Demand for LT Non-Residential / Commercial [LT: II (B) , LT II (C)] , LT III: Public Water Works , LT V (A) (ii): Industry - Power Looms (above 20 kW) , LT V (B) (ii): Industry - General (above 20 kW), LT X (A) Public Services - Government Owned Educational Institutes and Hospitals [LT X (A) (ii) and LT X (A) (iii)] , LT X (B) Public Services - Others [LT X (B) (ii) and LT X (B) (iii)] category having MD based Tariff:-

Monthly Billing Demand will be the higher of the following:

- a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 40% of the Contract Demand.

#### Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

### **Billing Demand - HT tariff categories**

Billing Demand for HT I: Industry, HT II: Commercial, HT III Railway/Metro/Monorail, HT IV: Public Water Works, HT V: Agriculture, HT VI: Group Housing Society (Residential), HT VIII: Temporary Supply, HT IX: Public Services.

Monthly Billing Demand will be the higher of the following:

- a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
- b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;

c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.
- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

HT Seasonal Category (HT I)

During Declared Season, Monthly Billing Demand will be the higher of the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours
- ii. 75% of the Contract Demand
- iii. 50 kVA.

During Declared Off-season, Monthly Billing Demand will be the following:

- i. Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours

The Billing Demand for the consumers with CPP will be governed as per the CPP Order in Case No. 55 and 56 of 2003.

**Annexure IX: Montly MoD Stack approved**

Generator Name	Variable Cost per unit (Rs/kWh)	Apr-16		May-16		Jun-16		Jul-16		Aug-16		Sep-16		Oct-16		Nov-16		Dec-16		Jan-17		Feb-17		Mar-17	
		Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)
Must Run Stations																									
KAPP	2.28	90	21	93	21	90	21	93	21	93	21	90	21	93	21	90	21	93	21	93	21	84	19	93	21
TAPP 1&2	0.97	94	9	97	9	94	9	97	9	97	9	94	9	97	9	94	9	97	9	97	9	88	8	97	9
TAPP 3&4	2.85	266	76	274	78	266	76	274	78	274	78	266	76	274	78	266	76	274	78	274	78	248	71	274	78
SSP	2.05	99	20	103	21	99	20	103	21	103	21	99	20	103	21	99	20	103	21	103	21	93	19	103	21
Pench	2.05	11	2	12	2	11	2	12	2	12	2	11	2	12	2	11	2	12	2	12	2	10	2	12	2
Dodson I	2.47	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
Dodson II	1.40	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1
Non Conv. Energy	5.65	958	541	1,137	642	1,213	685	1,643	928	1,113	629	600	339	327	185	1,001	565	1,175	664	1,175	664	1,175	664	1,175	664
Hydro	-	344	-	356	-	344	-	356	-	356	-	344	-	356	-	344	-	356	-	356	-	321	-	356	-
Stations under MoD																									
KSTPS III	1.04	76	8	78	8	76	8	78	8	78	8	76	8	78	8	76	8	78	8	78	8	71	7	78	8
KSTPS	1.06	370	39	382	41	370	39	382	41	382	41	370	39	382	41	370	39	382	41	382	41	345	37	382	41
SIPAT TPS 2	1.07	166	18	171	18	166	18	171	18	171	18	166	18	171	18	166	18	171	18	171	18	155	17	171	18
SIPAT TPS 1	1.08	346	37	358	39	346	37	358	39	358	39	346	37	358	39	346	37	358	39	358	39	323	35	358	39
VSTP III	1.37	167	23	172	24	167	23	172	24	172	24	167	23	172	24	167	23	172	24	172	24	156	21	172	24
VSTP IV	1.41	182	26	188	27	182	26	188	27	188	27	182	26	188	27	182	26	188	27	188	27	170	24	188	27
CGPL	1.44	424	61	438	63	424	61	438	63	438	63	424	61	438	63	424	61	438	63	438	63	396	57	438	63
VSTP I	1.47	259	38	267	39	259	38	267	39	267	39	259	38	267	39	259	38	267	39	267	39	242	35	267	39
EMCO Power	1.53	113	17	116	18	113	17	116	18	116	18	113	17	116	18	113	17	116	18	116	18	105	16	116	18
VSTP II	1.49	201	30	207	31	201	30	207	31	207	31	201	30	207	31	201	30	207	31	207	31	187	28	207	31
VSTP V	1.52	99	15	102	15	99	15	102	15	102	15	99	15	102	15	99	15	102	15	102	15	92	14	102	15
Lara	1.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	60	9	66	10
IPP - JSW	1.72	159	27	164	28	159	27	164	28	164	28	159	27	164	28	159	27	164	28	164	28	148	26	164	28
Adani power 1320 MW	1.76	699	123	723	127	699	123	723	127	723	127	699	123	723	127	699	123	723	127	723	127	653	115	723	127
Chandrapur 8	2.09	-	-	-	-	102	21	105	22	105	22	102	21	227	47	220	46	227	47	227	47	205	43	227	47
Chandrapur 9	2.09	-	-	-	-	-	-	-	-	-	-	-	-	105	22	220	46	227	47	227	47	205	43	227	47
Koradi R U-8	2.33	290	68	300	70	290	68	300	70	300	70	290	68	300	70	290	68	300	70	300	70	271	63	300	70
Koradi 9	2.33	-	-	-	-	-	-	-	-	-	-	-	-	138	32	290	68	300	70	300	70	271	63	300	70
Koradi10	2.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	70	271	63	300	70
PARAS UNIT-3	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	31	145	35
PARAS UNIT-4	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	31	145	35
Adani power 125 MW	2.41	70	17	73	18	70	17	73	18	73	18	70	17	73	18	70	17	73	18	73	18	66	16	73	18
Adani power 1200 MW	2.41	676	163	698	169	676	163	698	169	698	169	676	163	698	169	676	163	698	169	698	169	631	152	698	169
CHANDRAPUR - 6	2.56	263	67	272	70	263	67	272	70	272	70	263	67	272	70	263	67	272	70	272	70	245	63	272	70
CHANDRAPUR - 7	2.56	263	67	272	70	263	67	272	70	272	70	263	67	272	70	263	67	272	70	272	70	245	63	272	70
CHANDRAPUR - 5	2.56	263	67	272	70	263	67	272	70	272	70	263	67	272	70	263	67	272	70	272	70	245	63	272	70
CHANDRAPUR - 4	2.56	110	28	114	29	110	28	114	29	114	29	110	28	114	29	110	28	114	29	114	29	103	26	114	29
CHANDRAPUR - 3	2.56	110	28	114	29	110	28	114	29	114	29	110	28	114	29	110	28	114	29	114	29	103	26	114	29
KhSTPS-II	2.50	83	21	86	21	83	21	86	21	86	21	83	21	86	21	83	21	86	21	86	21	78	19	86	21
GTPS URAN	2.60	293	76	303	79	293	76	303	79	303	79	293	76	303	79	293	76	303	79	231	60	274	71	303	79
Parli replacement U 8	2.76	-	-	-	-	-	-	-	-	-	-	-	-	51	14	49	14	51	14	-	-	100	28	111	31
KHAPARKHEDA 5	2.79	288	80	297	83	288	80	297	83	297	83	288	80	297	83	288	80	297	83	-	-	268	75	295	82
Mauda	2.70	236	64	244	66	236	64	244	66	244	66	236	64	244	66	236	64	244	66	-	-	221	60	-	-
KHAPARKHEDA - 1to 4	2.80	464	130	480	134	464	130	480	134	480	134	464	130	480	134	464	130	480	134	-	-	6	2	-	-
Rattaniindia Amravati	2.90	676	196	643	186	635	184	-	-	21	6	676	196	698	202	184	53	-	-	-	-	-	-	-	-
BHUSAWAL 4	2.90	98	28	-	-	-	-	-	-	-	-	75	22	297	86	-	-	-	-	-	-	-	-	-	-
BHUSAWAL 5	2.90	-	-	-	-	-	-	-	-	-	-	-	-	194	56	-	-	-	-	-	-	-	-	-	-
Total		9,596	2,303	9,906	2,417	9,814	2,428	9,444	2,418	9,364	2,245	9,316	2,115	10,165	2,234	9,828	2,329	9,678	2,311	9,263	2,185	9,200	2,228	9,806	2,327

The abvoetable depicts projection of month-wise MoD stack based on approved variable charge for FY 2016-17. However, actual operation of MoD stack shall be governed as perthe ABT Order in Case No.42 of 2006, the State Grid Code and amendments thereof. Accordingly the actual MoD stack shall vary based on the energy charge inclusive of FAC, if any, of various generating stations.

MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20

Generator Name	Variable Cost per unit (Rs/kWh)	Apr-17		May-17		Jun-17		Jul-17		Aug-17		Sep-17		Oct-17		Nov-17		Dec-17		Jan-18		Feb-18		Mar-18	
		Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)
<b>Must Run Stations</b>																									
KAPP	2.28	90	21	93	21	90	21	93	21	93	21	90	21	93	21	90	21	93	21	93	21	84	19	93	21
TAPP 1&2	0.97	94	9	97	9	94	9	97	9	97	9	94	9	97	9	94	9	97	9	97	9	88	8	97	9
TAPP 3&4	2.85	266	76	274	78	1,745	498	274	78	274	78	266	76	274	78	266	76	274	78	274	78	248	71	274	78
SSP	2.05	99	20	103	21	99	20	103	21	103	21	99	20	103	21	99	20	103	21	103	21	93	19	103	21
Pench	2.05	11	2	12	2	11	2	12	2	12	2	11	2	12	2	11	2	12	2	12	2	10	2	12	2
Dodson I	2.47	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
Dodson II	1.40	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1
Non Conv. Energy Hydro	5.72	1,128	645	1,338	766	1,428	817	1,934	1,106	1,310	749	706	404	385	220	1,178	674	1,383	791	1,383	791	1,383	791	1,383	791
	-	346	-	358	-	346	-	358	-	358	-	346	-	358	-	346	-	358	-	358	-	323	-	358	-
<b>Stations under MoD</b>																									
KSTPS III	1.04	76	8	78	8	76	8	78	8	78	8	76	8	78	8	76	8	78	8	78	8	71	7	78	8
KSTPS	1.06	370	39	382	41	370	39	382	41	382	41	370	39	382	41	370	39	382	41	382	41	345	37	382	41
SIPAT TPS 1	1.07	346	37	358	38	346	37	358	38	358	38	346	37	358	38	346	37	358	38	358	38	323	35	358	38
SIPAT TPS 2	1.08	166	18	171	18	166	18	171	18	171	18	166	18	171	18	166	18	171	18	171	18	155	17	171	18
VSTP III	1.37	167	23	172	24	167	23	172	24	172	24	167	23	172	24	167	23	172	24	172	24	156	21	172	24
VSTP IV	1.41	182	26	188	27	182	26	188	27	188	27	182	26	188	27	182	26	188	27	188	27	170	24	188	27
CGPL	1.46	424	62	438	64	424	62	438	64	438	64	424	62	438	64	424	62	438	64	438	64	396	58	438	64
VSTP I	1.47	259	38	267	39	259	38	267	39	267	39	259	38	267	39	259	38	267	39	267	39	242	35	267	39
VSTP II	1.49	201	30	207	31	201	30	207	31	207	31	201	30	207	31	201	30	207	31	207	31	187	28	207	31
VSTP V	1.52	99	15	102	15	99	15	102	15	102	15	99	15	102	15	99	15	102	15	102	15	92	14	102	15
Gadarwara	1.52	-	-	-	-	-	-	-	-	15	2	14	2	15	2	14	2	15	2	15	2	26	4	29	4
Lara	1.52	64	10	66	10	64	10	66	10	66	10	128	20	133	20	128	20	133	20	133	20	120	18	133	20
EMCO Power	1.58	113	18	116	18	113	18	116	18	116	18	113	18	116	18	113	18	116	18	116	18	105	17	116	18
IPP - JSW	1.75	159	28	164	29	159	28	164	29	164	29	159	28	164	29	159	28	164	29	164	29	148	26	164	29
Adani power 1320 MW	1.78	699	125	723	129	699	125	723	129	723	129	699	125	723	129	699	125	723	129	723	129	653	116	723	129
Chandrapur 8	2.09	288	60	297	62	288	60	297	62	297	62	288	60	297	62	288	60	297	62	297	62	268	56	297	62
Chandrapur 9	2.09	288	60	297	62	288	60	297	62	297	62	288	60	297	62	288	60	297	62	297	62	268	56	297	62
Koradi R U-8	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
Koradi 9	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
Koradi10	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
PARAS UNIT-3	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	31	145	35
PARAS UNIT-4	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	31	145	35
Adani power 125 MW	2.47	70	17	73	18	70	17	73	18	73	18	70	17	73	18	70	17	73	18	73	18	66	16	73	18
Adani power 1200 MW	2.47	676	167	698	172	676	167	698	172	698	172	676	167	698	172	676	167	698	172	698	172	631	156	698	172
Adani power 440 MW	2.47	248	61	256	63	248	61	256	63	256	63	248	61	256	63	248	61	256	63	256	63	231	57	256	63
CHANDRAPUR - 3	2.57	110	28	114	29	110	28	114	29	114	29	110	28	114	29	110	28	114	29	114	29	103	27	114	29
CHANDRAPUR - 4	2.57	110	28	114	29	110	28	114	29	114	29	110	28	114	29	110	28	114	29	114	29	103	27	114	29
CHANDRAPUR - 5	2.57	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
CHANDRAPUR - 6	2.57	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
CHANDRAPUR - 7	2.57	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
KhSTPS-II	2.50	83	21	86	21	83	21	86	21	86	21	83	21	86	21	83	21	86	21	86	21	78	19	86	21
GTPS URAN	2.61	293	76	303	79	293	76	303	79	303	79	293	76	303	79	293	76	303	79	303	79	274	71	303	79
KORADI - 6	2.63	97	25	100	26	97	25	100	26	100	26	97	25	100	26	97	25	100	26	100	26	86	21	100	26
KORADI - 7	2.63	94	25	97	25	94	25	97	25	97	25	94	25	97	25	94	25	97	25	97	25	86	21	97	25
Parli replacement U 8	2.76	-	-	-	-	-	-	-	-	-	-	57	16	145	40	123	34	-	-	-	-	-	-	-	-
KHAPARKHEDA 5	2.80	-	-	-	-	-	-	-	-	-	-	-	-	297	83	-	-	-	-	-	-	-	-	-	-
Mauda	2.70	-	-	-	-	-	-	-	-	-	-	-	-	244	66	-	-	-	-	-	-	-	-	-	-
KHAPARKHEDA - 1to 4	2.81	-	-	-	-	-	-	-	-	-	-	-	-	283	80	-	-	-	-	-	-	-	-	-	-
<b>Total</b>		<b>9,933</b>	<b>2,356</b>	<b>10,264</b>	<b>2,487</b>	<b>10,160</b>	<b>2,549</b>	<b>9,774</b>	<b>2,549</b>	<b>9,694</b>	<b>2,330</b>	<b>9,649</b>	<b>2,143</b>	<b>10,537</b>	<b>2,269</b>	<b>10,188</b>	<b>2,431</b>	<b>10,022</b>	<b>2,430</b>	<b>9,606</b>	<b>2,323</b>	<b>9,535</b>	<b>2,361</b>	<b>10,170</b>	<b>2,467</b>

The abovetable depicts projection of month-wise MoD stack based on approved variable charge for FY 2017-18. However, actual operation of MoD stack shall be governed as per the ABT Order in Case No.42 of 2006, the State Grid Code and amendments thereof. Accordingly the actual MoD stack shall vary based on the energy charge inclusive of FAC, if any, of various generating stations.

Generator Name	Variable Cost per unit (Rs./kWh)	Apr-18		May-18		Jun-18		Jul-18		Aug-18		Sep-18		Oct-18		Nov-18		Dec-18		Jan-19		Feb-19		Mar-19	
		Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)
Must Run Stations																									
KAPP	2.28	90	21	93	21	90	21	93	21	93	21	90	21	93	21	90	21	93	21	93	21	84	19	93	21
TAPP 1&2	0.97	94	9	97	9	94	9	97	9	97	9	94	9	97	9	94	9	97	9	97	9	88	8	97	9
TAPP 3&4	2.85	266	76	274	78	266	76	274	78	274	78	266	76	274	78	266	76	274	78	274	78	248	71	274	78
SSP	2.05	99	20	103	21	99	20	103	21	103	21	99	20	103	21	99	20	103	21	103	21	93	19	103	21
Pench	2.05	11	2	12	2	11	2	12	2	12	2	11	2	12	2	11	2	12	2	12	2	10	2	12	2
Dodson I	2.47	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
Dodson II	1.40	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1
Non Conv. Energy	5.76	1,289	742	1,529	880	1,631	939	2,209	1,273	1,496	862	807	465	440	253	1,346	775	1,580	910	1,580	910	1,580	910	1,580	910
Hydro	-	346	-	358	-	346	-	358	-	358	-	346	-	358	-	346	-	358	-	358	-	323	-	358	-
Stations under MoD																									
KSTPS III	1.04	76	8	78	8	76	8	78	8	78	8	76	8	78	8	76	8	78	8	78	8	71	7	78	8
KSTPS	1.06	370	39	382	41	370	39	382	41	382	41	370	39	382	41	370	39	382	41	382	41	345	37	382	41
SIPAT TPS 2	1.07	166	18	171	18	166	18	171	18	171	18	166	18	171	18	166	18	171	18	171	18	155	17	171	18
SIPAT TPS 1	1.08	346	37	358	39	346	37	358	39	358	39	346	37	358	39	346	37	358	39	358	39	323	35	358	39
VSTP III	1.37	167	23	172	24	167	23	172	24	172	24	167	23	172	24	167	23	172	24	172	24	156	21	172	24
VSTP IV	1.41	182	26	188	27	182	26	188	27	188	27	182	26	188	27	182	26	188	27	188	27	170	24	188	27
VSTP I	1.47	259	38	267	39	259	38	267	39	267	39	259	38	267	39	259	38	267	39	267	39	242	35	267	39
CGPL	1.48	424	63	438	65	424	63	438	65	438	65	424	63	438	65	424	63	438	65	438	65	396	59	438	65
VSTP II	1.49	201	30	207	31	201	30	207	31	207	31	201	30	207	31	201	30	207	31	207	31	187	28	207	31
VSTP V	1.52	99	15	102	15	99	15	102	15	102	15	99	15	102	15	99	15	102	15	102	15	92	14	102	15
Gadarwara	1.52	28	4	29	4	28	4	29	4	29	4	28	4	29	4	28	4	29	4	29	4	26	4	29	4
Lara	1.52	128	20	133	20	128	20	133	20	133	20	128	20	133	20	128	20	133	20	133	20	120	18	133	20
EMCO Power	1.64	113	18	116	19	113	18	116	19	116	19	113	18	116	19	113	18	116	19	116	19	105	17	116	19
IPP - JSW	1.77	159	28	164	29	159	28	164	29	164	29	159	28	164	29	159	28	164	29	164	29	148	26	164	29
Adani power 1320 MW	1.80	699	126	723	130	699	126	723	130	723	130	699	126	723	130	699	126	723	130	723	130	653	117	723	130
Chandrapur 8	2.09	288	60	297	62	288	60	297	62	297	62	288	60	297	62	288	60	297	62	297	62	268	56	297	62
Chandrapur 9	2.09	288	60	297	62	288	60	297	62	297	62	288	60	297	62	288	60	297	62	297	62	268	56	297	62
Koradi R U-8	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
Koradi 9	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
Koradi 10	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	354	83	392	91
PARAS UNIT-3	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	32	145	35
PARAS UNIT-4	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	131	32	145	35
Adani power 125 MW	2.52	70	18	73	18	70	18	73	18	73	18	70	18	73	18	70	18	73	18	73	18	66	17	73	18
Adani power 1200 MW	2.52	676	170	698	176	676	170	698	176	698	176	676	170	698	176	676	170	698	176	698	176	631	159	698	176
Adani power 440 MW	2.52	248	62	256	64	248	62	256	64	256	64	248	62	256	64	248	62	256	64	256	64	231	58	256	64
CHANDRAPUR - 3	2.58	110	29	114	29	110	29	114	29	114	29	110	29	114	29	110	29	114	29	114	29	103	27	114	29
CHANDRAPUR - 4	2.58	110	29	114	29	110	29	114	29	114	29	110	29	114	29	110	29	114	29	114	29	103	27	114	29
CHANDRAPUR - 5	2.58	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
CHANDRAPUR - 6	2.58	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
CHANDRAPUR - 7	2.58	263	68	272	70	263	68	272	70	272	70	263	68	272	70	263	68	272	70	272	70	245	63	272	70
KhSTPS-II	2.50	83	21	86	21	83	21	86	21	86	21	83	21	86	21	83	21	86	21	86	21	78	19	86	21
GTPS URAN	2.61	293	77	303	79	293	77	303	79	303	79	293	77	303	79	293	77	303	79	303	79	274	71	303	79
KORADI - 6	2.63	97	26	100	26	97	26	100	26	100	26	97	26	100	26	97	26	100	26	100	26	91	24	100	26
KORADI - 7	2.63	97	26	100	26	97	26	100	26	100	26	97	26	100	26	97	26	100	26	100	26	91	24	100	26
Parli replacement U 8	2.76	121	33	-	-	21	6	-	-	-	-	140	39	145	40	140	39	-	-	-	-	18	5	-	-
KHAPARKHEDA 5	2.80	-	-	-	-	-	-	-	-	-	-	168	47	297	83	197	55	-	-	-	-	-	-	-	-
Mauda	2.70	-	-	-	-	-	-	-	-	-	-	-	-	244	66	-	-	-	-	-	-	-	-	-	-
KHAPARKHEDA - 1to 4	2.83	-	-	-	-	-	-	-	-	-	-	-	-	480	136	-	-	-	-	-	-	-	-	-	-
BHUSAWAL 4	2.90	-	-	-	-	-	-	-	-	-	-	-	-	135	39	-	-	-	-	-	-	-	-	-	-
Total		10,310	2,511	10,655	2,655	10,553	2,680	10,147	2,739	10,066	2,491	10,015	2,285	10,938	2,410	10,583	2,604	10,404	2,605	9,977	2,495	9,905	2,534	10,563	2,647

The abovetable depicts projection of month-wise MoD stack based on approved variable charge for FY 2018-19. However, actual operation of MoD stack shall be governed as per the ABT Order in Case No.42 of 2006, the State Grid Code and amendments thereof. Accordingly the actual MoD stack shall vary based on the energy charge inclusive of FAC, if any, of various generating stations.

MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20

		Apr-19		May-19		Jun-19		Jul-19		Aug-19		Sep-19		Oct-19		Nov-19		Dec-19		Jan-20		Feb-20		Mar-20	
Generator Name	Variable Cost per unit (Rs./kWh)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)	Energy (MU)	Variable Charge (Rs. Crore)
Must Run Stations																									
KAPP	2.28	90	21	93	21	90	21	93	21	93	21	90	21	93	21	90	21	93	21	93	21	87	20	93	21
TAPP 1&2	0.97	94	9	97	9	94	9	97	9	97	9	94	9	97	9	94	9	97	9	97	9	91	9	97	9
TAPP 3&4	2.85	266	76	274	78	266	76	274	78	274	78	266	76	274	78	266	76	274	78	274	78	257	73	274	78
SSP	2.05	99	20	103	21	99	20	103	21	103	21	99	20	103	21	99	20	103	21	103	21	96	20	103	21
Pench	2.05	11	2	12	2	11	2	12	2	12	2	11	2	12	2	11	2	12	2	12	2	11	2	12	2
Dodson I	2.47	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1	4	1
Dodson II	1.40	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1
Non Conv. Energy	5.79	1,462	847	1,735	1,004	1,851	1,071	2,507	1,451	1,698	983	915	530	499	289	1,527	884	1,793	1,038	1,793	1,038	1,793	1,038	1,793	1,038
Hydro	-	349	-	360	-	349	-	360	-	360	-	349	-	360	-	349	-	360	-	360	-	337	-	360	-
Stations under MoD																									
KSTPS III	1.04	76	8	78	8	76	8	78	8	78	8	76	8	78	8	76	8	78	8	78	8	73	8	78	8
KSTPS	1.06	370	39	382	41	370	39	382	41	382	41	370	39	382	41	370	39	382	41	382	41	357	38	382	41
SIPAT TPS 2	1.07	166	18	171	18	166	18	171	18	171	18	166	18	171	18	166	18	171	18	171	18	160	17	171	18
SIPAT TPS 1	1.08	346	37	358	39	346	37	358	39	358	39	346	37	358	39	346	37	358	39	358	39	335	36	358	39
VSTP III	1.37	167	23	172	24	167	23	172	24	172	24	167	23	172	24	167	23	172	24	172	24	161	22	172	24
VSTP IV	1.41	182	26	188	27	182	26	188	27	188	27	182	26	188	27	182	26	188	27	188	27	176	25	188	27
VSTP I	1.47	259	38	267	39	259	38	267	39	267	39	259	38	267	39	259	38	267	39	267	39	250	37	267	39
VSTP II	1.49	201	30	207	31	201	30	207	31	207	31	201	30	207	31	201	30	207	31	207	31	194	29	207	31
CGPL	1.50	424	64	438	66	424	64	438	66	438	66	424	64	438	66	424	64	438	66	438	66	410	62	438	66
VSTP V	1.52	99	15	102	15	99	15	102	15	102	15	99	15	102	15	99	15	102	15	102	15	95	14	102	15
Lara	1.52	128	20	133	20	128	20	133	20	133	20	128	20	133	20	128	20	133	20	133	20	124	19	133	20
Gadarwara	1.52	28	4	29	4	28	4	29	4	29	4	28	4	29	4	28	4	29	4	29	4	27	4	29	4
NTPC Khargone (2*660MW)	1.52	-	-	-	-	-	-	-	-	15	2	15	2	14	2	15	2	15	2	29	4	27	4	29	4
EMCO Power	1.70	113	19	116	20	113	19	116	20	116	20	113	19	116	20	113	19	116	20	116	20	109	18	116	20
IPP - JSW	1.80	159	29	164	30	159	29	164	30	164	30	159	29	164	30	159	29	164	30	164	30	154	28	164	30
Adani power 1320 MW	1.82	699	127	723	131	699	127	723	131	723	131	699	127	723	131	699	127	723	131	723	131	676	123	723	131
Chandrapur 8	2.09	288	60	297	62	288	60	297	62	288	60	297	62	288	60	297	62	288	60	297	62	278	58	297	62
Chandrapur 9	2.09	288	60	297	62	288	60	297	62	288	60	297	62	288	60	297	62	288	60	297	62	278	58	297	62
Koradi R U-8	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	367	85	392	91
Koradi 9	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	367	85	392	91
Koradi10	2.33	380	88	392	91	380	88	392	91	392	91	380	88	392	91	380	88	392	91	392	91	367	85	392	91
PARAS UNIT-3	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	135	33	145	35
PARAS UNIT-4	2.41	140	34	145	35	140	34	145	35	145	35	140	34	145	35	140	34	145	35	145	35	135	33	145	35
Adani power 125 MW	2.58	70	18	73	19	70	18	73	19	73	19	70	18	73	19	70	18	73	19	73	19	68	18	73	19
Adani power 1200 MW	2.58	676	174	698	180	676	174	698	180	698	180	676	174	698	180	676	174	698	180	698	180	653	168	698	180
Adani power 440 MW	2.58	248	64	256	66	248	64	256	66	256	66	248	64	256	66	248	64	256	66	256	66	239	62	256	66
KhSTPS-II	2.50	83	21	86	21	83	21	86	21	86	21	83	21	86	21	83	21	86	21	86	21	81	20	86	21
CHANDRAPUR - 3	2.60	110	29	114	30	110	29	114	30	114	30	110	29	114	30	110	29	114	30	114	30	107	28	114	30
CHANDRAPUR - 4	2.60	110	29	114	30	110	29	114	30	114	30	110	29	114	30	110	29	114	30	114	30	107	28	114	30
CHANDRAPUR - 5	2.60	263	68	272	71	263	68	272	71	272	71	263	68	272	71	263	68	272	71	272	71	254	66	272	71
CHANDRAPUR - 6	2.60	263	68	272	71	263	68	-	-	272	71	263	68	272	71	263	68	272	71	272	71	254	66	272	71
CHANDRAPUR - 7	2.60	263	68	272	71	263	68	-	-	272	71	263	68	272	71	263	68	272	71	138	36	254	66	272	71
GTPS URAN	2.62	293	77	303	79	293	77	-	-	60	16	293	77	303	79	293	77	303	79	-	-	283	74	303	79
KORADI - 6	2.63	97	26	100	26	97	26	-	-	-	-	97	26	100	26	97	26	11	3	-	-	73	19	100	26
KORADI - 7	2.63	97	26	100	26	97	26	-	-	-	-	97	26	100	26	97	26	-	-	-	-	-	-	68	18
Parli replacement U8	2.76	140	39	140	39	140	39	-	-	-	-	140	39	145	40	140	39	-	-	-	-	-	-	-	-
Mauda	2.70	217	59	-	-	80	22	-	-	-	-	236	64	244	66	236	64	-	-	-	-	-	-	-	-
KHAPARKHEDA 5	2.80	-	-	-	-	-	-	-	-	-	-	210	59	297	83	201	56	-	-	-	-	-	-	-	-
KHAPARKHEDA - 1to 4	2.84	-	-	-	-	-	-	-	-	-	-	-	-	480	136	-	-	-	-	-	-	-	-	-	-
BHUSAWAL 4	2.91	-	-	-	-	-	-	-	-	-	-	-	-	297	86	-	-	-	-	-	-	-	-	-	-
BHUSAWAL 5	2.91	-	-	-	-	-	-	-	-	-	-	-	-	-	195	57	-	-	-	-	-	-	-	-	-
Total		10,722	2,690	11,074	2,847	10,973	2,877	10,550	2,952	10,468	2,673	10,419	2,439	11,371	2,563	11,021	2,790	10,818	2,794	10,384	2,680	10,312	2,699	10,989	2,838

The abvoetable depicts projection of month-wise MoD stack based on approved variable charge for FY 2019-20. However, actual operation of MoD stack shall be governed as per the ABT Order in Case No.42 of 2006, the State Grid Code and amendments thereof. Accordingly the actual MoD stack shall vary based on the energy charge inclusive of FAC, if any, of various generating stations.



**Appendix 1: List of Persons who attended the Technical  
Validation Session held on 21 March, 2016**

Sr. No.	Name	Company / Institution
1	Shri. Sanjeev Kumar	MD ,MSEDCL
2	Shri Abhijeet Deshpande	MSEDCL
3	Shri A.S.Chavan	MSEDCL
4	Shri Amol More	MSEDCL
5	Shri S.V.Bapat	MSEDCL
6	Shri M.M.Digraskar	MSEDCL
7	Shri J.R.Fule	MSEDCL
8	Shri M.P.Kulkarni	MSEDCL
9	Shri Rajesh Kurai	MSEDCL
10	Shri Jetendra Bhanushali	MSEDCL
11	Shri Pratap Hogade	MVGS
12	Shri R.G.Tambe	S.S.S.K
13	Smt. Swati Vyavahare	MSEDCL
14	Shri B.K.Godade	MSEDCL
15	Shri A.P.Mudgalm	MSEDCL
16	Shri P.N.Paunikar	MSEDCL
17	Shri Anil Gachake	MCCIA
18	Shri Mangesh Kohat	MSEDCL
19	Shri Amit Kamble	MSEDCL
20	Shri. Anil Kalekar	MSEDCL
21	Shri Vijay Shirookar	MSEDCL
22	Shri A.P. Gaikwad	MSEDCL
23	Smt Ashwini Chitnis	Prayas
24	Shri. Shantanu Dixit	Prayas
25	Shri Ashok Pendse	TBIA
26	Shri Ashish Chandarana	VIA
27	Smt Saumya Vaishnava	Prayas

**Appendix 2: List of Persons who attended the Technical  
Validation Session held on 29April, 2016**

Sr. No.	Name	Company / Institution
1	Shri. Sanjeev Kumar	MD ,MSEDCL
2	Shri Abhijeet Deshpande	MSEDCL
3	Shri A.S.Chavan	MSEDCL
4	Shri A.V Shinde	MSEDCL
5	Shri P.N.Paunikar	MSEDCL
6	Shri A.P.Mudgalm	MSEDCL
7	Shri J.R.Fule	MSEDCL
8	Shri M.P.Kulkarni	MSEDCL
9	Shri Anil M. Kamble	MSEDCL
10	Shri Amol A. More	MSEDCL
11	Shri M.M.Digraskar	MSEDCL
12	Smt. Swati Vyavahare	MSEDCL
13	Shri. Anil Kalekar	MSEDCL
14	Shri Ravindra Sangale	MSEDCL
15	Smt Shilpa Naik	MSEDCL
16	Shri S.P Khumbhar	MSEDCL
17	Shri Rajesh Kurai	MSEDCL
18	Smt Ashwini Chitnis	Prayas
19	Shri. Shantanu Dixit	Prayas
20	Shri Ashok Pendse	TBIA
21	Shri. Ashok Shreenivas	Prayas

### **Appendix 3: List of Objectors at Public Hearings**

#### **Amravati Division**

<b>Sr. No.</b>	<b>Name of the Objector</b>
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Shri Jagdish/Kiran Visnupant Paturkar, 'KIRAN' Topenagar, Pavanaskar Layout, Amravati-444602
[B]	Objections / Suggestions by Consumers
2	Shri Raghunath Kaparathi, M/s Balaji Electro Smelters Ltd., Yavatmal
3	The President, The Akot MIDC Industries Association, Plot No.B-1 & B-2, MIDC, Akot
4	Shri Kailash Khandelwal, Akola Industries Association, MIDC Phase 3, Akola
5	Smt Munira H. Karani, Director, Rana Denim Pvt. Ltd., Yavatmal- 445001
6	Shri Pamode Narayan Khandagale, Maharashtra Veej Grahak Sanghatana, Buldhana Zila, Nimgaon, Dist: Buldhana
7	Shri R.B.Agrawal & Adv Anil Harishchandra Vyas, Kamgaon, Dist: Buldhana
8	Shri Omprakash Bhandari, MIDC Industrial Association, Amravati
9	Office Superintendent, Sanjay Gandhi Cotton Growers Co-Op Spinning Mills Ltd., Buldhana
10	Shri B.S.Khandare, Maharashtra Rajaya Grahak Parishad, Anajangaon Surji, Amravati
11	Shri Prashant B. Daryapurkar, Yavatmal
12	Shri Rahul Dinkarrao Kadu
13	Shri Baburao Janrao Shivalkar
14	Shri Anilkumar Thaware

#### **Nagpur Division**

<b>Sr. No.</b>	<b>Name of the Objector</b>
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Vidarbha Industries Association, Nagpur
2	Shri Avinash Vinayak Prabhune, 113, Suvarnavedh, Pandurang Gawande Layout, Ranapratap Nagar, Nagpur-440022
3	Shri. Banait Sharadchandra, Praashchandra, 20, Sahas Colony, Pratap Nagar, Nagpur-440022
4	Shri Suhas R.Khandekar, Shreedham, Rahate Colony, Jail Road, Nagpur- 440 022
[B]	Objections / Suggestions by Consumers

Sr. No.	Name of the Objector
5	Shri. Bacchu Kadu, Member of Legislature
6	Adv. Vamanrao Chatak, Ex-Memner of Legislature
7	Shri. Vasudev Thombaree, Akhil Bhartiya Kisan Union, Umred, Dist-Nagpur
8	Principal, L.A.D & Smt R.P College for Women, Shankarnagar, Nagpur
9	Shri Anil Murlidhar Wadpalliwar, New Ramdas Peth, Nagpur
10	Shri S.D.Patil, Br. Sheshrao Wankhede Shetkari Sahakari Soot Girani Ltd., Nagpur
11	Shri J.K.Mittal, Gimatex Industries Pvt.Ltd (Wani Unit) Hinganghat Wardha
12	Shri Sunil Mathur, Nagpur Metro Rail Crop. Ltd., Nagpur
13	Shri Rajesh Goyal, Indo Rama Synthetics (I) Ltd., Nagpur
14	President, Indoworth India Ltd, Buttupuri, Nagpur
15	General Sreatry, Textile Consumer's Foundation (NGO), Khamla, Nagpur
15	Shri C.G. Shegaonkar, MIDC Industries Association, Nagpur
16	Shri M.H. Roongta, MIDC Industries Association, Chandrapur
17	CREDAI Nagpur Metro Builders Association
18	Shri Devendra Tiwari, Akhil Baratiya Grahak Kalyan Parishad
19	Shri Mayank Shukla, Fedration of Industries Association Vidarbha
20	Shri Pradeep Tiwari
21	Shri Mahendra Kapase
22	Shri Mahendra Jichkar
23	Shri Rakesh Surana, Butibori Manufactures Association
24	Shri Prashant Mohota
25	Shri Devendra Godbole
26	Shri John Thomas, Nagpur City (Dist.) Congress Committee
27	Shri D.K. Chakraborty
28	Shri Vivek N. Masade
29	Shri Nana Narayanrao Aakare
30	Shri Prashant B. Daryapurkar
31	Shri Mukund Mundra
32	Shri Vikas Thakaray
33	Shri Manohar Band
34	Shri Arif Hussan
35	Shri Mohan Sharma

Sr. No.	Name of the Objector
36	Shri Papu Deshamukh
37	Shri Gajanan Kubade
38	Shri B.D.Pawar
39	Shri Pramod Gajbhiye
40	Shri Mohamad Kadar
41	Shri Annaji Rajedhar
42	Shri sanjay Darmadhikari
43	Shri D.K.Chakraboty
44	Advocate D.R.Punekar
45	Shri Vamanrao Chatap
46	Dr Shrinivas Khandevale
47	Shri Ram Navale

**Aurangabad Division**

Sr. No.	Name of the Objector
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Ms Ashwini Chitnis, Prayas Energy Group
2	Shri Hemant Kapadia, Aurangabad
3	Dr. Barhate Gorakh Haribhau, Shrirampur, Dist: Ahmednagar-413709
[B]	Objections / Suggestions by Consumers
4	Shri Nrher Kulkarni
5	Adv. Rajesh Shah, Pandriba Main Road, Auragabad
6	Shri Dipesh Shah, Sterlite Technologies Ltd, Auragabad
7	Shri Omprakash Daga, Parbhani District Ginning Pressing Association, Parbhani
8	Secretary, Urja Sayog, CIDCO, Auragabad
9	Shri Nitin Joshi, Jain Irrigation Systems Ltd
10	Shri Sharad Kulkarni, Akhil Bharti Grahak Panchayat, Latur
11	Shri Vijay Lekurwale, Marathwada Association of Small Scale Industries and Agriculture (MASSIA), Aurangabad
12	Shri Gurpreet Singh Bagga, Chamber of Marathwada Industries and Agriculture (CMIA), Aurangabad
13	Shri Vivek Garg, Sudarshan Chemical Industries Ltd., Roha, Raighad
14	Shri D.K.Singh, Videocon Industries Ltd., Aurangabad

Sr. No.	Name of the Objector
15	M/s R.N. Steels & Energy Ltd.Chitegaon, Aurangabad
16	Shri Y.G.Ghatage,The Ichalkaranji Co-op Spinning Mills Ltd., Ichalkaranaji
17	Shri Anil Galande,Alkyl Amines Chemicals Ltd., Kurkumbh,Dist.Pune
18	Shri Ashok Medankar,PIAGGIO Vehicals Pvt.Ltd.
19	Shri Mukund KulkarniMarathwada Development Board
20	Shri Ayub Jahgirdar
21	Shri Shirish Kulkarni
22	Shri K. B. Kothari
23	Shri Subhash Lomte
24	Shri Jagiasi S. Puchama
25	Shri Anant Motale
26	Shri Anil Bugdani
27	Dr. M. A. Khan
28	Shri B. V. Joshi
29	Shri Sayyad Jahiroddin
30	Shri Vishal Kadam
31	Shri Balasaheb Jatal
32	Shri Mohsin Ahamad, Janjagaran Samitti Maharashtra
33	Shri Akhatar Ali Khan

**Pune Division**

Sr. No.	Name of the Objector
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Ms Ashwini Chitnis, Prayas Energy Group
[B]	Objections / Suggestions by Consumers
2	Shri Sanjay Ghatge, ex-Member of Legislature
3	Shri Vivek Velankar,Sajag Nagarik Manch, Pune
4	Shri.Vikrant Patil Kinikar,Kolhapur Zila Panipuravatha Santhacha Sahakari Sangh Maryadit, Kolhapur
5	Shri.Chandrakant Patil,Kolhapur Zila Panipuravatha Santhacha Sahakari Sangh Maryadit, Kolhapur
6	Shri N.D.Patil,Maharashtra Rajya Irrigation Fedaration,Kolhapur
7	Shri Hanumant B.Lad, Shri Basaveshwar Sahakari Panipuravatha Santha Maryadit, Kundal,Dist Sagali

8	Shri Sakharam Naru Chavan,Karvir Taluka Irrigation Federation, Kolhapur
9	Shri Rangarav Jadhav,Akhil Bharatiya Grahak Panchayat, Satara
10	Chairman,Janseva Panipurvatha Seva Sahakari Santha Maryadit, Padali (Khurd), Tal-Karvir,Dist- Kolhapur
11	Shri Prakash Bedekar,Pune
12	Shri R.G.Tambe,Sahyadri Sahakari Sakhar Karkhana Ltd.,Yashavantnagar, Karad, Dist Satara
13	Shri Hanumant G.Lad,Tupari Dhyari,Ghogav,Ganeshwadi Sahakari Pani Puravatha Santha Maryadit, Kundal,Kolhapur
14	Shri Mahadev Nivrutti Sutar,Shri Hanuman Sahakari Panipurvath Santha Ltd, Asurle,Kolhapur
15	Shri Mahadev Maruti More,Yashavanrao Atigre Sahakari Panipuravatha Santha Maryadit,Koge,Tal-Karvir, Dist-Kolhapur
16	Shri J.P.Lad,Sangli Zilha Sahakari Panipuravatha Santhacha Sahakari Sangh,Sangli
17	Shri Ashok P. Pawar,Satyashwar Sahakari Pani Puravatha Santha Maryadit.Kundal, Dist-Sangli
18	Bhahujan Dilat Mahasangh,Sangli
19	Maratha Samaj Mahasangh,Sangli
20	Shri Jyotiram Rangrao Patil,Shri Ram Warana Sahakari Pani Puravatha Santha Maryadit,Bhadole,Kolhapur
21	Shri Sambhaji Bapu Patil,Hanuman Warana Sahakari Pani Puravatha Santha, Bhadole,Kolhapur
22	Shri Chandrakant Shripati Patil,Shri Datta Warana Sahakari Pani Puravatha Santha, Kanranjwade, Sangli
23	Shri Bhimrao Narayan Shinde,Shri Ram Warana Sahakari Panipurvatha Santha Maryadit, Wathar Tarfe Udgaon,Kolhapur
24	Shri Pandurang Dattu ChougaleBuwache Wathar Warana Sahakari Panipurvatha Santha Maryadit, Wathar Tarfe Udgaon,Kolhapur
25	Shri Udyasingh Prataprao Patil, Tatyasaheb Kore Warana Sahakari Panipurvatha Santha Maryadit, Shigaon, Sangli
26	Shri Vithal Pundalik Patil,Balkrushana Kaka Warana Sahakari Panipurvatha Santha Maryadit, Shigaon, Sangli
27	Shri Dynandeo Bapu Patil,Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit,Bachani,Kolhapur
28	Shri Vinayak Bhirao Talekar,Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit,Bachani,Kolhapur
29	Shri Eknath Shivaji Patil,Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit,Bachani,Kolhapur
30	Shri Rajendra Bhapuso Chavan,Shisavarde Latwade Warana Sheti Panipurvath Mandal,Sawarde, Kolhapur
31	Shri Sanjay Pandurang Patil,Shri Jyotiling Warana Sahakari Pani Purvatha Santha Maryadit,Bhadole,Kolhapur
32	Shri Chandrashekar Janardan Buva,Shri Mahadev Warana Pani Purvatha Seva Santha Maryadit,Wathar Tarfe Udgaon,Kolhapur
33	Shri Atmaram Shivappa Chougule,Shri Warana Shetkari Sahakari Pani Purvatha Seva Santha Maryadit, Kini,Kolhapur
34	Secretary,Shri Mahalaxmi Warana Sahakari Pani Puravatha Santha Maryadit, Peth Wadgaon,Kolhapur

35	Shri Abhijit Prataprao More,Satave Warana Sahakari Pani Puravatha Santha Maryadit,Satave,Kolhapur
36	Shri Nivrutti Ishwar Chavan,Top-Wadgon –Tasgaon-Minche sahakari Pani Puravatha Santha Maryadit,Peth Wadgaon, Kolhapur
37	Shri Wamanrao Salunkhe,Sahyadri Sahakari Sakhar Karkhana Ltd.,Yashavantnagar, Karad, Dist Satara
38	Shri Prakash Pandurang Patil,Satara Zila Sahakari Pani Purvatha Santhacha Sangh, Maryadit, Karad,Satara
39	Shri Nivruti Iswara Chavan,Ambap, Talsade Warana Sahakari Pani Purvatha Santha Maryadit,Talsade, Kolhapur
40	Shri Shayamrao Dttatreya Shendge,Shri Wanana Sahakari Pani Purvatha Santha Maryadit,Kakhe, Kolhapur
41	Shri Dattatreya Dhondiram Jadhav, Shri Vitthal Pani Purvatha Seva Sahakari Santha Maryadit, Savarwadi, Kolhapur
42	Shri Shyamrao Nivrutti Medsinghe, Hanuman Sahakari Pani Purvatha Mandali Ltd, Kandgaon,Kolhapur
43	Shri Sachin Bapuso Jamdade, Shri Jai Bhawani Sahakari pani Puravatha Santha Maryadit, male, Kolhapur
44	Shri Balaso Bapurao Nalawade, Shri Vitthal Panipurvatha Seva Sahakari Santha Maryadit,Sawarwadi,Kolhapur
45	Shri Sachin Krishanath Babu Shelke, Shri Hanuman Sahakari Pani Puravatha Santha Maryaditm, Shelkewadi, Kolhapur
46	Adv Sambhaji H. Mohite, Yashavantrao Chavan Sahakari Pani Santha Maryadit,Shirgaon,Satara
47	Shri Tanaji Sadashiv Khot,Bahirewadi Jakhale Warana Sahakari Pani Purvatha Santha Maryadit,Bahirewadi,Kolhapur
48	Shri Yashawant Shankar Kaigade, Sahyadri Warana Sahakari Sheti Pani Puravatha Santha Maryadit,Kodoli,Kolhapur
49	Shri Namdeo Bapu Kambale, Shri Har Har Mahadev Sahakari Pani Puravatha Santha Maryadit,Mharul, Kolhapur
50	Shri Sambhaji Maruti Patil, Shri Har Har Mahadev Sahakari Pani Puravatha Santha Maryadit,Mharul, Kolhapur
51	Shri Rangrao Shankar Bhachate, Shri Koteswar V.K.S Vikas Seva Santha Maryadit, Bahireswar
52	Shri Chandrakant Sadashiv Dinde, Shri Koteswar V.K.S Vikas Seva Santha Maryadit, Bahireswar
53	Shri Vilas Dattatreya Patil, Jai Hanuman Warana Sahakari Panipurvath Seva Santha Maryadit, Alur, Sangli
54	Shri Vilas Dattatreya Patil,Shri Shvi Shankar Warana Sahakari Pani Puravatha Seva Santha Maryadit, Bahadurwadi, Sangli
55	Shri Vilas Dattatreya Patil,Babaso Tatyaso Jadhav warana Sahakari Pani Purvatha Seva Santha Maryadit, Alur, Sangli
56	Shri Pratap Hogade, Janta Dal (Secular), Maharashtra
57	M/s Shri Sai Tyres Remolding Works,Sangli
58	M/s Shri Ganesh Tyre Remold ,Shiroli (Pulachi),Kolhapur
59	M/s Archana Tyres, Kolhapur
60	M/s Navjeevan Tyres Pvt Ltd., Latur
61	M/s Starwel Tyres, Ubraj,Dist-Satara



62	M/s Genu Tyres, Sangli
63	M/s Krishana Tyre Retreders, Karad, Dist-Satara
64	M/s Shakti Tyre Remold, Narayanwadi, Dist-Satara
65	M/s Ajinkya Tyre Retreaders Pvt. Ltd, Additional MIDC, Satara
66	M/s Ashirwad Tyre Works, Shirol, Kolhapur
67	M/s Shetkari Tyre Retradars, Shirol, Kolhapur
68	M/s J. J. Tyres, Gokul Shirgaon, Kolhapur
69	M/s Maharashtra Tyres Remolding Works, Kapoorwadi, Dist Sangli
70	M/s Evlin Wheels, Kolhapur
71	M/s Samrat Tyre Works, N.H.Peth Naka, Sangli
72	M/s Mahalaxmi Tyre Cold Process, Nipani Road, Mudal Titta, Dist-Kolhapur
73	M/s Samrat Tyre Works, Koparde, Dist-Kolhapur
74	M/s Kolhapur District Tyre Retreaders Association, Laxmipuri, Kolhapur
75	M/s Haripriya Tyre Remolding, Mudhaltitta, Kolhapur
76	M/s Kandoba Tyre Remolding Works, Murgud Road Mudhaltitta, Kolhapur
77	M/s Kolhapur Tyres, Wakare, Dist-Kolhapur
78	M/s Kolhapur Tyre Retreading Works, Wakare (Phata), Dist-Kolhapur
79	M/s Kerala Tyre Soles, Kaneriwadi, Kolhapur
80	Shri Subhash Pradhan & Others
81	Shri Vijay Pawar & Others
82	Shri Anil Baburao Kadam, Shri Naikba Sahakari Pani Purvatha Sanstha Maryadit, Beldare, Satara
83	Shri Subhash Krushnappa Sahapure, Balasaheb Sahapure Sahakari Pani Purvatha Sanstha Maryadit, Bubnal Kolhapur
84	Shri Mahadev Shivaji Mali, Sangam Sahakari Pani Purvatha Santha Maryadit, Mundhe, Satara
85	Shri Shivaji Shankar Chavan, Shri Bhagatsingh Warana Sahakari Pani Purvatha Sanstha Maryadit, Aarle, Kolhapur
86	Shri Vasant Ganpati Kekare, Shri Datta Pani Purvatha Seva Sahakari Sanstha Maryadit, Kodoli-Kakhe, Kolhapur
87	Shri Dhanpal Bhau Marje, Bubnal Sahakari Pani Purvatha Sanstha Maryadit, Bubnal
88	Shri Hanumant Yashavant Deshmukh, Talsande-Pargaon Sahakari Pani Puravatha Mandal Ltd., Talsande, Dist: Kolhapur
89	Shri Shripati Ramchandra Bhosale, Shri Hanuman Warana Sahakari Pani Purvatha Santha Maryadit, Chikurd, Dist-Sangli
90	Shri Sanjay Ramchandra Kamble, Vilasrao Kore Warana Ursa Jalsinchani Sahakari Santha Maryadit, Chikurde, Dist-Sangli
91	Shri Babaso Sankar Bhosale, Shri Ganesh Warana Sahakari Pani Purvatha Santha Maryadit, Chikurde, Dist-Sangli

92	Shri Laxman Vithu Kore, Shri Bhiravnath Warana Sahakari Pani Purvath Santha Maryadit, Devarde, Dist-Sangli
93	Shri Shankar Keshav Gujar, Shri Datta Warana Sahakari Pani Purvatha Santha Maryadit,Chikurd, Dist-Sangli
94	Shri Ramchandra Baburao Gaikwad, Shri Mahalaxmi Sahakari Pani Puravatha Santha Maryadit, Arale Borpadale,
95	Shri Bhimrao Tukaram Patil,Shri Sambhaji Warana Sahakari Pani Puravatha Santha Maryadit, Kodoli, Dist- Kolhapur
96	Shri Sambhaji Balkrishana Patil, Bhairavnath Sahakari Pani Puravatha Santha Maryadit, Kese, Dist-Satara
97	Shri Santaram Kadam, Sagareswar Sahakari Soot Girani Maryadit, Kadegaon, Dist-Sangali
98	Shri Sanjay Maruti Chavan, Shri Koteswar Sahakari Pani Puravatha Santha Maryadit, Korti Dist-Satara
99	Shri Bhikhu Dyandeo Salunkhe, Krushanai Sahakari Pani Puravatha Santha Maryadit, Dist-Satara
100	Shri Vijay Ganpatrao Gaikwad, Shri Umeshwar Sahakari Pani Puravatha Santha Maryadit,Umbraj, Dist- Satara
101	Shri Dinkar Babasaheb Mohite, Shriram Sahakari Upasa Jalsinchin Santha Maryadit, Talbid, Dist-Satara
102	Shri Himanshu Balasaheb Shah, Shri Jyotirling Sahakari Pani Puravatha Santha Maryadit, Charegaon, Dist-Satara
103	Shri Sayajirao Balwant Patil, Shri Umeshwar Sahakari Pani Puravatha Santha Maryadit,Umbraj, Dist- Satara
104	M/s Delux Tyre Remold, Kolhapur Road, Ankli (Sangli)
105	Shri Madan Parshuram Limaye, Kelkar Road, Pune
106	M/s Kisan Tyre Remolds, Kolhapur Road, Ankli (Sangli)
107	Shri Ananda Vishawanath Jadhav, Shri Bhagyaxmi Sahakari Pani Puravatha Santha Maryadit, Arewadi, Dist-Satara
108	Shri Sarjerao Bapurao Koli,Dr. J.C.Patil, Kanhoba Warana Sahakari Panipuravatha Seva Santha Maryadit, Kenegaon,Dist-Sangli
109	Shri Mahadeo Anandrao Mohite,Shri Tandaleswar Warana Sahakari Panipuravatha Seva Santha Maryadit, Tandulwadi, Dist-Sangli
110	Jai Javan Jaikisan Warana Sahakari Panipuravatha Seva Santha Maryadit, Tandulwadi, Dist-Sangli
111	M/s Devgiri Sahakari Pani Puravatha santha Maryadit, Peth Wadgaon, Dist- Kolhapur
112	M/s Western Maharashtra Steel Manufactutres Association, Wakadewadi,Pune
113	Shri Sanjay Tatyaso Chaugule, Udgaon Sahakari Pani Puravatha Mandali Ltd, Udgaon, Dist-Kolhapur
114	Shri Shrikant Vasant Mali, Ratnachaya Sahakari Pani Puravatha Santha Maryadit, Ka Sangao Dist-Kolhapur
115	Shri Appaso Krishna Kale, Shri Kalleswar Sahakari Pani Puravatha Mandali Ltd.,Shirol, Dist-Kolapur
116	Shri Rangrao Sitaram Patil, Shri Hanuman Sahakari Pani Puravatha Seva Santha Maryadit, Kutwad, Dist-Kolhapur
117	Shri Sanjay Anandrao Ghatge,

	Shri Annapurna Sahakari Pani Puravatha Santha Maryadit, Vhanali, Dist-Kolhapur
118	Shri Sunil Chugonda Kumbhoje, Shri Parswanath Sahakari Pani Puravatha Santha Maryadit, Majale, Dist-Kolhapur
119	Shri Akaram Rajaram Bachate, Shri Tuljabhawani Sahakari Pani Puravatha Santha Maryadit, Vhanali, Dist-Kolhapur
120	Shri Kumar Balgonda Patil, Shri Vidyasagar Sahakari Pani Puravatha Santha Maryadit, Majale, Dist- Kolhapur
121	Shri Annaso Kallappa Chougule, Shri Jalganga Sahakari Pani Puravatha Santha Maryadit, Ka Alate, Dist-Kolhapur
122	Shri Adgonda Annapatil, Padmavati Sahakari Pani Puravatha Santha Maryadit, Ka Alate, Dist-Kolhapur
123	General Manager, Krishana Verala Magaswargiya Sahakari Soot Girani Maryadit, Palus, Dist-Sangli
124	Executive Director, Shri Vyankatesh Shetkari Vinkari Sahakari Soot Girani Ltd., Ichalkaranji
125	Shri Satish Malu, Krishna Valley Chamber of Industries & Commerce, MIDC Kupwad, Dist-Sangli
126	Shri Manohar Bhaskar Shinde, Go-Ka-Ka Sahakari Pani Puravatha Santha Maryadit, Karad, Dist-Satara
127	Shri Balgonda Nagonda Patil, Shri Vidyasagar Sahakari Pani Puravatha Santha Maryadit, Lat, Dist-Kolhapur
128	Shri Suresh Devvappa Shedbale, Lat Bagayatdar Sahakari Pani Puravatha Mandal. Ltd, Lat, Dist-Kolhapur
129	Shri Samgonda Algonda Patil, Shri Kalleswar Sahakari Pani Puravatha Mandali Ltd., Lat, Dist-Kolhapur
130	Shri Mangonda Ramchandra Mirje, Shri Gurudatta Sahakari Pani Puravatha Santha Maryadit, Ka. Sangaon, Dist-Kolhapur
131	Shri Pradhan Raoso Bhoje, Shri Mahalaxmi Sahakari Pani Puravatha Santha Maryadit, Ka. Sangaon, Dist-Kolhapur
132	Shri Sudarshan Kallapa Majale, Shri Chatrapati Shau Sahakari Pani Puravatha Santha Maryadit, Ka. Sangaon, Dist-Kolhapur
133	Shri Rajendra Annasaheb Muthane, Indian Freedom Fighters & Heirs Association, Ichalkaranji, Dist-Kolhapur
134	Shri Navnath Jejurkar & Others
135	Shri Vivek Dharurkar, Bharat Forge Ltd., Pune
136	Shri Sandip Belsare, Pimpri Chinchawad Small Industries Association, Pune
137	Shri Bhimchandra Ramchandra Khedkar, Akhil Bhartiya Grahak Panchayat, Pune
138	Executive Director, Shetkari Sahakari Soot Girani Maryadit. Ltd., Sangole, Dist-Solapur
139	Shri U.N. Nagane, Babasaheb Deshmukh Shetkari Sahakari Soot Girani Maryadit, Atpati, Dist-Sangli
140	Shri Surendra Jain, Shirolu Manufacture's Association, Kolhapur
141	Shri V.T. Kulkarni, Raymond Luxury Cotton Limited, Hatkangale, Kolhapur
142	Smt Sheetal Ketkale Lakmi Industries Manufacturers Associations, Hatkangale, Kolhapur
143	Shri P. I. Gaddam, Solapur Jilha Yantramag Dhharak Sangh, Solapur

144	M/s. Century Enka Limited, Bhosari, Pune
145	Ichalkarnji Engineering Association, Shahpur- Ichalkaranji, Kolhapur
146	Shri Ramesh Shankarlal Parik, Kapad Market, Ichalkaranki, Kolhapur
147	Shri Ramesh Shankarlal Parik, Son Irrigation Systems Pvt. Limited, Hatkanangale, Kolhapur
148	Smt Sunanda Shakaralal Parik, Aditya Industries, Hatkanangale, Kolhapur
149	Shri Himmat Dhondiram Salokhe, Shri Mahalaksmi Sahakari Pani Purvatha Sanstha Maryadit, Kalmbe Tarfe Thane, Kolhapur
150	Shri Balaso Kallapa Chaogule, Shri Hanuman Sahakari Pani Purvatha Mandali Limited, Udgaon, Kolhapur
151	Shri Chandrakant Nivrutti Patil, Shri Adrushya kadsiddheshwar Sahakari Pani Purvatha Sanstha Maryadit, Jaitad, Kolhapur
152	Shri Sharad Krushana Thakare, Solapur Industries Association, Chincholi, Solapur
153	Shri Namdev Dhondiba Varke, Shri Datta Sahakari Upsa Jalsinchan Seva Santha Maryadit, Kalnakwadi, Kolhapur
154	Shri S.Y.Kelkar, Tessitura Monti India Pvt Ltd., Kohapur
155	Smt.Vimal Chandrakant Kumthekar, Shetkari Mahila Sahakari Vastra Nirman Soot Girani Maryadit, Sagole, Kolhapur
156	Shri Ashok Medankar, PIAGGIO Vehicles Pvt Ltd., Baramati
157	Shri Ram Babu Jhaydar & others The Ichalkaranji Power Loom Waivers Co-Op Association Ltd. Ichalkaranji, Kolhapur
158	Shri Talware Yogendra Vasant, Strome Energy Pvt. Ltd., Kothrud, Pune
159	Shri Shakar Amidwar, Vidut Urja Equipments Pvt.Ltd., Baner, Pune
160	Shri R.R.Dange, Dindayal Magasvargiya Sahakari Soot Girani Ltd., Islampur, Sangli
161	Shri Rajesh Korpe, Manufactures Association Satara
162	Shri Lalit K. Dwivedi, Pudumjee Paper Products Ltd., Chinchwad, Pune
163	Shri Roopak Karnik, Bekaert Industries Pvt. Ltd., Viman Nagar Pune
164	Chairman, Jai Hanuman Sahakari Pani Puravatha Santha Maryadit, Sawarde Narande, Kolhapur
165	Chairman, Shri Hanuman Sheti Pani Purvatha Mandal, Bhendawale, Kolhapur
166	Shri Jayant Deo, Prabhat Road, Pune
167	Shri V.V.Joshi, Tata Construction, CPED & Environment, Pune
168	Shri Tushar Kasar & Shri Shrikant Acharya, AAM ADAMI PARTY, Pune
169	Shri Tushar Parakh, Maha Cold Storage Association, Pune
170	Shri Shriram Dixit, Shree Tools, Satara
171	Shri Surenderkumar Ambardar, Rubberchem Industries, Satara
172	Shri Jitesh Kokate, Bajaj Finserv Ltd., Akurdi, Pune
173	Shri Anil Galande, ALKYL AMINES Chemicals Ltd., Daund, Pune

174	Shri S.K.Birje,Paranjape Autocast Pvt.Ltd.,Kothrud,Pune
175	Shri Jyotirling Sahakari Pani Puravatha Santha, Tondal, Dist-Satara
176	President,Sangali Miraj MIDC,Manufacture's Association, Miraj
177	Shri Dhanajay Gaikwad,Tuljabhavani Cold Storage Pvt.Ltd.,MIDC,Baramati
178	Shri Dhairyasheel Gaikwad,Tuljabhavani Cold Storage,MIDC,Baramati
179	Shri Prakash Deochake,General Rubber Products, Satara
180	Shri Suhas Joshi,Talegaon Dabhade,Pune
181	Chairman,The Ichalkaranji Sizing Co-Op Society Ltd,Ichalkaranji,Kolhapur
182	Shri Shrikant Anandrao Jagtap, Shri Gurudatta Sahakari Sheti Pani Purvatha Santha Maryadit,Morve, Satara
183	Secretary & Others, The Chandgad Taluka Chember of Commerce and Industries, Chandgad,Kolhapur
184	Shri Kiran Tarlekar, Vita Yantramag Audyogik Sahakari Sangh Ltd., Vita Sangli
185	Shri Mohan Kondiba Khot, Birdev Sahakari Pani Purvatha Mandali Ltd.,Arjun vad, Kolhapur
186	Shri Dattatreya Shankar Suryavanshi, Shri Arjuneshwar Sahakari Pani Puravatha Madali Ltd.,Arjun vad,Kolhapur
187	Shri Bharat Shakar Sahapure, Shri Siddheswar Sahakari Pani Purvatha Mandali Ltd, Arjunvad,Kolhapur
188	Shri Dadaso Bhikoba Chavan,Shri Biravnath Sahakari Pani Purvatha Society Ltd.,Bhade,Satara
189	Shri Anandrao Sambhaji Nalawade, Shri Khanderai Sahakari Pani Purvatha Santha Maryadit,Mohare,Kolhapur
190	Shri Javid Momin,Maharashtra Veej Grahak Sagathana,Kolhapur
191	Shri Nilesh Jadhav,WNS Global Service Pvt.Ltd,Viman Nagar,Pune
192	Shri Rajaram Tukaram Chavan, Shri Chatrapati Shau Sahakari Pani Purvatha Santha Maryadit,Girgaon,Kolhapur
193	Shri Shivaji Dadu Gurav, Chavare-Ghunki Sahakari Pani Puravatha Santha Maryadit,Chavare
194	Shri Rangarao Pandurang Patil, Shri Bairavnath Sahakari Pani Purvatha Santha Maryadit,Girgaon,Kolhapur
195	Shri Laxmanrao Shankarrao Kulkarni, Sarvoday Vividha Karyakari Vikas Society,Kodoli, Kolhapur
196	Shri Raju Rathi, Solapur Chember of Commerce,Industries & Agricultural,Solapur
197	Shri Sanjay Angadi,Kolhapur Engineering Association,Kolhapur
198	Shri Rakesh Baweja,Ranjangaon Industries Association,Ranjangaon,Pune
199	EXIDE Industries Ltd.,Plot No.E-5, Ahmednagar
200	Shri Suresh Sancheti,One up Advisors and Consultants Pvt. Ltd.Shukrawar Peth, Pune.
201	Shri Ananadrao Kondiba Waghmode,Shri Hanuman Sahakari Pani Puravatha Santha Maryadit, Shegadewadi, Tal-Khandala,Satara
202	Shri Akaram Rajaram Bachate, Shri Annapurna Sahakari Pani Puravatha Santha Maryadit, Vhanali,Dist-Kolhapur

203	Shri Mahadev Dattatreya Patil, Khasdar Dattajirao Kadam (Anna) Shiradwad Vividh Karyakari Sahakari (Vikas) Society Ltd., Shriradwad,Kolhapur
204	Chairman,Shiradwad Shivnakwadi Panchaganga Sahakari Pani Puravatha Madali Ltd., Shriradwad,Kolhapur
205	Shri Sarjerao Narayan Jarag, Shrikrushana Sahakari Pani Puravatha Mandali, Mahe, Kolhapur
206	Shri Manik Anandrao Patil,Shiradwad Shivnakwadi Panchaganga Sahakari Pani Puravatha Madali Ltd.,Shriradwad,Kolhapur
207	Shri Prashant Shamrao Patil, Shri Anand Pani Purvatha Seva Sahakari Santha Maryadit, Kodoli,Pargaon,Kolhapur
208	Mahratta Chamber of Commerce,Industries & Agricultural, Senapati Bapat Road, Pune
209	Shri Sagar Appaso Makane,Sahakar Maharshi Tatyasaheb Mohite Sahakari Pani Purvatha Santha Maryadit,Yelgud-Randevivadi, Kolhapur
210	Arvind Cotsyan (India) Ltd,Shri Laxmi Co-Op Industrial Estate, Hatkanangale,Kolhapur
211	Shri Nandkumar Yashwant Bhore,Deshabhakta Ratnappanna Kumbhar Panchaganga Sahakari Sakhar Karkhana Ltd., Ganganagar- Ichakaranaji, Kolhapur
212	Shri Ashish Badnerkar,Corning Technolies India Pvt Ltd,MIDC Chakan,Pune
213	Shri Nitin Anandrao Mane,Shri Somaidevi Pani Puravatha Seva Sahakari Santha Maryadit, Nisare,Satara
214	Shri Y.G.Ghatage,The Ichalkaranaji Co-Op Spinning Mills Ltd., Ichalkaranaji
215	Shri Rajendra Vijay Swami, Zambli- Takwade Panchaganga Sahakari Panipurvatha Mandali Ltd,Zambli,Kolhapur
216	Shri Mohinder Shandna,Allied Digital,Swargate,Pune
217	M/s Technocrat Construction,Pune
218	Shri Babasaheb Shripati Bhosale, Shri Narayaneshwar Sahakari Ursa Jal Sinchan,Tal-Khandala,Satara
219	Shri Shahaji Dinkar Bhosale, Shri Shivshambho Sahakari Ursa Jal Sinchan Santha Maryadit, Satara
220	Smt Seema Agarwal
221	Shri Bikram Chaudhari
222	Shri Chandrakant Kisan Kale
223	Shri Dharmaraj Manohar Jagdale (Satara)
224	Shri B. G. Angolkar, Gokul Shirgaon Manfu. Asso
225	Shri Ankush Murlidhar Jagtap, Mandki SPPS
226	Shri Suresh Sancheti, One up Advisors & Const Pvt Ltd
227	Shri Mahesh P Dhuka, Industrial Metal Powders Ind Pvt Ltd
228	Shri Arun Sambhaji Waghmare
229	Shri Santosh Ramakant Saudankar
230	Shri S.V.Bhise, Tata communications and Parag Milk Foods
231	Dr. Santosh S Supe, S M Supe Foundation

232	Col. Oberai, Talegaon Floriculture Park
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**Nashik Division**

Sr. No.	Name of the Objector
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Shri Siddharth Varma (Soni), Nasik
2	Shri Sham Dashrath Patil,Dhule
[B]	Objections / Suggestions by Consumers
3	Shri Ajay Chandak,Dhule
4	Shri Satish Shah,Nashik
5	Dindori Industrial Association,Palkhed Road, Dindori,Nashik
6	Shri Arvind Gadhakh,Gangapur Road,Nashik
7	Shri Vijay Moharir,Akhil Bhartiya Grahak Panchayat,Jalgaon,Maharashtra
8	Shri Ajay Baheti,M/s Bhagvati Steel Cast Pvt.Ltd,Sinner,Nashik
9	Managing Director,Loknayak Jayprakash Narayan Shetkari Sahakari Soot Girani Ltd, Shahada, Dist:- Nandurbar
10	Shri Uttam Soudane,Nandgaon, Nashik
11	Shri Vinayak Salunkhe,Thyssenkrupp Electrical Steel India Pvt. Ltd., Igatpuri, Nashik
12	Adv. Anil Chavan,Dwarka, Nashik
13	Shri Milind Dharmadhikari,Bhusawal
14	Director,Avdhoot Heat Treat Pvt. Ltd.,Ambad, Nashik
15	Shri Atul Vijay Pawar,Jalgaon
16	Shri D.S.Mahajan,Jawahar Shetkari Sahakari Soot Girni Ltd.,Dhule
17	Shri R.V.Chitale,Shriganesh Textile & Infra (I) Pvt.Ltd,Dhule
18	Shri Milind Rajput,Nashik Industries & Manufacturer's Association (NIMA),Nashik
19	Shri Rajendra Ahire,Ambad Industries & Manufacturer's Association (AIMA),Nashik
20	Shri C.M.Deshpande,Nashik
21	Shri Mohan Yashwant Sardar,Jalgaon
22	Shri Amit Patil,Nashik
23	Shri Ajay Boraste, Corporator, Nashik Municipal Corporation, Nashik
24	Shri Rahul Shirwadkar,BOSCH Ltd.,Nashik
25	Shri Anupam Ghosh,Nashik Ispat Pvt. Ltd.,Sinnar,Nashik
26	Shri Dhanvant H. Yeola,Polygenta Technologies Ltd.,Nashik
27	Shri Sanjay Pagare,CEAT Ltd.,Nashik

Sr. No.	Name of the Objector
28	Shri V.P.Yadav,Omsfree Agro Tech Ltd.,Dhule
29	Shri Santosh Agrawal,DEESAN Agro Tech Pvt Ltd.,Dhule
30	Dr.Nilesh Rohankar,Subordinate Engineers Association,MSEB,Nashik
31	Shri Yasinkha Ramjankha Pathan, Ma.Ra. Vi.Sharmik Seva Saghatana, Bhusawal
32	Shri Ansari Abdul Malik Mohamad Yasin,President, Ansari, Momin, Julaha Powerloom Conference,Malegaon
33	Shri Shrikrishna Shirole
34	Shri Mahendra Bhamare
35	Shri Yusuf mohammad Shaikh
36	Shri Vilas G.Deole
37	Shri Jagannath Nathe
38	Shri S.P Mishara
39	Shri Ashok Sonawane
40	Shri Suresh Maru
41	Advocate Prabhakar Waychade
43	Shri Suresh Borse
44	Shri Ramesh Dahekar
45	Shri Sanjay Chavankar
46	Shri Tarun Agarawal
47	Dr.Karad

**Navi Mumbai Division**

Sr. No.	Name of the Objector
[A]	Consumer Representative u/s. 94 (3) of the Electricity Act, 2003
1	Dr. Ashok Pendse, Thane Belapur Industries Association
2	Shri N. Ponrathnam,80, Sindhi Society, Chembur, Mumbai – 400071
[B]	Objections / Suggestions by Consumers
2	Shri Sanjay Avhad,Kalyan
3	Shri.George John,Andheri (W), Mumbai-53
4	Shri.Vikrant Patil Kinikar, Kolhapur Zilha Panipuravatha Santhacha Sahakari Sangh Maryadit, Kolhapur
5	Shri.Chandrakant Patil, Kolhapur Zilha Panipuravatha Santhacha Sahakari Sangh Maryadit, Kolhapur
6	Shri Hanumant B.Lad,



	Shri Basaveshwar Sahakari Panipuravatha Santha Maryadit, Kundal, Dist Sagali
7	Shri N.D.Patil, Maharashtra Rajya Irrigation Fedaration, Kolhapur
8	Shri R.G.Tambe, Sahyadri Sahakari Sakhar Karkhana Ltd., Yashavantnagar, Karad, Dist Satara
9	Shri Bhagwan Sadashiv Patil, Janseva Panipurvatha Seva Sahakari Santha Maryadit, Padali (Khurd), Tal- Karvir, Dist- Kolhapur
10	Shri P.Premchandran, Roma Builders Pvt.Ltd, Powai, Mumbai
11	Shri Mahadev Nivrutti Sutar, Shri Hanuman Sahakari Panipurvath Santha Ltd, Asude, Kolhapur
12	Shri Mahadev Maruti More, Yashavanrao Atigre Sahakari Panipuravatha Santha Maryadit, Koge, Tal-Karvir, Dist-Kolhapur
13	Shri J.P.Lad, Sangli Zilha Sahakari Panipuravatha Santhacha Sahakari Sangh, Sangli
14	Shri Ashok P. Pawar, Satyashwar Sahakari Pani Puravatha Santha Maryadit. Kundal, Dist-Sangli
15	Shri Jyotiram Rangrao Patil, Shri Ram Warana Sahakari Pani Puravatha Santha Maryadit, Bhadole, Kolhapur
16	Shri Sambhaji Bapu Patil, Hanuman Warana Sahakari Pani Puravatha Santha, Bhadole, Kolhapur
17	Shri Chandrakant Shripati Patil, Shri Datta Warana Sahakari Pani Puravatha Santha, Kanranjwade, Sangli
18	Shri Bhimrao Narayan Shinde, Shri Ram Warana Sahakari Panipurvatha Santha Maryadit, Wathar Tarfe Udgaon, Kolhapur
19	Shri Pandurang Dattu Chougale, Buwache Wathar Warana Sahakari Panipurvatha Santha Maryadit, Wathar Tarfe Udgaon, Kolhapur
20	Shri Udyasingh Prataprao Patil, Tatyasaheb Kore Warana Sahakari Panipurvatha Santha Maryadit, Shigaon, Sangli
21	Shri Vithal Pundalik Patil, Balkrushana Kaka Warana Sahakari Panipurvatha Santha Maryadit, Shigaon, Sangli
22	Shri Dynandeo Bapu Patil, Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit, Bachani, Kolhapur
23	Shri Vinayak Bhimrao Talekar, Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit, Bachani, Kolhapur
24	Shri Eknath Shivaji Patil, Kedarling Bhairavnath Sahakari Pani Purvatha Santha Maryadit, Bachani, Kolhapur
25	Shri Rajendra Bhapuso Chavan, Shri Savarde Latwade Warana Sheti Panipurvath Mandal, Sawarde, Kolhapur
26	Shri Sanjay Pandurang Patil, Shri Jyotirling Warana Sahakari Pani Purvatha Santha Maryadit, Bhadole, Kolhapur
27	Shri Chandrashekar Janardan Buva, Shri Mahadev Warana Pani Purvatha Seva Santha Maryadit, Wathar Tarfe Udgaon, Kolhapur
28	Shri Atamaram Shivappa Chougule, Shri Warana Shetkari Sahakari Pani Purvatha Seva Santha Maryadit, Kini, Kolhapur
29	Secretary, Shri Mahalaxmi Warana Sahakari Pani Puravatha Santha Maryadit, Peth Wadgaon, Kolhapur
30	Shri Abhijit Prataprao More, Satave Warana Sahakari Pani Puravatha Santha Maryadit, Satave, Kolhapur
31	Shri Nivrutti Ishwar Chavan, Top-Wadgon –Tasgaon-Minche sahakari Pani Puravatha Santha Maryadit, Peth Wadgaon, Kolhapur

32	Shri Wamanrao Salunkhe, Sahyadri Sahakari Sakhar Karkhana Ltd.,Yashavantnagar, Karad, Dist Satara
33	Shri Prakash Pandurang Patil, Satara Zilha Sahakari Pani Purvatha Santhacha Sangh, Maryadit, Karad,Satara
34	Shri Nivruti Iswara Chavan, Ambap, Talsade Warana Sahakari Pani Purvatha Santha Maryadit,Talsade, Kolhapur
35	Shri Shayamrao Dattatreya Shendge, Shri Wanana Sahakari Pani Purvatha Santha Maryadit,Kakhe, Kolhapur
36	Shri Dattatreya Dhondiram Jadhav, Shri Vitthal Pani Purvatha Seva Sahakari Santha Maryadit, Savarwadi, Kolhapur
37	Shri Shyamrao Nivrutti Medsinghe, Hanuman Sahakari Pani Purvatha Mandali Ltd, Kandgaon,Kolhapur
38	Shri Sachin Bapuso Jamdade, Shri Jai Bhawani Sahakari pani Puravatha Santha Maryadit, male, Kolhapur
39	Shri Balaso Bapurao Nalawade, Shri Vitthal Panipurvatha Seva Sahakari Santha Maryadit,Sawarwadi,Kolhapur
40	Shri Sachin Krishanath Babu Shelke, Shri Hanuman Sahakari Pani Puravatha Santha MaryaditShelkewadi, Kolhapur
41	Adv Sambhaji H. Mohite, Yashavantrao Chavan Sahakari Pani Santha Maryadit,Shirgaon,Satara
42	Shri Tanaji Sadashiv Khot,Bahirewadi Jakhale Warana Sahakari Pani Purvatha Santha Maryadit,Bahirewadi,Kolhapur
43	Shri Yashawant Shankar Kaigade,Sahydri Warana Sahakari Sheti Pani Puravatha Santha Maryadit,Kodoli,Kolhapur
44	Shri Namdeo Bapu Kambale, Shri Har har Mahadev Sahakari Pani Puravatha Santha Maryadit,Mharul, Kolhapur
45	Shri Sambhaji Maruti Patil, Shri Har har Mahadev Sahakari Pani Puravatha Santha Maryadit,Mharul, Kolhapur
46	Shri Rangrao Shankar Bachate, Shri Koteswar V.K.S Vikas Seva Santha Maryadit, Bahireswar
47	Shri Chandrakant Sadashiv Dinde, Shri Koteswar V.K.S Vikas Seva Santha Maryadit, Bahireswar
48	Shri Vilas Dattatreya Patil, Jai Hanuman Sahakari Panipurvatha Seva Santha Maryadit, Alur, Sangli
49	Shri Vilas Dattatreya Patil,Shri Shiv Shankar Warana Sahakari Pani Puravatha Seva Santha Maryadit, Bahadurwadi, Sangli
50	Shri Vilas Dattatreya Patil,Babaso Tatyaso Jadhav warana Sahakari Pani Purvatha Seva Santha Maryadit, Alur, Sangli
51	Shri Ashok M.Swami, Maharashtra Rajya Sahakari Vastrodyog Mahasangh Maryadit,Bellard Estate, Mumbai
52	Shri Babaso Shankar Bhosale, Shri Ganesh Warana Sahakari Pani Purvatha sanstha Maryadit, Chikurde, Tal. Walawa, Sangli
53	Shri Sanjay Ramchandra Kamble, Vilasrao Kore Warana Upasa Jalsinchan Sahakari Sanstha Maryadit, Chikurde, Tq. Walawa, Sangli
54	Shri Shripati Ramchandra Bhosale,Shri Hanuman Warana Sahakari Pani Purvatha sanstha Maryadit, Chikurde, Tal. Walawa, Sangli
55	Shri Hanumant Yashawant Deshmukh, Talsande-Pargaon Sahakari Pani Purvatha Mandal Limited, Talsande, Hatakanangale, Kolhapur
56	Shri Shankar Keshav Gujar, Shri Datta Warana Sahakari Pani Purvatha sanstha Maryadit, Chikurde, Tal. Walawa, Sangli

57	Shri Subhash Krishanappa Shahapure, Balasaheb Shahapure Sahakari Pani Purvatha Sanstha Maryadit, Bubnal, Tal. Shirol, Kolhapur
58	Shri Shivaji Shankar Chavan, Shri Bhagatsingh Warana Sahakari Pani Puravatha Sanstha, Aarale, Tq. Panhala, Kolhapur
59	Shari Vasant Ganpati Kekare, Shri Datta Pani Puravatha sewa sahakari Sanstha Maryadit, Kodoli-Kakhe, Tal. Panhala, Kolhapur
60	Shri Laxman Vithu Kore, Shri Bhairavnath Warana Shakati Pani Purvatha sanstha Maryadit, Devarde, Tal. Walawa, Sangli
61	Shri Anil Baburao Kadam Shri Naikba Shakari Pani Purvatha Sanstha Maryadit, Beldare, Tal. Karad, Satara
62	Shri Dhanpal Bhau Marje, Bubnal Sahakri Pani Puravatha Sanstha Maryadit, Bubnal, Tal. Shirol, Kolhapur
63	Shri Mahadev Shivaji Mali, Sangam Shakari Pani Purvatha Sanstha Maryadit, Mundhe, Tal. Karad, Satara
64	Shri Bhimrao Tukaram Patil, Shri Sambhaji Warana Sahakari Pani Purvatha Sanstha Maryadit, Kodoli, Tal. Panhala, Kolhapur
65	Shri Dilip Parasnis, Taloja Manufacturers Association, P-21, MIDC, Taloja, Panvel
66	Shri Sambhaji Balkrishana Patil, Shri Bhairavnath Sahakari Pani Purvatha Sanstha Maryadit, Kese, Tal. Karad, Satara
67	Shri Ramchandra Baburao Gaikwad, Shri Mahalakshmi Sahakari Pani Purvatha Sanstha Maryadit, Arale Borpatade, Tal. Panhala, Satara
68	Mahavir Kumar Jain, Borivali East, Mumbai
69	Shri Anand Vishawanath Jadhav, Shri Bhagyalakshmi Shakari Pani Purvatha Sanastha Maryadit, Aarewadi, Gamevadi, Dlevadi, Tal. Karad, Satara
70	Secretary, Deogiri Shakari Pani Purvatha Sanastha Maryadit, Peth Vadagaon, Hatkanangale, Kolhapur
71	Secretary, Jai Javan Jai Kisan Warana Sahakari Pani Purvatha Sanstha Maryadit, Tandulwadi, Tal. Walava, Sangli
72	Secretary, Shri Tandaleshwar Warana Sahakari Pani Purvatha Sanstha Maryadit, Tandulwadi, Tal. Walava, Sangli
73	Shri Sarjerao Baburao Koli, Dr. J. C. Patil, Kanhoba Warana Sahakari Pani Purvatha Sanstha Maryadit, Kanegaon, Tal. Walava, Sangli
74	Shri Eknath Sonwane, Chamber of Small Industry Associations, TSSIA House, Wagle Industrial Estate, Thane
75	Shri Sunil Kulkarni, Thane Small Scake Industries Association, TSSIA House, Wagle Industrial Estate, Thane
76	Shri Malgonda Ramchand Mirje, Shri Gurudatta Shakari Pani Purvatha Sanstha Maryadit, kaa Sangav, Kagal, Kolhapur
77	Shri Sudarshan Kallappa Majale, Shri Chhatrapati Shahu Sahakari Pani Purvatha Snastha Maruadit, kaa Sangav, Tal. Kagal, Kolhapur
78	Shri Shrikant Vasant Mali, Ratnachhaya Sahakari Pani Purvatha Sanstha Maruadit, kaa Sangav, Tal. Kagal, Kolhapur
79	Shri Pradhan Raso Bhoje, Shri Mahalakshmi Sahakari Pani Purvatha Snastha Maruadit, Kaa Sangav, Tq. Kagal, Kolhapur
80	GSC Glass Limited, R-50, Rabale, TTC Industrial Area, MIDC, Thane Belapur Road, Navi Mumbai
81	Fazlani Exports Pvt Ltd, A-32, TTC Industrial Area, MIDC, Mahape, Navi Mumbai

82	Shri B. R. Mantri, Vallabh Villa No. 2, Opp. Purnima Talkies, Murbad Road, Kalyan (West)
83	Shri Sanjay Tatayaso Chowgule, Udgaon Shakari Pani Purvatha Mandali Limited, Udagaon, Tal. Shirol, Kolhapur
84	Shri Madhukar Tukaram Shinde, F-201, Shri Hari Park, Mhopada, Panvel
85	JML Polyfab, Bldg B-11/01, Shiva Palm Beach CHS, Sector-04, Nerul, Navi Mumbai
86	Shri Rangrao Sitaram Patil, Shri Hanuman Sahakari Pani Purvatha Seva Sanstha Maryadit, Kutwad, Tal. Shirol, Kolhapur
87	Shri Balgonda Nagonda Patil, Shri Vidyasagar Sahakari Pani Puravataha Sanstha Maryadit, Lat, Tal. Shirol, Kolhapur
88	Shri Suresh Devappa Shedbale, Lal Bagayat Sahakari Pani Puravataha Mandal Ltd, Shirol, Kolhapur
89	Shri Appaso Krishana Kale, Shri Kalleshwar Sahakari Pani Puravataha Sanstha Maryadit, Shirol, Kolhapur
90	Shri Sandeep Zaveri, Total Print Solutions Pvt Ltd W-228(A). T.T.C. Industrial Area, Behind Reliance Silicon, Thane Belapur Road, Kopar Khairne, Navi Mumbai- 400 709
91	Director, S. M. Systems (P) Ltd, A-297, Road No. 16-Z, Kamgar Hospital Bus Stop, Wagle Indl. Estate, Thane- 400 604
92	Shri Sharad Patil, Bhivandi Vikas Manch ,1578, Gala No. 1, Eshwarya Complex, Aashish Senamashejari, Padmanagar, Bhiwandi, Thane- 421 302
93	Shri Faizan Ahmad Aazmi, Maharashtra State Powerloom Federation 667, Faizan Compound, Narpoli, Bhiwandi – 421 302
94	Director, Sands Textile Consultant Pvt Ltd, Plot No. C-117, T.T.C. Ind. Area, Pawane MIDC, Off. Thane, Belapur Road, Near Hyco Bus Stop, Navi Mumbai - 400705
95	Shri Akaram Rajaram Bachate, Shri Annapurna Sahkari pani Purvtha Sanstha Maryadit, Vhanali, Sake-Kenvade, Gorambe, Kagal, Kolhapur
96	Shri Adgonda Anna Patil, Padmavati Sahakari Pani Puravatha Santha Maryadit, Ka Alate, Dist-Kolhapur
97	Shri Annaso Kallappa Choughule, Shri Jalganga Sahkari Panipurvtha Sanstha Ltd, Alate, Hatkangale, Kolhapur
98	Shri Akaram Rajaram Bachate, Shri Tuljabhavani Sahkari Pani Purvtha Sanstha Ltd, Vhanali, Kagal, Kolhapur
99	Shri Sunil Chowgonda Kumbhoje, Shri Parshvanath Sahkari Pani Puravatha Sanstha Ltd, Majale, Hatkangale, Kolhapur
100	Shri Kumar Balgonda Patil, Shri Vidyasagar Sahakari Pani Puravatha Santha Maryadit, Majale, Dist- Kolhapur
101	Shri S.K.Mital, Century Rayon, P.B. No. 22, Shahad, Thane – 421 103
102	Shri Pratap G. Hogade, Maharashtra Veej Grahak Sanghna, Janta Dal Office, 10, C.D.O. Baracks, Opp Yogshem, Jeevan Bima Marg, Churchgate, Mumbai- 400 020
103	Shri Somgonda Aalgonda Patil Shri Kalleshwar Sahkari pani Purvtha Sanstha Ltd, Lat, Shirol, Kolhapur
104	Shri Padmakar Renghe, TechNova Imaging System (P) Ltd, Laxmi Mills Estate, Off. Dr. E. Moses Road, Mahalaxmi, Mumbai- 400 011
105	Shri. Narendra V. Dharamshi, HD Fire Protech Pvt Ltd D-6/2, Road No. 34, Wagle Estate, Thane- 400 604
106	Shri S. P. Fabricators, 29/1, Yogayog Co-op. Housing Society, Shivai Nagar, 1st Pokhran Road, Thane- 400 606
107	General Secretary, Pokhran lake Small Scale Industries Association, Thane

	Shanti Industrial Estate, 1st Floor, Pokhran Road No.1, Near Upvan, Thane-400 606
108	Shri D. K. Raut, Tarapur Industrial Manufacture's Association P-14, Recreation Centre, MIDC Tarapur Indl. Area, Thane-401 506
109	Shri Prathik A. Shah, S K Chemical Industries (Mumbai) Pvt Ltd 818/819, Corporate Avenue, Sonawala Road, Goregaon (E), Mumbai- 400 063
110	Valsad District Co-Op. Milk Producers' Union Ltd M-12, Tarapur Industrial Area, Boisar-401506, Palghar
111	Sai Engineering Works, Gala No. 40(A), Plot No. 267, K.B.Yadav Industrial Estate, 1st Pokhran Road, Upvan, Thane(W)- 400 606
112	Purnima Enterprises, A-12,K.K.IND Estate, Near K B Yadav IND Estate, Pokhran Road, No.1, Upavan, Thane(W)-400 606
113	Shri. M. P. Mishra, Amines & Plasticizers Ltd 'D' Building, Shiv Sagar Estate, Dr. Annie Besant Road, Worli, Mumbai-400 018
114	Manalee Industries, 1/1 & 2, Manisha Industrial Estate, near Anandashram School, Palghar- Boisar Road, Thane-401 404
115	Shri Ajay Modi, Vasai Industrial manufacturer's Welfare Association 2/8, Vora Industrial Estate No.1, Navghar, Vasai Road (E), Thane-401 201
116	Shri Dilip Parasnis, Forstar Frozen Foods Pvt Ltd M-53, MIDC Industrial Area, Taloja, Navi Mumbai-410 208
117	Shri S.K.Jena, Inox Air Products Pvt Ltd 7th Floor, Ceejay House, Dr. Annie Besant Road, Worli, Mumbai- 400 018
118	Shri Uday Gupta, Mahindra Sanyo Special Steel Pvt Ltd 74, Ganesh Apartments, Lady Jameshedji Road, Mahim, Mumbai-400 016
119	M/s D P Industries & 103 others
120	Marichi Exports, GI/205, Jai Jalaram Complex, Village Pimplas, Bhiwandi- 421 311
121	Ortech Equipments, Plot No-267, Unit No-745/E, near Water Tank, Pande Ind. Estate, Upvan, Thane(W)-400 606
122	Universal Engineering, Riddhi Siddhi Sankul, Flat No. 18, Near Hanuman Mandir, Golavali Fish Market, Dombivali(E)
123	Abhijeet Engineers, Upvan Industrial Estate, Mithila Tank Road, Upvan, Pokhran Road No.1, Thane(W)- 400 606
124	Orton Engineering Pvt Ltd, 750-A, Plot No. 268, Near Water Tank, Pokhran Road No.1, Upvan, Thane (W)- 400 606
125	Tirupati Industries Gala No.1, Digvijay Ind Estate No.2, Pokhran Road No.1, Upvan, Thane(W)- 400 606
126	Tolia Industries Plot No. D-4/2, Road No.16, Wagle Industrial Estate, Thane- 400 604
127	Needumbra Industries Pvt Ltd Plot No. A-156, Main Road, Wagle Industrial Estate, Thane-400 604
128	Gini Tex Pvt Ltd, 413, Tania Jogani Ind Premises, Sitaram Mill Compound, Near Lodha Group, N.M.Joshi Marg, Lower Parel(E) Mumbai- 400 011
129	Neeraj Purohit, Gini Silk Mills Ltd, 413, Tania Jogani Ind Premises, Sitaram Mill Compound, Near Lodha Group, N.M.Joshi Marg, Lower Parel(E) Mumbai- 400 011
130	Machino Techniks No. 1A & B.K.B. Yadav Industrial Estate, 1st pokhran Road, Upvan, Thane- 400 606
131	V.N. Engineering Works, 233, Sainath Industrial Estate, Upvan, 1st Pokhran Road, P.O.J.K. gram, Thane(W)- 400 606
132	Atul Engineering Works Unit # 3, Sonai Industrial Estate, Pokhran Road No.1, Upvan, Thane- 400 606

133	Shivam Packaging industries 233, Sainath Industrial Estate, Pokharan Road No.1, P.O. Jekegram, Thane- 400 606
134	Smita Engineering Works, Digvijay Industrial Estate, 268, Phokharan Road, No.1, Near Municipal Water Tank & Raj Enterprises, Upvan, Thane
135	Shri S.N. Tolia, Forward Precision Engineers Pvt Ltd, Thane
136	Central Engineering B-7, Adarsh industrial Estate, Pokhran Road No.1, Upvan, Thane- 400 606
137	Kiran Udyog, Satyam Industrial Estate No.1, Unit No. 12, Pokhran Road No. 1, Upvan, Thane- 400 606
138	M. M. Fabricators Plot No. 268, Behind Syan industries, Upvan, Thane (W)- 400 606
139	Uday Engineering Works Unit No.2, Digvijay Industrial Estate No.2, Pokhran Road No.2, Upvan Thane- 400 606
140	Maliyekkal Engineering, Gala No. 2, Plot 268, Pandey Industrial Estate, Upvan, Near Water Tank, Thane (W)- 400 606
141	Anand Enterprises, Gala No. B/2, Adarsh industrial Estate, Pokharan Road, No.1, Upvan, Thane- 400 606
142	Kiran Enterprises, Satyam Industrial Estate No.1, Unit No.9, Pokharan Road No.1, Upvan, Thane- 400 606
143	Tirupati Enterprises, Gala No. 1 , Digvijay Ind. Estate No. 2, Pokhran Road No.1, Upvan, Thane(W)- 400 606
144	Primetech Engineers B-4, Shanti Niwas, Opp. J.K.Gram, 1st Pokharan Road, Thane(W)- 400 606
145	Rajesh Industries Opp. Digvijay Estate, Pokhran no.2, Upvan, Thane- 400606
146	Minhas Engineering Works Plot No. 268, Near Water Tank, Upvan, Thane(W)- 400 606
147	Harco Overseas (India) Pvt Ltd, 413, Jogani Indl. Estate, Opp. Kastrurba Hospital, J.R. Boricha Marg, Lower Parel(East), Mumbai- 400 011
148	Prolific Technology, A-1-703, Sonallaxmi, Dhawal Hills, Near Gawand Baug, Pokhran No. 2, Upvan, Thane(W)- 400 610
149	Dabir Industries Parag Estate, Shed No. 11, Pokhran Road No. 1, Upvan, Thane-400 606
150	Shri Satish Patil, Linde India Ltd Plot No. T-8, MIDC Industrial Area, Taloja, Raigad, Navi Mumbai- 410 208
151	N.S.D. Enterprises B 8/2, Adarsh industrial Estate, Pokharan Road No.1, upvan, Thane- 400 606
152	Dabir Precitech Pvt Ltd, F-60, Engineering Zone, Addl. Ambernath Industrial Area, Taluka Ambernath, Thane- 421 506
153	RVE TechnoPrint Pvt Ltd Unit No. C-2, Digvijay Estate No. 2, Pokharan Road No.1, Upvan, Thane- 400 606
154	Shivam Machine Tools Plot No. 268, Near Mithila Tanks, Upvan, Pokhran Road No.1, Thane- 400 606
155	Nina Enterprises A/104, Saileela Apt. Parsik Road, Kharegaon, Kalwa, Thane- 400 605
156	Kiran Industries, Satyam Industrial Estate, No. 1 , Unit No. 6 & 14, Pokhran Road No.1, Upvan, Thane- 400 606
157	Kangaroo Leather Pvt Ltd PAP R-64, MIDC, Rabele Naka, Navi Mumbai- 400 701
158	Star Offset, 25, Annapurna Industrial Estate, Tilak Road, Gatkopar(E), Mumbai- 400 077

159	Crystal Automation Pvt Ltd, A-363/364, Road No. 26, near TMT Wagle Bus Depot, Wagle Industrial Estate, Thane (W)- 400 604
160	Shri Huzaifa Bamboat, Bamboat Press Pvt Ltd 14-G Thacker Industrial Estate, N M Joshi Marg, Lower Parel(E), Mumbai- 400 011
161	Mohini Organics Pvt Ltd T-78 & 79, MIDC, Tarapur Industrial Area, Boisar- 401506
162	Shri Mahesh Kudav, Venus Safety & Health Pvt Ltd Post Box No. 15, Plot No. W-284, MIDC, Rabale, Navi Mumbai – 400 701
163	Smt Pallavi Mulay, Alloy Steel Producers Association of India (ASPAI) Belapur Road, Thane 400 605
164	Arlex Chemi Pvt Ltd 1302, B-Wing, Cello Triumph, I.B. Patel Road, Goregaon (E), Mumbai- 400 063
165	Shri Ganesh Gawade, Zydus Takeda Healthcare Pvt Ltd C-4, MIDC, Village Pawne, Thane-Belapur Road, Navi Mumbai- 400 705
166	Akhil Wires Pvt Ltd, G-3/9, MIDC, Tarapur Ind. Area, Boisar, Palghar- 401 506
167	Pennar Industries Ltd, J-72(2), Tarapur MIDC Indl, Area, Off Navapur Road, Boisar- 401 506, Palghar
168	The Pharmaceutical Products of India Ltd Plot No. D- 312/313, T.T.C. Area, MIDC, Turbhe Naka, Navi Mumbai- 400 705
169	Jayant Specialities Pvt Ltd Plot No. K-21, MIDC Tarapur, Boisar, Palghar- 401 506
170	Valiant Glass Works Pvt Ltd 384-M, Dhabholkarwadi, 5th Floor, Kalbadevi Road, Mumbai- 400 002
171	Kilitch Drugs (India) Ltd 37, Ujagar Industrial Estate, W.T.Pati; Marg, Deonar, Mumbai- 400 088
172	S. R. Iyer, Common Effluent Treatment Plant Association P-60, MIDC, Khairane, P.O. Koper Khairane, Thane-Belapur Road, Navi Mumbai- 400 709
173	Sudhir Switchgears Pvt Ltd, 305/6, Appejay House, 130 BS Marg, Fort, Mumbai- 400 023
174	K. A. Koshy, Quality Engineering Products A-193, Road No. 16/A , Wagle Industrial Estate, Thane(W)- 400 604
175	R. S. Patwardhan Envirocare labs Pvt Ltd A-7, MIDC, Wagle Industrial Estate, Main Road, Thane 400 604
176	Chandrakant N. Patil ,Shri Adrush Kadsiddheshwar Sahkari Pani Purvtha Sanstha Ltd, Jaital, Karveer, Kolhapur
177	Shri Ballaso Kallappa Chaugule , Shri Hanuman Shakari Pani Purvtha Mandal, Udgaon, Shirol, Kplhapur
178	Shri Himmat Dhondiram Saloke, Shri Mahalaxmi Sahkari Pani Purvtha Sanstha Ltd, Kalbe tharf ThaneKarveer, Kolhapur
179	Shri Namdev Dhondiba Varke, Shri Datta Sahakari Ursa Jalsinchin Seva Santha Maryadit, Kalnakwadi, Kolhapur
180	Shri V.R.G. Prakash, Vice President, Bombay Small Entrepreneurs Association 213, Raja Indl Estate, Mulund (W), Mumbai 400080
181	Shri Nilesh Phalak, G.M. Syntex Pvt Ltd., Plot No. D 21/1/1, MIDC Boisar 401 506
182	Shri Vikas More, G.M. Syntex Pvt Ltd., E-32/12, MIDC Boisar 401 506
183	Shri Naresh Gharat, At Post Saphale, Tal. Palghar
184	Shri Amit Kakkar, Sr Manager (Electrical), Galaxy Surfactants Ltd V-23, MIDC, Taloja, Panvel

185	Dheeraj Deokate, Rexam Beverage Cans India pvt Ltd,
186	Spring Steel Products, F-45, Addl Ambernath Indl Area,MIDC Ambernath (E)
187	Shri C Bagavathy,MIDC Tarapur, Boisar
188	Shri Ravi Kumar, GM Syntex Pvt Ltd.,Boisar
189	Shri Pravin Arekar,MIDC, Tarapur, Boisar
190	Shri Ganesh Punde, MIDC, Tarapur, Boisar, Dist. Palghar
191	Indramani Shastri, MIDC Tarapur, Pandey Colony, Boisar
192	Pawan Gupta, Shivaji Nagar, Boisar, Dist.Palghar
193	Shri Suresh Patil,Siyaram Silk Mills Ltd.,Plot H-3/2, MIDC, Tarapur
194	Shri Satish Kulkarni, Dhruva Engineering Works, V.R. Dandekar Compound, Behind Vijaya Bank, Mahim Road, Palghar
195	Shri Punamkumar M Kataria Bldg No R41, Flat No 6, MIDC, Sudarshan Nagar, Dombiwali(E)
196	Shri Ravindrakumar Rana, At.Po. Boisar, Palghar
197	Shri Sandeep Dongre,Sanchita Marine Products Pvt Ltd Plot No. M-11, MIDC Industrial Area Taloja, navi Mumbai- 410 208
198	Shri O N Malhotra, G M Syntex, Plot No D-21, MIDC Tarapur
199	R J Bhujang, G M Syntex Pvt Ltd Plot No. E 37/2 & E 38, Tarapur Ind Estate, Boisar, MIDC, Palghar- 401 506
200	Shri Santosh Bagade,Rizwan Ice & Cold Storage D-366, TTC Ind Area, Kukshet, MIDC, Turbbe, Navi Mumbai- 400 706
201	Shri Vivek Garg, Sudarshan Chemical Industries Ltd 46, MIDC Area, Dhatav-Roha, Raigad- 402 116
202	Shri Ganesh Vanjare, Boisar
203	Shri Sonali Juvekar, Boisar
204	Shri Vivek Sankhe, Boisar, Palghar
205	Shri Janamejay Singh, MIDC, Tarapur
206	Shri Mohammad Zubair,Hejazi Foodstudd Pvt Ltd.Taloja Ind. Area, Panvel
207	Shri Rajendra Vanjare, Boisar
208	Beetee Textile Industries Ltd.
209	Shri Suresh Borate, Manager,Allana Investments & Trading Co Pvt Ltd MIDC, Taloja, Panvel
210	Shri Sandeep
211	Smt Ponam Singh, Tarapur, Boisar
212	Shri.Shyamlal Roy, Tarapur Boisar
213	Smt Asha Toshniwal
214	Shri Vinayak Toshniwal
215	Shri Yogesh Zambare



216	Shri Somi Prajan
217	Shri Srinivas JBL Saks Pvt Ltd
218	Shri Srinivas G.S Dinesh Polyfab Pvt Ltd, Plot No. F-54, MIDC, Murbad, Thane,
219	Shri Y R Raotole, Samarpan Fabricators Pvt Ltd 51/52, Ajay Apartment, S.V. Road, Santacruz(W), Mumbai- 400 054
220	Anupam Electroheat 127 & 126, Punjani industrial Estate, Pokhran Road No. 1, Khopat, Thane(W)- 400601
221	Anupam Heaters and Controls Pvt Ltd, Plot A-284, Road No. 30 Wagle Ind Estate, Thane (W) 400604
222	Shri S.N. Shah, Manometer (India) Pvt Ltd Plot No. F-6/4, Road no. 22, Wagle industrial Estate, Thane-400 604
223	Esjay Industries, Plot No. A/285, road No. 16-Z, Wagle Estate, Thane- 400 604
224	Shri Sachit Prasad, Boisar
225	Smt Darshana N. Naik
226	Shri Vikas Gunjal
227	Shri Peer Mohammad
228	Shri Rajesh Tendulkar
229	Metropolitan Equipments & Consultants Pvt Ltd, A-486, Wagle Estate, Rod No. 24, Thane(W)- 400604
230	Shri Yogesh Pawar, Tarapur, Boisar
231	Seasaga Enterprises Pvt Ltd Plot No. R-25 & R-26, TTC Indl. Area, Rabale, navi Mumbai- 400 701
232	Shri Dhananjay Bharti
233	Shri Ranjith Shetty
234	Shri Ashok Grover, Gowalis Industries Association 101-103, Indira Udyog Haven, Golani Complex, Waliv, Vasai(E) 401 208
235	Shri Nilesh Dubey
236	Shri Sachin Manale, M/s. Tata Teleservices (Maharashtra) Ltd Volta Premises, T.B. Kadam Marg, Chinchpokli, Mumbai- 400 033
237	Shri Bhavesh M Maru, M/s. Fitwell Engineering Company 2nd Floor Pokharan Road, Opp. Oswal Park, Thane(W)- 400 601
238	Shri Sunil Chandra Agarwal, Boisar
239	Chek Associates, Santaram Hariram Compound, Opp. Golden Dyes Corpn, L.B.S. Marg, majiwada, Thane- 400 601
240	Shri Manoj Yadav, Boisar
241	Shri Dinesh Kumar Ajariwal, Boisar
242	Shri Pankaj Tiwari, MIDC Tarapur, Boisar
243	Shri Suresh Patil
244	Shri Yashpal Singh

245	Shri R.K. Sharma, Siyram Silk Mills Ltd, E-125, MIDC, Tarapur
246	Shri Sandeep Patil, Siyram Silk Mills Ltd, E-125, MIDC, Tarapur
247	Shri Mahesh Khedkar, Vangaon
248	Shri Chandan Sahoo, Boisar, Dist. Palghar
249	Shri Pramod Sharma, Boisar, Dist. Palghar
250	Shri Pradeep Heralgi, Boisar, Dist. Palghar
251	Shri Chetan Mhatre, Palghar
252	Shri Devansh Varshney, G-1, Indu CHS, Juvekar Marg, Bhandup (East), Mumbai
253	Shri Anil Kargawal, Boisar, Dist. Palghar
254	Shri Tulsidas Bhoite, Siyaram Silk Mills, G-4/1A, MIDC, Tarapur, Boisar, Dist. Palghar
255	Shri Madhur Sanchawat
256	Shri Bapusaheb Katkar, Boisar, Dist. Palghar
257	Shri Nishad Naik, Vasai
258	Shri Sanjay Laddha, Boisar, Dist Palghar
259	Shri Sudhakar Bonde, Subodh Technologies, Material Science Centre, R-968, MIDC Rabale, Navi Mumbai
260	Shri Kishore Vengsarkar, Super Containers Pvt Ltd C-424, MIDC, TTC Turbhe, Navi Mumbai
261	Shri K.S. Dungrawala, Dolphin Lubricants & Specialities Pvt Ltd R-623 MIDC, Rabale, TTC, Navi Mumbai
262	Shri Shubh Karan, Fine Cast Industries, A-872, TTC, MIDC Khairne, Navi Mumbai 709
263	McCoy Architectural Systems Pvt Ltd. E-6, Agrawal Indl Estate, 139-G, S.V. Road, Jogeshwari (West), Mumbai
264	Shri Shakil Ansari, Maharashtra Electricity Consumers Association, H. No. 55/5, Shop No. 4, Gr. Floor, Murlidhar Compound, Kalyan Road, Bhiwandi-421302, Thane
265	Shri Sanjay Kadakia, Esfour Engineering Works, R-327, MIDC, Rebale, Thane Belapur Road, Navi Mumbai- 400 701
266	Shri Sowmil C. Shah, C.S. Diesel Engineering Pvt Ltd, R 253, MIDC, Rebale Industrail Estate, Thane Belapur Road, Navi Mumbai-400 701
267	Shri Vinit R Thakkar, Printage Print Process Automation 30, Chitraklekha, Dr. Lazrus Road, Charai Naka, Thane(W)- 400 602
268	ESDEE Paints Ltd., Chembur, Mumbai
269	Shri Sandeep Pol, Siyaram Silk Mills Ltd Plot No. J-177
270	Shri Shubh Karan, R.K. Manufacturing Co., Mahape, Navi Mumbai
271	Fabricolor Pvt Ltd Plot No. A-730, MIDC, Mahapa, TTC, Indl. Area, Navi Mumbai- 400 710
272	Shri Puneet Rane, Rane Rao Reshamia Laboratories Pvt Ltd, RRR House, Plot No. 80, Sector 23, CIDCO Industrial Area, Turbhe, Navi Mumbai- 400 705
273	Shri Kulbhushan Jetly, Eastwest Engineering & Electronics Pvt Ltd D-191, MIDC, Sirwane, Post Nerul, Navi Mumbai- 400 706
274	Shri Sachin Ghorpade, Wind Independent Power Producers Association Ltd,

	6th Floor, Tower 4A, M.G. Road, DLF Corporate Park, Gurgaon-122002
275	Shri Paramjeet Singh Saini, Additional Patalganga Manufacturers Association Plot No. N-1/11, Addl. Patalganga, MIDC area, Panvel, -410207
276	Shri Ulhas Chodhari, 56/5, Gorai (2), Borivali(W), Mumbai-400 091
277	Shri Dilip Bhattalwar, Steel Authority of India Ltd, Chandrapur Ferroalloy Plant MUL Road, Chandrapur-442401
278	Shri Vinay Toshniwal
279	Smt Geeta Toshniwal
280	Shri G N Kamath, Indian Wind Power Association Empire House, 214 Dr D N Road, Ent A K Nayak Marg, Fort, Mumbai- 400 001
281	Shri Mitul Gogari, Dinsons Self Sticks Pvt Ltd A-506, MIDC, TTC Ind Area, Mahape, Navi Mumbai- 400 710
282	Shri. P.H. Limaye, Thane manufacturer's Association TMA House, Plot No. 6, Main Road, Wagle Industrial Estate, Thane- 400 604
283	Shri Rustom B. Irani, Seafood Exporters Association of India 810, Vashi Infotech Park, Sector 30 – A, Vashi, Navi Mumbai- 400 705
284	Shri Dilip G. Nevse, Alps Ice & Cold Storage Pvt Ltd 30-A.P.M.C. Yard Mafco Compound, Vashi, Navi Mumbai- 400 705
285	Shri Lalji Ramji Savla, Navi Mumbai Cold Storage Owners Welfare Association 620/621, Commodity Exchange Building, Plot No. 2,3 & 4, Sector 19, Vashi, Navi Mumbai- 400 705
286	Shri Rakesh Yadav
287	Shri S. P. Dabhade, U. P. Twiga Fiberglass Ltd, N-40, Additional Ambernath Industrial Area, MIDC, Shil Badlapur Road, Ambernath(E), Thane- 421 506
288	Shri Milind Rajpurkar, Owens-Corning (India) Pvt Ltd Plot No. T-28, MIDC Phase 2, Taloja, P.O. Box No. 67, Raigad- 410 208
289	Dr. Anant Sardeshmukh, MCCIA, A Wing, 5th Floor, MCCIA Trade, Tower, S.L. Kirkoskar International Conventional Center Complex, 403 A, Senapath Bapat Road, Pune- 411 016
290	Naini Trading Works, C/o United Engineering Company Plot No. A-411, Road No. 28, Lane L-4, Wagle Industrial Estate, Thane- 400 604
291	Shri Mukund Bendre, Mahendra Electrical Works Plot No. –A-433, Road No. 28, Wagle Industrial Estate, Thane(W)- 400 604
292	Bajaji Engineering Works 3/3A, Satyam Industrial Estate, Pokhran Road No. 1, Upvan, Thane- 400 606
293	Expo Engineering Enterprises 210, Tirupati Indl. Estate, Subhash Nagar, Bhandup (W0, Mumbai- 400 078
294	Shradha Electricals & 56 Others
295	Mahindra Dished Ends Pvt Ltd Plot No. B-13, Road No. 12, Wagle Industrial Estate, Thane- 400 604
296	Weldon Engineers Pvt Ltd Plot A-398, Road No. 34, Wagle Industrial Estate, Thane- 400 604
297	ACE India Engineering Pvt Ltd G1-19 & 119, Jai Jalaram Industrial Complex, Pimplas, Biwandi, Thane- 421311
298	Precision Engineers A-76, Road No. 21, Wagle Industrial Estate, Thane- 400 604
299	Shri Belson Koshy, Steelcons Engineers Pvt Ltd, R-215, TTC Industrial Area, MIDC, Rabale, Navi Mumbai- 400 701

300	Shri R. G. Choubey, Palanpur Engineering & Fabrications Ltd 83, Bajaj Bhavan, Nariman Point, Mumbai- 400 021
301	Kimaya Engineers, B-12, Digvijay Estate II, Pokhran Road, No.I, Upvan, Thane- 400 606
302	Shri Sunil Deshpande, Croda India Company Pvt LTD, Plot No.1/1 Part, TTC Industrial Area, Thane Belapur Road, Koparkhairne, Navi Mumbai- 400 710
303	Sintbush (India) Pvt Ltd, Plot No.41, 42, 49 & 50, Shree Shakti Udyor Nagar, Palghar Manor Road, Vevoor Village, Palghar (E), Thane-401 404
304	NBZ Pharma Ltd, R-905, TTC Indl Area, MIDC, Rebale, Navi Mumbai- 400 701
305	Shri R.S. Tiwari, Tej Conntrol Systems pvt Ltd Plot No. A-329/331, 333, Road No. 25, Wagle Industrial Estate, Thane- 400 604
306	Shri Pravin D. Thakkar, Bhiwandi Electricity Users Welfare Association 4th Nizampura, Near Jawwad Hotel, Bhiwandi, Thane-421 302
307	Sarin Industries, D-299, TTC Ind. Area, MIDC, Off Pfizer Road, Turbhe, Navi Mumbai- 400 705
308	Shri K. P. Dosamaya, J-Fibre Corporation, D 17-18, Nandanyav Industrial Estate, Opp. ACC Research Centre, L.B. Shastri Marg, Thane- 400 604
309	A.R.F. Leathers, Jai jalaram Complex, C-2, 1st Floor, Gala No. 109, Pimplas, Bhiwandi, Thane-421 311
310	Zaara International, Jai Jalaram Complex, C-2, 1st floor, Gala No. 108, Pimplas, Bhiwandi, Thane- 421 311
311	Sanjivani Paranteral Ltd 205, P.N. Kothari Indl. Estate, L.B.S. Marg, Bhandup(W), Mumbai- 400 078
312	Shri Nipun Mehta, Sphere Engineers Pvt Ltd Plot No. A-287, Road No. 16/Z, Wagle Industrial Estate, Thane- 400 604
313	Shri Shishir G Jog, PS Auto Pvt Ltd Plot No. A-57, Road No. 10, Wagle Estate, Thane- 400 604
314	V. K. Fabricators, 34, Shiva Estate, Next to Tata Power, lake Road, Mumbai- 400 078
315	QOT Packaging Pvt Ltd Unit 212/A-2, Shah & Nahar Industrial Estate, lower Parel(W), Mumbai- 400 013
316	Shri Sudhir Kumar, Angre Chemicals Pvt Ltd 402, Amit Industrial Estate, 61, Dr. S.S.Rao Road, Parel, Mumbai- 400 012
317	Shri Sudhir Kumar, Kubo Combustion Efficiency Chemicals Pvt Ltd 401, Amit industrial Estate, 61, Dr. S.S.Rao Road, Parel, Mumbai- 400 012
318	Shri Sudhir Kumar, Kubo Chemicals Pvt Ltd 402, Amit Industrial Estate, 61, Dr. S.S.Rao Road, Parel, Mumbai- 400 012
319	Palghar Plywood Product Pvt Ltd, Plot No.11, Village-Alyali, Palghar-401 404
320	Shri Sasi Damodaran Padmanabhan, Sasi Retreading Enterprises Pvt Ltd D-308, TTC-Turbhe, Navi Mumbai- 400 705
321	Transfer Systems, W-164/E, TTC industrial Area, MIDC Pawane, Thane Belapur Road, Navi Mumbai- 400 705
322	Advance Construction Co Pvt Ltd, Advance Chambers, Sector No. 9, CBD, Navi Mumbai- 400 614
323	Smt Mahadevi Kale,Rakiro Biotech Systems Pvt Ltd R-466, TTC Industrial Area, MIDC Rabale, Navi Mumbai- 400 701
324	Shri. Prashant P. Katkar, Hindalco Industries Ltd, P.B. No. 05, Taloja AV, Raigad- 410 208
325	Paper Print, R-355(1), MIDC Rable, Behind Bhushan Hotel, Thane Belapur Road, navi Mumbai- 400 701

326	Shri Kishore R. Jagasia,Kay Kay Embroideries Pvt Ltd A-284/586, MIDC Ind. Area, Mahape, navi Mumbai- 400 710
327	Interchrome, Plot No. R-207/2, Road No. RR-4, TTC Industrial, Area, MIDC, Rabale, Thane-Belapur Road, Ghansoli, Navi Mumbai- 400 701
328	Shri Arjun Lade
329	Dr. Subin Mathews, Metalemmms Bombay Pvt Ltd Plot No. A-185, 16-Z-Road, Wagle Industrial Estate, Thane- 400 604
330	Shri Vinay Sapte, Svizera Labs Pvt Ltd Plot No. 29-33, Govandi, Mumbai- 400 043
331	Mandhana Industries Ltd,Tarapur MIDC,Boisar
332	Shri RW Choudhari, Tesla Electrosystems Pvt Ltd W-157, TTC Industrial Area,MIDC, Pawane, Navi Mumbai- 400 705
333	Shri Sanket Mokul,Packwell Craft Pvt Ltd, Plot No. R-902, MIDC Rabale, TTC Industrial Areas, Thane Belapur Road, Navi Mumbai- 400 701
334	Shri Rajendra Patil,Balkrishna Synthetics Ltd, Plot No. H-3/1, MIDC, Tarapur, Palghar
335	Shri Manoj Shah,Belami Fine Chemicals Pvt Ltd C-308, MIDC, TTC Pawne, Industrial Area, Navi Mumbai- 400 705
336	Michael Crushing Equipments Co.,Plot No. R-560, Behind Golden Garage, TTC Area, MIDC, Rabale, Navi Mumbai- 400 701
337	Six Sigma Gases India Pvt Ltd, R-727,MIDC Pipe Road, Rabale, Navi Mumbai- 400 701
338	Shri Deepak Kulkarni
339	Shri Sachin Bansode, Hartex Silk Mills Pvt Ltd, Plot No. F-2/3, MIDC Tarapur, Boisar
340	G.M.Fabrics Pvt.Ltd, Plot No.F-2/4,MIDC Tarapur, Boisar
341	Dhanasingh Fabrics Pvt.Ltd,Plot No.F-2/2,MIDC Tarapur, Boisar
342	Shri Chandrajeet Yadav
341	Shri Bharat Ramanuj
342	Shri Vinod Sharma
343	Shri Vinay Sapte,Maneesh Exports(EOU)
344	Shri V. K. Sharma
345	Shri Prashant Bhosle
346	Shri Rane, Display House exhibition Events Retail, 402, V.K.Industrial Estate, Pais Street, Byculla(W), Mumbai-11
347	Shri Alok Singh, Siyaram Silk Mills Ltd. G1/1, Tarapur MIDC
348	Shri Chandrashekhar Vinayak Surve, Khar, Mumbai-51
349	Shri Suresh Babu Nair, Rubcomp Industries Pvt. Ltd. W-469, TTC Industrial Area, Turbhe Mahape Road, Opp. Mayur Cold Storage, Navi Mumbai-705
350	Smt Sachita Nand Sharma
351	Shri Stephen Souza, Boisar Tarapur
352	Shri Amanprit Mahante,Boisar, Tarapur

353	Shri Jitendra Pandey, Boisar, Tarapur
354	Shri Mehul Patil
355	Shri Mohan Kondiba Khot, Birdev Sahakari Pani Purvatha Mandali Ltd., Arjun vad, Kolhapur
356	Shri Dattatreya Shankar Suryavanshi, Shri Arjuneshwar Sahakari Pani Puravatha Madali Ltd., Arjun vad, Kolhapur
357	Shri Bharat Shakar Sahapure, Shri Siddheswar Sahakari Pani Purvatha Mandali Ltd, Arjunvad, Kolhapur
358	Shri Rajaram Tukaram Chavan, Shri Chatrapati Shau Sahakari Pani Purvatha Santha Maryadit, Girgaon, Kolhapur
359	Shri Shivaji Dadu Gurav, Chavare-Ghunki Sahakari Pani Puravatha Santha Maryadit, Chavare
360	Shri Laxmanrao Shankarrao Kulkarni, Sarvoday Vividha Karyakari Vikas Society, Kodoli, Kolhapur
361	Dextra India Pvt Ltd, Office No.1, Seventh Floor, Building no. 9, Solitaire Corporate park, Andheri, Gatkopar Link Road, Andheri(E), Mumbai- 400 093
362	Shruti Bhatia, Indian Energy Exchange Ltd Unit no.3,4,5 7 6 Fourth Floor, Plot No.7, TDI Centre, District Centre, Jasola, New Delhi- 110 025
363	Sankalp Organics Pvt Ltd, 13, Seva Sadan, D.J. Road, Vile-Parle(W), Mumbai- 400 056
364	Shri Ashok Khurana, Association of Power Producers 501-502, 5th Floor, Mohan Dev Building, 13, Tolstoy Marg, new Delhi- 110 001
365	S.R.Gupta, Tarapur industrial Manufacturers's Association Recreation Centre, MIDC Tarapur Indl. Area, Palghar-401 506
366	Empeef Chemicals Pvt Ltd, 12, Veena Apt, Opp. Bhagwati Hospital, S.V.P. Road, Borivali(W), Mumbai- 400 103
367	Cosmic Chemicals, 12, Veena Apartments, Opp. Bhagwati Hospital, S.V.P. Road, Borivali (W), Mumbai- 400 103
368	Puneet Rane, Korde Chemicals, RRR house, Plot 80, Sector 23, CIDCO Industrial Area, Turbhe Naka, Navi Mumbai- 400 705
369	Shri K.R.Onkar, Patalganga and Rasayani Industries' Association P/23, MIDC Residential Area, Mohopada, Rasayani, Raigad- 410 222
370	Tuba Oxygen Pvt Ltd, Plot No. K-24, Vishnu Nagar, Dighal MIDC, TTC indl Area, Navi Mumbai- 400 708
371	Tit-Bit Foods (India) Pvt Ltd Plot No. A-55, TTC Industrial Area, MIDC, Mahape, Navi Mumbai- 400 710
372	Shri Ashok Medankar, Piaggio Vehicles Pvt Ltd, 9th Floor, Sky One, Kalyani Nagar, Pune- 411 006
373	Shri Manikant Singh, SK Formulations India Pvt Ltd, R-406, TTC Industrial Area, Rabale, Navi Mumbai- 400 701
374	Shri Mohan Keskar, Britomatics Engineers Pvt Ltd A-285, MIDC, TTC, Industrial Area, Shilfata Road, Mahape, Navi Mumbai-400 701
375	Shri Arun Sarnobat, Prijai heat Exchange Pvt Ltd, Plot No. B-25, MIDC, TTC Industrial area, MIDC, Pipe Line Road, Behind Bharat Bijlee, Navi Mumbai- 400 708
376	Shri Manohar Chandnani, Prudent Arts & Fab Private Limited, A-221, TTC Industrial Area, Opp. Anthony Motors, MIDC, Mhape, Navi Mumbai
377	Shri Kaushik Kale, Swami Samarth Consultants, 202, Sunrise Business Park, Wagale Estate, Thane (W)
378	Shri Praveen Patel, Hira Print Solutions Pvt Ltd. Powai Mumbai

379	Smt Sayali Sawant,A.S.Controls Pvt Ltd. A-160 TTC Ind. Area, MIDC Khairne, Thane-Belapur Road, Navi Mumbai
380	Shri Sumit Gala, International Industrial Springs A-26, Road No. 10, Wagle Industrial Estate, Thane
381	Shri Dhiraj Pawar, Bajaj Polyblends Pvt Ltd., Rasayani, Panvel
382	Supreme Bond Pvt Ltd, MIDC Mahape, Navi Mumbai
383	Shri Sunil Garad, Dicitex Furnishing Pvt. Ltd, MIDC Tarapur, Palghar
384	Shri Manmohan Gupta, SAMMAAN Fabrics Pvt. Ltd, TTC Ind. Estate, Khairne, Navi Mumbai
385	Ashok Stove Pvt Limited, D-77/1, TTC Industrial Area, MIDC, Turbhe, Navi Mumbai
386	Shri Vinod Garg, Nagreeka Exports Limited, 7, Kala Bhavan,3, Mathew Road, Mumbai
387	Angadpal Industries Pvt Ltd, Plot No. H-4/3, MIDC, Tarapur-Boisar, Thane
388	Shri V. S. Paradkar, MEHK Chemicals Private Limited W-6,7,8,C-153, TTC, Pawane, Navi Mumbai
389	Max Flow, W-5, TTC Industrial Area, Pawane, Thane
390	Robonik (India) Pvt Ltd., A-374, TTC, MIDC Mahape, Navi Mumbai
391	Shri C. Rajaian, Wel Finish Metal Processors Pvt Limited, MIDC TTC, Rabale, Thane
392	Shri C. Rajaian, GEMTECH, MIDC TTC, Rabale, Thane
393	Shri P B Naik, Future Plastics, Biwandi, Thane
394	ACE Plastic,Bhiwandi, Thane
395	Excel Hone Manufacturing (India) Pvt Ltd,TTC, MIDC, Rabale, Navi Mumbai
396	Sharpline Automation Pvt LtdTTC, Digha MIDC, Navi Mumbai
397	B. Vrajlal & Co. Iron and Steel Merchants,14, Sonapur Lane, New Darukhana, Mazgaon, Mumbai
398	Shri S R D Narsimhan, Lubrizol India Pvt Limited, VIP House, Prabhadevi Road, Mumbai
399	Westend Foundry Pvt Ltd. TTC Industrial Area, Thane Belapur Road, Rabale, Navi Mumbai
400	Shri Esmail Kharodiya, Mayur Cold Storage Pvt. Ltd, TTC Ind Area, MIDC, Turbhe, Thane
401	Shri Suryakant P. Salunkhe, Sonak Surface Technologies Pvt Ltd. Turbhe MIDC, Navi Mumbai
402	Shri Novonil Guha, Dipti Corrugating Ind. Pvt. Ltd, Shahapur, Thane
403	Shri Mahadev Dattatreya Patil,Khasdar Dattajirao Kadam (Anna) Shiradwad Vividh Karyakari Sahakari (Vikas) Society Ltd., Shriradwad,Kolhapur
404	Shri Mahavir Bemu Bargale,Shiradwad Shivnakwadi Panchaganga Sahakari Pani Puravatha Madali Ltd.,Shriradwad,Kolhapur
405	Shri Sarjerao Narayan Jarag,Shrikrushana Sahakari Pani Puravatha Mandali, Mahe, Kolhapur
406	Shri Manik Anandrao Patil,Shiradwad Shivnakwadi Panchaganga Sahakari Pani Puravatha Madali Ltd.,Shriradwad,Kolhapur
407	Shri Prashant Shamrao Patil, Shri Anand Pani Purvatha Seva Sahakari Santha Maryadit, Kodoli,Pargaon,Kolhapur

408	Shri Sagar Appaso Makane,Sahakar Maharshi Tatyasaheb Mohite Sahakari Pani Purvatha Santha Maryadit,Yelgud-Randevivadi, Kolhapur
409	Shri Shailesh Parikh,Small Scale Enterpreneneur's Association- TTC, Khairane-MIDC,Navi Mumbai
410	Smt Vidhi Shah, Vashi, Navi Mumbai
411	Shri Pradip Bhandari, Veendeep Oiltek Exports Pvt. Ltd. Additional Patalganga, MIDC, Raigarh,
412	Dr. C. D. Patil, Clariant Chemicals (India) Ltd, MIDC, Roha, Raigarh
413	Shri C. R. Jamdar, Arvind Cotspin, MIDC, Gokul Shirgaon, Kolhapur
414	MD, Polycot Yarn Spinning Mills Pvt. Ltd., Kudus, Wada, Thane
415	Gala Gears,LBS Marg, Thane
416	Shri Nandkumar Yashwant Bhore,Deshabhakta Ratnappanna Kumbhar Panchaganga Sahakari Sakhar Karkhana Ltd., Ganganagar- Ichakaranji, Kolhapur
417	Shri Manoj Ruparel, Geecy Engineering Pvt. Ltd.
418	Forward Manufacturing Company Pvt. Ltd., TTC, MIDC, Digha, Navi Mumbai
419	Shri P. P. Bardeskar, ELPPE Chemicals Ltd.
420	Shri D. P. Deshpande, Rathi Dye Chem Pvt Ltd,MIDC, Roha, Raigarh
421	Shri Vinay Ghone, Godfrey Phillips India Limited, TTC, MIDC, Rabale, Navi Mumbai
422	M/s Naina's Apparel Pvt Ltd, 13/14, New Majestics Centre, 144 J.S.S.Road, Girgaum, Mumbai- 400 004
423	Shri Rajendra Vijay Swami,Zambli- Takwade Panchaganga Sahakari Panipurvatha Mandali Ltd,Zambli,Kolhapur
424	M/s Vaid Elastomer Processors Pvt Ltd, Plot No. R-856, T.T.C. Industrial Area,Rabale, P.D. Ghansoli, Navi Mumbai- 400 701
425	Technosoft Engineering Projects LtdA-25, MIDC, Marol Industrial Area, Road No.3, Andheri(E), Mumbai-400 093
426	Jon Parera, Veej Grahak Sanghtna, Vasai, Nirbay Jan Sanstha Karyalaya, Dodtiaali-Nirmal, Vasai, Thane-401 304
427	Manvel Tuksano, Janta Dal (Secular) Vasai, Randive vada, Parnaka, Vasai, Thane- 401 201
428	Nirbhay Jan Sanstha, Nanda, Vasai, Thane
429	Associated Plasmatron Pvt Ltd,Chikhloli Morivali,Ambernath (W), Thane
430	Shri Arun Roy,Rhodia Specialty Chemicals India Ltd,Roha
431	Shetrunjay Dyeing & Weaving Mills Ltd,Bhiwandi
432	Aarti Industries Limited,E-50, MIDC,Tarapur,Boisar
433	Shri Babasaheb Shripati Bhosale,Shri Narayaneshwar Sahakari Upsa Jal Sinchan,Tal-Khandala,Satara
434	Shri Shahaji Dinkar Bhosale,Shri Shivshambho Sahakari Upsa Jal Sinchan Santha Maryadit, Satara
435	Shri S.G.Bahaley,The Institution of Engineers (India),Mumbai
436	Shri P. P.Karhade,Urja Prabhodan Kendra,Thane
437	Sai Wardha Power Ltd,MIDC Warora, Chandrapur



438	Vardhaman Dyestff Industries Pvt.Ltd,MIDC Tarapur,Boisar
439	Shri Abhishek Chaturvedi,Bharti Airtel Limited,Malad (W), Mumbai
440	Shri Gopal C. Panigrahi,Asahi India Glass Ltd,T-7,Taloja MIDC,Taloja
441	Shri Sudhir Devidas Gawhal,Icono One World Center, Plot No.21,Turbhe,Navi Mumbai
442	Shri Balasaheb Bapurao Borkar,Lord CHS, CBD Belapur,Navi Mumbai
443	Shri Soubhik Das, Direcor (Power), Praxair India Pvt. Ltd., Murbad, dist- Thane
444	Shri Vikas Patangia,Captive Power Producers Association
445	Shri A.P.Singh,Sanghi Udyog
446	Shri Krishana Bhoyar,Maharashtra State Electricity Works Federation
447	Shri J.M.Mishara
448	Shri R.G.Tambe,Textile Foundation
449	Shri Kishor Jagtap
450	Shri Santosh Gavas
451	Shri Moreswar Patil