BEFORE

MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI

MID TERM REVIEW PETITION FOR FINAL TRUE UP OF FY 2015-16 & FY 2016-17, PROVISIONAL TRUE UP FOR FY 2017-18 AND REVISED ARR AND TARIFF FOR FY 2018-19 TO FY 2019-20

MAHAVITARAN

Maharashtra State Electricity Distribution Co. Ltd.

Maharashtra State Electricity Distribution Company Ltd.

Regd. Off: Prakashgad, Anant Kanekar Marg, Bandra (E), Mumbai-400051

EXECUTIVE SUMMARY

A) Background

The Hon'ble Commission has issued the MYT Regulations 2015 for the 3rd Control Period from FY 2016-17 to FY 2019-20 on 8th December, 2015. As per the provisions of Regulation 5.1(b) of the said Regulations, Distribution Licensee has to file Mid Term Review Petition (MTR Petition) by 30th November 2017 which has subsequently been revised and extended to 21st December 2017 by the Hon'ble Commission vide its Order dated 30th November 2017.

Accordingly, MSEDCL hereby submits the MTR petition under section 62 of the Electricity Act, 2003 and MERC MYT Regulations, 2015 comprising of following:

- Truing-up for FY 15-16 based on Annual Audited Accounts under MERC (MYT) Regulations, 2011;
- Truing-up for FY 16-17 based on Annual Audited Accounts under MERC (MYT) Regulations, 2015;
- Provisional Truing-up for FY 17-18 based on provisional information available for FY 17-18 under MERC (MYT) Regulations, 2015;
- Revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff and charges, expected revenue gap, and proposed category-wise Tariff for the period FY 18-19 to FY 19-20;
- Revision in Schedule of Charges;

B) Final True Up for FY 2015-16

Based on the annual audited accounts of MSEDCL, the Aggregate Revenue Requirement (ARR) for FY 2015-16 is determined at Rs. **59,728** Cr. based on all the cost parameters as specified in the following table. The final True Up for FY 15-16 comparing the actual audited data for FY 15-16 with those approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 is summarized below.

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Power Purchase Expenses	44,034	43,626	(408)
Operation & Maintenance Expenses	6,533	6,842	309
Depreciation Expenses	1,857	1,876	19
Interest on Loan Capital	1,712	1,700	(12)
Interest on Working Capital	221	695	474
Interest on Consumers Security Deposit	470	432	(38)
Other Finance Charges	31	36	5
Provision for bad and doubtful debts	258	405	146
Other Expenses	14	36	22
Intra-State Transmission Charges MSLDC charge	4,070	4,070	-
Incentives/Discounts	258	249	(9)
Prior Period Expenses	-	(178)	(178)
DSM expenses	8	-	(8)
Return on Equity Capital	1,520	1,661	141
RLC refund	5	5	(1)
ASC refund	-	1	1
Effect of sharing of gains/losses	(2,286)	(716)	1,570
Past Period Surplus	(1,011)	(1,011)	-
Aggregate Revenue Requirement	**57,695**	**59,728**	**2,033**
Revenue from Sale of Power	54,911	50,517	(4,394)
Non-Tariff Income	2,123	2,882	759
Income from Open Access Charges	576	678	103
Income from Trading of Surplus Power	189	211	22
Income from Wheeling Charges	4	1	(3)
Total Revenue	**57,802**	**54,290**	**(3,513)**
Revenue Gap/(Surplus)	**(107)**	**5,439**	**5,546**

Major reasons for deviation are lower revenue from sale of power due to change in consumer mix; reduction in power purchase expenses and increase in O&M Expenses. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL but well within the regulatory provisions for consideration in true up. MSEDCL has also considered the impact of sharing of gains/ (losses) on account of change in distribution losses and other controllable parameters like O&M Expenses and Interest on Working Capital.

C) Final True Up for FY 2016-17

Based on the annual audited accounts of MSEDCL, the Aggregate Revenue Requirement (ARR) for FY 2016-17 is determined at Rs. **62,771** Cr. based on all the cost parameters as specified in the following table. The final True Up for FY 16-17 comparing the actual audited data for FY 16-17 with those approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 is summarized below.

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Power Purchase Expenses	43,754	43,826	72
Operation & Maintenance Expenses	5,912	6,753	841
Depreciation Expenses	2,062	2,043	(19)
Interest on Loan Capital	1,937	1,602	(335)
Interest on Working Capital	124	771	647
Interest on Consumers Security Deposit	688	603	(84)
Other Finance Charges	-	29	29
Provision for bad and doubtful debts	258	492	233
Other Expenses	15	214	199
Intra-State Transmission Charges MSLDC charge	4,611	3,793	(818)
Incentives/Discounts	271	235	(37)
Contribution to Contingency Reserves	108	-	(108)
DSM expenses	2	13	11
Return on Equity Capital	1,602	1,768	167
RLC refund	284	177	(107)
ASC refund	-	5	5
Effect of sharing of gains/losses	(1,030)	49	1,079
Past Period Adjustment by Commission	399	399	-
Aggregate Revenue Requirement	**60,998**	**62,771**	**1,774**
Revenue from Sale of Power	59,284	53,956	(5,328)
Non-Tariff Income	826	574	(252)
Income from Open Access Charges	599	1,034	435
Income from Trading of Surplus Power	-	384	384
Income from Wheeling Charges	5	2	(2)
Income from Additional Surcharge	284	116	(168)
Total Revenue	**60,998**	**56,067**	**(4,931)**
Revenue Gap/(Surplus)	**-**	**6,704**	**6,704**

Major reasons for deviation are lower revenue from sale of power due to change in consumer mix; lower transmission charges than approved by Hon'ble Commission and higher normative O&M Expenses than approved by Hon'ble Commission. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL but well within the regulatory provisions for consideration in true up. MSEDCL has also considered the impact of sharing of gains/ (losses) on account of change in distribution losses and other controllable parameters like O&M Expenses and Interest on Working Capital.

D) Provisional True Up for FY 17-18

Aggregate Revenue Requirement of MSEDCL for FY 2017-18 is estimated considering the provisional data available for the financial year.

Based on the provisional true-up, the Aggregate Revenue Requirement (ARR) determined for FY 17-18 is Rs. **67,882** Cr. The provisional True Up for FY 17-18, comparing the estimated data with that approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 is summarized below:

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Power Purchase Expenses	47,958	49,130	1,172
Operation & Maintenance Expenses	6,088	7,162	1,074
Depreciation Expenses	2,309	2,724	415
Interest on Loan Capital	2,269	1,586	(683)
Interest on Working Capital	137	131	(6)
Interest on Consumers Security Deposit	722	664	(58)
Provision for bad and doubtful debts	258	492	234
Other Expenses	16	65	49
Intra-State Transmission Charges MSLDC charge	5,824	4,812	(1,012)
Incentives/Discounts	285	247	(38)
Contribution to Contingency Reserves	129	-	(129)
DSM expenses	-	1	1
Return on Equity Capital	1,687	1,938	251
Effect of sharing of gains/losses	(635)	-	635
Past Period Adjustment by Commission	(1,116)	(1,116)	-
Add: Impact of payment to MPECS in future years	46	46	-
Aggregate Revenue Requirement	**65,977**	**67,882**	**1,904**
Revenue from Sale of Power	63,775	60,539	(3,236)
Non-Tariff Income	864	1,086	222
Income from Open Access Charges	623	536	(87)
Income from Trading of Surplus Power	-	180	180
Income from Wheeling Charges	5	1	(4)
Income from Additional Surcharge	710	119	(591)
Total Revenue	**65,977**	**62,461**	**(3,516)**
Revenue Gap/(Surplus)	**-**	**5,420**	**5,420**

Major reasons for deviation are increase in power purchase expenses, lower revenue from sale of power due to change in consumer mix; lower transmission charges than approved by Hon'ble Commission, lower income from additional surcharge and change in capex related expenses. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL. MSEDCL has not considered the impact of sharing of gains/ (losses) on account of change in distribution losses since as per the provisions of the MYT Regulations 2015, it needs to be considered at the time of truing up only.

E) Aggregate Revenue Requirement for FY 2018-19 to FY 2019-20

The aggregate revenue requirement for the period i.e. FY 18-19 to FY 19-20 has been determined based on the provisions of the MYT Regulations, 2015 and certain assumptions.

1. Sales Projections

MSEDCL has used historical trend method and estimated energy consumption for various consumer categories using 3 year CAGR. Wherever it is observed that the trend is unreasonable/unsustainable, the growth factors have been corrected to arrive at more realistic projections.

It is seen that in FY 17-18, sales in HT Industry category has increased. This is mainly on account of sourcing more power by some of the Open Access consumers from MSEDCL as can be seen from the reduction in Open Access quantum in FY 17-18 as compared to FY 16-17. While calculating CAGR for HT Industry category, impact of such reduction in Open Access quantum has not been considered.

Considering the category wise CAGRs as discussed above, MSEDCL has projected the sales for the period FY 18-19 to FY 19-20. The projection of Sales for HT category is outlined in the following table:

MUs

Consumer Category	FY 2018-19 (Projected)	FY 2019-20 (Projected)
HT Category		
HT-IND 11 AND 22 KV	12,998	13,097
HT-IND 33 KV	8,611	8,673
HT-IND EHV	6,937	7,335
HT-SEASONAL	102	102
Total : HT-I Industries	**28,648**	**29,208**
HT-II Commercial		
HT-COMM 11 AND 22 KV	1,691	1,660
HT-COMM 33 KV	76	76
HT-COMM EHV	42	42
Total : HT-II Commercial	**1,809**	**1,778**
HT III Railways	59	59
HT IV-PWW	1,521	1,525
HT V Agricultural	785	804
HT VI Bulk Supply (Housing Complex)	217	216
HT Temporary	5	5
HT-IX Public services	993	1,017
MSPGCL AUX SUPPLY	218	218
HT AG Others (Poultry)	227	250
Total HT	**34,481**	**35,080**

In the LT Category, MSEDCL has taken a realistic view and proposed to convert 1,00,000 agriculture unmetered consumers per year to metered category. Considering average load of 5 HP and unmetered index of 1242 units/HP/Annum, MSEDCL has calculated the consumption of these unmetered consumers and the same is added to the metered category and reduced it from unmetered category. The projection of Sales for LT category is outlined in the following table:

		MUs
Consumer Category	**FY 2018-19**	**FY 2019-20**
	Projected	**Projected**
LT Category		
LT-I (A): LT- BPL	54	54
LT-I (B) : LT-Residential(Other than BPL)	**19,510**	**20,282**
1-100 Units	12,498	12,899
101-300 Units	4,985	5,197
301-500 Units	863	912
501-1000 Units	560	601
Above 1000 Units	603	673
LT-II : LT- Non Residential		
0-20 KW	4,235	4,653
>20-<=50 KW	850	929
>50 KW	493	540
LT-II : LT- Non Residential	**5,578**	**6,123**
LT-III : LT-Public Water Works	746	780
LT-IV: LT-Agriculture	**30,778**	**32,002**
LT-AG-Unmetered (Pumpsets)	10,469	9,848
LT-AG Metered (Pumpsets)	20,173	22,005
LT-AG Metered (Others)	136	150
LT V(A) : LT Industry- Power Looms	**1,985**	**2,135**
0-20 KW (Upto & including 27 HP)	715	692
Above 20 KW (above 27 HP)	1,270	1,443
LT V(B) : LT Industry- General	**4,700**	**4,780**
0-20 KW (Upto & including 27 HP)	1,488	1,410
Above 20 KW (above 27 HP)	3,212	3,370
Street Light (LT-VI)	**1,883**	**2,014**
Temporary Connection (LT-VII)	**16**	**16**
LT-VIII : LT-Advertisements & Hordings	**5**	**5**
LT-IX : LT-Crematorium and Burial Grounds	**2**	**2**
LT X - Public services - Govt	**52**	**58**
0-20 KW	35	38
>20-50 kW	9	10
>50 kW	8	9
LT X - Public services - Other	**401**	**441**
0-20 KW	234	257
>20-50 kW	78	85
>50 kW	90	98
Total LT	**65,712**	**68,694**
Total MSEDCL excl. DF	**1,00,193**	**1,03,774**

MSEDCL has projected the input level sales for two Distribution Franchisees for FY 18-19 and FY 19-20 as shown in the table given below.

		MUs
Particulars	**FY 18-19 (Projected)**	**FY 19-20 (Projected)**
Bhiwandi		
Input Sales	3,846	3,974
Nagpur		
Input Sales	1,641	1,705

It is pertinent to note that Hon'ble Commission, in its MYT Order dated 3rd November 2016 has not shown the sales of Bhiwandi Franchisee area separately for FY 17-18 to FY 19-20.

2. Power Purchase

MSEDCL has projected the power purchase for the period FY 18-19 to FY 19-20 based on the availability, operational parameters; expected commissioning of upcoming projects in the FY 18-19 to FY 19-20 and estimated the power purchase cost based on merit order principles (MoD) for optimum utilization. The source-wise power purchase projection for the period FY 18-19 to FY 19-20 is summarised below:

FY 18-19						
Source	**MERC Approved**		**MSEDCL Estimated**		**Deviation**	
	Quantum (MUs)	**Cost (Rs. Crs)**	**Quantum (MUs)**	**Cost (Rs. Crs)**	**Quantum (MUs)**	**Cost (Rs. Crs)**
MSPGCL	45,470	19,202	46,993	20,479	1,523	1,277
NTPC	25,585	7,365	29,834	9,243	4,250	1,879
NPCIL	5,471	1,283	5,380	1,378	(91)	95
SSP	1,210	248	1,210	248	(0)	(0)
Pench	136	28	136	28	0	0
Dodson	116	22	116	21	(0)	(0)
JSW	1,934	499	1,934	631	0	132
CGPL (Mundra UMPP)	5,158	1,232	5,158	1,321	(0)	89
Adani Power	20,601	7,146	21,110	6,528	509	(618)
EMCO Power	1,370	468	1,489	518	119	50
Rattan India	-	904	-	983	-	79
Renewable	17,066	9,830	15,580	8,329	(1,486)	(1,501)
PGCIL Charges		2,592		2,688	-	97
Total Power Purchase	**1,24,116**	**50,817**	**1,28,940**	**52,394**	**4,824**	**1,577**

FY 19-20						
Source	MERC Approved		MSEDCL Estimated		Deviation	
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)
MSPGCL	46,787	19,700	45,884	20,888	(903)	1,188
NTPC	26,853	7,592	31,120	9,968	4,267	2,376
NPCIL	5,486	1,321	5,485	1,474	(1)	153
SSP	1,213	249	1,213	249	0	0
Pench	137	28	137	28	(0)	(0)
Dodson	116	22	116	16	0	(5)
JSW	1,940	503	1,940	632	(0)	129
CGPL	5,172	1,248	5,172	1,323	0	75
Adani Power	20,658	7,229	21,512	6,656	854	(573)
EMCO Power	1,374	472	1,493	516	119	44
Rattan India	-	907	-	983	-	76
Renewable	19,365	11,212	17,112	9,079	(2,253)	(2,134)
PGCIL Charges	-	2,851	-	2,928	-	77
Total Power Purchase	**1,29,101**	**53,334**	**1,31,183**	**54,741**	**2,082**	**1,407**

3. Distribution Losses

MSEDCL has achieved a significant reduction in distribution losses, during recent years. These efforts shall continue and will be enhanced. Hon'ble Commission in the MYT Order dated 3rd November 2016 had set the Distribution Loss reduction targets [excluding EHV sales]. MSEDCL has proposed the same trajectory.

Particulars	FY 2018-19		FY 2019-20	
	Approved	Projected	Approved	Projected
Distribution Losses	14.76%	14.76%	13.26%	13.26%

4. Segregation of Wires and Supply Business

The Regulation 68 of MERC (Multi Year Tariff) Regulations, 2015 mentions about separation of accounts of distribution licensee and that the Aggregate Revenue Requirement of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the allocation matrix.

MSEDCL has segregated the expenses based on the allocation matrix as provided in the regulations.

5. ARR for the period FY 18-19 to FY 19-20

Aggregate Revenue Requirement of MSEDCL for the period FY 18-19 to FY 19-20 is projected considering projections for various components of ARR and provisions of

MERC MYT Regulations, 2015. Also, the Revenue has been considered based on the existing tariff and accordingly the revenue gap has been calculated as summarised in following table.

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Power Purchase Expenses	50,817	52,394	1,577	53,334	54,741	1,407
Operation & Maintenance Expenses	6,268	7,596	1,328	6,454	8,056	1,602
Depreciation Expenses	2,450	3,011	561	2,498	3,235	737
Interest on Loan Capital	2,341	1,536	(805)	2,176	1,311	(865)
Interest on Working Capital	144	135	(8)	143	134	(8)
Interest on Consumers Security Deposit	758	634	(124)	796	697	(98)
Provision for bad and doubtful debts	258	26	(232)	258	-	(258)
Other Expenses	16	68	52	17	71	54
Intra-State Transmission Charges MSLDC charge	6,539	5,418	(1,121)	6,619	5,499	(1,120)
Incentives/Discounts	299	259	(40)	314	272	(42)
Contribution to Contingency Reserves	143	-	(143)	149	-	(149)
DSM expenses	-	0.4	0.4	-	-	-
Return on Equity Capital	1,716	2,102	386	1,719	2,255	536
Effect of sharing of gains/losses	(311)	-	311	-	-	-
Past Period Adjustment by Commission	(1,032)	(1,032)	-	853	853	-
Add: Impact of payment to MPECS in future years	43	43	-	40	40	-
Aggregate Revenue Requirement	**70,449**	**72,190**	**1,742**	**75,369**	**77,166**	**1,797**
Revenue from Sale of Power	68,155	65,384	(2,771)	72,977	68,565	(4,412)
Non-Tariff Income	903	1,051	148	945	1,104	159
Income from Open Access Charges	648	641	(7)	674	675	1
Income from Wheeling Charges	5	2	(3)	5	2	(3)
Income from Additional Surcharge	738	122	(616)	768	126	(642)
Total Revenue	**70,449**	**67,200**	**(3,249)**	**75,369**	**70,471**	**(4,899)**
Revenue Gap/(Surplus)	**-**	**4,990**	**4,990**	**-**	**6,695**	**6,695**

Major reasons for deviation are increase in power purchase expenses, lower revenue from sale of power due to change in consumer mix; reduction in transmission charges, lower income from additional surcharge, increase in O&M Expenses and change in capex related expenses. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL. MSEDCL has not considered the impact of sharing of gains/ (losses) since it needs to be considered at the time of final truing up of the respective year.

F) Total Revenue gap

Considering the revenue gap for FY 15-16 to FY 17-18, impact of order on Review Petition (Case No 176 of 2016), difference in Sharing of Efficiency Loss due to higher Distribution Losses for FY 14-15, carrying cost, claim of penalty levied by MERC for non-fulfilling RPO requirement for FY 2015-16 along with the revenue gap projected for the period FY 18-19 to FY 19-20, the total revenue gap works out to be Rs. **34,646** Cr. as shown in the following table.

Rs Cr.

Particulars	Amount
True Up Requirement for FY 15-16	5,546
True Up Requirement for FY 16-17	6,704
Revenue Gap for FY 17-18	5,420
Revenue Gap for FY 18-19	4,990
Revenue Gap for FY 19-20	6,695
Impact of Review Order for FY 14-15	216
Difference in Sharing of Efficiency Loss (primarily distribution loss due disallowance of AG sales for FY 14-15)	935
Carrying Cost - on Revenue Gaps for previous years till FY 17-18	3,880
Claim of penalty levied by MERC for shortfall in RPO	260
Total Revenue Gap	**34,646**

G) Tariff Design

There is an urgent need for ensuring recovery of full cost of service from consumers to sustain the operations of the Company. Hon'ble Commission has been guided by the Electricity Act, 2003 and the National Tariff Policy while determining retail tariffs. Hon'ble Commission has always laid emphasis on parameters which encourages economy, efficiency, effective performance and improved supply conditions of supply for consumers. MSEDCL requests the Hon'ble Commission to apply similar principles considering the ground realities as well as to ensure the financial viability of the Company.

The Tariff design proposed by MSEDCL is based on the following factors:

- Rationalisation of Fixed Charges to ensure increase in recovery of fixed costs through fixed charges;
- kVAh based billing for HT Category consumers;
- Rationalisation of Incentives;
- Incentives for New as well as Existing consumers of certain categories;
- Revision in ToD Charges considering the actual demand curve;
- Recovery of Cross Subsidy Surcharge as per NTP formula without any ceiling;
- Applicability of Additional Surcharge extended to all OA consumers including those sourcing power from CPP as well;
- Introduction of separate category of Electric vehicle Charging stations/ centers;
- Same tariffs for FY 18-19 and FY 19-20 in order to bring stability in power tariffs and avoid any additional carrying cost;

H) Rationale of Tariff hike

MSEDCL has proposed a revision in fixed and energy charges for various categories in order to bridge the revenue gap. Such tariff revision is minimum requirement for MSEDCL to meet the inflation as well as the additional costs that have arisen due to increase in power purchase costs; Renewable Purchase Obligation (RPO) as per new RPO Regulations 2016, change in consumer mix and its impact on revenue, increase in PoC cost, reduction in revenue etc. The tariff revision is necessary for its survival and it is purely to meet the revenue gap emerged due to increase in cost on account of inflation as well as additional costs which are beyond the control of MSEDCL.

I) Wheeling Charges

Considering the Network and supply cost segregation as provided in MYT Regulations 2015, and the methodology adopted by Hon'ble Commission in its previous Orders, MSEDCL has proposed the wheeling charges and wheeling losses at HT and LT level for the period FY 18-19 to FY 19-20 as summarized in following table:

Particulras	FY 18-19		FY 19-20	
	Wheeling Loss %	Wheeling Charges (Rs./Unit)	Wheeling Loss %	Wheeling Charges (Rs./Unit)
33 kV level	6%	0.15	6%	0.15
22/11 kV level	9%	0.83	9%	0.78
LT Level	12%	1.26	12%	1.24

*Rs. /kVAh or Rs. /kWh as the case may be

J) Cross Subsidy Surcharge

The Cross Subsidy Surcharge (CSS) is compensatory charge to the Discom. As held by APTEL, New Delhi, CSS is not only to compensate the Discom for the loss of cross subsidy, it is also to compensate the remaining consumers of the Discom who have not taken Open Access. Therefore, CSS needs to be based on the current level of cross subsidy.

To examine the issues related to Open Access along with issues relating to amendments in provisions relating to captive Generating plants in the Electricity Rules, 2005, a Committee was constituted by CEA on the advice of Ministry of Power. In the Consultation paper by MoP issued on 24th August 2017, which is based on the report of the said Committee, it has been proposed that:

"It is essential for SERCs to implement both Para 8.3 -2 and First proviso to para 8.5.1 of the Tariff Policy 2016 simultaneously. If one of the provisions could not be implemented due to some reason, the second provision should also not be implanted to that extent."

Accordingly, MSEDCL has proposed CSS based on the formula in Tariff Policy 2016 without putting any ceiling. For representation purpose, the proposed CSS for HT Industrial category consumers has been provided in the following table:

Rs. per kVAh

Consumer Category	FY 18-19	FY 19-20
HT I(A) (i): HT - Industry		
11/22 KV	4.50	4.40
33 KV	3.53	3.38
EHV	4.62	4.40

K) Additional Surcharge

MSEDCL has tied up sufficient quantum of power, after approval of the Hon'ble Commission, by considering the overall growth in the State. However, on the other hand, a large number of consumers are buying power under Open Access instead of availing 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 required to pay Fixed Charges (or Capacity Charges) to the Generators irrespective of actual purchase. Thus, the need 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 has been underlined by Hon'ble Commission in the MYT Order.

In line with the methodology adopted by Hon'ble Commission in the MYT Order dated 3rd November 2016, MSEDCL computed the Additional Surcharge. The Additional Surcharge for FY 18-19 works out to be Rs. **1.25** /kVAh and Rs. **1.28** /kVAh for FY 19-20.

MSEDCL opines that increasing trend of 'retrofitting' oneself as captive power plant so as to somehow evade CSS and additional surcharge by misusing the provisions of Electricity Rules 2005 is alarming and requires to be taken judicial note of. Similarly, such evasion of CSS and additional surcharge affect the revenue of MSEDCL and such under recovery gets passed on to its other common consumers resulting into increase in their tariff for no fault on their part. Therefore, MSEDCL has requested the Hon'ble Commission to make the additional surcharge applicable to all Open Access consumers including OA consumers sourcing power from Captive Power Plants as well.

L) Voltage wise Cost of Supply

In the absence of actual data on voltage wise cost, the bifurcation of the cost has been done on the basis of assumption in line with the APTEL Judgement. Considering the APTEL Judgement and derived allocation factors, a study based on the Embedded Cost Approach has been carried out by MSEDCL and standalone Voltage Wise Cost of Supply for FY 18-19 and FY 19-20 is as shown in following table.

Rs/Unit

Volatge level	FY 18-19	FY 19-20
EHV (66 kV & above)	5.52	5.65
HT Level (33 kV)	6.53	6.82
HT Level (22&/or 11 kV)	6.57	6.89
LT Level	6.91	7.10
Total	**6.71**	**6.93**

M) Tariff Applicability

Every consumer of electricity has a unique applicability of tariff, depending upon the nature of power supply, purpose of power usage etc. which determines the class of consumer or category of the consumer. The Hon’ble Commission has accordingly classified the consumers of electricity into various categories depending upon the nature of power supply i.e. (Low Tension or High Tension), purpose of power/type of usage i.e. (Domestic, Non-domestic, Industrial, Agricultural, etc.)

In the recent past, it is observed that classification of a consumer into a particular category has resulted in litigation since applicability of a particular category of tariff is not available in exhaustive nature. MSEDCL has therefore examined this issue and based on the feedback received during interactions with field officers

MSEDCL has proposed modification in applicability of tariff as appearing in the tariff booklet.

N) Tariff Schedule

A comparison of detailed Category/Sub-category wise Existing and Proposed Energy Charges (excl. Wheeling Charges) is shown in tables below:

Category	FY 17-18	FY 18-19			FY 19-20		
	Existing	Approved	Proposed		Approved	Proposed	
	Rs./kWh	Rs./kWh	Rs./kVAh	% Change over Approved	Rs./kWh	Rs./kVAh	% Change over FY 18-19 Proposed
HT I (A) (i): HT - Industry							
11/22 kV; 33 kV; EHV	7.07	6.98	7.09	2%	6.93	7.09	0%
HT I (A) (ii): HT - Industry New Connections							
11/22 kV; 33 kV; EHV			6.09			6.09	0%
HT I (B) (i): HT - Industry (Seasonal)							
11/22 kV; 33 kV; EHV	7.67	7.37	7.70	4%	7.20	7.70	0%
HT I (B) (ii): HT - Industry (Seasonal) New Connections							
11/22 kV; 33 kV; EHV			6.70			6.70	0%
HT II (A): HT - Commercial							
11/22 kV; 33 kV; EHV	11.40	11.45	11.56	1%	11.50	11.56	0%
HT II (B): HT - Commercial New Connections							
11/22 kV; 33 kV; EHV			10.56			10.56	0%
HT III (A): HT - Railways/Metro/Monorail Traction							
11/22 kV; 33 kV; EHV	6.01	5.80	5.91	2%	5.55	5.91	0%
HT III (B): HT - Railways/Metro/Monorail Traction (New Connections)							
11/22 kV; 33 kV; EHV			4.91			4.91	0%
HT IV: HT - Public Water Works (PWW)							
11/22 kV; 33 kV; EHV	5.75	5.85	6.02	3%	5.95	6.02	0%
HT V(A): HT - Agriculture Pumpsets							
11/22 kV; 33 kV; EHV	3.30	3.44	4.24	23%	3.65	4.24	0%
HT V(B): HT - Agriculture Others							
11/22 kV; 33 kV; EHV	4.56	4.75	5.91	24%	5.02	5.91	0%
HT VI: HT - Group Housing Societies (Residential)							
11/22 kV; 33 kV; EHV	5.82	5.82	5.93	2%	5.86	5.93	0%
HT VIII(A): HT - Temporary Supply Religious							
11/22 kV; 33 kV; EHV	3.10	3.20	3.63	13%	3.27	3.63	0%
HT VIII(B): HT - Temporary Supply Others (TSO)							
11/22 kV; 33 kV; EHV	10.14	10.27	11.61	13%	10.39	11.61	0%
HT IX(A): HT - Public Services-Government							
11/22 kV; 33 kV; EHV	7.20	7.20	7.74	8%	7.10	7.74	0%
HT IX(B): HT - Public Services-Others							
11/22 kV; 33 kV; EHV	9.10	9.07	9.72	7%	8.93	9.72	0%
HT X : Charging Stations/Centers for Electrical Vehicles			6.00			6.00	

Rs./kWh

Category	FY 17-18	FY 18-19			FY 19-20		
	Existing	Approved	Proposed	% Change over Approved	Approved	Proposed	% Change over FY 18-19 Proposed
LT I: LT - Residential							
LT I(A): LT - Residential-BPL	1.05	1.06	1.07	1%	1.08	1.07	0%
LT I(B): LT - Residential							
0-100 Units	3.00	3.07	3.07	0%	3.18	3.07	0%
101-300 Units	6.73	6.81	7.19	6%	6.91	7.19	0%
301-500 Units	9.70	9.76	10.26	5%	9.86	10.26	0%
501-1000 Units	11.20	11.25	11.81	5%	11.37	11.81	0%
Above 1000 Units	12.48	12.53	13.14	5%	12.65	13.14	0%
LT II: LT - Non-Residential							
(A) (i): 0 – 20 kW (0 - 200 units)	6.09	6.10	7.96	3%	6.15	7.96	0%
(A) (i): 0 – 20 kW (above 200 units)	9.32	9.32			9.37		
(B): >20 kW and ≤ 50 kW	9.98	9.98	11.59	16%	9.98	11.59	0%
(C): >50 KW	12.55	12.58	14.19	13%	12.63	14.19	0%
LT III: LT - Public Water Works (PWW)							
(A): 0-20 KW	1.97	2.09	2.62	25%	2.31	2.62	0%
(B): > 20 kW and ≤ 40 kW	3.24	3.37	4.15	23%	3.54	4.15	0%
(C): > 40 kW	4.53	4.69	5.74	22%	4.81	5.74	0%
LT IV: LT - Agriculture							
LT IV(A): LT - AG Un-metered - Pumpsets*							
Category 1 Zones (Above 1318 Hrs/HP/Annum)							
(a) 0-5 HP	309	334	449	34%	363	449	0%
(b) Above 5 HP - 7.5 HP	341	365	490	34%	398	490	0%
(c) Above 7.5 HP	381	400	537	34%	443	537	0%
Category 2 Zones (Below 1318 Hrs/HP/Annum)							
(a) 0-5 HP	212	236	320	36%	251	320	0%
(b) Above 5 HP - 7.5 HP	247	266	362	36%	293	362	0%
(c) Above 7.5 HP	275	294	398	35%	321	398	0%
LT IV(B): LT - Agriculture Metered Tariff - Pumpsets	1.83	1.95	2.55	31%	2.14	2.55	0%
LT IV(C): LT - Agriculture Metered – Others	3.09	3.26	4.35	33%	3.51	4.35	0%

Rs./kWh

Category	FY 18-19			FY 19-20		
	Approved	Proposed	% Change over Approved	Approved	Proposed	% Change over FY 18-19 Proposed
LT V (A): LT - Industry - Powerlooms						
(i): 0-20 KW	4.59	4.70	2%	4.69	4.70	0%
(ii): Above 20 KW	5.95	6.06	2%	6.02	6.06	0%
LT V(B): LT - Industry - General						
(i): 0-20 KW	4.76	4.87	2%	4.81	4.87	0%
(ii): Above 20 KW	6.38	6.49	2%	6.42	6.49	0%
LT VI: LT - Street Light						
(A): Grampanchayat A B & C Class Municipal Council	4.39	5.16	18%	4.49	5.16	0%
(B): Municipal corporation Area	5.48	6.41	17%	5.58	6.41	0%
LT VII: LT - Temporary Connection						
(A): LT - Temporary Supply Religious (TSR)	3.20	3.79	18%	3.27	3.79	0%
(B): LT - Temporary Supply Others (TSO)	12.63	14.64	16%	12.79	14.64	0%
LT VIII: LT - Advertisements and Hoardings	12.58	12.58	0%	12.74	12.58	0%
LT IX: LT - Crematorium and Burial Grounds	3.14	3.78	21%	3.26	3.78	0%
LT X (A) - Public Services - Government						
(i): 0 – 20 kW (0 - 200 units)	3.15	4.48	20%	3.12	4.48	0%
(i): 0 – 20 kW (above 200 units)	4.32			4.26		
(ii): >20 - ≤ 50 kW	5.10	5.92	16%	5.03	5.92	0%
(iii): >50 kW	5.81	6.50	12%	5.74	6.50	0%
LT X(B) - Public Services - Others						
(i): 0 – 20 kW (0 - 200 units)	4.24	5.91	7%	4.19	5.91	0%
(i): 0 – 20 kW (above 200 units)	6.79			6.74		
(ii): >20 - ≤ 50 kW	6.85	8.06	18%	6.75	8.06	0%
(iii): >50 kW	7.21	8.42	17%	7.11	8.42	0%
LT XI Charging Stations/Centers for Electrical Vehicles		6.00			6.00	

A comparison of detailed Category/Sub-category wise Existing and Proposed Fixed/ Demand Charges is shown in tables below:

Category	Unit	FY 17-18 Existing	FY 18-19 Approved	FY 18-19 Proposed	FY 18-19 % Change over Approved	FY 19-20 Approved	FY 19-20 Proposed	FY 19-20 % Change over FY 18-19 Proposed
		Demand Charges				Demand Charges		
HT I (A) (i): HT - Industry								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT I (A) (ii): HT - Industry New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT I (B) (i): HT - Industry (Seasonal)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT I (B) (ii): HT - Industry (Seasonal) New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT II (A): HT - Commercial								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT II (B): HT - Commercial New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT III (A): HT - Railways/Metro/Monorail Traction								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT III (B): HT - Railways/Metro/Monorail Traction (New Connections)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT IV: HT - Public Water Works (PWW)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT V(A): HT - Agriculture Pumpsets								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	40	45	125	178%	50	125	0%
HT V(B): HT - Agriculture Others								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	40	45	150	233%	50	150	0%
HT VI: HT - Group Housing Societies (Residential)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	220	220	460	109%	220	460	0%
HT VIII(A): HT - Temporary Supply Religious								
11/22 kV; 33 kV; EHV	Rs./Connection/ Month	330	355	745	110%	385	745	0%
HT VIII(B): HT - Temporary Supply Others (TSO)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	290	290	610	110%	290	610	0%
HT IX(A): HT - Public Services-Government								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT IX(B): HT - Public Services-Others								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT X : Charging Stations/Centers for Electrical Vehicles	Rs. / kVA/Month			565			565	

Category	Unit	FY 17-18 Existing	FY 18-19 Approved	FY 18-19 Proposed	FY 18-19 % Change over Approved	FY 19-20 Approved	FY 19-20 Proposed	FY 19-20 % Change over FY 18-19 Proposed
		Fixed/Demand Charges				Fixed/Demand Charges		
LT I: LT - Residential								
LT I(A): LT - Residential-BPL	Rs./Month	12	13	15	15%	15	15	0%
LT I(B): LT - Residential								
0-100 Units	Rs./Month	60	65	140	115%	70	140	0%
101-300 Units	Rs./Month	60	65	170	162%	70	170	0%
301-500 Units	Rs./Month	60	65	190	192%	70	190	0%
501-1000 Units	Rs./Month	60	65	205	215%	70	205	0%
Above 1000 Units	Rs./Month	60	65	220	238%	70	220	0%
Three Phase Connection	Rs./Month	170	185	400	116%	200	400	0%
LT II: LT - Non-Residential								
(A) (i): 0 – 20 kW	Rs./Month	250	270	580	115%	290	580	0%
(B): >20 kW and ≤ 50 kW	Rs. / kVA/Month	250	270	580	115%	290	580	0%
(C): >50 KW	Rs. / kVA/Month	250	270	580	115%	290	580	0%
LT III: LT - Public Water Works (PWW)								
(A): 0-20 KW	Rs. / kVA/Month	75	80	170	113%	85	170	0%
(B): > 20 kW and ≤ 40 kW	Rs. / kVA/Month	85	90	195	117%	100	195	0%
(C): > 40 kW	Rs. / kVA/Month	125	135	290	115%	145	290	0%
LT IV: LT - Agriculture								
LT IV(B): LT - Agriculture Metered Tariff - Pumpsets	Rs. / HP/Month	22	24	50	108%	26	50	0%
LT IV(C): LT - Agriculture Metered – Others	Rs./kW/Month	60	65	140	115%	70	140	0%

Category	Unit	FY 17-18	FY 18-19			FY 19-20		
		Existing	Approved	Proposed		Approved	Proposed	
		Fixed/Demand Charges			% Change over Approved	Fixed/Demand Charges		% Change over FY 18-19 Proposed
LT V (A): LT - Industry - Powerlooms								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): Above 20 KW	Rs. / kVA/Month	170	185	400	116%	200	400	0%
LT V(B): LT - Industry - General								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): Above 20 KW	Rs. / kVA/Month	170	185	400	116%	200	400	0%
LT VI: LT - Street Light								
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kW/Month	60	65	140	115%	70	140	0%
(B): Municipal corporation Area	Rs. / kW/Month	60	65	140	115%	70	140	0%
LT VII: LT - Temporary Connection								
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	355	765	115%	385	765	0%
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	360	775	115%	360	775	0%
LT VIII: LT - Advertisements and Hoardings	Rs./Connection/ Month	575	575	1235	115%	575	1235	0%
LT IX: LT - Crematorium and Burial Grounds	Rs./Connection/ Month	330	355	765	115%	385	765	0%
LT X (A) - Public Services - Government								
(i): 0-20 KW	Rs./Connection /Month	220	235	505	115%	250	505	0%
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	220	235	530	126%	250	530	0%
(iii): >50 kW	Rs. / kVA/Month	220	235	550	134%	250	550	0%
LT X(B) - Public Services - Others								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	250	270	610	126%	290	610	0%
(iii): >50 kW	Rs. / kVA/Month	250	270	635	135%	290	635	0%
LT XI Charging Stations/Centers for Electrical Vehicles	Rs. / kVA/Month			580			580	

MSEDCL requests Hon'ble Commission to provide the tariff considering the Tariff Design principles, new categories proposed and Other Suggestions made by MSEDCL.

O) Prayers

MSEDCL most respectfully prays to the Hon'ble Commission:

1) To admit the MTR Petition as per the provisions of the MERC (MYT) Regulations 2015 and consider present Petition for further proceedings before Hon'ble Commission;
2) To approve the total recovery of Aggregate Revenue Requirement and revenue gap for FY 2015-16 to FY 2019-20 along with other claims as proposed by MSEDCL;
3) To allow the carrying cost on the revenue gap of FY 2015-16 to FY 2019-20;
4) To approve mechanism for recovery of computed revenue gap along with carrying cost and Tariff Schedule considering the Tariff Design principles and other suggestions proposed by MSEDCL;
5) To approve the AG sales for FY 2014-15 and FY 2015-16 without any disallowances;
6) To approve tariffs for individual categories as proposed by MSEDCL;
7) To allow the revision in criteria for Billing Demand as proposed by MSEDCL;

8) To allow kVAh based billing for HT category consumers;
9) To allow separate category for Charging Stations/Centers for Electrical Vehicles with Tariffs as proposed by MSEDCL;
10) To allow the creation of New Sub-Categories in HT for New Consumers as proposed by MSEDCL;
11) To allow a rebate for incremental consumption of existing HT consumers of selected categories as proposed by MSEDCL;
12) To allow to sell energy to the HT consumers in SEZ areas whosoever approach MSEDCL treating them at par with New Consumers in Sr. No. 10 above;
13) To consider the incentives/rebates proposed as above as part of ARR;
14) To rationalize the incentives and penalties as proposed by MSEDCL;
15) To allow the revision in ToD Charges as proposed by MSEDCL;
16) To approve Cross Subsidy Surcharge and all such other charges including wheeling charges and wheeling losses for Open Access consumers as proposed for FY 2018-19 to FY 2019-20;
17) To approve the Additional Surcharge for all Open Access consumers including those sourcing power from CPPs as proposed for FY 2018-19 to FY 2019-20;
18) To allow increase in standby charges for embedded CPP consumers;
19) To allow levy of compulsive regulatory provision for standby agreement for SEZ and railways;
20) To approve the suggested categorization for different type of activities as proposed by MSEDCL in applicability of tariff;
21) To allow recovery of wheeling charges from the consumers who are connected at a higher voltage level than as stipulated in MERC SOP Regulations
22) To allow levy of wheeling charges to rooftop system users;
23) To approve the schedule of charges as proposed by MSEDCL;
24) To approve the capex and capitalisation as submitted by MSEDCL;

25) To grant any other relief as the Hon'ble Commission may consider appropriate;

26) 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;

27) To condone any error/omission and to give opportunity to rectify the same;

28) To permit MSEDCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time;

Satish Chavan
Director (Commercial)

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1. Background

1.1 Introduction

1.1.1 Maharashtra State Electricity Distribution Co. Ltd. (hereinafter referred to as "MSEDCL" or "The Company" or "The Petitioner") has been incorporated under the Companies Act, 1956 pursuant to decision of Government of Maharashtra to reorganize erstwhile Maharashtra State Electricity Board ("MSEB"). The said reorganization of the MSEB has been done by Government of Maharashtra pursuant to "Part XIII – Reorganization of Board" read with section 131 of The Electricity Act 2003. MSEDCL has been incorporated on 31.5.2005 with the Registrar of Companies, and has obtained Certificate of Commencement of Business on 15.09.2005. MSEDCL is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 ("the Act") and is engaged, within the framework of Electricity Act, 2003, in the business of distribution of electricity to its consumers situated over the entire State of Maharashtra, except Mumbai City & its suburbs (excluding Mulund & Bhandup).

1.1.2 The Maharashtra Electricity Regulatory Commission (hereinafter referred to as "MERC" or "Hon'ble Commission") is an independent statutory body constituted under the provisions of the Electricity Regulatory Commissions (ERC) Act, 1998, which was superseded by Electricity Act (EA), 2003. Hon'ble Commission is continued as provided under Section 82 of the EA, 2003. Hon'ble Commission is vested with the authority regulating the power sector in the State inter alia including setting of tariff for electricity consumers.

1.1.3 The Hon'ble Commission has issued MYT Regulations 2015 for the 3rd Control Period (FY 2016-17 to FY 2019-20) on 8thDecember 2015. These Regulations have come into force from 8th December 2015.

1.2 Provisions of Law

1.2.1 The MERC MYT Regulations, 2015, issued by the Hon'ble Commission provide the framework under which the licensees have to operate along with determination of Aggregate Revenue Requirement, Tariff, etc. The regulations provide for the Petitions to be filed in the Control Period. Regulation 5.1 (b) provides for the Mid-Term Review

Petition. The key provisions of the said Regulation are reproduced below for reference.

5.1. The Petitions to be filed in the Control Period under these Regulations are as under:
b) Mid-Term Review Petition shall be filed by November 30, 2017, comprising:

- *Truing-up for FY 2015-16 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2011 ;*
- *Truing-up for FY 2016-17 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015 ;*
- *Provisional Truing-up for FY 2017-18 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015 ;*
- *Revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff and charges, expected revenue gap and proposed category-wise Tariff for the third and fourth year of the Control Period ;*

1.2.2 The Hon'ble Commission has issued the MYT Regulations 2015 for the 3rd Control Period from FY 2016-17 to FY 2019-20 on 8th December, 2015. As per As per the provisions of Regulation 5.1(b) of the said Regulations, Distribution Licensee has to file Mid Term Review Petition (MTR Petition) by 30th November 2017 which was subsequently revised and extended to 21st December 2017 by the Hon'ble Commission vide its Order dated 30th November 2017.

1.2.3 Accordingly, MSEDCL is submitting this Mid-Term Review Petition as per provisions of MERC MYT Regulations, 2015.

1.3 MSEDCL Submission

1.3.1 Hon'ble Commission has issued Order dated 3rd November, 2016 in Case no. 48 of 2016(herein after referred as "MYT Order") for Final True Up for FY 2014-15, Provisional True Up for FY 2015-16 and MYT for FY 2016-17 to 2019-20.

1.3.2 MSEDCL hereby submits the Petition under section 62 of the Electricity Act, 2003 and MERC MYT Regulations, 2015 for final True Up for FY 2015-16 & FY 2016-17, provisional True Up for FY 2017-18 based on latest available information for the year and Mid Term Review for the period FY 2018-19 to FY 2019-20 based on estimates/projections.. The Regulatory Formats are annexed as **Annexure 1** to this Petition. MSEDCL is also submitting the Annual Accounts for the period 1st April 2015 to 31st March 2016and 1st April 2016 to 31st March 2017 duly audited by the statutory auditors for the purpose of truing up of expenses and revenue for FY 2015-16 and FY 2016-17 annexed as **Annexure 2** and **Annexure 3** respectively to this Petition.

1.3.3 MSEDCL is also filing the provisional True Up for FY 2017-18 based on latest available information for FY 2017-18 and Mid Term Review for the period FY 2018-19 to FY 2019-20 based on the estimates/projections provided in this Petition.

2. Final True Up for FY 2015-16

2.1 Preamble

2.1.1 This section outlines the actual performance of MSEDCL for the FY 2015-16. MSEDCL hereby submits final True Up for FY 2015-16 comparing the actual audited data for FY 2015-16 with those approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 (MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20)

2.1.2 The Board of Directors of MSEDCL has approved the Annual Audited Accounts of MSEDCL for the period April 2015 to March 2016 and Statutory Auditors M/s Mittal & Associates, M/s. SGCO &Co, M/s. B.N. Kedia & Co. have audited the Accounts vide report dated 29/12/2016 attached as **Annexure 2** to this Petition. MSEDCL hereby proposes to true up its expenses and revenues based on these Audited Accounts.

2.1.3 Following sections outline the deviations in actual expenses and revenue for FY 2015-16 based on the Audited Accounts of MSEDCL in comparison with that approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016.

2.2 Category Wise Sales for FY 2015-16

2.2.1 A comparison of category wise actual sales for FY 2015-16 vis-à-vis approved sales for MSEDCL excluding all Distribution Franchisee have been summarized in the following table.

Table 1: Category wise sales for FY 15-16 (Excl. Franchisee)

Category	FY 2015-16		
	Approved	Actual	Deviation
	Sales (MUs)	Sales (MUs)	Sales (MUs)
Residential	17,972	17,985	13
Commercial	6,196	6,197	1
HT-Industrial	22,720	22,720	-
LT-Industrial	6,260	6,260	-
PWW	2,073	2,073	-
Street Light	1,614	1,614	-
Agriculture	25,097	28,390	3,293
Public Services	1,174	1,174	-
Railways	983	983	-
Others	414	507	93
Total	**84,502**	**87,903**	**3,401**

Others include: HT group housing, Temporary Category, Crematoriums & Burial Grounds, Advt. & Hoardings etc.

2.2.2 MSEDCL submission during the provisional true-up of FY 15-16 was based on provisional information available at the time of submission of MYT Petition. Now, the final sales for FY 15-16 are available. MSEDCL further submits that at the time of submission of MYT Petition, it has shown the LT Prepaid sales separately under "Others", now it has considered in the respective category. Therefore, there is a minor deviation of 13 MUS and 1 MU in Residential and Commercial Category respectively.

2.2.3 MSEDCL submits that during provisional true-up of FY 15-16, the Hon'ble Commission in its MYT Order dated 03rd November 2016 has approved LT AG sales of 24,105 MUs as against the actual sales of 27,405 MUs, disallowing 3,399 MUs. Hon'ble Commission is requested to note that the AG sales of 27,405 MUS included around 106 MUs of LT Poultry which is metered energy. Therefore, MSEDCL has considered the 106 MUs of LT Poultry in Others. Due to this, there is a deviation of around 93 MUs in Others.

2.2.4 Hon'ble Commission, in its MYT Order dated 3rd November 2016 (Case No 48 of 2016) has disallowed 2414 MUs in FY 2014-15 and 3399 MUs in FY 2015-16 from the Agricultural Category sale as submitted by MSEDCL in its Petition.

2.2.5 While provisionally approving the Ag Sales for FY 14-15 and FY 15-16 in the said MYT Order, Hon'ble Commission adopted methodology based on Feeder-based Energy accounting of AG separated Feeders and AG separated Feeders with SDT to determine the Circle-wise AG Index.

2.2.6 MSEDCL submits that Hon'ble Commission in the said Tariff Order has indicated that there are limitations in approach of Feeder-based assessment of AG Index determination with present data constraints and further stated that the sales as approved are subject to the findings of the Report of the committee formed for verification of AG consumption assisted by IIT Bombay. The Hon'ble Commission would undertake a detailed review of the methodology of determination of AG Sales after the Report is finalized.

2.2.7 MSEDCL submits that the Ag Fact finding Committee is formed by MSEBHCL. The Committee has submitted its report to MSEBHCL on 21st July 2017. Also it is in custody of MSEBHCL. MSEBHCL has sent the interim report to MSEDCL for its comments/suggestions MSEDCL has submitted its comments to MSEBHCL. The report is under consideration of MSEBHCL for its decision. On finalization of the report & the directions (if any), necessary action as mandated by MSEBHCL will be taken and the same will be appraised/ submitted to the Hon'ble Commission.

2.2.8 MSEDCL, therefore submits that the concerns regarding AG sales of MSEDCL can only be addressed if an alternate methodology based on authenticated data is considered for the determination and justification of agriculture sales. Since the reliability of feeder data provided by MSEDCL for FY 2014-15, 2015-16 and also 2016-17has been questioned, MSEDCL feels that the alternate methodology for estimation of Ag Sales should be based on the parameters which are reliable and authenticated from a third-party.

2.2.9 Accordingly, MSEDCL has submitted a report of the statistical study carried out on AG consumption based on EHV Input to ascertain the agriculture sales for the said period to MERC vide letter No. SE/TRC/MTR3B/No.11378 dated 21st May, 2018. The parameter 'EHV Input' was chosen for the purpose of analysis since the data pertaining to this parameter is sourced directly from the incoming EHV Feeder of MSETCL. Thus, the data used is sourced from an independent third party with least possibility of manual intervention and hence authentic, reliable and consistent. The detailed study report is attached to this petition as **Annexure 4**.

2.2.10 MSEDCL has also submitted another report of the statistical study carried out on AG consumption based on parameters such as Rainfall, Cropping Pattern and Agricultural & Horticultural Production which are independent to MSEDCL. From the study it can be seen that the claims of MSEDCL for its AG sales for FY 14-15 and FY 15-16 are not at all baseless and proved beyond doubt to be statistically in line with relationship of all the significant variables which are independent to MSEDCL. The detailed Study Report is attached to this Petition as **Annexure 5**.

2.2.11 MSEDCL also requests the Hon'ble Commission to allow it to make further submission in this matter in future with any additional available data from time to time.

2.2.12 MSEDCL also humbly requests the Hon'ble Commission to allow the recovery of financial impact due to such revision of AG sales to MSEDCL.

2.3 Distribution Losses for FY 2015-16

2.3.1 In MYT Order dated 03rd November, 2016 in Case No. 48 of 2016, the Hon'ble Commission has approved distribution loss of 18.24%. However, while deciding the impact of distribution loss, Hon'ble Commission compared the approved loss with 13.50%. Considering the above submission regarding AG sales, MSEDCL has also compared the actual distribution loss with 13.50% only. The actual distribution loss of MSEDCL for FY 2015-16 is 14.51% which is 1.01% more.

Table 2: Distribution Losses FY 2015-16

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Distribution Losses	13.50%	14.51%	1.01%

2.3.2 MSEDCL also submits that the figure of actual distribution losses excluding EHV sales is 15.31% for the FY 2015-16.

2.3.3 MSEDCL endeavors for taking Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. These efforts shall be continued and will be enhanced in coming years. However, loss reduction is a slow process and to maintain the rate with which it has been decreasing is a difficult task. The reduction in HT Sales and increase in LT sales has also impacted the distribution losses. MSEDCL, hence requests the Hon'ble Commission to approve the actual Distribution Loss.

2.4 Energy Balance for FY 2015-16

2.4.1 The quantum of sales in MUs shown in Table 1 represents the sales of MSEDCL excluding the sales in the area served by Distribution Franchisees. As per the methodology adopted by Hon'ble Commission for calculating energy balance of MSEDCL as a whole, the sale to the consumers within the Distribution Franchisee area has also been considered. Therefore, total energy sale for FY 2015-16 is computed as below:

Table 3: Energy Sales for MSEDCL for FY 2015-16

MUs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)
Energy Sales by MSEDCL for FY 2015-16	84,502	87,903
Add: Category wise sales in DF area	4,115	4,114
Less: PD Consumers		(8)
Add: OA Sales (Conventional)	5,928	5,928
Add: Renewable Open Access	420	447
Total Energy Sales MSEDCL	**94,965**	**98,383**

2.4.2 MSEDCL would like to submit that MSEDCL is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs, CPP and Renewable Sources. It would be very difficult to differentiate which power is coming from which source at Transmission periphery. Hence an average inter-state loss for the whole year is considered for power sourced from outside the State of Maharashtra.

2.4.3 MSEDCL also submits that data of metered energy is available at 3 points: at bus-bar of the MSEDCL generating station, at T <> D interface i.e. at Distribution Periphery and sales at consumer end. MSEDCL further states that in order to calculate Distribution Loss, it considers metered energy at Distribution periphery and sales at consumer end.

2.4.4 MSEDCL further submits that the TAPS (NPCIL) and EMCO Power Plants are connected to CTU and therefore are considered as Inter-State sources.

2.4.5 MSEDCL has traded surplus power as and when available on day ahead basis through the energy exchanges. In the cases of drop in demand and during the monsoon season, surplus power is available. The surplus power is handled either by giving the zero schedules to high cost generating units or by backing down and selling through the exchanges/bilateral. Further during the winter season, demand during day period is more than that of night period due to the agricultural load. Thus there is the utilization of maximum available power during day hours, whereas during the night there is drastic decrease in demand due to the effect of winter season which causes the back down of generation. As generation cannot be reduced below the technical minimum, the surplus power (after backing down) needs to be sold in order to maintain the stability of the system. MSEDCL submits that quantum of 925.81 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL in FY 2015-16.

2.4.6 MSEDCL further submits that the FBSM has been finalized by SLDC for FY 2015-16 recently and (2396 MUs) have been considered as per the bills raised by SLDC. MSEDCL further submits that FBSM is an Inter-Utility settlement and therefore, finalization of FBSM affects the Inter-Utility quantum resulting into modification of Transmission Loss of the Intra State Distribution Licensees. Further, in view of the average weekly losses notified by WRLDC, it is appropriate to consider the same while calculating the energy balance. Therefore, MSEDCL has considered the average of transmission losses for 52 weeks provided by WRLDC as on March 30, 2016 as the Inter State Transmission Loss and the impact of FBSM in the Energy Balance. The relevant link of WRLDC is provided for reference. (http://www.wrldc.in/Commercial/WR_LOSS_NEW/20160404-0410.pdf)

2.4.7 MSEDCL is therefore submitting the Energy Balance considering above submissions.

2.4.8 Considering the energy available for sale for FY 2015-16 as shown in Table 3 and above submissions, the energy balance for MSEDCL is calculated. The following table shows the energy balance for FY 15-16.

Table 4: Energy balance for FY 2015-16

Particulars	Units	FY 2015-16 (Approved)	FY 2015-16 (Actual)
Retail Energy Sale to Consumers	**MU**	**94,965**	**98,383**
Distribution Losses	%	18.24%	14.51%
Distribution Losses	MU	21,183	16,693
Energy at Distribution Periphery	**MU**	**116,148**	**115,077**
Energy at Distribution Periphery injected and drawn at 33 kV	MU	458	449
Energy at Distribution Periphery injected from 33 kV and above	MU	115,690	114,628
Intra-State loss	%	3.92%	3.12%
Total Energy required at Transmission Periphery	**MU**	**120,410**	**118,323**
Surplus Energy Traded	MU	877	926
Total Power Purchase Quantum Handled	**MU**	**121,287**	**119,248**
Power Purchase Quantum from Intra-State sources	**MU**	**92,481**	**85,005**
MSPGCL	MU	43,776	43,852
Dodson	MU	96	96
IPPs (JSW, ADANI, RATTANINDIA)	MU	26,482	26,482
Renewable	MU	8,544	8,698
CPP	MU	825	688
Traders	MU	1,278	1,278
IBSM/FBSM	MU	(260)	(2,396)
Input for OA Consumption	MU	6,306	6,306
NPCIL (TARAPUR)	MU	3,929	-
EMCO	MU	1,504	-
Power Purchase Quantum from Inter-State Sources	**MU**	**29,899**	**35,546**
NTPC	MU	23,889	24,103
NPCIL (Incl. Tarapur)	MU	609	4,537
CGPL UMPP	MU	4,717	4,717
EMCO	MU	-	1,504
SSP+Pench	MU	684	684
Inter-State losses	%	3.66%	3.66%
PP Quantum from Inter-State sources at Maharashtra Periphery	**MU**	**28,806**	**34,243**
Total Energy Units Handled	**MU**	**122,379**	**120,551**

2.4.9 It is pertinent to note that while approving the Energy Balance for FY 15-16 in the MYT Order dated 3rd November 2016, Hon'ble Commission considered Energy at Distribution Periphery as 1,16,148 MUs instead of 1,15,077 MUs as submitted by MSEDCL. MSEDCL submits that energy at Distribution Periphery is metered energy at sub-station end which has been verified with the final data received from MSLDC. MSEDCL had submitted the energy at Distribution Periphery based on the provisional data available at the time of the submission of the MYT Petition. Considering the inter-state transmission losses at 3.66% as per the justification given in the para 2.4.6 above, MSEDCL has derived Intra-State losses as power purchase, sales and energy at Distribution Periphery all are metered figures.

2.4.10 In the MYT Order dated 3rd November 2016, Hon'ble Commission revised the metered figure of Energy at Distribution Periphery. This was an error apparent and hence the same was brought to the notice of Hon'ble Commission in the Review Petition. In view of the above submissions, MSEDCL requests the Hon'ble Commission to approve the Energy Balance as submitted above.

2.5 Power Purchase for FY 2015-16

2.5.1 A comparison of source wise power purchase quantum and expenses as per the Audited Accounts for FY 2015-16 and as approved by Hon'ble Commission in MYT Order dated 3rd November 2016 in Case No. 48 of 2016 is shown in the following table.

Table 5: Source wise Power Purchase for FY 2015-16

Source	MERC Approved		MSEDCL Actual		Deviation	
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)
MSPGCL	43,776	18,132	43,852	16,846	76	(1,286)
NTPC	23,889	6,651	24,103	6,835	214	184
NPCIL	4,537	1,181	4,537	1,198	-	17
SSP	565	116	566	116	0	0
Pench	118	24	118	24	-	-
Dodson	96	26	96	30	-	5
JSW	1,805	515	1,805	515	(0)	0
Mundra UMPP	4,717	1,156	4,717	1,155	-	(0)
Adani Power	19,047	6,025	19,047	6,074	-	49
EMCO Power	1,504	488	1,504	489	-	1
Rattan India	5,630	2,329	5,630	2,404	0	75
Renewable Excluding CPP	8,544	4,927	8,642	5,325	98	398
CPP	825	168	688	136	(137)	(32)
PGCIL Charges		1,947		2,133	-	186
Traders and FBSM	1,019	350	(1,117)	344	(2,136)	(5)
Total Power Purchase	**116,073**	**44,034**	**114,188**	**43,626**	**(1,885)**	**(409)**

2.5.2 In the following paragraphs, MSEDCL has given the detailed reasons for variation in the power purchase cost.

2.5.3 MSEDCL submits that at the time of filling of MYT Petition in Case No. 48 of 2016, it has submitted the details of power purchase up to March 2015 based on available information. Subsequent to that the Audited Accounts of FY 15-16 have been finalized and the power purchase expenses for FY 15-16 have been revised accordingly. The source wise reasons for deviation have been summarized in following paragraphs.

- **MSPGCL-** Reduction in cost due to pass through of the provisional true up for FY 2013-14 amounting to Rs. 1,313 Crs by MSPGCL.
- **NTPC–** Bills on account of revision of energy charges, annual adjustment to AFC (Annual Fixed cost) & SFC (Specific Fuel Cost) for March 2016 were received along with energy bills of April 2016. The overall impact of this revision was Rs. 140.20 Crs.
- **NPCIL–** There is revision in bills for the month of Feb 16 & Mar 16 amounting to Rs. 2.86 Crs. on account of Tariff revision due to notification for Nuclear Liability Fund. Moreover, MSEDCL paid Rs. 25.56 Crs on account of ROE. Further, amounts of Rs. 8.85 Crs paid towards, water cess, liability fund, WRLDC charges etc. were

not considered while submitting MYT data, and hence there is difference of Rs. 17 Crs.

- **DODSON–** The bills for short fall in generation of FY 09-10 & FY 15-16, water cess arrears for Dec. 15 in respect of Dodson II amounting to Rs. 4.97 Crs. have been raised which were not considered in MYT submission.
- **Renewable–** Since the data for renewable sources needs to be collected from field offices, same was not available for the month of Feb'16 & Mar'16. While submitting the provisional data, MSEDCL considered amount around Rs. 850 Crs. with quantum of 1561 MUs for these two months. However the actual amount is around Rs. 1246 Crs with 1667 MUs, hence there is difference of around Rs. 398 Crs.
- **PGCIL–** PGCIL raised POC -3 bill for the Qtr. Jan. 16 to Mar 16 amounting to Rs. 187.77 Crs.
- **Adani Power–** An amount of Rs. 50.34 Crs were paid to M/s. APML towards Change in law claims. This amount was not considered while submitting the MYT provisional data.

2.5.4 **RattanIndia–** An amount of Rs. 74.25 Crs was paid to M/s. RIPL out of which Rs. 28.99 Crs. were paid towards zero scheduling for the month of Mar' 16 & Rs. 45.26 Crs paid towards Change in law claims for the month of Feb' 2016 & Mar' 2016. These amounts were not considered while submitting the MYT provisional data.

2.5.5 MSEDCL most respectfully submits that the above changes are beyond the reasonable control of MSEDCL but well within the regulatory provisions for consideration in true up. Hon'ble Commission in its MYT Order has ruled that the approved power purchase for FY 15-16 was subject to further prudence check at the time of final truing-up. Hence, MSEDCL requests the Hon'ble Commission to approve the power purchase expenses as per the Audited Accounts.

2.6 Intra-State Transmission Charges for FY 15-16

2.6.1 MSEDCL submits the actual transmission charges and SLDC charges were paid to MSETCL and MSLDC, the details of which are as follows:

Table 6: Intra State Transmission Charges FY 2015-16

Particulars	Amount (Rs. Crs)	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
Total Share of Transmission Charges		**4049.44**
Share of MSLDC Charges for MSEDCL from April 2015 to September 2015		
Monthly	1.64 x 6	Case 178 of 2013
Bi Annual		**3.50**
Share of MSLDC Charges for MSEDCL from October 2015 to March 2016		
Monthly	0.94 x 6	Case 218 of 2014
Bi Annual		**2.05**
Total Share of MSLDC Charges		**21.05**
Total Transmission and MSLDC Charges during FY 2015-16		**4070.49**

2.6.2 MSEDCL requests the Hon'ble Commission to approve the actual Transmission and MSLDC Charges as per the Audited Accounts.

2.7 Fixed Costs for FY 2015-16

2.7.1 Based on the Capital Cost and the consequent Capitalized Expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2015-16 has been determined in accordance with the provisions of MYT Regulations 2011 outlined thereof. As outlined under the regulations, other than the Power Purchase cost, the fixed cost for MSEDCL has been determined under the following major heads:

- Operation and Maintenance Expenses
- Depreciation
- Interest and Finance Charges
- Interest on Working Capital
- Return on Equity etc.

2.7.2 Net Annual Revenue Requirement has been computed after netting off Expenses capitalized, and Non-Tariff Income of MSEDCL.

2.7.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 for Approval of MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20.

2.8 Operation & Maintenance Expenses for FY 2015-16

2.8.1 Operations and Maintenance (O&M) Expenses of the company consists of the following elements:

- Employee Expenses
- Repairs and Maintenance Costs
- Administrative and General Expenses

2.8.2 Employee expenses comprise of salaries, dearness allowance, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.

2.8.3 Administrative expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits etc.

2.8.4 Repairs and Maintenance Expenses go towards the day to day upkeep of the distribution network of the company and form an integral part of the company's efforts towards reliable and quality power supply as also in the reduction of losses in the system.

2.8.5 The following table provides the summary of O&M Expenses (net off Capitalisation) for the FY 2015-16.

Table 7: Actual O&M Expenses for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Actual)
Employee Expenses	4,187
A&G Expenses	641
R&M Expenses	589
Total	**5,418**

2.8.6 The details of employee expenses, A&G Expenses and R&M Expenses have been provided in Regulatory Formats.

2.8.7 MSEDCL submits that it does not maintain the separate Accounts for Wires and Supply Business. Therefore, as approved by Hon'ble Commission in its MYT Order dated 26th June 2015, MSEDCL has applied the Ratio for allocation of O&M Expenses into wires and supply business.

2.8.8 In the following paragraphs, MSEDCL has given the detailed reasons for the change in the O&M cost for FY 15-16 over FY 14-15.

2.8.9 **Employee Expenses for FY 2015-16**

- MSEDCL submits that the major elements of employee cost are basic pay, dearness allowance and terminal benefits. The basic pay, annual increments and increment on promotion is provided as per Rules & Regulations of the Company. The dearness allowance is same as applicable to the State Government and Central Government employees. The terminal benefits such as Gratuity and Leave encashment are based on Gratuity Act/ Company's Rules & regulations. Moreover, the valuation of Gratuity and Leave encashment is done through third party i.e. Actuary. The detailed explanation is given below.

- Compared to FY 14-15, the employee expenses have reduced by Rs.364 Crs in FY 15-16. The main factor attributable for decrease in Employee expenses is reduction in gratuity payment and earned leave encashment.

Sr. No.	Particulars	2014-15	2015-16	Difference (Rs. Crs)
I	II	III	IV	V=(IV-III)
1	Dearness Allowance	1294.78	1427.46	132.68
2	Earned Leave Encashment	632.85	460.60	-172.25
3	Gratuity	765.37	447.26	-318.11

- The Dearness Allowance (DA) to the employees of the Company is given at the rate at which it is as given to the Employees of the State Government. Further, the State Government follows the rate of DA as given to Employees of Central Government. Whenever the Central Government announces increase in DA, the same is followed by the State Government. However, the same is generally deferred by the State Government for three to four months after the application of increased DA to the Central Government Employees. The Company extends benefit of increased DA to its employees in the same month in which the State Government adopts the increased DA.

- It can be seen that during the FY 2015-16, there is increase in DA by Rs. 132.68 Crs. The increase in DA is @ 6% twice (due from Oct 15 and Feb 16) during the Year 2015-16, Also, the difference of impact of DA increase of FY 2014-15 was deferred in FY 2015-16 and the same was actually given in the June 15 and Jan 16.
- The details of Leave Encashment and Gratuity is as under

Particulars	2014-15	2015-16	Difference (Rs. Crs)
I	II	III	IV=(III-II)
Earned Leave Encashment during Service period	83.86		-83.86
Leave Encashment on Retirement	548.99	460.60	-88.39
Total Leave Encashment	**632.85**	**460.60**	**-172.25**
Gratuity	765.37	447.2	-318.11

- There are two types of Earned Leave Encashment benefit given to the employees of the Company viz. –

  Earned leave Encashment during Service period:

  An employee can encash maximum of 30 days leave at a time out of his accumulated leave balance within a block period of two years. Generally in the beginning of the block year, more encashments are observed. The year 2014-15, being the first year of the block period 2014 to 2016, actual earned leave encashment was more. Amount paid for leave Encashment is on the basis of salary drawn (Basic +DA+CLA) for the month for which leave is encashed. The reduction on account of this encashment is Rs. 83.86 Crs.

  Leave Encashment on Retirement:

  On Retirement, an employee is entitled for Leave encashment for accumulated leave balance not exceeding 300 days on the basis of last salary drawn. The reduction on account of this encashment is Rs. 88.39 Crs.

- MSEDCL further submits that, as far as the provision of Gratuity and Leave encashment for employees retiring in future is concerned, it is made on the basis of actuarial valuation from experts as per AS-15. The actuary considers various parameters & assumptions such as Discount rate, Salary escalation rate etc. and decides the amount of liability towards Gratuity of the employees retiring in future and accordingly issues Certificate.

- In case of Gratuity in FY 2015-16, actual attrition was on a higher side. Also, the release of liability through benefit payment was much higher than the increase in liability by one additional year of service for the employees. Further, the senior employees were replaced with the newly appointed employees which reduced the average past service to 14 years from 16 years as calculated in the previous year.

- Besides, Employee Costs capitalized in FY 2015-16 is also higher by Rs. 48.88 Crores as compared to FY 2014-15.

- Thus, with the above considerations, the overall employee expenses for FY 2015-16 are reduced by Rs 364 Crs as compared to FY 2014-15.

2.8.10 **Administrative and General Expenses for FY 2015-16**

- The A&G expenses have decreased from Rs. 703 Crs in FY 14-15 to Rs. 641 Crs in FY 15-16, a decrease of Rs. 62 Crs. The broad reasons for change in A&G expenses are due to following components:

Particulars	**2014-15**	**2015-16**	**Difference (Rs. Crs)**
II	III	IV	V=(IV-III)
Miscellaneous Expenses	119.31	3.28	-116.03
Rent Rates & Taxes	51.96	39.93	-12.03
Expenditure on Consumer billing	110.68	142.52	31.84
Computer Stationery	85.91	70.00	-15.92
Other Expenses (Excl. Misc. Exp.)	463.74	519.10	55.36
Total	**831.60**	**774.83**	**-56.77**

- Miscellaneous Expenses
  In 2014-15, the utility refunded penalty of Rs.109 Crores to Adani Power Maharashtra Ltd as per MERC order dated 30.03.2015. Hon'ble Commission has considered the "Impact of Shortfall of Chinese Manpower on Project Execution due to GoI's change in Visa Policy as a Force Majeure event and accordingly allowed delay in the scheduled COD and disallowed the excess penalty levied by MSEDCL. Further it has directed the Company to refund the excess amount of penalty deducted. As such Miscellaneous Expenses are more in FY 2014-15 as compared to that of FY 2015-16. No such major expenses were incurred under this head in the 2015-16.

- Expenditure on Consumer billing: It has increased due to increase in number of consumers and also due to overall inflation.

- Rent Rates & Taxes: The rate and taxes have decreased due to withdrawal of excess provision for Property and other taxes made in FY 2014-15.

- Computer Stationery: It has decreased due to implementation of SAP. Also, due to billing on SMS and online payment, there is saving in the cost of Stationery.

- Other expenses: Considering the present trend of inflation, there is increase over previous year in most of the expenses head such as telephone & postage, advertisement expenses etc. Further increase is also due to increase in no. of consumers, special recovery drive, theft detection drive, public awareness etc.

- Based on the above, overall A&G Expenses have decreased in FY 2015-16 as compared to FY 2014-15.

2.8.11 **Repairs and Maintenance Expenses for FY 2015-16**

- From FY 2014-15, SAP has been implemented in all circles. The stock has been physically verified by the technical staff and reconciled with the balances of books accounts and the necessary accounting entries have been passed in FY 2014-15. Therefore, repairs and maintenance expenses were comparatively less in FY 2015-16 as compared to FY 2014-15.

Sr. No.	Particulars	2014-15	2015-16	Difference (Rs. Crs)
I	II	III	IV	V=(IV-III)
1	Plant & Machinery	146.11	199.94	53.84
2	Lines & Cable Networks	606.42	215.45	-390.97

2.8.12 MSEDCL further submits that Regulation 78.4.1 and Regulation 92.7.1 of the MERC (MYT) Regulations 2011 provide for the O&M Expenses Norm for Distribution Wires Business and Retail Supply of electricity respectively. Accordingly, MSEDCL has calculated the O&M Expenses for Wires Business and Retail Supply of electricity for FY 15-16 as shown in following tables.

Table 8: O&M Expenses for Wires Business for FY 2015-16

S.No.	Particulars	Units	FY 2015-16	
			MYT Order	True-Up requirement
A)	**Composite O&M Norms**			
1	**O&M Expenses Norm specified in Regulations**			
1.1	For Wheeled Energy	paise/kWh	14.34	14.34
1.2	For No. of Consumers in Wires Business	Rs Lakh/ '000 Consumers	7.40	7.40
1.3	For R&M Expenses	% of GFA	4.00%	4.00%
2	**Parameters for O&M Expenses**			
2.1	Wheeled Energy	MU	111,028	109,543
2.2	No. of Consumers in Wires Business	'000 Consumers	22,330	23,151
2.3	Opening GFA	Rs. Crore	32,073	36,905
B)	**Total O&M Expenses**	**Rs. Crore**	**4,527**	**4,760**

Table 9: O&M Expenses for Supply Business for FY 2015-16

S.No.	Particulars	Units	FY 2015-16	
			MYT Order	True-Up requirement
A)	**Composite O&M Norms**			
1	**O&M Expenses Norm specified in Regulations**			
1.1	For Sales in Supply Business	paise/kWh	9.94	9.94
1.2	For No. of Consumers in Supply Business	Rs Lakh/ '000 Consumers	5.13	5.13
1.3	For R&M Expenses	% of GFA	0.50%	0.50%
2	**Parameters for O&M Expenses**			
2.1	Sales	MU	84,502	87,903
2.2	No. of Consumers in Supply Business	'000 Consumers	22,330	23,151
2.3	Opening GFA	Rs. Crore	3,964	4,101
B)	**Total O&M Expenses**	**Rs. Crore**	**2,005**	**2,082**

2.8.13 MSEDCL humbly submits that Hon’ble Commission had approved an Opening GFA of Rs. 40,510 crore for FY 2015-16. Further, considering the methodology adopted by Hon’ble Commission, the GFA pertaining to DFs of Rs. 868 Crs was to be deducted from the Opening GFA. Thus, the Opening GFA for MSEDCL worked out to be Rs. 39,642 Crs. Accordingly with a 90:10 ratio, the Opening GFA for Wires and Supply should have been as given below:

Particulars	Units	Approved by MERC
Parameters for O&M Expenses		
Opening GFA for Wires	Rs. Crore	35,678

Particulars	Units	Approved by MERC
Opening GFA for Supply	Rs. Crore	3,964
Total	**Rs. Crore**	**39,642**

2.8.14 It is pertinent to note that Hon'ble Commission had correctly considered the Opening GFA for supply business as Rs. 3,964 Crs, however, it had considered the Opening GFA as Rs. 32,073 Crs instead of Rs. 35,678 Crs for wires business. Due to this, there is deviation in the normative O&M Expenses.

2.8.15 This was an error apparent on the face of record and Hon'ble Commission in its Order dated 20th November 2017 in Case No. 176 of 2016 allowed review on this issue and ruled that MSEDCL may claim the impact on this account in its forthcoming MTR Petition.

2.8.16 MSEDCL further submits that while claiming the ARR, MSEDCL has considered the Normative O&M Expenses for FY 2015-16 as per the provisions of the MYT Regulations 2011 and shared the efficiency gains/(losses) due to actual audited O&M Expenses for FY 2015-16 with the consumers as shown in Paragraph of this Petition.

2.8.17 A comparison of Normative O&M Expenses against the approved normative O&M Expenses is highlighted in the following table.

Table 10: Comparison of O&M Expenses for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Normative)	Deviation
O&M Expenditure for Wires Business	4,527	4,760	233
O&M Expenditure for Retail Supply Business	2,005	2,082	77
Operation & Maintenance Expenses	**6,533**	**6,842**	**309**

2.8.18 Therefore, MSEDCL most humbly requests the Hon'ble Commission to approve the O&M Expenses on normative basis.

2.9 Reconciliation of GFA

2.9.1 MSEDCL would like to submit that it had filed an Appeal No. 227 of 2012 & IA No. 20 of 2014 challenging the Hon'ble Commission's Tariff Order dated 16 August, 2012 in Case No. 19 of 2012. In the said Appeal, MSEDCL contended that the Hon'ble Commission had approved the capex and capitalization as submitted by it in its Tariff Petition for FY 2010-11, FY 2011-12 and FY 2012-13. However, due to difference in the opening balance of GFA, the actual expenditure allowed in the Tariff Order was lower than that submitted by MSEDCL.

2.9.2 In its Judgment dated 30 May 2014 in the said Appeals, the ATE ruled that the main reason for difference in the opening GFA was due to disallowance of certain capitalisation in earlier Orders for previous years due to non-submission of the requisite details. Hon'ble Commission in the past had reconsidered the capitalisation whenever MSEDCL had furnished such details. ATE gave liberty to MSEDCL to file a Petition raising its claims with supporting documents, computations and explanation, and directed Hon'ble Commission to consider the same and decide it according to law.

2.9.3 MSEDCL in its MYT Petition in Case No. 48 of 2016 had submitted the detailed reconciliation of GFA difference. However, Hon'ble Commission did not consider the same.

2.9.4 Further, MSEDCL in its Petition for Review of MYT Order dated 3rd November 2016 requested the Hon'ble Commission to reconcile the difference in GFA due to following counts:

A. Difference of Rs.815 Crores in capitalization approved for FY 2007-08;
B. Difference of Rs.208 Crores in capitalization approved for FY 2009-10;
C. Difference of Rs.112 Crores in capitalization approved for FY 2011-12.

2.9.5 Subsequently, Hon'ble Commission issued order in the matter of Case No 176 of 2016 rejecting the claims of MSEDCL in this regard.

2.9.6 MSEDCL most humbly submits that the treatment of above capitalization for inclusion in GFA needs to be seen in the light of ATE Judgment in Appeal No. 227 of 2012 & IA

No. 20 of 2014. ATE Judgment does note that the Hon'ble Commission in the past had reconsidered the capitalization whenever MSEDCL had furnished such details.

2.9.7 With this background, MSEDCL is once again requesting the Hon'ble Commission for reinstatement of GFA to the extent of capitalization submitted at Paragraph 2.9.4. In this regard, MSEDCL would like to make following submission about chronology of events which is pertinent to note:

Case No.	Considerations made in MERC Order	Remark
Case No.38 of 2014	- Hon'ble Commission considered capitalisation (in Table 36 of Order) to the tune of Rs.112 Crores (other Adjustments by Corp Office) - But while **<u>calculating depreciation (Table 37 of the Order) the Hon'ble Commission has not increased the GFA to the extent of capitalisation of Rs.112 Crores</u>** and it slipped out of GFA basket of MSEDCL.	- Page 71 of 148 - Page 72 of 148
Case No.121 of 2014	- **MSEDCL submitted CBA of Capex incurred during FY 2007-08 vide letter dated 30 July, 2014**. - Further, **MSEDCL submitted difference in Capex-related Expenses approved by Commission for FY 2007-08 to the tune of Rs.53.82 Crores**. - MSEDCL requested the Commission to adjust the Opening GFA. - **The Hon'ble Commission scrutinised the submissions of MSEDCL, and allowed Rs. 53.82 Crore as claimed for FY 2007-08.** - As no computations of additional claims have been submitted by MSEDCL, the Hon'ble Commission directed MSEDCL to submit reconciliation of GFA in the audited accounts and Regulatory accounts at the time of next tariff filing.	- Page 196 of 381 - Page 197 of 381 - Page 197 of 381 - Page 197 of 381 - Page 197 of 381
Case No.48 of 2016	- **MSEDCL submitted statement of GFA reconciliation.** - But for computation of Depreciation the Hon'ble Commission considered GFA as approved by it earlier and not GFA as submitted by MSEDCL.	- Page 129 of 617 - Page 129 of 617

Case No.	Considerations made in MERC Order	Remark
Case No.176 of 2016	- Upon non-consideration of earlier capitalized schemes in GFA, MSEDCL sought review. - The commission has rejected the reinstatement of GFA only on account of following: A. Non-submission of CBA for schemes of Rs.815 Crores capitalised in FY 2007-08; B. Adjustment in capitalisation to the tune of Rs.112 Crores has been already done in Case No.38/2014; C. MSEDCL's claim of capitalisation to the tune of Rs.208 Crores has been rejected by the Commission in its Order in Case No.21/2012.	- Page 24 of 53

2.9.8 In view of the above MSEDCL would like to submit that

A. For capitalisation in FY 2007-08, MSEDCL has already righteously submitted CBA to the Hon'ble Commission during proceedings in Case No.121/2014, which is noted by the Hon'ble Commission itself in its Order. As a matter of Principle, capex related expenses such as depreciation, interest on loan and return on equity get charged into tariff only after inclusion of capitalisation in GFA. Accordingly, Hon'ble Commission in its Order in Case No.121/2014 allowed the difference of Rs 53.82 Crs in Capex related expenses as shown below:

Particulars	Audited (Rs Crores)	Allowed after Final Truing up (Rs Crores)	Difference (Rs. Crores)
Depreciation	408.05	382.26	25.79
Advance against Depreciation	20.89	46.68	-25.79
Interest on Long term Capital	241.54	233.54	8.00
RoE	545.18	499.36	45.82
Total for FY 2007-08			**53.82**

B. The capex related expenses such as depreciation, interest on loan and return on equity get charged into tariff only after inclusion of capitalisation in GFA. Considering the fact that Hon'ble Commission has allowed the previously disallowed capex related expenses amounting to Rs 53.82 Crs, and the fact that as directed by Hon’ble Commission, MSEDCL has submitted the reconciliation of GFA in Case No 48 of 2016, Hon’ble Commission ought to have considered the capitalisation of Rs. 815 Crs in GFA.

C. Capitalisation of Rs.208 Crores has been done by MSEDCL in FY 2009-10 which is reflecting in Annual Accounts under different heads. The Hon’ble Commission in its Review Order dated 15.06.2012 in Case No.21/2012 has rejected the claim of capitalisation citing it has considered the latest submission of MSEDCL while considering Capitalisation for FY 2009-10. However, while doing so Hon’ble Commission ignored the figures from Audited Accounts and reconciliation submitted by MSEDCL in response to Data Gaps. MSEDCL submits that this capitalisation is mainly due to corporate office works which were not forming part of any scheme. MSEDCL would like to highlight that in past the Hon’ble Commission has allowed the recovery of capitalisation for corporate office works which are not a part of any specific scheme. (Pl refer Page 141 of 352 in Case No. 19 of 2012, Page 112 of 148 in Case No 38 of 2014 , Page 153 of 381 in Case No. 121 of 2014, Page 127 of 617 Case No. 48 of 2016). In view of ATE judgment in Appeal No. 227 of 2012 & IA No. 20 of 2014, MSEDCL requests the Hon’ble Commission to relook in to the capitalisation towards schemes not forming part of any specific scheme. Hence the capitalization of Rs 208 Crs. ought to have been considered.

D. For capitalisation of Rs.112 Crores, Hon’ble Commission in its review order in Case No.176 of 2016 has noted that adjustment in capitalisation to the tune of Rs.112 Crores has been already done in Case No.38/2014. However. From the Table 37 of said Order in Case No.38/2014, it is evident that the GFA has not been increased to the extent of Rs. 112 Crs. and it is slipped out of GFA basket of MSEDCL.

2.9.9 In view of the submissions in foregoing paragraphs, MSEDCL most humbly requests Hon’ble Commission to reconcile the GFA and accordingly opening GFA for FY 2015-16 may be reinstated as claimed by MSEDCL.

2.10 Capitalisation for FY 2015-16

2.10.1 MSEDCL has achieved capitalisation of Rs. 3,814 Crs in FY 2015-16. A Comparison of Capex and capitalization as approved by Hon'ble Commission and realized by MSEDCL in FY 2015-16 is shown in the table below.

Table 11: Comparison of Capex and capitalisation FY 2015-16

Rs. Crs

Particulars	Opening CWIP	Investment during the year	Total Capitalisation	Closing CWIP
Details of Capex	1,282	5,043	3,814	2,512

2.10.2 As per the Annual Accounts the addition to GFA is Rs. 3,914.82 Crs (incl. disposal/adjustment) whereas in Form 4.2 MSEDCL has shown Capitalisation as Rs. 3813.76 Crs. MSEDCL submits that in Form 4.2, only scheme wise details have been shown whereas in Annual Accounts, the Addition to GFA is shown in totality including land and land rights, buildings etc. The detail of which is shown in the following table.

Sr. No.	Particulars	Amount Rs. Crs
1	Capitalization as per Note 12 of Annual Accounts	**3,914.82**
2	Capitalization as per Form 4.2	3,813.76
Other Assets		
3	Land	52.88
4	Buildings	10.44
5	Vehicles	0.277
6	Furniture & Fixtures	2.75
7	General Assets	26.58
8	Other Civil Work	8.13
Total (2 to 8)		**3,914.82**

2.10.3 Hon'ble Commission in its MYT Order dated 3rd November 2016 has allowed the capitalization towards schemes not forming part of any specific scheme for FY 14-15. MSEDCL further submits that Hon'ble Commission has accordingly revised the GFA to that extent as well. Therefore, MSEDCL requests the Hon'ble Commission to approve the capitalization as per the Audited Accounts including the capitalization towards schemes not forming part of any specific scheme and revise the GFA accordingly.

2.11 Depreciation for FY 2015-16

2.11.1 MSEDCL submits that for FY 14-15, the Hon'ble Commission in it MYT Order dated 3rd November 2016 has considered the Depreciation as per the Audited Accounts of FY 14-15. On the similar line MSEDCL is claiming the depreciation as per the Audited Accounts FY 15-16. A comparison of Depreciation Expense approved by the Hon'ble Commission and actual depreciation expenses of MSEDCL is shown in the following table.

Table 12: Depreciation for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Opening GFA	40,510	41,874	1,364
Depreciation	1,857	1,876	19
% Depreciation	4.58%	4.48%	-0.10%

2.11.2 MSEDCL submits that depreciation for the FY 2015-16 as per audited account is Rs.2746.46 which includes depreciation of Rs 870.50 Crs, on the differential value due to revaluation of assets, transferred under the scheme of financial restructuring of erstwhile Maharashtra State Electricity Board (MSEB), the reference of which has been given in the Note No. 30(26) of the Audited Accounts of FY 2015-16.The asset class-wise breakup of depreciation value of Rs 870.50 Crs for FY 2015-16 in following table.

Rs. Crs.

FY 15-16	
Particulars	**Amount**
Building	67.37
Plant and Machinery	26.83

FY 15-16	
Particulars	**Amount**
Lines and Cables	774.64
Communication Equipment	0.07
Furniture and Fixture	0.08
IT Equipment	(11.69)
Office Equipment's	0.17
Other Assets	13.03
Total	**870.50**

2.11.3 MSEDCL submits that the Opening GFA considered by MSEDCL for FY 2015-16 is on basis of Actual Audited Figure. There is a difference between approved and actual Opening GFA considered by MSEDCL because of certain disallowances by Hon'ble Commission in the past. In Paragraph 2.9 above, MSEDCL has already submitted a detailed reconciliation of the GFA. In view of the same, MSEDCL humbly requests Hon'ble Commission to consider the Opening GFA for FY 15-16 as per its submission.

2.11.4 As per the Regulation 25 of MYT Regulations 2015, for i) the capital work undertaken from funds, partly or fully provided by users, which are in nature of deposit works on consumer contribution work and ii) capital works undertaken with grants or capital subsidy received from state or central Govt.; the provision related to depreciation shall not be applicable to the extent of financial support received.

2.11.5 In the MYT order dated 3.11.2016, the Hon'ble Commission in terms of the said Regulation 25.2(c) has not allowed depreciation to the extent of GFA established through consumer Contribution and Grants for the 3rd control period.

2.11.6 Meanwhile, Ministry of Corporate Affairs (MCA) has issued Indian Accounting Standards (IND AS) converged with IFRS, which is applicable to MSEDCL from FY 2016-17 with comparative period of one year. In pursuance with Ind AS 20, Govt. Grant relating to the purchase of property, Plant & equipment are presented as capital

Grant in financial statements and are credited to P&L in a systematic manner over the expected life of related assets and presented within other operating income. Thus, consequent upon adoption of Ind AS, MSEDCL has recognized grant as deferred income in P&L to the extent of corresponding depreciation over a period of useful life from FY 2016-17.

2.11.7 However, the Hon'ble Commission for the purpose of computing allowable depreciation, has considered the opening GFA by adjusting grants and consumer contribution and allowed depreciation on the Net GFA. Further, the amount of the grant shown as deferred income in Other Income head has also been deducted from ARR. It is submitted that since no depreciation is being allowed on the assets created out of Grants/ Consumer Contribution, it would not be correct to true up the amount of deferred Grant & consumer contribution recognized in P&L account, resulting into disallowance of the Revenue Requirement to the extent.

2.11.8 This issue was raised, with reference to change in accounting policy, in Review petition filed with the Hon'ble Commission (case No 176 of 2016) and requested for correction. In the said matter the Hon'ble Commission has stated that since MSEDCL has not mentioned about the change in accounting policy in MYT petition, the Commission under took this deduction in the GFA as per the provision of MYT Regulation, 2015 and thus it cannot be construed as error. Accordingly, Hon'ble Commission directed MSEDCL to take up this matter in the MTR.

2.11.9 In view of this, the Hon'ble Commission is requested to take cognizance of prevailing Ind AS 20 and accordingly consider both the amounts i.e. Depreciation on Gross Asset (including Grant) and Grant deferred (Other Income) as per MSEDCL's audited accounts, while truing up of 3rd control period. If the Commission adheres to the provisions in MYT Regulations 2015 and computes depreciation by deducting grant and consumers contribution from GFA, then Hon'ble Commission may kindly exclude grant deferred income from Non-tariff Income while truing up.

2.12 Interest Expenses for FY 2015-16

2.12.1 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. Further, the projected capital expenditure and the funding of the same also have a major bearing on the long-term interest expenditure.

2.12.2 The clause 33.3 of the MERC MYT Regulations 2011 states that

33.3 The repayment for the year of the tariff period FY 2011-12 to FY 2015-16 shall be deemed to be equal to the depreciation allowed for that year:

2.12.3 In line with the regulations, the loan repayment considered is equal to depreciation for calculation of interest. Further, Weighted average interest rate (11.83%) has been calculated considering the average of the Loan (opening and closing) and interest paid during FY 15-16. The details for the same have been shown in the table below.

Outstanding Loan at the start of the year (Rs. Crs.)	Loan drawal during the year (Rs. Crs.)	Loan repayment during the year (Rs. Crs.)	Balance outstanding at the end of the year (Rs. Crs.)	Interest Expense incurred during the year (Rs. Crs.)	Weighted Average Interest rate (%)
(1)	(2)	(3)	(4)=(1)+(2)-(3)	(5)	(6)=(5)/Avg ((1),(4))
12,606	2,385	1,687	13,305	1,532	11.83%

2.12.4 Therefore, interest is calculated on the normative average loan availed during the year using Weighted average interest rate as shown in following table.

Table 13: Interest Expenses for FY 2015-16

Rs Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	14,415	14,415	-
Loan Drawal	1,975	1,804	(171)
Loan Repayment	1,857	1,876	19
Normative Balance Outstanding at the end of the year	14,533	14,343	(190)
Interest Rate	11.83%	11.83%	
Gross Interest Expenses	**1,712**	**1,700**	**(12)**

2.12.5 MSEDCL requests the Hon'ble Commission to approve the Interest Expense as shown in above table.

2.13 Interest on Working Capital and Security Deposit for FY 2015-16

2.13.1 MSEDCL submits that the Regulations 35.3 of the MERC (MYT Regulations 2011), provides for Interest on Working Capital for Wire business of electricity. Accordingly, MSEDCL has calculated the Interest on Working Capital for Wire business as shown in the following table.

Table 14: Interest on Working Capital for Wire business for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Computation of Working Capital (Wire Business)			
One-twelfth of the amount of O and M Expenses	377	397	20
One-twelfth of the sum of the book value of stores, materials and supplies	57	71	14
Two months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs	1,467	1,516	49
Less:			
Amount of Security Deposit			
From Distribution System users	(606)	(617)	(11)
Total Working Capital	**1,295**	**1,367**	**72**
Computation of working capital interest			
Rate of Interest (% p.a.)	14.75%	14.75%	
Interest on Working Capital	**191**	**202**	**11**
Interest on Security Deposit			
Rate of Interest (% p.a.)	7.75%	7.75%	
Interest on Security Deposit	**47**	**48**	**(1)**

2.13.2 MSEDCL has calculated the interest on working capital at 14.75% i.e. the State Bank Advance Rate (SBAR) of State Bank of India and the interest on security deposit at 7.75% per annum i.e. RBI Bank Rate as provided in the MYT Regulations 2011.

2.13.3 MSEDCL has paid the Interest on Security Deposit as per the RBI Base applicable from time to time. The MSEDCL General Commercial Circular No. 227 for Rate of Interest on Consumer Security Deposit for FY 15-16 is attached as **Annexure 6** to this Petition.

2.13.4 MSEDCL requests the Hon'ble Commission to allow the Interest on Working capital along with the interest on security deposit for wire business as shown in above table.

2.13.5 MSEDCL further submits that Regulations 35.4 of the MERC (MYT Regulations 2011) provides for Interest on Working Capital for Retail Supply business of electricity.

2.13.6 However, as per the MYT Regulations 2011, the provision of reducing the working capital by the total amount of security deposits is resulting in the net working capital as NEGATIVE. Therefore, the working capital requirement based on normative principle works out to ZERO and Hon'ble Commission does not allow any interest on working capital for supply business.

2.13.7 MSEDCL hereby submits that the amount of security deposits as reflecting in the books of accounts of MSEDCL is just a notional amount, since such amount though reflects in the Balance Sheet in the Transfer Scheme; MSEDCL has not physically received any such deposit in cash from erstwhile Maharashtra State Electricity Board. MSEDCL submits that the opening Balance of Consumer Security Deposit is Rs. 1823 Crs. Even though, subsequently, MSEDCL received security deposit from consumers, due to opening balance, MSEDCL is suffering loss of actual interest paid due to normative practise adopted by Hon'ble Commission. Therefore, MSEDCL requests the Hon'ble Commission not to consider the opening balance of Consumer Security Deposit while calculating the working capital requirement.

2.13.8 As per the Audited Accounts MSEDCL has paid interest on working capital. MSEDCL further submits that the working capital is mainly required to meet the liabilities relating to fuel / power purchase and is beyond the reasonable control of MSEDCL. Accordingly, MSEDCL has claimed the balance Interest on Working Capital in Supply Business i.e. Interest on working capital as per audited accounts less the interest on working capital claimed in wires business. Same approach has been followed for Interest on Security Deposit also.

Table 15: Working Capital for Retail Supply business for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Computation of Working Capital (Supply Business)			
One-twelfth of the amount of Operations and Maintenance Expenses	167	173	6
One-twelfth of the sum of the book value of stores, materials and supplies	6	8	2
Two months of the expected revenue from sale of electricity at the prevailing tariffs	9,152	8,419	(733)
Less:			
Amount of Security Deposit from retail supply consumers	(5,455)	(5,557)	(102)
One month equivalent of cost of power purchased	(3,670)	(3,975)	(305)
Total Working Capital	**200**	**(931)**	**(1,131)**
Computation of working capital interest			
Rate of Interest (% p.a.)	14.75%	14.75%	
Interest on Working Capital	30	494	**464**
Interest on Security Deposit			
Rate of Interest (% p.a.)	7.75%	7.75%	
Interest on Security Deposit	**423**	**384**	**(39)**

2.13.9 MSEDCL submits that the deviation in working capital is mainly due to the normative principles adopted by Hon'ble Commission whereas MSEDCL has paid interest on working capital.

2.13.10 Therefore, MSEDCL requests the Hon'ble Commission to allow the actual Interest on Working capital along with the interest on security deposit for supply business as shown in above tables.

2.14 Other Finance Charges for FY 2015-16

2.14.1 MSEDCL submits that it has incurred Other Finance Charges amounting to Rs. 35.82 Crs during the F.Y. 2015-16. These are the Fund raising charges i.e. Guarantee charges, Finance Charges, stamp duty and Service Fee.

Table 16: Other Finance Charges for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Guarantee Charges	6	4	(2)
Finance Charges	24	13	(11)
Stamp Duty	0	0	(0)
Service Fee i.e. Fund raising charges	2	19	17
Other Interest and Charges	-	-	-
Total Other Finance Charges	**31**	**36**	**5**

2.14.2 MSEDCL submits that it availed Short Term Loan of Rs 5,000 Crs from State Bank of India for two years on 31st August 2015. The said Loan was utilized for payment of accumulated dues of principal amount outstanding of MSPGCL, MSETCL and other Power purchase liabilities. Due to this, the Service Fees i.e. Fund Raising Charges have increased.

2.14.3 MSEDCL submits that these charges depend on the no. of loans, LC required to be given to the Power Suppliers, documentation for availing long term and working capital loans. These charges are, thus, beyond control of MSEDCL and hence required to be considered in the total financial cost. Therefore, MSEDCL humbly requests the Hon'ble Commission to allow the Other Finance Charges as per the Audited Accounts.

2.15 Provision for Bad Debts for FY 2015-16

2.15.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution.

2.15.2 Regulation 78.6 and 92.9 of the MYT Regulations, 2011 specifies that a provision of bad and doubtful debt may be allowed up to 1.5% of the amount shown as receivables in the Audited Accounts of the distribution licensee duly allocated for wires and supply business.

2.15.3 MSEDCL submits that as per the final audited figures, the amount of trade receivables at the end of FY 2015-16 was Rs. 26967.25 Crs. With respect to the increase in the debtors balance by around 57% as against Rs. 17,216 for FY 2014-15, eventually the provision for bad and doubtful has increased. The workings for the same has been shown below.

Particulars	Reference	2015-16
Secured & Considered good	Note 9	6,174.60
Unsecured & Considered good	Note 9	20,792.65
Receivables		26,967.25
Yearly provision as % of receivables		1.50
Provision as per MYT Regulations		404.51

2.15.4 Accordingly, MSEDCL has considered the provision for bad and doubtful debts for FY 2015-16 as per MERC Regulations as given below:

Table 17: Provision for bad and doubtful debts for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Bad Debt Provision for Wire & Supply Busines	258	405	146
Receivables	17,216	26,967	9,751
% of Receivables	1.50%	1.50%	

2.15.5 As detailed in the note 30(26) of the audited accounts, MSEDCL submits that at the time of financial restructuring of erstwhile MSEB i.e. 5th June 2005, as per the provisional transfer scheme, the arrears outstanding for more than 3 years as on 31/05/2005 had been temporarily parked in the books of MSEBHCL. However, under the direction of MSEB Holding Company, the same was retransferred to MSEDCL in FY 2015-16. In addition to that, the FRP has been finalized vide GR no.Reform2010/P.K.117/Urja-3 dated 31st March 2016 whereby the same has been reflected in books of MSEDCL.

2.15.6 Out of Rs. 9,751 Crs increase in trade Receivable, Rs. 4,819 Crs are on account of receivable transferred from MSEB Holding Company and increase of Rs.4,932 Crs are increase in receivables from LT Agriculture category consumers.

2.15.7 MSEDCL requests the Hon'ble Commission to allow the provision for bad debt as shown in above table.

2.16 Other Expenses for FY 2015-16

2.16.1 The other expenses of MSEDCL comprise of the expenditure on account of interest to suppliers/contractors, rebate to consumers and other expenses viz. compensation for injuries to staff and outsiders.

2.16.2 Nature of Other expenses:

- Interest to Supplies / Contractors: This amount represents the interest expense on security deposits collected from collection agencies. MSEDCL submits that the DPS amount booked by MSEDCL related to power purchase suppliers for the FY 2015-16 is Rs. 180 Crs. It is submitted that, such amount is not claimed by MSEDCL in MTR petition. The details of Interest to Suppliers/Contractors considered by MSEDCL in Form 6B are as follows:

Particulars	Amount (Rs. Crs)
A. Interest to suppliers/Contractors (Capital)	2.51
B. Interest to suppliers/Contractors (O&M)	186.39
C. Less: Interest to suppliers/Contractors (Generators)	(180)
Total claimed in ARR (A+B-C)	**8.91**

- Non Moving items written off: These are items of stores which are lying as non-moving for 2 years the realizable value of which is nil.

Table 18: Other Expenses for FY 2015-16

Rs Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
compensation for injuries, death to staff	3	4	1
compensation for injuries, death to others	6	7	1
Loss on obsolescence of fixed Assets & on account of natural calamities	-	8	8
Non Moving Items	2	6	4
Interest to Suppliers/Contractors	2	9	7
Small and Low value written off	-	0	0
Others	1	2	1
Other Expenses	**14**	**36**	**22**

2.16.3 Loss of Obsolescence of Fixed Assets: MSEDCL in its MYT Petition had requested Rs. 11 Crs towards Loss on obsolescence of Fixed Assets. However, Hon'ble Commission did not approve any expenses under this head. The details of the Loss of Obsolescence of Fixed Assets including loss on account of natural calamities considered by MSEDCL in Form 6B are shown in the table below. MSEDCL requests the Hon'ble Commission to approve the same.

Particulars	Amount (Rs. Cr.)	Reference
Loss of Obsolescence of Fixed Assets & on account of Natural Calamities	8.36	Form 6B
A. Loss on obsolescence of Fixed Assets	0.028	Note 27
B. Loss on account of natural calamities	8.33	Note 27

2.16.4 MSEDCL requests the Hon'ble Commission to approve the Other Expenses as shown in above table.

2.17 Contribution to Contingency Reserves for FY 2015-16

2.17.1 MSEDCL submits that considering the precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it was not feasible for MSEDCL to invest in contingency reserves. Considering the critical financial situation in FY 2015-

16, MSEDCL has not invested any amount in contribution to contingency reserves. Accordingly, the same not been claimed in ARR of the FY 2015- 16.

2.18 Incentives and Discounts for FY 2015-16

2.18.1 MSEDCL submits that during FY 2015-16, it has paid Rs. 249.12 Crs. of incentives/discounts to the consumers for timely payment of bills as against Rs. 258.40 Crs. approved by Hon'ble Commission in its MYT Order dated 03rd Nov 2016.

Table 19: Incentives/discounts for FY 2015-16

Rs Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Incentives/Discounts	258	249	(9)

2.18.2 MSEDCL requests the Hon'ble Commission to approve the Incentives/Discounts as shown in above table.

2.19 RLC Refund for FY 2015-16

2.19.1 MSEDCL during FY 2015-16 has refunded Rs. 5 Crs of RLC. The RLC Refund approved by Hon'ble Commission is also Rs. 5 Crs. MSEDCL requests the Hon'ble Commission to allow the RLC Refund for FY 2015-16 as per Audited Accounts.

2.20 ASC Refund for FY 2015-16

2.20.1 MSEDCL during FY 2015-16 has refunded Rs. 74.2 Lakhs of ASC. MSEDCL requests the Hon'ble Commission to allow the ASC Refund for FY 2015-16 as per Audited Accounts.

2.21 Prior Period Expenses/ (Income) for FY 2015-16

2.21.1 Net Prior Period Expenses/(Income) credited during the financial year 2015-16 is Rs. (187) Crs. Prior period items as defined in the AS - 5 are the items of income or expenses which arise in the current period as result of errors or omissions in the preparation of the financial statements of one or more prior periods. Though the expenses are the prior period item, since it has been accounted in the books of account in the FY 2015-16, the same has been claimed by MSEDCL in FY 2015-16 in line with the principles adopted by Hon'ble Commission in previous Tariff Orders.

2.21.2 The Details of Prior Period Expenses as shown in Annual Accounts and claimed by MSEDCL are given in following table.

Table 20: Details of Prior Period Expenses for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Actual)	MSEDCL Claim
Income relating to Previous Year		
Receipts from Consumers	43	43
Interest Income	90	
Excess Provision for Power Purchased	39	39
Excess Provision for Interest & Finance Charges	20	
Other Excess Provision	167	167
Other Income	79	79
SUB TOTAL (A)	**438**	**327**
Expenses / Losses relating to Previous Year		
Short Provision for Power Purchase		
Adjustment to Past Billing	150	150
Material related expenses	7	
Employees cost	14	
Other Operating Expenses	33	
Administrative Expenses	13	
Interest & Other Charges	34	
SUB TOTAL (B)	**251**	**150**
Net prior period expenditure C = (B) - (A)	**(187)**	**(178)**

2.21.3 MSEDCL requests the Hon'ble Commission to allow the prior period expenses/ (income) as claimed by MSEDCL in above table.

2.22 Return on Equity for FY 2015-16

2.22.1 Regulation 32.2 of MERC (MYT Regulations 2011), provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

"Return on equity capital for the Transmission Licensee and Wires Business of Distribution Licensee shall be computed on the equity capital determined in accordance with Regulation 30 at the rate of 15.5 % per cent per annum, and for the Retail Supply of Electricity of Distribution Licensee, Return on equity capital shall be allowed a return at the rate of 17.5 % per cent per annum, in Indian Rupee terms, on the amount of equity capital determined in accordance with Regulation 30."

2.22.2 Following table shows the calculation of capital expenditure, equity and asset capitalisation of MSEDCL for computing the Return on Equity.

Table 21: Calculation of Capital expenditure, Equity portion and Asset Capitalization

Rs. Crs

Sr. No.	Particulars	FY 2015-16 (Actual)
1	Capital Expenditure	5,043
a	Less: Grant	1,537
b	Capital Expenditure incurred (excl Grants)	3,506
2	Equity	
a	Internal Accural	784
b	GoM Equity	337
c	Consumer contribution	241
3	Total Equity	881
4	Equity portion of capital expenditure 4 = (3 / 1 b)	0
5	Assets Capitalization	
a	Capitalisation	3,814
b	Assets Capitalization (to be consider in proportionate to 1 b)	2,652
6	**Equity portion of Assets Capitalisation**	**666**

2.22.3 The return on equity capital is allocated on the proposed ratio of fixed assets between wires and retail supply business. i.e., 90% to Wires Business and 10% to Supply Business. Therefore the capital expenditure, grants, equity and capitalisation is divided into Wires and Supply Business in the ratio of 90:10. In Form 4.4 MSEDCL has shown the details of year wise funding for various schemes wherein the debt: equity portion is arranged. However, there can be few capital works which can be funded by consumers through consumer contribution which are reconciled at the time of finalization of accounts. MSEDCL submits that it will be difficult to project and allocate the consumer contribution to any particular scheme. Therefore, in Form 4.4, MSEDCL has not shown the consumer contribution. However, for the purpose of computation of RoE, MSEDCL has considered the consumer contribution based on historical experience and capital expenditure as shown in above table.

2.22.4 For calculation of equity portion, as per the MERC Regulations the grant received needs to be deducted from the expenditure. Therefore the capitalization of expenditure has been worked out in proportion to the capital expenditure calculated after deducting the grant. For Example:

For FY 2015-16		
Capital Expenditure	:	Rs. 5,043 Crs
Less Grant	:	Rs.1,537 Crs
Net Capital Expenditure	:	Rs. 3,506 Crs
Capitalization	:	Rs. 3814 Crs
Capitalization in Proportion to Capex less grant	:	= 3506/5043*3814 = Rs.2,652 Crs.

2.22.5 For Wires Business, the return on equity has been computed @ 15.5% on average equity based upon the opening balance of equity and normative additions during the year; accordingly, the RoE for wires business for the FY 15-16 is as under:

Table 22: RoE for wires business for the FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Regulatory Equity at the beginning of the year (Wires)	8,589	9,220	
Capital Expenditure incurred (excl Grants)		3,156	
Equity portion of capital expenditure	-	793	
% of Equity portion of capital expenditure		25.12%	
Assets Capitalization		2,386	
Equity portion of Assets Capitalisation	257	599	
Regulatory Equity at the end of the year	**8,846**	**9,819**	**973**
Return on Computation			
Return on Regulatory Equity at the beginning of the year - 15.5%	1,331	1,429	98
Return on Normative Equity portion of Assett Capitalization	20	46	27
Total Return on Regulatory Equity for Wires	**1,351**	**1,475**	**124**

2.22.6 For Supply Business the return on equity has been computed @ 17.5% on average equity based upon the opening balance of equity and normative additions during the year. Accordingly, the RoE for retail supply business for the FY 15-16 is as under:

Table 23: RoE for retail supply business for the FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Regulatory Equity at the beginning of the year (Equity)	954	1,024	
Capital Expenditure incurred (excl Grants)		351	
Equity portion of capital expenditure		88	
% of Equity portion of capital expenditure		25.12%	
Assets Capitalization		265	
Equity portion of Assets Capitalisation	29	67	
Regulatory Equity at the end of the year	**983**	**1,091**	**108**
Return on Computation			
Return on Regulatory Equity at the beginning of the year - 17.5%	167	179	12
Return on Normative Equity portion of Assett Capitalization	3	6	3
Total Return on Regulatory Equity for Supply	**169**	**185**	**16**

2.22.7 MSEDCL humbly requests to the Hon'ble Commission to true up the Return on Equity as shown in above Tables for wires and supply business respectively.

2.23 Sharing of Gains/Losses for FY 2015-16

2.23.1 The Audited Accounts for FY 2015-16 have been submitted by MSEDCL with the present Petition. MSEDCL has considered the expense and revenue heads for FY 2015-16, considering the actual amounts as per the Audited Accounts. However, parameters such as O&M Expenses, for which specific norms have been specified in the MYT Regulations, these have been calculated on normative basis.

2.23.2 As these parameters need to be treated as controllable under the MYT Regulations 2011, any variation in the actual expenses compared to the permissible normative levels has been shared between MSEDCL and consumers.

2.23.3 Regulation 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 sharing of gains and losses on account of controllable parameters.

2.23.4 O&M Expenditure: The actual O&M Expenses as per the Audited Accounts for FY 2015-16 are lower than the expenses allowed on normative basis.

2.23.5 Interest on Working Capital: The actual IoWC expense as per the Audited Accounts for FY 2015-16 is higher than that allowed on normative basis.

2.23.6 Therefore as per the provisions of the MYT Regulations 2011, MSEDCL has calculated the sharing of O&M Expenses and Interest on Working Capital as shown in following Table.

Table 24: Sharing of O&M Expenses and Interest on Working Capital for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Gains/(Loss)	2/3 of Efficiency Gains /(losses)	1/3 of Efficiency Gains /(losses)
O&M Expenses	6,842	5,418	1,424	950	475
Interest on Working Capital	221	695	(474)	(316)	(158)
Total	**7,063**	**6,113**	**950**	**634**	**317**

2.23.7 Distribution Loss: The actual distribution loss in FY 2015-16 is 14.51% against a target of 13.5% set by the Hon'ble Commission in Case No. 48 of 2016. This efficiency loss has to be shared between MSEDCL and the consumers in accordance with the MERC (MYT) Regulations, 2011. Accordingly, MSEDCL has calculated the efficiency loss due to under-achievement of distribution loss reduction based on the actual average billing rate of MSEDCL (per the methodology adopted by Hon'ble Commission) in FY 2015-16, as shown in the table below:

Table 25: Efficiency Loss due to Distribution Loss FY 2015-16

Particulars	Unit	Amount
Normative distribution losses	%	13.50%
Actual distribution losses	%	14.51%
Actual energy input	MU	1,15,076
Normative sales	MU	99,541
Actual sales	MU	98,383
Additional/ (lower) sales due to lower distribution loss	MU	(1,158)
Average Billing Rate*	Rs/ kWh	5
Additional/ (lower) sales due to lower distribution loss	Rs. crore	(599)
2/3 of Efficiency Gains /(losses)	Rs. crore	(399)
1/3 of Efficiency Gains /(losses)	Rs. crore	(200)

**Based on Part A "Revenue from sale of power" as per Schedule 21 of Audited Accounts of MSEDCL excluding recoveries from theft of power/malpractice and Other Operating Revenue(Part B) and Regulatory Surplus/ (Deficit) (Part C).*

2.23.8 The total impact of sharing of gains and losses of various components have been summarized in the Table below:

Table 26: Net Impact of sharing of gains and losses FY 2015-16

Particulars	Amount (Rs. Crs)
O&M Expenses	(475)
Interest on Working Capital	158
Revenue due to Distribution Loss	(399)
Total	**(716)**

2.23.9 Thus, the net impact of sharing of gains and losses is reduction of ARR by Rs. 716 Crs. MSEDCL requests the Hon'ble Commission to allow the total impact of sharing of gains and losses of various components as shown above.

2.24 Revenue from sale of Power for FY 2015-16

2.24.1 MSEDCL has considered the revenue for FY 2015-16 based on the Audited Accounts as shown in following table.

Table 27: Revenue from sale of Power for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Revenue	54,911	50,517	(4,394)

2.24.2 MSEDCL submits that Revenue as per Note 21 of the Audited Accounts includes around Rs. 1 Cr. of Wheeling Charges, Rs. 211 Crs of Revenue from Trading of surplus power and Rs. 678 Crs as income from Open Access which are not included as indicated in the above table as they are not part of revenue from sale of power at retail tariff. These figures are shown separately in the ARR table. Similarly Regulatory Surplus of Rs. 2300 Crs is also not included in above table.

2.24.3 MSEDCL submits that the revenue estimated in the MYT Petition for FY 2015-16 (Case No. 48 of 2016) was based on the information available at the time of filing of additional submission as sought by Hon'ble Commission. Subsequent to the submission of the Petition, Annual Accounts of MSEDCL for the year 2015 – 16 have been finalized, wherein revenue from sale of power (excluding Regulatory Surplus) has been indicated as Rs. 51,407 Crs (Rs. 50,517 Crs + Rs.1 Cr Wheeling Charges + Rs. 211 Crs. Trading of surplus power + Rs. 678 Crs. Income from Open Access).

2.24.4 MSEDCL submits that the audited revenue from sale of the power includes the Regulatory Surplus of Rs. 2300 Crs. MSEDCL further submits that the corresponding debit effect for Regulatory Liability has been given in audited balance sheet. MSEDCL further submits that at the time of Truing up of FY 2016- 17, Hon'ble Commission will determine the trued up gap for FY 2016-17 based on actual expenditure & income without considering the income/expenses arising out of regulatory surplus/deficit. MSEDCL also submits that the consumers will be billed accordingly. In the truing up of FY 2016-17, the actual expenditure & income will be considered & Regulatory Surplus shall not be considered. Accordingly, the Regulatory Surplus is excluded to determine Revenue from sale of power.

2.24.5 MSEDCL humbly requests the Hon'ble Commission to consider the revenue from sale of power as shown in above table and true up the same.

2.25 Non-Tariff Income for FY 2015-16

2.25.1 MSEDCL has certain sources of non-tariff income viz. interest on arrears of consumers, delayed payment charges, interest on staff loans and advances, sale of scrap, interest on investment, rebate on power purchase, etc.

Table 28: Non-tariff income for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Non Tariff Income	2,123	2,882	759

2.25.2 MSEDCL has a Non-Tariff Income of Rs. 2,882 Crs as against Rs. 2,123 Crs as approved by the Hon'ble Commission. Hence, the deviation of Rs. 759 Crs is observed. Details of which are as below.

- The interest on delayed payment receipts from consumers for FY 2015-16 has increased to 1773 Crs from Rs 1042 Crs in FY 2014-15, due to the increase in the receivable (arrears) amount in FY 2015-16
- For the Deferred income of consumer contribution, the grant is increased in FY 2015-16 by Rs 110.17 Crs. due to addition in the grant and consumer contribution amount.
- The income from Theft recovery is already included in the Revenue from Sale of power shown in Table 27 above.

2.25.3 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Non-Tariff Income as per the Audited Accounts.

2.26 Income from Wheeling Charges for FY 2015-16

2.26.1 MSEDCL has an income from Wheeling Charges of Rs. 1 Cr. as against Rs. 4 Crs as approved by the Hon'ble Commission. Hence MSEDCL has received Rs. 3 Crs less income from Wheeling Charges.

Table 29: Income from Wheeling Charges FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Income From Wheeling Charges	4	1	(3)

2.26.2 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Wheeling Charges as per the Audited Accounts.

2.27 Income from Open Access Charges for FY 2015-16

2.27.1 MSEDCL has an income of Rs. 678 Crs from Open Access Charges as against Rs. 575 Crs. as approved by the Hon'ble Commission. Hence MSEDCL has received Rs. 103 Crs. more income from Open Access Charges.

Table 30: Income from Open Access Charges for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Income from Open Access Charges	576	678	103

2.27.2 MSEDCL submits that Hon'ble Commission in the MYT Order had considered an increase in revenue from OA commensurate to the annual growth in OA sales. Hon'ble Commission had also ruled that the said amount would be subsequently trued-up subject to prudence check.

2.27.3 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Open Access Charges as per the Audited Accounts.

2.28 Income from Trading Surplus FY 2015-16

2.28.1 MSEDCL has an Income from Trading of Surplus Power of Rs. 211 Crs. as against Rs. 189 Crs. as approved by the Hon'ble Commission. Hence, MSEDCL has received Rs. 22 Crs. more through Income from Trading of Surplus Power.

Table 31: Income from Trading of Surplus Power FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Income from Trading of Surplus Power	189	211	22

2.28.2 MSEDCL humbly requests to the Hon'ble Commission to consider the revenue from sale of power as shown in above table.

2.29 Aggregate Revenue Requirement for FY 2015-16

2.29.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2015 -16 is as follows:

Table 32: ARR for Wires Business for FY 2015 -16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Operation & Maintenance Expenses	4,527	4,760	233
Depreciation	1,671	1,688	17
Interest on Loan Capital	1,541	1,530	(11)
Interest on Working Capital	191	202	11
Interest on deposit from Consumers and Distribution System Users	47	48	1
Other Finance Charges	28	32	4
Provision for bad and doubtful debts	26	40	14
Return on Equity Capital	1,351	1,475	124
Aggregate Revenue Requirement	**9,381**	**9,776**	**395**
Less : Income from Wheeling Charges	4	1	(3)
Less: Income from Open Access Charges	576	678	103
Aggregate Revenue Requirement from Distribution Wires	**8,802**	**9,097**	**295**

2.29.2 Similarly, considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2015 -16 is as follows:

Table 33: ARR for Supply Business for FY 2015 -16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Power Purchase Expenses (including Inter-State Transmission Charges)	44,034	43,626	(408)
Operation & Maintenance Expenses	2,006	2,082	76
Depreciation	186	188	1
Interest on Loan Capital	171	170	(1)
Interest on Working Capital	30	494	464
Interest on Consumer Security Deposit	423	384	(39)
Other Finance Charges	3	4	1
Provision for bad and doubtful debts	232	364	132
Other Expenses	14	36	22
Intra-State Transmission Charges	4,070	4,070	-
Incentives/Discounts	258	249	(9)
Prior Period Expenses	-	(178)	(178)
DSM Expenses	8	-	(8)
Return on Equity Capital	169	185	16
RLC refund	5	5	(1)
ASC refund	-	1	1
Effect of sharing of gains/losses	(2,286)	(716)	1,570
Past Period Surplus	(1,011)	(1,011)	-
Amount of compensation paid to consumers	(0)	(0)	-
Total Revenue Expenditure	**48,314**	**49,952**	**1,638**

2.30 Combined Aggregate Revenue Requirement for FY 2015-16

2.30.1 Based on the above analysis, the summary of ARR (after sharing of efficiency gains & losses) for the Wires Business and Supply Business, as per Audited Account and as approved by the Hon’ble Commission, for FY 2015-16 is presented in the Table below.

Table 34: Combined ARR (Wires + Supply) for FY 2015-16

Rs. Crs

Particulars	FY 2015-16 (Approved)	FY 2015-16 (Actual)	Deviation
Power Purchase Expenses	44,034	43,626	(408)
Operation & Maintenance Expenses	6,533	6,842	309
Depreciation Expenses	1,857	1,876	19
Interest on Loan Capital	1,712	1,700	(12)
Interest on Working Capital	221	695	474
Interest on Consumers Security Deposit	470	432	(38)
Other Finance Charges	31	36	5
Provision for bad and doubtful debts	258	405	146
Other Expenses	14	36	22
Intra-State Transmission Charges MSLDC charge	4,070	4,070	-
Incentives/Discounts	258	249	(9)
Prior Period Expenses	-	(178)	(178)
DSM expenses	8	-	(8)
Return on Equity Capital	1,520	1,661	141
RLC refund	5	5	(1)
ASC refund	-	1	1
Effect of sharing of gains/losses	(2,286)	(716)	1,570
Past Period Surplus	(1,011)	(1,011)	-
Amount of compensation paid to consumers	(0)	(0)	-
Aggregate Revenue Requirement	**57,695**	**59,728**	**2,033**
Revenue from Sale of Power	54,911	50,517	(4,394)
Non-Tariff Income	2,123	2,882	759
Income from Open Access Charges	576	678	103
Income from Trading of Surplus Power	189	211	22
Income from Wheeling Charges	4	1	(3)
Total Revenue	**57,802**	**54,290**	**(3,513)**
Revenue Gap/(Surplus)	**(107)**	**5,439**	**5,546**

2.31 Revenue Gap/(Surplus) for FY 2015-16

2.31.1 Considering Aggregate Revenue Requirement and total Revenue, the revised gap works out to be Rs. 5,439 Crs. as against surplus Rs. (107) Crs. as approved by the Hon'ble Commission. Thus the actual Revenue Gap for FY 15-16 works out to be Rs. 5,546 Crs. MSEDCL requests the Hon'ble Commission to allow MSEDCL the true up requirement as submitted above.

3. Final True Up for FY 2016-17

3.1 Preamble

3.1.1 This section outlines the actual performance of MSEDCL for the FY 2016-17. MSEDCL hereby submits final True Up for FY 2016-17 comparing the actual audited data for FY 2016-17 with those approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 (MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20)

3.1.2 The Board of Directors of MSEDCL has approved the Annual Audited Accounts of MSEDCL for the period April 2016to March 2017 and Statutory Auditors M/s Mittal & Associates, M/s. SGCO &Co, M/s. B.N. Kedia & Co. have audited the Accounts vide report dated 09/10/2017 attached as **Annexure 3** to this Petition. MSEDCL hereby proposes to true up its expenses and revenues based on the Audited Accounts.

3.1.3 Following sections outlines the deviations in actual expenses for FY 2016-17 based on the Audited Accounts of MSEDCL in comparison with the expenses approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 (MYT Order of MSEDCL for the period from FY 2016-17 to FY 2019-20).

3.2 Category Wise Sales for FY 2016-17

3.2.1 Category wise actual sales for FY 2016-17 for MSEDCL excluding all Distribution Franchisee have been summarized in the following table.

Table 35: Category wise sales for FY 16-17

Category	FY 2016-17		
	Approved	Actual	Deviation
	Sales (MUs)	Sales (MUs)	Sales (MUs)
Residential	19,174	18,056	(1,118)
Commercial	6,648	6,201	(447)
HT-Industrial	23,629	22,874	(755)
LT-Industrial	6,606	6,419	(187)
PWW	2,149	2,062	(87)
Street Light	1,776	1,695	(81)
Agriculture	25,132	28,561	3,429
Public Services	1,316	1,294	(22)
Railways	77	17	(60)
Others	351	418	67
Total	**86,858**	**87,596**	**738**

Others include: HT group housing, Temporary Category, Crematoriums & Burial Grounds, Advt. & Hoardings etc.

3.2.2 MSEDCL submits that Hon'ble Commission in its MYT Order dated 3rd November 2016 has approved MSEDCL sales (excl. DF) of 86,858 MUs. However, the actual sales (excl. DF) are 87,596 MUs i.e. additional sale of 738 MUs.

3.2.3 It is, however pertinent to note that the sale to all the major categories, except AG, are lower than that approved by Hon'ble Commission. Increased Open Access is one of the reasons for reduction in HT Industrial& Commercial Sales. The Open Access has increased to 7995 MUs as against 6378 MUs during the previous year. For LT Residential category, Hon'ble Commission has considered 8% growth, however the actual growth in this category is only 4%. In this regard, MSEDCL submits that the consumption of LT Residential Category depends on socio-economic factors such as per capita income, urbanization etc. Certain energy conservation & efficiency measures viz. use of LED bulbs, star rated devices, solar water heaters etc. by residential consumers might have impacted the energy consumption.

3.2.4 There is an increase in actual sales of LT AG Category as compared to that approved by Hon'ble Commission. The major reasons for the deviation are:

3.2.5 Hon'ble Commission at Table 5-11 of the MYT Order has approved the No. of Consumers, Connected Load and AG Sales for 3rd Control Period. In the said table, Hon'ble Commission has approved No. of consumers as 41.65 Lakhs and connected load of 200 Lakhs HP for FY 16-17. However, while allowing a growth of around 2 lakhs consumers, the increase in the connected load has been allowed to the extent of 0.38 lakh HP only. A comparison of No. of consumers and connected load for FY 15-16 and FY 16-17 as approved by Hon'ble Commission is shown below:

Particulars	FY 15-16	FY 16-17	Change
No. of Consumers (lakh)			
Un-Metered	15.91	13.91	-2.000
Metered	23.52	27.75	4.230
Total	**39.43**	**41.65**	**2.220**
Connected Load (lakh HP)			
Un-Metered	83.42	72.93	-10.490
Metered	116.20	127.07	10.870
Total	**199.62**	**200.00**	**0.380**

3.2.6 From the above table, it is evident that the connected load is not increased corresponding to increase in number of consumers. In case of Un-metered consumer category, the connected load has reduced by ~5 HP per consumer corresponding to the reduction in the number of consumers. However, for the metered category, the increase in the connected load is extremely low only at ~ 2.5 HP per consumer corresponding to their increase in number of consumers. Thus, the increase in connected load for metered category is not commensurate with the increase in number of consumers.

3.2.7 If the same HP per consumer approved by Hon'ble Commission for FY 2015-16 is considered for FY 16-17, the approved LT AG Sales for FY 16-17 should have been 25,277 MUs.

3.2.8 Further, MSEDCL submits that though there was a good rainfall in FY 16-17, it also witnessed a prolonged dry spell in July/August 17. In order to facilitate irrigation of the standing crop, MSEDCL has provided 12 Hrs supply to the AG Category consumers from Sept 16 to Dec 16. (From 8th September to 15th November, and from 21st November to 15th December 2016). This has also contributed to rise is AG Sales by additional 1,798 MUs.

3.2.9 FY 16-17 witnessed good rainfall, thereby increasing the availability of water across the storage facilities and farmers could use the water for irrigation during the Rabi season of FY 16-17.

3.2.10 Considering the revision in the approved sales for FY 16-17 on account of correction in error and the additional sales due to increased supply hours during September 16 to December 16 and good rainfall, MSEDCL most earnestly requests the Hon'ble Commission to approve the LT AG Sales for FY 16-17 as submitted by MSEDCL.

3.3 Distribution Losses for FY 2016-17

3.3.1 In MYT Order dated 3rd November, 2016 in Case No. 48 of 2016, the Hon'ble Commission has approved distribution loss of 17.76% (excluding EHV Sales). The actual distribution loss of MSEDCL for FY 2016-17 is 15.40 % which is 2.36% less than the level of Distribution Losses approved by Hon'ble Commission.

Table 36: Distribution Loss for FY 16-17

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Distribution Losses	17.76%	15.40%	-2.36%

3.3.2 MSEDCL endeavors for taking Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. These efforts shall continue and will be enhanced. 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. MSEDCL requests the Hon'ble Commission to approve the actual Distribution Loss.

3.4 Energy Balance for FY 2016-17

3.4.1 The quantum of sales in MUs shown in Table 35 represents the sales of MSEDCL excluding the sales in the area served by Distribution Franchisees. As per the methodology adopted by Hon'ble Commission for calculating energy balance of MSEDCL as a whole, the sale to the consumers within the Distribution Franchisee area has also been considered. Therefore, energy available for sale for FY 2016-17 is computed as below:

Table 37: Energy Available for Sales FY 2016-17

MUs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)
Energy Sales by MSEDCL for FY 2016-17	86,858	87,596
Add: Category wise sales in DF area	4,371	4,079
Less: PD Consumers		(5)
Add: OA Sales (Conventional)	6,165	7,219
Add: Renewable Open Access	420	770
Total Energy Sales MSEDCL	**97,814**	**99,659**

3.4.2 MSEDCL would like to submit that MSEDCL is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs, CPP and Renewable Sources. It would be very difficult to differentiate which power is coming from which source at Transmission periphery. Hence an average inter-state loss for the whole year is considered for power sourced from outside the State of Maharashtra. The said loss is calculated in Energy Balance only.

3.4.3 MSEDCL also submits that data of metered energy is available at 3 points: at bus-bar of the generating station, at T <> D interface i.e. at Distribution Periphery and sales at consumer end. It is further to state that to calculate Distribution Loss, it considers metered energy at Distribution periphery and sales at consumer end.

3.4.4 MSEDCL further submits that the TAPS (NPCIL) and EMCO Power Plants are connected to CTU and therefore are considered as Inter-State sources which earlier were taken as Intra-State sources.

3.4.5 With reference to the justification of the 'Surplus Energy Traded' given in the para 2.4.5, MSEDCL submits that for FY 16-17, it has considered the actual figures. The quantum of 1244 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL during FY 16-17.

3.4.6 MSEDCL submits that the FBSM has not been finalized by SLDC after May 2016 and as per latest DSR available, UI for FY 16-17 has been considered as -1393 MUs. MSEDCL further submits that FBSM is an Inter-Utility settlement and therefore, finalization of FBSM shall result into revision in the Inter-Utility quantum resulting into modification of Transmission Loss of the Intra State Distribution Licensees. Further, in view of the average weekly losses notified by WRLDC, it will be appropriate to consider the same while calculating the energy balance. Therefore, MSEDCL has considered the average of transmission losses for 52 weeks provided by WRLDC as on March 30, 2017 as the Inter State Transmission Loss and the impact of FBSM in the revised Energy Balance. The relevant link of WRLDC is provided for reference. (http://www.wrldc.in/Commercial/WR_LOSS_NEW/20170403-0409.pdf)

3.4.7 Accordingly, MSEDCL is submitting the Energy Balance considering above submissions. MSEDCL also submits that due to pending FBSM, the energy balance is not showing the correct picture and will change when FBSM is finalized by SLDC in due course. MSEDCL requests the Hon'ble Commission to direct SLDC to finalize the FBSM on regular basis so the exact impact of the quantum as well as cost can be considered in Tariff Petitions.

3.4.8 Considering the inter-state transmission losses at 3.66% as per the justification given in the para 3.4.6 above , MSEDCL has derived Intra-State losses as power purchase, sales and energy at Distribution Periphery all are metered figures.

3.4.9 Considering the above energy available for sale for FY 2016-17 as shown in above, the energy balance for MSEDCL is calculated. MSEDCL further would further like to submit that while calculating the Distribution Loss as shown in Table 36, it considered the voltage wise sales. The following table shows the energy balance for FY 16-17.

Table 38: Energy Balance for FY 2016-17

Particulars	Units	FY 2016-17 (Approved)	FY 2016-17 (Actual)
LT sales	MUs	60,624	62,275
HT sales	MUs	24,524	23,865
Renewable Open Access	MUs	420	770
Sales to Open Access Consumers (Conventional)	MUs	6,165	7,219
Total Sales to Consumers	**MUs**	**91,733**	**94,128**
Distribution Loss	%	17.76%	15.40%
Distribution Loss	MUs	18,872	17,139
Total Energy Available for Sale at 33kV	**MUs**	**1,10,604**	**1,11,268**
Energy injected and drawn at 33kV	MUs	458	494
Net Energy Available for Sale at 33kV	**MUs**	**1,10,146**	**1,10,773**
EHV Sales	MUs	6,081	5,533
Net Energy requirement at T<>D Periphery	**MUs**	**1,16,227**	**1,16,306**
Intra-State Transmission Loss	%	3.92%	4.29%
Intra-State Transmission Loss	MUs	4,742	5,218
Energy Requirement at G<>T Periphery	**MUs**	**1,20,969**	**1,21,524**
Less: Input for OA consumption	MUs	(6,826)	(7,680)
Power Traded	MUs	-	1,244
Net Energy Requirement at G<>T Periphery	**MUs**	**1,14,143**	**1,15,088**
Power Purchase Quantum from Intra-State sources	MUs	81,573	76,728
Power Purchase Quantum from Inter-State sources at MS Periphery	MUs	32,570	38,359
Inter-State Losses	**%**	3.66%	3.66%
Power Purchase Quantum from Inter-State sources	MUs	33,807	39,815
Total Power Purchase Quantum payable	**MUs**	**1,15,380**	**1,16,543**

3.4.10 In view of the above submissions, MSEDCL requests the Hon'ble Commission to approve the Energy Balance as submitted above

3.5 Power Purchase for FY 2016-17

3.5.1 Following table summarizes the source wise power purchase done by MSEDCL during the FY 16-17.

Table 39: Source wise Power Purchase for FY 16-17

Source	MERC Approved		MSEDCL Actual		
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Deviation (Rs. Crs)
MSPGCL	39,965	15,950	46,796	16,458	508
NTPC	26,208	6,871	27,412	8,376	1,505
NPCIL	5,471	1,319	4,210	1,052	(267)
SSP	1,210	249	845	173	(75)
Pench	136	28	115	24	(4)
Dodson	116	27	69	24	(3)
JSW	1,934	510	1,742	452	(58)
CGPL	5,158	1,212	5,149	1,235	22
Adani Power	17,587	5,881	17,294	5,786	(95)
EMCO Power	1,370	462	1,475	600	138
Rattan India	3,532	1,927	1,701	1,466	(461)
Renewable Excluding CPP	12,692	7,177	9,762	5,849	(1,328)
Others			319	(111)	(111)
PGCIL Charges		2,142	-	2,387	245
Traders and FBSM			(784)	56	56
Total Power Purchase	**1,15,380**	**43,754**	**1,16,104**	**43,826**	**72**

3.5.2 In the following paragraphs, MSEDCL has given the detailed reasons for variation in the power purchase quantum and cost.

- **MSPGCL**

  Following table shows the comparison of the actual power purchase vis-à-vis approved power purchase from MSPGCL.

Station	FY 2016-17					
	Quantum in MUs		Cost Rs. Crs		Variation	
	Approved	Actual	Approved	Actual	Quantum	Cost
Paras Unit 3 & 4	3,406	2,679	1,287	1,127	(727)	(160)
Chandrapur 3 to 7	12,288	10,751	3,814	3,283	(1,537)	(531)
Chandrapur 8 & 9	2,959	2,906	1,289	1,164	(53)	(125)
Nasik 3, 4 & 5	-	2,973	336	1,409	2,973	1,073
GTPS Uran	3,494	3,203	1,043	742	(291)	(302)
Parli Replacement 8	362	22	265	12	(340)	(253)
KHAPARKHEDA - 1to 4	3,402	3,821	1,332	1,479	420	148
KHAPARKHEDA 5	3,200	3,241	1,389	1,364	41	(25)
Bhusawal 2 and 3		574	80	305	574	225
Bhusawal 4 and 5	664	5,089	1,259	2,650	4,425	1,390
Koradi 5,6 & 7	-	546	174	336	546	162
Parli 3, 4 & 5	-	(12)	32	96	(12)	64
Parli 6 & 7	-	1,399	344	737	1,399	393
Koradi 8,9&10	6,004	4,237	2,608	1,749	(1,767)	(858)
Hydro	4,186	4,418	698	715	232	17
Infirm		949		653	949	653
Others				(1,362)	-	(1,362)
Total	**39,965**	**46,796**	**15,950**	**16,458**	**6,831**	**508**

3.5.3 MSEDCL submits that the major variation is on account of power sourced from Nashik 3, 4 & 5 and Bhusawal 4 & 5 due to Transmission constraint, Infirm Power and Other adjustments as well as requirement of running thermal plants on technical minimum. It is pertinent to note that while approving the power purchase cost for FY 16-17, Hon'ble Commission did not consider the issue of transmission constraint and technical minimum. Further, addition of 949 MUs from infirm power was not anticipated in MYT Order.

3.5.4 MSEDCL further submits that MSPGCL has passed through the impact of provisional true up for FY 2013-14 & 14-15 amounting to Rs. 1362 Crs. Details of which are

a) Supplementary Credit Bills towards provisional True up for FY 2015-16 amounting to Rs 1300.47 Crs;
b) Surplus approved for Final true up of FY 14-15 Rs. 61.77 Crs as per MERC Order in Case 46 of 2016 dtd. 30.08.2016.

- **NTPC**

MSEDCL submits that during FY 16-17, Mauda II (Capacity 660 MW) achieved COD on 01st February 2017 due to that additional generation of 220 MUs received from NTPC.

Further, Hon'ble Commission did not consider any power purchase from Kawas and Gandhar, however, MSEDCL has procured power from these Stations.

MSEDCL further submits that CERC has issued Orders for various Stations for the period FY 2013-14 to FY 2018-19 as per the CERC Tariff Regulations 2014 which were not considered in the MYT order. Due to this, the cost of NTPC stations has revised.

- **NPCIL**

MSEDCL submits that the Kakrapar Nuclear Plant is on outage from Apr 2016 hence there was no power purchase as against 1095 MUs approved. This was an unforeseen event and hence, there is a deviation.

- **DODSON**

  There has been decline in generation in Dodson II. There was zero generation from Sep 16 to Dec 16. Hence total power purchase from Dodson is less than approved. Further, hydro being must run power, fixed cost had to be paid. This increased actual cost compared to the approved cost. Further, incentives of Rs. 1.26 Crs were paid for capacity index.

- **Renewable**

  Since the data for renewable sources needs to be collected from field offices, same was not available for the month of Dec 16 to Mar 17. While submitting the provisional data, MSEDCL estimated quantum of around 4700 MUs with purchase cost of Rs. 2656 Crs for these four months. However the actual quantum is 3686 MUs amounting around Rs. 2517 Crs, hence there is difference of around 1014 MUs & Rs. 139 Crs. Further, field offices make provisions for bills at the end of the year. MSEDCL has executed EPAs with various wind generators in the month of March 2017 for the power injected from stations with COD upto March 17 and hence a provision of Rs. 345 Crs has been made in the Books of account. MSEDCL has further made a provision for Renewable Energy Certificate Rs. 99.9 Crs, Renewable energy obligation fund provision Rs. 206.6 Crs, provision of Rs. 169.52 Crs towards new PPAs of 154 MW. MSEDCL further submits that an amount of Rs. 96.47 Crs have been withdrawn being related to prior period and MSEDCL have availed rebate amounting to Rs. 56.03 Crs. during the FY 2016-17.

- **FBSM**

  The credit bill amounting to Rs. 124.94 Crs for the FBSM was not considered in approved figures as the same cannot be estimated.

- **PGCIL**

  PGCIL raised POC -3 bill of Rs. 101.35 Crs for April 16 to Jun 16, Rs 71.79 Crs for Jul. 16 to Sep 16 and Rs. 5.23 Crs bill against True up. In addition, inter regional charges bill of Rs. 23.80 Crs. was raised as per revision of REA.

- **Rattan India**

Due to backing down, actual power purchase was 1701 MUs as against 3533 MUs approved.

- **Adani**

  Adani 440 MW plant achieved COD in Feb 17. There has been a deduction against deemed availability for APML amounting to Rs. 90 crs.

- **MP Electricity Board & OA generators**

  MSEDCL purchased 9 MUs of power from M.P. Electricity Board amounting to Rs. 4.71 Crs. The purchase of 310 MUs of over injected units by Open Access generators amounted to Rs. 6.73 Crs, which also accounted for the lapsed units 161 MUs.

- **Short term Power Purchase**

  In case of any shortfall from approved sources, when demand exceeds availability or for cost optimisation, MSEDCL sources power from exchange/Traders or other sources through competitive bidding in accordance with the Guidelines of MoP. Accordingly, short term power procured of 609 MUs amounting to Rs. 180.61 Crs has been procured which was not considered in the MYT.

3.6 Intra State Transmission Charges for FY 16-17

3.6.1 MSEDCL submits the actual transmission charges and SLDC charges paid to MSETCL and MSLDC. The details are as follows:

Table 40: Intra State Transmission Charges for FY 16-17

Rs Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Transmission Charges paid to Tx Licensee	4,611	3,793	(818)

3.6.2 MSEDCL submits that it pays the transmission charges to STU as per the InSTS Order issues by Hon'ble Commission from time to time. MSEDCL requests the Hon'ble Commission to approve the actual Transmission and MSLDC Charges as per the Audited

Accounts.

3.7 Fixed Costs for FY 2016-17

3.7.1 Based on the Capital Cost and the consequent Capitalized Expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2016-17 has been determined in accordance with the provisions of MYT Regulations 2015 outlined thereof. As outlined under the regulations, the fixed cost for MSEDCL has been determined under the following major heads:

- Operation and Maintenance Expenses
- Depreciation
- Interest and Finance Charges
- Interest on Working Capital
- Income Tax
- Return on Equity

3.7.2 Net Annual Revenue Requirement has been computed after netting off Expenses capitalized.

3.7.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016 in Case no. 48 of 2016 for FY 2016-17 and the values as per the audited accounts.

3.8 Operation & Maintenance Expenses for FY 2016-17

3.8.1 Operations and Maintenance (O&M) Expenses of the company consists of the following elements:

- Employee Expenses
- Repairs and Maintenance Expenses
- Administrative and General Expenses

3.8.2 The following table provides the summary of O&M Expenses (net of Capitalization) for the FY 2016-17.

Table 41: Actual O&M Expenses for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Actual)
Employee Expenses	4,292
A&G Expenses	727
R&M Expenses	777
Total	**5,797**

3.8.3 The details of employee expenses, A&G Expenses and R&M Expenses have been provided in Regulatory Formats.

3.8.4 In the following paragraphs, MSEDCL has given the detailed reasons for change in the O&M cost for FY 16-17 over FY 15-16.

3.8.5 **Employee Expenses**

3.8.5.1 MSEDCL submits that, out of total O&M expenses of Rs. 5,797 Crore for FY 2016-17, Employees cost comprises of Rs. 4,292 Crore which makes the Employee Cost to be 74% of the total O&M expenses. Further, MSEDCL submits that the employee cost is entirely uncontrollable. The major elements of employee cost are basic pay, dearness allowance and terminal benefits. The basic pay, annual increments and increment on promotion are as per Rules & Regulations of the Company. The dearness allowance is the same as applicable to the State Government and Central Government employees. The terminal benefits such as Gratuity and Leave encashment is based on Gratuity Act/ Company's Rules & regulations. Moreover, the valuation of Gratuity and Leave encashment is done through third party i.e. Actuary.

3.8.5.2 Following table provides the details of variation in Employee Expenses compared to previous year.

Sr. No.	Particulars	2015-16 (Rs. in Crs.)	2016-17 (Rs. in Crs.)	Difference (Rs. in Crs.)
I	II	IV	IV	V=(IV-III)
1	Gross Employee Expenses	4531.67	4650.51	118.84
2	Less: Capitalized	(344.20)	(358.30)	(14.10)
3	Less: Re-measurement of defined benefit plans deducted from contribution to CPF	(116.58)	(171.09)	(54.51)
4	Add Employees cost for previous years	14.25		(14.25)
5	**Net Employee Expense**	**4085.14**	**4121.12**	**35.98**

3.8.5.3 The broad reasons for increase in Employee expenses are due to following components:

Sr. No.	Particulars	2015-16 (Rs. in Crs.)	2016-17 (Rs. in Crs.)	Difference (Rs. in Crs.)
I	II	III	IV	V=(IV-III)
1	Dearness Allowance	1427.46	1,487.24	59.77
2	Earned Leave Encashment	460.60	574.40	113.80
3	Gratuity	447.26	391.77	-55.48

3.8.5.4 **Dearness Allowance (DA)**

MSEDCL submits that the DA to the employees of the Company is given at the rate at which it as given to the Employees of the State Government. Further, the State Government follows the rate of DA as given to Employees of Central Government. Whenever the Central Government announces increase in DA, the same is followed by the State Government. However, it is to be noted that the same is generally deferred for three to four months after the application of increased DA to the Central Government Employees. MSEDCL submits that it extends benefit of increased DA to its employees in the same month in which the State Government adopts the increased DA.

MSEDCL submits that, during the FY 2016-17, there is an increase in DA by Rs. 59.77 Cr. The increase in DA is @ of 6% (due from Sept 16) during the Year 2016-

17, Also MSEDCL submits that the difference of impact of DA increase of FY 2015-16 was deferred to FY 2016-17 and the same was actually given in the May 16.

3.8.5.5 Leave Encashment and Gratuity-

Sr. No.	Particulars	2015-16 (Rs. in Crs.)	2016-17 (Rs. in Crs.)	Difference (Rs. in Crs.)
I	II	III	IV	V=(IV-III)
1	Earned Leave Encashment	460.60	574.40	113.80
2	Gratuity	447.26	391.77	(55.49)

MSEDCL provides two types of Earned Leave Encashment benefit given to its employees viz. –

- Earned leave Encashment during Service period:
  An employee can encash maximum of 30 days leave at a time out of his accumulated leave balance within a block period of two years. Amount paid for leave Encashment is on the basis of salary drawn (Basic +DA+CLA) for the month for which leave is encashed.
- Leave Encashment on Retirement:
  On Retirement, an employee is entitled for Leave encashment for accumulated leave balance not exceeding 300 days on the basis of last salary drawn

3.8.6 MSEDCL submits that, In case of leave encashment, every year 30 earned leaves are added and the employees whose earned leave are expected to exceed 300 days can encash their leaves. Employees can encash leaves once in a block period of two years and generally in the beginning of the block year, much of the encashments are observed. The year 16-17, being the first year of the block period 2016-18, actual earned leave encashment is more. Therefore, there is an increase in earned leave encashment in the FY 2016-17.

3.8.7 MSEDCL further submits that the Payment to Retired Employees during the year depends upon the number of Employees retired during the year. In FY 2015-16 the number of employees retired was 3882 whereas it was 4099 in FY 2016-17. Hence, there is an increase in the Payment to Retired Employees for the FY 2016-17.

3.8.8 MSEDCL further submits that, as far as the provision of Gratuity and Leave encashment for employees retiring in future is concerned, it is made on the basis of actuarial valuation from experts as per AS-15. The actuary considers various parameters & assumptions such as Discount rate, Salary escalation rate etc. and decides the amount of liability towards Gratuity of the employees retiring in future and accordingly issues Certificate.

3.8.9 Besides, Employee Cost capitalized in FY 2016-17 is higher by Rs. 14.25 Crores as compared to FY 2015-16. Based on the above, the overall employee expenses of FY 2016-17 are increased by Rs 36 Crs as compared to FY 2015-16.

3.8.10 **Administrative and General Expenses**

3.8.10.1 The A&G expenses have increased from Rs. 639.07 Crs in FY 15-16 to Rs. 727.13 Crs in FY 16-17 i.e. increase of Rs. 88.06 Crs. The change in A&G expenses are due to following components

Sr. No.	Particulars	2015-16	2016-17	Difference
I	II	III	IV	V=(IV-III)
1	Gross Admin. & Gen Expenses	686.02	780.15	94.13
2	Less: Capitalized	46.95	53.01	6.07
3	Net Admin. & Gen Expense	639.07	727.13	88.06

3.8.10.2 The broad reasons for increase in A&G Expenses are due to following components:

Sr. No.	Particulars	2015-16	2016-17	Difference
I	II	III	IV	V=(IV-III)
1	Rent Rates & Taxes	39.93	132.72	92.77
2	Advertisement Expenses	16.87	28.62	11.75
3.	Computer Stationery	70.00	42.28	-27.72
4.	Other Expenses	8.40	28.50	20.10
	Total	**136.00**	**232.12**	**96.12**

3.8.10.3 Rent Rates and Taxes: MSEDCL submits that, in FY 2016-17, Rs. 64.64 Crs. are deposited with the Hon'ble Commission for using infrastructure of Mula Pravra Energy Ltd and Rent paid as user charges @ Rs. 1 Cr per month, (Total 12 Crs.) is considered in Rent. The rate and taxes increased in FY 2016-17 due to payment of property taxes and increase in rate of Service tax.

3.8.10.4 Advertisement Expenses: MSEDCL submits that it is increased due to advertisement on Public notice of Public hearing of MYT Tariff Petition for control period 2016-17 to 2019-20 paid in FY 2016-17.

3.8.10.5 Computer Stationery: MSEDCL submits that, it is decreased due to implementation of SAP. Also, due to billing on SMS and online payment, there is saving in the cost of Stationery.

3.8.10.6 Other Expenses: Considering the present trend of inflation, MSEDCL submits that there is increase over previous year in most of the expenses heads such as telephone & postage, advertisement expenses etc. Further increase is also due to increase in no. of consumers, special recovery drive, theft detection drive, public awareness etc.

3.8.10.7 Also, as per the IND AS the Prior period expenses of Rs 21.30 Crs of admin and General Expenses are adjusted in FY 2016-17. Hence the other expenses increased in FY 2016-17.

3.8.10.8 Based on above, overall A&G Expenses have increased by Rs 96.12 Crs in FY 2016-17 as compared to FY 2015-16.

3.8.11 **Repairs and Maintenance**

3.8.11.1 Following table gives a comparison of R&M Expenses for FY 16-17 as against FY 2015-16.

(Rs. in Crs.)

Sr. No.	Particulars	2015-16	2016-17	Difference
I	II	III	IV	V=(IV-III)
1	R&M Expenses	589.33	777.35	188.02

3.8.11.2 MSEDCL submits that the increase in Actual Expenses for the FY 2016-17 is normal increase resulted due to increasing infrastructure. Even though the R&M expenses appear to be slightly increased, it is rather suppressed expenditure due lower approvals by Hon'ble Commission.

3.8.11.3 MSEDCL further submits that it had recovered the service line charges from consumers while releasing new connections during the period Jan 2005 to April 2007. However, Hon'ble Supreme Court vide ordered dated 10th Nov 2016, upholding the MERC decision not to recover any charges other than scheduled charges, approved by the Hon'ble Commission. Accordingly, the provision of payment of Meter cost of Rs 125.71 Crs collected during this period is considered in the R& M Expenses in FY 2016-17.

3.8.11.4 Therefore, MSEDCL most humbly requests the Hon'ble Commission to approve the O&M Expenses as proposed.

3.8.11.5 MSEDCL submits that Regulation 72 and Regulation 81 of the MERC (MYT) Regulations 2015 provides for the O&M Expenses Norm for Distribution Wires Business and Retail Supply of electricity respectively.

3.8.12 Hon'ble Commission has issued an Amendment to the MERC (MYT) Regulations 2015. As per the said Amendment the Base Year expenses for FY 2015-16 needs to be escalated by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the past five financial years as per the Office of Economic Advisor of Government of India and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the past five financial years as per the Labour Bureau, Government of India, as reduced by an efficiency factor of 1% to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period.

3.8.13 Hon'ble Commission has provided the year-on-year variations in CPI and WPI in the Explanatory Memorandum of the Draft Amendment to the MERC (MYT) Regulations 2015. Considering the same, MSEDCL has calculated the escalation factor as shown in the following table.

Year	WPI	% Annual Change	CPI	% Annual Change
2012-2013	167.62	7.36%	215	10.44%
2013-2014	177.64	5.98%	236	9.68%
2014-2015	181.19	2.00%	251	6.29%
2015-2016	176.67	-2.49%	265	5.65%
2016-2017	183.2	3.70%	276	4.12%
5 year Average		3.31%		7.24%
Weight	30%	0.99%	70%	5.06%
Combined		6.06%		

3.8.14 MSEDCL further submits that the efficiency factor of 1% for arriving at the escalation factor for projecting O&M expenses is on very high side. Considering the nature of electricity distribution business and expenses/activities covered in O&M Expenses, the stipulation of 1% in each year is unrealistically high.

3.8.15 In the Statement of Reasons of MERC (MYT) (1st Amendment) Regulations 2017, Hon'ble Commission has opined that an efficiency factor of 1% translates into efficiency improvement of 4% to be achieved over the Control Period. Hon'ble Commission has further opined that the efficiency improvement to this extent in O&M expenses may be difficult considering the increasing number of consumers, asset base and other elements that is likely. In view of this, Hon'ble Commission noted that it would take these considerations into account during the forthcoming Mid-Term Review proceedings and determine the efficiency factor to be applied, if at all, at that stage.

3.8.16 MSEDCL submits that the actual O&M Expenses are already suppressed due to lower approval by Hon'ble Commission in past. MSEDCL further submits that the MYT Regulations, 2015 specify an efficiency factor of 1%, they also provide that a different efficiency factor may be stipulated by the Hon'ble Commission from time to time. Hence, MSEDCL requests the Hon'ble Commission to allow the escalation factor as calculated above without reducing it by 1% efficiency factor.

3.8.17 Considering the above escalation factor and O&M expenses for FY 15-16 after considering the impact of sharing of gains, MSEDCL has calculated the O&M Expenses for Wires Business and Retail Supply of electricity for FY 16-17 as shown in following tables.

Table 42: Normative O&M Expenses for FY 16-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Normative)	Deviation
O&M Expenditure for Wires Business	3,843	4,389	546
O&M Expenditure for Retail Supply Business	2,069	2,364	295
Operation & Maintenance Expenses	**5,912**	**6,753**	**841**

3.8.18 MSEDCL requests the Hon'ble Commission to allow the O&M Expenses as shown in above table.

3.9 Capitalisation for FY 2016-17

3.9.1 MSEDCL has achieved capitalization of Rs. 3305 Crs in FY 2016-17 as against Rs. 8457 Crs approved by Hon'ble Commission. Following table shows the capex and capitalization in FY 2016-17 is shown in the table below.

Table 43: Capex and Capitalization for FY 16-17

Rs. Crs

Particulars	Opening CWIP	Investment during the year	Total Capitalisation	Closing CWIP
Capex and Capitalisation	2,512	4,420	3,305	3,626

3.9.2 As per the Annual Accounts the addition to GFA is Rs. 3,363 Crs. whereas in Form 4.2 MSEDCL has shown Capitalization as Rs.3,305 Crs. MSEDCL submits that in Form 4.2, only scheme wise details have been shown whereas in Annual Accounts the Addition to GFA is shown in totality including land and land rights, buildings etc. The detail of which is shown in the following table.

Particulars	Amount (Rs. Crs)
Land	17.79
Buildings	17.42
Vehicles	0.31
Furniture & Fixtures	3.51
General Assets	16.98
Other Civil Work	2.37
Total	**58.37**

3.9.3 Hon'ble Commission in its MYT Order dated 3rd November 2016 has allowed the capitalization towards schemes not forming part of any specific scheme for FY 14-15. MSEDCL further submits that Hon'ble Commission has accordingly revised the GFA to that extent as well. Therefore, MSEDCL requests the Hon'ble Commission to approve the capitalization as per the Audited Accounts and revise the GFA accordingly.

3.10 Depreciation for FY 2016-17

3.10.1 MSEDCL submits that for FY 14-15, the Hon'ble Commission in it MYT Order dated 3rd November has considered the Depreciation as per the Audited Accounts of FY 14-15. On the similar lines, MSEDCL is claiming the depreciation as per the Audited Accounts FY 16-17.

3.10.2 MSEDCL submits that a depreciation of Rs. 1.35 Crs as per IND AS has been included as depreciation towards FRP, which was included in the head of depreciation without FRP in the previous petition. Hence, the depreciation without FRP for FY 2016-17 is Rs.2043.13 Crs. and depreciation towards FRP is Rs. 791.75 Crs.

3.10.3 The Asset class-wise breakup of this depreciation amount towards FRP, which is notified in the Note. No. 31(33)(V) of the Audited Accounts of FY 2016-17, is given in following table.

Particulars	Amount in Rs. Crs
Building	61.32
Hydraulic works	0.00
Other Civil works	0.01
Plant and Machinery	32.72
Lines and Cables	696.77
Communication Equipment	0.63
Furniture and Fixture	0.03
IT Equipment	0.16
Office equipment	0.04
Other Assets	0.05
Total	**791.75**

3.10.4 A comparison of Depreciation Expense approved by the Hon'ble Commission and actual depreciation expenses of MSEDCL is shown in the following table.

Table 44: Depreciation for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Opening GFA	43,224	45,788	2,564
Depreciation	**2,063**	**2,043**	**(20)**
% Depreciation	4.77%	4.46%	-0.31%

3.10.5 MSEDCL requests the Hon'ble Commission to approve the depreciation as per the Audited Accounts.

3.11 Interest Expenses for FY 2016-17

3.11.1 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. Further, the projected capital expenditure and the funding of the same also have a major bearing on the long-term interest expenditure.

3.11.2 Regulation 29.3 of the MERC (MYT) Regulations 2015 provides for repayment equal to depreciation. The relevant extract is reproduced below:

29.3 The repayment during each year of the Control Period from FY 2016-17 to FY 2019-20 shall be deemed to be equal to the depreciation allowed for that year.

3.11.3 In line with the regulations, the loan repayment considered is equal to depreciation for calculation of interest. Further, weighted average interest rate 11.37% has been calculated considering the average of the Loan (opening and closing) and interest paid during the year FY 2016-17, the workings of which have been shown below.

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))
13,305	2,151	1,807	13,649	1,532	11.37%

3.11.4 Therefore, interest is calculated on the normative average loan availed during the year using Weighted average interest rate as shown in following table.

Table 45: Interest on Long Term Loans FY 2016-17

Rs Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	14,533	14,343	(191)
Loan Drawal	5,739	1,535	(4,204)
Loan Repayment	2,063	2,043	(20)
Normative Balance Outstanding at the end of the year	18,210	13,835	(4,375)
Ineterst Rate	11.83%	11.37%	-0.46%
Gross Interest Expenses	**1,937**	**1,602**	**(335)**

3.11.5 MSEDCL submits that Hon'ble Commission has approved Funding of Capitalization based on the approved capitalization. However, actual capitalization is lower than the approved. The actual loan drawl is also lower than that of projected in MYT Petition.

3.11.6 MSEDCL requests the Hon'ble Commission to approve the Interest Expense as shown in above table.

3.12 Interest on Working Capital and Security Deposit for FY 2016-17

3.12.1 MSEDCL submits that the Regulations 31.3 of the MERC (MYT) Regulations 2015provides for Interest on Working Capital for Wire business of electricity. Accordingly, MSEDCL has calculated the Interest on Working Capital for Wire business as shown in the following table.

3.12.2 MSEDCL has calculated the interest on working capital at 10.80% per annum i.e. the Base Rate of State Bank of India (SBI) plus 150 basis points as provided in the MYT Regulations 2015. Though Hon'ble Commission has issued First Amendment in MYT Regulations 2015 wherein the Base Rate is linked to MCLR of SBI, its implementation can only be prospective. The MSEDCL General Commercial Circular No. 243 for Rate of Interest on Consumer Security Deposit for FY 16-17 is attached as **Annexure 7** to this Petition.

Table 46: Interest on working capital and SD (Wire Business) FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Computation of Working Capital (Wire Business)			
One-twelfth of the amount of Operations and Maintenance Expenses	320	366	46
Maintenance Spares at 1% of Opening GFA	389	412	23
One and half months equivalent of the expected revenue from charges for use of Distribution Wires	1,072	1,060	(12)
Less:			
Amount of Security Deposit from Distribution System users	(636)	(645)	(9)
Total Working Capital			-
Computation of working capital interest	1,145	1,193	
Rate of Interest (% p.a.)	10.80%	10.80%	
Interest on Working Capital	**124**	**129**	**5**
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.80%	10.80%	
Interest on Security Deposit	**69**	**70**	**(1)**

3.12.3 MSEDCL requests the Hon'ble Commission to allow the Interest on Working capital along with the interest on security deposit for wire business as shown in above table.

3.12.4 MSEDCL further submits that Regulations 31.4 of the MERC (MYT) Regulations 2015 provides for Interest on Working Capital for Retail Supply business of electricity.

3.12.5 However, as per the MYT Regulations 2015, the provision of reducing the working capital by the total amount of security deposits resulting the net working capital requirement as NEGATIVE. Therefore, the working capital requirement based on normative principle works out to ZERO and Hon'ble Commission does not allow any interest on working capital.

3.12.6 MSEDCL hereby submits that the amount of security deposits as reflecting in the books of accounts of MSEDCL is just a notional amount, since such amount though reflects in the Balance Sheet in the Transfer Scheme; MSEDCL has not physically received such deposit in cash from erstwhile Maharashtra State Electricity Board. MSEDCL submits that the opening Balance of Consumer Security Deposit is Rs. 1823 Crs. Even though, subsequently, MSEDCL received security deposit from consumers, due to opening balance, MSEDCL is suffering loss of actual interest paid due to normative practise adopted by Hon'ble Commission. Therefore, MSEDCL requests the Hon'ble Commission not to consider the opening balance of Consumer Security Deposit while calculating the working capital requirement.

3.12.7 As per the Audited Accounts MSEDCL has paid interest on working capital. MSEDCL further submits that the working capital is mainly required to meet the liabilities relating to fuel / power purchase and is beyond the reasonable control of MSEDCL. Accordingly, MSEDCL has claimed the balance Interest on Working Capital in Supply Business i.e. Interest on working capital as per audited accounts less the interest on working capital claimed in wires business. Same approach has been followed for Interest on Security Deposit also.

Table 47: Interest on working capital and SD (Supply Business) FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Computation of Working Capital (Supply Business)			
One-twelfth of the amount of Operations and Maintenance Expenses	172	197	25
Maintenance Spares at 1% of Opening GFA	43	46	3
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	6,828	6,759	(69)
Less:			
Amount of Security Deposit from retail supply consumers	(5,728)	(5,806)	(78)
Less: One month equivalent of cost of power purchase, transmission charges and MSLDC Charges	(4,030)	(3,968)	62
Total Working Capital	(2,715)	(2,772)	(57)
Computation of working capital interest			
Rate of Interest (% p.a.)	10.80%	10.80%	
Interest on Working Capital (Normative Basis	**-**	**642**	**642**
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.80%		
Interest on Security Deposit	**619**	**534**	**(85)**

3.12.8 Therefore, MSEDCL requests the Hon'ble Commission to allow the Interest on Working capital along with the interest on security deposit for supply business as shown in above table.

3.13 Other Finance Charges for FY 2016-17

3.13.1 MSEDCL submits that it has incurred Other Finance Charges amounting to Rs. 29 Crores during the FY 2016-17. These are the Fund raising charges i.e. Guarantee charges, Finance Charges, stamp duty and Service Fee.

Table 48: Other Finance Charges for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Actual)
Guarantee Charges	2
Finance Charges	21
Stamp Duty	1
Service Fee i.e. Fund raising charges	5
Total Other Finance Charges	**29**

3.13.2 MSEDCL submits that these charges depend on the no. of loans, LC required to be given to the Power Suppliers, documentation for availing long term and working capital loans. These charges are, thus, beyond control of MSEDCL and hence required to be considered in the total financial cost. Therefore, MSEDCL humbly requests the Hon'ble Commission to allow the Other Finance Charges as per the Audited Accounts.

3.14 Provision for Bad Debts for FY 2016-17

3.14.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution.

3.14.2 Regulation 73 and 82 of the MYT Regulations, 2015 specifies that a provision of bad and doubtful debt may be allowed up to 1.5% of the amount shown as trade receivables or receivables in the Audited Accounts of the distribution licensee duly allocated for wires and supply business respectively.

3.14.3 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. Bad Debt is generally an uncontrollable factor. A business typically estimates the amount of bad debt based on historical experience. It is submitted that the bad debts are inseparable incidents of the business of electricity distribution too.

3.14.4 Regulation 82 of the MERC MYT Regulations, 2015 provides for the provision of bad and doubtful debts for supply business up to 1.5 % of the amount shown as Trade Receivables or Receivables from Sale of Electricity excluding the provision made for unbilled revenue. Before the notification of the MYT Regulations 2011, Hon'ble Commission had followed a convention to allow the provision of bad and doubtful debts at a rate of 1.5% of the Revenue of the corresponding year.

3.14.5 MSEDCL humbly submits that the amount of provision made as a percentage of Receivables instead of Revenue is much less than the actual requirement of provision for Bad Debts.

3.14.6 There are certain inherent difficulties in recovery of arrears:

- Public Water Works, Street Light and Agricultural categories of consumers constitute highest quantum of arrears of the total quantum of arrears as on March 31, 2016. Together, they constitute ~69% of the total arrears as on March 31, 2016. As PWW and Street Light are public services, their dues recovery is dependent on financial health of local bodies.
- Out of the three categories, agriculture category alone constitutes ~58% of the total arrears amounting to Rs. 19,271.57 crores as on March 31, 2017. The amount of recoverable dues from the Agricultural consumer has been piling up day by day on account of bad weathers, less production, poor financial health of farmers and various socio-economic considerations. As a result, this sector is always dependent on grant and subsidy from the government. Agriculture consumers are charged with cross subsidized rates determined by the Hon'ble Commission. GoM also gives subsidy to agriculture consumers in addition to the cross subsidy built into the tariff. GoM announces additional subsidy in drought affected areas and also issue directives not to disconnect agriculture supply for non-payment of dues. The agriculture consumers are generally located in such a remote and interior part where convenient transportation facilities are not available. In view of above reasons, it becomes very difficult to carry out effective disconnection of defaulting agriculture consumers. The collection efficiency of agriculture category for FY 2016-17 is 13.86 %.

- Further, 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.

3.14.7 MSEDCL has considered the provision for bad and doubtful debts for FY 2016-17 as per Audited Accounts as given below:

Particulars	Reference	2016-17
Secured & Considered good	Note 9	4,137.70
Unsecured & Considered good	Note 9	28,630.78

Particulars	Reference	2016-17
Receivables		32,768.47
Yearly provision as % of receivables		1.50
Provision as per MYT Regulations		491.53

3.14.8 Accordingly, the provisions have been worked out for wire and retail supply businesses respectively as shown below.

Table 49: Provision for Bad Debts for Wire Business for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Bad Debt Provision for Wire Business	**26**	**49**	**23**
Receivables	1,722	3,277	1,555
% of Receivables	1.51%	1.50%	

Table 50: Provision for Bad Debts for Supply Business for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Bad Debt Provision for Supply Business	**232**	**442**	**210**
Receivables	15,494	29,492	13,998
% of Receivables	1.50%	1.50%	

3.14.9 MSEDCL requests the Hon'ble Commission to allow the provision for bad debt as shown in above table.

3.15 Other Expenses for FY 2016-17

3.15.1 The other expenses of MSEDCL comprise of the expenditure on account of Non Moving items written off, interest to suppliers/contractors, Incentive to distribution franchisee and other expenses viz. compensation for injuries to staff and outsiders. MSEDCL accordingly submits the other expenses as shown in the table below.

Table 51: Other Expenses for FY 2016-17

Rs Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Other Expenses	15	214	199

3.16 Contribution to Contingency Reserves for FY 2016-17

3.16.1 MSEDCL submits that considering the precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it was not feasible for MSEDCL to invest in contingency reserves. Considering the critical financial situation in FY 2016-17, MSEDCL has not invested any amount in contribution to contingency reserves. Accordingly, the same is not claimed in ARR of the FY 2016- 17.

3.17 Incentives and Discounts for FY 2016-17

3.17.1 MSEDCL submits that during FY 2016-17, it has paid Rs. 235 Crs of incentives/discounts to the consumers for timely payment of bills as against Rs. 271 Crs approved by Hon'ble Commission in its MYT Order dated 3rdNov 2016.

Table 52: Incentives and Discounts for FY 2016-17

Rs Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Incentives/Discounts	271	235	(37)

3.17.2 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as per the Audited Accounts for FY 2016-17.

3.18 RLC Refund for FY 2016-17

3.18.1 MSEDCL during FY 2016-17 has refunded Rs. 177 Crs of RLC. The RLC Refund approved by Hon'ble Commission is Rs. 284 Crs. MSEDCL requests the Hon'ble Commission to allow the RLC Refund for FY 2016-17 as per Audited Accounts. MSEDCL also request the Hon'ble Commission to allow the RLC refund as and when it refunds the same to eligible consumers in future.

Table 53: RLC Refund for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
RLC refund	284	177	(107)

3.18.2 MSEDCL requests the Hon'ble Commission to allow the RLC Refund as per the Audited Accounts for FY 2016-17.

3.19 ASC Refund for FY 2016-17

3.19.1 MSEDCL during FY 2016-17 has refunded Rs. 5 Crs of ASC. MSEDCL requests the Hon'ble Commission to allow the ASC Refund for FY 2016-17 as per Audited Accounts.

3.19.2 MSEDCL further submits that as per the Order of Hon'ble Commission dated 7th July 2017 in Case No. 101of 2016, MSEDCL has stopped the refund of ASC.

Table 54: ASC Refund for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
ASC refund	-	5	5

3.19.3 MSEDCL requests the Hon'ble Commission to allow the ASC Refund as per the Audited Accounts for FY 2016-17.

3.20 Return on Equity for FY 2016-17

3.20.1 Regulation 28.2 of MERC (MYT) Regulations 2015, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

28.2 Return on equity for the Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of 15.5 per cent per annum in

Indian Rupee terms, and for the Retail Supply Business, Return on equity capital shall be allowed on the amount of equity capital determined in accordance with Regulation 26 at the rate of 17.5 per cent per annum in Indian Rupee terms.

3.20.2 Following table shows the calculation of capital expenditure, equity and asset capitalisation of MSEDCL for computing the Return on Equity.

Table 55: Calculation of equity portion of the Capitalization for FY 2016-17

Rs. Crs

Sr. No.	Particulars	FY 2016-17 (Actual)
1	Capital Expenditure	4,420
a	Less: Grant	984
b	Capital Expenditure incurred (excl Grants)	3,436
2	Equity	
a	Internal Accural	984
b	GoM Equity	301
c	Consumer contribution	344
3	Total Equity excl. Consumer Contribution	941
4	Equity portion of capital expenditure 4 = (3 / 1 b)	27.38%
5	Assets Capitalization	
a	Capitalisation	3,305
b	Assets Capitalization (to be consider in proportionate to 1 b)	2,569
6	**Equity portion of Assets Capitalisation**	**704**

3.20.3 The return on equity capital is allocated on the proposed ratio of fixed assets between wires and retail supply business. i.e. 90% to Wires Business and 10% to Supply Business. Therefore the capital expenditure, grants, equity and capitalization is divided into Wires and Supply Business in the ratio of 90:10. In Form 4.4 MSEDCL has shown the details of year wise funding for various schemes wherein the debt: equity portion is arranged. However, there can be few capital works which can be funded by consumers through consumer contribution which are reconciled at the time of finalization of accounts. MSEDCL submits that it will be difficult to project and allocate the consumer contribution to any particular scheme. Therefore, in Form 4.4, MSEDCL has not shown the consumer contribution. However, for the purpose of computation of RoE, MSEDCL has projected the consumer contribution based on historical experience and capital expenditure as shown in above table.

3.20.4 For calculation of equity portion, as per the MYT Regulations the grant received needs to be deducted from the expenditure. Therefore the capitalization of expenditure has been worked out in proportion to the capital expenditure calculated after deducting the grant.

3.20.5 MSEDCL further submits that it has reduced the 30% equity corresponding to the assets retired in FY 16-17 and accordingly, claimed the ROE on balance equity.

3.20.6 For Wires Business, the return on equity has been computed @ 15.5% on average equity based upon the opening balance of equity and normative additions during the year and accordingly, the RoE for wires business for the FY 16-17 is as under:

Table 56: RoE for wires business for the FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Regulatory Equity at the beginning of the year (Wires)	8,846	9,819	973
Capital Expenditure incurred (excl Grants)		3,092	
Equity portion of capital expenditure		847	
% of Equity portion of capital expenditure		27.38%	
Assets Capitalization		2,312	
Equity portion of Assets Capitalisation	673	633	(40)
Regulatory Equity at the end of the year	**9,519**	**10,452**	**933**
Return on Computation			
Return on Regulatory Equity at the beginning of the year	1,371	1,522	151
Return on Normative Equity portion of Assett Capitalization	52	49	(3)
Interest on Equity portion above 30% @11.83%p.a.			
Total Return on Regulatory Equity for Wires	**1,423**	**1,571**	**148**

3.20.7 For Supply Business the return on equity has been computed @ 17.5% on average equity based upon the opening balance of equity and normative additions during the year; accordingly, the RoE for retail supply business for the FY 16-17 is as under:

Table 57: RoE for retail supply business for the FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Regulatory Equity at the beginning of the year (Supply)	983	1,091	**108**
Capital Expenditure incurred (excl Grants)		344	
Equity portion of capital expenditure		94	
% of Equity portion of capital expenditure		27.38%	
Assets Capitalization		257	
Equity portion of Assets Capitalisation	75	70	
Regulatory Equity at the end of the year	**1,058**	**1,161**	**103**
Return on Computation			
Return on Regulatory Equity at the beginning of the year	172	191	19
Return on Normative Equity portion of Assett Capitalization	7	6	(0)
Interest on Equity portion above 30%			
Total Return on Regulatory Equity for Supply	**179**	**197**	**18**

3.20.8 MSEDCL humbly requests to the Hon'ble Commission to true up the Return on Equity as shown in above Tables for wires and supply business respectively.

3.21 Sharing of Gains/Losses for FY 2016-17

3.21.1 The Audited Accounts for FY 2016-17 have been submitted by MSEDCL with the present Petition. MSEDCL has considered the expense and revenue heads for FY 2016-17, considering the actual amounts as per the Audited Accounts. However, parameters such as O&M Expenses for which specific norms have been specified in the MYT Regulations, these have been calculated on normative basis.

3.21.2 As these parameters need to be treated as controllable under the MYT Regulations 2015, any variation in the actual expenses as against the permissible normative levels has been shared between MSEDCL and consumers.

3.21.3 Regulation 11 of the MYT Regulations 2015 provides for the mechanism of pass through of gains and losses on account of uncontrollable parameters, and the mechanism for sharing of gains and losses on account of controllable parameters.

3.21.4 **O**&M Expenditure: The actual O&M Expenses as per the Audited Accounts for FY 2016-17 are lower than that of allowed on normative basis.

3.21.5 Interest on Working Capital: The actual IoWC expense as per the Audited Accounts for FY 2016-17 is higher than that allowed on normative basis.

3.21.6 Therefore as per the provisions of the MYT Regulations 2015, MSEDCL has calculated the sharing of O&M Expenses and Interest on Working Capital as shown in following Table.

Table 58: Sharing of O&M Expenses and Interest on Working Capital for FY 2016-17

Rs. Crs

Particulars	FY 2016-17	FY 2016-17 (Actual)	Gains/(Loss)	1/3 of Efficiency Gains /(losses)	2/3 of Efficiency Gains /(losses)
O&M Expenses estimated in this petition	**6,753**	**5,797**	956	319	638
Interest on Working Capital approved by MERC	**124**	**771**	(647)	(216)	(431)
Total	**6,877**	**6,567**	**310**	**103**	**207**

3.21.7 Distribution Loss: The actual distribution loss in FY 2016-17 is 15.40% against a target of 17.76% set by the Hon'ble Commission in Case No. 48 of 2016. Considering the target distribution loss of 17.76%, there is an over-achievement of 2.36%. Therefore, this efficiency gain has to be shared between MSEDCL and the consumers in accordance with the MERC (MYT) Regulations, 2015. Accordingly, MSEDCL has calculated the efficiency gain due to over-achievement of distribution loss reduction based on the actual average billing rate of MSEDCL in FY 2016-17, as shown in the table below:

Table 59: Efficiency gain due to reduction in distribution loss FY 2016-17

Particulars	Unit	Amount
Normative distribution losses	%	17.76%
Actual distribution losses	%	15.40%
Actual energy input	MU	111,268
Normative sales	MU	91,506
Actual sales	MU	94,128
Additional/ (lower) sales due to lower distribution loss	MU	2,622
Average Billing Rate*	Rs/ kWh	5
Additional/ (lower) sales due to lower distribution loss	Rs. crore	1,414
1/3 of Efficiency Gains /(losses)	Rs. crore	471
2/3 of Efficiency Gains /(losses)	Rs. crore	942

**Based on "Revenue from sale of power" as per Schedule 21 of Audited Accounts of MSEDCL excluding standby charges, Miscellaneous charges from consumers, wheeling charges and Line Maintenance Charges.*

3.21.8 The total impact of sharing of gains and losses of various components have been summarized in the Table below:

Table 60: Total impact of sharing of gains and losses for FY 2016-17

Particulars	Amount (Rs. Crs)
O&M Expenses	(638)
Interest on Working Capital	216
Revenue due to Distribution Loss	471
Total	**49**

3.21.9 Thus, the net impact of sharing of gains and losses is increase in ARR by Rs. 49 Crs.

3.22 Aggregate Revenue Requirement for FY 2016-17

3.22.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2016 -17 is as follows:

Table 61: Aggregate Revenue Requirement for Wires Business for FY 2016 -17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Operation & Maintenance Expenses	3,843	4,389	546
Depreciation	1,856	1,839	(17)
Interest on Loan Capital	1,743	1,441	(302)
Interest on Working Capital	124	129	5
Interest on deposit from Consumers and Distribution System Users	69	70	1
Other Finance Charges	-	26	26
Provision for bad and doubtful debts	26	49	23
Contribution to contingency reserves	97	-	(97)
Return on Equity Capital	1,423	1,571	148
Aggregate Revenue Requirement	**9,181**	**9,515**	**334**
Less : Income from Wheeling Charges	5	2	(2)
Less: Income from Open Access Charges	599	1,034	435
Aggregate Revenue Requirement from Distribution Wires	**8,577**	**8,478**	**(99)**

3.23 Past Period Adjustment

3.23.1 MSEDCL submits that in the MYT Order dated 3rd November 2016, Hon'ble Commission has considered the Net Impact of Past Period and MSPGCL MYT Order in Case No. 46 of 2016 while approving the revenue from revised tariffs for the 3rd Control Period. MSEDCL has accordingly considered the impact of the same in respective year.

Rs. Crs

Particulars	16-17	17-18	18-19	19-20
ARR	59,169	65,601	69,924	72,892
Less: Income from Additional Surcharge	284	710	738	768
Net ARR	**58,885**	**64,891**	**69,186**	**72,124**
Net Impact of Past Period and MSPGCL MYT	399	-1,116	-1,032	853
Net ARR with past period adjustment	**59,284**	**63,775**	**68,154**	**72,977**
Revised Revenue approved	59,284	63,775	68,155	72,977

3.23.2 Similarly, considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2016 -17 is as follows:

Table 62: Aggregate Revenue Requirement for Supply Business for FY 2016 -17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Power Purchase Expenses (including Inter-State Transmission Charges)	43,754	43,826	72
Operation & Maintenance Expenses	2,069	2,364	295
Depreciation	206	204	(2)
Interest on Loan Capital	194	160	(34)
Interest on Working Capital	-	642	642
Interest on Consumer Security Deposit	619	534	(85)
Other Finance Charges	-	3	3
Provision for bad and doubtful debts	232	442	210
Other Expenses	15	214	199
Intra-State Transmission Charges	4,611	3,793	(818)
Incentives/Discounts	271	235	(37)
Contribution to contingency reserves	11	-	(11)
DSM Expenses	2	13	11
Return on Equity Capital	179	197	**19**
RLC refund	284	177	(107)
Effect of sharing of gains/losses	(1,030)	49	1,079
Total Revenue Expenditure	**51,817**	**53,256**	**1,440**
Revenue from Sale of Power	59,284	53,956	(5,328)
Non-Tariff Income	826	574	(252)
Income from Additional Surcharge	284	116	(168)
Income from Trading of Surplus Power	-	384	384
Total Revenue	**60,394**	**55,031**	**(5,363)**

3.24 Revenue from sale of Power for FY 2016-17

3.24.1 MSEDCL has considered the revenue for FY 2016-17 based on the Audited Accounts as shown in following table.

Table 63: Revenue from sale of Power for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Revenue	59,284	53,956	(5,328)

3.24.2 MSEDCL submits that the revised tariff approved in the MYT Order were applicable from 1st November, 2016. However, the revenue approved was for entire financial year. In the said MYT Order dated 3rd November Hon'ble Commission has made the following rulings.

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.

3.24.3 MSEDCL submits that there was a reduction of around 755 MUs in HT Industrial Category sales which has impacted the revenue to that extent. Further, on account of lower actual collections pertaining to the various charges, impacts of power factor incentive and impact of past billing adjustments, the revenue from this category is lower than approved by Hon'ble Commission.

3.24.4 Accordingly, MSEDCL requests the Hon'ble Commission to true up the actual revenue for FY 16-17.

3.24.5 MSEDCL submits that Revenue as per Note 24 of the Audited Accounts includes around Rs. 2 Crs of Wheeling Charges, Rs. 384 Crs of Revenue from Trading of surplus power, Rs. 1034 Crs as income from Open Access and Rs. 116 Crs as income from additional surcharge which is not included in above revenue shown in Table 63 above. These figures are shown separately in the ARR table. Similarly Truing Up Adjustment of Rs. 2343 Crs is also not considered in above table. Further, the Prompt Payment Discount as per the Audited Accounts is Rs. 235 Crs, MSEDCL has considered the same under Incentives/Discounts separately.

3.24.6 MSEDCL submits that the revenue approved for FY 2016-17 in the MYT Order (Case No. 48 of 2016) was based on the calculations with approved tariffs applying for entire year. Considering the above adjustments and Income from Wheeling Charges, Trading of surplus power, Open Access and Additional Surcharge, MSEDCL has considered following revenue.

Particulars	Amount Rs. Crs
Revenue from Sale of Power	53,780
Less: Income from Trading of surplus power	(384)
Less: Income from Open Access	(1,034)
Less: Income from Additional Surcharge	(116)
Less: Wheeling Charges	(2)
Add: Misc. charges from Consumers (excl. Wheeling Charges)	54
Add: Standby Charges	402
Add: Revenue from Operating Subsidy	1,254
Total	**53,956**

3.24.7 MSEDCL humbly requests to the Hon'ble Commission to consider the revenue from sale of power as shown in above table and true up the same.

3.24.8 MSEDCL further submits that the Revenue from sale of power is also inclusive of revenue grant as subsidy receivable from Government of Maharashtra amounting to Rs. 1254.32 Cr. for providing additional 3 hours of supply to agriculture consumers during the period from 08th September 2016 to 22nd October 2016. The same was approved by Hon'ble Commission vide its daily order dated 22nd September 2016. However, the Hon'ble Commission vide its order dated 20th June 2017 in Case No. 120 of 2016 directed MSEDCL to follow up for Government of Maharashtra for release of subsidy and the same shall not be passed on to the consumers.

3.25 Non-Tariff Income for FY 2016-17

3.25.1 MSEDCL has certain sources of non-tariff income viz. interest on arrears of consumers, delayed payment charges, interest on staff loans and advances, sale of scrap, interest on investment, rebate on power purchase, etc.

3.25.2 MSEDCL has a Non-Tariff Income of Rs. 574 Crs as against Rs. 826 Crs as approved by the Hon'ble Commission. Hence, MSEDCL has received Rs. 252 Crs less through Non-Tariff Income.

Table 64: Non-Tariff Income for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Rents of land or buildings	2	1	(0)
Sale of Scrap	11	31	20
Income from investments	18	16	(2)
Open access charges	11	-	(11)
Interest from Franchisee	4	39	35
Income from sale of tender documents	-	8	8
Rebate on power purchase	74	-	(74)
Prompt payment discount from REC/PFC	-	9	9
Other/Miscellaneous receipts	639	447	(192)
Interest on staff loans & Advances	-	0	0
Others (income from prior period)	-	22	22
Recovery from theft and malpractice	67	-	(67)
Total	**826**	**574**	**(252)**

3.25.3 As provided in the Regulation 36.3 of the MYT Regulations 2015, delayed Payment Charge and Interest on Delayed Payment is not considered under Non-Tariff Income.

3.25.4 MSEDCL submits that under UDAY Scheme, it has executed Tri-partite MOU with Ministry of Power, Govt. of India, Govt. of Maharashtra. As per the MOU, Government of Maharashtra has taken over Medium-Term and Short-Term debt of Rs. 4960 Crs (Being the 75% of Rs 6613 Crs, the debt of MSEDCL as on 30th September 2015). The debt has to be transferred to MSEDCL as Grant/loan as described in the following table:

Year	Total Debt taken-over	Transfer to the DISCOM in the form of Grants (Rs.)	Transfer to the DISCOM in the form of Loan (Rs.)	Transfer to the DISCOM in the form of Equity (Rs.)	Outstanding State loan of the DISCOM (Rs.)
2016-17	20%	991.75	3,968.00 *	-	3,968.00
2017-18	20%	992.00			2,976.00
2018-19	20%	992.00			1,984.00
2019-20	20%	992.00			992.00
2020-21	20%	992.00			-
	Total	**4959.75**			

3.25.5 MSEDCL submits that, in the FY 2016-17 the short-term debt amounting to Rs. 4959.75 Cr taken over and transferred to MSEDCL in the form of State loan. The same will be adjusted by way of grant from Govt. of Maharashtra to MSEDCL in equal ratio for next 4 years from F.Y. 2017-18 to F.Y. 2020-21 i.e. Rs 992 Cr per year as provided in the G.R. dated 31st March 2017 as shown above.

3.25.6 MSEDCL submits that as per the nature of its business, it has to incur expenses on account of Interest on Working Capital Loan. However, Hon'ble Commission allows expenses on this account only on the normative basis as per the provisions of MYT Regulations. The normative interest expenses allowed by Hon'ble Commission are very much lower than the actual expenses incurred by MSEDCL.

3.25.7 MSEDCL further submits that this amount of Rs 992 Crs received under UDAY scheme has been utilized for swapping of short term loan. This has helped MSEDCL in reducing the gap between the actual interest expenses and the normative interest expenses to some extent; though the normative expenses allowed by Hon'ble Commission are still lower than actual expenses even after the grant under UDAY scheme.

3.25.8 MSEDCL further submits that the benefit of lower Interest on Working Capital allowed is already built in tariff and hence MSEDCL has not considered this amount of Rs 992 Crs as part of non-tariff income so as to avoid the duplication..

3.25.9 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Non-Tariff Income as submitted in above Table.

3.26 Income from Open Access Charges for FY 2016-17

3.26.1 MSEDCL has an income from Open Access Charges of Rs. 1,034 Crs as against Rs. 599 Crs as approved by the Hon'ble Commission. Hence MSEDCL has received Rs. 435 Crs more income from Open Access Charges.

Table 65: Income from Open Access Charges for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Income from Open Access Charges	599	1,034	435

3.26.2 Details of Open Access charges are provided in the following Table.

Particulars	Amount (Rs. Crs)
Energy Charges	53.36
F.C.A Charges	0.69
Additional Charges	0.29
Adj to past billing	-14.81
PF Penalty	19.33
Cross Subsidy Surcharge	524.81
Wheeling Charge	153.21
Transmission Charge	284.82
Operating Charges	12.44
Transco Charges	0.00
Total	**1,034.15**

3.26.3 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Open Access Charges as per the Audited Accounts.

3.27 Income from Trading Surplus FY 2016-17

3.27.1 MSEDCL has an Income from Trading of Surplus Power of Rs. 384 Crs as against NIL approved by the Hon'ble Commission. Hence, MSEDCL has received Rs. 384 Crs more through Income from Trading of Surplus Power.

Table 66: Income from Trading of Surplus Power for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Income from Trading of Surplus Power	-	384	384

3.27.2 MSEDCL humbly requests to the Hon'ble Commission to consider the revenue from sale of power as shown in above table.

3.28 Income from Additional Surcharge FY 2016-17

3.28.1 MSEDCL has an income from additional surcharge of Rs. 116 Crs as against Rs. 284 Crs as approved by the Hon'ble Commission. Hence MSEDCL has received Rs. 168 Crs less income from additional surcharge.

Table 67: Income from Additional Surcharge for FY 16-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Income from Additional Surcharge	284	116	(168)

3.28.2 The Hon'ble Commission in MYT Order 3rd November 2016 approved the income from additional surcharge considering the entire open access sales (incl. CPPs) whereas Hon'ble Commission ruled that Additional Surcharge will not be applicable to Captive Users of CPPs. Due to this, there has been reduction in income from Additional Surcharge.

3.29 Income from Wheeling Charges for FY 2016-17

3.29.1 MSEDCL has an income from Wheeling Charges of Rs. 2 Crs as against Rs. 5 Crs as approved by the Hon'ble Commission. Hence MSEDCL has received Rs. 2 Crs less income from Wheeling Charges.

Table 68: Income from Wheeling Charges for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Income From Wheeling Charges	5	2	(2)

3.29.2 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Wheeling Charges as per the Audited Accounts.

3.30 Aggregate Revenue Requirement for FY 2016-17

3.30.1 Based on the above analysis, the summary of ARR (after sharing of efficiency gains &losses) for the Wires Business and Supply Business, as per Audited Account and as approved by the Hon'ble Commission, for FY 2016-17 is presented in the Table below.

Table 69: Combined Aggregate Revenue Requirement (Wire+Supply) for FY 2016-17

Rs. Crs

Particulars	FY 2016-17 (Approved)	FY 2016-17 (Actual)	Deviation
Power Purchase Expenses	43,754	43,826	72
Operation & Maintenance Expenses	5,912	6,753	841
Depreciation Expenses	2,062	2,043	(19)
Interest on Loan Capital	1,937	1,602	(335)
Interest on Working Capital	124	771	647
Interest on Consumers Security Deposit	688	603	(84)
Other Finance Charges	-	29	29
Provision for bad and doubtful debts	258	492	233
Other Expenses	15	214	199
Intra-State Transmission Charges MSLDC charge	4,611	3,793	(818)
Incentives/Discounts	271	235	(37)
Contribution to Contingency Reserves	108	-	(108)
DSM expenses	2	13	11
Return on Equity Capital	1,602	1,768	167
RLC refund	284	177	(107)
ASC refund	-	5	5
Effect of sharing of gains/losses	(1,030)	49	1,079
Past Period Adjustment by Commission	399	399	-
Aggregate Revenue Requirement	**60,998**	**62,771**	**1,774**
Revenue from Sale of Power	59,284	53,956	(5,328)
Non-Tariff Income	826	574	(252)
Income from Open Access Charges	599	1,034	435
Income from Trading of Surplus Power	-	384	384
Income from Wheeling Charges	5	2	(2)
Income from Additional Surcharge	284	116	(168)
Total Revenue	**60,998**	**56,067**	**(4,931)**
Revenue Gap/(Surplus)	**-**	**6,704**	**6,704**

3.31 Revenue Gap/(Surplus) for FY 2016-17

3.31.1 The Hon'ble Commission in its MYT Order for FY 2016-17 to FY 2019-20 dated 3rd November 2016 has approved Aggregate Revenue Requirement of Rs. 60,998 Crs for FY 2016-17. MSEDCL submits that the actual ARR of Rs. 62,771 Crs with a deviation of Rs. 1,774 Crs. Considering the impact of revenue and other income, the revenue gap works out to be Rs.6,704 Crs. MSEDCL requests the Hon'ble Commission to allow MSEDCL the true up requirement as submitted above.

4. Provisional True Up for FY 17-18

4.1 Preamble

4.1.1 This section outlines the performance of MSEDCL for FY 2017-18. In line with the provisions of the MERC (MYT) Regulations 2015, MSEDCL hereby submits detailed Provisional Truing-up for FY 2017-18 comparing the expenditures for FY 2017-18 based on the provisional available information with the forecast approved by the Hon'ble Commission vide MYT Order dated 3rd November 2016.

4.2 Principles of Provisional Truing-up for FY 2017-18

4.2.1 In line with the provisions of MERC (Multi Year Tariff) Regulations, 2015, MSEDCL has computed the Provisional Truing- up for FY 2017-18. The scope of this section is a comparison of the performance of MSEDCL in the FY 2017-18 based on the provisional information available for FY 2017-18 with the approved forecast for FY 2017-18 in the MYT Order dated 3rd November 2016.

4.2.2 Accordingly, based on the provisional available information for FY 2017-18, the Aggregate Revenue Requirement, revenue and gap for FY 2017-18 are discussed in detail in the following subsequent paragraphs.

4.3 Category Wise Sales for FY 2017-18

4.3.1 The details of the actual energy sales for FY 2017-18 as per the provisional information available excluding two Franchisees (Bhiwandi & Nagpur) have been shown in the table below.

Table 70: Category wise Sales for FY 2017-18

Category	FY 2017-18		
	Approved	Provisional	Deviation
	Sales (MUs)	Sales (MUs)	Sales (MUs)
Residential	20,840	18,826	(2,014)
Commercial	7,280	6,923	(357)
HT-Industrial	24,934	28,110	3,176
LT-Industrial	9,149	6,488	(2,661)
PWW	2,553	2,237	(316)
Street Light	1,965	1,762	(203)
Agriculture	25,101	29,659	4,558
Public Services	1,403	1,384	(19)
Railways	77	59	(18)
Others	1,454	1,426	(28)
Total	**94,756**	**96,873**	**2,117**

Others include: HT group housing, HT AG and LT AG Others, Temporary Category, Crematoriums & Burial Grounds, Advt. & Hoardings etc.

4.3.2 MSEDCL would like to submit that in the MYT Order dated 3rd November 2016, Hon'ble Commission from FY 2017-18 onwards considered sales of the Bhiwandi DF area merged with the MSEDCL sales. However, MSEDCL has shown the energy sales for FY 2017-18 excluding two Franchisee (Bhiwandi & Nagpur). Due to this, there is a difference in the actual sales compared to the approved sales.

4.3.3 Since majority of power loom consumption is from Bhiwandi DF Area, there has been reduction in LT Industrial category sales. However, HT Industrial sales have increased in comparison to those approved which may be due to the decreased OA sales.

4.3.4 Considering above, the provisional sales for MSEDCL works out to be 96,873 MUs as against 94,756 MUs approved by Hon'ble Commission.

4.4 Distribution Losses for FY 2017-18

4.4.1 In MYT Order dated 3rd November 2016, in Case No. 48 of 2016, the Hon'ble Commission has approved distribution loss excl. EHV of 16.26%. As per the provisional information available for FY 2017-18, the distribution loss has been shown below.

Table 71: Distribution Loss for FY 2017-18

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Distribution Losses	16.26%	14.84%	-1.42%

4.4.2 MSEDCL requests the Hon'ble Commission to approve the Distribution Loss.

4.5 Energy Balance for FY 2017-18

4.5.1 The quantum of sales in MUs shown in Table 70 represents the sales of MSEDCL excluding the sales in the area served by Distribution Franchisees. However, while calculating energy balance of MSEDCL as a whole, the sale to the consumers of the Distribution Franchisee area has also been considered. Since the Distribution Franchisee is an agent to MSEDCL as per the Franchisee Agreement, MSEDCL has to consider the loss within the Franchisee area for Energy balance. Therefore, energy available for sale for FY 2017-18 is computed as below:

Table 72: Energy Available for Sale FY 2017-18

MUs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)
Energy Sales by MSEDCL for FY 2017-18	94,756	96,873
Add: Category wise sales in DF area	1,450	4,437
Add: OA Sales (Conventional)	6,412	4,330
Renewable Open Access	420	679
Total Energy Sales MSEDCL	**103,038**	**106,320**

4.5.2 MSEDCL would like to submit that MSEDCL is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs, CPP and

Renewable Sources. It would be very difficult to differentiate which power is coming from which source at Transmission periphery. Hence an average inter-state loss for the whole year is considered for power sourced from outside the State of Maharashtra. The said loss is calculated in Energy Balance only.

4.5.3 MSEDCL also submits that data of metered energy is available at 3 points: at bus-bar of the generating station, at T <> D interface i.e. at Distribution Periphery and sales at consumer end. It is further to state that to calculate Distribution Loss, it considers metered energy at Distribution periphery and sales at consumer end.

4.5.4 MSEDCL further submits that the TAPS (NPCIL) and EMCO Power Plants are connected to CTU and therefore considered as Inter-State sources.

4.5.5 With reference to the justification of the 'Surplus Energy Traded' given in the para 2.4.5, MSEDCL submits that for FY 17-18, it has considered the actual figures. The quantum of 580 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL during FY 17-18.

4.5.6 MSEDCL has considered the average of transmission losses for last 52 weeks provided by WRLDC as on March 18, 2018 as the Inter State Transmission Loss. The relevant link is provided for reference (WRLDC Transmission Losses FY18.pdf). Accordingly, considering the inter-state transmission losses at 3.47 %, MSEDCL has derived Intra-State losses as power purchase, sales and energy at Distribution Periphery all are metered figures in this petition.

4.5.7 As per latest DSR available, UI for FY 17-18 has considered as (1359) MUs.

4.5.8 Considering the above energy available for sale for FY 2017-18 as shown in Table 72, the energy balance for MSEDCL is calculated. The following table shows the provisional energy balance for FY 17-18.

Table 73: Energy Balance for FY 2017-18

Particulars	Units	FY 2017-18 (Approved)	FY 2017-18 (Provisional)
LT sales	MUs	64,294	66,523
HT sales	MUs	25,575	27,082
Renewable Open Access	MUs	420	679
Sales to Open Access Consumers (Conventional)	MUs	6,412	4,330
Total Sales to Consumers	**MUs**	**96,701**	**98,614**
Distribution Loss	%	16.26%	14.84%
Distribution Loss	MUs	17,941	17,185
Total Energy Available for Sale at 33kV	**MUs**	**1,14,642**	**1,15,799**
Energy injected and drawn at 33kV	MUs	458	488
Net Energy Available for Sale at 33kV	**MUs**	**1,14,184**	**1,15,311**
EHV Sales	MUs	6,341	7,705
Net Energy requirement at T<>D Periphery	**MUs**	**1,20,525**	**1,23,016**
Intra-State Transmission Loss	%	3.92%	3.49%
Intra-State Transmission Loss	MUs	4,917	4,443
Energy Requirement at G<>T Periphery	**MUs**	**1,25,442**	**1,27,459**
Input for OA consumption	MUs	(7,099)	(4,606)
Power Traded	**%**	-	580
Net Energy Requirement at G<>T Periphery	**MUs**	**1,18,343**	**1,23,433**
Power Purchase Quantum from Intra-State sources	MUs	87,001	81,627
Power Purchase Quantum from Inter-State sources at MS Periphery	MUs	31,342	41,806
Inter-State Losses	**%**	3.66%	3.47%
Power Purchase Quantum from Inter-State sources	MUs	32,533	43,307
Total Power Purchase Quantum payable	**MUs**	**1,19,533**	**1,24,934**

4.5.9 MSEDCL further submits that the FBSM has not been finalized after May 2016. MSEDCL most earnestly submits that it has been more than 2 years since the FBSM was finalized. MSEDCL requests the Hon'ble Commission to direct SLDC to finalize the FBSM on regular basis so the exact impact of the quantum as well as cost can be considered in Tariff Petitions.

4.5.10 MSEDCL requests the Hon'ble Commission to approve the Energy Balance for FY 17-18 as submitted by MSEDCL in above table.

4.6 Power Purchase Expenses for FY 2017-18

4.6.1 MSEDCL has following sources of firm power viz.

- Maharashtra State Power Generation Company Limited (MSPGCL)
- Purchase from Central Generating Stations

- JSW (Ratnagiri)
- Mundra UMPP CGPL
- Adani Power Limited
- RattanIndia Limited
- Emco Power Limited etc.

4.6.2 MSEDCL also buys power from other sources such as Sardar Sarovar and Pench Hydro project, renewable sources including co-generation, Wind power and Solar.

4.6.3 In addition to the above sources, In case of any shortfall from approved sources, when demand exceeds availability or for cost optimization, MSEDCL sources power from exchange/Traders or other sources at the market price through competitive bidding in accordance with the Guidelines of MoP.

4.6.4 MSPGCL: Units 3, 4 & 5 of Bhusawal stations were not ranked among MOD stack, however, due to demand hike, power was scheduled from such units during FY 17-18.

NTPC: Due to high power demand during some period of 2017-18, the quantum of power procured from NTPC stations is increased. Moreover, the cost of stations like Mauda II and Solapur are higher, hence there is an increase in overall power purchase cost of NTPC stations. Moreover, the impact of refund by NTPC of Rs. 673.90 Cr. has been considered thereby reducing the cost to that extent.

IPPs: The power from RIPL was scheduled during 2017-18 which was scheduled in MoD by Hon’ble Commission.

NPCIL: Lower than approved generation was available from the plant at TAP 1-2 and TAP 3-4 was available.

Except RIPL, there is decline in power procurement from other stations. Due to coal shortages, power from APML 1320 & 440 plants was not available up to normative availability.

Renewable Energy: MSEDCL submits that in order to meet RPO obligation, it is procuring RE power from various sources like wind, small hydro, solar, etc. The total quantum of Non Solar RE power procured was 10,239 MU at the rate of Rs. 5.48 per unit and Solar RE power of 808 MU at the rate of Rs. 7.90 per unit. Further, a provision is made towards REC purchase for meeting shortfall in Non-Solar RPO Target.

4.6.5 A comparison of source wise power purchase quantum and expenses as per the provisional information available for FY 17-18 and as approved by Hon'ble Commission in MYT order dated 3rd November 2016 in Case No. of 2016 is shown in the table below.

Table 74: Power Purchase for FY 2017-18

Source	MERC Approved		MSEDCL Provisional		Deviation	
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)
MSPGCL	42,185	17,741	48,843	18,625	6,658	884
NTPC	24,931	7,084	30,116	8,243	5,185	1,158
NPCIL	6,950	1,741	2,589	758	(4,361)	(983)
SSP	1,210	248	246	50	(964)	(198)
Pench	136	28	51	10	(86)	(18)
Dodson	116	26	83	22	(33)	(4)
JSW	1,934	505	1,899	548	(35)	43
CGPL	5,158	1,222	4,990	1,275	(168)	53
Adani Power	20,601	7,096	17,257	6,159	(3,344)	(937)
EMCO Power	1,370	465	1,261	532	(109)	68
Rattan India	-	904	4,347	2,150	4,347	1,246
Renewable	14,942	8,542	11,046	6,245	(3,896)	(2,297)
PGCIL Charges	-	2,356		2,559	-	203
Traders			4,056	1,495	4,056	1,495
FBSM			(1,359)	(267)	(1,359)	(267)
Renewable Energy Certificates				689	-	689
Others				36	-	36
Total Power Purchase	**1,19,533**	**47,958**	**1,25,422**	**49,130**	**5,890**	**1,172**

4.6.6 There has been increase in the power purchase quantum and cost due to increase in sales. Further, while approving the power purchase for FY 17-18 on the basis of MoD Principles Hon'ble Commission however, did not consider the issue of transmission constraint. Due to this, despite of higher cost in the in MOD stack, MSEDCL has to procure costly power in MOD stack due to requirement of technical minimum load; transmission constraint etc. and thus the actual power purchase cost is more than approved. Further, 4055 MUs of short term power has been procured which was not anticipated in MYT Order.

4.6.7 Hon'ble Commission has approved the Power Purchase quantum and cost for NPCIL Generating Stations as submitted by MSEDCL. However, while allowing the Power Purchase from TAPP 3 & 4, Hon'ble Commission has considered 4,711 MUs for FY 17-18 instead of 3,232 MUs. Hon'ble Commission, in its order dated 20th November 2017 in MSEDCL's Review Petition has accepted the error. The same has been corrected.

4.6.8 MSEDCL also submits that the Kakrapar Nuclear Plant is on outage from Apr 2016. Due to these reasons, there is reduction of 3838 MUs from NPCIL.

4.6.9 Hon'ble Commission in the MYT Order had approved the power purchase from the renewable energy sources to meet the RPO Targets specified under the RPO Regulations, 2016. 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) is constantly increasing in line with the load growth and also the RPO targets, but corresponding RE capacity addition is not taking place.

4.7 Intra State Transmission Charges for FY 2017-18

4.7.1 MSEDCL submits the transmission charges and SLDC charges paid to MSEDCL and MSLDC respectively as shown in the table below.

Table 75: Intra-State Transmission Charges for FY 2017-18

Rs Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Transmission Charges paid to Tx Licensee	5,824	4,812	(1,012)

4.7.2 MSEDCL submits that it pays the transmission charges to STU as per the InSTS order issued by Hon'ble Commission from time to time.

4.7.3 MSEDCL requests the Hon'ble Commission to allow the transmission charges as submitted in above table.

4.8 Fixed Costs for FY 2017-18

4.8.1 Based on the Capital Cost and the consequent capitalized expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2017-18 have been determined in accordance with the Tariff Regulations outlined thereof. As outlined under the regulations, the fixed cost for MSEDCL has been determined under the following major heads:

- Operation and Maintenance Expenses
- Depreciation
- Interest and Finance Charges
- Interest on Working Capital
- Income Tax
- Return on Equity

4.8.2 Net Annual Revenue Requirement has been computed after netting off Expenses capitalized and Non-Tariff Income of MSEDCL.

4.9 Operation & Maintenance Expenses for FY 2017-18

4.9.1 MSEDCL submits that Regulation 72 and Regulation 81 of the MERC (MYT) Regulations 2015 (First Amendment) provides for the O&M Expenses Norm for Distribution Wires Business and Retail Supply of electricity respectively.

4.9.2 Considering the escalation factor as computed in the Paragraphs 3.8.13 & 3.8.14, normative O&M expenses for FY 16-17, MSEDCL has calculated the O&M Expenses for Wires Business and Retail Supply of electricity for FY 17-18 as shown in following table.

4.9.3 The normative O&M expenses are Rs. 7,162 Crs as against the normative O&M Expenses of Rs. 6,088 Crs approved by Hon'ble Commission Thus, there is deviation Rs. 1,074 Crs.

Table 76: O&M Expenses for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Normative)	Deviation
O&M Expenditure for Wires Business	3,957	4,655	698
O&M Expenditure for Retail Supply Business	2,131	2,507	376
Operation & Maintenance Expenses	**6,088**	**7,162**	**1,074**

4.9.4 MSEDCL requests the Hon'ble Commission to allow the Normative O&M Expenses as shown in above table.

4.10 Capex and Capitalization

4.10.1 MSEDCL submits that the provisional capitalization of MSEDCL for FY 2017-18 is summarized below. The scheme wise details of capital expenditure and capitalization is shown in Regulatory Form 4.2 and 4.3.

Table 77: Capitalization for FY 2017-18

Rs. Crs

Particulars	Opening CWIP	Investment during the year	Total Capitalisation	Closing CWIP
Capex and Capitalisation	3,626	4,568	5,864	2,330

4.10.2 MSEDCL submits that considering the present status of the various schemes and progress of award of contracts, it has revisited the capitalization. MSEDCL requests the Hon'ble Commission to allow the capitalization as submitted in above table.

4.11 Depreciation for FY 2017-18

4.11.1 Regulation 27 of the MERC MYT Regulations, 2015 provides for recovery of Depreciation. As per Regulation 27.1(b) of MYT Regulation, the individual asset is to be depreciated to the extent of 70% on the straight line basis as per the rates specified in the Regulations. The Hon'ble Commission has further clarified that the useful life of asset shall be determined as per the provisions of the Companies Act, 1956.

4.11.2 MSEDCL submits that depreciation has been calculated taking into consideration the opening balance of assets in the beginning of the year and the projected capitalization. The Depreciation rates used as per the MERC MYT Regulations 2015. A comparison of approved and provisional depreciation for FY 2017-18 is as shown below:

Table 78: Depreciation for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Opening GFA	49,711	49,221	(490)
Depreciation	**2,308**	**2,724**	416
% Depreciation	4.64%	5.54%	

4.11.3 MSEDCL requests the Hon'ble Commission to allow the depreciation as submitted in above table.

4.12 Interest Expenses for FY 2017-18

4.12.1 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. Further, the projected capital expenditure and the funding of the same also have a major bearing on the long-term interest expenditure.

4.12.2 MSEDCL submits that the Regulation 29.3 of the MERC MYT Regulations 2015 states that

29.3 The repayment for the year of the tariff period FY 2016-17 to FY 2019-20 shall be deemed to be equal to the depreciation allowed for that year:

4.12.3 In line with the regulations, the loan repayment is considered equal to depreciation for calculation of interest.

4.12.4 MSEDCL submits that the Regulation 29 of the MERC MYT Regulations, 2015 specifies that the rate of interest used for calculation of interest on long-term loans shall be weighted average rate of interest on the basis of actual loan portfolio at the beginning of each year. Further, the interest should be calculated on the normative average loan availed in a particular year. MYT Regulations 2015 also provides that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest for actual loan shall be considered Accordingly, MSEDCL has calculated the interest on long term loans considering the weighted average rate of interest for FY 16-17 i.e. 11.37% as computed in the paragraph 3.11.3.

Table 79: Interest Expenses for FY 2017-18

Rs Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	18,210	13,835	(4,375)
Loan Drawal	4,248	2,967	(1,281)
Loan Repayment	2,308	2,724	416
Normative Balance Outstanding at the end of the year	20,150	14,077	(6,073)
	11.83%	11.37%	(0)
Gross Interest Expenses	**2,269**	**1,586**	**(683)**
Less: Expenses Capitalised			
Net Interest Expenses	**2,269**	**1,586**	**(683)**

4.12.5 Due to change in the capitalization, loan drawl and depreciation, there is reduction in interest expenses. MSEDCL requests the Hon'ble Commission to allow the interest expenses as submitted in above table.

4.13 Interest on Working capital and Security Deposit for FY 2017-18

4.13.1 MSEDCL submits that the Regulations 31.3 of the MERC (MYT Regulations 2015), provides for Interest on Working Capital for Wire business of electricity. Accordingly, MSEDCL has calculated the Interest on Working Capital for Wire business as shown in the following table.

Table 80: Interest on Working Capital (Wires Business) FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Computation of Working Capital (Wire Business)			
One-twelfth of the amount of Operations and Maintenance Expenses	330	388	58
Maintenance Spares at 1% of Opening GFA	447	443	(4)
One and half months equivalent of the expected revenue from charges for use of Distribution Wires	1,162	1,246	84
Less:			
Amount of Security Deposit from Distribution System users	(668)	(698)	(30)
Total Working Capital	1,271	1,378	107
Computation of working capital interest			
Rate of Interest (% p.a.)	10.80%	9.50%	-1.30%
Interest on Working Capital	**137**	**131**	(6)
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.80%	9.50%	-1.30%
Interest on Security Deposit	**72**	**66**	**6**

4.13.2 MSEDCL has calculated the interest on working capital at 9.50% i.e. MCLR plus 150 basis points.

4.13.3 MSEDCL submits that the amendment to the Regulation 29.11 of MYT Regulations 2015 provides for Interest on Security Deposit at MCLR plus 150 basis points. The MSEDCL General Commercial Circular No. 258 for Rate of Interest on Consumer Security Deposit @ 9.50% per annum (MCLR plus 150 basis points) for FY 17-18 is attached as **Annexure 8** to this Petition.

4.13.4 MSEDCL requests the Hon'ble Commission to allow the Interest on Working capital along with the interest on security deposit for wire business as shown in above table.

4.13.5 MSEDCL further submits that Regulation 31.4 of the MERC (MYT Regulations 2015) provides for Interest on Working Capital for Retail Supply business of electricity.

4.13.6 Considering the provisions of Regulation 31.4 of the MERC (MYT Regulations 2015), MSEDCL has calculated the Interest on Working capital for Supply business as shown in following table.

Table 81: Interest on Working Capital (Supply Business) FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Computation of Working Capital (Supply Business)			
One-twelfth of the amount of Operations and Maintenance Expenses	178	209	31
Maintenance Spares at 1% of Opening GFA	50	49	(1)
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	7,233	7,582	349
Less:			
Amount of Security Deposit from retail supply consumers	(6,015)	(6,286)	(271)
Less: One month equivalent of cost of power purchase, transmission charges and MSLDC Charges	(4,482)	(4,495)	(13)
Total Working Capital	(3,036)	(2,941)	95
Computation of working capital interest			
Rate of Interest (% p.a.)	10.80%	9.50%	-1.3%
Interest on Working Capital (Normative Basis)	-	-	-
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.80%	9.50%	
Interest on Security Deposit	**650**	**597**	**(52)**

4.13.7 MSEDCL further submits that it has calculated the Interest on Working Capital on normative basis. However, in reality it has to utilize working capital and pay interest on it. Therefore, MSEDCL requests the Hon'ble Commission to allow interest on working capital at the time of true up.

4.13.8 MSEDCL requests the Hon'ble Commission to allow the interest on security deposit for supply business as shown in above table.

4.14 Provision for Bad Debts for FY 2017-18

4.14.1 As provided in the MYT Regulations 2015, the provision for bad and doubtful debts of Rs. 491.53 Crs at the rate of 1.5% of the receivable for FY 2016-17 has been made for FY 2017-18 as shown in following tables.

Table 82: Provision for bad and doubtful debts (Wire Business) FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Bad Debt Provision for Wire Business	26	49	23
Receivables	1,722	3,277	1555
% of Receivables	1.50%	1.50%	

Table 83: Provision for bad and doubtful debts (Supply Business) FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Bad Debt Provision for Supply Business	232	442	210
Receivables	15,494	29,492	13998
% of Receivables	1.50%	1.50%	

4.14.2 MSEDCL has already provided the reasons for deviations in increase in receivables at Paragraph 2.15.6 of this Petition. MSEDCL requests the Hon'ble Commission to allow this deviation

4.15 Other Expenses for FY 2017-18

4.15.1 The other expenses of MSEDCL comprise of the expenditure on account of interest to suppliers/contractors, rebate to consumers and other expenses viz. compensation for injuries to staff and outsiders. MSEDCL has estimated the Other Expenses considering a nominal 5% increase over previous year.

4.15.2 Other Expenses approved by the Hon'ble Commission and Provisional other Expenses incurred by MSEDCL for FY 2017-18 is as tabulated below.

Table 84: Other Expenses for FY 2017-18

Rs Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Other Expenses	16	65	49

4.15.3 Due to consideration of Expected Credit Loss on other receivables and other expenses for previous years as provided in Audited Accounts for FY 2016-17, there is a deviation compared to other expenses approved in MYT Order. MSEDCL requests the Hon'ble Commission to allow this deviation

4.16 Contribution to Contingency Reserves for FY 2017-18

4.16.1 MSEDCL submits that considering the precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it was not feasible for MSEDCL to invest in contingency reserves. Considering the critical financial situation in FY 2017-18, MSEDCL has not invested any amount in contribution to contingency reserves. Accordingly, the same not been claimed in ARR of the FY 2017- 18.

Table 85: Contribution to Contingency Reserves FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Contribution to Contingency Reserves	129	-	(129)

4.16.2 MSEDCL hereby requests the Hon'ble Commission to allow this deviation in contribution to contingency reserves for FY 2017-18.

4.17 Incentives and Discounts for FY 2017-18

4.17.1 MSEDCL submits that for FY 17-18, it has estimated the Incentives and discounts at a rate of 5% over previous year.

Table 86: Incentives and Discounts FY 2017-18

Rs Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Incentives/Discounts	285	247	(38)

4.18 Return on Equity for FY 2017-18

4.18.1 Regulation 28.2 of MERC (MYT Regulations 2015), provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Businesses:

4.18.2 Following table shows the calculation of capital expenditure, equity and asset capitalization of MSEDCL for computing the Return on Equity.

Table 87: Calculation of capital expenditure, equity and asset capitalisation FY 2017-18

Rs. Crs

Sr. No.	Particulars	FY 2017-18 (Provisional)
1	Capital Expenditure	4,568
a	Less: Grant	989
b	Capital Expenditure incurred (excl Grants)	3,579
2	Equity	
a	Internal Accural	1,005
b	GoM Equity	264
c	Consumer contribution	100
3	Total Equity excl. Consumer Contribution	1,168
4	Equity portion of capital expenditure 4 = (3 / 1 b)	32.64%
5	Assets Capitalization	
a	Capitalisation	5,864
b	Assets Capitalization (to be consider in proportionate to 1 b)	4,595
6	**Equity portion of Assets Capitalisation (upto 30%) with impact of Equity portion of assets retired during the year**	**1,378**
6	**Balance Equity Portion to be treated as Loan**	**121**

4.18.3 The return on equity capital is allocated in the ratio of fixed assets between wires and retail supply business. i.e. 90% to Wires Business and 10% to Supply Business. Therefore the capital expenditure, grants, equity and capitalization is divided into

Wires and Supply Business in the ratio of 90:10. In Form 4.4 MSEDCL has shown the details of year wise funding for various schemes wherein the debt: equity portion is arranged. However, there can be few capital works which can be funded by consumers through consumer contribution which are reconciled at the time of finalization of accounts. MSEDCL submits that it will be difficult to project and allocate the consumer contribution to any particular scheme. Therefore, MSEDCL has not shown the consumer contribution in Form 4.4. However, for the purpose of computation of RoE, MSEDCL has projected the consumer contribution based on historical experience and capital expenditure as shown in above table.

4.18.4 For calculation of equity portion, as per the MERC Regulation the quantum of grant needs to be deducted from the expenditure. Therefore the capitalization of expenditure has been worked out in proportion to the capital expenditure calculated after deducting the grant as explained in Paragraph 2.22.4.

4.18.5 For Wires Business, the return on equity has been computed @ 15.5% on average equity based upon the opening balance of equity and normative additions during the year; accordingly, the RoE for wires business for the FY 17- 18 is as under:

Table 88: RoE for Wire Business FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Regulatory Equity at the beginning of the year (Wires)	9,519	10,452	933
Capital Expenditure incurred (excl Grants)		3,221	
Equity portion of capital expenditure		1,051	
% of Equity portion of capital expenditure		32.64%	
Assets Capitalization		4,135	
Equity portion of Assets Capitalisation	302	1,241	939
Regulatory Equity at the end of the year	**9,821**	**11,693**	**1,872**
Return on Computation			
Return on Regulatory Equity at the beginning of the year	1,475	1,620	145
Return on Normative Equity portion of Assett Capitalization	23	96	73
Interest on Equity portion above 30% @11.83%p.a.		6	6
Total Return on Regulatory Equity for Wires	**1,499**	**1,722**	**224**

4.18.6 For Supply Business the return on equity has been computed @ 17.5% on average equity based upon the opening balance of equity and normative additions during the year; accordingly, the RoE for retail supply business for the FY 17-18 is as under:

Table 89: RoE for Supply Business FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Regulatory Equity at the beginning of the year (Supply)	1,058	1,161	**103**
Capital Expenditure incurred (excl Grants)		358	
Equity portion of capital expenditure		117	
% of Equity portion of capital expenditure		32.64%	
Assets Capitalization		459	
Equity portion of Assets Capitalisation	34	138	
Regulatory Equity at the end of the year	**1,092**	**1,299**	**207**
Return on Computation			
Return on Regulatory Equity at the beginning of the year	185	203	18
Return on Normative Equity portion of Assett Capitalization	3	12	9
Interest on Equity portion above 30%		1	
Total Return on Regulatory Equity for Supply	**188**	**216**	**28**

4.19 Impact of payment to MPECS in future years

4.19.1 Hon'ble Commission in the MYT Order dated 3rd November 2016 has approved following amount towards payment to MPECS.

Financial Year	Amount in Rs. Cr.
FY 17-18	46.20
FY 18-19	43.18
FY 19-20	40.17

4.19.2 MSEDCL has considered the same amount for the respective year. MSEDCL requests the Hon'ble Commission to allow the same.

4.20 Aggregate Revenue Requirement for Wire Business FY 2017-18

4.20.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2017-18 is as follows:

Table 90: ARR for Wire Business FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Operation & Maintenance Expenses	3,957	4,655	698
Depreciation	2,078	2,452	374
Interest on Loan Capital	2,042	1,428	(614)
Interest on Working Capital	137	131	(6)
Interest on deposit from Consumers and Distribution System Users	72	66	(6)
Provision for bad and doubtful debts	26	49	23
Contribution to contingency reserves	116	-	(116)
Return on Equity Capital	1,499	1,722	223
Aggregate Revenue Requirement	**9,927**	**10,504**	**577**
Less : Income from Wheeling Charges	5	1	(4)
Less: Income from Open Access Charges	623	536	(87)
Aggregate Revenue Requirement from Distribution Wires	**9,299**	**9,966**	**668**

4.21 Aggregate Revenue Requirement for Supply Business FY 2017-18

4.21.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2017 -18 is as follows:

Table 91: ARR for Supply Business FY 2017-18

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Power Purchase Expenses (including Inter-State Transmission Charges)	47,958	49,130	1,172
Operation & Maintenance Expenses	2,131	2,507	376
Depreciation	231	272	41
Interest on Loan Capital	227	159	(68)
Interest on Working Capital	-	-	-
Interest on Consumer Security Deposit	650	597	(53)
Other Finance Charges	-	-	-
Provision for bad and doubtful debts	232	442	210
Other Expenses	16	65	49
Intra-State Transmission Charges	5,824	4,812	(1,012)
Incentives/Discounts	285	247	(38)
Contribution to contingency reserves	13	-	(13)
DSM Expenses	-	1	1
Return on Equity Capital	188	216	28
Effect of sharing of gains/losses	(635)	-	635
Past Period Surplus	(1,116)	(1,116)	
Impact of payment to MPECS in future years	46	46	-
Total Revenue Expenditure	**56,050**	**57,377**	**1,327**
Revenue from Sale of Power	63,775	60,539	(3,236)
Non-Tariff Income	864	1,086	222
Income from Additional Surcharge	710	119	(591)
Total Revenue	**65,349**	**61,924**	**(3,425)**

4.22 Revenue from sale of Power for FY 2017-18

4.22.1 MSEDCL has considered the revenue for FY 2017-18 as per the provisional figures available.

4.22.2 MSEDCL would like to submit that it has been observed that the provisional revenue from fixed/demand charges during FY 2017-18 is lower than that approved by Hon'ble Commission for HT Industries.

Fixed/Demand Charges	MERC Approved	Actual

	Rs. Crs	Rs. Crs
HT Industries	3268	2160

4.22.3 A Comparison of revenue as per the provisional information available and as approved by the Hon'ble Commission, for FY 2017-18 is presented in the Table below.

Table 92: Revenue from sale of Power for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Revenue	63,775	60,539	(3,236)

4.22.4 MSEDCL also submits that the revenue for FY 17-18 also includes the impact of revenue refund of LBT expenses to customers

4.22.5 MSEDCL requests the Hon'ble Commission to allow the deviation in revenue.

4.23 Non-Tariff Income for FY 2017-18

4.23.1 MSEDCL has certain sources of non-tariff income viz. interest on arrears of consumers, delayed payment charges, interest on staff loans and advances, sale of scrap, interest on investment, rebate on power purchase, etc.

4.23.2 As provided in the MYT Regulations 2015, MSEDCL has not considered the DPC and Interest on DPC. A Comparison of non-tariff income as per the provisional information available and as approved by the Hon'ble Commission, for FY 2017-18 is presented in the Table below.

Table 93: Non-Tariff Income for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Rents of land or buildings	2	1	(0)
Sale of Scrap	11	51	39
Income from investments	19	16	(3)
Open access charges	12	-	(12)
Interest from Franchisee	4	85	81
Income from sale of tender documents	-	6	6
Rebate on power purchase	78	-	(78)
Prompt payment discount from REC/PFC	-	15	15
Other/Miscellaneous receipts	671	912	241
Interest on staff loans & Advances	-	-	-
Recovery from theft and malpractice	67	-	(67)
Grant under UDAY Scheme		-	
Total	**864**	**1,086**	**222**

4.23.3 In pursuance of the Hon'ble Supreme Court order in Civil Appeal No. 4305/2007 dated 10.11.2016, MSEDCL needs to refund of SLC, ORC charges and meter cost recovered during the period 20 Jan 2005 to 30 Apr 2007. Due to refund of meter cost, the consumer contribution is reduced and as a result the Income transferred from deferred income is reduced. MSEDCL humbly requests the Hon'ble Commission to allow the same.

4.24 Income from Wheeling Charges for FY 2017-18

4.24.1 A Comparison of income from Wheeling Charges as per the provisional figures and as approved by the Hon'ble Commission, for FY 2017-18 is presented in the Table below.

Table 94: Income from Wheeling Charges for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Income From Wheeling Charges	5	1	(4)

4.24.2 MSEDCL humbly requests the Hon'ble Commission to allow the same.

4.25 Income from Open Access Charges for FY 17-18

4.25.1 A Comparison of income from Open Access Charges as per the provisional figures available and as approved by the Hon'ble Commission, for FY 2017-18 is presented in the Table below.

Table 95: Income from Open Access Charges FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Income from Open Access Charges	623	536	(87)

4.25.2 MSEDCL humbly requests the Hon'ble Commission to allow the same.

4.26 Income from Trading of Surplus Power for FY 2017-18

4.26.1 MSEDCL submits that during the FY 2017-18, it has traded around 580 MUs and received about Rs. 180 Crs from trading of such surplus power. The same has been considered for FY 2017-18 as shown below.

Table 96: Income from Trading of Surplus Power for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Income from Trading of Surplus Power		180	180

4.27 Income from Additional Surcharge for FY 2017-18

4.27.1 A comparison of the income from Additional Surcharge as per the provisional information available and as approved by Hon'ble Commission in MYT Order dated 3rd November 2016 is shown in the table below.

Table 97: Income from Additional Surcharge FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Income from Additional Surcharge	710	119	(591)

4.27.2 The Hon'ble Commission in MYT Order 3rd November 2016 approved the income from additional surcharge considering the entire open access sales (incl. CPPs) whereas Hon'ble Commission ruled that Additional Surcharge will not be applicable to Captive Users of CPPs. Further, more and more consumers are opting for Open Access under CPP arrangement and open access quantum from IPPs is much lower than anticipated by Hon'ble Commission. Due to this, there has been reduction in income from Additional Surcharge.

4.28 Aggregate Revenue Requirement for FY 2017-18

4.28.1 Based on the above analysis, the summary of ARR for the Wires Business and Supply Business, as per provisional information available and as approved by the Hon'ble Commission, for FY 2017-18 is presented in the Table below.

Table 98: Aggregate Revenue Requirement for FY 2017-18

Rs. Crs

Particulars	FY 2017-18 (Approved)	FY 2017-18 (Provisional)	Deviation
Power Purchase Expenses	47,958	49,130	1,172
Operation & Maintenance Expenses	6,088	7,162	1,074
Depreciation Expenses	2,309	2,724	415
Interest on Loan Capital	2,269	1,586	(683)
Interest on Working Capital	137	131	(6)
Interest on Consumers Security Deposit	722	664	(58)
Provision for bad and doubtful debts	258	492	234
Other Expenses	16	65	49
Intra-State Transmission Charges MSLDC charge	5,824	4,812	(1,012)
Incentives/Discounts	285	247	(38)
Contribution to Contingency Reserves	129	-	(129)
DSM expenses	-	1	1
Return on Equity Capital	1,687	1,938	251
Effect of sharing of gains/losses	(635)	-	635
Past Period Adjustment by Commission	(1,116)	(1,116)	-
Add: Impact of payment to MPECS in future years	46	46	-
Aggregate Revenue Requirement	**65,977**	**67,882**	**1,904**
Revenue from Sale of Power	63,775	60,539	(3,236)
Non-Tariff Income	864	1,086	222
Income from Open Access Charges	623	536	(87)
Income from Trading of Surplus Power	-	180	180
Income from Wheeling Charges	5	1	(4)
Income from Additional Surcharge	710	119	(591)
Total Revenue	**65,977**	**62,461**	**(3,516)**
Revenue Gap/(Surplus)	**-**	**5,420**	**5,420**

5. AGGREGATE REVENUE REQUIREMENT FOR FY 2018-19 TO FY 2019-20

5.1 Preamble

5.1.1 This Chapter summarizes the Aggregate Revenue Requirement (ARR) for the period FY 2018-19 to FY 2019-20. The estimations/ projections for the FY 2018-19 and FY 2019-20 have been made based on the MERC (Multi Year Tariff) Regulations, 2015.

5.2 Approach for Sales Projection

5.2.1 As per Regulation 79.1 of MERC (MYT) Regulations, 2015, MSEDCL has to submit a month-wise forecast of the expected sales of electricity to each tariff category/ sub-category. The relevant extracts of the regulation are reproduced below.

*"**79. Sales forecast—***

79.1 The Distribution Licensee shall submit a month-wise forecast of the expected sales of electricity to each Tariff category/sub-category and to each Tariff slab within such Tariff category/sub-category to the Commission for approval along with the Multi-Year Tariff Petition, as specified in these Regulations:

Provided that the Distribution Licensee shall submit relevant details regarding category-wise sales separately for each Distribution Franchisee area within its Licence area, as well as the aggregated category-wise sales in its Licence area.

*79.2 The sales forecast shall be consistent with the load forecast prepared as part of the power procurement plan under **Part C** of these Regulations and shall be based on past data and reasonable assumptions regarding the future :*

Provided that where the Commission has stipulated a methodology for forecasting sales to any particular Tariff category, the Distribution Licensee shall incorporate such methodology in developing the sales forecast for such Tariff category."

5.2.2 It has been observed from the past experience that the historical trend method has proved to be a reasonably accurate and well accepted method for estimating the load, number of consumers and energy consumption. In light of the above, MSEDCL has estimated energy consumption for various customer categories primarily based on the CAGR trends during past years. Wherever it is observed that the trend is unreasonable/unsustainable or considering the impact of open access on Industrial consumption, the growth factors have been corrected to arrive at more realistic projections.

5.2.3 The break-up of the past sales and the CAGR growth rates for different periods (5 years, 3 years and year on year) is provided in the following tables. It may be noted that 5 year CAGR is calculated considering the period between FY 2012-13 & FY 2017-18, 3 year CAGR is considering the period between FY 2014-15 & FY 2017-18 whereas year on year is for FY 2017-18 over FY 2016-17.

5.2.4 The HT Industrial category has witness a significant rise in sales for FY 2017-18 over FY 2016-17. This is on account of various Open Access consumers returned to MSEDCL for purchase of power. The incremental sales on this account is around 3000 Mus. Thus, for the purpose of computing the CAGR for HT Industrial sales, FY 2017-18 sales has been normalized by deducting the incremental sales of 3000 MU (due to OA consumers returning back to discom).

5.2.5 From the perusal of historical HT Industrial sales, it has also been observed that no clear trend is visible in sales trajectory for computation of 3 year CAGR and hence, 4 years CAGR has been computed in HT industrial sales.

5.2.6 Historical trend in HT Category sales growth for MSEDCL (including all Franchisee) is given in following table.

Table 99: Historical Sales Growth and CAGR (HT Category)

MUs

Category	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	5 year CAGR	3 Year CAGR*	Y-oY Growth
HT-I Industries									
HT-IND 11 AND 22 KV	12,718	12,225	12,356	11,764	11,946	13,251	0%	1%	6%
HT-IND 33 KV	7,606	7,117	7,553	7,079	6,764	8,548	-1%	1%	8%
HT-IND EHV	5,793	4,354	4,977	4,151	4,392	6,561	-1%	6%	24%
HT-SEASONAL	167	143	147	83	94	102	-9%	-12%	8%
Total : HT-I Industries	**26,284**	**23,840**	**25,033**	**23,076**	**23,196**	**28,461**	**-1%**	**2%**	**10%**
HT-II Commercial									
HT-COMM 11 AND 22 KV	1,566	1,679	1,908	2,038	1,882	1,806	3%	-2%	-4%
HT-COMM 33 KV	131	115	117	101	105	76	-10%	-13%	-27%
HT-COMM EHV	195	200	106	38	41	42	-26%	-27%	3%
Total : HT-II Commercial	**1,892**	**1,994**	**2,130**	**2,177**	**2,027**	**1,924**	0%	-3%	-5%
HT III Railways	**1,518**	**1,487**	**1,501**	**994**	**17**	**66**	-47%	-65%	294%
HT IV-PWW	**1,282**	**1,517**	**1,676**	**1,747**	**1,733**	**1,911**	8%	4%	10%
HT V Agricultural	**767**	**710**	**712**	**833**	**859**	**766**	0%	2%	-11%
HT VI Bulk Supply (Housing Comp	**265**	**229**	**229**	**242**	**228**	**226**	-3%	0%	-1%
HT Temporary	**11**	**5**	**5**	**5**	**4**	**5**	-15%	-4%	30%
HT-IX Public services	**619**	**774**	**910**	**971**	**971**	**1,002**	10%	3%	3%
MSPGCL AUX SUPPLY	**3**	**14**	**60**	**83**	**179**	**218**	139%	54%	22%
HT AG Others (Poultry)	**82**	**100**	**134**	**160**	**187**	**208**	20%	16%	11%
Sub total -HT Sales	**32,723**	**30,669**	**32,390**	**30,288**	**29,400**	**34,788**	**1.2%**	**2.4%**	**18.3%**

4 Year CAGR has been computed instead of 3 year CAGR for HT Industrial consumers

5.2.7 Historical trend in LT Category sales growth (including all Franchisee) is given in following table.

Table 100: Historical Sales Growth and CAGR (LT Category)

MUs

Category	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	5 year CAGR	3 Year CAGR*	Y-oY Growth
LT Category									
LT I -BPL	188	138	102	77	61	54	-22%	-19%	-11%
LT I Domestic	15,426	16,281	17,678	18,861	18,962	19,824	5%	4%	5%
1-100 Units	10,229	10,849	11,548	12,167	12,265	12,694	4%	3%	3%
101-300 Units	3,795	4,006	4,536	4,887	4,820	5,140	6%	4%	7%
301-500 Units	626	637	744	815	836	878	7%	6%	5%
501-1000 Units	388	396	447	499	537	553	7%	7%	3%
Above 1000 Units	388	394	402	493	504	560	8%	12%	11%
LT II Non Domestic	3,998	3,914	4,087	4,358	4,524	5,403	6%	10%	19%
LT III PWW	606	593	627	673	691	716	3%	5%	4%
LT IV Agriculture	20,141	20,915	25,786	27,512	27,525	29,669	8%	5%	8%
LT IV -Unmetered	9,890	10,042	12,050	12,003	11,977	11,090	2%	-3%	-7%
LT IV Metered incl Poultry	10,250	10,873	13,736	15,509	15,548	18,579	13%	11%	19%
LT V Powerloom	2,794	2,878	3,222	3,243	3,270	3,644	5%	4%	11%
LT V Industrial General	4,343	4,599	4,816	5,026	5,114	4,954	3%	1%	-3%
LT VI Streetlight	1,227	1,328	1,498	1,667	1,751	1,817	8%	7%	4%
LT VII- Temporary Connection	37	23	19	18	16	16	-15%	-5%	3%
LT VIII Advertisement & Hoardings	4	3	3	3	4	4	4%	11%	9%
LT IX – Crematoriums & Burial Grounds	1	2	1	1	2	2	6%	10%	5%
LT X - Public services	14	87	203	307	361	428	99%	28%	19%
LT - Prepaid	8	12	13	-	-	-	-100%	-100%	
P.D. Consumers	(5)	(14)	(10)	(11)	(5)	(9)	14%	-4%	85%
LT Total	**48,781**	**50,760**	**58,046**	**61,736**	**62,275**	**66,523**	**6%**	**5%**	**7%**
Total	**81,504**	**81,429**	**90,435**	**92,024**	**91,674**	**1,01,311**	**4%**	**4%**	**11%**

5.3 CAGR considered for Sales Projection

5.3.1 MSEDCL has witnessed a normal growth in the Sales in the last five years. MSEDCL has been able to increase the availability of power, because of which the sales of MSEDCL has grown. However, the growth is not as expected in the 16th or 17th EPS due to considerable increase in Open Access transactions.

5.3.2 Keeping the variations over a period in mind, MSEDCL has considered the 3 years CAGRs for projecting the sales. Wherever the trend was unreasonable /unsustainable, the growth factors have been corrected to arrive at more realistic projections.

5.3.3 The category wise CAGRs considered for projecting the sales for the period FY 18-19 to FY 19-20 for HT Category have been shown in the following table.

Table 101: CAGR Considered for Sales Projections (HT Category)

Consumer Category	CAGR Considered	Justification/Rationale
HT-IND 11 AND 22 KV	1%	4 Year CAGR
HT-IND 33 KV	1%	4 Year CAGR
HT-IND EHV	6%	4 Year CAGR
HT-COMM 11 AND 22 KV	-2%	3 Year CAGR
HT-COMM 33 KV	0%	3 Year CAGR -13%, however, quantum being very low CAGR considered 0%
HT-COMM EHV	0%	3 Year CAGR -27%, however, quantum being very low CAGR considered 0%
HT-III RAILWAYS/Metro/Mono	0%	3 Year CAGR -65%, however, quantum being very low CAGR considered 0%
HT-PWW 11 AND 22 KV	-4%	3 Year CAGR
HT-PWW 33 KV	9%	3 Year CAGR
HT-PWW EHV	10%	3 Year CAGR 85% being abnormal, Realistic growth of 10% considered.
HT-AGRICULTURE 11 AND 22 KV	2%	3 Year CAGR
HT-AGRICULTURE 33 KV	3%	3 Year CAGR
HT-AGRICULTURE EHV	3%	3 Year CAGR
HT-PUBLIC SER.-GOVT 11 AND 22 KV	10%	Y-o-Y growth 12%, Realistic growth of 10%
HT-PUBLIC SER.-GOVT 33 KV	10%	Y-o-Y growth 348%, Realistic growth of 10%
HT-PUBLIC SER.-GOVT EHV	0%	No sales hence 0%
HT-PUBLIC SER.-OTHER 11 AND 22 KV	-2%	3 Year CAGR
HT-PUBLIC SER.-OTHER 33 KV	3%	3 Year CAGR
HT-PUBLIC SER.-OTHER EHV	10%	3 Year CAGR
HT-AG OTHERS 11 AND 22 KV	10%	3 Year CAGR 16%, Realistic growth of 10%
HT-AG OTHERS 33 KV	10%	3 Year CAGR 11%, Realistic growth of 10%
HT-AG OTHERS EHV	0%	No sales hence 0%

5.3.4 Further, it is submitted that since November 2015, Railways has got status of Deemed Licensee and the sales of Railways has reduced drastically. However, few consumers are still with MSEDCL. Considering the sales of FY 2017-18, MSEDCL has projected the sales for Railways to remain at current level. So MSEDCL has considered the same sales during the period FY 18-19 to FY 19-20.

5.3.5 The category wise CAGRs considered for the period FY 2018-19 to FY 2019-20 for LT Category have been shown in the following table.

Table 102: CAGR Considered for Sales Projections (LT Category)

Consumer Category	CAGR Considered	Justification/Rationale
LT-I (A): LT- BPL	0%	3 Year CAGR -19%, further quantum being very low CAGR considered 0%
LT-I (B) : LT-Residential(Other than BPL)		
1-100 Units	3%	3 Year CAGR
101-300 Units	4%	3 Year CAGR
301-500 Units	6%	3 Year CAGR
501-1000 Units	7%	3 Year CAGR
Above 1000 Units	12%	3 Year CAGR
LT-II : LT- Non Residential		
0-20 KW	10%	3 Year CAGR
>20-<=50 KW	9%	3 Year CAGR
>50 KW	9%	3 Year CAGR
LT-III : LT-Public Water Works		
0-20 KW	4%	3 Year CAGR
20-<=40 KW	6%	3 Year CAGR
> 40 KW	6%	3 Year CAGR
LT-IV: LT-Agriculture		
LT-AG-Unmetered (Pumpsets)	0%	No new connections hence 0%
LT-AG Metered (Pumpsets)	6%	3 Year CAGR 10%, Realistic growth of 6%
LT-AG Metered (Others)	10%	YoY Growth 14%, Realistic growth of 10%
LT V(A) : LT Industry- Power Looms		
0-20 KW (Upto & including 27 HP)	-3%	3 Year CAGR
Above 20 KW (above 27 HP)	14%	3 Year CAGR
LT V(B) : LT Industry- General		
0-20 KW (Upto & including 27 HP)	-5%	3 Year CAGR
Above 20 KW (above 27 HP)	5%	3 Year CAGR
LT X - Public services - Govt		
0-20 KW	10%	YoY Growth 27%, Realistic growth of 10%
>20-50 kW	12%	YoY Growth
>50 kW	10%	YoY Growth 21%, Realistic growth of 10%
LT X - Public services - Other		
0-20 KW	10%	3 Year CAGR 18%, Realistic growth of 10%
>20-50 kW	10%	3 Year CAGR 29%, Realistic growth of 10%
>50 kW	10%	3 Year CAGR 33%, Realistic growth of 10%

5.4 Sales Projections for FY 18-19 to FY 19-20

5.4.1 MSEDCL has considered the provisional sales of FY 2017-18 as the base for projection of sales for the FY 2018-19 and FY 2019-20. Based on the provisional sales for FY 2017-18 and the CAGRs as shown in above tables, MSEDCL has projected the sales for various categories. The sales projections of HT Categories (Excluding 2 Franchisee) for the period FY 2018-19 to FY 2019-20 are shown in the following table:

Table 103: Sales Projections-Excluding DF (HT category)

MUs

Consumer Category	FY 2018-19 (Projected)	FY 2019-20 (Projected)
HT Category		
HT-IND 11 AND 22 KV	12,998	13,097
HT-IND 33 KV	8,611	8,673
HT-IND EHV	6,937	7,335
HT-SEASONAL	102	102
Total : HT-I Industries	**28,648**	**29,208**
HT-II Commercial		
HT-COMM 11 AND 22 KV	1,691	1,660
HT-COMM 33 KV	76	76
HT-COMM EHV	42	42
Total : HT-II Commercial	**1,809**	**1,778**
HT III Railways	59	59
HT IV-PWW	1,521	1,525
HT V Agricultural	785	804
HT VI Bulk Supply (Housing Complex)	217	216
HT Temporary	5	5
HT-IX Public services	993	1,017
MSPGCL AUX SUPPLY	218	218
HT AG Others (Poultry)	227	250
Total HT	**34,481**	**35,080**

5.4.2 Based on the above growth rate, it is estimated that HT category sales will grow at around **2%** on YoY basis.

5.5 Approach for Agriculture Sales and LT sales Projections

5.5.1 MSEDCL has taken a realistic view and proposed to convert 1,00,000 consumers per year to metered category. Considering average load of 5 HP and unmetered index of 1242 units/Hp/Annum, MSEDCL has calculated the consumption of these unmetered consumers as shown in following table and the same is added to the consumption of metered category.

Particulars	Units	FY 18-19 (Projected)	FY 19-20 (Projected)
No. of Consumers	Nos.	1,00,000	1,00,000
Avg HP per Consumer	HP	5	5
Total HP	HP	5,00,000	5,00,000
Index	Units/HP/Annum	1,242	1,242
Consumption	**MUs**	**621**	**621**

5.5.2 Based on the provisional sales for FY 2017-18 and the CAGRs as shown in above table, MSEDCL has projected the sales for various categories. The sales projections of LT Categories (Excluding 2 Franchisee) for the period FY 2018-19 to FY 2019-20 are shown in the following table:

Table 104: Sales Projections Excluding DF (LT Category)

MUs

Consumer Category	FY 2018-19	FY 2019-20
	Projected	Projected
LT Category		
LT-I (A): LT- BPL	54	54
LT-I (B) : LT-Residential(Other than BPL)	**19,510**	**20,282**
1-100 Units	12,498	12,899
101-300 Units	4,985	5,197
301-500 Units	863	912
501-1000 Units	560	601
Above 1000 Units	603	673
LT-II : LT- Non Residential		
0-20 KW	4,235	4,653
>20-<=50 KW	850	929
>50 KW	493	540
LT-II : LT- Non Residential	**5,578**	**6,123**
LT-III : LT-Public Water Works	746	780
LT-IV: LT-Agriculture	**30,778**	**32,002**
LT-AG-Unmetered (Pumpsets)	10,469	9,848
LT-AG Metered (Pumpsets)	20,173	22,005
LT-AG Metered (Others)	136	150
LT V(A) : LT Industry- Power Looms	**1,985**	**2,135**
0-20 KW (Upto & including 27 HP)	715	692
Above 20 KW (above 27 HP)	1,270	1,443
LT V(B) : LT Industry- General	**4,700**	**4,780**
0-20 KW (Upto & including 27 HP)	1,488	1,410
Above 20 KW (above 27 HP)	3,212	3,370
Street Light (LT-VI)	**1,883**	**2,014**
Temporary Connection (LT-VII)	**16**	**16**
LT-VIII : LT-Advertisements & Hordings	**5**	**5**
LT-IX : LT-Crematorium and Burial Grounds	**2**	**2**
LT X - Public services - Govt	**52**	**58**
0-20 KW	35	38
>20-50 kW	9	10
>50 kW	8	9
LT X - Public services - Other	**401**	**441**
0-20 KW	234	257
>20-50 kW	78	85
>50 kW	90	98
Total LT	**65,712**	**68,694**
Total MSEDCL excl. DF	**1,00,193**	**1,03,774**

5.6 Sales projections for Distribution Franchisees

5.6.1 MSEDCL submits that the DF Agreement for distribution of power in Bhiwandi Circle has been extended for a further period of 10 years with effect from January 26, 2017.

5.6.2 Accordingly, the category wise sales for the Bhiwandi & Nagpur DFs for the period for FY 2018-19 to FY 2019-20 have been projected using the CAGRs as indicated in foregoing paragraphs and estimated sales of FY 2017-18.

5.6.3 Considering the projected sales and estimated loss levels, MSEDCL has projected the input level sales of said DFs for FY 18-19 and FY 19-20 as shown in following table.

Table 105: Input Sales for DFs

MUs

Particulars	FY 18-19 (Projected)	FY 19-20 (Projected)
Bhiwandi		
Input Sales	**3,846**	**3,974**
Nagpur		
Input Sales	**1,641**	**1,705**

5.6.4 Considering the decision of Hon'ble Commission in its Order dated 18th June 2014 in Case No. 85 of 2010, MSEDCL has considered area of supply of MPECS as merged in the area of supply of MSEDCL for present projections.

5.7 Approach for No. of Consumer Projection

5.7.1 Similar to sales projections, MSEDCL has also adopted the historical trend method for projecting category wise no. of consumers of MSEDCL. The Break-up of category wise no. of consumers and 3 year CAGR growth rates for the period FY 2017-18 over FY 2014-15 are as follows.

5.7.2 Historical trend in No. of Consumers in HT Category for MSEDCL (Excluding 2 Franchisees) is given in following table.

Table 106: Historical Growth and CAGR No. of Consumers (HT Category)

Nos

Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	3 Year CAGR	Y-oY Growth
HT-I Industries						
HT-IND 11 AND 22 KV	10,850	11,190	11,473	11,831	3%	3%
HT-IND 33 KV	1,034	1,086	1,103	1,175	4%	7%
HT-IND EHV	183	206	217	233	8%	7%
HT-SEASONAL	567	483	468	452	-7%	-3%
Total : HT-I Industries	**12,634**	**12,965**	**13,261**	**13,691**	**3%**	**3%**
HT-II Commercial						
HT-COMM 11 AND 22 KV	2,833	2,847	2,899	2,936	1%	1%
HT-COMM 33 KV	50	57	45	40	-7%	-11%
HT-COMM EHV	28	21	12	12	-25%	0%
Total : HT-II Commercial	**2,911**	**2,925**	**2,956**	**2,988**	1%	1%
HT III Railways	**43**	**9**	**23**	**76**	21%	230%
HT IV-PWW	**927**	**945**	**977**	**950**	1%	-3%
HT V Agricultural	**1,062**	**1,057**	**1,075**	**1,043**	-1%	-3%
HT VI Bulk Supply (Housing Complex)	**225**	**231**	**234**	**357**	17%	53%
HT Temporary	**10**	**7**	**10**	**11**	3%	10%
HT-IX Public services	**1,115**	**1,169**	**1,214**	**1,265**	4%	4%
MSPGCL AUX SUPPLY	**23**	**24**	**28**	**28**	7%	0%
HT AG Others (Poultry)	**390**	**443**	**478**	**388**	0%	-19%
Total -HT Consumers	**19,340**	**19,775**	**20,256**	**20,797**	**2%**	**3%**

5.7.3 Historical trend in No. of Consumers in LT Category for MSEDCL (Excluding 2 Franchisees) is given in following table.

Table 107: Historical Growth and CAGR No. of Consumers (LT Category)

Nos

Category	2014-15	2015-16	2016-17	2017-18	3 Year CAGR	Y-oY Growth
LT Category						
LT I -BPL	3,43,933	2,65,058	2,09,677	1,76,751	-20%	-16%
LT I Domestic	1,60,06,975	1,67,41,814	1,73,55,815	1,79,35,808	4%	3%
LT II Non Domestic	15,23,372	15,86,158	16,51,974	17,27,569	4%	5%
LT III PWW	47,903	49,666	51,300	51,100	2%	0%
LT IV Agriculture	38,30,600	39,86,347	41,01,981	41,76,837	3%	2%
LT IV -Unmetered	16,01,847	15,90,617	15,40,817	15,04,408	-2%	-2%
LT IV Metered incl Poultry	22,28,753	23,95,730	25,61,164	26,72,429	6%	4%
LT V Powerloom	32,773	34,057	34,026	33,769	1%	-1%
LT V Industrial General	2,93,041	3,00,616	2,99,055	2,89,760	0%	-3%
LT VI Streetlight	83,503	86,334	88,978	91,343	3%	3%
LT VII- Temporary Connection	2,415	2,602	2,605	3,557	14%	37%
LT VIII Advertisement & Hoardings	1,876	2,054	2,334	2,317	7%	-1%
LT IX – Crematoriums & Burial Grounds	117	143	167	188	17%	13%
LT X - Public services	71,334	76,370	81,588	90,551	8%	11%
Total LT Consumers	**2,22,37,842**	**2,31,31,219**	**2,38,79,500**	**2,45,79,550**	**3.4%**	**2.9%**
Total Consumers	**2,22,57,182**	**2,31,50,994**	**2,38,99,756**	**2,46,00,347**	**3.4%**	**2.9%**

5.8 CAGR considered for Projection of Nos. Consumer

5.8.1 MSEDCL has considered 3 year CAGR for all major categories. Wherever it is observed that the trend is unreasonable or unsustainable, the growth factors have been corrected to arrive at more realistic projections considering year on year growth rate.

5.8.2 Following tables provide the CAGRs considered for projecting the number of consumers for the period FY 18-19 to 19-20.

Table 108: CAGR Considered for No. of Consumers Projections (HT Category)

Consumer Category	CAGR Considered	Justification/Rationale
HT-IND 11 AND 22 KV	3%	3 Year CAGR
HT-IND 33 KV	4%	3 Year CAGR
HT-IND EHV	8%	3 Year CAGR
HT-COMM 11 AND 22 KV	1%	3 Year CAGR
HT-COMM 33 KV	0%	3 Year CAGR -7%, Realistic growth of 0%
HT-COMM EHV	0%	3 Year CAGR -25%, Realistic growth of 0%
HT-III RAILWAYS/Metro/Mono	0%	3 Year CAGR 21%, Category being small, realistic growth of 0% has been considered
HT-PWW 11 AND 22 KV	1%	3 Year CAGR
HT-PWW 33 KV	2%	3 Year CAGR
HT-PWW EHV	0%	3 Year CAGR
HT-AGRICULTURE 11 AND 22 KV	-1%	3 Year CAGR
HT-AGRICULTURE 33 KV	2%	3 Year CAGR
HT-AGRICULTURE EHV	7%	3 Year CAGR
HT-PUBLIC SER.-GOVT 11 AND 22 KV	6%	YoY Growth rate
HT-PUBLIC SER.-GOVT 33 KV	5%	YoY Growth rate is 100%. Realistic growth rate of 5% considered
HT-PUBLIC SER.-GOVT EHV	0%	No consumer in this category, hence 0%
HT-PUBLIC SER.-OTHER 11 AND 22 KV	0%	3 Year CAGR -5%, Realistic growth of 0%
HT-PUBLIC SER.-OTHER 33 KV	0%	3 Year CAGR -3%, Realistic growth of 0%
HT-PUBLIC SER.-OTHER EHV	0%	3 Year CAGR
HT-AG OTHERS 11 AND 22 KV	0%	3 Year CAGR
HT-AG OTHERS 33 KV	10%	3 Year CAGR
HT-AG OTHERS EHV	0%	No consumer in this category, hence 0%

Table 109: CAGR Considered for No. of Consumers Projections (LT Category)

Consumer Category	CAGR Considered	Justification/Rationale
LT-I (A): LT- BPL	0%	3 Year CAGR -20%, Realistic growth of 0%
LT-I (B) : LT-Residential(Other than BPL)	4%	3 Year CAGR
LT-II : LT- Non Residential		
0-20 KW	4%	3 Year CAGR
>20-<=50 KW	9%	3 Year CAGR
>50 KW	11%	3 Year CAGR
LT-III : LT-Public Water Works		
0-20 KW	2%	3 Year CAGR
20-<=40 KW	4%	3 Year CAGR
> 40 KW	5%	3 Year CAGR 21%, Realistic growth of 5%
LT-IV: LT-Agriculture		
LT-AG-Unmetered (Pumpsets)	-2%	3 Year CAGR
LT-AG Metered (Pumpsets)	6%	3 Year CAGR
LT-AG Metered (Others)	7%	3 Year CAGR
LT V(A) : LT Industry- Power Looms		
0-20 KW (Upto & including 27 HP)	0%	3 Year CAGR
Above 20 KW (above 27 HP)	5%	3 Year CAGR 11%, Realistic growth of 5%
LT V(B) : LT Industry- General		
0-20 KW (Upto & including 27 HP)	0%	3 Year CAGR -1%, Realistic growth of 0%
Above 20 KW (above 27 HP)	2%	3 Year CAGR
LT X - Public services - Govt		
0-20 KW	5%	YoY Growt Rate 29%, Realistic growth of 5%
>20-50 kW	5%	YoY Growt Rate 14%, Realistic growth of 5%
>50 kW	5%	YoY Growt Rate 14%, Realistic growth of 5%
LT X - Public services - Other		
0-20 KW	-1%	3 Year CAGR
>20-50 kW	5%	3 Year CAGR 16%, Realistic growth of 5%
>50 kW	5%	3 Year CAGR 20%, Realistic growth of 5%

5.8.3 MSEDL submits that presently and for future period also, it has sufficient power availability. Considering this, MSEDCL has taken an optimistic view and considered positive or zero growth for certain categories. However, considering the factual position, for certain categories it has projected negative sales growth as well and projected no. of consumers for various categories.

5.9 Number of Consumer Projections for FY 18-19 to FY 19-20

5.9.1 MSEDCL has considered FY 2017-18as the base year for projection of number of consumers for the period FY 2018-19 to FY 2019-20. Based on the number of consumers for FY 2017-18 and the CAGRs as shown in above tables, MSEDCL has projected the number of consumers (excluding 2 Franchisees) for various categories as shown in the following tables:

Table 110: No. of Consumers Projections (HT category)

Consumer Category	FY 2018-19	FY 2019-20
	Projected	Projected
HT Category		
HT-IND 11 AND 22 KV	12,178	12,535
HT-IND 33 KV	1,227	1,281
HT-IND EHV	253	275
HT-SEASONAL	452	452
Total : HT-I Industries	**14,110**	**14,543**
HT-II Commercial		
HT-COMM 11 AND 22 KV	2,972	3,008
HT-COMM 33 KV	40	40
HT-COMM EHV	12	12
Total : HT-II Commercial	**3,024**	**3,060**
HT III Railways	**76**	**76**
HT IV-PWW	**959**	**968**
HT V Agricultural	**1,038**	**1,034**
HT VI Bulk Supply (Housing Complex)	**375**	**394**
HT Temporary	**11**	**11**
HT-IX Public services	**1,284**	**1,305**
MSPGCL AUX SUPPLY	**30**	**32**
HT AG Others (Poultry)	**389**	**390**
Total HT Consumers	**21,296**	**21,813**

Table 111: No. of Consumers Projections (LT category)

Consumer Category	FY 2018-19	FY 2019-20
	Projected	Projected
LT Category		
LT-I (A): LT- BPL	1,76,751	1,76,751
LT-I (B) : LT-Residential(Other than BPL)	1,86,29,085	1,93,49,159
LT-II : LT- Non Residential		
0-20 KW	17,72,586	18,47,312
>20-<=50 KW	23,573	25,577
>50 KW	5,495	6,088
LT-II : LT- Non Residential	**18,01,654**	**18,78,977**
LT-III : LT-Public Water Works	52,177	53,278
LT-IV: LT-Agriculture	**43,12,412**	**44,59,033**
LT-AG-Unmetered (Pumpsets)	14,73,264	14,42,765
LT-AG Metered (Pumpsets)	28,12,970	29,88,308
LT-AG Metered (Others)	26,178	27,960
LT V(A) : LT Industry- Power Looms	**33,913**	**34,069**
0-20 KW (Upto & including 27 HP)	28,858	28,761
Above 20 KW (above 27 HP)	5,055	5,308
LT V(B) : LT Industry- General	**2,91,046**	**2,92,361**
0-20 KW (Upto & including 27 HP)	2,33,825	2,33,825
Above 20 KW (above 27 HP)	57,221	58,536
Street Light (LT-VI)	**92,829**	**94,380**
Temporary Connection (LT-VII)	**3,662**	**3,847**
LT-VIII : LT-Advertisements & Hordings	**2,387**	**2,459**
LT-IX : LT-Crematorium and Burial Grounds	**198**	**208**
LT X - Public services - Govt	**20,359**	**21,379**
0-20 KW	19,891	20,886
>20-50 kW	323	340
>50 kW	145	153
LT X - Public services - Other	**70,885**	**70,618**
0-20 KW	67,664	67,235
>20-50 kW	2,225	2,337
>50 kW	996	1,046
Total LT Consumers	**2,54,87,358**	**2,64,36,519**
Total MSEDCL excl. DF Consumers	**2,55,08,654**	**2,64,58,332**

5.10 Approach for Connected Load/Contract Demand Projection

5.10.1 Similar to projections of sales and no. of consumers, MSEDCL has also adopted the historical trend method for projecting category wise connected load/Contract Demand for MSEDCL. The Break-up of category wise connected load/Contract Demand and the 3 year CAGR growth rates for the period FY 2017-18 over FY 2014-15 are as follows.

Table 112: Historical Growth and CAGR Actual Billed Demand/ Connected Load

kVA

Category	FY 14-15	FY 15-16	FY 16-17	FY 17-18	3 Year CAGR	Y-oY Growth
HT-I Industries						
HT-IND 11 AND 22 KV	33,92,050	33,54,605	34,68,368	36,66,127	3%	6%
HT-IND 33 KV	15,71,390	14,89,979	14,75,097	16,84,283	2%	14%
HT-IND EHV	15,92,494	15,36,834	16,37,261	18,36,339	5%	12%
HT-SEASONAL	77,740	56,960	54,040	58,209	-9%	8%
Total : HT-I Industries	**66,33,674**	**64,38,377**	**66,34,766**	**72,44,958**	**3%**	**9%**
HT-II Commercial						
HT-COMM 11 AND 22 KV	6,53,316	6,75,869	6,71,654	6,65,849	1%	-1%
HT-COMM 33 KV	47,821	38,678	40,202	31,085	-13%	-23%
HT-COMM EHV	1,37,253	88,046	29,509	29,831	-40%	1%
Total : HT-II Commercial	**8,38,391**	**8,02,593**	**7,41,365**	**7,26,765**	**-5%**	**-2%**
HT III Railways	**-**	**-**	**11,977**	**37,127**		210%
HT IV-PWW	**2,60,632**	**2,88,795**	**2,95,857**	**3,07,728**	6%	4%
HT V Agricultural	**3,95,676**	**4,03,374**	**4,15,035**	**4,32,480**	3%	4%
HT VI Bulk Supply (Housing Complex)	**51,613**	**52,727**	**52,629**	**52,607**	1%	0%
HT Temporary	**-**	**-**	**1,075**	**2,788**		159%
HT-IX Public services	**2,52,613**	**2,73,434**	**2,83,306**	**2,93,129**	5%	3%
MSPGCL AUX SUPPLY	**47,064**	**72,650**	**1,04,183**	**1,10,969**	33%	7%
HT AG Others (Poultry)	**44,222**	**51,348**	**59,674**	**67,987**	15%	14%
Total -HT	**85,23,885**	**83,83,298**	**85,99,866**	**92,76,538**	**3%**	**8%**

Table 113: Historical Growth and CAGR connected load/Contract Demand (LT Category)

Category	2014-15	2015-16	2016-17	2017-18	3 Year CAGR	Y-oY Growth
LT Category						
LT I -BPL (kW)	35,277	26,868	21,242	18,545	-16%	-13%
LT I Domestic (kW)	1,58,34,413	1,69,21,592	1,78,69,931	1,88,86,137	4%	6%
LT II Non Domestic (kW)	29,97,219	31,76,715	34,56,384	38,15,323	5%	10%
LT III PWW (kW)	1,44,742	1,53,329	1,64,046	1,66,398	4%	1%
LT IV Agriculture (HP)	1,94,21,593	2,00,78,979	2,06,29,531	2,11,83,255	2%	3%
LT IV -Unmetered (HP)	83,94,300	83,42,017	78,32,143	75,39,616	-2%	-4%
LT IV Metered incl Poultry (HP)	1,10,27,294	1,17,36,962	1,27,97,388	1,36,43,638	5%	7%
LT V Powerloom (HP)	4,52,132	4,71,827	4,86,357	4,99,454	2%	3%
LT V Industrial General (HP)	39,34,850	40,31,460	40,72,886	40,04,275	1%	-2%
LT VI Streetlight (kW)	3,59,962	3,64,797	3,73,666	3,77,339	1%	1%
LT VII- Temporary Connection (kW)	14,249	15,018	15,729	18,181	3%	16%
LT VIII Advertisement & Hoardings (kW)	5,032	5,386	5,914	6,043	6%	2%
LT IX – Crematoriums & Burial Grounds (kW)	838	1,223	1,444	1,516	20%	5%
LT X - Public services (kW)	1,40,258	1,78,365	2,11,958	2,46,491	15%	16%
LT Total	**4,33,40,566**	**4,54,25,558**	**4,73,09,089**	**4,92,22,957**	**3%**	**4%**
Total	**5,18,64,451**	**5,38,08,856**	**5,59,08,955**	**5,84,99,495**	**3%**	**5%**

5.11 CAGR considered for Connected Load/Contract Demand Projection

5.11.1 Following tables provide the CAGRs considered for projecting connected load/contract demand for HT and LT categories for the period FY 2018-19 to FY 2019-20.

Table 114: CAGR Considered for Contract Demand Projections (HT Category)

Consumer Category	CAGR Considered
HT-IND 11 AND 22 KV	3%
HT-IND 33 KV	2%
HT-IND EHV	5%
HT-COMM 11 AND 22 KV	1%
HT-COMM 33 KV	-23%
HT-COMM EHV	0%
HT-III RAILWAYS/Metro/Mono	0%
HT-PWW 11 AND 22 KV	4%
HT-PWW 33 KV	10%
HT-PWW EHV	5%
HT-AGRICULTURE 11 AND 22 KV	-1%
HT-AGRICULTURE 33 KV	6%
HT-AGRICULTURE EHV	5%
HT-PUBLIC SER.-GOVT 11 AND 22 KV	0%
HT-PUBLIC SER.-GOVT 33 KV	0%
HT-PUBLIC SER.-GOVT EHV	0%
HT-PUBLIC SER.-OTHER 11 AND 22 KV	0%
HT-PUBLIC SER.-OTHER 33 KV	5%
HT-PUBLIC SER.-OTHER EHV	8%
HT-AG OTHERS 11 AND 22 KV	5%
HT-AG OTHERS 33 KV	3%
HT-AG OTHERS EHV	0%

Table 115: CAGR Considered for Connected Load/Contract Demand Projections (LT Category)

Consumer Category	CAGR Considered
LT-I (A): LT- BPL	0%
LT-I (B) : LT-Residential(Other than BPL)	6%
LT-II : LT- Non Residential	
0-20 KW	8%
>20-<=50 KW	8%
>50 KW	10%
LT-III : LT-Public Water Works	
0-20 KW	5%
20-<=40 KW	5%
> 40 KW	4%
LT-IV: LT-Agriculture	
LT-AG-Unmetered (Pumpsets)	-4%
LT-AG Metered (Pumpsets)	8%
LT-AG Metered (Others)	0%
LT V(A) : LT Industry- Power Looms	
0-20 KW (Upto & including 27 HP)	1%
Above 20 KW (above 27 HP)	10%
LT V(B) : LT Industry- General	
0-20 KW (Upto & including 27 HP)	-1%
Above 20 KW (above 27 HP)	3%
LT X - Public services - Govt	
0-20 KW	5%
>20-50 kW	5%
>50 kW	5%
LT X - Public services - Other	
0-20 KW	10%
>20-50 kW	10%
>50 kW	10%

5.12 Connected Load Projections for FY 18-19 to FY 19-20

5.12.1 Based on the connected load/ contract demand or provisional billing demand for FY 2017-18 and the CAGRs as shown in above tables, MSEDCL has projected the connected load/contract demand for various categories (excluding 2 Franchisees) for the period as shown in the following table:

Table 116: Connected load/contract demand Projections (HT category)

kVA

Consumer Category	FY 2018-19	FY 2019-20
	Projected	Projected
HT Category		
HT-IND 11 AND 22 KV	37,62,322	38,61,040
HT-IND 33 KV	17,23,688	17,64,015
HT-IND EHV	19,25,653	20,19,310
HT-SEASONAL	58,209	58,209
Total : HT-I Industries	**74,69,871**	**77,02,574**
HT-II Commercial		
HT-COMM 11 AND 22 KV	6,70,079	6,74,337
HT-COMM 33 KV	31,085	31,085
HT-COMM EHV	29,831	29,831
Total : HT-II Commercial	**7,30,996**	**7,35,253**
HT III Railways	**37,127**	**37,127**
HT IV-PWW	**3,23,815**	**3,40,954**
HT V Agricultural	**4,46,309**	**4,60,986**
HT VI Bulk Supply (Housing Complex)	**53,247**	**53,896**
HT Temporary	**2,788**	**2,788**
HT-IX Public services	**2,95,128**	**2,97,253**
MSPGCL AUX SUPPLY	**1,16,483**	**1,22,272**
HT AG Others (Poultry)	**71,253**	**74,677**
Total HT	**95,47,017**	**98,27,781**

Table 117: Connected load/contract demand Projections (LT category)

Consumer Category	FY 2018-19	FY 2019-20
	Projected	Projected
LT Category		
LT-I (A): LT- BPL (kW)	18,545	18,545
LT-I (B) : LT-Residential(Other than BPL) (kW)	2,00,28,889	2,12,40,787
LT-II : LT- Non Residential (HP)		
0-20 KW	35,64,506	38,59,753
>20-<=50 KW	3,57,252	3,85,026
>50 KW	2,11,198	2,32,318
LT-II : LT- Non Residential	**41,32,956**	**44,77,097**
LT-III : LT-Public Water Works (kW)	1,74,316	1,82,611
LT-IV: LT-Agriculture (HP)	**2,20,35,015**	**2,29,79,990**
LT-AG-Unmetered (Pumpsets)	72,74,517	70,18,739
LT-AG Metered (Pumpsets)	1,46,54,045	1,58,54,798
LT-AG Metered (Others)	1,06,453	1,06,453
LT V(A) : LT Industry- Power Looms	**5,16,652**	**5,35,401**
0-20 KW (Upto & including 27 HP) (HP)	3,47,135	3,48,932
Above 20 KW (above 27 HP) (kVA)	1,69,517	1,86,469
LT V(B) : LT Industry- General (HP)	**40,31,059**	**40,59,754**
0-20 KW (Upto & including 27 HP) (HP)	25,53,335	25,30,864
Above 20 KW (above 27 HP) (kVA)	14,77,724	15,28,890
Street Light (LT-VI) (kW)	**3,95,449**	**4,15,371**
Temporary Connection (LT-VII) (kW)	**19,722**	**21,395**
LT-VIII : LT-Advertisements & Hordings (kW)	**6,423**	**6,827**
LT-IX : LT-Crematorium and Burial Grounds (kW)	**1,668**	**1,835**
LT X - Public services - Govt	**36,501**	**38,326**
0-20 KW (kW)	27,734	29,120
>20-50 kW (kVA)	4,345	4,563
>50 kW (kVA)	4,422	4,643
LT X - Public services - Other	**2,32,906**	**2,56,202**
0-20 KW (kW)	1,63,612	1,79,978
>20-50 kW (kVA)	33,874	37,261
>50 kW (kVA)	35,421	38,963
Total LT	**5,16,30,102**	**5,42,34,142**
Total MSEDCL excl. DF	**6,11,77,119**	**6,40,61,923**

5.13 Segregation of Wires and Supply Business

5.13.1 The Regulation 68 of MERC (Multi Year Tariff) Regulations, 2015 mentions about separation of accounts of distribution licensee and that the Aggregate Revenue Requirement of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the allocation matrix.

5.13.2 The relevant extract of the regulation is reproduced below.

> "*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."*

5.13.3 MSEDCL has not undertaken actual accounting separation between distribution wires business and retail supply business and has segregated the expenses based on the allocation matrix as provided in the regulations.

Table 118: Segregation 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%

5.14 Estimation of ARR for FY 18-19 to FY 19-20

5.14.1 The components for the calculation of total expenses for the Annual Revenue Requirement for the period FY 2018-19 to FY 2019-20 are as follow:

- Power Purchase Cost.
- Operation & Maintenance Cost.
- Interest on Loan and Financial Charges.
- Depreciation.
- Interest on Working Capital.
- Provision for Bad Debts.
- Income Tax
- Return on Equity.

5.15 Power Purchases Expenses for FY 18-19 to FY 19-20

Sources of power

5.15.1.1 MSEDCL has following primary sources of firm power viz.

- Maharashtra State Power Generation Company Limited (MSPGCL)
- Purchase from Central Generating Stations

- JSW (RATNAGIRI)
- Mundra UMPP CGPL
- Adani Power Ltd.
- RattanIndia (Previously IndiaBulls Ltd.)
- Emco Power Ltd. etc.

5.15.1.2 In addition to the above sources, MSEDCL buys power from Sardar Sarovar and Pench Hydro project, renewable energy sources including co-generation, wind power and solar. MSEDCL may also purchase the power from the Power trading Companies, Power exchanges in case of shortfall from regular sources or increase in demand depending on the availability.

5.16 Assumptions for power purchase for FY 18-19 to FY 19-20

5.16.1 MSEDCL procures power from different sources on Merit Order Dispatch Principle for optimum utilization of the sources at least cost. For projection of availability, MSEDCL has considered the entire power available from all the tied-up sources during this period to meet the demand. Considering the capacity available and the demand projection, no power procurement from Traders or power exchange is projected for the period FY 18-19 to FY 19-20.

5.16.2 Further, a realistic approach has been adopted in projecting the power purchase availability based on the actual availability and considering upcoming projects in the FY 18-19 to 2019-20.

5.16.3 For estimating the power purchase cost, merit order principles have been considered. As per the provisions of MYT Regulations 2015, MSEDCL has projected the monthly power requirement using the monthly sales projections and applying monthly MOD. While full fixed (capacity) charges have been considered for all the plants, the variable charges corresponding to the cheaper sources of power have been considered, whereas no variable charges have been considered in respect of energy not scheduled for power purchase (according to the merit order dispatch principles).

5.16.4 For power procurement from competitive bidding route, the tariff has been considered based on the rate quoted as per the terms of the PPA with the escalation based on the CERC rates, wherever applicable.

5.17 Source wise Power Purchase Projection for FY 18-19 to FY 19-20

a. Maharashtra State Generation Company Limited (MSPGCL)

MSEDCL has considered power generation, operational factors as well as Cost (Fixed as well as Variable charges) for existing thermal power stations as per the MTR filed by MSPGCL.

Parli 4 & 5 stations are in reserve shutdown, hence no availability of generation has been considered for these plants and instead of Capacity Charges only Reserve Shutdown Charges have been considered in line with that submitted by MSPGCL in its mid-term review petition.

Further, Hon'ble Commission issued an Order in Case No. 59 of 2017 or approval of Capital Cost and Tariff of Koradi Generating Units 8, 9 & 10, Chandrapur Units 8 & 9 and Parli Unit 8. Hon'ble Commission in the said Order has ruled that *"MSPGCL shall raise the monthly bills as per the tariff approved in this Order from the month of January, 2018 onward. The Commission also directs MSPGCL to recover/adjust the difference in Annual Fixed Charges approved in this Order and the provisional Annual Fixed Charges billed by MSPGCL up to the month of December, 2017 in 3 monthly installments from January, 2018 onwards".*

The impact of increased costs related to the FY 2015-16 & 2016-17 may be allowed to be recovered through the FAC of the respective month. Hence, the impact of increased cost due to revision in tariff of these stations is not considered in the final true up of FY 2015-16 & 2016-17 and provisional true up of FY 2017-18. MSEDCL has considered the energy charges and fixed charges for these stations as per the said Order for the period FY 18-19 and FY 19-20.

b. Central Generating Stations (CGS)

i. NTPC

In case of NTPC, MSEDCL has a firm share allocation for drawal of power as allocated by MoP. Variable Charges, energy charges and capacity charges for FY 2018-19 and FY 2019-20 have been considered same as per that levied by NTPC for FY 2017-18 as per the bills raised.

Following NTPC stations are expected to be commissioned during FY 18-19 to FY 19-20.

Name of NTPC station	MSEDCL Share in MW	Anticipated COD
Solapur 2	308	January 2019
Lara	228	August 2018
Gadarwara	50	August 2018
Khargone	50	March 2019

NTPC Solapur 2: The variable rate of this Station is considered as Rs 2.72 p.u. The fixed charge considered as Rs.2.32 p.u. based on information received from NTPC.

NTPC Gadarwara : The variable rate of this Station is considered as Rs 1.32 p.u. and the fixed charge considered as Rs. 2.36 p.u. based on information received from NTPC.

NTPC Lara: The variable rate of this Station is considered as Rs 0.93 p.u. and the fixed charge considered as Rs. 2.34 p.u. based on information received from NTPC.

NTPC Khargone: The variable rate of this Station is considered as Rs 1.95 p.u. and the fixed charge considered as Rs.2.37 p.u. based on information received from NTPC.

ii. NPCIL

Plant at Kakrapar was shutdown during the FY 2017-18 and was expected to generate power from May 2018. However, generation from Kakrapar is still unavailable.

The overall cost of NPCIL has increased from Rs. 2.5 to 2.92 due to increase in tariff during 2017-18.

For NPCIL Stations, the Variable Charges are increased by 5% per annum over actual variable charges for FY 17-18.

c. Sardar Sarovar Project (SSP) and Pench.

MSEDCL has Projected 1210 and 1213 MUs power purchase from SSP and 136 and 137 MUs from PENCH for FY 2018-19 and 2019-20 respectively. MSEDCL has considered the tariff at Rs 2.05 per kWh which is currently being paid. This rate shall prevail until such time GOM claims for additional tariff for Sardar Sarovar Project & Pench or PPA is executed.

d. Power purchase from Dodson I and II

MSEDCL has also projected purchase of 120 MUs from Dodson I and II and the Annual Fixed Cost (AFC) as approved by the Hon'ble Commission in case no 105 of 2009 is considered. Also the water cess has been considered as per FY 2015-16 in total cost of Dodson II.

e. Power Procurement from Renewable Energy Sources

MSEDCL submits that the Hon'ble Commission has notified the RPO Regulations 2016. As per the said Regulations, the RPO Targets have been revised drastically. Considering the provisions of RPO Regulations 2016, MSEDCL has projected the purchase as per the RPO Regulations, 2016 and the Solar and Non-Solar rates as per the actual information available for FY 2017-18. MSEDCL has estimated the RPO Quantum considering RPO Targets as percentage of the non-renewable quantum instead of total power purchase quantum to avoid cascading effect.

5.17.1 The projected renewable energy purchase to fulfill RPO Targets for FY 18-19 and FY 19-20 is as shown in following table.

Table 119: Renewable Energy Purchase for FY 18-19 and FY 19-20

Particulars	Units	FY 18-19	FY 19-20
Total Power Purchase Requirement	MUs	1,28,940	1,31,183
Solar RPO Target	%	2.75%	3.50%
Non Solar RPO Target	%	11.0%	11.50%
Non Renewable Energy	MUs	1,13,361	1,14,072
Solar Energy	MUs	3,116	3,989
Non Solar Energy	MUs	12,464	13,122
Total Renewable Energy Quantum	**MUs**	**15,580**	**17,112**
Solar Energy Rate	Rs./kWh	4.37	4.37
Non Solar Energy Rate	Rs./kWh	5.59	5.59
Solar Energy Cost	Rs. Crs	1,362	1,743
Non Solar Energy Cost	Rs. Crs	6,967	7,335
Total Renewable Energy Cost	Rs. Crs	8,329	9,079
Total Renewable Energy Cost per Unit	**Rs./kWh**	**5.35**	**5.31**

5.17.2 The energy charges have been arrived at by taking weighted average cost for RE tariff considering the expected capacity addition.

5.17.3 MSEDCL submits that it is committed to promote the Renewable Energy in the State and it will try to achieve RPO target set out by Hon'ble Commission in line with the NTP as well as capacity addition which will take place as per the GoM Policy for Grid Connected Power Projects based on New and Renewable (Non-conventional) Energy Sources 2015.

a. IPP

In respect of IPPs, Variable charges and capacity charges are calculated based on the PPAs (Quoted rates) and CERC index prevailing for March 2018. Moreover, the impact of Change in Law, as per latest processed claim for the month of June 2017 is taken in variable charges on per unit basis.

b. Power Purchase from short terms and FBSM

No procurement from Traders or from power exchange has been projected for the balance 2 years of the control period due to sufficient availability of power from the tied-up sources as compared to demand projection. However in case of any outage of the generator or demand exceeding the power availability, MSEDCL would procure power from power exchange or from available short term route under competitive bidding guidelines.

However, MSEDCL submits that in the MYT Order for the Control Period FY 16-17 to FY 19-20 (Case No. 48 of 2016), Hon'ble Commission has approved a ceiling rate of Rs. 4 per unit for the procurement of power procurement from short term sources during the Control Period

Hon'ble commission also vide its order under case no 135 of 2017 dated 06th October 2017 has in-principally allowed MSEDCL to procure additional power above ceiling rate of Rs. 4.00 per unit as and when required on the e-bidding portal in accordance with the Short-Term Competitive Bidding Guidelines, and any residual power from the Power Exchanges, till December 2017. Further the said deadline was extended till May 2018 vide order under case no 181 of 2017 dated 05th January 2018. This has enabled MSEDCL to procure the power on power exchanges and through short term tenders on DEEP e-bidding portal to meet the rising demand of power. In April & May 2018 (provisional) MSEDCL has purchased power of 1369.99 MUs at the rate of Rs. 4.33 per unit amounting Rs. 593.77 Cr.

For the month of June also, MSEDCL had purchased power through short term tenders from 01st June to 15th June 2018 upto 390 MW at the rate of Rs 4.24 per unit. Moreover, in anticipation of this persisting coal shortage scenario, MSEDCL has floated the short term Power Purchase tender for the months from June-18 to Sept-18. The rate discovered is in the range of Rs. 3.93 per unit to Rs. 6.29 per unit for different time slots. MSEDCL requests Hon'ble Commission to approve the same

It is further submitted that MSEDCL's demand is expected to increase due to the agricultural load from the month of October'2018. In anticipation of the reduced generation availability due to coal shortage/breakdown, etc, MSEDCL may require to purchase power from exchanges and through short term power purchase tenders throughout the year. Hence it is submitted that, considering the volatile nature of short term power market and uncertainty in supply of power from long term sources on account of anticipating coal shortage in future, MSEDCL requests the Hon'ble Commission to accord in principle approval for procurement of power on DEEP e-bidding portal/ power exchange above ceiling rate of Rs. 4.00 per unit as and when required. MSEDCL has already submitted a petition before the Hon'ble Commission for approval for short term power above a ceiling of Rs. 4 per unit

Final Energy Balancing and Settlement Account (FBSM) under Intra State ABT has been implemented w.e.f. 01.08.2011. With the implementation of ABT, the regional UI which was allocated to MSEDCL is now allocated to State pool participants. Based on this and under/ over drawal and injection in the State, the net pool imbalance charges are calculated by Maharashtra State Power Committee (MSPC). Due to difficulty in prediction of incremental/decremental quantum and the market price these are considered NIL.

c. Transmission Charges

PGCIL transmission charges are projected considering the past trend and quantum of energy flow as shown in following Table.

YEAR	FY 18-19	FY 19-20
		(Rs. Crs)
PGCIL	2682	2922
ULDC CHARGES	6	6
Total	**2688**	**2928**

5.18 Renewable Purchase Obligation for FY 18-19 to FY 19-20

5.18.1 As per the MERC (Renewable Purchase Obligation, Its Compliance and Implementation of REC Framework) Regulations, 2016, MSEDCL need to procure electricity generated from renewable energy sources. For the Second Control Period of MYT, the minimum quantum of purchase (in %) from renewable energy sources range from 11%-15%. The said Regulations also provide that the Distribution Licensee shall include the plan for procurement of power from RE sources under its long-term power procurement plan to comply with minimum RPO target as stipulated above. However, considering the difficulties as submitted in following paragraphs, it is not always possible for MSEDCL to meet the RPO targets.

5.18.2 MSEDCL has taken all efforts by executing long term EPA's with all RE generators, intending to exercise the sale to MSEDCL option, to fulfill its RPO target on the basis of CUF/PLF as determined by MEDA / MERC. In spite of the above, it is observed that, the RE generation available to MSEDCL is not as per expected CUF. This proves that either the CUF projections are to be rationalized or the RE Generator's efficiency has to be improved.

5.18.3 The gross energy consumption (GEC) of the Discoms is increasing day by day in line with load growth and so is the RPO target. But, in line with the same, there is no sufficient capacity addition taking place in RE sector. Hence, since FY 2012-13 onwards shortfall is being observed in meeting the RPO target by the State utilities in general and MSEDCL in particular. However, MSEDCL shall endeavour to achieve RPO targets set out by Hon'ble Commission in RPO Regulations 2016.

5.18.4 Following tables provide the summary of source wise power purchase for the Period FY 18-19 and FY 19-20.

Table 120: Source wise Power Purchase for FY 18-19

FY 18-19						
Source	MERC Approved		MSEDCL Estimated		Deviation	
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)
MSPGCL	45,470	19,202	46,993	20,479	1,523	1,277
NTPC	25,585	7,365	29,834	9,243	4,250	1,879
NPCIL	5,471	1,283	5,380	1,378	(91)	95
SSP	1,210	248	1,210	248	(0)	(0)
Pench	136	28	136	28	0	0
Dodson	116	22	116	21	(0)	(0)
JSW	1,934	499	1,934	631	0	132
CGPL (Mundra UMPP)	5,158	1,232	5,158	1,321	(0)	89
Adani Power	20,601	7,146	21,110	6,528	509	(618)
EMCO Power	1,370	468	1,489	518	119	50
Rattan India	-	904	-	983	-	79
Renewable	17,066	9,830	15,580	8,329	(1,486)	(1,501)
PGCIL Charges		2,592		2,688	-	97
Total Power Purchase	**1,24,116**	**50,817**	**1,28,940**	**52,394**	**4,824**	**1,577**

Table 121: Source wise Power Purchase for FY 19-20

FY 19-20						
Source	MERC Approved		MSEDCL Estimated		Deviation	
	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)	Quantum (MUs)	Cost (Rs. Crs)
MSPGCL	46,787	19,700	45,884	20,888	(903)	1,188
NTPC	26,853	7,592	31,120	9,968	4,267	2,376
NPCIL	5,486	1,321	5,485	1,474	(1)	153
SSP	1,213	249	1,213	249	0	0
Pench	137	28	137	28	(0)	(0)
Dodson	116	22	116	16	0	(5)
JSW	1,940	503	1,940	632	(0)	129
CGPL	5,172	1,248	5,172	1,323	0	75
Adani Power	20,658	7,229	21,512	6,656	854	(573)
EMCO Power	1,374	472	1,493	516	119	44
Rattan India	-	907	-	983	-	76
Renewable	19,365	11,212	17,112	9,079	(2,253)	(2,134)
PGCIL Charges	-	2,851	-	2,928	-	77
Total Power Purchase	**1,29,101**	**53,334**	**1,31,183**	**54,741**	**2,082**	**1,407**

5.18.5 MSEDCL requests the Hon'ble Commission to allow the power purchase as shown in the tables above.

5.19 Distribution Loss for FY 18-19 to FY 19-20

5.19.1 MSEDCL has been achieving a significant reduction in distribution losses and these efforts shall be continued and will be enhanced. However, the loss reduction is a slow process and as the loss levels come down further reduction in loss becomes difficult. MSEDCL has considered the distribution losses (excl. EHV) as approved by the Hon'ble Commission in its MYT Order for the FY 18-19 to FY 19-20 is shown in following table:

Table 122: Distribution Loss FY 18-19 to FY 19-20

Particulars	FY 2018-19		FY 2019-20	
	Approved	Projected	Approved	Projected
Distribution Losses	14.76%	14.76%	13.26%	13.26%

5.19.2 MSEDCL requests that the distribution losses approved by Hon'ble Commission for FY 18-19 and FY 19-20 need to be reconsidered in view of the submission made in Paragraph 5.19.1.

5.20 Energy Balance for FY 18-19 to FY 19-20

5.20.1 The quantum of sales in MUs shown in Table 103 and Table 104 represent the sales of MSEDCL excluding the sales in the area served by Distribution Franchisees. As per the methodology adopted by Hon'ble Commission for calculating energy balance of MSEDCL as a whole, the sale to the consumers within the Distribution Franchisee area has also been considered. Therefore, total energy sale for FY 18-19 to FY 19-20 is computed as below:

Table 123: Total Energy Sales for MSEDCL

MUs

Particulars	FY 2018-19	FY 2019-20
	Projected	**Projected**
Energy Sales by MSEDCL for FY 2018-19	1,00,193	1,03,774
Add: Category wise sales in DF area	4,618	4,823
Add: OA Sales (Coneventional)	4,547	4,774
Add: Renewable Open Access	713	749
Total Energy Sales MSEDCL	**1,10,070**	**1,14,120**

5.20.2 MSEDCL would like to submit that MSEDCL is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs, CPP and Renewable Sources. It would be very difficult to differentiate which power is coming from which source at Transmission periphery. Hence an average inter-state loss for the whole year is considered for power sourced from outside the State of Maharashtra. The said loss is calculated in Energy Balance only.

5.20.3 MSEDCL also submits that data of metered energy is available at 3 points: at bus-bar of the generating station, at T <> D interface i.e. at Distribution Periphery and sales at consumer end. It is further to state that to calculate Distribution Loss, it considers metered energy at Distribution periphery and sales at consumer end.

5.20.4 MSEDCL further submits that the TAPS (NPCIL) and EMCO Power Plants are connected to CTU and therefore are considered as Inter-State sources.

5.20.5 Since MSEDCL has applied principle of Merit Order dispatch for power procurement, it has not envisaged any trading of surplus power during the period FY 18-19 to FY 19-20.

5.20.6 Considering the above energy available for sale for the period FY 18-19 to FY 19-20, the energy balance for MSEDCL is calculated.

5.20.7 As per the justifications provided in the paras 2.4.6, 3.4.6 & 4.5.6 for FY 15-16, FY 16-17 & FY 17-18 respectively, MSEDCL has considered the average of transmission losses for last 52 weeks provided by WRLDC as on March 18, 2018 as the Inter State Transmission Loss. The relevant link is provided for reference. WRLDC Transmission Losses FY18.pdf.

Table 124: Energy Balance FY 18-19 to FY 19-20

Particulars	Units	FY 2018-19		FY 2019-20	
		Approved	Projected	Approved	Projected
LT sales	MUs	68,314	69,432	72,713	72,590
HT sales	MUs	26,674	27,240	27,823	27,410
Renewable Open Access	MUs	420	713	420	749
Sales to Open Access Consumers (Conventional)	MUs	6,668	4,547	6,935	4,774
Total Sales to Consumers	**MUs**	1,02,076	1,01,932	1,07,890	1,05,523
Distribution Loss	%	14.76%	14.76%	13.26%	13.26%
Distribution Loss	MUs	16,946	17,650	15,876	16,131
Total Energy Available for Sale at 33kV	**MUs**	1,19,022	1,19,582	1,23,766	1,21,654
Energy injected and drawn at 33kV	MUs	458	488	458	488
Net Energy Available for Sale at 33kV	**MUs**	1,18,564	1,19,094	1,23,308	1,21,166
EHV Sales	MUs	6,614	8,138	6,899	8,597
Net Energy requirement at T<>D Periphery	**MUs**	1,25,178	1,27,232	1,30,207	1,29,763
Intra-State Transmission Loss	%	3.92%	3.46%	3.92%	3.33%
Intra-State Transmission Loss	MUs	5,107	4,559	5,312	4,464
Energy Requirement at G<>T Periphery	**MUs**	1,30,285	1,31,791	1,35,519	1,34,227
Input for OA consumption	MUs	(7,383)	(4,837)	(7,679)	(5,079)
Net Energy Requirement at G<>T Periphery	**MUs**	1,22,902	1,26,954	1,27,840	1,29,148
Power Purchase Quantum from Intra-State sources	MUs	90,932	85,244	94,627	86,074
Power Purchase Quantum from Inter-State sources at MS Periphery	MUs	31,970	41,710	33,213	43,074
Inter-State Losses	**%**	3.66%	3.47%	3.66%	3.47%
Power Purchase Quantum from Inter-State sources	MUs	33,185	43,208	34,475	44,621
Total Power Purchase Quantum payable	**MUs**	1,24,116	1,28,452	1,29,101	1,30,695

5.20.8 MSEDCL requests the Hon'ble Commission to approve the Energy Balance for the period FY 18-19 to FY 19-20 as submitted by MSEDCL in above table.

5.21 Operation & Maintenance Expenses for FY 18-19 to FY 19-20

5.21.1 Regulation 72 and Regulation 81 of the MERC (Multi Year Tariff) Regulations, 2015 and its First Amendment, provides for the procedure/ methodology to calculate O&M Expenses for Distribution Wires Business and Retail Supply of electricity respectively.

5.21.2 As submitted in the Paragraphs 2.8, 3.8 & 4.9, MSEDCL has calculated the Normative O&M Expenses as shown in following table.

Table 125: Normative O&M Expenses FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
O&M Expenditure (Wires Business)	4074	4,937	863	4,195	5,237	1,042
O&M Expenditure (Supply Business)	2194	2,659	465	2,259	2,820	561
Operation & Maintenance Expenses	**6,268**	**7,596**	**1,328**	**6,454**	**8,056**	**1,602**

5.21.3 MSEDCL requests the Hon'ble Commission to allow the O&M Expenses as shown in above table.

5.22 Capex and Capitalisation for FY 18-19 to FY 19-20

5.22.1 MSEDCL submits that the projected capital expenditure and capitalisation of MSEDCL from FY 2018-19 to FY 2019-20 is summarized below. The scheme wise details of capital expenditure and capitalisation from FY 2016-17 to FY 2019-20 is shown in Form 4.2 of the Regulatory Formats.

Table 126: Capitalization FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		FY 2019-20	
	Approved	Projected	Approved	Projected
Capitalisation	2074	5,105	449	3,503

5.22.2 MSEDCL requests the Hon'ble Commission to allow the capitalisation as shown in above table.

5.23 Depreciation for FY 18-19 to FY 19-20

5.23.1 The MERC MYT Regulations, 2015 provides for recovery of Depreciation and the method of computing depreciation under Paragraph 27.1 which is reproduced hereunder:

" 27.1 The Generating Company, Licensee, and MSLDC shall be permitted to recover depreciation on the value of fixed assets used in their respective Businesses, computed in the following manner:
(a) The approved original cost of the fixed assets shall be the value base for calculation of depreciation:
Provided that the depreciation shall be allowed on the entire capitalised amount of the new assets after reducing the approved original cost of the retired or replaced or decapitalised assets.
(b) Depreciation shall be computed annually based on the straight line method at the rates specified in the ***Annexure I*** *to these Regulations:*

Provided that the Generating Company or Licensee or MSLDC shall ensure that once the individual asset is depreciated to the extent of seventy percent, remaining depreciable value as on 31st March of the year closing shall be spread over the balance Useful Life of the asset including the Extended Life, as provided in this Regulation:

Provided further that the Generating Company or Licensee shall submit all such details or documentary evidence as may be required, to substantiate the above claims.

(c) The salvage value of the asset shall be considered at 10 per cent of the allowable capital cost and depreciation shall be allowed upto a maximum of 90 per cent of the allowable capital cost of the asset."

5.23.2 The MERC (Multi Year Tariff) Regulations, 2015 has come into force with effect from December 08, 2015 and is effective for MSEDCL from April 01, 2016. In the said Regulation asset wise depreciation rates are specified in Annexure I to the Regulations.

5.23.3 As per Regulation 27.1(b) of MYT Regulation, the individual asset is to be depreciated to the extent of 70% on the straight line basis as per the rates specified in the Regulation. The relevant clause has been specified as below.

"(b) Depreciation shall be computed annually based on the straight line method at the rates specified in the Annexure I to these Regulations:

*Provided that the Generating Company or Licensee or MSLDC shall ensure that once the individual asset is depreciated to the extent of **seventy percent**, remaining depreciable value as on 31st March of the year closing shall be spread over the balance Useful Life of the asset including the Extended Life, as provided in this Regulation:"*

5.23.4 The Hon'ble Commission has further clarified that the useful life of asset shall be determined as per the provisions of the Companies Act, 1956.

5.23.5 Accordingly, depreciation has been calculated taking into consideration the opening balance of assets in the beginning of the year and the projected capitalization. The Depreciation rates are used as per the MERC (MYT Regulations) 2015. The depreciation projected for the period FY 18-19 to FY 19-20 is shown in the following table:

Table 127: Depreciation FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Opening GFA	54,294	55,086	792	56,064	60,191	4,127
Depreciation	**2,449**	**3,011**	**562**	**2,498**	**3,235**	**737**
% Depreciation	4.51%	5.47%		4.46%	5.38%	

5.23.6 MSEDCL requests the Hon'ble Commission to allow the Depreciation as shown in above table.

5.24 Interest on Long Term Loan for FY 18-19 to FY 19-20

5.24.1 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. Further, the projected capital expenditure and the funding of the same also have a major bearing on the long-term interest expenditure.

5.24.2 The clause 29.3 of the MERC MYT Regulations 2015 states that

"29.3 The repayment during each year of the Control Period from FY 2016-17 to FY 2019-20 shall be deemed to be equal to the depreciation allowed for that year. "

5.24.3 The addition to Loan has been considered in proportion to the Capex and Capitalization, hence interest capitalized is not considered.

5.24.4 MSEDCL submits that the Regulation 29.5 of the MERC MYT Regulations, 2015 specifies that the rate of interest used for calculation of interest on long-term loans shall be weighted average rate of interest computed on the basis of actual loan portfolio at the beginning of each year. Further, the interest should be 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 11.37% for FY 16-17.

5.24.5 The Interest Expenses for the period FY 2018-19 to 2019-20 is projected as tabulated below.

Table 128: Interest Expenses on Long Term Loan FY 18-19 to FY 19-20

Rs Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Normative Outstanding Loan at beginning of the year	20,149	14,077	(6,072)	19,435	12,945	
Loan Drawal	1,736	1,879	143	410	413	
Loan Repayment	2,449	3,011	562	2,498	3,235	
Normative Outstanding Loan at the end of the year	19,436	12,945	(6,491)	17,347	10,123	
Interest Rate	11.83%	11.37%		11.83%	11.37%	
Gross Interest Expenses	**2,341**	**1,536**	**(806)**	**2,176**	**1,311**	**(864)**

5.24.6 MSEDCL requests the Hon'ble Commission to allow the Interest on Long Term Loans as shown in above table.

5.25 Interest on Working Capital and Security Deposit for FY 18-19 to FY 19-20

5.25.1 Regulations 31.3 of the MERC Multi Year Tariff Regulations 2015, provides for Interest on Working Capital for Wire business of electricity.

" 31.3 Distribution Wires Business:-

(a) The working capital requirement of the Distribution Wires Business shall cover—

(i) Operation and maintenance expenses for one month;

(ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and

(iii) One and half months equivalent of the expected revenue from charges for use of Distribution Wires at the prevailing Tariff;

minus

(iv) Amount held as security deposits in cash from Distribution System Users:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of components of working capital approved by the Commission in the Truing-up before sharing of gains and losses ;

(b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points."

5.25.2 Accordingly, MSEDCL has calculated Interest on Working Capital for the period FY 18-19 to FY 19-20 @ 9.75% (MCLR + 150 basis points) for Wires Business as shown in following Table.

Table 129: Interest on Working Capital and Security Deposit for Wires Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Computation of Working Capital (Wire Business)						
One-twelfth of the amount of Operations and Maintenance Expenses	340	411	71	350	436	86
Maintenance Spares at 1% of Opening GFA	489	496	7	505	542	37
One and half months equivalent of the expected revenue from charges for use of Distribution Wires	1,204	1,246	42	1,204	1,246	42
Less:						
Amount of Security Deposit From Distribution System users	**(702)**	**(768)**	**(66)**	**(737)**	**(845)**	**(108)**
Total Working Capital	**1,330**	**1,385**	**55**	**1,322**	**1,379**	**57**
Computation of working capital interest						
Rate of Interest (% p.a.)	10.80%	9.75%	-1.05%	10.80%	9.75%	-1.05%
Interest on Working Capital	**144**	**135**	**(9)**	**143**	**134**	**(9)**
Interest on Security Deposit						
Rate of Interest (% p.a.)	10.80%	8.25%		10.80%	8.25%	
Interest on Security Deposit	**76**	**63**	**(13)**	**80**	**70**	**(10)**

5.25.3 MSEDCL submits that the amendment to the Regulation 29.11 of MYT Regulations 2015 provides for Interest on Security Deposit at MCLR plus 150 basis points. MSEDCL would like to submit that this rate is very high considering the interest rates provided by the leading banks for fixed deposit for a period of 1 year. A comparison of the Interest Rates on Term Deposits is shown below for some of the leading Banks:

Bank	**State Bank of India**	**ICICI Bank**	**Union Bank of India**	**HDFC Bank**	**Central Bank of India**
Duration	1 year	1 year to 389 days	1 year	1 year	1 yr to less than 2 yrs
Interest Rate	6.25%	6.75%	6.10%	6.75%	6.60%

5.25.4 MSEDCL submits that the Interest Rate on Security Deposit provided by MYT Regulations 2015 is on much higher side. Due to such higher rates the consumers are getting burdened with high tariffs. MSEDCL submits that the Interest rates for savings account are even lower. Therefore, considering the SBI MCLR for 1 year i.e. (8.25%), MSEDCL has calculated the Interest on security deposit. Hon'ble Commission has inherent powers to remove the difficulties in implementing the MYT Regulations 2015. MSEDCL requests the Hon'ble Commission to allow MSEDCL to provide interest on Security Deposit at MCLR.

5.25.5 Regulations 31.4 of the MERC Multi Year Tariff Regulations, 2015, provides for Interest on Working Capital for Retail Supply business of electricity.

" 31.4 Retail Supply of Electricity
(a) The working capital requirement of the Retail Supply Business shall cover—
(i) Operation and maintenance expenses for one month;
(ii) Maintenance spares at one per cent of the opening Gross Fixed Assets for the Year; and
(iii) One and half months equivalent of the expected revenue from sale of electricity at the prevailing Tariff, and including revenue from cross-subsidy surcharge and additional surcharge, if any;
minus
(iv) Amount held as security deposits in cash from retail supply consumers;
(v) One month equivalent of cost of power purchased, including the Transmission Charges and SLDC Charges, based on the annual power procurement plan:

Provided that in case of power procurement from own Generating Stations of the Retail Supply Business, no amount shall be reduced from working capital requirement towards payables, to the extent of supply of power by the Generation Business to the Retail Supply Business, in the computation of working capital in accordance with these Regulations:

Provided further that for the purpose of Truing-up for any year, the working capital requirement shall be re-computed on the basis of the values of components of working capital approved by the Commission in the Truing-up before sharing of gains and losses;

(b) Rate of interest on working capital shall be on normative basis and shall be equal to the Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points:

Provided that for the purpose of Truing-up for any year, interest on working capital shall be allowed at a rate equal to the weighted average Base Rate prevailing during the concerned Year plus 150 basis points."

5.25.6 MSEDCL submits that it has divided the total consumer security deposit in 10% to wires and 90% to Supply Business. The Interest on Working Capital for Retail Supply Business for the period FY 18-19 to FY 19-20 is shown in following Table.

Table 130: Interest on Working Capital and SD for Supply Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Computation of Working Capital (Supply Business)						
One-twelfth of the amount of Operations and Maintenance Expenses	183	222	39	188	235	47
Maintenance Spares at 1% of Opening GFA	54	55	1	56	60	4
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	7,640	(478)	(8,118)	8,075	8,612	537
Less:						
Amount of Security Deposit from retail supply consumers	(6,315)	(6,915)	(600)	(6,631)	(7,606)	(975)
Less: One month equivalent of cost of power purchase, transmission charges and MSLDC Charges	(4,780)	(4,818)	(38)	(4,996)	(5,020)	(24)
Total Working Capital	**(3,218)**	**(11,934)**	**(8,716)**	**(3,308)**	**(3,719)**	**(411)**
Computation of working capital interest						
Rate of Interest (% p.a.)	10.80%	9.75%	-1.05%	10.80%	9.75%	-1.05%
Interest on Working Capital (Normative Basis	-	-		-	-	
Interest on Security Deposit						
Rate of Interest (% p.a.)	10.80%	8.25%	-2.55%	10.80%	8.25%	-2.55%
Interest on Security Deposit	**682**	**570**	**(112)**	**716**	**628**	**(88)**

5.25.7 MSEDCL requests the Hon'ble Commission to allow the Interest on Working capital along with the interest on security deposit as shown in above table.

5.26 Other Finance Charges for FY 18-19 to FY 19-20

5.26.1 As per Regulation 29.8 of MERC MYT Regulations, 2015, the finance charges shall be allowed by the Hon'ble Commission only at the time of true-up. The relevant extracts of the regulations are reproduced below.

" 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."

5.26.2 Therefore in line with the above regulations, MSEDCL is not projecting any finance charges for the period FY 18-19 to FY 19-20 and will claim the same during true-up of the respective years. MSEDCL requests the Hon'ble Commission to allow the same at the time of true up.

5.27 Provision for Bad Debts for FY 18-19 to FY 19-20

5.27.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution.

5.27.2 Regulation 73 and 82 of the MERC MYT Regulations, 2015 specifies that a provision for bad and doubtful debt may be allowed up to 1.5% of the amount shown as trade receivables or receivables from sale of electricity in the audited accounts of the distribution licensee duly allocated for wires and supply business. The MYT Regulations 2015 also provides that if the cumulative provisioning for bad and doubtful debts allowed exceeds five per cent of the amount shown as Receivables no such appropriation shall be allowed. Since, the cumulative provisioning exceeds 5% in FY 19-20, MSEDCL has not claimed any provision for bad and doubtful debts for the period FY 19-20. Details of the same have been shown in the table below.

Particulars	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20
Op. Provision	301	689	1,121	1,612	-
Addition incl. Bad Debt written off	405	492	492	27	-
Less : write off	(16)	(60)			
Cl. Provision	689	1,121	1,612	1,639	-
Receivables	26,967	32,768	32,768	32,768	-
Yearly Provision as % of receivables	1.50%	1.50%	1.50%	0.08%	-
Cumulative Provision as % of receivables	2.56%	3.42%	4.92%	5.00%	-

5.27.3 However, due to any revision by Hon'ble Commission resulting into cumulative provisioning for bad and doubtful debts less than 5%, Hon'ble Commission is requested to allow the provisioning for bad and doubtful debts as provided in the MYT Regulations 2015. A comparison of approved provisioning for bad and doubtful debts and claimed by MSEDCL is given below:

Table 131: Provision for Bad and Doubtful Debt for Wires Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Bad Debt Provision for Wire Business	26	3	(23)	26	-	(26)
Receivables	1,722	3,277		1,722	-	
% of Receivables	1.50%			1.50%		

Table 132: Provision for Bad and Doubtful Debt for Supply Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Bad Debt Provision for Supply Business	232	24	(209)	232	-	(232)
Receivables	15,494	29,492		15,494	-	
Provisioning for bad & doubtful debts during the year	1.50%			1.50%		

5.27.4 MSEDCL also requests the Hon'ble Commission to allow the provisioning for Bad Debt for FY 18-19 and FY 19-20 in truing up exercise for these years based on the Audited Accounts.

5.28 Other Expenses for FY 18-19 to FY 19-20

5.28.1 The other expenses of MSEDCL comprise of the expenditure on account of interest to suppliers/contractors, rebate to consumers and other expenses viz. compensation for injuries to staff and outsiders.

5.28.2 Nature of Other expenses

- Interest to Supplies / Contractors: This amount represents the interest expense on security deposits collected from collection agencies.
- Non Moving items written off: These are items of stores which are lying as non-moving for 2 years the realizable value of which is nil.

5.28.3 The projections for the period FY 18-19 to FY 19-20 have been made on the basis of an annual 5% increase over the previous year.

5.28.4 Other Expenses projected for the period FY 18-19 to FY 19-20 by MSEDCL is tabulated in the following table.

Table 133: Other Expenses FY 18-19 to FY 19-20

Rs Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Other Expenses	16	68	52	17	71	54

5.28.5 The Detailed break up of other expenses is given in the Form No. 6A of the Regulatory Formats.

5.29 Intra State Transmission Charges for FY 18-19 to FY 19-20

5.29.1 MSEDCL submits that MSETCL transmission charges are considered in line with the the Hon'ble Commission's order in Case No 91 of 2016 for InSTS Tariff and Case No. 20 of 2016 for MSLDC Budget approval.

Table 134: Intra State Transmission Charges FY 18-19 to FY 19-20

Rs Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Transmission Charges paid to Tx Licensee	6,539	5,418	(1,121)	6,619	5,499	(1,120)

5.29.2 MSEDCL submits that the transmission related cost of the private companies need to be relooked into since there appears to be a vast difference in the amount approved for the private companies and MSETCL vis-a-vis units handled.

5.30 Contribution to Contingency Reserves for FY 18-19 to FY 19-20

5.30.1 MSEDCL submits that considering the precarious financial condition and unavailability of sufficient funds to discharge its various liabilities, it is not feasible for MSEDCL to invest in contingency reserves. Considering the critical financial situation, MSEDCL may not be able to invest any amount in contribution to contingency reserves. Accordingly, the same not been claimed in ARR of the period FY 18- 19 to FY 19-20.

Table 135: Contribution to contingency reserve FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Contribution to Contingency Reserves	143	-	(143)	149	-	(149)

5.31 Incentives and Discounts for FY 18-19 to FY 19-20

5.31.1 The Incentives and Discounts are projected for the period considering a nominal rise of 5% over previous year.

Table 136: Incentives/Discounts FY 18-19 to FY 19-20

Rs Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Incentives/Discounts	299	259	(40)	314	272	(42)

5.32 Return on Equity for FY 18-19 to FY 19-20

5.32.1 Regulation 28.2 of MERC MYT Regulations, 2015, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

"28.2 Return on equity for the Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on equity capital shall be allowed on the amount of equity capital determined in accordance with Regulation 26 at the rate of 17.5 per cent per annum in Indian Rupee terms."

5.32.2 The methodology to compute return on equity is provided in Regulation 28.3 and the same is reproduced below.

"28.3 The return on equity shall be computed in the following manner:—
(a) Return at the allowable rate as per this Regulation, applied on the amount of equity capital at the commencement of the Year ; plus

(b) Return at the allowable rate as per this Regulation, applied on 50 per cent of the equity capital portion of the allowable capital cost, for the investments put to use in Generation Business or Transmission Business or Distribution Business or MSLDC, for such Year."

5.32.3 Following table shows the calculation of capital expenditure, equity and asset capitalisation of MSEDCL for computing the Return on Equity.

Table 137: Calculation of capital expenditure, equity and asset capitalization FY 18-19 to FY 19-20

Rs. Crs

Sr. No.	Particulars	FY 2018-19 (Projected)	FY 2019-20 (Projected)
1	Capital Expenditure	5791	2320
a	Less: Grant	2656	1023
b	Capital Expenditure incurred (excl Grants)	3135	1297
2	Equity		
a	Internal Accural	694	1024
b	GoM Equity	309	0
c	Consumer contribution	110	100
3	Total Equity excl. Consumer Contribution	893	924
4	Equity portion of capital expenditure 4 = (3 / 1 b)	28.48%	71.18%
5	Assets Capitalization		
a	Capitalisation	5105	3503
b	Assets Capitalization (to be consider in proportionate to 1 b)	2763	1959
6	**Equity portion of Assets Capitalisation**	**787**	**588**
	Balance Equity Portion to be treated as Loan	-	**807**

5.32.4 As discussed earlier, the return on equity capital is allocated on the proposed ratio of fixed assets between wires and retail supply business. i.e. 90% to Wires Business and 10% to Supply Business. Therefore the capital expenditure, grants, equity and capitalisation is divided into Wires and Supply Business in the ratio of 90:10. In Form 4.4 MSEDCL has shown the details of year wise funding for various schemes wherein the debt: equity portion is arranged. However, there can be few capital works which can be funded by consumers through consumer contribution which are reconciled at the time of finalization of accounts. MSEDCL submits that it will be difficult to project and allocate the consumer contribution to any particular scheme. Therefore, MSEDCL has not shown the consumer contribution in Form 4.4. However, for the purpose of computation of RoE, MSEDCL has projected the consumer contribution based on historical experience and capital expenditure as shown in above table.

5.32.5 For calculation of equity portion, as per the MERC Regulation the grant received needs to be deducted from the expenditure. Therefore the capitalization of expenditure has been worked out in proportion to the capital expenditure calculated after deducting the grant.

5.32.6 As seen in above table, the equity portion of the capital expenditure is more than 30%. However, since the MYT Tariff Regulations, 2015, do not allow RoE on equity component over and above a maximum of 30% of total capital expenditure, the additional equity has been considered as normative loan and MSEDCL has claimed interest on same at an average rate of interest as discussed in Paragraph 3.11.3. MSEDCL requests the Hon'ble Commission to approve the same.

5.32.7 The return on equity has been computed as per the methodology specified by the Hon'ble Commission as mentioned above.

5.32.8 Accordingly, the RoE for wires business for the period FY 18-19 to FY 19-20 is projected as under:

Table 138: ROE for wires business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Regulatory Equity at the beginning of the year (Wires)	9,821	11,693	1,872	9,852	12,401	2,549
Capital Expenditure incurred (excl Grants)		2,821			1,168	
Equity portion of capital expenditure		803			831	
% of Equity portion of capital expenditure		28.48%			71.18%	
Assets Capitalization		2,487			1,763	
Equity portion of Assets Capitalisation	31	708	677		529	529
Regulatory Equity at the end of the year	**9,852**	**12,401**	2,549	**9,852**	**12,930**	3,078
Return on Computation						
Return on Regulatory Equity at the beginning of the year	1,522	1,812	290	1,527	1,922	395
Return on Normative Equity portion of Assett Capitalization	2	55	52	-	41	41
Interest on Equity portion above 30% @11.37%p.a.					41	
Total Return on Regulatory Equity for Wires	**1,525**	**1,867**	**343**	**1,527**	**2,004**	**477**

5.32.9 Further the RoE for retail supply business for the period FY 18-19 to FY 19-20 is projected as under:

Table 139: ROE for Supply business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Regulatory Equity at the beginning of the year (Supply)	1,091	1,299	208	1,095	1,378	283
Capital Expenditure incurred (excl Grants)		313			130	
Equity portion of capital expenditure		89			92	
% of Equity portion of capital expenditure		28.48%			71.18%	
Assets Capitalization		276			196	
Equity portion of Assets Capitalisation	3	79	76		59	59
Regulatory Equity at the end of the year	**1,094**	**1,378**	284	**1,095**	**1,437**	342
Return on Computation						
Return on Regulatory Equity at the beginning of the year	191	227	36	192	241	50
Return on Normative Equity portion of Assett Capitalization	0	7	7	-	5	5
Interest on Equity portion above 30%					5	
Total Return on Regulatory Equity for Supply	**191**	**234**	**43**	**192**	**251**	**59**

5.32.10 MSEDCL requests the Hon'ble Commission to kindly approve the return on equity for both wheeling and supply business as per the above projections.

5.33 Aggregate Revenue Requirement for FY 18-19 to FY 19-20

5.33.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wire Business for the Period FY 2018-19 to FY 2019-20 is as follows:

Table 140: Aggregate Revenue Requirement for Wire Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Operation & Maintenance Expenses	4,074	4,937	863	4,195	5,237	1,042
Depreciation	2,205	2,710	505	2,248	2,912	664
Interest on Loan Capital	2,107	1,382	(725)	1,958	1,180	(778)
Interest on Working Capital	144	135	(8)	143	134	(8)
Interest on deposit from Consumers and Distribution System Users	76	63	(12)	80	70	(10)
Provision for bad and doubtful debts	26	3	(23)	26	-	(26)
Contribution to contingency reserves	129	-	(129)	134	-	(134)
Return on Equity Capital	1,525	1,867	342	1,527	2,004	477
Aggregate Revenue Requirement	**10,285**	**11,098**	**813**	**10,310**	**11,537**	**1,227**
Less : Income from Wheeling Charges	5	2	(3)	5	2	(3)
Less: Income from Open Access Charges	648	641	(7)	674	675	1
Aggregate Revenue Requirement from Distribution Wires	**9,632**	**10,455**	**823**	**9,631**	**10,861**	**1,230**

5.33.2 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the Period FY 2018-19 to FY 2019-20 is as follows:

Table 141: Aggregate Revenue Requirement for Supply Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Power Purchase Expenses (including Inter-State Transmission Charges)	50,817	52,394	1,577	53,334	54,741	1,407
Operation & Maintenance Expenses	2,194	2,659	465	2,259	2,820	561
Depreciation	245	301	56	250	324	74
Interest on Loan Capital	234	154	(80)	218	131	(87)
Interest on Consumer Security Deposit	682	570	(112)	716	628	(88)
Provision for bad and doubtful debts	232	24	(208)	232	-	(232)
Other Expenses	16	68	52	17	71	54
Intra-State Transmission Charges	6,539	5,418	(1,121)	6,619	5,499	(1,120)
Incentives/Discounts	299	259	(40)	314	272	(42)
Contribution to contingency reserves	14	-	(14)	15	-	(15)
Return on Equity Capital	191	234	43	192	251	59
Past Period Surplus	(1,032)	(1,032)	-	853	853	-
Effect of sharing of gains/losses	(311)	-	311	-	-	-
Impact of payment to MPECS in future years	43	43	-	40	40	-
Total Revenue Expenditure	**60,164**	**61,092**	**928**	**65,059**	**65,629**	**570**
Revenue from Sale of Power	68,155	65,384	(2,771)	72,977	68,565	(4,412)
Non-Tariff Income	903	1,051	148	945	1,104	159
Income from Additional Surcharge	738	122	(616)	768	126	(642)
Total Revenue	**69,796**	**66,557**	**(3,238)**	**74,690**	**69,794**	**(4,896)**

5.34 Revenue at existing tariff for FY 18-19 to FY 19-20

5.34.1 MSEDCL has considered the projected sales, no. of consumers and connected load/contract demand and tariff prevailing for the respective as on date of submission of the Petition.

5.34.2 Year wise Revenue for the period FY 18-19 to FY 19-20 have been summarized in the following table.

Table 142: Revenue at Existing Tariff for the period FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Revenue	68,155	65,384	(2,771)	72,977	68,565	(4,412)

5.35 Non-Tariff Income for FY 18-19 to FY 19-20

5.35.1 Regulation 74.1 of MERC MYT Regulations, 2015 provides for Non-Tariff Income. The regulation is as follows:

"...74.1 The amount of non-tariff income relating to the Distribution Wires Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the wheeling charges of Distribution Wires Business.

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission in such form as may be stipulated by the Commission."

5.35.2 MSEDCL has certain sources of non-tariff income viz. interest on arrears of consumers, delayed payment charges, interest on staff loans and advances, sale of scrap, interest on investment, rebate on power purchase, etc. Annual increase of 5% over previous year is assumed for the heads covered under non-tariff income.

5.35.3 MSEDCL submits that the in the MYT, the projections of the Non-Tariff Income were done considering the base figures of FY 14-15 whereas in this petition, the projections of these figures have been done considering the actual figures of FY 2017-18 as base which were lower with the impact of transfer of income from the deferred income under the head of other/miscellaneous receipts.

5.35.4 However, Regulation 36.3 of the MERC MYT Regulations, 2015 provides for non-inclusion of the Delayed Payment Charge and Interest on Delayed Payment in Non-Tariff Income. The relevant Regulation is reproduced below for reference:

36.3 Such Delayed Payment Charge and Interest on Delayed Payment earned by the Generating Company or the Licensee shall not be considered under its Non-Tariff Income.

5.35.5 Accordingly, MSEDCL has not considered any Delayed Payment Charge and Interest on Delayed Payment in Non-Tariff Income. Following table shows the projected non-tariff income for the period FY 2018-19 to 2019-20.

Table 143: Non-Tariff Income FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Rents of land or buildings	2	1	(0)	2	1	(0)
Sale of Scrap	12	53	41	13	56	43
Income from investments	19	16	(3)	20	17	(3)
Open access charges	12	-	(12)	13	-	(13)
Interest from Franchisee	4	-	(4)	5	-	(5)
Income from sale of tender documents	-	7	7	-	7	7
Rebate on power purchase	82	-	(82)	86	-	(86)
Prompt payment discount from REC/PFC	-	15	15	-	16	16
Other/Miscellaneous receipts	705	958	253	740	1,006	266
Interest on staff loans & Advances	-	-	-	-	-	-
Others (income from prior period)	-	-	-	-	-	-
Recovery from theft and malpractice	67	-	(67)	67	-	(67)
Total	**903**	**1,051**	**148**	**945**	**1,104**	**159**

5.35.6 MSEDCL requests the Hon'ble Commission to approve the Non-Tariff Income as per above projections.

5.36 Income from Wheeling Charges for FY 18-19 to FY 19-20

5.36.1 MSEDCL submits that it has projected the income from wheeling in the Form ARR Summary itself and no separate form is prepared for the same. A nominal increase of 5% is considered per annum to project the income from wheeling charges. Following table shows the income from wheeling charges for FY 2018-19 to FY 2019-20.

Table 144: Income from Wheeling Charges FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Income From Wheeling Charges	5	2	(3)	5	2	(3)

5.36.2 MSEDCL requests the Hon'ble Commission to approve the income from wheeling charges as per above projections.

5.37 Income from Open Access Charges for FY 18-19 to FY 19-20

5.37.1 The income from CSS has been estimated with prevailing CSS at respective voltage level and other income such as energy charges, transmission charges, wheeling charges, and operating charges estimated with an escalation of 5% over the provisional income for FY 17-18.

5.37.2 The following table shows the income from Cross Subsidy Surcharge and Open Access Charges for the period FY 2018-19 to FY 2019-20 based on above assumption.

Table 145: Income from Open Access FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Income from Open Access Charges	648	641	(7)	674	675	1

5.37.3 MSEDCL requests the Hon'ble Commission to approve the income from open access charges as shown in above table.

5.38 Income from Additional Surcharge for FY 18-19 to FY 19-20

5.38.1 The income from additional surcharge has been estimated with prevailing rate of Rs. 1.11 per unit on the estimated the quantum of open access. The summary of projected incomes from additional surcharge as compared to approved is outlined in following table:

Table 146: Income from Additional Surcharge FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Income from Additional Surcharge	738	122	(616)	768	126	(642)

5.38.2 The Hon'ble Commission in MYT Order 3rd November 2016 approved the income from additional surcharge considering the entire open access sales (incl. CPPs) whereas Hon'ble Commission ruled that Additional Surcharge will not be applicable to Captive Users of CPPs. Due to this, there has been reduction in income from Additional Surcharge. MSEDCL requests the Hon'ble Commission to approve the income from Additional Surcharge as shown in above table.

5.39 Combined ARR for FY 18-19 to FY 19-20

5.39.1 Based on the parameters discussed above, the stand alone Revenue gap (combined for wires and supply) for FY 2016-17 to FY 2019-20 is as follows:

Table 147: Combined ARR for Supply and Wires Business FY 18-19 to FY 19-20

Rs. Crs

Particulars	FY 2018-19		Deviation	FY 2019-20		Deviation
	Approved	Projected		Approved	Projected	
Power Purchase Expenses	50,817	52,394	1,577	53,334	54,741	1,407
Operation & Maintenance Expenses	6,268	7,596	1,328	6,454	8,056	1,602
Depreciation Expenses	2,450	3,011	561	2,498	3,235	737
Interest on Loan Capital	2,341	1,536	(805)	2,176	1,311	(865)
Interest on Working Capital	144	135	(8)	143	134	(8)
Interest on Consumers Security Deposit	758	634	(124)	796	697	(98)
Provision for bad and doubtful debts	258	26	(232)	258	-	(258)
Other Expenses	16	68	52	17	71	54
Intra-State Transmission Charges MSLDC charge	6,539	5,418	(1,121)	6,619	5,499	(1,120)
Incentives/Discounts	299	259	(40)	314	272	(42)
Contribution to Contingency Reserves	143	-	(143)	149	-	(149)
DSM expenses	-	0.4	0.4	-	-	-
Return on Equity Capital	1,716	2,102	386	1,719	2,255	536
Effect of sharing of gains/losses	(311)	-	311	-	-	-
Past Period Adjustment by Commission	(1,032)	(1,032)	-	853	853	-
Add: Impact of payment to MPECS in future years	43	43	-	40	40	-
Aggregate Revenue Requirement	**70,449**	**72,190**	**1,742**	**75,369**	**77,166**	**1,797**
Revenue from Sale of Power	68,155	65,384	(2,771)	72,977	68,565	(4,412)
Non-Tariff Income	903	1,051	148	945	1,104	159
Income from Open Access Charges	648	641	(7)	674	675	1
Income from Wheeling Charges	5	2	(3)	5	2	(3)
Income from Additional Surcharge	738	122	(616)	768	126	(642)
Total Revenue	**70,449**	**67,200**	**(3,249)**	**75,369**	**70,471**	**(4,899)**
Revenue Gap/(Surplus)	**-**	**4,990**	**4,990**	**-**	**6,695**	**6,695**

5.39.2 MSEDCL requests the Hon'ble Commission to allow the expenditure and revenue gap as shown in the above table.

6. ADDITIONAL CLAIMS AND TOTAL REVENUE GAP TO BE RECOVERED

6.1 Impact of Review Order

6.1.1 MSEDCL further submits that on 16th December 2016, it had filed a Petition seeking review of the MYT Order dated 3rd November, 2016 in Case no. 48 of 2016 (MERC Case No.176 of 2016 Herein after to be referred as "Review Petition"). Hon'ble Commission on 20th November 2017 has issued Order on the said Review Petition. MSEDCL has considered the impact of the said Review Petition under the appropriate heads of the expenditure for the period FY 15-16. MSEDCL further submits that the impact of Review Petition for FY 14-15 is considered in the following paragraphs.

6.1.2 **No. of consumers considered for normative computation of O&M Expenses**

6.1.2.1 In the MYT Petition, MSEDCL had submitted 2,18,53,000 as the total number of consumers for FY 14-15, excluding consumers in the Distribution Franchisee (DF) areas. The Hon'ble Commission considered this number as including DF and reduced it further, thereby resulting in reduction of consumers of DF twice. This has resulted in reduction of O&M expenses to that extent.

6.1.2.2 Hon'ble Commission in the Order dated 20th November 2017 allowed the review on this issue and ruled that MSEDCL may claim the impact on this account in its forthcoming MTR Petition.

6.1.2.3 Accordingly, the impact of this works out to be Rs. 107 Crs for FY 14-15 as shown in following table.

Particulars	Unit	Approved	MSEDCL
Wire Business			
Norm	Rs lakh/ '000 Consumers	7	7
No. of Consumers	'000 Consumers	20,920	21,824
O&M Expenses corresponding to No. of Consumers		1,464	1,528
Supply Business			
Norm	Rs lakh/ '000 Consumers	4.85	4.85

Particulars	Unit	Approved	MSEDCL
No. of Consumers	'000 Consumers	20,920	21,824
O&M Expenses corresponding to No. of Consumers		1,050	1,058
Total for Wire and Supply Business		**2,479**	**2,586**
Difference to be claimed			**107**

6.1.2.4 MSEDCL most humbly requests the Hon'ble Commission to allow it to recover the impact of Rs. 107 Crs towards number of consumers considered for normative computation of O&M Expenses for FY 14-15.

A&G Expenses (LD refund to APML)

6.1.2.5 In the True-up of FY 2013-14, Hon'ble Commission had considered the Liquidated Damages of Rs. 126 crore collected by MSEDCL as Non-Tariff Income. However, as per the Order dated 30 March, 2015, the Liquidated Damages worked out to Rs. 17 crore. Accordingly, MSEDCL refunded the net amount of Rs. 109 Crs (Rs.126 – 109 Crs) crore in FY 2014-15 and accounted for it in A&G Expenses. Therefore, MSEDCL requested Hon'ble Commission to allow the expense of Rs. 109 crore separately over and above the normative O&M expenses.

6.1.2.6 Hon'ble Commission in the Order dated 20th November 2017 allowed the review on this issue and ruled that MSEDCL may claim the impact on this account in its forthcoming MTR Petition.

6.1.2.7 Accordingly, MSEDCL most humbly requests the Hon'ble Commission to allow it to recover the impact of Rs. 109 Crs towards refund of liquidated damages to APML for FY 14-15.

6.2 Impact of Disallowance of AG Sales for FY 2014-15

6.2.1 Hon'ble Commission, in its MYT Order dated 3rd November 2016 (Case No 48 of 2016) has disallowed 2414 MUs in FY 2014-15 and 3399 MUs in FY 2015-16 from the Agricultural Category sale submitted by MSEDCL in its Petition.

6.2.2 Hon'ble Commission adopted methodology based on Feeder-based Energy accounting of AG separated Feeders and AG separated Feeders with SDT to determine the Circle-wise AG Index and determined the AG Sales for FY 14-15 and FY 15-16.

6.2.3 However, MSEDCL would like to submit that the AG consumption for a particular year depends on rainfall, no. of dry spells during monsoon. MSEDCL further submits that the variables such as Rainfall, Agriculture Production, Horticulture Production, Productivity, Land under Cultivation, Dam Water levels and Ground Water Table level also help in understanding the level of electricity usage during a year.

6.2.4 Accordingly, in order to ascertain the AG sales of MSEDCL for FY 2014-15 and FY 2015-16, MSEDCL has undertaken a detailed study regarding the AG Consumption trend during the last few years along with the indicators such as Rainfall, Agriculture Production, Horticulture Production, Productivity etc. MSEDCL has also used the well-established statistical tools for its study. From the study it has been proved that the claims of MSEDCL for its AG sales for FY 14-15 and FY 15-16 are not at all baseless and proved to be statistically in line with relationship of all the significant variables. Therefore, MSEDCL objects the disallowance of the AG sales for FY 2014-15 and FY 2015-16. The detailed Study Report has been attached to this Petition as **Annexure 5**.

6.2.5 Considering the above submission, MSEDCL has calculated the sharing of efficiency losses for FY 14-15 due to higher Distribution Losses based on actual AG sales as shown in following table.

Particulars	Units	FY 2014-15		
		Approved	MSEDCL	Difference
Normative Distribution Losses	%	13.75%	13.75%	
Actual Distribution Losses	%	16.36%	14.17%	
Actual energy input at the dist. Periphery	MUs	110,458	110,458	
Normative Loss	MUs	15,188	15188	
Normative sales (incl. OA & credit sales)	MUs	95,270	95,270	
Actual sales	MUs		94,805	
Approved sales (Incl. OA & credit sales)	MUs	92,391		

Particulars	Units	FY 2014-15		
		Approved	MSEDCL	Difference
Additional/ (lower) sales due to higher Distribution Loss	MUs	2,879	(466)	
Average Billing Rate	Rs.p.u.	5.81	5.81	
Loss of Revenue on account of lower energy sales	Rs. Crs	1,673	(270)	
Efficiency Loss to be borne by the consumers	Rs. Crs	558	(90)	
Efficiency Loss to be retained by MSEDCL	**Rs. Crs**	**1,115**	**(180)**	**935**

6.2.6 MSEDCL therefore most humbly requests Hon'ble Commission to approve the AG Sales as claimed by MSEDCL for FY 14-15 and allow the recovery of financial impact of such disallowance to MSEDCL as shown in above table.

6.3 Carrying Cost on previous Gap

6.3.1 Hon'ble Commission has been allowing carrying cost/holding cost on the revenue gap/surplus respectively. MSEDCL requests the Hon'ble Commission to allow the carrying cost on the previous gaps.

6.3.2 MSEDCL further submits that the APTEL, New Delhi in its Judgement dated 8th April, 2015 in the matter of Reliance Infrastructure Limited Vs MERC and others, the APTEL has ruled that the carrying cost should be calculated for the period from the middle of the financial year in which the revenue gap had occurred upto the middle of the financial year in which the recovery has been proposed. This is because the expenditure is incurred throughout the year and its recovery is also spread out throughout the year.

6.3.3 The revenue gap is determined at the end of the financial year in which the expenditure is incurred. However, the under or over recovery is the resultant of the cost and revenue spread out throughout the year. Similarly, the revenue gap of the past year is recovered throughout the year in which its recovery is allowed. Therefore, the carrying cost on revenue gap as a result of true up for a financial year should be calculated from the mid of that year till the middle of the year in which such revenue gap is allowed to be recovered.

6.3.4 MSEDCL requests the Hon'ble Commission to allow the carrying cost on the similar principle.

6.3.5 MSEDCL submits that the details of carrying cost on the revenue gap of FY 2015-16 to FY 2017-18 along with the additional claims is given in following table. The Interest Rate is taken as per the Interest on Working Capital for the year.

Table 148: Carrying cost

Particulars	Revenue Gap in Rs. Crs	Period		FY 15-16	FY 16-17	FY 17-18	FY 18-19	Total
Interest Rate (p. a.)		From	To	14.75%	10.80%	9.50%	9.75%	
True Up Requirement for FY 15-16	5,546	01-10-2015	30-09-2018	409.00	598.94	526.61	270.35	1804.90
True Up Requirement for FY 16-17	6,704	01-10-2016	30-09-2018		362.02	636.61	326.83	1325.47
Revenue Gap for FY 17-18	5,420	01-10-2017	30-09-2018			257.35	264.24	521.59
Impact of Review Order for FY 14-15	216	01-10-2016	30-09-2018		11.66	20.51	10.53	42.71
Difference in Sharing of Efficiency Loss due to higher Dist. Losses FY 14-15	935	01-10-2016	30-09-2018		50.49	88.79	45.58	184.86
Total	**18,821**			**409.00**	**1023.11**	**1529.87**	**917.53**	**3879.52**

6.4 Impact of non-compliance of RPO as per Case 190 of 2014

6.4.1 MSEDCL submits that the Hon'ble Commission in its MYT Tariff Order had disallowed the RPO compliance cost of Rs 260.33 Cr. to the extent of shortfall in RPO compliance by MSEDCL, as directed in Case 190 of 2014, on a provisional basis. Hon'ble Commission had further ruled that the same would be reviewed at the time of Mid Term Review on the basis of the RPO compliance verification Order which would be passed by the Commission with regard to FY 2015-16.

6.4.2 In view of the same, MSEDCL submits that the Hon'ble Commission, passed its order dated 27th March 2018 in Case No, 169 of 2016 regarding verification of compliance of Renewable Purchase Obligation targets by MSEDCL for FY 2015-16. As per the order, MSEDCL has fulfilled its cumulative non-solar RPO shortfall upto FY 2015-16 and the same is approved by Hon'ble Commission. The Hon'ble Commission with regard to the stand-alone and cumulative shortfall against its Solar RPO targets in FY 2015-16 allowed to fulfil the same by the end of March, 2019. Accordingly, MSEDCL is taking efforts to fulfill cumulative solar RPO shortfall upto FY 2015-16 by the end of March

2019 and in view of this, has considered the amount of Rs. 260.33 Crs. as disallowed by Hon'ble Commission as a part of revenue gap.

6.5 Payment of Delayed Payment Surcharge to various wind generators

6.5.1 MSEDCL submits that various wind generators had filed petition before the Hon'ble Commission seeking directions against MSEDCL for recovery of outstanding dues as well as DPC under the Wind EPAs for the sale of power generated by their projects in Maharashtra. Hon'ble Commission vide its order dated 16th March 2017 has directed MSEDCL to pay the principal amount & delayed payment charges expeditiously.

6.5.2 As per the directions of Hon'ble Commission, MSEDCL has paid the principal and DPC to some of the wind generators as given below:

S. No.	Name of wind generator	DPC Paid (Rs. Cr.)
1	Shah promoters & developers	3.13
2	Sun n Sand Hotel Private Limited	1.37
3	Ghatge Patil Industries	0.84
4	Bindu Vayu Urja Pvt. Ltd	6.49
	Total	11.83

6.5.3 In the matter of payment of Late Payment Surcharge (LPS) in case no 162 of 2016, Hon'ble Commission has directed MSEDCL to pay Rs 180 Crs towards LPS.

6.5.4 In the matter of payment of delayed payment charges to Hindustan Zinc Limited, APTEL, in its order in case no. 75 of 2017 dated 24th April 2018, has ruled as follows:

………………… We are also of the opinion that the ***issues raised by the Appellant before the State Commission do not pertain to the issue at hand and could be taken up during the Tariff Order /ARR proceedings before the State Commission*** *or through a difficulty removal/norms relaxation petition as per the relevant regulations of the State Commission.* ***(Emphasis Added)***

6.5.5 Accordingly MSEDCL is approaching before Hon'ble Commission for consideration of passing through of DPC and interest thereof in ARR. The reasons are detailed below:

6.5.5.1 MSEDCL being a revenue neutral regulated entity, cannot raise additional funds and the external circumstances affects the cash flow. MSEDCL has no cash balances to pay such costs without including the same in ARR.

6.5.5.2 The RoE is being utilized for compensation of less allowance in working capital.

6.5.5.3 The DPC and interest thereof reflected in Annual Accounts is also not realised as most of the DPC is of agriculture consumers.

6.5.6 MSEDCL further submits that various cases pertaining to delayed payment surcharge are still under jurisdiction at APTEL/ MERC. Accordingly, in view of the aforementioned APTEL's directive and other submissions, MSEDCL requests Hon'ble Commission to consider the delayed payment charges to be recovered through tariff as and when the same are required to be paid by MSEDCL.

6.6 Total Revenue Gap to be recovered

6.6.1 Considering the revenue gap for the period FY 15-16 to FY 19-20 and impact of Review Order for FY 14-15, the total revenue gap is summarized in following table

Table 149: Total Revenue Gap to be recovered

Rs Cr.

Particulars	Amount
True Up Requirement for FY 15-16	5,546
True Up Requirement for FY 16-17	6,704
Revenue Gap for FY 17-18	5,420
Revenue Gap for FY 18-19	4,990
Revenue Gap for FY 19-20	6,695
Impact of Review Order for FY 14-15	216
Difference in Sharing of Efficiency Loss (primarily distribution loss due disallowance of AG sales for FY 14-15)	935
Carrying Cost - on Revenue Gaps for previous years till FY 17-18	3,880
Claim of penalty levied by MERC for shortfall in RPO	260
Total Revenue Gap	**34,646**

6.6.2 MSEDCL requests the Hon'ble Commission to allow the revenue gap along with the carrying cost.

7. Tariff Design Principles

7.1.1 Hon'ble Commission has been guided by the Electricity Act, 2003 while determining retail tariffs across the State of Maharashtra. Hon'ble Commission has always laid emphasis on adoption of factors that encourages economy, efficiency, effective performance and improved conditions of supply for the consumers. On the similar lines, Hon'ble Commission may apply principles considering the ground realities as well to ensure the financial viability of the Licensee.

7.1.2 Also, in terms of the Section 61(g) of the Act, the Hon'ble Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity. Section 61 of the Act mandates that the Appropriate Commission, while determining tariff, shall not only ensure safeguarding of consumer's interests but shall also ensure the recovery of the cost of electricity in a reasonable manner.

7.1.3 MSEDCL submits that there is an urgent need for ensuring recovery of cost of supply from consumers to make the sector viable. At the same time, as mandated in the EA 2003, some minimum level of support by way of cross subsidy is required to make electricity affordable for very poor consumers as electricity is a basic minimum need and an essential driver of growth in an agrarian economy of the State.

7.2 Full Cost Recovery

7.2.1 MSEDCL submits that the present Petition is based on full cost recovery of the revenue gap. MSEDCL humbly requests Hon'ble Commission to evolve a methodology during remaining two years of third control period to ensure financial viability of the Licensee and at the same time protect the consumer's interest. Paragraph 5.10 of the National Tariff Policy notified on 28th January 2016 states as follows:

> *"Consumer interest is best served in ensuring viability and sustainability of the entire value chain viz., generation, transmission and distribution of electricity, while at the same time facilitating power supply at reasonable rate to consumers. The financial turnaround/restructuring plans are approved by the Appropriate Government from time to time to achieve this objective.* ***The Appropriate Government as well as the Appropriate Commission while implementing such plans shall ensure viability of the generation, transmission and distribution in***

terms of recovery of all prudent costs".

7.2.2 MSEDCL proposes the following Tariff Philosophy that may be considered while deciding the tariff and the terms and conditions of the tariff schedule:

7.3 Rationalisation of Fixed Cost

7.3.1 It has been the Hon'ble Commission's policy of allowing recovery of the Fixed Costs of MSEDCL through a Fixed / Demand Charges applicable to the consumers (to the extent possible). Hon'ble Commission in its first tariff Order dated 5th May 2000, while determining the fixed charge component of the tariff, ruled that the recovery of fixed costs should come from fixed charges and has also observed that the fixed charge component of tariff needs to be gradually increased in due course to cover the actual fixed costs incurred.

7.3.2 The Hon'ble Commission has articulated its view point in its December 2003 Tariff Order as follows:

> *"…. A major part of the costs of the MSEB, apart from the cost of fuel for own generation and variable cost of power purchase, is fixed in nature and the ratio of fixed to variable costs currently stands at 53:47. Though the consumer accesses electricity at any time he desires, the MSEB's infrastructure (physical infrastructure as well as employees, administration, etc.) has to be permanently available, and related costs incurred irrespective of the level of consumption by individual consumers, and these expenses thus comprises the fixed costs of the MSEB**. 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.** ......"*

7.3.3 In the June 2008 tariff Order, the Hon'ble Commission unilaterally decided to reduce the fixed charges applicable to different categories of consumers citing the reasons of reduced availability of power.

7.3.4 In the said Order, the Hon'ble had Commission observed "..........As and when sufficient power is available and contracted by the licensees, the fixed charges can again be increased, and energy charges reduced correspondingly."

7.3.5 Similarly, in the Tariff Order dated September 12, 2010, Hon'ble Commission had observed that ".... once sufficient power is available and contracted by the licensees, the fixed/demand charges can again be increased, and energy charges reduced correspondingly."

7.3.6 It is humbly submitted that, at that point of time also, the power supplied to certain categories of consumers was maintained without any reduced supply. As such, MSEDCL feels that the said reduction was unwarranted.

7.3.7 It is further submitted that unavoidable circumstances in real time operations such as coal shortages, faults in generation units, transmission line tripping etc. have led to load shedding for short duration. The load shedding is resorted to safeguard the system from over drawls and/or grid collapse. It is not the MSEDCL's infrastructure which is incapable of supplying the power, rather there is sufficient supply to match the consumer demand. Thus, the fixed/demand charges should not be linked to the few instances of load shedding.

7.3.8 At present, due to sufficient availability of power, there is no Load Shedding in the State. As in the past, and also as per the directives of the Hon'ble Commission in the tariff order dated 26th June 2015, the load shedding protocol is used only as load regulation measure in the shortage situation and not as a matter of routine. MSEDCL therefore categorically submits that it has sufficient power and has contracted enough power to meet the present and ever-increasing demand of the State.

7.3.9 MSEDCL submits that all its expenditure excluding the variable cost (fuel related cost) of Power Purchase Expense is fixed in nature. Thus ideally these fixed cost expenses should be recovered through Fixed/Demand Charges.

7.3.10 MSEDCL submits that the classification of Fixed and Demand Charges has been estimated and proposed in line with the recommendations/discussions at various committees such as Committee on Simplification & Rationalization of Tariff, Committee to examine issues relating to amendments in the Electricity Rules, 2005 as well as in Consultation Paper on issues pertaining to Open Access by Ministry of Power (MoP) issued in August 2017.

7.3.11 In order to reflect the actual share of fixed cost in the revenue requirement of Distribution licensees, there is need to enhance recovery through fixed charges. The fixed charge shall be so set that it leads to recovery of 100% of the fixed costs of Distribution Licensees.

7.3.12 The above concern of MSEDCL is also highlighted in the recently issued Draft Amendments to Tariff Policy, 2018, which reads as below:

"In order to reflect the actual share of fixed cost in the revenue requirement of Distribution licensees, there is need to enhance recovery through fixed charges. The fixed charge shall be so set that it leads to recovery of at least 50% of the fixed costs in case of Domestic and Agriculture categories and at least 75% recovery of fixed costs in case of other categories progressively over next three years. The SERCs and JERCs shall lay down a roadmap to achieve the same."

7.3.13 The tables below provide typical computation of fixed costs and recovery through fixed charges at the existing tariff for FY 17-18 as approved in MYT Order dated 03-11-2016

Rs Crs.

Expense Particulars	Fixed Cost	Variable Cost	ARR for FY 17-18
Power Purchase Expense	18,875	29,083	47,958
O & M Expenses	6,088		6,088
Depreciation Expenses	2,308		2,308
Interest on Long-term Loan Capital	2,269		2,269
Interest on Working Capital and SD	859		859
Provisioning for Bad & Doubtful Debts	258		258

Expense Particulars	Fixed Cost	Variable Cost	ARR for FY 17-18
Other Expenses	16		16
Transmission Charges - Intra-State	5,824		5,824
Contribution to Contingency Reserves	129		129
Incentives/Discounts	285		285
Return on Equity Capital	1,687		1,687
Non-Tariff Income	(864)		(864)
Income from Wheeling Charges	(5)		(5)
Income from Open Access Charges	(623)		(623)
Effect of sharing of gains/losses	(635)		(635)
Impact of payment to MPECS in future years	46		46
Income from Additional Surcharge	(710)		(710)
Total Cost for FY 17-18	**35,807 (55%)**	**29,083 (45%)**	**64,890**
Revenue	**Fixed**	**Variable**	**Total**
Revenue from Sale of Power for FY 17-18	**9,376 (15%)**	**54,389 (85%)**	**63,765**

7.3.14 From the above table it is evident that that the fixed cost is approximately 55% of total cost for the year 2017-18 (as approved in the Tariff Order), however the recovery through demand/ fixed charges is much lower at about 15% of the total revenue. Such lower recovery from Fixed Charges is against the basic principles set out by Hon'ble Commission. Since the fixed charges are inadequate, MSEDCL has to borrow some amount to meet its working capital requirements to discharge its fixed liabilities. Increasing tariff by increasing energy charges instead of fixed / demand charges would result into steep fluctuations in revenue with varying consumption over time. It would also affect MSEDCL's ability to meet the fixed charges obligation.

7.3.15 The following table compares Demand Charges for HT Industrial category consumers among some of the states. MSEDCL submits that the fixed charges in the neighboring states are relatively higher than those approved for MSEDCL. Such charges eventually lead to appropriate fixed charge recovery for these States.

Rs./kVA/Month

FY 17-18	MSEDCL	MP	A.P.	Gujarat*	Himachal Pradesh	Ch'garh	Tamil Nadu
EHV-Industries	250	620	475	475	425	375	350

*For > 1000 kVA

7.3.16 Though the Hon'ble commission in the MYT Order dated 03rd November 2016, has noted that the enhanced supply availability of MSEDCL is a strong case for increase in the Fixed / Demand Charges. However it has approved the marginal increase in fixed charges but still the fixed cost recovery through fixed charges is only 15% of total cost.

7.3.17 Therefore, in light of all the above and in line with Hon'ble Commissions accepted principle, MSEDCL has proposed to increase the Fixed/Demand Charges for each category of consumers as a step towards balancing the fixed charges recovery with fixed cost obligation.

7.3.18 MSEDCL submits that the increase in Fixed/Demand Charges has been proposed in line with the recommendations/discussions at various committees such as Committee on Simplification & Rationalization of Tariff formed on the advice of MoP, GoI to examine issues relating to amendments in the Electricity Rules, 2005 as well as in Consultation Paper on issues pertaining to Open Access by Ministry of Power (MoP) issued in August 2017.

7.4 Revision in Billing Demand

7.4.1 In order to help the industrial consumers in shifting the demand and in flattening the demand curve, Hon'ble Commission in its Tariff Order dated May 5, 2000 revised the definition of billing demand to be the higher of the following for HT Consumers:

(a) Actual demand [During 0600 hrs. to 2200 hrs.]
(b) 75% of the highest billing demand during preceding 11 months
(c) 50% of the Contract Demand
(d) 50 kVA

7.4.2 Subsequently, in its Tariff Order dated January 10, 2002 for FY 2001-02, Hon'ble Commission observed that the minimum billing demand of 50 kVA may not give the smaller industrial units any incentive to control their demand. Hence, the Hon'ble Commission modified the formula for Billing Demand for HT industrial consumers, by removing the clause of 'minimum 50 kVA'.

7.4.3 Many consumers are taking undue advantage of the present definition of the billing demand and manipulating the same for taking load factor incentives as well as ToD Rebates by exceeding the contract demand during night.

7.4.4 MSEDCL also submits that most of the Open Access consumers opt for partial open access and do not reduce the Contract Demand. In line with the provisions of NTP and the Act, since the cross subsidy surcharge takes care of the reduction in power purchase, the Licensee is not expected to purchase the power for open access.

7.4.5 Due to Universal Service Obligation, MSEDCL has to be ready with the requisite power including the Contract Demand of the Open Access consumers. Due to such obligation, power planning becomes difficult and MSEDCL has been paying fixed charges for the contracted power.

7.4.6 MSEDCL submits that some of the consumers exceed their demand during night hours to avail the benefit of ToD rebate. Such regular/frequent instances of exceeding demand causes saturation of CTs after some period and results into erroneous readings. This also leads to financial loss to MSEDCL due to incorrect recording of consumption. This important technical aspect has to be taken care of immediately by considering such excess demand as a part of billing demand.

7.4.7 MSEDCL further submits that the recovery from fixed charges as approved by the Hon'ble Commission is also not happening due to restriction on billing demand. Following table shows the actual recovery through fixed/demand charges for HT Industries as against the approved by the Hon'ble Commission through Tariff Orders.

Particulars	MERC Case No.	Approved (Rs. Crs)	Actual (Rs. Crs)
FY 15-16	Case No. 121 of 2015	2,682	1,643

Particulars	MERC Case No.	Approved (Rs. Crs)	Actual (Rs. Crs)
FY 16-17	Case No. 48 of 2016	2,864	1,785
FY 17-18	Case No. 48 of 2016	3,268	2,130

7.4.8 Considering the above, MSEDCL feels the time has come to revisit the Billing Demand Definition. It is pertinent to note that many States have billing demand as shown in the following table.

	MSEDCL	TN	MP	Gujarat	AP	Karnataka (BESCOM)	Chhattisgarh
HT Category							
Highest of	Actual Demand	Actual Demand	Actual Demand	Actual Demand	Actual Demand	Actual Demand	Actual Demand
	75% of max billing demand during last 11 month	90% of Contract demand	90% of Contract Demand	85% of CD	80% of Contract Demand	75% of Contract Demand	75% of CD
	50% of CD			100 kVA			60 kVA
LT Category							
Highest of	65% of the Actual Maximum Demand	Contracted demand	Actual Maximum Demand	Actual Maximum Demand	Actual Demand	Maximum Demand recorded	Actual Maximum Demand
	40% of CD		90% of CD	85% of CD	Contract demand	Sanctioned load	75% of CD
				15KW			15 kW

7.4.9 In view of the above, MSEDCL proposes following change in the definition of Billing Demand.

	Existing	Proposed
	Maximum of	Maximum of
LT	65% of actual MD recorded during 06 to 22 Hrs **OR** 40% of the Contract Demand	Actual MD recorded **OR** **85% of the Contract Demand**

	Existing	Proposed
	Maximum of	Maximum of
HT	Actual MD recorded during 06 to 22 Hrs **OR** 75% of the highest Billing Demand **OR** 50% of the Contract Demand	Actual MD recorded **OR** **90% of the Contract Demand**

7.4.10 MSEDCL submits that in view of the explanation provided above and also in para 7.3, MSEDCL has computed the revenue from proposed Fixed/Demand Charges for HT & LT category for FY 18-19 and FY 19-20 considering the proposed definition for billing demand. MSEDCL requests the Hon'ble Commission to allow the revision in the definition of Billing Demand so as to ensure the appropriate recovery from fixed /demand charges.

7.5 Slab wise Fixed Charges for Residential Consumers

7.5.1 Hon'ble Commission has been allowing the slab wise Fixed Charges for Residential Category for Mumbai Licensees. A comparison of Fixed Charges for Residential Category for Maharashtra Licensees for FY 17-18 is given below:

Rs./Connection/Month

Slabs	MSEDCL	TPC-D	RInfra-D	BEST
0-100	60	50	50	50
101-300	60	80	80	80
301-500	60	80	80	80
500 and above	60	105	105	105

7.5.2 Thus, it is seen that there is major deviation in the fixed charges for MSEDCL and other Licensees in the State. MSEDCL suggests that the fixed charges recovery should be on similar principle based on consumption slab. Consumers falling in higher consumption slabs would have to pay higher fixed charges. MSEDCL requests the Hon'ble Commission to approve the differential fixed charges for Residential Consumers as proposed in the Tariff Schedule.

7.6 Deemed Contract Demand (3 instances)

7.6.1 As per prevailing provisions, the Demand for a High Tension consumer during night hours is not considered as billing demand, even though the same exceeds its Contract Demand. Further such consumer, who has exceeded its Contract Demand during night hours, is considered as eligible for Load Factor Incentive.

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.).

7.6.2 It has been observed that the consumers are taking undue advantage of such provision and are getting benefited by paying marginal penalty for exceeding Contract Demand against substantial quantum of Load Factor Incentive. The amount of demand penalty thereby becomes negligible as compared to the amount of incentive of load factor and benefit of ToD night time rebate.

7.6.3 MSEDCL further submits that more than 90% of consumers who are availing Load Factor Incentive are continuous industries and are exceeding the contract demand at night. Some of these consumers are repeatedly exceeding the contract demand during off peak hours so as to avail Load Factor Incentive as well as ToD Tariff, which is against the philosophy of providing Load Factor Incentive.

7.6.4 In view of this situation, it is requested to the Hon’ble Commission to modify the present provision in respect of “Billing Demand” and the Demand recorded during off peak hours also needs to be considered for billing purpose. Similarly such consumers who have exceeded Contract Demand during night hours should also not be considered as eligible for “Load Factor Incentive”. (Cases have come to the notice of MSEDCL where this provision has been misused by some consumers).

7.6.5 MSEDCL submits that due to non-consideration of demand during 22:00 to 06:00 period, the Load Factor for some of the consumers had exceeded more than 100% as per the formula provided by Hon'ble Commission. Hence, a revision is required in calculation of load factor to address this issue.

7.6.6 MSEDCL further submits that the MERC (Supply Code) Regulations 2005 has no specific provision for initiating action against such consumers. The only provision available for increase or reduce the contract demand / sanctioned load is against the application made by the consumer.

6.8 The Distribution Licensee shall increase or reduce the contract demand / sanctioned load of the consumer upon receipt of an application for the same from the consumer:

7.6.7 Considering the financial impact and increased load factor, MSEDCL suggests that the Contract Demand of the consumers who exceeds their Contract Demand on more than three occasions during night in a year shall be increased to the actual billing demand without application from the consumer. Such Contract Demand will be further used for further billing purposes. Also the recovery of necessary load enhancement charges shall be done in ensuing bills.

7.6.8 MSEDCL further submits that since the introduction of LF incentive, in the calculation of Load Factor as per the methodology adopted by Hon'ble Commission, 60 Hrs have been deducted towards interruption/non-supply in a 30 day month. However, MSEDCL is supplying continuous power to all consumers. Hence the 60 Hrs criteria need not be considered or it should be reduced to realistic level.

7.7 kVAh based Billing

7.7.1 There are two components of electric power, active and reactive. The active or real power is actually consumed and converted into useful work for creating heat, light and motion and is measured in kilo Watt (kW) and is totalized by the energy meter in kilo watt hour(kWh). The reactive power is measured by kilo Volt Ampere Reactive (kVAR) and is totalized by the energy meter in kiloVolt Ampere Reactive hour (kVARh). This power is used to provide the electromagnetic field in inductive and capacitive equipment.

7.7.2 The reactive power occupies the capacity of electricity network and reduces the useful capacity of system for generation and distribution. The source of most reactive currents is the poor power factor loads (equipment) connected at consumer premises. As these loads are not compensated by appropriate capacitor installations by consumers, utilities are burdened for installation of capacitors.

7.7.3 The Hon'ble Commission vide its order dated May 5, 2000 in the case no Case No.1 of 1999 introduced a mechanism to incentivize consumers if they maintain power factor above 0.95 and penalize if the power factor is less than 0.9 and the same mechanism is presently in vogue.

7.7.4 At present MSEDCL is billing to its consumers for active power which is measured in kWh. Reactive power consumption of all HT consumers and LT consumers having connected load of 20kW and above are presently eligible for Power Factor Incentive. The present tariff order has approved following incentive & penalty structure.

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%

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%
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%

Sl.	Range of Power Factor	Power Factor Level	Penalty
10	0.805 to 0.814	0.81	10%
...	...	...	...

7.7.5 From above table it is evident that the Power Factor (P.F.) penalty is applied for P.F. below 0.90 and incentive is given for P.F. above 0.95. However there is no penalty or incentive if P.F. is between 0.9 & 0.95. Although consumers in this range are also affecting the system to some extent, they are not penalized in the existing tariff structure. Thus there is no uniformity in incentive and penalty in the present structure.

7.7.6 Total amount of penalty and incentive passed on to the HT consumers in last five years is as below.

PF Category	Description	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18 Up to sept
PF INCENTIVE	Amount (Rs. Cr)	-1248	-1367	-1342	-1361	-786
	Sale (MU)	26879	28545	26969	26820	15681
	No. of Consumers	14267	14546	14998	15516	7922
PF PENALTY	Amount (Rs. Cr)	50	49	49	53	32
	Sale (MU)	878	889	814	830	406
	No. of Consumers	2386	2525	2502	2528	1290
TOTAL	Amount (Rs. Cr)	-1198	-1318	-1293	-1307	-754
	Sale (MU)	30676	32403	30305	29447	17039
	No. of Consumers	16653	17071	17501	18045	9213

7.7.7 From the above table it is clear that in the year 2016-17, PF incentive of Rs. 1361 Cr. is availed by 15516 out of 18045 Nos. of HT consumers i.e. 86% of total consumers in HT category.

7.7.8 These consumers are already being benefited by less demand charges due to reduction in kVA demand because of improved power factor. Further, the power factor incentive is burdening the tariff of all the consumers since it is passed through tariff. The impact on tariff of consumers due to PF incentive is as follows.

FY	Total Sale (MU)	PF incentive (Rs Cr.)	Per unit increase in tariff (Rs. / kWh)
2013-14	81,429	1,198	0.15
2014-15	90,435	1,318	0.15
2015-16	92,024	1,293	0.14
2016-17	91,675	1,307	0.14

7.7.9 Further reactive power consumption for categories of consumers not covered under P.F. Penalty / Incentive mechanism remains unaddressed.

7.7.10 Reactive power is a local phenomenon and the extra reactive compensation by industrial consumers in MIDC/ Industrial area cannot be used / compensated against extra reactive energy drawl by agricultural section. As a result, in both situations, system stability of Distribution Company is hampered. It is thus imperative that every section of consumers has to shoulder their responsibility to maintain the system PF within permissible limits only.

7.7.11 The most effective remedy to remove such anomaly is to introduce kVAh billing. Introduction of kVAh metering and kVAh tariffs is therefore seen as a commercial inducement to consumers to ensure a smaller electricity bill by ensuring that they do not draw reactive power. It is considered that these consumers will in turn use efficient devices with power factor correctors or install capacitors at their premises.

7.7.12 The forum of regulators (FoR) in its report on “Metering Issues” August, 2009, has stated that kVAh billing is the new trend in electricity billing, which is adopted worldwide. In the report they have strongly advocated to adopt kVAh billing in India on account of following reasons.

a. kVAh Metering is a check on power factor.
b. It will encourage consumers to use reactive energy compensators to control the voltage at their intake point and maintain unity power factor.

c. The accepted threshold limit of power factor is unity. There need not be any penalty exemption for power factor neither lagging nor leading. Thus kVAh billing merits consideration over power factor penalty.

7.7.13 It is pertinent to mention that kVAh billing has already been adopted in some of the state in India as per orders of respective SERCs details of which are as below:

i. HP: HPERC Order dated 18.09.2001.
ii. Delhi: DERC in 2001.
iii. Jammu &Kashmir: Order dated 28.03.2007.
iv. AP: APERC Order dated 30-03-2011.
v. Haryana: HERC Order dated 25.07.2012
vi. UP: UPERC Tariff order dated 31.05.2013.
vii. Punjab: PERC order dated 22.08.2014.
viii. Chhattisgarh : Chhattisgarh ERC Tariff order dated 23.05.2015
ix. Bihar: BERC order dated 21-03-2016.

7.7.14 Category wise status of applicability of kVAh billing for various states is tabulated as below.

Category	AP	CG	Delhi	Haryana	J&K	UP	Bihar
HT							
Industrial	✓	✓	✓	✓	✓	✓	✓
Commercial	✓	✓	✓	✓	✓	✓	✓
Railways	✓	✓	✓	✓	✓	✓	✓
Agriculture	✓	✓	×	×	✓	×	✓
PWW/LIS	✓	✓	✓	×	✓	✓	✓
Temporary	✓	✓	✓	×	✓	×	✓
Bulk Supply	✓	✓	×	✓	✓	✓	✓
Start up	×	✓	×	×	×	×	✓
LT							
Domestic	×	×	×	×	×	×	×
Non Domestic /Commercial	✓*	×	✓*	✓$	×	×	×
PWW	✓	×	✓*	×	×	×	✓
Agriculture	×	×	×	×	×	×	×
Industrial	✓#	×	✓*	✓	×	×	✓

Category	AP	CG	Delhi	Haryana	J&K	UP	Bihar
Street Light	×	×	×	×	×	×	×

$ >20 kW/20 kVA **>10 kW#* *> 15kW* ✓kVAh Tariff Applicable

7.7.15 The Prime Objective of the KVAh based billing is to encourage the consumers to maintain near unity Power factor to achieve loss reduction, improve system stability, power quality and improve voltage profile. At the national level, emphasis is being given to Energy conservation, energy efficiency and Demand Side Management (DSM) and green energy solutions to optimize the energy usage. By kVAh billing, the consumers will be encouraged to adopt energy efficiency programs and will be benefited by reduced electricity bills.

7.7.16 Legal & Regulatory provisions:

Relevant APTEL judgments in the subject matter:

1. Hon'ble Appellate Tribunal for Electricity, New Delhi in its judgment dated 10th April 2015 in Appeal No. 264/2013 had observed advantages of High Power Factor and KVAH billing.

The relevant extracts of the same are reproduced below:

"……

a) *Higher the power factor, lower is the load current and thereby technical losses of the transmission lines i.e. I^2R losses will be reduced considerably.*
b) *Due to increase of Power Factor (nearer to one), the consumer's* ***demand charges will be reduced*** *and also the* ***KVAH billing will also be correspondingly reduced****.*
c) *The Higher Power Factor will reduce the demand on the system and i****mprove the systems Voltage****.*
d) *Increases the available transmission and distribution system capacity.*
e) *The improvement in Power Factor will* ***reduce the licensee's expenditure on Power Purchase*** *and thereby the consumers will be* ***benefited with lower tariff****.*
f) *In view of the above, most of the States are* ***changing their billing system from KWH to KVAH billing*** *system. The learned counsel of the Appellant has contended that due to KVAH billing, bill amount has been increased and*

thereby the Appellant burdened with higher power bill. We do not find any merit in the contention for the following reasons:
Because Power Factor = KWH/ KVAH
If Power Factor is unity, then KWH = KVAH

*In the instant case, the Power Factor is less than unity and hence the consumption recorded in respect of KVAH is high compared to KWH consumption. Further, the power factor surcharge/rebate will not be there in KVAH billing. Thus, the **KVAH based billing will drive the consumers to reach unity power factor** and thereby the system performance will be improved and also reactive power drawal from the system will be minimised and thereby better system voltages for the tail end consumers also.…"*

2. The Hon'ble ATE, in appeal No. 130 of 2005 between South East Central Railways, Chhattisgarh Versus Chhattisgarh State Electricity Board has upheld the decision of the State Commission in introducing kVAh billing, relevant extract of the same is reiterated below:

   *"**KVAH billing which provides inbuilt incentive** for the Appellant's category, which will automatically take care of power factor inventive and disincentive for the high and low power factor respectively"*

7.7.17 kVAh Measurement & Billing:
Wherever possible re-programming of meters at site will be carried out, otherwise appropriate meters will be installed.

7.7.18 In view of the submissions in the foregoing paras and various advantages as listed below, MSEDCL is proposing to adopt kVAh billing presently for all HT category consumers and the PF incentive for these categories may be withdrawn from FY 2018-19 onwards.

a. The kVAh based billing has an inbuilt incentive/penalty mechanism and therefore separate mechanism for the same is no more required. It will encourage the consumers to improve the power factor by way of reactive power compensation at the load point itself.

b. With the better power factor, the line loading shall be lower for the same KW requirement leading to lower transmission as well as distribution losses.
c. Power supply quality will be improved.
d. It is win-win proposal for both - the consumers and the MSEDCL.

7.7.19 In view of the above Hon'ble Commission is humbly requested to approve the KVAH based billing for all HT consumers.

7.7.20 MSEDCL further submits that the adoption of kVAh based billing may require updation of the Software of the consumer's Meter. Considering the no. of consumers, the updation will require some time. For the purpose of smooth billing during this transition period, it is proposed that the recorded kWh reading shall be converted to kVAh consumption for billing using actual recorded power factor. If the actual power factor recorded is more than 0.95, the power factor for conversion shall be limited to 0.95. MSEDCL feels this will also help to accelerate transition to kVAh based billing system.

7.8 Tariff Category for Charging Stations/Centers for Electrical Vehicles

7.8.1 MSEDCL submits that India is looking towards an all-electric car fleet by 2030 with an express objective of lowering the fuel import bill, running cost and reducing the carbon footprint. The government vision of having "All Electric Vehicle By 2030" is an ambitious and humungous task, and is going to have an immense impact on the economy as well as the welfare of the citizen of this country. On similar lines, Maharashtra being one of the progressive states, an upsurge is expected in the usage of Electric vehicles.

7.8.2 The major factor which shall fuel the electric vehicle penetration and its further growth is the establishment of charging stations. Charging stations converts the AC power to DC power which is required to charge the e-vehicles. The expected fall in prices of energy storage coupled with rapid development and faster adoption of e-vehicle technology shall result in spurt in demand of the e-vehicles. At present, insufficient charging infrastructure and high initial cost are some of the primary factors behind users not opting for electric vehicles.

7.8.3 MSEDCL further adds that in light of the expected growth in EV ownership, unique charging attributes, and resulting effects on electricity demand, very soon EV charging shall become significant type of load to warrant special tariffs and thus a special tariff category for charging stations for EVSs.

7.8.4 It is pertinent to note that MSEDCL is in receipt of requests from various consumers like Mahindra & Mahindra Ltd., ACME Cleantech Solutions Pvt. Ltd. etc. for adoption of separate tariff for battery swapping infrastructure to service electric vehicle.

7.8.5 In the present MYT Order dated 3rd November 2016, Hybrid Charging Centers /Stations are categorized under Commercial Category provided that, in case the consumer uses the electricity for charging his own Vehicle at his premises, the tariff is as per the parent category of supply.

7.8.6 The Forum of Regulators in its Report on Study on Impact of Electric Vehicles on the Grid has proposed a Model named Privately-owned battery swapping stations. FOR in the said Report has observed that Battery swapping will not amount to electricity resale and hence third parties can set up the stations with intimation to the Distribution Licensee to avail special category tariff.

7.8.7 In Maharashtra, MSEDCL is having 4000 locations which includes various offices, 11 KV Switching stations as well as 33/11 KV Substations where sufficient Land is available. Some locations are in close vicinity of Highways. In order to serve the users of electric vehicles as well as for optimum utilisation of its assets, MSEDCL is planning to establish Charging Stations at suitable locations and it will be implemented once all the necessary approvals are obtained.

7.8.8 Considering very low penetration in Electrical/Hybrid vehicles, it is necessary to provide incentives in tariffs to kick start this nascent technology and boost environfriendly electric and hybrid vehicles. In view of the above, it is proposed to create a separate category for the Electrical Charging Stations/Centers for Vehicles with following structure.

- Energy Charge: Rs. 6 per Unit * (*Rs./kVAh or Rs./kWh as the case may be)
- Fixed and Wheeling Charges as applicable to respective HT/LT Category;
- However, in case individual consumer uses electricity for charging own Vehicle at his premises, applicable tariff will be as per parent category;

7.9 Sub-Category for New Consumers

7.9.1 In Order to accelerate the Industrial Growth considering the initiative “Make in Maharashtra”, MSEDCL, proposes a separate category with lower energy charge to attract new HT consumers in Industrial, Commercial and Railways/Metro/Mono category.

7.9.2 MSEDCL further submits that such tariff shall be applicable for a period of three years from the date of connection for all Green Field Projects (new consumers) for which agreements for availing supply from MSEDCL are finalized during FY 2018-19. It is also proposed to provide such tariff to green field projects only and not to change in ownership in existing connection. MSEDCL further submits that the green field project shall be those projects where the consumer invests in the construction of new industry/plant from the ground up and there was no prior construction/structure on that particular land.

7.9.3 It is proposed that the Energy Charge for these new sub-categories to be Rs 1 p.u. less than the approved Energy Charge for the parent category. This will help in attracting new Industry to the state and increased Industries may have a cascading effect in further increasing MSEDCL’s sale.

7.9.4 In view of the above Hon’ble Commission is humbly requested to approve the proposal of MSEDCL for introducing new sub-categories in HT Industry, HT Commercial and HT Railway/Mono/Metro Categories for New (Green field) Consumers with Energy

Charge lower by Rs 1 /kVAh than the approved tariff for the same category for a period of three years.

7.9.5 MSEDCL submits that the data pertaining to this sub-category is not available presently and difficult to project also; the no. of consumers, sales and revenue calculation for these categories has not been shown. The overall sales and revenue generated from such category shall be taken care of in true up mechanism.

7.10 Rebate to Existing HT Consumers

7.10.1 MSEDCL submits that certain benefit also need to be provided to existing HT consumers for incremental consumption. There is a need to implement innovative schemes for boosting power demand more particularly in industrial, commercial and service sectors. Therefore, MSEDCL proposes to provide the incentive to the existing consumers for incremental consumption.

7.10.2 In order to encourage the consumers for incremental consumption, MSEDCL proposes a rebate of Rs. 1 /kVAh in energy charges for additional consumption over a threshold limit. The consumers have to pay the fixed and wheeling charges as may be applicable to that category. The criterion for allowing the rebate shall be as under:

7.10.3 The rebate shall be allowed to consumers, who consume power above threshold limit; The total consumption in financial year (FY 17-18) by the consumer shall be considered as baseline consumption;

a) In case, period is less than one year or there is reduction or extension in load/demand, baseline consumption shall be worked out on prorata basis;
b) The billing at the reduced rates after allowing the rebate shall be done once the consumer crosses the baseline consumption.
c) e.g. if a consumer’s total annual consumption in FY 2017-18 was 10,000 units, the consumer shall be entitled for a rebate of Rs. 1 /kVAh for consumption exceeding the baseline consumption of 10,000 units in FY 2018-19.
d) The rebate shall be for a period of two years i.e. remaining period of present Control Period;

e) The rebate shall be over and above the existing rebates;

f) The rebate shall be applicable to HT Industries, HT Commercial, HT Railways/Metro/Mono;

g) Considering the proposed rebate of Rs. 1 /kVAh in energy charges and existing rebates, the effective energy charges shall not be lower than Rs. 4 /kVAh;

h) The amount of rebate shall be adjusted from the Consumer's bill after completion of the Financial Year.

i) The rebate shall be given only to those consumers who source their entire power from MSEDCL. This rebate shall not be applicable to partial open access consumers.

7.10.4 MSEDCL submits that benefit of increased revenue as a result of increased consumption will get passed through in tariffs during future truing up. Hence, MSEDCL requests the Hon'ble Commission to approve the above proposal of MSEDCL and consider the said rebate as a part of ARR. However, MSEDCL at present has not considered any impact of such rebate. Overall impact of the rebate, shall be taken care of in true up mechanism subsequently.

7.11 Bulk Consumption Rebate

7.11.1 Hon'ble Commission in its Tariff Order dated May 5, 2000 had a provision for Bulk Discount for Industrial Consumers consuming more than 1 million units. The relevant extract of the said Order is reproduced below:

"Bulk discount:

If the consumption of any industrial consumer (availing TOD tariff and having no disputed arrears with the MSEB) exceeds one million units per month, the consumer will get a rebate of 1% on his energy bill (excluding fuel adjustment charge, demand charge, electricity duty, etc.) for every one million unit consumption above one million unit subject to a maximum of 5%."

7.11.2 In order to further incentivize the higher consumption, it is proposed to provide Bulk Rebate to Consumers consuming more than 0.5 million units in following manner subject to a ceiling of 10% of energy charge of the parent category of consumer.

0.5-1 MUs : :1.0%	6-7 MUs: 7.0%
1-2 MUs : 2.0%	7-8 MUs: 8.0%
2-3 MUs : 3.0%	8-9 MUs: 9.0%
3-4 MUs : 4.0%	9-10 MUs: 10%
4-5 MUs : 5.0%	>10 MUs : 10 %
5-6 MUs : 6.0%	

7.11.3 MSEDCL requests the Hon'ble Commission to approve the above proposal of MSEDCL and consider the said rebate as a part of ARR in line with the other incentives such Prompt payment discount or Load Factor Incentive.

7.11.4 Considering the actual quantum for FY 2016-17 of the consumers having consumption of 0.5 MUs and above, MSEDCL has estimated the amount of rebate as Rs. 495 Crs in FY 18-19 and Rs. 544 Crs in FY 19-20. The same has been added in the Incentives shown in the Form Revenue from proposed Tariffs.

7.12 Sale to Consumers from SEZ Area

7.12.1 The Electricity Act, 2003 advocates for the introduction of competition at the consumer end through open access regime and parallel license. The area of supply of various SEZs overlaps with that of MSEDCL. Hence, these SEZs are the second Licensees for those areas of supply, with MSEDCL being the Incumbent Licensee. Therefore, MSEDCL can supply power to consumers situated in SEZ Areas through parallel license arrangement.

7.12.2 The APTEL, New Delhi in its Judgment in Appeal Nos. 229 and 246 of 2012 on 28 November, 2014 has provided principles with regard to the Network Roll-out by TPC-D in its License area overlapping with R-Infra-D. The APTEL, New Delhi in its Judgment has emphasized to promote consumer choice without duplication and wastage of national resources, and advocated for the use of the existing networks of both Licensees to the extent possible. Therefore, MSEDCL feels that there is no need to duplicate the network in SEZ area in line with the principles laid down by APTEL, New

Delhi as it would result into replication of network and pass-through of capex related expenses on consumers through higher tariffs.

7.12.3 However, MSEDCL submits that if the consumer from SEZ area assures a period of 5 years with MSEDCL, it can develop the network for the consumers in SEZ areas, if required.

7.12.4 MSEDCL proposes that the consumers in such SEZ areas whosoever approaches MSEDCL for availing supply would be treated at par with the new connections and will be provided the same benefits as proposed above by MSEDCL for the separate sub-category of New Connections.

7.13 Change in Slabs for Commercial and Public Services (0-20 kW)

7.13.1 MSEDCL submits that the Ministry of Power has constituted a Committee for simplification of tariff categories. One of the objectives of the said Committee was reduction in number of tariff categories.

7.13.2 As a first step towards the reduction in number of tariff categories, MSEDCL proposes that the consumption based sub-slabs in 0-20 kW for LT Commercial and LT Public Services may be done away with and just a single tariff category 0-20 kW may be allowed.

7.14 Clarification on HT I Seasonal Category

7.14.1 MSEDCL submits that consumers request for to execute their option for the seasonal tariff as per the provision of MYT Order. As per the ruling ‘the period of operation in a financial year should be limited upto 9 months‘, whereas, the request for the option are received in third and last quarter of the financial year. The field offices are facing difficulties to implement such requests. Such consumers are availing the undue benefit of both categories i.e. demand charges of seasonal tariff category and per unit rate of Industrial tariff category during a financial year. Some of the consumers are requesting for execution of their options for past period as per seasonal tariff. Also, few consumers are requesting to apply the seasonal tariff category to their sugar factory units. In view of the above MSEDCL would like to suggest that the requests should be made in the first quarter of the financial year only and accordingly suggests the following in the Applicability for HT Seasonal Category:

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 ***excluding sugar factories****, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature.*

Provided that the period of operation of in a financial year should be limited upto 9 months, and the category should be opted for by the consumer ***<u>within first quarter of the financial year'</u>****.*

7.15 Clarification regarding Public Water Works by MIDC

7.15.1 MSEDCL submits that MIDC water supply is treated at par with the Local bodies for general use i.e Public Water Works where the utilization of the water is for the public. But it is observed that, some of the connections of MIDC (e.g. Water from MIDC Ratnagiri is used for M/s. JSW) are dedicated water supply of raw water for the purpose of generation of electricity by individual private power plant having commercial motive to generate and sale the power using the raw water. Also some connections are out of MIDC area and provide water supply to Industrial units out of MIDC area.

7.15.2 Hon'ble Commission in its Order in Case no 51 of 2013 has ruled that 'The power plant is an industrial premise wherein fuel and water are used as an input to generate electricity and therefore MSEDCL suggests that such connection may be classified as per Industrial tariff and not PWW.

7.16 Industrial tariff to Hotels in Notified Tourist Districts

7.16.1 As per the Maharashtra Tourism Policy, 2016, Tourism Department has declared Nagpur, Aurangabad and Sindhudurg districts as Tourism districts. Government of Maharashtra vide its letter No. Sankirna 2017/Pra.Ka.235/Urja-5 dated 7 March, 2018 has informed MSEDCL to approach the Hon'ble Commission for application of Industrial tariff to such hotels in the above said districts who have received 'Eligibility Certificates' from Maharashtra Tourism Development Corporation.

7.16.2 Accordingly, MSEDCL proposes to charge Industrial Tariff to hotels in Nagpur, Aurangabad and Sindhudurg districts; having eligibility certificate issued by Maharashtra Tourism Development Corporation.

7.17 Inclusion of R&D lab for Animal Husbandry in Ag-Others category

7.17.1 National Dairy Development board (NDDB) has been constituted as a body corporate and declared an institution of national importance by an Act of Indian parliament. It is an autonomous institution under Ministry of Agriculture, GOI. NDDB has set up state of art semen station in Rahuri where 300 Adult bulls are maintained for producing annually 10 million semen doses.

7.17.2 At Rahuri station agriculture activities for production of forage crops for the bulls, semen production laboratory for processing of semen doses, carrying out research work. As the Rahuri Semen station has been established and operating to serve the nation by providing high quality semen doses to the farmers at affordable cost and the activities of the semen station are mainly animal husbandry and agriculture in nature.

7.17.3 Since R&D Labs for Animal Husbandry are not specifically included in the tariff schedule, MSEDCL suggests that being helpful to Agriculture, the R&D Labs for Animal Husbandry may be included in the AG-Others category at respective voltage level.

7.18 Categorization of ordnance factories and ammunition factories

7.18.1 MSEDCL submits that at present the Defense establishments" are categorized in Public service category

7.18.2 However, The Defence of India Act,1971 in its chapter IV Establishment is defined as under:

(i) any office, or

(ii) any place where any industry, trade, business or occupation is carried on; and includes any technical institution or training centre established, selected or approved by the central Government;

7.18.3 Referring to this, various representations from the Ordinance factories and ammunition factories have been submitted to MSEDCL requesting to categorize them in Industrial category. They have submitted that they are Industrial organization under Ordinance factory board, of Ministry of Defence and "Factory act 1948" is applicable to them. They produce and manufacture ammunitions for Army/Navy/Air force are their customers.

7.18.4 MSEDCL requests the Hon'ble Commission to provide clarification on this and decide the applicability of Tariff for such establishments.

7.19 Incentives and Penalties Power Factor Incentives/Penalty

7.19.1 Considering the fact that MSEDCL has proposed kVAh billing for HT category consumers, the PF Incentives and Penalties for HT category consumers shall be withdrawn.

7.19.2 MSEDCL also proposes that there is no change in existing provisions of power factor incentive/penalty for LT Category Consumers. It is proposed that the said incentive will be provided to the eligible consumer subject to prompt payment.

7.19.3 Further, Regulation 2 of Part IV Grid connectivity standards applicable to distribution system and bulk consumer of the CEA (Technical Standards for Connectivity to the Grid) Regulations 2007 specifies PF limit 0.95 but present provisions of MYT Order penalises electricity user maintaining PF below 0.9 and incentivising above 0.95.

7.19.4 In view of the above, MSEDCL submits that the consumer need to maintain PF between 0.95 lag – 0.95 lead for system security.

7.19.5 The Agriculture consumers are not covered in above penalty clause; even these consumers are not keen to install capacitor at their motors. Hon'ble Commission has already ruled that the cost of the capacitors has to be borne by the AG consumers.

7.20 Load Factor Incentive

7.20.1 Hon'ble Commission vide its Tariff Order dated 10th March 2004 in Case No. 2 of 2003 has introduced Load Factor Incentives for consumers under HTP-I and HTP-II category with the objective of reducing the costs of high consumption industrial consumers and also ensuring that these consumers will be retained by MSEB.

7.20.2 In order to incentivize such high consumption consumers who also contribute a steady load to the MSEB system, the Hon'ble Commission introduced a Load factor incentive for consumers having Load Factor above 75% based on contract demand

- LF over 75% upto 85%: rebate of 0.75% for every 1% rise
- LF over 85%: rebate of 1% for every 1% rise subject to ceiling of 15%

7.20.3 MSEDCL submits that the ceiling of 15% is on very high side. It is also important to note that various SERCs in other States have given very low or no incentives for Load factor. A comparison is shown in following table.

Particulars	MSEDCL	AP	Gujarat	MP	Karnataka	TN
Load Factor Incentives	Maximum 15% of Energy Charges	NA	NA	12-36 paise per unit	NA	NA

NA: Not applicable

7.20.4 MSEDCL submits that the reason behind the load factor incentive is to motivate consumers towards the utilization of 100% sanctioned/contracted load. However, rationalisation of energy charge including bulk consumption discount rebate on incremental consumption and revision in billing demand will act as a motive for consumers to efficiently plan and utilise the power. Therefore, MSEDCL proposes that the present ceiling of 15% may be reduced to 7% for all the categories to whom the LF Incentive is applicable.

7.20.5 The proposed applicability of Load factor Incentive is as follows:

- Load factor above 80% and upto 84% - incentive of 0.5% on the energy charge for every 1% rise in load factor from 80% to 84%.
- Consumers having load factor above 84% - incentive of 0.75% on the energy charge for every 1% rise in load factor from 84%.
- The total incentive will be subject to a ceiling of 7% of energy charges applicable to the consumer.

7.20.6 MSEDCL submits that in order to improve the liquidity of MSEDCL, other incentives like Power Factor incentive, bulk supply discount, new consumer incentive, etc. are also proposed to be linked to prompt payment by the consumer in line with the Load Factor incentives.

7.21 Incentive for Online Payment for LT Category consumers

7.21.1 As a part of promotion of payment through digital means, ministry of Power, Government of India and Government of Maharashtra has informed MSEDCL being Public sector Utility to initiate steps so as to encourage the consumers for using online platform.

7.21.2 In this regard it is submitted that, MSEDCL has enabled the online payment facility for its consumers since 2005. At present, MSEDCL has activated all the modes of online payments like Internet Banking, Debit Cards, Credit Cards, Cash Card, M-wallet, UPI etc. for consumers through MSEDCL's web site and mobile app. Also Electronic Bill Presentment & payment (EBPP) and NACH facilities are also available for consumers. MSEDCL has also participated in Bharat Bill Payment System (BBPS) which is project of GoI to bring all bill payment under one umbrella.

7.21.3 Presently, as on May 2018, 42.60 lakhs consumers utilise the online payment modes amounting to approx. Rs. 873 Crs per month. This is around 32.19% of MSEDCL's total collection from LT consumers. The Response to online collection has shown the increasing trend since last year. The details of monthly transactions are shown in following table.

Month	No. of Transactions	Amount (Rs in Crs)
Apr 16	1817514	315.8
May 16	2049287	439.58
Jun 16	1919245	439.47
Jul 16	2037606	449.84
Aug 16	2156605	389.16
Sep 16	2019575	362.41
Oct 16	2224083	385.74
Nov 16	2185480	357.92
Dec 16	2470156	409.55
Jan 17	2690019	431.54
Feb 17	2572339	410.97
Mar 17	2841412	466.43
Apr 17	2578665	438.59
May17	2852141	575.69
Jun 17	2640050	638.69
Jul 17	2877743	674.77
Aug 17	2860713	570.76
Sep 17	2943574	599.38
Oct 17	3227102	642.75
Nov 17	3344685	649.69
Dec 17	3414542	590.37
Jan 18	3602049	602.3
Feb 18	3501127	597.6
Mar 18	3976120	684.93

Month	No. of Transactions	Amount (Rs in Crs)
Apr 18	3799423	651.85
May 18	4260118	872.99

7.21.4 MSEDCL further submits that in an effort to boost digital payments, the Union Cabinet has decided to waive the merchant discount rate (MDR) applicable on all debit cards, BHIM and UPI transactions up to Rs 2,000. The government will reimburse the same to the banks for a period of two years, starting January 1, 2018.

7.21.5 In view of the above, MSEDCL would like to propose a discount of 0.5% on the bill amount for LT Category consumers so as to promote the online payments and bring in payment discipline. This incentive shall be applicable if the consumer makes full payment of the bill within due date and has no previous arrears. MSEDCL requests the Hon'ble Commission to allow the same to recover through ARR. In respect of HT consumers, it is to submit that, 95% of amount from HT consumers is already received through RTGS/NEFT Mode hence no discount is proposed for HT Consumers.

7.22 Standby demand charges for CPP

7.22.1 The origin of levy of additional standby demand charges is in the Commission's Order dated 8 September, 2004 in Case Nos. 55 and 56 of 2003 ('the CPP Order') wherein it provided power purchase and other dispensation for fossil fuel based Captive Power Plants (CPPs). Further, the Commission has allowed recovery of additional demand charges from embedded Captive Power Plants (CPP) though its respective Tariff Orders. As per Tariff Order in Case No. 48 of 2016 dated 3 November,2016, additional standby demand charges of Rs. 20/- per KVA is charged to embedded CPP holders. The standy charges for CPP have been determined 14 years back considering the then prevailing power supply situation.

7.22.2 MSEDCL submits that the CPP Order was issued more than thirteen years back in circumstances different from those which have emerged now. The Commission under Section 62 of the Electricity Act, 2003 is empowered to determine Tariff and associated charges. In past, Hon'ble Commission in its respective Tariff Orders has approved additional standby demand charges of Rs. 20/- per KVA to embedded CPP holders. These charges are still continued and are on lower side in comparison to capacity payment made by MSEDCL for serving standy contracted capacity. Hence, it is appropriate to determine the conditionalities of standby component and its framework in present Mid-term Review Petition.

7.22.3 CPP consumers having captive generation facilities synchronised with the grid require standby facility throughout the year. The Stand-by Arrangement is for the benefit of the consumers so that they receive uninterrupted electricity supply and the Stand-by Charges are the premium (as fixed charges) on such guaranteed supply, which is irrespective of whether any supply is actually drawn under the Stand-by Arrangement or not.

7.22.4 Over the period of time, it is observed that a CPP unit gets tripped due to faults resulting in to drawl of power from MSEDCL. Such trippings are dependent on life of CPP unit, Maintenance of plant, operational expertise and sudden incidence of load etc. MSEDCL is serving around 36 numbers of consumers with CPP units having capacity of 1060.6 MW.

7.22.5 As per existing dispensation, MSEDCL can charge additional demand charges on embedded CPP consumers, when it is being utilized and only up to the extent of use. However, MSEDCL has to plan its power purchase to cater such additional demands. Further, it is observed that if penal charges for exceeding the demand on account of unplanned shutdown of CPP are computed then it works out to be very minuscule and does not provide any price signals.

7.22.6 For said purpose following illustrative example of one of MSEDCL consumer may be considered.

7.22.7 In this case, the consumer has reduced his contract demand to 0 kVA and availing the standby components of 6000 kVA. Due to this, the demand charges applicable to the said consumer is zero. Further, during August 17 to December 17, there has been instances of unplanned shutdown and drawal of excess power. In the month of

October 17, the consumer drew excess demand to the tune of 8 kVA in addition to standby component of 6000 kVA and very miniscule penalty of Rs. 267 was charged as per the existing dispensation. It is necessary to provide appropriate price signals for any overdrawal, hence, MSEDCL has proposed new demand charges on standby component.

FY 2017-18				
Month	August	September	October	December
Contract Demand (MW)	0			
Standby Component (kVA)	6000			
No. of Unplanned shutdown Hours	40	24	48	216
Excess Demand Drawl (kVA)	1360	1180	8	200
Demand Charges Attracted	0	0	0	0
Demand Penalty Attracted	37778	19667	267	30000

7.22.8 There have been several instances of tripping of the CPP Plants. This has resulted in over-drawl of power from the Grid by MSEDCL. Such events occurring frequently affect the Grid of the State as well as financially impact MSEDCL in terms of deviation charges. Further, such over-drawl may lead to power deficit situation for the existing consumers of MSEDCL. The CPP don’t have any obligations towards maintaining Grid stability. They may result in Grid instability and increase in voltage level losses. Thus, the Commission may take suitable measures to ensure that such instances of over-drawl by CPP’s do not occur frequently hence appropriate standby must be in place.

7.22.9 MSEDCL proposes following treatment considering existing conditions:

Demand Charges on standby contracted capacity:

- By its very nature the standby demand has two scenarios as follows.

  Scenario 1: Standby demand is not utilised.
  Scenario 2: Standby demand is utilised in planned /unplanned shutdown.

- In scenario 1, it is proposed that, Embedded CPP consumer shall pay Demand Charges on standby contracted capacity at the rate of 75% of approved demand charges. The said charges will be applicable on monthly basis throughout the year.

It is important to note that MSEDCL needs appropriate recovery of fixed charges on account of its contracted capacity for serving standby demand.

- In scenario 2, Following is proposed:
  - Planned Shutdown of CPP: When a particular consumer utilizes the Standby component during planned shutdown of its CPP unit then demand charges on total contracted standby capacity (on monthly basis) as approved in Tariff Order for relevant category will be applicable, irrespective of recorded demand.
  - Unplanned Shutdown of CPP: When a particular consumer utilizes the Standby component during unplanned shutdown of its CPP unit then 1.5 times of demand charges on total contracted standby capacity (on monthly basis) as approved in Tariff Order for relevant category will be applicable.

Energy Charges applicable during utilization of standby arrangement:

- During utilization of Standby arrangement (irrespective of Planned and unplanned shutdown), the CPP consumer needs to be levied Energy Charges at the regular retail tariff applicable to the relevant consumer category.

Penal Additional Demand Charges for Exceeding Contract Demand plus Standby:

- The demand exceeding the contract demand plus standby component may be billed at the rate of 2 times the applicable demand charges on monthly basis (applicable on only exceeded demand component).

In short following dispensation is prayed before the Commission:

Particular	Energy Charges	Demand Charges on standby contracted capacity	Penal Additional Demand Charges
When standby demand is unutilised	-	75% of applicable demand charges on standby contracted capacity	-
When standby demand is utilised.			
Planned shutdown	Energy charge as approved in Tariff Order for relevant category	As approved in tariff Order for relevant category on total contracted standby capacity (on monthly basis).	2 times Demand Charges (on monthly basis) in force
Unplanned shutdown	1.5 times applicable energy charges.	1.5 times approved demand charges in tariff Order for relevant category on total contracted standby capacity (on monthly basis).	

The method stipulated above would reduce the risk borne by CPP consumers, protect small consumers from load shedding, compensate the MSEDCL for standby services and is easy to implement and levy.

7.23 Standby charges for SEZ and deemed Licensees

7.23.1 It has been observed that many of the SEZ and deemed Licensees do not have standby arrangement. MSEDCL requests Hon'ble Commission to make it compulsory for making standby arrangement for supply of power in case of failure of the source generator. In order to ensure 24x7 reliable and uninterrupted power supplies to its consumers, there are possibilities that such licensees would draw power from grid. In such scenario, MSEDCL has to plan its power purchase accordingly. Therefore, in order to maintain the grid stability and optimize the cost to be incurred by MSEDCL, MSEDCL requests Hon'ble Commission that SEZ/deemed licensees must have a standby arrangement with MSEDCL. The tariff to be levied in such standby arrangement shall be applicable similar to dispensation provided to CPP as detailed in para 7.22.

7.24 Service of Notice through WhatsApp messenger:

7.24.1 Recently, Hon'ble Bombay High Court vide its Judgement dated 11 June,2018 in the matter of Notice No.1148 of 2015 in Execution application No.1196 of 2015 has accepted the service of notice through WhatsApp messenger after finding that notice served in the form of a PDF file was not only delivered, but the attachment was opened as well.

7.24.2 The relevant portion reads as follows:

"For the purposes of service of Notice under Order XXI Rule 22, I will accept this. I do so because the icon indicators clearly show that not only was the message and its attachment delivered to the Respondent's number but that both were opened,"

7.24.3 It is pertinent to note that following the enactment of the Information Technology Act, which recognises electronic communication as evidence, courts have already allowed parties in a litigation to serve notice through email, in addition to traditional methods.

7.24.4 It is submitted that as per Section 56 of the EA 2003 Distribution Licensee is empowered to disconnect the supply of consumer who neglects to pay any sum due from him, only after giving a notice of fifteen days.

7.24.5 It is submitted that MSEDCL has recently taken a drive to register a phone number of the consumers, in order to update them about recent bills, arrears etc. Further, MSEDCL has developed its own mobile application for enabling various services for MSEDCL consumers.

7.24.6 In view of above, MSEDCL request the Commission to consider service of notice under section 56 of EA, 2003 and other litigation notices through social media applications such as WhatsApp legitimate and tenable. Further, SMS & e-mail may also be considered as a media for serving notices.

7.25 Revision in reconnection charges for restoration of power supply

7.25.1 The percentage of consumers who pay within the due date is only 51% in case of LT consumers. LT category has a large base of consumers. The percentage of consumers paying late or not paying are about 40% of the overall LT category of consumers which is a very high proportion. Thus, a high proportion of consumers in LT category do not pay on time resulting in blocking of revenue. Further cost and expense have to be incurred to take necessary steps to realise the unpaid dues of the electricity bill from the defaulting consumers. Further, it reveals from the above mentioned table that at least ~10% of the consumers are such that they are paying electricity bill during notice period. Thus MSEDCL has to incur the administrative charges and expenses for serving notice on such consumers.

7.25.2 MSEDCL submits that due to lower collection efficiency, administrative costs, its financial position is getting worse day by day and interest on working capital is increasing. Therefore, recovery on arrears is a prime concern for the Petitioner and hence, higher disconnection/reconnection charges are required to ensure timely payments by the consumers. It is further submitted that higher reconnection charges may motivate the consumer to pay the electricity bills in time and this may encourage prompt payment and discourage the consumer from becoming a defaulter.

7.25.3 The disconnection and reconnection is two stage process. Initially, the defaulting consumer's supply is physically disconnected from consumers' premises. The disconnection in the electricity supply involves removal of meter, metering equipment and service line. After the consumer makes payment of electricity bills and reconnection charges, the reconnection process has to be completed at the consumer premises only, with all physical activities including transportation of equipment. When the consumer pays the bill the Petitioner has to reconnect the meter, metering equipment, service line etc. Unlike telephone or mobile where disconnection/reconnection is done remotely, physical disconnection/reconnection at consumer premises is essential in the disconnection of electricity. Even with remote disconnection/reconnection, the BSNL has reconnection charges of Rs. 100. While for the physical disconnection/ reconnection of electric supply, the charges are comparatively very low in the range of Rs. 50-100 for LT category of consumers.

7.25.4 MSEDCL submits that the reconnection charges approved by Hon'ble Commission are meagre and does not cover the actual cost incurred by MSEDCL for reconnection. Due to extremely low reconnection charges, consumers are defaulting for making timely payments of electricity bills and MSEDCL is adversely affected.

7.25.5 MSEDCL submits that as provided in the Section 56 (2) of the Electricity Act 2003, when any person neglects to pay any charge for electricity or any sum other than a charge for electricity due from him in respect of supply of electricity to him, MSEDCL after giving fifteen days notice in writing can disconnect the electric supply.

7.25.6 Notice is to be served through lawyer, whose legal fee varies. MSEDCL has approved the legal charges of Rs. 200/- towards preparation of disconnection notice and Postage & Printing charges of Rs 35/- for serving a single notice. Apart from that MSEDCL billing staff has to spend its time. There are cases when the consumer makes the payment during the notice period after the notice has been issued to him. In such cases, also the cost of issuance of notice is incurred by MSEDCL.

7.25.7 MSEDCL submits that reconnection activity involves administrative cost including man-power, transportation and time. In case of HT category consumer, for disconnecting supply, it is required to take outage & disconnect the supply from sub-station. During this period of disconnection, there is revenue loss for MSEDCL. Further, two persons (line staff + Helper) are required to reconnect the electricity supply.

7.25.8 Considering the fact that the disconnections/reconnections are required to be done during operating hours only, the Petitioner has restrictions in terms of manpower utilisation for multiple tasks. Due to such restrictions, the Petitioner needs to deploy staffs for reconnections which add to the employee cost. Moreover it is pertinent to mention that the issuance of notice and carrying out disconnection/reconnection incurs cost under several heads. In usual practice, two DISCOM employees are required to carry out 'disconnection/reconnection' activity. It is submitted that MSEDCL incur cost for carrying out the reconnection activity. Thus charges incurred on account of logistics & overheads of those employees should be subsumed within the reconnection charges. Hence the 'Notice' as well as 'disconnection/reconnection' needs to be fully compensated by individual consumer who is in default.

7.25.9 It is submitted that in accordance with EA 2003, the Commission had notified MERC (Electricity Supply Code and Other Condition of Supply) Regulations, 2005. As per the provisions of the Supply Code Regulations, MSEDCL recovers various charges approved by the Commission vide its Order dated 16 August 2012 (Case No. 19 of 2012), for various services provided to consumers. The petitioner submits that, as per the minimum wages act, 2012, the minimum wages for a skilled worker who works in a construction industry was Rs. 308 per day for skilled worker in Area B under Construction industry (which includes electric workmen) from FY 2012 onwards. Now, as per the minimum wages act, 2017, the minimum wages for a skilled worker who works in a construction industry is Rs. 593 per day for skilled worker in Area B under Construction industry (which includes electric workmen) from FY 2018 onwards. Furthermore, the activities for reconnection required to employ skilled labour.

7.25.10 While deciding the schedule of charges in Order dated 16 August 2012 (Case No. 19 of 2012), the Hon'ble Commission has considered the old Consumer Price Index (Industrial Workers) to approve revised reconnection charges, whereas the latest CPI, General Index of May 2017 is 278, which has increased by 277 % as compared to January 2006 (119) and by 200 % to Feb 2008(135). Also the minimum wages rates has increased manifold as compared to the base rate considered by this Hon'ble Commission. This has necessitated the need for revision of schedule of charges. MSEDCL has proposed increase in reconnection charges after considering the increase in labour cost and inflationary indices. This is for encouraging prompt payment and to discourage consumer from defaulting on the energy bills.

7.25.11 In order to encourage timely payments by defaulting consumers avoiding disconnection reconnection activities, it is necessary to have higher reconnections charges. Thus it is necessitated the need for revision of reconnection charges.

7.25.12 Hon'ble Commission in its Order dated 20th April 2015 has approved Visit Charges for subsequent visit for Inspection and test of Installation for Mumbai Licensees. The Petitioner submits that on similar lines, the staff of MSEDCL also requires to visit the consumer premises twice; first for disconnection and again for reconnection. Thus, considering the number of visits, manpower and time involved, transportation up to consumer premises the reconnection charges need to be increased to cover the costs incurred by Petitioner.

7.25.13 The estimate of the cost incurred by MSEDCL towards disconnection/reconnection charges and for serving notice to the consumer is as under:

Particulars	**Rs.**
A)Cost of serving notice	
Legal cost for Issue of notice	200
Printing and Postage charges	35
Other staff cost	65
Total cost of serving notice	300
B) Cost for disconnection + reconnection process	
Manpower Cost (2 employees visiting consumer premises twice and Total time is 1 hour each visit) Calculation - Rs. 593 (skilled for Area B as quoted above) per day for 8 hours /1 hour* 2 people*2)	297
Conveyance cost	50
Total cost for disconnection + reconnection process	347 Say 350

7.25.14 In addition of the above, there is a revenue loss to MSEDCL when the mains have to be shut down for safety reasons during disconnection which goes unaccounted. This is the latent cost which is unrecovered under any mechanism.

7.25.15 Therefore, the Petitioner prays to revise the existing charge and approve the following reconnection and notice charges.

Category	**Approved Charges (Rs)**	**Proposed (Rs.)**

A)Charges for Notice U/s 56 of EA 2003	-	300
B) Reconnection Charges		
1)Low Tension Service at Meter incomer		
a)Single phase	50	300
b)Three phase	100	500
2)At overhead mains:		
a) Single phase	50	300
b) Three phase	100	500
3)At underground mains:		
a) Single phase	100	500
b) Three phase	100	500
4)High Tension Supply:	500	3000

7.26 Voltage wise Cost of Supply

7.26.1 The cost of supplying power at a particular voltage level is dependent on the voltage of supply, demand pattern, energy consumption, losses attributable to the particular voltage level etc.

7.26.2 Voltage wise cost of supply study seeks to allocate all the costs of a utility to voltage level it serves. Such allocation reflects the costs attributable to electricity supplied and related services.

7.26.3 Hon'ble Tribunal in its Judgment dated 24 March, 2015 highlighted need to segregate costs incurred by Licensees to serve a consumer on particular voltage level. Further, Hon'ble Commission has issued MYT Order in Case No 48 of 2016 on 3 November 2016. In the same Order, the Hon'ble Commission observed that, it is necessary to undertake detailed analysis of Voltage-wise Cost of Supply (VCoS) and directed MSEDCL to submit the outcome of its VCoS study at the time of the Mid Term Review. Accordingly MSEDCL carried out the VCoS study, methodology is elaborated below;

1. **Objectives:**

- To formulate the methodology to determine the voltage wise cost of supply in accordance with economic principles and suggest a model.

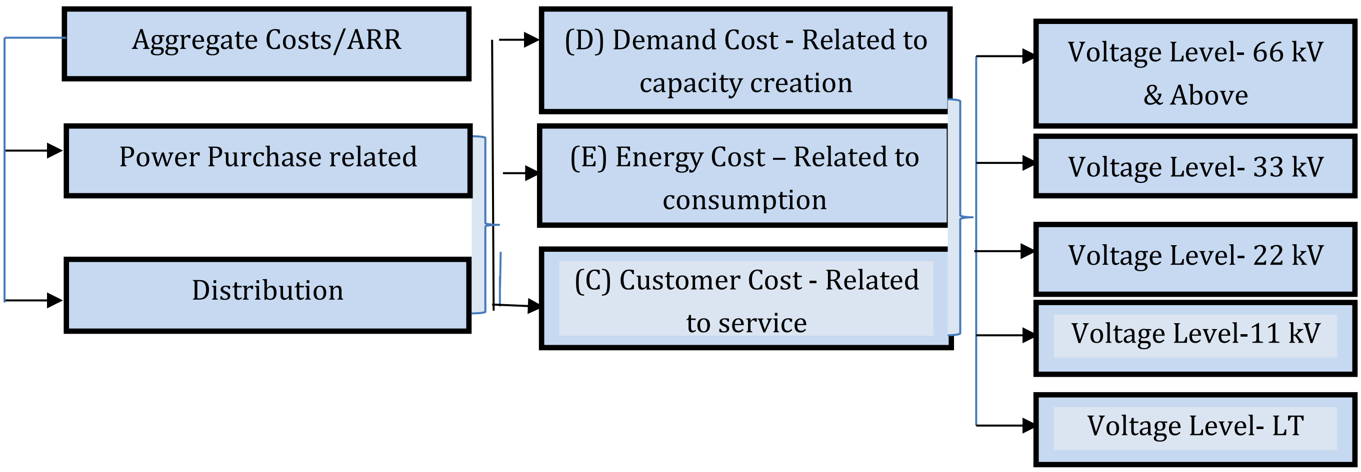
- **Approach design:**

  Basically, there are two broad approaches for ascertainment of voltage wise cost of supply i.e. Embedded Cost approach and Simplified approach. Punjab, Andhra Pradesh, Tamil Nadu and Assam carried out detailed cost of supply studies for determination of category wise cost of supply using the 'Embedded cost' approach. The 'Embedded cost' method identifies and assigns the historical/ accounting costs that make up a utility's Annual Revenue Requirement (ARR) to voltage/consumer categories based on various allocation factors.

  Further, taking into account the problems faced by State Commissions, the APTEL suggested that in absence of data, it would be adequate to determine the voltage-wise cost of supply taking into account the major cost element which would be applicable to all the categories of consumers connected to the same voltage level. Accordingly APTEL also gave detailed guidelines for calculation of voltage wise cost of supply. Delhi, Bihar, Himachal Pradesh, Odisha and Madhya Pradesh have calculated Voltage wise Cost of Supply based on certain norms and assumptions. In this study approach based on Embedded Cost is considered which is represented in following figure.

Figure 1: Embedded Cost approach

Step 1	Step 2	Step 3
Functionalisation – The total costs are divided in to G &T and D on the basis of function performed	Classification – The G, T and D costs are divided into D, E and C costs based on whether cost is related to capacity creation, consumption or service.	Allocation – The D, E and C costs are then further allocated to various voltage levels based on factors like peak demand or connected load



7.26.4 A systematic approach to the VCoS study involves three steps i.e functionalisation, classification and allocation of costs to various voltage levels.

- Functionalisation of Costs:

  The first stage of a VCoS study involves functionalisation of all the costs of the utility to various functions such as power purchase and distribution (termed as "functionalisation"). The power purchase costs include the costs of transmission of power from the generating stations to the delivery point as per Bulk Supply Agreement. the following table shows Functionalisation of Costs.

Sr.No.	Particulars	As per MTR Filing	Power Purchase	Distribution
1	Power Purchase Expenses	43,626		
	Fixed Power Purchase Cost		15,641	-
	Variable Power Purchase Cost including supplementary bills and others charges such as incentive etc.		28,958	-
	Less: Supplimentary Bills of MSPGCL		-1,135	
	Add:Other Charges (NTPC)		162	
2	Operation & Maintenance Expenses	6,842		
	Employee Costs		-	5,288
	Repairs & Maintenance		-	744
	Administration & General Expenses		-	809
3	Depreciation Expenses	1,876	-	1,876
4	Interest on Loan Capital & Financing Charges	1,700	-	1,700
5	Interest on Working Capital	695	-	695
6	Interest on deposit from Consumers	432		432
7	Other Finance Charges	36	18	18
8	Provision for Bad and Doubtful Debts	405	-	405
9	Other Expenses	36		36
10	Intra-State Transmission Charges MSLDC Charge	4,070	4,070	
11	Incentives/Discounts	249		249
12	Prior Period Expenses and Exceptional Items	-178		-178
13	**Total Revenue Expenditure**	**59,790**	**47,714**	**12,075**
14	Add: Return on Equity Capital	1,661		1,661
15	Add: RLC Refund	5		5
16	Add:ASC Refund	1		1
17	Sharing of Gains/(Losses)	-716		-716
18	Past period surplus	-1,011		-1,011
19	Amount of compensation paid to consumers	-0		-0
20	Non-Tariff Income	-2,882		-2,882
21	Income from Open Access Charges	-678		-678
22	Income from Trading of Surplus Power	-211		-211
23	Income from Wheeling Charges	-1		-1
24	Income from Additional Surcharge	-	-	-
25				
26	**Aggregate Revenue Requirement**	**55,956**	**47,714**	**8,241**

- Classification of Costs:
  The costs so functionalized are further classified into 3 categories such as demand, energy and customer/service related.

- Demand Cost: The peak demand has to be met by the capacity of generation, transmission and distribution. Hence the cost related to capacity creation is termed as demand related cost.
- Energy Cost: Energy related costs depend on the quantum of consumption of the users. Such costs are generally termed as variable cost and include costs such as variable cost of generation, interest on working capital etc.
- Customer Cost: Customer related costs are directly related to the services provided to customers. Though fixed in nature, these costs are associated with the functions of metering, service connection and other customer related activities.

Table 150: Classification of Power Purchase Expenses for FY 15-16

Rs. Cr.

		FY 2015-16			
Sr.No.	**Particulars**	**Power Purchase Cost**	**Demand Related**	**Eneregy Related**	**Customer Related**
	Expenditure				
1	**Power Purchase Cost**	43,626			
-	Fixed Cost	15,641	15,641	-	-
-	Variable Cost	27,984	-	27,984	-
2	Other Finance Charges	18	-	18	-
3	**Intra-State Transmission Charges MSLDC Charge**	4,070	4,070	-	-
	Classified Power Purchase Costs	**47,714**	**19,712**	**28,002**	**-**

Table 151: Classification of Distribution Expenses for FY 15-16

Rs. Cr.

Sr.No.	Particulars	Distribution	Demand Related	Energy Related	Customer Related
1	Operation & Maintenance Expenses				
	Employee Costs	5,288	2,644	-	2,644
	Repairs & Maintenance	744	744	-	-
	Administration & General Expenses	809	405	-	405
2	Depreciation Expenses	1,876	1,876	-	-
3	Interest on Loan Capital & Financing Charges	1,700	1,700	-	-
4	Interest on Working Capital	695	232	232	232
5	Interest on deposit from Consumers	432	-	432	-
6	Other Finance Charges	18	18	-	-
7	Provision for Bad and Doubtful Debts	405	-	-	405
8	Other Expenses	36	12	12	12
9	Incentives/Discounts	249		249	
10	Prior Period Expenses and Exceptional Items	-178	-178	-	-
12	Add: Return on Equity Capital	1,661	1,661	-	-
13	Add: RLC Refund	5		5	
14	Add:ASC Refund	1		1	
15	Sharing of Gains/(Losses)	-716	-716		
16	Past period surplus	-1,011	-1,011		
17	Amount of compensation paid to consumers	-0	-0		
18	Non-Tariff Income	-2,882			-2,882
19	Income from Open Access Charges	-678	-678		
20	Income from Trading of Surplus Power	-211		-211	
21	Income from Wheeling Charges	-1		-1	
22	Income from Additional Surcharge	-			
23					
24	**Aggregate Revenue Requirement**	**8,241**	**6,708**	**718**	**815**

- Allocation of Costs:
  The functionalized and classified costs are then allocated to various voltage levels of the utility based on allocation factors derived from demand, consumption of energy and number of customers. Such allocation arrives at the VCoS. The classified costs may be allocated on the basis on time differentiated allocation factors. The energy usage and a measure of demand (peak, average etc.) within such periods form the basis for allocation of costs.

7.26.5 In this study various allocation factors have been devised based following:

1. Demand related Costs: These costs are worked on the basis of percentage contribution of Non-coincident demand, Average demand and excess demand in its respective demand component.
2. Energy Related Costs: These allocation factors are derived based on ratio of energy input at particular voltage level.(Energy input= Energy sales + Losses)
3. Customer related Costs: to address the variance in service cost across voltage levels, Voltage level wise weightages have been derived to determine allocation factors for customer related costs. The weightages are a function of two parameters- sales per customer and load per customer. Costs are allocated as per derived weightages.

7.26.6 The allocation matrix is presented as below:

Table 152: Allocation Matrix

Voltage levels	Allocation for demand related costs %	Allocation for energy related costs %	Allocation for customer related costs %
EHV (66 kV & above)	6%	5%	0.22%
HT Level (33 kV)	9%	8%	1.29%
HT Level (22&/or 11 kV)	18%	16%	16.19%
LT Level	67%	70%	82.31%
MSEDCL Total	**100%**	**100%**	**100.0%**

7.26.7 Based on above allocation matrix the VCoS for FY 2015-16 are derived as below

Table 153: VCoS for FY 2015-16

Voltage levels	Sales (Mus)	Allocation %	Demand Related	Demand (Rs/Unit)	Allocation %	Energy Related	Energy (Rs/unit)	Allocation %	Customer Related	Customer (Rs/Unit)	Total
EHV (66 kV & above)	6017	6%	1616.40	2.69	5%	1576.89	2.62	0.22%	1.79	0.0030	5.31
HT Level (33 kV)	7860	9%	2266.95	2.88	8%	2191.51	2.79	1.29%	10.48	0.0133	5.69
HT Level (22&/or 11 kV)	16404	18%	4731.15	2.88	16%	4724.49	2.88	16.19%	131.86	0.0804	5.84
LT Level	61736	67%	17805.71	2.88	70%	20176.52	3.27	82.31%	670.59	0.1086	6.26
MSEDCL Total	**92017**	**100%**	**26420.22**	**2.87**	100%	**28720.25**	**3.12**	**100.00%**	**814.72**	**0.0885**	**6.08**

7.26.8 Based on the above approach, MSEDCL has calculated the stand alone Voltage Wise Cost of Supply for FY 18-19 and FY 19-20 is as shown in following table.

Table 154: Voltage Wise Cost of Supply for FY 18-19 and FY 19-20

Rs/Unit

Volatge level	FY 18-19	FY 19-20
EHV (66 kV & above)	5.52	5.65
HT Level (33 kV)	6.53	6.82
HT Level (22&/or 11 kV)	6.57	6.89
LT Level	6.91	7.10
Total	**6.71**	**6.93**

7.27 Revision in ToD Charges

7.27.1 MSEDCL submits that the very basic purpose of TOD tariff is to shift the load from peak to off-peak hours and avoid spikes in the demand pattern. Considering the load curves for last three years, MSEDCL suggests that to incentivize consumers to shift the demand pattern, it is necessary to relook at the TOD tariffs.

7.27.2 MSEDCL submits that the ToD slots should be modified. In order to incentivize consumer to shift their demand pattern, MSEDCL has proposed the following TOD tariffs:

Time Slots	Existing (Rs./kWh)	Proposed (Rs./kWh)
0600 hrs. to 0900 hrs.	0.00	0.80
0900 hrs. to 1200 hrs.	0.80	0.00
1200 hrs. to 1800 hrs.	0.00	0.00
1800 hrs. to 2200 hrs.	1.10	1.50
2200 hrs. to 0600 hrs.	(1.50)	(1.50)

7.27.3 MSEDCL requests the Hon'ble Commission to allow the revision in ToD Tariffs as suggested by MSEDCL in above table.

7.28 Adoption of Gross instead of Net Metering in case of Rooftop Systems.

7.28.1 The Net Metering is a great idea and needs to be promoted. Under net metering philosophy the consumer needs to be incentivised but while doing so it is necessary to consider the declining costs of solar modules. In India, from 2011-12 to 2016-17, the capital costs for solar projects have declined by 68% of which 55% comes from falling PV module costs, 25% from falling Balance of Systems (BoS) costs which include inverter and assembly and about 19% from falling soft costs (permission, installation, inspection etc).

7.28.2 The Net Metering is preferred by consumers whose consumption falls in higher tariff bracket such as Residential and Industrial etc. (subsidizing consumers). Installations of solar roof top by them bring them to lower consumption bracket and in subsidized tariff category; thereby killing MSEDCL's revenue as more and more consumers would become subsidized instead of subsidizing. As of now around 65% of residential consumption is in 0-100 units bracket which is subsidized (for FY 17-18: ABR-Rs.4.87 per unit, ACOS: Rs.6.63 per unit) and with Net metering it will further increase.

7.28.3 This will result into loss of the Cross Subsidy which will be passed on to the other consumers of MSEDCL, thereby increasing the retail tariff.

7.28.4 Hon'ble Commission has issued the MERC (Net Metering for Roof-top Systems) Regulations 2015 on 10th September 2015. As provided in the said Regulations, MSEDCL has been allowing the Net Metering in its area of supply to the eligible consumers.

7.28.5 MSEDCL however submits that certain provisions of the said regulations are causing financial loss to MSEDCL. MSEDCL vide its Letter No. SE/TRC/14809 dtd 17 June 2017 and Letter No SE/TRC/15196 dated 20 June 2017 has already conveyed its comments and suggestions so as to reduce the severe financial impact on MSEDCL.

7.28.6 This will result into loss of the Cross Subsidy which will be passed on to the other consumers of MSEDCL increasing the retail tariff.

7.28.7 MSEDCL has therefore suggested shifting to Gross Metering from Net Metering. MSEDCL would like to highlight that the Gross Metering will keep the Utility sales intact and in turn the cross subsidy also. Since there would not be any reduction in sales of the subsidising consumers, MSEDCL would not lose the revenue as well as cross subsidy provided by these subsidising consumers. Thus, there will not be any impact on the low end consumer tariffs.

7.28.8 MSEDCL also submits that the Tariff difference between consumer tariff and levelised cost of energy generated is major driving factor for adoption of Net Metering. As retail Tariff for low end residential and agricultural consumers is low, there is no incentive for them to opt for Net Metering. Gross Metering provides level playing field to all consumers for installation of roof top systems and since more than 80% consumers are subsidised, gross metering will help reaching them.

7.28.9 MSEDCL further submits that Andhra Pradesh and Uttar Pradesh have provided an option of Gross Metering to the consumers whereas in Karnataka residential, schools and hospitals can opt for Gross Metering whereby the energy generated through roof top system is exported to the Grid.

7.28.10 **International Experiences**

7.28.10.1 Germany is the most well-known example of a successful propagation of the gross metering concept. The recent trend in Japan has been to progressively move towards a gross metering model with Feed in Tariff (FiT) mechanism.

7.28.10.2 MSEDCL submits that the Solar Rooftop is being largely promoted in developed countries like USA since last 4 years targeting household and commercial customers by providing various facilities such as net-metering, purchase of surplus power by utility etc. Therefore, it is pertinent to study their experiences of solar roof top. Many issues are being faced by the utilities there and consequently they have taken various steps to restrict solar rooftop. It is not out of place to share some of the experiences of US utilities in this context. (The following information is obtained from internet).

A spokesperson of Arizona Public Service—the state's largest utility called the growth of rooftop solar in Arizona "explosive," but out of sync with how people consume energy. They get the credit for the solar they overproduced that went on to a system that is super saturated with excess generation. Solar 'overproduces' *during the midday when it is churning out the most power, but that's not when the utilities and their customers need it. Energy use peaks in the evening as people come home. When the solar is not producing, they have been allowed to bank the credit for their excess generation, however useful or useless it was. According to many utilities, this amounts to a subsidy, which shifts the costs onto all the other ratepayers.*

Several utilities, including Arizona Public Service and Denver-based Xcel Energy, have asked their state regulators to reduce incentives or impose charges on customers who install rooftop solar.

Duke Energy, the largest utility in the U.S., has so far succeeded in keeping third-party solar illegal in North Carolina. Duke Energy has claimed that rooftop solar hurts the poor by causing rate increases. The company opposed the Energy Freedom Act, a bipartisan bill to legalize third-party solar. At least four states—Florida, Kentucky, Oklahoma and North Carolina—currently ban third-party sales of solar energy.

The Nevada decision:

Nevada State has the highest percentage of solar energy in the union. On December 23, 2015, the Nevada State Legislature passed Senate Bill 374, following which the state Public Utilities Commission cut the rate payable to owners of domestic solar installations who sell surplus power to Nevada Energy. The rationale was that intermittent solar power sold to the NV Energy grid "differs from" the dispatchable power the grid sells back and that domestic solar owners were getting paid too much for the former and not paying enough for the latter: The state regulators levied $126 million in exit fees on three casinos seeking to negotiate their own direct power purchases. Then gave Nevada Energy an enormous increase in residential rooftop solar fees, while drastically cutting what the utility pays those customers when they feed electrons back into the grid. These changes were initially retroactive to some 10,000+ Nevada households who had already leased solar and were stuck with the costs. Effectively the new rules make rooftop solar no longer competitive in Nevada.

Key observations:

Financial Barriers:

Net Metering: *Typical net metering rate structures made it impossible for electricity providers (utilities) to recover their costs in markets with a large penetration of rooftop solar.*

Customers with solar panels buy less energy from the grid, operated by the utilities. Utilities often have to pay owners of home solar installations for the surplus energy their panels return to the grid.

Generally utilities operate with a mismatch between fixed and variable costs versus fixed and variable revenues. Policies that reduce electricity sales, such as net-metering, can prevent a utility from recovering its costs, which are largely fixed. Such net-metering policies are eating into the cost recovery for the assets and thus rooftop solar can actually ruin the balance sheet of an electric utility.

Technical Barriers:

Large amounts of rooftop system make it difficult for utilities to maintain the stability of the local grid.

Utilities have to maintain the distribution voltage within specified limits to provide reliable power to their customers. However, conventional grids were not designed with rooftop systems in mind and some RE generation characteristics, such as intermittent output and safety-triggered circuit trips, aggravate voltage instability.

7.28.10.3 Thus, it can be seen that excessive growth of rooftop system can severely affect the finances of host Discom on one hand and can affect the Grid stability due to voltage fluctuations on the other hand. Therefore, US utilities have taken various steps to restrict rooftop systems such as capping of net metering capacity, ban on third party rooftop systems, increase in grid access fees / exit fees, reduction in net metering rates etc.

7.28.11 Considering the adverse impact on the low end consumers, as well as the Licensee, Hon'ble Commission is requested to consider providing Gross Metering arrangement over Net Metering Arrangement in order to reduce the impact on Retail Tariff.

7.28.12 MSEDCL most humbly further suggests that the cumulative capacity to be allowed at a particular distribution transformer shall not exceed 15% of the peak capacity of the distribution transformer instead of present 40% and maximum capacity limit of 50% of consumer's sanctioned load/contract demand for individual roof top installation need to be added in the Principal Regulations.

7.28.13 Implementation of net metering based rooftop solar system will require clarity on the energy accounting & commercial settlement for electricity consumed from rooftop solar system as well as excess injected into the grid. Given the fact that such systems could also be third party owned, regulatory clarity will be required on cost implication on MSEDCL.

7.28.14 Traditionally, Distribution Licensees Tariff structure is based on two part tariff structure i.e. fixed and variable charges. The Net–Metering is jeopardizing cost recovery of MSEDCL, especially the fixed cost (CAPEX) which is not related to kWh consumed but to kW capacity contracted.

7.28.15 It is further submitted that in order to address concerns of connectivity of Solar Net Metering of change-over consumers, the Hon'ble Commission issued practice directions vide notification dated 30 September, 2016. As per practice directions the Supply Licensee is required to pay the wheeling charges for a particular financial year and corresponding to the unadjusted net credited units of electricity at the end of that year, to the Wire Licensee. Such Payment will be taken into account by the Hon'ble Commission while determining the respective Aggregate Revenue Requirements (ARR) of Supply Licensee. In short Wire Business is appropriately compensated for wheeling charges for use of network by Supply Business, which intern passed on to consumers through ARR of Supply Licensee.

7.28.16 In MSEDCL's case, MSEDCL is serving role of both Supply and Wire Licensee. If analogy of Mumbai system is followed up then MSEDCL needs to recover revenue on account of wheeling charges on net credited units from Solar PV consumers. Further, MSEDCL believes that the socializing of such wheeling charges should not be done and needs to be recovered from such rooftop system users.

7.28.17 MSEDCL would also like to state that it has to account for all rooftop consumers too for power purchase bucket. So irrespective of whether the consumer consumes power from MSEDCL grid or not, the petitioner has to make the necessary arrangements in place in terms of power purchase, infrastructure etc. for which it needs to be compensated. Therefore, it is proposed that, Commission allows a certain amount of charge per unit to be made payable to MSEDCL by the rooftop user. Such charge needs to compensate wheeling charges to be payable by respective users availing Net Metering facility. Hence MSEDCL humbly requests Hon'ble Commission to allow MSEDCL to levy following wheeling charges on rooftop energy consumption.

Particulras	FY 18-19	FY 19-20
	Rs/Unit	Rs/Unit
33 kV level	0.15	0.15
22/11 kV level	0.83	0.78
LT Level	1.26	1.24

7.28.18 MSEDCL further suggests that the electricity generated from a solar rooftop system shall be capped cumulatively at 90% of the electricity consumption by the eligible consumer at the end of the relevant billing period. At the beginning of the each settlement period, the quantum of injected electricity carried forward will be reset to Zero.

7.29 Short Term Open Access Transmission Charges

7.29.1 It has been observed that some of the Open Access consumers are misusing certain provisions of the present MERC Open Access Regulations. e.g. the consumers are seeking open access for a period of one month under short term open access for consecutive period of more than 3 months which actually should have come under the medium term open access.

7.29.2 Hon'ble Commission has determined the transmission tariff for medium term and short term users in terms of Rs./kW/month and Rs./kWh respectively. To avoid the transmission charges in terms of Rs./kW/month, the consumers are seeking short term open access for consecutive months (>3months) instead of opting for medium term open access. Thus they are not only misutilizing the provisions of the Regulations but also putting additional financial burden on MSEDCL which in turn is getting passed on to the consumers of MSEDCL by way of increased tariffs. A consumer having 300 MVA demand availing short term open access for consecutive three months is costing MSEDCL about Rs. 1 Cr per month as shown in following example.

Month	Open Access CD (kVA)	Transmission units	Applicable Transmission charge		Transmission charge (Rs. Crores)		Difference (Rs. Crores)
			Short-term OA (Rs./kWh)	Medium-term OA (Rs./kW/month)	Short-term OA	Medium-term OA	
May-16	300000	209004258	0.26	194.79	5.43	5.84	0.41
Jun-16	300000	165958195	0.26	194.79	4.31	5.84	1.53
Jul-16	224000	149207935	0.28	204.24	4.18	4.57	0.40
Total	**824000**	**524170388**			**13.93**	**16.26**	**2.34**

7.29.3 MSEDCL further submits that it has to pay the transmission charges to STU on the basis of MW irrespective of the actual consumption and therefore the difference in the amount is overburden on the consumers of MSEDCL which actually needs to be borne by open access consumers. Hence, MSEDCL requests the Hon'ble Commission to approve the short term open access charges in terms of Rs./kW/month instead of present Rs/kWh. Short Term OA charges need to be more than Medium term Open Access Charges.

7.30 Charges for Short Open Access Charges

7.30.1 A Committee was constituted by CEA on the advice of Ministry of Power to examine issues relating to amendments in the Electricity Rules, 2005 as well as on issues pertaining to Open Access.

7.30.2 The Committee had made certain suggestions on frequent shifting of Open Access Consumers. In the Consultation Paper based on the report of the above committee following observation is made.

DISCOMs are unable to manage power procurement efficiently due to the high frequency of shifting of Open Access consumers between DISCOM and other source of power.

7.30.3 The consultation paper also observed that

Whereas open access consumers are allowed to re-schedule their energy drawal based on the daily energy requirement, DISCOMs irrespective of the drawal pattern of the open access consumers, under universal service obligation is required to keep its entire generation and transmission capacity available for the consumers. In such a scenario forecasting demand for the ensuing day becomes challenging for the DISCOMs.

Considering the immense growth in number of open access consumers and the fluctuation in the energy drawal from open access, it is now imperative that frequency of switching is modulated in such a way that DISCOMs are not unduly burdened by their obligation to provide supply.

7.30.4 Considering the above difficulties, present open access charges needs to be revised. The revision needs to be based on period of confirmed schedule or degree of certainty which will eventually lead to incentivizing consumers who assist DISCOMs in improving accuracy of demand forecasts and in adhering to schedule.

7.30.5 Recent increase in Open Access has financially burdened the MSEDCL and resulted in revenue impact of around Rs. 2000 Crs per annum in last 3-4 years. The majority of Open Access permissions given by MSEDCL are of short term. The Short term sourcing is very volatile and frequent switching of sources is making the power purchase planning difficult. Because of the long term tie ups, the MSEDCL has to pay fixed charges irrespective of power drawl.

7.30.6 Considering the various obligations on the MSEDCL, the scheduling of power is getting difficult. Being the provider of last resort and Universal Service Obligation, the MSEDCL is required to maintain the sufficient power availability in case of failure of source of Open Access consumer. This is adding unnecessary financial burden of fixed costs on the MSEDCL which is getting reflected into the tariffs. Increased obligations, higher tariffs and open access has turned into a vicious cycle further stressing the finances of MSEDCL.

7.30.7 Therefore, MSEDCL requests the Hon'ble Commission to devise the Open Access charges in such a way that the long term Open Access consumers pay lower charges than the medium term and short term Open Access consumer pays the highest charges. This will help MSEDCL in avoiding undue burden of Deviation Settlement Mechanism (DSM) charges due to open access as well as in improving accuracy of demand forecasts and in adhering to schedule.

7.31 Any Other submission

7.31.1 Decisions of various Regulatory Forums

7.31.1.1 The Aggregate Revenue Requirement has been arrived at on the basis of available data for various Utilities like MSPGCL, MSETCL, NTPC, NPCIL, PGCIL and IPPs etc. Also, this data in some cases is likely to be revised on account of various reasons including decisions by the appropriate regulatory forums and judicial authorities. This is likely to have an additional impact on revenue gap, which cannot be estimated at this stage. Hon'ble Commission is humbly requested that as and when such impact is arrived at, the same may please be considered by the Hon'ble Commission and may permit recovery of the same with appropriate mechanism with immediate effect.

7.31.1.2 This will also be applicable for other legal cases which MSEDCL is challenging or has already challenged before various Legal/Judiciary forums. The same will have to be applied to these legal cases and hence the impact of the same may have to be considered by Hon'ble Commission at an appropriate time.

7.31.2 MSEDCL humbly requests the Hon'ble Commission to consider renewable power procurement through competitive bidding to qualify for RPO compliance.

7.31.2.1 At present, Clause 7.2 of MERC RPO Regulations, 2016 restricts MSEDCL to procure RE power through Commission approved rates only in order to fulfill its RPO obligation. MSEDCL would like to humbly submit that renewable tariff discovered through competitive bidding are lower than that Commission approved feed in tariff and therefore serves the larger interest of supplying cheap power to consumers.

7.31.2.2 MSEDCL would like to bring in to Hon'ble Commission's notice it has submitted comments on MERC's discussion paper on tariff discovery for EPAs of wind, bagasse and biomass which have completed the EPA tenure.

7.31.3 MSEDCL would like to humbly submit that for wind, it has paid the feed in tariff for 13 years as approved by Commission and facilitated the generators to service its debt and recover all other expenses it has incurred to run the project. In spirit MSEDCL is of the opinion that the consumers of MSEDCL have paid all the necessary costs to run the projects along with designated return on equity. Therefore, after the EPA tenure, the consumers of MSEDCL deserve cheap power from the generators with a tariff consisting of O&M and interest on working capital charges. MSEDCL therefore requests Hon'ble Commission to do the needful.

7.31.4 MSEDCL humbly requests the Commission to make it compulsory for railways to enter into a standby agreement with MSEDCL. The charges for the same are detailed in section 7.19.

8. Wheeling Charges

8.1 Network Cost of MSEDCL

8.1.1 Hon'ble Commission in MYT Regulations 2015 has notified the ratio of network and supply cost segregation. MSEDCL has considered the same for segregation of aggregate revenue requirement for the period FY 18-19 to FY 19-20 and arrived at the Wires Business and Retail Supply Business Cost. Following table provides the summary of Network Cost of MSEDCL for the period of FY 18-19 to FY 19-20.

Table 155: Network Cost of MSEDCL for FY 2018-19 to FY 19-20

Rs. Crs

S. No.	Particulars	FY 2018-19	FY 2019-20
1	Operation & Maintenance Expenses	4,937	5,237
2	Depreciation	2,710	2,912
3	Interest on Loan Capital	1,382	1,180
4	Interest on Working Capital	135	134
5	Interest on deposit from Consumers and Distribution System Users	63	70
6	Provision for bad and doubtful debts	3	-
7	Contribution to contingency reserves	-	-
8	Return on Equity Capital	1,867	2,004
9	**Total Revenue Expenditure**	**11,098**	**11,537**
10	Less : Income from Wheeling Charges	2	2
11	Less: Income from Open Access Charges	641	675
12	**Aggregate Revenue Requirement from Wire Busines**	**10,455**	**10,861**
13	Sales Excluding EHV (MUs)	96,673	1,00,000
14	**Avg Wheeling Charges (Rs/kWh)**	**1.08**	**1.09**

8.1.2 MSEDCL does not maintain audited accounts for voltage wise assets. However, based on the engineering study of its assets and as submitted in previous MYT Petition, 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 kV level and LT level assets. Hence, MSEDCL for the purpose of projection has considered 22/11 kV level GFA as considered in the MYT Order dated 3rd November 2016 which is shown in the table below.

Table 156: Segregation of GFA for FY 2018-19 to FY 2019-20

Particulars	FY 2019-20
33 kV level	14%
22/11 kV level	56%
LT Level	30%

8.1.3 MSEDCL has then applied ratio of Voltage-wise GFA shown in table above to arrive at GFA of 33 kV, 22/11 kV and LT levels asset which has been approved by the Hon'ble Commission in its order dated 3rd November 2016.

8.1.4 The Network Cost is apportioned among voltage level in the ratio of GFA as computed above:

Table 157: Network cost apportioned for FY 2018-19 & FY 2019-20

Particulars	Unit	FY 2018-19	FY 2019-20
33 kV level	Rs. Cr	1,464	1,521
22/11 kV level	Rs. Cr	5,855	6,082
LT Level	Rs. Cr	3,137	3,258

8.1.5 MSEDCL has considered the voltage wise consumption as projected in Form 1.2 for the respective years of the control period for determining the wheeling charges. The projected consumption at different voltage levels is shown below:

Table 158: Voltage Wise Consumption in MUS for FY 2018-19

Particulars	Unit	% Sales	FY 2018-19
33 kV level	MUs	9.75%	9,422
22/11 kV level	MUs	18.43%	17,818
LT Level	MUs	71.82%	69,432

Table 159: Voltage Wise Consumption in MUS for FY 2019-20

Particulars	Unit	% Sales	FY 2019-20
33 kV level	MUs	9.53%	9,535
22/11 kV level	MUs	17.88%	17,876
LT Level	MUs	72.59%	72,590

8.1.6 To arrive at the cost of wheeling at the various voltage levels, the total wire network cost (as computed above) has been apportioned to various voltage levels (i.e., 33 kV, 22 kV/11 kV and LT) in the ratio of sales at respective voltage levels. The wire costs at higher voltage levels have been further apportioned to lower voltage levels, since the HT system is also being used for supply to the LT consumers.

Table 160: Calculation of Wheeling Charges for FY 18-19

Particulars	Network Cost (Rs. Crs)	Sales (MUs)	% of Sales	% of Sales between 22/11 kV & LT Level	Wheeling Cost (Rs. Crs)
33 kV level	1,464	9,422	9.75%		143
22/11 kV level	5,855	17,818	18.43%	20.42%	1,465
LT Level	3,137	69,432	71.82%	79.58%	8,847
Total	**10,455**	**96,673**	**100%**	**100%**	**10,455**

Table 161: Calculation of Wheeling Charges for FY 19-20

Particulars	Network Cost (Rs. Crs)	Sales (MUs)	% of Sales	% of Sales between 22/11 kV & LT Level	Wheeling Cost (Rs. Crs)
33 kV level	1,521	9,535	9.53%		145
22/11 kV level	6,082	17,876	17.88%	19.76%	1,474
LT Level	3,258	72,590	72.59%	80.24%	9,242
Total	**10,861**	**1,00,000**	**100%**	**100%**	**10,861**

8.1.7 Subsequently, MSEDCL has calculated the share of each voltage category in the non-coincident peak demand using % sales for each category. The wheeling charge (in Rs./kW/month) has then been derived by dividing the wheeling cost of each voltage category (as computed above) by the non-coincident peak demand for that category and dividing it by 12 months.

8.1.8 Finally, the wheeling charges for each category have been calculated by dividing the wheeling charge (in Rs./kW/month) for each category by the load factor (assumed to be 66%) and 720 hrs (24x30).

Table 162: Calculation of Wheeling Charges for FY 2018-19

Particulars	Wheeling Loss %	Wheeling Cost (Rs. Crs)	Share in Non Coincident Demand (MW)	Wheeling Charge (Rs./kW/Month)	Wheeling Charges (Rs./kWh)
33 kV level	6%	143	1,632	73	0.15
22/11 kV level	9%	1,465	3,103	394	0.83
LT Level	12%	8,847	12,272	601	1.26
Total		**10,455**	**17,007**	**512**	**1.08**

Table 163: Calculation of Wheeling Charges for FY 2019-20

Particulars	Wheeling Loss %	Wheeling Cost (Rs. Crs)	Share in Non Coincident Demand (MW)	Wheeling Charge (Rs./kW/Month)	Wheeling Charges (Rs./kWh)
33 kV level	6%	145	1,736	70	0.15
22/11 kV level	9%	1,474	3,303	372	0.78
LT Level	12.00%	9,242	13,061	590	1.24
Total		**10,861**	**18,100**	**500**	**1.05**

8.2 Proposed Wheeling Charges

8.2.1 Using the above methodology, MSEDCL proposes the wheeling charges and wheeling losses at HT and LT level for FY 2018-19 to FY 2019-20 as summarized in following table.

Table 164: Proposed Wheeling Losses and Wheeling Charges for FY 2018-19 to FY 2019-20

Particulras	FY 18-19		FY 19-20	
	Wheeling Loss %	Wheeling Charges (Rs./Unit)	Wheeling Loss %	Wheeling Charges (Rs./Unit)
33 kV level	6%	0.15	6%	0.15
22/11 kV level	9%	0.83	9%	0.78
LT Level	12%	1.26	12%	1.24

8.2.2 The Hon'ble Commission is requested to consider the submissions as provided in above paragraphs & approve the proposed wheeling charges and wheeling losses as proposed above.

9. TARIFF RECOVERY MECHANISM

9.1 Background

9.1.1 As discussed in previous Chapters, MSEDCL has considered the following principles while proposing the revised tariff for the period i.e. FY 2018-19 to FY 2019-20:

- Rationalisation of Fixed Charges to ensure increase in recovery of fixed costs through fixed charges;
- kVAh based billing for HT Category consumers;
- Rationalisation of Incentives;
- Incentives for New as well as Existing HT consumers for optimum utilisation;
- Revision in ToD Charges considering the actual demand curve;
- Recovery of Cross Subsidy Surcharge as per NTP formula without any ceiling;
- Applicability of Additional Surcharge extended to all OA consumers including those sourcing power from CPP as well;
- Introduction of separate category of Electric vehicle Charging stations/ centers;
- Same tariffs for FY 18-19 and FY 19-20 in order to bring stability in power tariffs and avoid any carrying cost, etc;

9.1.2 MSEDCL submits that the National Tariff Policy envisages that the consumer tariff should progressively reflect the cost of supply of electricity. Accordingly, MSEDCL has proposed the tariffs for certain LT categories consumers close to cost of supply of electricity.

9.2 Rationale of Tariff Hike

9.2.1 MSEDCL submits that there was a huge reduction in approved revenue gap vis-a-vis the revenue gap sought by MSEDCL in MYT Order dated 3rd November 2016. MSEDCL further submits that with approved tariffs it is difficult to sustain its operations due to intrinsic rise in all expenditure heads due to inflationary pressures, and consistent rise in power purchase costs coupled with energy demands. The obligation to be met under Central or State Policies adding burden on the operations of MSEDCL. This had compelled MSEDCL to seek revision in Tariffs so as to meet the bare minimum requirement in order to remain financially viable and to meet the financial obligations for discharging its liabilities so as to effectively discharge its duties towards consumer services.

9.2.2 Accordingly, MSEDCL has proposed a revision in fixed and energy charges for various categories to bridge the revenue gap. Such revision is minimum requirement for MSEDCL to meet the inflationary rise as well as additional costs arisen due to RPO Compliance, change in consumer mix, impact of Open Access and reduction in revenue. MSEDCL submits that the proposed tariff revision is purely to meet the revenue gap emerged due to increase in costs for the reasons beyond reasonable control of MSEDCL.

9.3 Full recovery of Cross Subsidy Surcharge

9.3.1 MSEDCL at Paragraph 10.3 of this Petition has requested the Hon'ble Commission to determine the Cross Subsidy Surcharge based on the current level of cross subsidy. The current level of cross subsidy for Open Access Consumers needs to be calculated considering the formula prescribed the NTP 2016 without putting any ceiling. Considering this, MSEDCL has computed the CSS at Paragraph 10.4 of this Petition. Accordingly, with proposed CSS, MSEDCL is expected to get additional revenue of Rs.1,125 Crs during the period FY 18-19 to FY 19-20. The same has been adjusted against the revenue recovery from proposed tariffs.

9.4 Additional Surcharge Applicable to OA consumers sourcing power from CPP

9.4.1 MSEDCL at Paragraph 11.3 of this Petition has requested the Hon'ble Commission to make the additional surcharge applicable to OA consumers sourcing power from Captive Power Plants as well. MSEDCL feels that increasing trend of 'retrofitting' oneself as captive so as to somehow evade CSS and additional surcharge is alarming and requires to be taken judicial note of. Similarly, such evasion of CSS and additional surcharge affect the revenue of MSEDCL and such under recovery gets passed on to its other common consumers resulting into increase in their tariff for no fault on their part.

9.4.2 Accordingly, with proposed additional surcharge making applicable to OA consumers including those sourcing power from CPP, MSEDCL will get additional revenue of Rs.1,364 Crs during the period FY 18-19 to FY 19-20. The same has been adjusted against the revenue recovery from proposed tariffs.

9.5 Recovery of wheeling charges from consumers connected at higher voltage levels

9.5.1 Hon'ble Commission in its MYT Order dated 3 November, 2016 in Case No. 48 of 2016 has un-bundled the Variable Charge component (earlier termed Energy Charge) of the tariff into a Wheeling Charge component and Energy (Supply) Charge component. This un-bundling of the tariff components and determination of Wheeling Charges for different voltage levels is based on the principle that the consumer tariffs should also reflect the underlying differences in cost of supply at different voltage levels. Hence, HT consumers have been further distinguished based on voltage levels, i.e. EHV, 33 kV, 22 kV and 11 kV.

9.5.2 As per Regulation 5.3 of the MERC (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, the installations have been classified by the Commission. As per Section 43 of the Electricity Act, 2003, MSEDCL is bound release supply as per stipulations made out in SoP Regulations, 2014. Considering availability of various voltage level networks, RoW issues in the infrastructure installation, space constraints, infrastructure cost and consumer requests, MSEDCL has taken rational view of releasing connections at available voltage levels (could be higher or lower) and upgrade the same as network gets upgraded.

Hon'ble Commission in its Order dated 25 April, 2018 in Case No.99 of 2017 has taken up an issue of levy of Wheeling Charges to consumers connected on lower voltage levels wherein the Hon'ble Commission noted following:

"

42. MSEDCL has many other consumers who are availing power at higher or lower voltage level than specified in SoP Regulations. This could be because of non-availability of requisite network. The possibility of gaming by consumers to pay lower Wheeling Charge also cannot be ruled out due to which MSEDCL is possibly losing their *legitimate Wheeling Charge revenue. The Commission would look into this aspect and give necessary direction in the MTR Order."*

9.5.3 As per MERC (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2005, the connections of the consumers were done at specific voltage levels. The said regulations were amended in the year 2014 in which the limit for release of load at various voltage levels was redefined. However, at present, certain consumers are still connected at higher voltage levels than prescribed in the amended regulations.

9.5.4 Presently 1797 consumers are connected at a higher voltage level than the prescribed one. In spite of availability of lower voltage level and having a sanctioned load limit of lower voltage level, these consumers are paying less wheeling charges due to which there is loss of wheeling charges of Rs. 664 Crs. as per the provisional information available for FY 2017-18.

9.5.5 MSEDCL has considered the sales for such consumers for FY 2018-19 and FY 2019-20 as per the provisional information of FY 2017-18 and accordingly has considered the revenue from wheeling charges of Rs. 664 for each of the years i.e. FY 18-19 and FY 19-20.

9.5.6 Accordingly, MSEDCL prays Hon'ble Commission the principle adopted in Order (Case No.99 of 2017) needs to be applied uniformly and recovery of wheeling charges needs to be based on billed demand of such consumers for that particular month for the years FY 2018-19 and FY 2019-20. Accordingly, MSEDCL has proposed the revenue recovery from revised tariffs in next two years as shown in following table.

Table 165: Revenue recovery from revised tariffs

Rs Cr.

Particulars	Amount	
True Up Requirement for FY 15-16		5,546
True Up Requirement for FY 16-17		6,704
Revenue Gap for FY 17-18		5,420
Revenue Gap for FY 18-19		4,990
Revenue Gap for FY 19-20		6,695
Impact of Review Order for FY 14-15		216
Difference in Sharing of Efficiency Loss (primarily distribution loss due disallowance of AG sales for FY 14-15)		935
Carrying Cost - on Revenue Gaps for previous years till FY 17-18		3,880
Claim of penalty levied by MERC for shortfall in RPO		260
Total Revenue Gap		**34,646**
Full recovery of Cross Subsidy Surcharge		(1,110)
Additional Surcharge Applicable to all OA consumers including those sourcing power from CPP		(1,367)
Wheeling Charge Recovery from consumers connected at higher voltage than approved as per SOP		(1,328)
Net Revenue Gap		**30,842**
Financial Year	**FY 18-19**	**FY 19-20**
Revenue at Existing Tariff	65,384	68,565
Revenue at Proposed Tariff	81,097	83,693
Revenue Recovery	15,714	15,128
Total Revenue Recovery		**30,842**

9.5.7 MSEDCL requests the Hon'ble Commission to allow the revenue recovery from revised tariffs as shown in above table.

9.5.8 A comparison of detailed Category/Sub-category wise Existing and Proposed Fixed/ Demand Charges and Energy Charges (Excl. Wheeling Charges) is shown in tables below:

Category	Unit	FY 17-18	FY 18-19			FY 19-20		
		Existing	Approved	Proposed		Approved	Proposed	
		Demand Charges			% Change over Approved	Demand Charges		% Change over FY 18-19 Proposed
HT I (A) (i): HT - Industry								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT I (A) (ii): HT - Industry New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT I (B) (i): HT - Industry (Seasonal)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT I (B) (ii): HT - Industry (Seasonal) New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT II (A): HT - Commercial								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT II (B): HT - Commercial New Connections								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT III (A): HT - Railways/Metro/Monorail Traction								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT III (B): HT - Railways/Metro/Monorail Traction (New Connections)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month			565			565	
HT IV: HT - Public Water Works (PWW)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT V(A): HT - Agriculture Pumpsets								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	40	45	125	178%	50	125	0%
HT V(B): HT - Agriculture Others								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	40	45	150	233%	50	150	0%
HT VI: HT - Group Housing Societies (Residential)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	220	220	460	109%	220	460	0%
HT VIII(A): HT - Temporary Supply Religious								
11/22 kV; 33 kV; EHV	Rs./Connection/ Month	330	355	745	110%	385	745	0%
HT VIII(B): HT - Temporary Supply Others (TSO)								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	290	290	610	110%	290	610	0%
HT IX(A): HT - Public Services-Government								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT IX(B): HT - Public Services-Others								
11/22 kV; 33 kV; EHV	Rs. / kVA/Month	250	270	565	109%	290	565	0%
HT X : Charging Stations/Centers for Electrical Vehicles	Rs. / kVA/Month			565			565	

Category	Unit	FY 17-18	FY 18-19			FY 19-20		
		Existing	Approved	Proposed		Approved	Proposed	
		Fixed/Demand Charges			% Change over Approved	Fixed/Demand Charges		% Change over FY 18-19 Proposed
LT I: LT - Residential								
LT I(A): LT - Residential-BPL	Rs./Month	12	13	15	15%	15	15	0%
LT I(B): LT - Residential								
0-100 Units	Rs./Month	60	65	140	115%	70	140	0%
101-300 Units	Rs./Month	60	65	170	162%	70	170	0%
301-500 Units	Rs./Month	60	65	190	192%	70	190	0%
501-1000 Units	Rs./Month	60	65	205	215%	70	205	0%
Above 1000 Units	Rs./Month	60	65	220	238%	70	220	0%
Three Phase Connection	Rs./Month	170	185	400	116%	200	400	0%
LT II: LT - Non-Residential								
(A) (i): 0 – 20 kW	Rs./Month	250	270	580	115%	290	580	0%
(B): >20 kW and ≤ 50 kW	Rs. / kVA/Month	250	270	580	115%	290	580	0%
(C): >50 KW	Rs. / kVA/Month	250	270	580	115%	290	580	0%
LT III: LT - Public Water Works (PWW)								
(A): 0-20 KW	Rs. / kVA/Month	75	80	170	113%	85	170	0%
(B): > 20 kW and ≤ 40 kW	Rs. / kVA/Month	85	90	195	117%	100	195	0%
(C): > 40 kW	Rs. / kVA/Month	125	135	290	115%	145	290	0%
LT IV: LT - Agriculture								
LT IV(B): LT - Agriculture Metered Tariff - Pumpsets	Rs. / HP/Month	22	24	50	108%	26	50	0%
LT IV(C): LT - Agriculture Metered – Others	Rs./kW/Month	60	65	140	115%	70	140	0%

Category	Unit	FY 17-18	FY 18-19			FY 19-20		
		Existing	Approved	Proposed		Approved	Proposed	
		Fixed/Demand Charges			% Change over Approved	Fixed/Demand Charges		% Change over FY 18-19 Proposed
LT V (A): LT - Industry - Powerlooms								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): Above 20 KW	Rs. / kVA/Month	170	185	400	116%	200	400	0%
LT V(B): LT - Industry - General								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): Above 20 KW	Rs. / kVA/Month	170	185	400	116%	200	400	0%
LT VI: LT - Street Light								
(A): Grampanchayat A B & C Class Municipal Council	Rs. / kW/Month	60	65	140	115%	70	140	0%
(B): Municipal corporation Area	Rs. / kW/Month	60	65	140	115%	70	140	0%
LT VII: LT - Temporary Connection								
(A): LT - Temporary Supply Religious (TSR)	Rs./Connection/ Month	330	355	765	115%	385	765	0%
(B): LT - Temporary Supply Others (TSO)	Rs./Connection/ Month	360	360	775	115%	360	775	0%
LT VIII: LT - Advertisements and Hoardings	Rs./Connection/ Month	575	575	1235	115%	575	1235	0%
LT IX: LT - Crematorium and Burial Grounds	Rs./Connection/ Month	330	355	765	115%	385	765	0%
LT X (A) - Public Services - Government								
(i): 0-20 KW	Rs./Connection /Month	220	235	505	115%	250	505	0%
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	220	235	530	126%	250	530	0%
(iii): >50 kW	Rs. / kVA/Month	220	235	550	134%	250	550	0%
LT X(B) - Public Services - Others								
(i): 0-20 KW	Rs./Connection /Month	250	270	580	115%	290	580	0%
(ii): >20 - ≤ 50 kW	Rs. / kVA/Month	250	270	610	126%	290	610	0%
(iii): >50 kW	Rs. / kVA/Month	250	270	635	135%	290	635	0%
LT XI Charging Stations/Centers for Electrical Vehicles	Rs. / kVA/Month			580			580	

Category	FY 17-18	FY 18-19			FY 19-20		
	Existing	Approved	Proposed		Approved	Proposed	
	Rs./kWh	Rs./kWh	Rs./kVAh	% Change over Approved	Rs./kWh	Rs./kVAh	% Change over FY 18-19 Proposed
HT I (A) (i): HT - Industry							
11/22 kV; 33 kV; EHV	7.07	6.98	7.09	2%	6.93	7.09	0%
HT I (A) (ii): HT - Industry New Connections							
11/22 kV; 33 kV; EHV			6.09			6.09	0%
HT I (B) (i): HT - Industry (Seasonal)							
11/22 kV; 33 kV; EHV	7.67	7.37	7.70	4%	7.20	7.70	0%
HT I (B) (ii): HT - Industry (Seasonal) New Connections							
11/22 kV; 33 kV; EHV			6.70			6.70	0%
HT II (A): HT - Commercial							
11/22 kV; 33 kV; EHV	11.40	11.45	11.56	1%	11.50	11.56	0%
HT II (B): HT - Commercial New Connections							
11/22 kV; 33 kV; EHV			10.56			10.56	0%
HT III (A): HT - Railways/Metro/Monorail Traction							
11/22 kV; 33 kV; EHV	6.01	5.80	5.91	2%	5.55	5.91	0%
HT III (B): HT - Railways/Metro/Monorail Traction (New Connections)							
11/22 kV; 33 kV; EHV			4.91			4.91	0%
HT IV: HT - Public Water Works (PWW)							
11/22 kV; 33 kV; EHV	5.75	5.85	6.02	3%	5.95	6.02	0%
HT V(A): HT - Agriculture Pumpsets							
11/22 kV; 33 kV; EHV	3.30	3.44	4.24	23%	3.65	4.24	0%
HT V(B): HT - Agriculture Others							
11/22 kV; 33 kV; EHV	4.56	4.75	5.91	24%	5.02	5.91	0%
HT VI: HT - Group Housing Societies (Residential)							
11/22 kV; 33 kV; EHV	5.82	5.82	5.93	2%	5.86	5.93	0%
HT VIII(A): HT - Temporary Supply Religious							
11/22 kV; 33 kV; EHV	3.10	3.20	3.63	13%	3.27	3.63	0%
HT VIII(B): HT - Temporary Supply Others (TSO)							
11/22 kV; 33 kV; EHV	10.14	10.27	11.61	13%	10.39	11.61	0%
HT IX(A): HT - Public Services-Government							
11/22 kV; 33 kV; EHV	7.20	7.20	7.74	8%	7.10	7.74	0%
HT IX(B): HT - Public Services-Others							
11/22 kV; 33 kV; EHV	9.10	9.07	9.72	7%	8.93	9.72	0%
HT X : Charging Stations/Centers for Electrical Vehicles			6.00			6.00	

Rs./kWh

Category	FY 17-18	FY 18-19			FY 19-20		
	Existing	Approved	Proposed	% Change over Approved	Approved	Proposed	% Change over FY 18-19 Proposed
LT I: LT - Residential							
LT I(A): LT - Residential-BPL	1.05	1.06	1.07	1%	1.08	1.07	0%
LT I(B): LT - Residential							
0-100 Units	3.00	3.07	3.07	0%	3.18	3.07	0%
101-300 Units	6.73	6.81	7.19	6%	6.91	7.19	0%
301-500 Units	9.70	9.76	10.26	5%	9.86	10.26	0%
501-1000 Units	11.20	11.25	11.81	5%	11.37	11.81	0%
Above 1000 Units	12.48	12.53	13.14	5%	12.65	13.14	0%
LT II: LT - Non-Residential							
(A) (i): 0 – 20 kW (0 - 200 units)	6.09	6.10	7.96	3%	6.15	7.96	0%
(A) (i): 0 – 20 kW (above 200 units)	9.32	9.32			9.37		
(B): >20 kW and ≤ 50 kW	9.98	9.98	11.59	16%	9.98	11.59	0%
(C): >50 KW	12.55	12.58	14.19	13%	12.63	14.19	0%
LT III: LT - Public Water Works (PWW)							
(A): 0-20 KW	1.97	2.09	2.62	25%	2.31	2.62	0%
(B): > 20 kW and ≤ 40 kW	3.24	3.37	4.15	23%	3.54	4.15	0%
(C): > 40 kW	4.53	4.69	5.74	22%	4.81	5.74	0%
LT IV: LT - Agriculture							
LT IV(A): LT - AG Un-metered - Pumpsets*							
Category 1 Zones (Above 1318 Hrs/HP/Annum)							
(a) 0-5 HP	309	334	449	34%	363	449	0%
(b) Above 5 HP - 7.5 HP	341	365	490	34%	398	490	0%
(c) Above 7.5 HP	381	400	537	34%	443	537	0%
Category 2 Zones (Below 1318 Hrs/HP/Annum)							
(a) 0-5 HP	212	236	320	36%	251	320	0%
(b) Above 5 HP - 7.5 HP	247	266	362	36%	293	362	0%
(c) Above 7.5 HP	275	294	398	35%	321	398	0%
LT IV(B): LT - Agriculture Metered Tariff - Pumpsets	1.83	1.95	2.55	31%	2.14	2.55	0%
LT IV(C): LT - Agriculture Metered – Others	3.09	3.26	4.35	33%	3.51	4.35	0%

Rs./kWh

Category	FY 18-19 Approved	FY 18-19 Proposed	FY 18-19 % Change over Approved	FY 19-20 Approved	FY 19-20 Proposed	FY 19-20 % Change over FY 18-19 Proposed
LT V (A): LT - Industry - Powerlooms						
(i): 0-20 KW	4.59	4.70	2%	4.69	4.70	0%
(ii): Above 20 KW	5.95	6.06	2%	6.02	6.06	0%
LT V(B): LT - Industry - General						
(i): 0-20 KW	4.76	4.87	2%	4.81	4.87	0%
(ii): Above 20 KW	6.38	6.49	2%	6.42	6.49	0%
LT VI: LT - Street Light						
(A): Grampanchayat A B & C Class Municipal Council	4.39	5.16	18%	4.49	5.16	0%
(B): Municipal corporation Area	5.48	6.41	17%	5.58	6.41	0%
LT VII: LT - Temporary Connection						
(A): LT - Temporary Supply Religious (TSR)	3.20	3.79	18%	3.27	3.79	0%
(B): LT - Temporary Supply Others (TSO)	12.63	14.64	16%	12.79	14.64	0%
LT VIII: LT - Advertisements and Hoardings	12.58	12.58	0%	12.74	12.58	0%
LT IX: LT - Crematorium and Burial Grounds	3.14	3.78	21%	3.26	3.78	0%
LT X (A) - Public Services - Government						
(i): 0 – 20 kW (0 - 200 units)	3.15	4.48	20%	3.12	4.48	0%
(i): 0 – 20 kW (above 200 units)	4.32			4.26		
(ii): >20 - ≤ 50 kW	5.10	5.92	16%	5.03	5.92	0%
(iii): >50 kW	5.81	6.50	12%	5.74	6.50	0%
LT X(B) - Public Services - Others						
(i): 0 – 20 kW (0 - 200 units)	4.24	5.91	7%	4.19	5.91	0%
(i): 0 – 20 kW (above 200 units)	6.79			6.74		
(ii): >20 - ≤ 50 kW	6.85	8.06	18%	6.75	8.06	0%
(iii): >50 kW	7.21	8.42	17%	7.11	8.42	0%
LT XI Charging Stations/Centers for Electrical Vehicles		6.00			6.00	

10. Cross Subsidy Surcharges

10.1 Background

10.1.1 Section 2 (47) of the Electricity Act 2003 defines "Open Access', while Section 42 of the said Act inter – alia mandates the Distribution Licensee to provide Open Access to eligible consumers, subject to payment of "Cross Subsidy Surcharge", "Additional Surcharge" & other applicable charges.

10.1.2 MSEDCL further submits that Section 42(2) of the Act provides for the levy of Cross Subsidy Surcharge (CSS). The relevant provision of the Act is reproduced below:-

> *"……. In determining the charges for wheeling, it shall have due regard to all relevant factors including such cross-subsidies, and other operational constraints;*
> *Provided that such open access shall be allowed on payment of surcharge in addition to the charges for wheeling as may be determined by the state commission;*
> *Provided further that such surcharge shall be utilised* to meet the requirements of the ***current level of cross-subsidy*** *within the area of distribution licensee****….(emphasis added)****"*

10.1.3 MSEDCL submits that Section 86 (1) (a) of the Act inter – alia mandates the Hon'ble Commission to determine "Cross Subsidy Surcharge", "Additional Surcharge" & other applicable charges payable by the consumers opting for Open Access.

10.1.4 MSEDCL submits that the National Electricity Policy as stipulated by the Central Government provides that –

> *"Under sub – section (2) of Section 42 of the Act, a surcharge is to be levied by the respective State Commissions on consumers switching to alternate supplies under Open Access. This is to compensate the host distribution licensee serving such consumers who are permitted Open Access under Section 42 (2), for loss of Cross Subsidy element built into the tariff of such consumers…..".*

10.1.5 The Central Government notified the revised National Tariff Policy on 28th January, 2016 and has revised the "Surcharge Formula" as follows:

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.

10.1.6 MSEDCL submits that as per the provision of Section 42 (2) of the Electricity Act 2003, the cross-subsidy surcharge needs to be based on the current level of cross subsidy. Accordingly, the consumers who opted for Open Access need to be charged for the compensation of current level of cross subsidy which prevailed during that period and in order to avoid the burden of the same getting passed on other consumers who are with the Distribution Licensee.

10.2 Lower CSS approved

10.2.1 To examine the issues related to Open Access along with issues relating to amendments in provisions relating to captive Generating plants in the Electricity Rules, 2005, a committee was constituted by CEA on the advice of Ministry of Power. In the Consultation paper by MoP issued on 24th August 2017, which is based on the report of the said Committee, it has been proposed that the SERCs should determine the CSS based on real cross subsidy. The said Paper also advocated for implementation of Tariff Policy 2016 in true spirit. The relevant extract of the said Consultation Paper is reproduced below:

The Tariff Policy 2016 mandates SERCs to determine roadmap for reduction of cross subsidy and bring tariff at +/- 20% Average Cost of Supply, however it restricts Cross

Subsidy Surcharge at 20% of the consumer tariff. In case the consumer tariff is more than 120% of Average Cost of Supply, DISCOM will not be able to recover losses through cross subsidy surcharge in case consumer opts for open access. It is essential for SERCs to implement both Para 8.3 -2 and First proviso to para 8.5.1 of the Tariff Policy 2016 simultaneously. If one of the provision could not be implemented due to some reason, the second provision should also not be implanted to that extent.

10.2.2 While approving the CSS in Case No. 48 of 2016, Hon'ble Commission 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 in accordance with the Tariff Policy, 2016. The CSS computed in accordance with the NTP Formulae represents the current level of cross subsidy. However, Hon'ble Commission has approved the CSS equal to minimum of the two values: Computed CSS and 20% of tariff. This has resulted in lower CSS applicable than current level of cross subsidy. This has resulted into incomplete recovery of Cross Subsidy from Open Access consumers.

10.2.3 For example, the CSS calculated by Hon'ble Commission as per the NTP formula for HT Industry (General) at EHV level for FY 16-17 was Rs 3.67 per unit whereas the CSS approved for that category is Rs 1.62 per unit only. Considering the EHV Open Access Quantum for FY 16-17, MSEDCL lost about Rs. 721 Crs of legitimate revenue from HT Industrial category Open Access consumers due to the lower level of approved CSS.

10.2.4 Such revenue deficit due to lower CSS approved is being passed on to the consumers of the MSEDCL during true up exercise. This results in:-

a. substantial delay in getting this revenue which comes only after true up exercise; and
b. Further tariff increase of MSEDCL consumers at large, despite not being at any fault.

10.2.5 In the process, OA consumers unduly get benefited due to less cross subsidy surcharge. As Industrial consumers are subsidizing consumers, the more impact gets loaded onto the Industrial category, raising its tariff further. Such increased Industrial tariff will lead to more consumers opting for Open Access which will further add to revenue deficit, leading to requirement of further tariff hike, entering into vicious cycle. Therefore, as a principle, only those consumers who opt for Open Access during a particular period should pay the CSS for such period to maintain the prevailing level of cross subsidy and should not be loaded onto MSEDCL's consumers at large.

10.2.6 MSEDCL submits that the growth in Industrial sales of MSEDCL in last 4-5 years was not as expected, one of the reasons being tariff hike for the reasons cited in the above paragraph.

10.3 CSS as Compensatory Charge

10.3.1 MSEDCL submits that there can be no ambiguity with the proposition that CSS is a compensatory charge to the Discom. This principle had been accepted even by the Appellate Tribunal, in several judgments earlier. MSEDCL would also like to add that, as has also been held by the Tribunal, CSS is not only to compensate the Discom for the loss of cross subsidy, it is also to compensate the remaining consumers of the Discom who have not taken open access. This has been so held in the APTEL Judgment dated 2nd December 2013 in Appeal No. 178 of 2011 (supra) in "Summary of Findings" Para II, in the following terms:-

" . .II ***The contention of the State Commission that Tariff Policy provide that the CSS should not be so enormous to suffocate the Competition is misplaced.*** *The Act mandated the State Commission to determine the CSS to meet the requirement of current level of cross subsidy. We have to keep in mind that the CSS is paid by the subsidizing consumers only.* ***This Tribunal in catena of cases has held that CSS is compensatory in nature. It is meant for to compensate the loss suffered by the remaining subsidized low-end consumers. Thus, in the scenario of mass changeover of consumers, the CSS has also to be such that exodus of subsidizing consumers does not load the remaining low end consumers heavily.*** *The State Commission has to balance the interest of all the consumers, the plea taken by the State Commission in Appeal No. 132/2011 and accepted by this Tribunal in its judgment. The above submission of the State Commission also suggests that it has attempted to suppress the CSS artificially ..."("Emphasis Added")*

10.3.2 In view of the submissions in foregoing paragraphs, MSEDCL requests Hon'ble Commission to determine the Cross Subsidy Surcharge considering the formula prescribed the NTP 2016 without putting any ceiling.

10.3.3 It is submitted to the Hon'ble Commission that MSEDCL has determined the cross subsidy surcharge based on the Tariff Policy formula without putting any ceiling.

10.4 Computation of Cross Subsidy Surcharge for FY 2018-19 to FY 2019-20

Computation of ' C '

10.4.1.1 Computation of 'C' is based on the projected power purchase quantum and price for the period FY 18-19 to FY 19-20 as submitted in the Form 2 of the Regulatory Formats. The definition/ explanation for 'C' has been revised in the Tariff Policy dated 28th January, 2016 with inclusion of renewable power purchase in the computation of 'C'.

10.4.1.2 Therefore, computation of 'C' can be taken as the total power purchase cost based on MOD principle to the total power scheduled to be purchased as per MOD principle. Therefore, the 'C' computed for MSEDCL for FY 2018-19 to FY 2019-20 are shown in the following table.

Table 166: Computation of C for FY 2018-19 to FY 2019-20

Financial Year	Details of Power Purchase		
	MUs	Rs. Crs*	Rs./kWh
2018-19	1,28,940	49,706	3.85
2019-20	1,31,183	51,813	3.95
* - Power Purchase Cost is excluding the PGCIL transmission Charges			

Computation of System loss 'L'

10.4.1.3 The projected wheeling losses at the respective voltage level and the transmission losses are used to arrive at the grossed up total system losses for MSEDCL which is shown in the following table.

Table 167: Computation of System Loss for FY 2018-19 to FY 2019-20

Particulars	EHV Level	33 kV	22/11 kV	LT Level
Transmission Losses (%)	3.92%	3.92%	3.92%	3.92%
Wheeling Losses LT (%)	0.00%	6.00%	9.00%	12.00%
Total System Losses (%)	**3.92%**	**9.68%**	**12.57%**	**15.45%**

Computation of wheeling charge 'D'

10.4.1.4 The projected wheeling charges as shown in the **Chapter 8** at the respective voltage levels for MSEDCL along with per unit transmission charges (including PGCIL Charges and Intra-State) are used for the parameter "D' in the computation of cross subsidy surcharge for the period FY 18-19 to FY 19-20. The same wheeling charges at respective voltage levels are shown in the following table along with system losses.

Table 168: Computation of Wheeling Charge D for FY 2018-19 to FY 2019-20

Wheeling Charges (Rs./Unit*)				
Particulars	**EHV Level**	**33 kV**	**22/11 kV**	**LT Level**
2018-19	-	0.15	0.83	1.26
2019-20	-	0.15	0.78	1.24
Transmission Charges (Rs./Unit*)				
Particulars	**EHV Level**	**33 kV**	**22/11 kV**	**LT Level**
2018-19	0.773	0.773	0.773	0.773
2019-20	0.776	0.776	0.776	0.776
Wheeling and Transmission Charges (Rs./Unit*)				
Particulars	**EHV Level**	**33 kV**	**22/11 kV**	**LT Level**
2018-19	0.77	0.93	1.60	2.04
2019-20	0.78	0.92	1.56	2.02

*Rs. /kVAh or Rs./kWh as the Case may be

Computation of Average Billing Rate "T"

10.4.1.5 ABR of MSEDCL has been taken as the effective average billing rate as per the proposed tariff forthe period FY 2018-19 to FY 2019-20.

Determination of Cross subsidy surcharge "S"

10.4.1.6 The category wise CSS applicable to open access consumers arrived on consideration of the components T (ABR), C, L & D from the above referred respective sections is provided in the tables below:-

Table 169: Proposed CSS for FY 18-19

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
HT I(A) (i): HT - Industry							
11/22 KV	10.51	3.85	3.92%	9.00%	12.57%	1.60	4.50
33 KV	8.73	3.85	3.92%	6.00%	9.68%	0.93	3.53
EHV	9.40	3.85	3.92%	0.00%	3.92%	0.77	4.62
HT I(B) (i): HT - Industry (Seasonal)							
11/22 KV	11.85	3.85	3.92%	9.00%	12.57%	1.60	5.84
33 KV	11.44	3.85	3.92%	6.00%	9.68%	0.93	6.24
EHV	13.97	3.85	3.92%	0.00%	3.92%	0.77	9.18
HT II (A): HT - Commercial							
11/22 KV	16.50	3.85	3.92%	9.00%	12.57%	1.60	10.49
33 KV	16.14	3.85	3.92%	6.00%	9.68%	0.93	10.95
EHV	16.52	3.85	3.92%	0.00%	3.92%	0.77	11.73
HT III (A): HT - Railways/Metro/Monorail Traction							
11/22 KV	9.69	3.85	3.92%	9.00%	12.57%	1.60	3.68
33 KV	10.21	3.85	3.92%	6.00%	9.68%	0.93	5.01
EHV	10.88	3.85	3.92%	0.00%	3.92%	0.77	6.10
HT IV: HT - Public Water Works (PWW)							
11/22 KV	8.71	3.85	3.92%	9.00%	12.57%	1.60	2.70
33 KV	7.33	3.85	3.92%	6.00%	9.68%	0.93	2.13
EHV	6.70	3.85	3.92%	0.00%	3.92%	0.77	1.91
HT V(A): HT - Agriculture Pumpsets							
11/22 KV	5.94	3.85	3.92%	9.00%	12.57%	1.60	-
33 KV	4.94	3.85	3.92%	6.00%	9.68%	0.93	-
EHV	5.40	3.85	3.92%	0.00%	3.92%	0.77	0.61
HT V(B): HT - Agriculture Others							
11/22 KV	7.40	3.85	3.92%	9.00%	12.57%	1.60	1.39
33 KV	6.41	3.85	3.92%	6.00%	9.68%	0.93	1.21
EHV	6.26	3.85	3.92%	0.00%	3.92%	0.77	1.47

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
HT VI: HT - Group Housing Societies (Residential)							
11/22 KV	9.16	3.85	3.92%	9.00%	12.57%	1.60	3.15
33 KV	8.78	3.85	3.92%	6.00%	9.68%	0.93	3.59
EHV	8.63	3.85	3.92%	0.00%	3.92%	0.77	3.84
HT VIII(B): HT - Temporary Supply Others (TSO)							
11/22 KV	17.41	3.85	3.92%	9.00%	12.57%	1.60	11.40
33 KV	16.01	3.85	3.92%	6.00%	9.68%	0.93	10.81
EHV	14.67	3.85	3.92%	0.00%	3.92%	0.77	9.88
HT IX(A): HT - Public Services-Government							
11/22 KV	11.07	3.85	3.92%	9.00%	12.57%	1.60	5.06
33 KV	10.45	3.85	3.92%	6.00%	9.68%	0.93	5.25
EHV	10.29	3.85	3.92%	0.00%	3.92%	0.77	5.51
HT IX(B): HT - Public Services-Others							
11/22 KV	13.69	3.85	3.92%	9.00%	12.57%	1.60	7.68
33 KV	12.66	3.85	3.92%	6.00%	9.68%	0.93	7.47
EHV	11.12	3.85	3.92%	0.00%	3.92%	0.77	6.34

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
LT Category							
LT-BPL DOMESTIC	1.66	3.85	3.92%	12.00%	15.45%	2.04	-
LT-DOMESTIC							
0-100	6.11	3.85	3.92%	12.00%	15.45%	2.04	-
101-300	10.41	3.85	3.92%	12.00%	15.45%	2.04	3.81
301-500	12.75	3.85	3.92%	12.00%	15.45%	2.04	6.15
501-1000	13.75	3.85	3.92%	12.00%	15.45%	2.04	7.15
Above 1000	14.61	3.85	3.92%	12.00%	15.45%	2.04	8.01
LT Commercial							
LT COMM 0-20 KW	12.14	3.85	3.92%	12.00%	15.45%	2.04	5.54
LT COMM 20-50 KW	18.73	3.85	3.92%	12.00%	15.45%	2.04	12.14
LT COMM > 50 KW	22.44	3.85	3.92%	12.00%	15.45%	2.04	15.84
LT PWW							
LT-PWW > 40 KW	8.27	3.85	3.92%	12.00%	15.45%	2.04	1.67
LT INDUSTRIES							
LT IND UPTO 27 HP	7.23	3.85	3.92%	12.00%	15.45%	2.04	0.63
LT IND > 27 HP	12.05	3.85	3.92%	12.00%	15.45%	2.04	5.45
LT POWERLOOM							
POWERLOOM UPTO 27 HP	6.25	3.85	3.92%	12.00%	15.45%	2.04	-
POWERLOOM > 27 HP	8.20	3.85	3.92%	12.00%	15.45%	2.04	1.61

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
Steet Light							
ST.LGT GRAM, A,B&C	6.65	3.85	3.92%	12.00%	15.45%	2.04	0.05
ST.LGT MUN. CO.	8.45	3.85	3.92%	12.00%	15.45%	2.04	1.86
TEMPORORY CONNECTION							
TEMP CONN (OTHER)	18.13	3.85	3.92%	12.00%	15.45%	2.04	11.53
TEMP CONN (RELI)	6.74	3.85	3.92%	12.00%	15.45%	2.04	0.14
HORDING AND ADVT.	21.44	3.85	3.92%	12.00%	15.45%	2.04	14.85
CREMATORIUM/BURIAL	5.98	3.85	3.92%	12.00%	15.45%	2.04	-
LT-PUBLIC SERVICES							
LT-PUB.SER.GOVT							
LT-PUB.SER.GOVT- 0-20 KW	9.21	3.85	3.92%	12.00%	15.45%	2.04	2.61
LT-PUB.SER.GOVT- 20-50 KW	13.43	3.85	3.92%	12.00%	15.45%	2.04	6.84
LT-PUB.SER.GOVT- > 50 KW	13.57	3.85	3.92%	12.00%	15.45%	2.04	6.98
LT-PUB.SER.OTHER							
LT-PUB.SER.OTHER 0-20 KW	13.35	3.85	3.92%	12.00%	15.45%	2.04	6.75
LT-PUB.SER.OTHER- 20-50KW	13.65	3.85	3.92%	12.00%	15.45%	2.04	7.05
LT-PUB.SER.OTHER- >50KW	10.99	3.85	3.92%	12.00%	15.45%	2.04	4.39

*Rs./kVAh or Rs./kWh as the case may be

Table 170: Proposed CSS for FY 19-20

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
HT I(A) (i): HT - Industry							
11/22 KV	10.48	3.95	3.92%	9.00%	12.57%	1.56	4.40
33 KV	8.67	3.95	3.92%	6.00%	9.68%	0.92	3.38
EHV	9.29	3.95	3.92%	0.00%	3.92%	0.78	4.40
HT I(B) (i): HT - Industry (Seasonal)							
11/22 KV	12.12	3.95	3.92%	9.00%	12.57%	1.56	6.04
33 KV	11.78	3.95	3.92%	6.00%	9.68%	0.92	6.48
EHV	14.60	3.95	3.92%	0.00%	3.92%	0.78	9.71
HT II (A): HT - Commercial							
11/22 KV	16.47	3.95	3.92%	9.00%	12.57%	1.56	10.39
33 KV	16.06	3.95	3.92%	6.00%	9.68%	0.92	10.76
EHV	16.44	3.95	3.92%	0.00%	3.92%	0.78	11.56
HT III (A): HT - Railways/Metro/Monorail Traction							
11/22 KV	9.64	3.95	3.92%	9.00%	12.57%	1.56	3.56
33 KV	10.20	3.95	3.92%	6.00%	9.68%	0.92	4.90
EHV	10.88	3.95	3.92%	0.00%	3.92%	0.78	5.99
HT IV: HT - Public Water Works (PWW)							
11/22 KV	8.78	3.95	3.92%	9.00%	12.57%	1.56	2.71
33 KV	7.22	3.95	3.92%	6.00%	9.68%	0.92	1.92
EHV	6.55	3.95	3.92%	0.00%	3.92%	0.78	1.67
HT V(A): HT - Agriculture Pumpsets							
11/22 KV	5.88	3.95	3.92%	9.00%	12.57%	1.56	-
33 KV	4.94	3.95	3.92%	6.00%	9.68%	0.92	-
EHV	5.43	3.95	3.92%	0.00%	3.92%	0.78	0.54
HT V(B): HT - Agriculture Others							
11/22 KV	7.33	3.95	3.92%	9.00%	12.57%	1.56	1.26
33 KV	6.39	3.95	3.92%	6.00%	9.68%	0.92	1.09
EHV	6.24	3.95	3.92%	0.00%	3.92%	0.78	1.35

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
HT VI: HT - Group Housing Societies (Residential)							
11/22 KV	9.24	3.95	3.92%	9.00%	12.57%	1.56	3.17
33 KV	8.76	3.95	3.92%	6.00%	9.68%	0.92	3.47
EHV	8.61	3.95	3.92%	0.00%	3.92%	0.78	3.73
HT VIII(B): HT - Temporary Supply Others (TSO)							
11/22 KV	17.36	3.95	3.92%	9.00%	12.57%	1.56	11.29
33 KV	16.00	3.95	3.92%	6.00%	9.68%	0.92	10.71
EHV	15.86	3.95	3.92%	0.00%	3.92%	0.78	10.97
HT IX(A): HT - Public Services-Government							
11/22 KV	10.73	3.95	3.92%	9.00%	12.57%	1.56	4.65
33 KV	10.13	3.95	3.92%	6.00%	9.68%	0.92	4.84
EHV	9.99	3.95	3.92%	0.00%	3.92%	0.78	5.10
HT IX(B): HT - Public Services-Others							
11/22 KV	13.56	3.95	3.92%	9.00%	12.57%	1.56	7.48
33 KV	12.44	3.95	3.92%	6.00%	9.68%	0.92	7.15
EHV	10.97	3.95	3.92%	0.00%	3.92%	0.78	6.09

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
LT Category							
LT-BPL DOMESTIC	1.66	3.95	3.92%	12.00%	15.45%	2.02	-
LT-DOMESTIC							
0-100	6.10	3.95	3.92%	12.00%	15.45%	2.02	-
101-300	10.38	3.95	3.92%	12.00%	15.45%	2.02	3.69
301-500	12.70	3.95	3.92%	12.00%	15.45%	2.02	6.02
501-1000	13.70	3.95	3.92%	12.00%	15.45%	2.02	7.01
Above 100	14.57	3.95	3.92%	12.00%	15.45%	2.02	7.88
LT Commercial							
LT COMM 0-20 KW	11.96	3.95	3.92%	12.00%	15.45%	2.02	5.28
LT COMM 20-50 KW	18.53	3.95	3.92%	12.00%	15.45%	2.02	11.84
LT COMM > 50 KW	22.37	3.95	3.92%	12.00%	15.45%	2.02	15.68
LT PWW							
LT PWW 0-20 KW	4.59	3.95	3.92%	12.00%	15.45%	2.02	-
LT-PWW 20-40 KW	6.16	3.95	3.92%	12.00%	15.45%	2.02	-
LT-PWW > 40 KW	8.26	3.95	3.92%	12.00%	15.45%	2.02	1.57
LT INDUSTRIES							
LT IND UPTO 27 HP	7.27	3.95	3.92%	12.00%	15.45%	2.02	0.58
LT IND > 27 HP	11.90	3.95	3.92%	12.00%	15.45%	2.02	5.21
LT POWERLOOM							
POWERLOOM UPTO 27 HP	6.23	3.95	3.92%	12.00%	15.45%	2.02	-
POWERLOOM > 27 HP	8.08	3.95	3.92%	12.00%	15.45%	2.02	1.39

*Rs./kVAh or Rs./kWh as the case may be

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
Steet Light							
ST.LGT GRAM, A,B&C	6.61	3.95	3.92%	12.00%	15.45%	2.02	-
ST.LGT MUN. CO.	8.49	3.95	3.92%	12.00%	15.45%	2.02	1.80
TEMPORORY CONNECTION							
TEMP CONN (OTHER)	18.22	3.95	3.92%	12.00%	15.45%	2.02	11.53
TEMP CONN (RELI)	6.80	3.95	3.92%	12.00%	15.45%	2.02	0.12
HORDING AND ADVT.	20.89	3.95	3.92%	12.00%	15.45%	2.02	14.21
CREMATORIUM/BURIAL	5.92	3.95	3.92%	12.00%	15.45%	2.02	-
LT-PUBLIC SERVICES							
LT-PUB.SER.GOVT							
LT-PUB.SER.GOVT- 0-20 KW	9.03	3.95	3.92%	12.00%	15.45%	2.02	2.34
LT-PUB.SER.GOVT- 20-50 KW	12.94	3.95	3.92%	12.00%	15.45%	2.02	6.26
LT-PUB.SER.GOVT- > 50 KW	12.97	3.95	3.92%	12.00%	15.45%	2.02	6.29
LT-PUB.SER.OTHER							
LT-PUB.SER.OTHER 0-20 KW	13.26	3.95	3.92%	12.00%	15.45%	2.02	6.57
LT-PUB.SER.OTHER- 20-50KW	13.56	3.95	3.92%	12.00%	15.45%	2.02	6.87
LT-PUB.SER.OTHER- >50KW	10.82	3.95	3.92%	12.00%	15.45%	2.02	4.13

*Rs./kVAh or Rs./kWh as the case may be

10.4.1.7 Hon’ble Commission may consider the submissions as provided in above paragraphs & approve the CSS for FY 18-19 to FY 19-20 as submitted above.

11. Additional Surcharge

11.1 Background

11.1.1 Section 42 (4), provides that

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

11.1.2 Regulation 14.8 of the Commission's Distribution OA Regulations, 2016 outlines the principles for determination and levy of Additional Surcharge as below:

"14.8 Additional Surcharge

a. An Open Access consumer receiving supply of electricity from a person other 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 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. This 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 a commitment.

c. The Distribution Licensee shall submit to the Commission with its petition under the Commission's Regulations governing a Multi-year tariff, detailed computations of fixed cost which it is incurring towards his obligation to supply, and actual expenses incurred vis-à-vis those approved by the Commission.

d. The Commission shall determine category wise additional surcharge to be recovered by Distribution Licensee from Open Access consumers, based on the following principles:

(i) The cost must have been incurred by or be expected, with reasonable certainty, to be incurred by 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, standby charges or other charges approved by the Commission
Provided that such additional surcharge shall be applicable to all the consumers who have availed Open Access to receive supply from a source other than the Distribution Licensee to which they are connected.

e. ……………….

f. ……………….”

11.2 Surcharge Computation

11.2.1 MSEDCL has implemented Intra State ABT in the state of Maharashtra since 1st August 2011 and SLDC / DISCOM are granting approvals / consent to open access consumers for purchase and sale of power through open access as per Open Access Regulations. Accordingly, open access consumers are now buying considerable quantum of power under open access and on the other hand MSEDCL has tied up sufficient quantum of power after approval of the Commission, so as to meet the expected demand by considering the overall growth in the State.

11.2.2 As a result, the generation capacity tied up by MSEDCL becomes excess. 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 capacity. The burden of fixed cost is affecting the viability and sustainability of operations of MSEDCL, which ultimately adversely affects the tariff of MSEDCL’s common consumers. Hence, to mitigate this, it was appropriate to determine the Additional Surcharge for OA consumers, as per Section 42 (4) of the EA, 2003. Hon’ble Commission in its Order dated 3rd November 2016 (case No. 48/2016) had observed that there was 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. Accordingly, Hon’ble

Commission has determined the additional surcharge in the said MYT Order dated 3rd November 2016.

11.3 Applicability of Additional Surcharge to OA consumers sourcing power from CPP

11.3.1 Section 2 (47) of the Electricity Act defines "Open Access', while Section 42 (2) of the said Act inter – alia mandates the Distribution Licensee to provide Open Access to eligible consumers, subject to payment of "Cross Subsidy Surcharge" in addition to the charges for wheeling. Fourth proviso of the subsection 2 of Section 42 of the Act also provides for exemption from levy of Cross Subsidy Surcharge to person who has established a captive generating plant for carrying the electricity to the destination of his own use.

11.3.2 After completely specifying the provisions of subsection 2 of 42, the subsection 4 of section 42 provides for the levy of "Additional Surcharge" to meet the fixed cost of distribution licensee arising out of his obligation to supply. Thus from the complete reading of section 42 of the Act, it is amply clear that that the Act does not specifically provide for any exemption of levy of Additional Surcharge to captive generating plants.

11.3.3 MSEDCL submits that captive power plants are set up primarily for their own consumption. Therefore the captive plants have to be conceived / conceptualized right at the time of setting up of the plant.

11.3.4 It is pertinent to note that Captive generation was encouraged by the Government of India during the period when the electricity requirements of the industrial consumers were to be met by captive generation due to the shortage of power to meet the continuous power requirements of such consumers. The Act also provided for various benefits to such plants. However, over the period the situation has changed and sufficient power is available to cater the demand of industrial consumers and now most of Distribution utilities, including MSEDCL, are power surplus.

11.3.5 However, by changing the shareholding in accordance with the Electricity Rules 2005 by selling 26% of equity, a generating plant originally setup as an Independent Power Producer (IPP) is being converted to a Group Captive Generating Plant. Thus the majority shareholders (74%) avail the financial benefits of group captive structure without consuming any power. In known Case No. 117 of 2012 before Hon'ble Commission, in the matter of Petition of M/s Wardha Power Company, it has also been observed that power plant has been set up by the promoters, but the promoters including the incorporated entity owning the plant itself does not consume any power. By modifying the shareholding, the captive consumers are able to get the benefit of exemption from levy of CSS and additional surcharge.

11.3.6 The increasing trend of 'retrofitting' oneself as captive so as to somehow evade CSS and additional surcharge is alarming and requires to be taken judicial note of. Similarly, such evasion of CSS and additional surcharge affect the revenue of Distribution utilities and such under recovery gets passed on to its other common consumers of distribution utilities resulting into increase in their tariff for no fault on their part.

11.3.7 There have been number of cases where the shareholding pattern of the captive consumers is adjusted / changed within the financial year such that the captive consumption remains in proportion to the equity shareholding at the end of the year and satisfy the condition of 51% consumption by the captive shareholders as per provision in the Electricity Rules, 2005.

11.3.8 In view of submissions in forgoing paragraphs MSEDCL requests Hon'ble Commission to allow MSEDCL to levy Additional Surcharge to all Open Access Consumers irrespective of source of power IPP or CPP.

11.4 Provisions in Other States

11.4.1 One of the States in India (H.P.) has allowed the Distribution Licensees to levy Additional Charge to open access consumers sourcing power from to CPP as well.

- Himachal Pradesh: Regulation 6 of Himachal Pradesh Electricity Regulatory Commission (Cross Subsidy Surcharge, Additional Surcharge and Phasing of Cross Subsidy) Regulations, 2006 provides for Additional surcharge payable by any consumer including any consumer who puts up a captive plant for his own use.

"6. Additional surcharge-

> *(1) An open access consumer shall also pay to the distribution licensee an additional surcharge to meet the fixed cost of such distribution licensee arising out of his obligation to supply as provided under subsection (4) of section 42 of the Act.*
>
> *(2) Additional surcharge will be payable by any consumer including any consumer who puts up a captive plant* ***for his own use****………**(Emphasis Added)***

- Accordingly, HPERC has determined the Additional Surcharge of Rs. 0.49 per unit for the consumers availing short-term open access vide its Order dated 28th October, 2016 against Petition No. 27/2016

11.4.2 In line with the methodology adopted by Hon'ble Commission in the MYT Order dated 3rd November 2016, MSEDCL computed the Additional Surcharge as per DOA Regulations, 2016 based on the data for the FY 16-17.

Table 171: Proposed Additional Surcharge FY 18-19

Particulars	Reference	Unit	Value
Step-1: Establishing contribution of OA to backing-down/stranded capacity			
OA volume for FY 17-18	(a)	MU	5,009
Backing Down quantum for FY 17-18	(b)	MU	14,917
Ratio to OA to Backed down for FY 17-18	(c)=(b)/(a)	%	34%
Step-2: Ascertaining Cost of Stranded Capacity			
Fixed Cost of Thermal Generating Sources for FY 18-19	(d)	Rs. Crs	18,026
Total Available MU from Thermal Generating Stations for FY 18-19	(e)	MUs	1,44,207
Wt. Avg. Per Unit FC of Thermal Generating Stations for FY 18-19	(f)=(d)/(e) x10	Rs/kWh	1.25
Total Projected Backdown/RSD Volume for FY 18-19	(g)	MUs	41,902
Projected Open Access Volume for year for FY 18-19	(h)	MUs	5,259
Fixed Cost pertaining to Backdown/RSD capacity for FY 18-19	(i)=(f)*(h)/10	Rs. Crs	657
Step-3: Determination of Additional Surcharge			
Per Unit Additional Surcharge (to be applicable on OA Consumers)	**j=(i)/(h)*10**	**Rs/kVAh**	**1.25**

Table 172: Proposed Additional Surcharge FY 19-20

Particulars	Reference	Unit	Value
Step-1: Establishing contribution of OA to backing-down/stranded capacity			
OA volume for FY 17-18	(a)	MU	5,009
Backing Down quantum for FY 17-18	(b)	MU	14,917
Ratio to OA to Backed down for FY 17-18	(c)=(b)/(a)	%	34%
Step-2: Ascertaining Cost of Stranded Capacity			
Fixed Cost of Thermal Generating Sources for FY 19-20	(d)	Rs. Crs	19,131
Total Available MU from Thermal Generating Stations for FY 19-20	(e)	MUs	1,48,985
Wt. Avg. Per Unit FC of Thermal Generating Stations for FY 19-20	(f)=(d)/(e) x10	Rs/kWh	1.28
Total Projected Backdown/RSD Volume for FY 19-20	(g)	MUs	46,090
Projected Open Access Volume for year for FY 18-19	(h)	MUs	5,522
Fixed Cost pertaining to Backdown/RSD capacity for FY 19-20	(i)=(f)*(h)/10	Rs. Crs	709
Step-3: Determination of Additional Surcharge			
Per Unit Additional Surcharge (to be applicable on OA Consumers)	**j=(i)/(h)*10**	**Rs/kVAh**	**1.28**

11.4.3 In view of the submissions in the above paragraphs MSEDCL requests the Hon'ble Commission to approve the Additional Surcharge for Open Access Consumers including Captive Power Plants as computed in the above tables.

12. PROPOSED TARIFF APPLICABILITY

12.1 Background

12.1.1 Every consumer of electricity has a unique applicability of tariff, depending upon the nature of power supply, purpose of power supply etc. which determines the class of consumer or category of the consumer.

12.1.2 The Hon'ble Commission has accordingly classified the consumers of electricity into various categories depending upon the nature of power supply i.e. (Low Tension or High Tension), purpose of power supply i.e. (Domestic, Non-domestic, Industrial, Agricultural, etc.)

12.1.3 In the recent past, it is observed that classification of a consumer into a particular category has resulted in litigation since applicability of a particular category of tariff is not available in exhaustive nature.

12.1.4 A comparison of the existing applicability as per the MYT Order dated 3rd November 2016 and proposed applicability of tariff for different categories of consumer is given in the following table.

12.1.5 It is submitted that it is very difficult to cover all the existing activities. However, this exercise of MSEDCL has attempted to cover majority of activities. The applicability given in the Petition is generic but may not have covered some of the activities and hence the activities not covered in this section will be dealt by the respective field officer/ concerned authority of MSEDCL for the purpose of categorization.

12.2 LT Category

Sr. No.	Existing Applicability	Proposed Applicability
1.	**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 categorization 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 categorization 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.	**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 categorization 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 categorization 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.

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
2.	**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: a) Private residential premises, Government/semi-Government residential quarters; b) 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	**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: a) Private residential premises, Government/semi-Government residential quarters; b) 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

Sr. No.	Existing Applicability	Proposed Applicability
	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	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

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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;

Sr. No.	Existing Applicability	Proposed Applicability
	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	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) Ironing/Laundry service irrespective of premises being their residential or otherwise who consume upto 300 units a month, and who have consumed less than 3600 units per annum in the previous financial year.** **m)** 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.

Sr. No.	Existing Applicability	Proposed Applicability
	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. Note: a) For three phase supply, an additional fixed charge of Rs.160 per 10kW 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.	n) 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: (iii) 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 (iv) a person, for making electricity available to its employees residing in the same premises for residential purposes. Note: a) For three phase supply, an additional fixed charge of Rs.160 per 10kW 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

Sr. No.	Existing Applicability	Proposed Applicability
		tariff, and will be charged at the tariff applicable to the respective categories.
3.	**LT II: LT– Non-Residential** Applicability: **(A) 0-20 kW** 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;	**LT II: LT– Non-Residential** Applicability **(A) 0-20 kW** 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;

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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;

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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;

Sr. No.	Existing Applicability	Proposed Applicability
	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. **(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). 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.	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.~~ **(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). 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.

Sr. No.	Existing Applicability	Proposed Applicability
4.	**LT III: LT - Public Water Works 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.	**LT III: LT - Public Water Works 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.

Sr. No.	Existing Applicability	Proposed Applicability
5.	**LT IV: LT - 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. 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	**LT IV: LT - 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. 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

<table>
<tr><th>Sr. No.</th><th>Existing Applicability</th><th>Proposed Applicability</th></tr>
<tr><td></td><td>consumption norm below 1318 hours/HP/year) is given as below:
<table><tr><td>Category 1 Zones (with consumption norm above 1318 hours/HP/year)</td><td>Category 2 Zones (with consumption norm below 1318 hours/HP/year)</td></tr><tr><td>Bhandup (U), Pune, Nashik</td><td>Amaravati, Auragabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Nagpur</td></tr></table>
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.</td><td>consumption norm below 1318 hours/HP/year) is given as below:
<table><tr><td>Category 1 Zones (with consumption norm above 1318 hours/HP/year)</td><td>Category 2 Zones (with consumption norm below 1318 hours/HP/year)</td></tr><tr><td>Bhandup (U), Pune, Baramati, Nashik, Jalgaon</td><td>Amaravati, Auragabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur, Chandrapur,Gondia, Nanded, Akola</td></tr></table>
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.</td></tr>
</table>

Sr. No.	Existing Applicability	Proposed Applicability
	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. **LT IV (C): LT - Agriculture Metered – Others** Applicability This category shall be applicable for use of electricity / power supply at Low / Medium Voltage for:	**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. **LT IV (C): LT - Agriculture Metered – Others** Applicability

Sr. No.	Existing Applicability	Proposed Applicability
	a. Pre-cooling plants and cold storage units for Agriculture Products – processed or otherwise**;** b. Poultries exclusively undertaking Layer & Broiler activities, including Hatcheries; c. High-Tech Agriculture (i.e. Tissue Culture, Green House, Mushroom activities), provided the power supply is exclusively utilized by such Hi-Tech Agriculture consumers for purposes directly concerned with the crop cultivation process, and that the power is not utilized for any engineering or industrial process; d. Floriculture, Horticulture, Nurseries, Plantations, stand-alone Aquaculture, Sericulture, Cattle Breeding Farms, etc.	This category shall be applicable for use of electricity / power supply at Low / Medium Voltage for: a. Pre-cooling plants and cold storage units for Agriculture ~~Products – processed or otherwise~~ **Produce in its natural form;** b. Poultries exclusively undertaking Layer & Broiler activities, including Hatcheries; c. High-Tech Agriculture (i.e. Tissue Culture, Green House, Mushroom activities), provided the power supply is exclusively utilized by such Hi-Tech Agriculture consumers for purposes directly concerned with the crop cultivation process, and that the power is not utilized for any engineering or industrial process; d. Floriculture, Horticulture, Nurseries, Plantations, stand-alone Aquaculture, Sericulture, Cattle Breeding Farms, etc.; e. **R&D Labs for Animal Husbandry**
6.	**LT V: LT- Industry** **LT-V (A): LT – Industry – Powerlooms** Applicability:	**LT V: LT- Industry** **LT-V (A): LT – Industry – Powerlooms** Applicability:

Sr. No.	Existing Applicability	Proposed 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. 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.	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. 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	**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

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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. **This tariff category shall also be applicable for use of electricity / power supply by Hotels/Restaurants in Nagpur, Aurangabad and Sindhudurg districts; having eligibility certificate issued by Maharashtra Tourism Development Corporation. Where such Unit does not hold the relevant eligibility certificate, the tariff shall be as per the LT II category, and the LT V(B) tariff shall**

Sr. No.	Existing Applicability	Proposed Applicability
	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;	**apply to it after receipt of such eligibility 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. 0Ice 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 not covered under the LT – Public Water Works category; h. **Dedicated water supply schemes to power plants;**

Sr. No.	Existing Applicability	Proposed Applicability
	k. Cold Storages not covered under LT IV (C) – Agriculture (Others); l. Food (including seafood) Processing units; m. Seed manufacturing	i. 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); **j. Auxiliary Power supply to EHV/Distribution Substations (but not for construction).** k. Brick Kiln (Bhatti); l. Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra; m. Cold Storages not covered under LT IV (C) – Agriculture (Others) **and storing multiple products irrespective of nature**; n. Food (including seafood) Processing units; o. Seed manufacturing
7.	**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	**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

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.

Sr. No.	Existing Applicability	Proposed Applicability
	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'.	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'.
8.	**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	**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

Sr. No.	Existing Applicability	Proposed Applicability
	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. **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).	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. **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).

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
9.	**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; Note:	**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; Note:

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
10.	**LT IX: LT- Crematorium and Burial Grounds** Applicability:	**LT IX: LT- Crematorium and Burial Grounds** Applicability:

Sr. No.	Existing Applicability	Proposed 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.	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.
11.	**LT X: LT - Public Services** **LT X (A): LT - Public Services - Government Educational Institutes and Hospitals** Applicability: This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as	**LT X: LT - Public Services** **LT X (A): LT - Public Services - Government Educational Institutes and Hospitals** Applicability: This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as

Sr. No.	Existing Applicability	Proposed Applicability
	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. 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**	Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres, **Blood banks** 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. 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**

Sr. No.	Existing Applicability	Proposed Applicability
	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	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, **Blood banks** 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

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
12.		**LT (XI) LT : Electrical Charging Stations/Centers for Vehicles** Applicability: Electrical Charging Stations/Centers for Hybrid/Electrical Vehicles;

Sr. No.	Existing Applicability	Proposed Applicability
		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 of such premise.

12.3 HT Category

Sr. No.	Existing Applicability	Proposed Applicability
1.	**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	**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

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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. **This tariff category shall also be applicable for use of electricity / power supply by Hotels/Restaurants in Nagpur, Aurangabad and Sindhudurg districts; having eligibility certificate issued by Maharashtra Tourism Development Corporation. Where such Unit does not hold the relevant eligibility certificate, the tariff shall be**

Sr. No.	Existing Applicability	Proposed Applicability
	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.	**as per the HT II category, and the HT I tariff shall apply to it after receipt of such eligibility 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.; p. Sewage Treatment Plant/ Common Effluent Treatment Plant for industries not covered under the HT – Public Water Works category; q. **Dedicated water supply schemes to power plants;**

Sr. No.	Existing Applicability	Proposed Applicability
	m) Seed manufacturing	g) 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); **h) Auxiliary Power supply to EHV/Distribution Substations (but not for construction).** i) Brick Kiln (Bhatti); j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra; r. Cold Storages not covered under LT IV (C) – Agriculture (Others) **and storing multiple products irrespective of nature**; k) Food (including Seafood) Processing units. l) 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,	**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,

Sr. No.	Existing Applicability	Proposed Applicability
	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. **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.	Cotton Pressing Factories, Salt Manufacturers, Khandsari/Jaggery Manufacturing Units **excluding Sugar Factories**, or such other consumers who opt for a seasonal pattern of consumption, such that the electricity requirement is seasonal in nature. **Provided that the period of operation of in a financial year should be limited upto 9 months, and the category should be opted for by the consumer within <u>first quarter of the financial year'.</u>** **Note:** **I. Standby charges for embedded CPP** **i. If standby demand is unutilized then 75% of applicable demand charges on standby contracted capacity needs to be levied.** **ii. During planned outage of CPP, embedded CPP Industrial will pay additional Demand Charges on total contracted standby capacity (on monthly basis) as approved in Tariff Order for relevant category.**

Sr. No.	Existing Applicability	Proposed Applicability
	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.	**iii. During unplanned outage demand charges equal to 1.5 times approved demand charges in tariff Order for relevant category on total contracted standby capacity (on monthly basis) needs to be levied.** **II.** 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. **III.** Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.
2.	**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:	**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:

Sr. No.	Existing Applicability	Proposed Applicability
	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;	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;

Sr. No.	Existing Applicability	Proposed Applicability
	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:	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:~~

Sr. No.	Existing Applicability	Proposed Applicability
	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.	~~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.~~

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
3.	**HT III: HT – Railways/Metro/Monorail** Applicability: This tariff is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.	**HT III: HT – Railways/Metro/Monorail** Applicability: This tariff is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.
4.	**HT IV: HT - Public Water Works and Sewage Treatment Plants** Applicability:	**HT IV: HT - Public Water Works and Sewage Treatment Plants** Applicability:

Sr. No.	Existing Applicability	Proposed 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.	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
5.	**HT V: HT – Agricultural** **HTV (A) – Agriculture Pump sets** Applicability:	**HT V: HT – Agricultural** **HTV (A) – Agriculture Pump sets** Applicability:

Sr. No.	Existing Applicability	Proposed 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 – Agricultural 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;	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 – Agricultural Others** Applicability: This tariff category is applicable for use of electricity / power supply at High Voltage for: f. Pre-cooling plants and cold storage units for Agriculture ~~Products – processed or otherwise~~ **Produce in its natural form;** **a.** Poultries exclusively undertaking layer and broiler activities, including Hatcheries;

Sr. No.	Existing Applicability	Proposed Applicability
	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;	**b.** 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; c. Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc; d. **R&D Labs for Animal Husbandry;**
6.	**HT VI: HT - Bulk Supply (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:	**HT VI: HT - Bulk Supply (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:

Sr. No.	Existing Applicability	Proposed Applicability
	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 b) a person, for making electricity available to its employees residing in the same premises for residential purposes.	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 b) a person, for making electricity available to its employees residing in the same premises for residential purposes.
7.	**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	**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

Sr. No.	Existing Applicability	Proposed Applicability
	Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc. **HT VIII (B) – 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. Note: Additional Fixed Charges of Rs.230 per 10 kW load or part thereof above 10 kW load shall be payable.	Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc. **HT VIII (B) – 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. Note: Additional Fixed Charges of Rs.230 per 10 kW load or part thereof above 10 kW load shall be payable.
8.	**HT IX: HT Public Services**	**HT IX: HT Public Services**

Sr. No.	Existing Applicability	Proposed Applicability
	HT IX (A): HT - Public Services - Government Educational Institutes 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.	**HT IX (A): HT - Public Services - Government Educational Institutes 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, **Blood banks** 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

Sr. No.	Existing Applicability	Proposed Applicability
	HT IX (B): Public Services – 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;	primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals. **HT IX (B): Public Services – 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, **Blood banks** 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

Sr. No.	Existing Applicability	Proposed Applicability
	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	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
9.		**HT (X): Electrical Charging Stations/Centers for Vehicles** Applicability: Electrical Charging Stations/Centers for Hybrid/Electrical Vehicles;

Sr. No.	Existing Applicability	Proposed Applicability
		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 of such premise.

13. COMPLIANCE TO THE DIRECTIVES

13.1 Background

13.1.1 MSEDCL submits that the Hon'ble Commission in its Multi Year Tariff Order dated 3rd November 2016 (Case No 48 of 2016) has given various directives to MSEDCL having different timelines for submission of their compliances. The same along with its compliances are reproduced as below:

1. **The Commission directs MSEDCL to provide meters for all un-metered LT Agriculture pump sets 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.**

   MSEDCL's Compliance:

   MSEDCL submits that, the compliance of the said directive is submitted to Hon'ble Commission vide letter no. CE (Dist) / D-IV / Ag metering / 26385 dated 27th October 2017. The said letter is annexed as **Annexure 9** to this petition.

2. **The Commission directs MSEDCL to complete metering of all un-metered Agriculture consumers by the end of the 3rd Control Period, i.e. by March, 2020.**

   MSEDCL's Compliance:

   MSEDCL submits that, in order to complete the metering of the 15,89,123 nos. of unmetered AG consumers, the Detailed Project Report (DPR) for master metering plan is prepared as below and proposed to be completed by Year 2020, in phase wise manner.

Particular	Period	Qty.	Unit	Rate	Amount (Rs Crs)
Installation of 3ϕ Energy meter to Unmetered Agricultural connection	Up to Nov-2017	74,287	No	Rs. 5,545	Rs. 41.19
	FY 2017-18	2,98,520	No	Rs. 5,545	Rs. 165.54
	FY 2018-19	6,08,158	No	Rs. 5,545	Rs. 337.22
	FY 2019-20	6,08,158	No	Rs. 5,545	Rs. 337.22

Particular	Period	Qty.	Unit	Rate	Amount (Rs Crs)
	Total	**15,89,123**	**No**	**Rs. 5,545**	**Rs. 881.17**

Total Scheme Cost is amounting to Rs. 881.17 Crs.

In order to avoid additional financial burden on MSEDCL's Consumers through tariff hike, the Board of Directors in the 191st Board Meeting dt. 09.02.2017 have accorded in principle approval to this master metering plan and resolved that request be made to Govt. of Maharashtra to sanction grant for implementation of this scheme.

The Grant of Rs. 171.07 Crores for Nagpur, Amravati, Sangali, Satara, Kolhapur & Ahmednagar Districts is already requested to Govt. of Maharashtra, Energy department vide letter No. महावितरण/मु.अ.(वितरण)/वि-४/कृषी वीज ग्राहक/३३५४८ वि. ०७/११/२०१६. It is to submit that, till date this 'Grant' is awaited.

3. **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 29th 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.**

MSEDCL's Compliance:

MSEDCL has refunded FAC of Rs. 58.21 Crores along with interest of Rs. 3.51 Crores to the consumers in the billing for the month of September 2016. The same has been communicated to Hon'ble Commission vide letter no, MSEDCL/PP/FAC/L7/36363 dated 06/12/2016. The said letter is annexed as **Annexure 10** to this petition.

4. **MSEDCL should explore further expansion of its mobile applications to enhance other customer outreach and awareness activities.**

MSEDCL's Compliance:

Mahavitaran Mobile App for Consumers.

Mahavitaran Consumer App enables consumers to avail Mahavitaran services at his/her fingertips. The app is simple and easy to use. It provides transparency in delivering services to consumers. App is available in English as well as Marathi Language.

Following services are available through Mahavitaran Mobile App:

- View and Pay MSEDCL Electricity bill though Net banking, Debit Card, Credit Card, Cash Cards, Mobile Wallets, etc. (4,25,000+ transactions per month)
- Register & Track Power Failure and Billing Complaints etc Apply for New Electricity Connection
- Submit Reading: Self meter reading by Consumer to avoid average billing if meter reading is not taken by meter reader.
- View Electricity Bill history and Payments history.
- Manage multiple electricity connections from single account.
- Contact 24 x7 MSEDCL Call Center
- Feedback: Submit ratings of Mahavitaran services in the scale of 1 to 5 Update. Mobile Number & E-Mail IDs of consumer account.

Till date more than 29 Lakh users have downloaded Mahavitaran Mobile App.

5. **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's Compliance:

MSEDCL submits that, in order to review its billing related process to bring the improvement and take corrective steps and monitoring of implementation at the highest level, MSEDCL have already taken steps as mentioned below and the monitoring of implementation of the same is done at Corporate Office level.

- **Meter Reading through Mobile App:**
  Meter reading of LT consumers is taken through Mobile App for correctness of reading and uploading it directly to the server. The App also provides the GPS location of meter reader alongwith Date and time of reading by which check is maintained on the meter reading agency.

- **5% Check reading:**
  This activity is introduced to keep the check on meter reading agency and improve normal billing percentage to issue correct and as per reading bills to the consumers to minimize consumer grievance.

- **PC 0 billing between 1st day to 5th day of every month:**
  All HT & LT Industrial consumers in the state are billed during 1st day to 5th day of every month to have uniformity in billing of Industrial consumers and prompt realization of revenue.

- **20KW and above consumer reading through MRI/AMR:**
  All 20KW and above high consumption consumers are billed through MRI/AMR reading to avoid manual interference and issue correct bills to the consumers.

- **Payment of Bills by producing SMS on Mobile phone:**
  Facility for consumer is created for the ease of payment of bills by producing SMS generated by the system on his registered mobile.

- **PC Delay:**
  Delays in processing and distribution of bills is minimized by arresting PC delays so that consumer gets his bill on time periodically every month.

6. **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.**

MSEDCL's Compliance:

MSEDCL submits that, as on 20th June 2018, MSEDCL had completed 99% AMR for AG SDT feeders and 97% of AMR for AG Separated feeders.

Balance 102 AG feeders (SDT +AG separated) AG AMR will be completed within three months span.

After completion of balance 102 AG AMR for feeders, MSEDCL will publish AG AMR data on Quarterly basis as per the said directives.

Detailed status of AG AMR for MSEDCL is as below;

AG feeders AMR (AG SDT +Pure AG)										
Name	Total Feeders			AG AMR STATUS (As on 20.06.2018)			% age AG AMR done			Balance
	AG SDT feeders	AG Separated feeders	Total	AG SDT feeders AMR done	AG Separated feeders AMR done	Total	AG SDT AMR	AG Separated AMR	Total	Total
MSEDCL	3053	1950	5003	3017	1884	4901	99%	97%	98%	102

MSEDCL further submits that the 4901 No. of AG feeders are already installed with the necessary AMR metering arrangement. Out of these, only 1021 Feeders are active. For rest of the Feeders, there is communication linkage problem. MSEDCL is striving hard to establish the communication linkage by availing services of various service providers available in the respective areas.

7. **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.

MSEDCL's Compliance:

MSEDCL submits that, the compliance of the said directive is submitted to Hon'ble Commission vide letter no. CE/PP/MTR/28472 dated 21st November 2017. The said letter is annexed as **Annexure 11** to this petition. (Data submitted with the said letter is attached in soft only)

8. **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.**

MSEDCL's Compliance:

MSEDCL submits that, Asset Register contains details of useful life of Fixed Asset maintained through SAP systems. Fixed Assets are depreciated to the extent of 90% of the cost of the asset and carried at 10% of Gross value, at the end of its useful life in Asset Register.

9. **MSEDCL should also review its PPAs and explore options to optimize the impact of the fixed cost of the contracted capacity, including deferment in cases where no significant work execution has taken place so far.**

MSEDCL's Compliance:

MSEDCL submits that, on the basis of 17th EPS projected demand data, MSEDCL had planned for capacity addition to meet projected demand. After getting the due approval from Hon'ble Commission, MSEDCL has signed long term power purchase agreement with MSPGCL and Central Sector through MoU route and with Independent Power Producers (IPPs) as per Competitive Bidding guidelines. The present status of PPAs with different sources is as under:

Sr. No.	Name of the Utility	MSPGCL	Central Sector	IPP	UMPP	Others	NCE Sources	Total
1	Effective PPA	22997	6611.63	5465	1860	991	7659	45583.63
2	Current effective Available Generation Capacity	13427	5695*	4785	760	491	6104	31262
3	Upcoming Project	0	658.63	0	0	0	807	1463
4	Uncertain/ Deferred Project	9570	0	680	1100	500	0	11850

*Including unallocated share by Ministry of Power, GoI.

Further, the upcoming Central Sector Thermal Power stations are as under:

Sr. No	Name of Utility	Name of Upcoming Projects	Installed Capacity	MSEDCL Contracted Capacity	Date of PPA	Expected COD
1	NTPC	Lara Chhattisgarh	1600	230.63	16.12.2010	August 2018
2	NTPC	Solapur STPS Stage II	660	328	19.07.2010	January 2019
3	NTPC	Gadarwara STPS	1600	50	05.01.2011	August 2018
4	NTPC	Khargone STPP (2X 660 MW)	1320	50	05.01.2011	March 2019
5	**Total**		**5180**	**658.63**		

MSEDCL Efforts to reduce Fixed Cost:

MSEDCL has reviewed the projected demand vis-à-vis actual demand of last 5 years and accordingly has taken following effective steps to reduce the fixed cost burden:

a) **MSPGCL's Uncertain/Deferred Power Projects**

MSEDCL has signed an addendum PPA with MSPGCL on 24.12.2010 for capacity addition out of which 9570 MW capacity is not commissioned till date --which are as under:

Sr. No.	Name of Power Station	Generating Unit	Contracted Capacity	Remarks
1	Bhusawal TPS	Unit- 6	660	
2	GTPS Uran	Unit- 9 & 10	1220	
3	Paras TPS	Unit- 5	250	
4	Nashik TPS	Unit- 6	660	
5	Dondaicha TPS	Unit 1 to 5	3300	
6	Latur JVC	Unit 1 & 2	1500	Considering Gas based Power Project
7	Dhopave TPS	Unit 1 to 3	1980	
	Total		**9570**	

Hon'ble Commission has started Suo-moto hearing (Case No. 42 of 2017) regarding above listed MSPGCL's projects and issued an order directing MSPGCL, to stop the work of capacity addition of the above said units. Further MSPGCL has filed a review petition (Case No. 154 of 2018) for approval regarding execution work of Bhusawal TPS, Unit 6.

MSEDCL's demand growth has not been increased as projected in the EPS data but the contracted generation capacity was added in phased manner and hence led MSEDCL in surplus contracted capacity temporarily.

b) <u>Other IPP/UMPP Projects</u>

Against other certain contracted capacity with IPPs (UMPP), @ 2280 MW capacity has been deferred which is as follows:

Sr. No.	Type	Name of Power Station	Date of PPA	Installed Capacity	Contracted Capacity/Share
1	IPP	Lanco Vidharbha LVTP	04.08.2009	1 X 680 MW	680

Sr. No.	Type	Name of Power Station	Date of PPA	Installed Capacity	Contracted Capacity/Share
2	UMPP	CAPL Krishna' nam, Andra Pradesh (Reliance)	23.03.2007	6 X 660 MW	800
3	UMPP	Tilaiya, Jharkhand (Reliance)	10.09.2008	6 X 660 MW	300
4	Others	Lanco Teesta	29.08.2006	4X125 MW	500
	Total				**2280**

It is submitted that, plants at S. No. 1, 2 & 4 have not taken off. They are under litigation at different stages. MSEDCL will take appropriate steps regarding these projects after periodic review on case to case basis.

10. 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, capitalization 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.

MSEDCL's Compliance:

MSEDCL submits that, as directed by Hon'ble Commission scheme of 'providing 3 phase energy meters to existing 16,01,847 Nos. of unmetered AG consumers', amounting to Rs. 989.30 Crs. was prepared, eliminating the LT capacitors from the estimation and submitted for approval before the Board for Directors. The scheme consists of providing 3 phase RF energy meters to existing unmetered AG consumers, divided in 3 phases. The Board of Directors accorded the approval & directed to get required funds from Govt. of Maharashtra considering the present financial condition of MSEDCL.

In first Phase it was proposed to provide 3,08,512 nos. of unmetered AG consumers from Ahmednagar, Sangali, Satara, Kolhapur, Amaravati & Nagpur districts during 2017-18 with estimated expenditure of Rs. 171.03 Crores. The GoM was requested to provide financial assistance as “Grant”, vide letter no. महावितरण/मु.अ.(वितरण)/वि-४/कृषी वीज ग्राहक/३३५४८ वि. ०७/११/२०१६.

In second phase, it was proposed to provide 6,08,158 nos. of unmetered AG consumers from 13 districts during 2018-19 with estimated expenditure of Rs. 337.22 Crores.

In third phase, it was proposed to provide 6,08,158 nos. of unmetered AG consumers form remaining 13 districts during 2019-20 with estimated expenditure of Rs. 337.22 Crores.

Funds sanctioned by GoM are not received so far.

11. **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.**

MSEDCL’s Compliance:

MSEDCL submits that, the compliance of the said directive is submitted to Hon’ble Commission vide letter no. SE/DF/356/28166 dated 18th November 2017. The said letter is annexed as **Annexure 12** to this petition.

12. **The Commission has directed to explore the possibility of implementation of kVAh metering for selected categories.**

MSEDCL’s Compliance:

MSEDCL submits that in the present Petition, MSEDCL has suggested different incentives/penalties in the **Chapter 7**. MSEDCL has also proposed rebate for incremental consumption.

MSEDCL further submits that at **Paragraph 7.7** of this Petition, MSEDCL has made proposal for KVAh billing for selected categories.

13. **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.**

MSEDCL's Compliance:

MSEDCL submits that, as per the prevailing practice, the voltage-wise breakup of GFA is not maintained in Asset Register. Hence it is difficult to segregate the old assets voltage-wise. But necessary arrangement is being made in the SAP system for maintaining voltage-wise breakup of new upcoming assets in future.

MSEDCL also submits that, there is a genuine practical difficulty in identifying the voltage-wise loss levels. However, efforts are being taken up by MSEDCL in order to obtain the voltage-wise loss levels.

14. **The Hon'ble Commission in its order against no. 111 of 2017 dated 02nd May 2018 observed that it is necessary to put in place a system for monitoring not only the coal stocks available with the Generators and the shortage or otherwise of coal to be supplied by CIL, but also if indenting for coal has been undertaken diligently by the Generators in lean periods so that sufficient stock is available for periods of high power demand and /or when there is a shortfall in coal supply by CIL. MSEDCL should inform the Commission of the actual or proposed monitoring system.**

MSEDCL's Compliance:

MSEDCL has filed a petition seeking review of the Hon'ble Commission's Order dated 02nd May 2018 (Case No. 111 of 2017) and has made the following submissions:

- MSEDCL has already formed a Coal Monitoring Committee looking after following functions:
  - Daily Coal Stock Report is gathered from all IPPs viz. APML, RIPL, GMR Warora and from MSPGCL.
  - Monitoring of CEA website to keep record of Coal Stock Position of NTPC Stations
  - Information of Transportation of coal such as availability Rakes
  - Coal and Transportation Booking i.e. payments made by the Long term PPA generators
  - Correspondence with Govt. of Maharashtra for coal related issues faced by MSPGCL, IPPs and NTPC.
  - Conducting periodic meeting with all IPPs, MSPGCL, NTPC to discuss power availability for the subsequent months and any issues related to coal supply, coal transport, etc.
  - Whether indent placed as per FSA terms.
  - Coal stock provision for the months in which there is maximum demand.

- **Proposal for Constitution of Generation Availability Committee**

  Looking to the vital importance of the generation availability in power generation cycle, MSEDCL in the said petition has proposed to form a Generation Availability Committee constituting under the Chairmanship of the Chief Engineer (MSLDC). The other member of this committee will be Chief Engineer (Power Purchase), and One representative from the Long term PPA generators. It is proposed that the committee will meet every fort nightly to review and monitor the coal stock position. The prime responsibilities of the committee shall be as follows:
  - To monitor demonstration of availability.
  - Surprise demonstration of availability of thermal power station to verify its declared capacity and subsequently its payment of capacity charges.
  - Whether coal is available for generation of declared capacity.

- To study the monthly consumption pattern of coal and assessment of the coal requirement for the generation.
- Month wise and capacity wise operation of plants as per MOD

The Committee will appraise the generation availability and crucial issues regarding coal periodically to the concerns stakeholder and Hon'ble Commission.

- In fortnightly review if committee will also check for the completion of necessary activities regarding coal procurement i.e. Coal and Transportation Booking & their payments made by the Long term PPA generators.
- Even after fulfilment of all the formalities for coal procurement by the generators, if generators are not getting the coal then committee will escalate the issue to the higher authorities.

- **MSEDCL proposal for demonstration of Declared Capacity**

  MSEDCL in the said petition proposed a methodology for demonstration of Declared Capacity as under:

  - When the situation arises, SLDC will ask the Generating utilities to demonstrate the declared capacity with intimation to concerned Distribution licensees.
  - For demonstration of the declared capacity; the units position in MOD shall not be considered as an exceptional case.
  - During demonstration of declared capacity, unforeseen problems/situations if any, shall be dealt within the frame work of scheduling and dispatch code.
  - While taking the unit on bar, notice will be issued by SLDC before 24 Hrs to the respective generating station.
  - The SLDC shall carry out 72 hrs test for demonstration of declared capacity and may be extended as per the system condition. The ramping up and ramping down at the specified rates shall be allowed for bringing back the unit on bar and the DC for this period shall be preserved.

In view of results of 72 hrs running test and following available inputs SLDC will determine the capacity of demonstration. For the demonstration of capacity the following parameters are quite important.

- Balance Coal Stock
- Coal Stock indented and Payment done for the respective month.
- Booking and Payment done for Rail Rakes
- Water availability
- Any other parameters

- **Declaration of Availability and subsequently payment of Capacity Charges**

  On the aforesaid basis, MSEDCL has already proposed option No. 1 in its additional submission dtd. 27.02.2018, which is reproduced as below:
  - **For declaration of availability of the first unit of the station,**
    The generator must have minimum coal stock of 3 days so as to have the continuous power supply for the further period considering the coal supply in transit.
  - **For declaration of 2nd unit/ onward units**
    For the declaration of 2nd unit/onward units, generation should have the coal stock as prescribed by CEA in above table i.e. for pit head it is 15 days for the first/declared unit. And having 3 days coal stock only, generator shall declare his 2nd/onward unit.

14. Proposal for Schedule of Charges

14.1 Background

14.1.1 Presently MSEDCL is recovering various charges from the consumers for various services provided as per the Schedule of charges approved by the Hon'ble Commission vide its Order dated 16 August, 2012 (Case No. 19 of 2012).

14.1.2 Basically these charges are for recovery of investments made, which should otherwise be made by the consumer, for availing supply of electricity, rental on equipment provided and maintained by MSEDCL for consumers' exclusive use, and various other services provided to the consumers. The income from these charges form a part of the non-tariff income of MSEDCL.

14.1.3 The Electricity Act 2003 (EA 2003) provides Distribution Licensees to recover charges incurred for supply of electricity from its consumers in accordance with tariff determined by the State Regulatory Commission. The charges to be recovered may include fixed charges in addition to charges for supply of electricity and rent or other charges for meter or other equipment provided by licensees.

14.1.4 Section 45 of EA 2003 reads as follows -
"(3) The charges for electricity supplied by a distribution licensee may include –

(a) *a fixed charge in addition to the charge for the actual electricity supplied;*

(b) *a rent or other charges in respect of any electric meter or electrical plant provided by the distribution licensee "*

14.1.5 As per the provisions of Section 46 of the Act provides that the Commission may authorize a Distribution Licensee to charge a person requiring a supply of electricity any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply.

14.1.6 In accordance with EA 2003, Hon'ble Commission has notified MERC (Electricity Supply Code and Other Condition of Supply), Regulation 2005. As per provisions of Supply

Code Regulations, various charges are permitted to be recovered from consumers subject to approval from the Commission.

14.1.7 Various services for which charges can be recovered from the consumer as per provisions in regulations of MERC (Electricity Supply Code) Regulations, 2005 are given below:

Sr. No.	Broad Head	Relevant Regulation
1.	Service connection charges	3.3.1 to 3.3.4
2.	Charges for temporary supply	3.3.6
3.	Supervision charges	3.3.8
4.	Processing of applications	4.1 (ix)
5.	Charges for increase/reduction in Contract demand/sanctioned load	6.8
6.	Change of Name	10.3
7.	Processing fee for change of name	10.3 (iv)
8.	Security deposit	11.3
9.	Cost of meter	14.1.3 & 14.2.2
10.	Meter testing charges	14.4.2
11.	Charges for restoration of supply	16.2

14.1.8 Considering the above provisions, MSEDCL has proposed revision in Schedule of Charges which is annexed as **Annexure 13** to this Petition. Hon'ble Commission is requested to approve the same.

15. DETAILS OF CAPEX SCHEMES

DPR Schemes

15.1 INFRA-II Scheme

15.1.1 Infrastructure Plan Part II scheme is formulated for enhancing and upgrading the Infrastructure so as to enable MSEDCL to cater to increasing demand, releasing New connections under Residential, Commercial, Industrial and Agriculture categories and Renovation/Modernization (R&M) works to be taken up during the period between 2013-14 and FY 2015-16. While formulating the scheme, expected load Growth up to 2015-16 has been considered.

15.1.2 Infra Part II Scheme in 7 Towns - As the Distribution losses are below 15% in Pune, Kolhapur, Panvel & Navi Mumbai (16 divisions), Nashik, Sinnar and Ozar towns were excluded from the R-APDRP Part-B works. To cope with the growing demand and to release the new Residential, Commercial, Industrial and other connections up to 2015-16, it is necessary to implement INFRA Part- II Scheme in these towns for development of Infrastructure.

15.1.3 Infra Plan “Part II” Schemes is prepared keeping in view the following Objectives:

1. Releasing New Connections - R, C, I as well as to clear all the Agriculture Paid Pending Connections and prospective demand upto 2015-16
2. Up-gradation of existing system
3. Meeting Load Growth
4. Providing reliable & quality supply
5. Reducing AT&C Loss
6. Reduction in DTC Failure Rates.

15.1.4 Approval from the MSEDCL Board:

a) MSEDCL Board of Directors has accorded approval to Infra II Plan vide BR No: 53 dated 07.03.2012 for various capital works such as New substations, switching station, Augmentation of Power Transformers, additional power transformers, Distribution Transformers, associated lines and works etc. amounting to Rs. 5556.5 Crs. The area covered excludes the 130 towns covered under R-APDRP scheme.

b) The scheme for "Up gradation and Modernization" amounting to Rs. 943.50 Crs has been sanctioned vide B.R. No: 153 date 19.06.2012.

c) The Board of Directors has accorded the approval for execution of INFRA-II Scheme in 7 Towns at a cost of Rs. 1804.32 Crs vide BR No: 161 date 23.09.2013.

15.1.5 Approval from Government of Maharashtra:

a) The Government of Maharashtra has granted 20% equity support amounting to Rs. 1300 Crs. vide GOM resolution: Infra-II/2012/872/Urja-5 date 02 March 2013.

b) Further, the Government of Maharashtra has granted 20% Equity support of 360.86 Crs. The Total equity received from Government of Maharashtra up to March-2018 is Rs. 1182.13 Crs.

15.1.6 Scope and progress of works:

The tenders for Infra II were awarded from September 2013 to October 2015 in phase manner. The following table shows the progress of Infra-II Scheme up to 31st March - 2018.

Sr. No.	Particulars	Unit	Freezed Scope	Completed + Commissioned works	WIP
1	New Sub Stations + Switching Stations	No.	510	466	38
2	Addl. Power Transformers	No.	327	317	9
3	Augmentation of Power Transformers	No.	212	212	0
4	New Distribution Transformers	No.	37885	36336	515
5	Augmentation of Distribution Transformers	No.	14971	14750	0
6	HT Line (O/H + U/G)	Km.	26806	23254	723
7	LT Line (O/H + U/G)	Km.	23118	20547	221

15.2 Additional Infra II Scheme

15.2.1 Additional Infra II scheme amounting Rs. 1594 Crs has been approved by MSEDCL Board with 60 % grant from Government of Maharashtra. The scheme will be executed in two years from the award of Contract i.e. from 2016 to 2018. For Rs. 1594 Crs. The scheme submitted towards Govt. of Maharashtra for sanction. The approval is still awaited.

15.2.2 The anticipated expenditure under Addl. Infra-II Scheme will be Rs. 600 Crs for year FY 18-19 & Rs. 994 Crs during year FY 19-20.

15.2.3 The projected physical achievement in year 2018-19 will be as below:

Description	Unit	Projected Achievement for year 2018-19
New substations	No.	40
Augmentation of Power Transformers	No.	30
Additional Power Transformers	No.	50
Distribution Transformers	No.	3500
Augmentation of Distribution Transformers	No.	3000
HT Line	Km.	2500
LT Line	Km.	1800

15.3 Gaothan Feeder Separation Scheme (GFSS)

15.3.1 Project Design: Gaothan feeder separation scheme (GFSS) involves segregation of agricultural load and other category load respectively on separate feeders. Areas particularly identified for GFSS are agricultural dominated wherein the Ag. loads are concentrated. Existing feeder is treated as agriculture feeder & a separate new feeder is erected from substation to Gaothan / Village. The existing Ag. feeder will get supply during OFF peak period, whereas new Gaothan feeder will get continuous supply. The scheme envisages restricted supply to agriculture load thereby extending nearly uninterrupted good quality power supply to villages.

15.3.2 Project Originality: The immediate measure for load management can only be achieved by flattening of the load curve and shifting of the peak load to other off-peak periods and thus minimize the large-scale unrest among rural consumers arising out of load shedding. Such measure shall also help MSEDCL to eliminate the feeling of discrimination felt by the rural consumers' vis-à-vis urban consumers. The Scheme shall benefit MSEDCL over the long term in view of the various advantages as mentioned below:

- Reduction in load shedding particularly to Rural/Semi-urban consumers and thereby reducing the feeling of discrimination and discontent among rural consumers.
- Flattening of load curve in judicial way.
- Better Energy Accounting for Ag consumption.
- System strengthening by improving the Infrastructure.
- Improvement in Reliability and Quality of power supply.
- Better Load Management.
- Reduction in over drawl and power purchase
- Reduction in T&D loss.

15.3.3 The GFSS project is being implemented by MSEDCL in 4 phases in Maharashtra; also the project is further implemented in Shrirampur Division under Ahmednagar District. Details of GFSS progress as on March 2018 are as given below:

15.3.4 Progress of GFSS as on March 2018:

Name of the Scheme	Feeders		Villages		Load Management	
	Scope (Nos)	Achieved (Nos)	Scope (Nos)	Achieved (Nos)	Scope (MW)	Achieved (MW)
GFSS-I	1498	1498	6932	6932	1905	1905
GFSS-II	892	892	6775	6775	1088	995
GFSS-III	-	-	434	328	-	-
GFSS Left-out	1131	1093	3592	3148	628	362
GFSS-Shrirampur	81	81	151	151	161	72

Name of the Scheme	Feeders		Villages		Load Management	
	Scope (Nos)	Achieved (Nos)	Scope (Nos)	Achieved (Nos)	Scope (MW)	Achieved (MW)
GFSS Total	3602	3564	17884	17334	3782	3334

15.4 Single Phasing Scheme

15.4.1 Objectives: Single Phasing of the selected rural mixed load feeders is carried out by use of changeover switches at substation. The scheme envisages supplying Single Phase rural lighting load through three nos. of single phase transformers. During the normal operation, the agricultural load continues to be supplied from the three phase transformers. On operation of the changeover switch, there will be no supply to the 3-phase load on the 11kV distribution network whereas single phase supply is available to the lighting and fan load. On revising changeover switch, normal 3-phase supply shall be restored.

15.4.2 The Single Phasing project is being implemented by MSEDCL in 4 phases in Maharashtra. Details of Single Phasing progress as on March 2018 are as given below:

15.4.3 Progress of Single Phasing Scheme as on March 2018:

Name of the Scheme	Feeders		Villages		Load Management	
	Scope (Nos)	Achieved (Nos)	Scope (Nos)	Achieved (Nos)	Scope (MW)	Achieved (MW)
Single Phasing-I	1186	1186	8085	8085	1153	1153
Single Phasing-II	768	768	3877	3877	722	722
Single Phasing-III	1054	1054	2308	1880	-	-
Single Phasing Left-out	-	-	2755	2667	-	-
Single Phasing Total	**3008**	**3008**	**17025**	**16509**	**1875**	**1875**

15.5 R-APDRP Scheme

15.5.1 GOI has initiated a scheme named "R-APDRP" to focus on establishment of baseline data and fixation of accountability and reduction of AT & C losses through strengthening &upgradation of sub-transmission and distribution network and adoption of Information Technology during XI Plan. R-APDRP scheme includes following:

- Proposed to cover urban areas- Towns and cities with population of more than 30,000;
- Project shall be taken up in Two parts Part 'A' and Part 'B',
- Part A shall include the projects for establishment of Base Line Data and IT applications for energy Accounting /Auditing and IT Based Consumer Service centers;
- Part B shall include regular distribution strengthening and augmentation projects to reduce AT&C Losses upto 15%.

15.5.2 Funding Mechanism:

- Initially GOI will provide 100% Loan for Part A and 25% loan for Part B projects on the terms decided by Ministry of Finance. The Loan of Part A is converted into grant once establishment of the required system is achieved;
- The balance funds (75 %) for Part B projects shall be raised from financial institutions. The entire loan from GoI is routed through financial institutions for the respective schemes funded by them.

15.5.3 Conversion of loan into Grant

- Part A: The loan shall be converted into grant once the establishment of the required system is achieved and verified by the independent agencies. The interest on the converted Loan shall be capitalized. No conversion to grant will be made in case Part A is not completed within 5 years from the date of sanctioning of the project/ till the period extended by PFC. PFC has extended the period of completion of R-APDRP Part A till March -2017

- Part B: Up to 50% loan of Part-B projects shall be converted into grant in five equal tranches on achieving the 15% AT&C loss in the project area on a sustainable basis for a period of five years. If the utility fails to achieve or sustain the 15% AT&C loss target in a particular year, that year's trench of conversion of loan to grant will be reduced in proportion to the shortfall in achieving 15% AT&C loss target from the starting AT&C loss figure. PFC has extended the R-APDRP Part B till March -18.

15.5.4 Progress of works:

- **Achievements of R-APDRP Part A:**
  a) 128 Towns with population more than 30,000 (Census 2001) selected for Implementation of R-APDRP Part A.
  b) Loan amounting to Rs 315 Crs for 128 towns is sanctioned by PFC on 19/3/2010. The sanctioned amount is revised to Rs 260.09 Crs on 30.01.2017.
  c) All 128 towns Declared as go-Live as on Oct'14.
  d) After declaration of Go live of towns the TPIA (M/s PWC Ltd) appointed by PFC has started their work in April -2015. The verification is completed. The reports submitted by TPIEA for successful completion of the scheme is accepted by PFC in the month of Oct – 16.
  e) Closure proposal submitted on 16.01.2018.
  f) Letter of conv. of Loan amount to Grant, is awaited from PFC/MoP.
- **Achievements of R-APDRP Part B:**
  a) The Expenditure of RAPDRP Part B as on 31.08.2018 is Rs 2028 Crs.
  b) The achievements upto 31.03.2018 are as given below:

Sr. No	Activities	Unit	Scope	Achievement
1	New Substation (No)	Nos	135	135
2	Aug of Power Tr. (No)	Nos	29	29
3	Addl Power Tr. (No)	Nos	35	35
4	DTC (No)	Nos	5919	5919
5	Aug. of DTCs (No)	Nos	3652	3652

- **All 120 Towns are declared as completed as on 31.03.2018.**

15.6 SCADA Part A

15.6.1 SCADA is being implemented in 8 towns of MSEDCL. The towns with population more than 4 lakhs and Annual Input energy more than 350 MU are selected for SCADA implementation amounting to Rs. 117 Crs. The eligible towns are Amravati, Malegaon, Sangli, Solapur and Greater Mumbai for SCADA and DMS, and Pune, Nashik and Kolhapur for Only substation SCADA.

15.6.2 The SCADA Part A Includes the following scope of work:

a) Establishment of SCADA/DMS control center in eight specified towns.
b) Integration with IT system being implemented under R-APDRP Part-A
c) Establishment of Data Recovery Center at Nagpur
d) Supply, installation, integration and commissioning of RTUs at all 66/33/22/11kV S/S,
e) FRTUs at locations of RMUs on 11kV Distribution networks etc.
f) SCADA/DMS system for control and supervision of 33/11kV S/S and 33KV & 11kV feeders

15.6.3 The Achievements of SCADA Part A are as below:

Sr No	Activity	Scope	Installed
1	SCADA Control Center	8	8
2	RTU	268	268
3	FRTU	1654	1646

15.6.4 All 8 SCADA towns are declared completed.

15.7 SCADA Part B

15.7.1 PFC has sanctioned 8 towns for SCADA enabling works amounting to Rs 189 crs. The Towns sanctioned by PFC are Greater Mumbai, Amravati, Solapur, Sangli, Malegaon, Pune, Nashik and Kolhapur.

15.7.2 The SCADA Part B Includes the following scope of work:
Installation of equipment required for automation such as Ring Main Units, numerical Relays for the Protection of 11 KV feeders, Capacitors and incomers, Automatic Voltage regulators, winding Temperature Indicator and Oil Temperature Indicator for Power Transformers etc.

15.7.3 The Achievements of SCADA Part B are as below:

Sr No	Activity	Scope	Installed
1	RMU	1370	1370
2	Numerical Relay	3913	3913
3	WTI/OTI	403	403

15.7.4 All 8 SCADA (Part B) towns are completed.

15.8 Integrated Power Development Scheme (IPDS-I)

15.8.1 Government of India has launched Integrated Power Development Scheme (IPDS) for urban area (Statutory Towns) only. The existing scheme of R-APDRP will be subsumed in this new IPDS scheme.

15.8.2 Objectives of IPDS:

- 24x7 Hrs Power supply for consumers.
- Strengthening of electrical distribution network.
- Reduction of AT&C Losses.

15.8.3 Provision of funds

- 60% Grant Central Government.
- 10% Utility/ State Government
- 30% Loan from FIs/ Banks
- Additional grant of 50% of loan component i.e. 15% will be released subject to achievement of milestones.

15.8.4 The Need Assessment Document (NADs) were prepared for Rs. 10609 Crs & submitted to PFC. However, PFC suggested to restrict the DPR cost to Rs. 2400 Crs for Maharashtra State. Accordingly, DPR's of Amounting Rs.3175.15 Crores were prepared for 44 Circles (254 towns) in MSEDCL (Rs 3052.97 Crs) & BEST Utility (Rs 122.18 Crs) and submitted online to the Nodal Agency, PFC. The criteria considered for curtailment in the NAD quantity was that the work which is executable and required on top most priority such as overloading of substations, feeders and DTCs, assessing the future load growth in the nearby area and strengthening of the existing system. Accordingly, locations of substations and DTCs are selected under the proposed DPRs.

15.8.5 Government of India has in-principally approved the DPRs for MSEDCL amounting to Rs. 2300.43 Crs. IPDS status as on 31.03.2018 is provided below:

Sr. No.	Particulars	Scope	Target as per milestone (March 18)	Progress	
				Commissioned/ Completed	WIP
1	New Substation (No)	129	86	10	85
2	Aug of Power Tr. (No)	56	50	35	12
3	Addl Power Tr. (No)	25	25	11	13
4	HT line (Km)	6692	4575	1133	1112
5	DTC (No)	5630	2537	726	839
6	Aug. of DTCs (No)	3644	1880	1100	101
7	LT Line (Km)	6303.747	3370.81	610.24	168.32

15.8.6 The R.I charges of Rs. 900 Crs have been considered for works of underground cabling.

15.8.7 The Hon'ble Commission has accorded in principle approval for IPDS scheme in MSEDCL amounting to Rs 2300.43 Crs on dt 10/2/2016.

15.8.8 The works under IPDS Scheme are targeted to be completed by March -19

15.9 Smart Grid:

15.9.1 Amravati town and the congress Nagar Division under Nagpur town are selected for Implementation of the Smart Grid Pilot project

15.9.2 Activities covered under the scheme:

1. Advanced Metering Infrastructure (AMI) for Residential, Commercial and Industrial Consumers
2. Outage Management system (OMS) ; Integration with existing SCADA/ DMS
3. Integrated Visualization and Analytics
4. Demand Response
5. Integration with existing legacy, RAPDRP Part A solutions and ERP applications
6. Cyber Security

15.9.3 The Scheme sanctioned cost

- Amravati town: 90.05 Crs
- Congress Nagar Division, Nagpur – 139.15 Crs

15.9.4 Current Status:

- Tender Floated , technical bid evaluation in process

15.10 IPDS IT Phase-II: IT enablement scheme

Project Name	IT Phase - II
Towns selected	124
Criteria	Towns with population more than 15000
Scope	IT Infra at Towns , DC and and DR , IT Hardware (PC and Switch for Towns), GIS , Meter (DTC , feeder , boundary and HT Consumers) and Modem

Sanction details	Cost - Rs 94.79 Crs received on 5th July 2017

15.10.1 Current status of the Scheme

Sr. No.	**Activity**	**DPR Sanctioned Cost Rs. Crs**	**Tender Status**	**Current Status**
1	GIS	12.39	Tender Floated on 11.10.2017	MERC approval and LOA issue under Process
2	IT Town Infrastructure	62.09	Tender Floated on 23.11.2017	The tender is cancelled DC DR scope is deleted from tender and tenders to be refloated for Town IT infra.
3	CCC	2.24	Tender Floated on 19.09.2017	LOA issued on 25th Jan 2018
4	Meter	4.92	Tender to be floated by store	
5	Modem	13.14	Tender to be floated by IT	
Total		**94.79**		

- The IPDS IT Phase-II Scheme is targeted to be completed by March – 19

15.11 Rajiv Gandhi Gramin Vidyutikaran Yojana

15.11.1 Government of India (GoI) has launched in April 2005 an ambitious scheme “Rajiv Gandhi Gramin Vidyutikaran Yojana” (RGGVY).

15.11.2 This scheme has following policies:

- Provision of access to electricity to all households.
- Quality and reliable power supply at reasonable rates.
- Minimum lifeline consumption of 1 Unit per household per day as a merit by year 2012.
- Electrifying all villages as per census 2001 with new definition of village electrification.

- While providing power supply to 100% BPL (Below Poverty Line) Households no service connections cost to be recovered from such beneficiaries.

15.11.3 RGGVY Scheme Xth plan, XIth Plan &XIth supplementary plan was completed in March 2010, September-2013 & October 2014 respectively. Final progress of the scheme is as follows:

BPL Connections		Infrastructure Work Progress					
		HT Line (Km)		LT Lines (Kms.)		DTC	
Target	Achmt	Target	Achmt	Target	Achmt	Target	Achmt
1203694	**1211041**	**5640.55**	**3797.19**	**9488.13**	**10437.24**	**9552**	**9018**

15.12 Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY)

15.12.1 Government of India (GoI) has launched an ambitious program of "Deen Dayal Upadhyay Gram Jyoti Yojana" (DDUGJY) in December 2014. The scheme is being implemented 33 Districts (37 Circles) of Maharashtra State.

15.12.2 Objectives of DDUGJY scheme:

- Giving regulated Power Supply to Ag. Consumers,
- Continuous Power Supply (24X 7) for non-agriculture consumers
- Strengthening and augmentation of Distribution networks.
- Metering at various level for proper Energy accounting.
- Reduction of AT & C Losses.
- Subsuming RGGVY in DDUGJY and carry forward the approved outlay for RGGVY to DDUGJY

15.12.3 The work completion period for the scheme is 1/ 1.5 years from the date of issue of LoAs. Due to poor response to the tenders for DDUGJY & higher rates quoted by the agencies, the process of awarding LoA was delayed. Hence there is deviation in projections which was already provided by this section.

15.12.4 Now LoAs for all the Districts/ Circle in Maharashtra State have been awarded &work proposed under the scheme is in progress. Current Status (up to May 2018) of the scheme is provided below:

	New S/stn (Nos.)	Aug of S/stn (Nos.)	Add PT (Nos.)	New DTCs (Nos.)	Aug of DTC (Nos.)	HT Line (Km)	LT Line (Km)	No. of Feeders for Segregation	BPL proposed (Nos.)	SAGY villages proposed (Nos.)
Scope	216	54	43	10023	393	18896.91	6030.46	775	3,96,196	79
Achievement	**45**	**39**	**26**	**1365**	**105**	**3782**	**715**	**103**	**23,058**	**15**

15.13 SAP ERP PROJECT

15.13.1 MSEDCL has implemented integrated SAP ERP (Enterprise Resource Planning) solution for its core functions for improvement in operation efficiencies with respect to the finance, project functions and integrating with existing systems viz. Billing, HRMS etc.

15.13.2 The scope of work of this project primarily consists of:

- Providing and installing ERP package and related software licenses;
- Implementation of ERP, Project Management and control;
- Integration with ancillary modules, R-APDRP Applications, SCADA under development in R-APDRP Part-A & other systems;
- Revamping/Upgrading of existing Billing System to n-tier architecture and integrating with proposed ERP;
- Enhancement and maintenance of ancillary modules;
- Development of custom application and its maintenance.

15.13.3 ERP project cost to provide ERP solution as above is Rs. 51.13 crores, which includes support for 3 years after completion of the project.

15.13.4 The scope of LOA "Supply, Installation, Commissioning and Maintenance of Hardware for ERP implementation solution in MSEDCL" primarily consist of:

- Procurement, Commissioning, Integration, Maintenance and Management of New Servers, Laptops and other hardware and software in DC and DR.
- Comprehensive Warranty of Hardware and software for 5 years from date of commissioning and final acceptance.
- Implementation of DC-DR replication
- Two Factor Authentication for VPN users with Authentication manager at DC and DR
- Application Performance Monitoring tool
- Up-gradation of existing mail server application

15.13.5 Objectives

- The existing Financial Accounting System was standalone system and needs to be re-engineered to a latest platform. It was also required to integrate the new system to all the existing system. Further, the existing billing system is distributed and client server architecture based. It was required to re-engineer this system to N tier architecture.

- Further for the management of different projects running at MSEDCL like Infra, RGGVY, GFSS, R-APDRP etc., an off the shelf project management tool was required. This tool helps in managing and monitoring the projects. There was need to keep track of all the materials in stock and accordingly manage the procurement activity. This implementation helps MSEDCL in achieving following objectives in mind:

a) Enable MSEDCL to improve operational and financial efficiencies;

b) Reduces the workload pressure and provides accurate, timely information for taking appropriate business decisions;

c) Adopt best practices, standardization and automate many of the business activities.

15.13.6 Benefits:

a) Provide real time, on-line information and MIS for fast, efficient decision making at the highest levels;

b) Centralized Data storage and real-time availability of information;

c) No duplication of data at enterprise level;

d) Online workflows and approvals;

e) Plant Maintenance operates the overall maintenance business processes and functions of MSEDCL. It helps to keep track of breakdown and preventative maintenance activity of equipment;

f) FICO module enables to centrally track financial accounting data and cross-functional integration with other SAP modules helps to generate financial statement and balance sheet at ease;

g) IT solution for Project Execution and Management enables users and managers to execute and monitor the projects effectively;

h) Material Management speeds up the procurement and material management activities making the business run smoother with complete time and cost efficiency;

i) Revamp the existing 2 tier billing system to ‘n’ tier architecture, this help the billing system online and ensure faster access to MIS reporting. The billing solution would be centralized to ensure lowest total cost of ownership;

15.13.7 Scheme Approval

- MERC scheme code: MSEDCL/FY11/21
- MERC In Principle Clearance Reference No. and Dt : MERC/CAPEX/2010/2011/02588 dated 31.03.2011

- In Principal Approved Cost Rs in Cr : Rs. 91.00 Crores.

15.13.8 LOA Project cost:

- LOA for "ERP Solution Implementation and integration at MSEDCL" issued for an amount of Rs. 51.13 Crs. The project is ongoing.
- LOA for "Supply, Installation, Commissioning and Maintenance of Hardware for ERP implementation solution in MSEDCL" issued for an amount of Rs. 32.56 Crs. The project is completed.

15.14 DC/DR IT infra up-gradation – I

15.14.1 Scope:

- Upgradation of existing 3PAR SAN Storage space at both DC & DR and procurement of SAN switch at both DC & DR
- Upgradation of Processor & RAM of existing BL870 Servers at DC & DR
- Upgradation cum Procurement of High Performance Servers
- Supply & installation of Latest Oracle Ebiz Suite to Servers and Applications and data migration of existing HRMS, Payroll, etc modules to new environment (including migration of existing oracle database instances to latest enterprise edition release) along with successful DC-DR replication. The successful integration of migrated modules as per pre-migration scenario. Comprehensive Training of Oracle Ebiz Suite & migration activities to MSEDCL staff.
- Supply and Installation of Window Servers.
- Up-gradation cum Procurement of SAP Hana Appliance & HANA Software Licenses by 256GB with one-year support
- Successful Integration of new & upgraded servers, storage and other hardware with existing infrastructure.

15.14.2 Objective:

- MSEDCL's Data Center at Prakashganga, BKC, Mumbai hosts various enterprise level applications like Website, Online Bill Payment, E-Tendering, HRMS, Payroll, Data Warehouse, Mobile Apps, ERP etc. Similar configuration exists at Disaster Recovery Center at Nagpur with continuous replication of data of Data Centre via point to point leased lines.

- Objective is to upgrade few of the IT Infrastructure components at Data Center & Disaster Recovery Center to meet the current requirements of MSEDCL.

15.14.3 Benefits

- There is no direct tangible cost benefit, the up- gradation of existing infrastructure is essential to run the existing critical applications smoothly. Also, the proposed new solution will give the following benefits:
  a) Strengthen the availability and responsiveness of existing online applications by having appropriate hardware & software resources.
  b) Strengthen agility, scalability, multi-tenancy, governance of its IT infrastructure and maintain these for a foreseeable future.
  c) Utilization of the modem technologies evolved in Servers, Storage and software to improve the scalability, availability, maintainability & performance of IT based systems.

15.14.4 LOA Project Cost:

- LOA for “Up-gradation cum Procurement of IT infrastructure equipment at Data Centre & Disaster Recovery Centre” is issued for an amount of Rs. 16.21 Crs. The project is completed.

15.15 RF-DCU (Expression of Interest)(Non-DPR)

15.15.1 Scope

- The vendor has to supply, install, commission and configure RF DCU in the pilot area having RF Meters installed. In case of multiple agencies are allotted the work, the quantum of RF meters in pilot area, allotted to each agency. The brief scope of work includes the following activities:

- Installation and Configuration of RF DCU in field where RF Meters are installed
- Commissioning of RF Meters for existing and newly installed RF Meters
- Download of RF Meter data (from all the RF Meter make) through RF DCU.
    a. Reading Data: As per Billing Cycle compulsory & also on demand, if required.
    b. Tamper Data: As and when detected in a meter
    c. Bill History & Load Survey: On demand
- Installation and configuration of data collection software at MSEDCL.
- Network debug, validation of data. Maintenance of RF Networks in the field.
- For first two months, RF DCU implementation will be done in parallel to existing RF reading through HHT and correctness of RF Meter readings received through RF DCU will be verified after comparing with RF reading received through HHT.
- In case of no reading received through DCU, all the remaining meters shall be downloaded using HHT and submitted in the format required for billing.

15.15.2 Objective:

To take readings of RF meters by installing DCUs so as to achieve automatic meter reading (AMR) for single phase & three phase consumers.

15.15.3 Benefits:

- No need to visit the consumer premise/carry Hand Held Terminals (HHT) to take meter readings.
- Readings downloaded by DCUs can be seen online through web based data collection software of agencies.
- Accuracy of reading is 100%.

15.15.4 Project status - Ongoing

15.16 P:SI (Project for System Improvement)

15.16.1 Background

This scheme is prepared to comply the statutory obligation section 57 of Electricity Act 2003 as well as to maintain quality of power supply as specify by SOP & to reduce technical loss.

15.16.2 Objective

These schemes are prepared for to reduce the technical loss & improve voltage profile by strengthening the system by taking loan from REC Ltd.

15.16.3 Funding Source

Scheme is executed by taking loan from funding agency such as REC Ltd. The Hon'ble Commission's approval for PSI scheme have taken from FY-2009-10.

15.17 Ag Metering:

15.17.1 Hon'ble Commission in its MYT Order in Case No. 48 of 2016 dated 03.11.2016, has directed MSEDCL to complete 100% metering of 16,01,847 nos. of unmetered Ag consumers up to the year 2020. Further, the metering of 74,400 unmetered consumers having load more than 7.5 HP must be completed within one year from MYT Order Dt. 03/11/2016 in Case No. 48 of 2016.

15.17.2 The scheme of 'Installation of 3-Ph Energy meters to existing 16,01,847 Nos. unmetered AG consumers', amounting to Rs. 989.30 Cr. was prepared and submitted for approval before the Board of Directors. Scheme covers metering of Unmetered AG Consumers of Nagpur, Amaravati, Sangali, Kolhapur, Satara and Ahmednagar.

15.17.3 MSEDCL approached GoM for vide Letter. No. 33548 Dt. 07.11.2016 for providing grant in order to safeguard MSEDCL's common consumers from financial burden to the tune of Rs. 171.03 Cr on account of implementation of metering plan.

15.17.4 The Scheme for Master metering plan of Installation of 3-Ph Energy meters to existing 15,89,123 nos. of unmetered AG consumers is proposed to complete up to the year 2020.

15.17.5 In first part out of 74,287 nos. of unmetered AG consumers having load 7.5 HP & above, 73518 nos. of unmetered AG consumers have been metered up to 23/10/2017.

15.17.6 In second part 3,08,512 nos. of unmetered AG consumers are to be metered during Financial Year 2017-18, having estimated Cost Rs. 171.07 Cr. In third part 6,08,158 nos. of unmetered AG consumers are to be metered during Financial Year 2018-19, having estimated Cost Rs. 337.22 Cr. In forth part 6,08,158 nos. of unmetered AG consumers are to be metered during Financial Year 2019-20, having estimated Cost Rs. 337.22 Cr.

15.17.7 Vide BR dated 09/02/2017, resolution no. 838, Chief Engineer (Material management Cell) authorized to float the tender on full turn-key basis for supply & installation of 3-Ph RF Energy Meters to existing un-metered AG consumers. The tenderization work is in process.

Particulars	Qty.	FY 2017-18	FY 2018-19	FY 2019-20
Installation of 3-Ph RF Energy meter to Unmetered Ag Consumers.	3,08,512	171.07	-	-
	6,08,158	-	337.22	-
	6,08,158	-	-	337.22
Fund Sanctioned (Rs. Cr.)		Nil	Nil	Nil
Expenditure (Rs. Cr.)		Nil	Nil	Nil

Note: For Funding of the scheme, The required Funds of Rs. 171.07 Crores for 3,08,512 nos. of unmetered Ag consumers has been requested from Govt. of Maharashtra as a 'Grant' vide letter no. 33548 dated 07/11/2016. The same is awaited.

Non DPR Schemes

15.18 DPDC/Non-Tribal

15.18.1 Release of residential, agriculture, street light, public water works connections & infrastructure (H.T. line, L.T. line, DTC etc.) development are the main works carried out under this plan.

15.18.2 As per Government Resolution No. Sankirna-2013/ Pra. Kra. 189/ Energy -5 Dt. 30.12.2013, funds under this plan are released as grant to MSEDCL from the year 2013-14.

15.18.3 The GoM has sanctioned Outlay of Rs. 167.75 Crs under General Plan (Non-Tribal) for year 2016-17.

15.18.4 For FY 2016-17 and FY 2017-18 works carried out till Mar 18 under this plan is as below:

Particulars	General Plan FY 2016-17		General Plan FY 2017-18	
	Target	Achievement	Target	Achievement
Residential Connection	24784	17425	17910	8039

15.18.5 Physical target under General Plan for FY 2018-19 to FY 19-20 is as below:

Particulars		2018-19	2019-20
Physical Targets	Agriculture Pump Set Connection	8114	8925
	Residential Connection	54218	59640
	DTC	2681	2949
	HT Line	4021	4423
	LT Line	9381	10319

15.19 DPDC/Special Component Plan

15.19.1 Release of residential connections & Ag. connections to Scheduled Caste & Nav-Buddha beneficiaries & release of street light connections in dalit basti are the main works carried out under this plan.

15.19.2 As per Government Resolution No. Sankirna-2013/ Pra. Kra. 189/ Energy -5 Dt. 30.12.2013, funds under this plan are released as grant to MSEDCL from the year 2013-14.

15.19.3 The GoM has sanctioned Outlay of Rs. 93.3 Crs. and Rs. 122.06 Crs. for FY 17-18 under Special Component Plan and works carried out till Mar 18 under this plan is as below-

Particulars		Special Component Plan FY 2016-17		Special Component Plan FY 2017-18	
		Target	Achievement	Target	Achievement
Physical Targets	Agriculture Pump Set Connection	6924	2790	3107	1038
	Residential Connection	16040	4874	3361	1146
	Street Light electrification	6054	3086	3193	1291

15.19.4 Projected Expenditure & physical target under General Plan for FY 2018-19 to FY 19-20 is as below:

Particulars		2018-19	2019-20
Physical Targets	Agriculture Pump Set Connection	6462	7108
	Residential Connection	10690	11759
	Dalit Basti Street Light	7082	7790
	DTC	858	944
	HT Line	1286	1415
	LT Line	3430	3773

15.20 DPDC/TSP+OTSP (District wise)

15.20.1 This scheme is executed in area notified as Tribal Sub-Plan (TSP) area as well as other than Tribal Sub Plan (OTSP) area. In this scheme, out of total allocation, 85% allocation is utilized for Tribal beneficiary living in TSP area and balance for Tribal beneficiary living in OTSP area.

15.20.2 The fund is received from GOM under DPDC (TSP + OTSP) Scheme as a 100% grant. The fund sanctioned under this scheme should be obtained from concern District Collector.

15.20.3 The works included under this scheme is mainly to release Ag. Connections, L&F Connection to tribal beneficiaries and to electrify un-electrified tribal Wadi / Pada.

15.20.4 The budget provision for FY 2016-17, for area under TSP is Rs. 85.9 Crs. & for OTSP is Rs. 12.75 Crs. Similarly, budget provision for FY 2017-18, for area under TSP is Rs. 89.60 Crs. & for OTSP is Rs. 14.09 Crs. The works to be done under this scheme & progress of work upto Mar 2018 are as under:

Description		Tribal sub-plan (provisional) (T.S.P. & OTSP) FY 2016-17		Tribal sub-plan (provisional) (T.S.P. & OTSP) FY 2017-18	
		Target	**Achievement**	**Target**	**Achievement**
Physical Target	Ag. pump energisation	4699	2186	1826	563
	L&F connection	13106	2959	1490	298
	Wadi/Pada Electrification	333	289	133	65

15.20.5 Projected Expenditure & physical target under TSP & OTSP for FY 2017-18 to FY 19-20 is as below-

Particulars		2018-19		2019-20	
		TSP	**OTSP**	**TSP**	**OTSP**
Fund Demand (Rs. In crs)		215.06	45.31	237	50
Physical Targets	Agriculture pump energisation	2353	988	2588	1087
	Residential Connection	12557	2005	13813	2206

Particulars		2018-19		2019-20	
		TSP	OTSP	TSP	OTSP
	Wadi/Pada Electrification	548	102	603	112
	HT line	1547	343.5	1702	378
	LT Line	4124	916	4536	1008
	DTC	1031	229	1134	252

15.21 Backlog Removal Scheme

15.21.1 The GOM is making provision of funds to the Mahavitaran Co. for the removal of District wise Backlog of Ag pumps energization declared by The Backlog & Indicator Committee set up by Govt. of Maharashtra in March 1996 as per the Hon. Governor, Maharashtra State, directives issued since FY 2005-06 regarding removal of the Regional Imbalance of Agricultural Pump Sets. Presently, in the five districts namely Thane, Raigad, Ratnagiri, Chandrapur and Gadchiroli, the work of energization of agricultural pumps is being carried out through the Backlog Scheme.

15.21.2 The Target of 15014 nos. of Ag pumps energization under Backlog Scheme has been set for the year 2016-17 and for that the GoM has sanctioned Rs. 138.72 Crs. under Backlog Scheme for FY 2016-17. Under this scheme, MSEDCL has carried out work of electrification of 6243 nos. of Ag. Pumps& Expenditure incurred is Rs. 138.72 Crs. up to Mar- 2017 for year 2016-17. Similarly for FY 2017-18 GoM has sanctioned amount of Rs. 87.30 Crs. for Ag pump energisation. MSEDCL has carried out the work of electrification of 1330 nos. of Ag pumps & expenditure incurred up to Mar-18 is Rs. 39.30 Crs. Presently Ag Backlog is removed from all district except Ratnagiri District.

15.21.3 Projected Expenditure & physical target under Ag Backlog scheme for FY 2016-17 to FY 19-20 is as below:

Particulars		2018-19	2019-20
Physical Targets	Agriculture pump energisation	2500	-

15.22 AG Special Package for Vidarbha & Marathwada

15.22.1 As compared to the Rest of Maharashtra, there was imbalance of Ag. Pump-energisation in Vidarbha& Marathwada. To remove the imbalance of Ag. Pump-energisation in Vidarbha& Marathwada the GoM made the provision of fund of Rs. 819 Cr. under Special Package – I for FY 2015-16 for energization of 99054 nos. of Ag. paid pending as on March 2015 in Vidarbha & Marathwada; under this scheme during FY 2015-16, 101332 nos. of Ag. Pumps are energized.

15.22.2 For the FY 2016-17, the GoM made the provision of fund of Rs. 916.20 Cr. under Special Package – II for energization of 94462 nos. of Ag. paid pending as on March 2016in Vidarbha & Marathwada; under this scheme during FY 2016-17, total 30343 nos. of Ag. pumps and during FY 2017-18 upto March 2018, total 54706 nos. of Ag. Pumps are energized.

15.22.3 For FY 2018-19, the scheme of Rs. 700 Cr. is prepared for the energization of 110156 nos. of Ag. pumps in Vidarbha & Marathwada.

Particulars		2015-16	2016-17	2017-18	2018-19
Physical Targets	Agriculture pump energisation	99054	94462		110156
Achievements	Agriculture pump energisation	65900	30243	54706	--

15.23 Evacuation

15.23.1 As per GoM decision on dt.14th July 2010 regarding Energy from non-conventional resources the estimated cost of evacuation for power is to be borne by the generator / Developer. 50% payment will be reimbursed to the developer by MEDA. Balance 50% amount will be paid to generator / developer by the MSEDCL after successful commissioning of the project and keeping it in running condition for one year then in five equal installments annually in successive 5 years watching generation in process. This amount to be paid to generator / developer is to be financed from REC.

15.23.2 GoM Policy for Grid connected power projects based on New and renewable (Non-Conventional energy) Energy Source -2015 dated 20 July 2015 envisaged following for grid connectivity:

- Bagasse / Agricultural Waste based Co-generation Power Projects & Solar Power Projects:
  The regulations and orders of the Hon'ble Commission in the matter of evacuation arrangement and expenditure will be applicable to the bagasse / agricultural waste based co-generation power projects and Solar Power Projects under this policy.

15.24 Small Hydro Power Projects and Biomass based Power Projects:

15.24.1 Expenditure on evacuation arrangement:

15.24.2 The amount of expenditure on evacuation arrangement payable as financial assistance from the green cess fund will be the amount as per the estimate approved by MSETCL / MSEDCL or as per the expenditure actually incurred, and verified by the MSETCL / MSEDCL, whichever amount is less.

15.24.3 The project developer as per the availability of funds will be given financial assistance as reimbursement by MEDA from the green cess fund, up to a maximum of Rs. 1 crore per project for expenditure made on evacuation arrangement.

15.24.4 The financial assistance from the green cess fund will be released by MEDA only after the evacuation arrangement is handed over to MSETCL / MSEDCL and upon approval of expenditure on evacuation arrangement by MSETCL / MSEDCL subject to the availability of funds.

15.25 Evacuation Wind Generation.

15.25.1 As per GoM decision on dt.14th July 2010 regarding energy from wind mills, the estimated cost of evacuation for power will be borne by the generator / developer initially. 50% amount will be reimbursed to generator / developer by the MEDA (Maharashtra Energy Development Agency) as per commissioning of mills step by step.

15.25.2 Remaining 50% amount will be paid to generator / developer by the MSEDCL after successful commissioning of the wind mills. The amount will be paid to generator / developer after one year in the next successive 5 years in 5 Nos. of equal instalments.

15.25.3 As per new GoM Policy for Grid connected power projects based on New and renewable (Non-Conventional energy) Energy Source -2015 on dated. 20 July 2015 as follows –

15.26 Wind Power Projects: -

15.26.1 The regulations and orders of the Hon'ble Commission will be applicable to wind power projects under this policy in the matter of evacuation arrangement and expenditure.

15.26.2 As stated in MERC (Renewable purchase obligation, it's compliance and implementation of renewable energy certificate frame work) regulation 2016, point no. 15 states about the Grid connectivity framework:

15.26.3 Grid connectivity framework:

- The concerned Licensee shall be responsible for development of evacuation infrastructure beyond the inter connection point, while the generating Company shall develop evacuation infrastructure from the generation facility up to the inter connection point at its own expense.
- Provided that the evacuation infrastructure cost beyond the inter-connection point shall be borne by the licensee and shall be recovered from its consumers as per the pricing framework developed by the state commission.
- As stated in MERC (Renewable purchase obligation, it's compliance and implementation of renewable energy certificate frame work) regulation 2016, point no. 2(2.1) (h) definition of "Inter-connection point" states that:

- "Inter-connection point" shall mean the interface point of a Renewable Energy generating facility with the transmission system or distribution system, as the case may be."
- In relation to Wind Energy Projects and Solar Photo Voltaic (PV) Projects, the inter connection point shall be the line isolator on the outgoing feeder on the HV side of the Pooling sub-Station.

Explanation: -

The Pooling Sub-station shall mean the Sub-substation at the site of the wind farm or Solar power plant, which shall include step-up transformer and associated switchgear, and to the LV side of which multiple. Generating Units (i.e Wind Turbine Generators or Solar PV modules/arrays/inverter units) are connected;

In relation to mini and micro Hydro power, small Hydro power, Biomass power, non–fossil fuel-based Co-generation power and Solar Thermal Projects, the inter connection point shall be the line isolator on the outgoing feeder on the HV side of the generator transformer.

16. PRAYERS TO THE HON'BLE COMMISSION

16.1 Prayers

16.1.1 MSEDCL most respectfully prays to the Hon'ble Commission:

1) To admit the MTR Petition as per the provisions of the MERC (MYT) Regulations 2015 and consider present Petition for further proceedings before Hon'ble Commission;
2) To approve the total recovery of Aggregate Revenue Requirement and revenue gap for FY 2015-16 to FY 2019-20 along with other claims as proposed by MSEDCL;
3) To allow the carrying cost on the revenue gap of FY 2015-16 to FY 2019-20;
4) To approve mechanism for recovery of computed revenue gap along with carrying cost and Tariff Schedule considering the Tariff Design principles and other suggestions proposed by MSEDCL;
5) To approve the AG sales for FY 2014-15 and FY 2015-16 without any disallowances;
6) To approve tariffs for individual categories as proposed by MSEDCL;
7) To allow the revision in criteria for Billing Demand as proposed by MSEDCL;
8) To allow kVAh based billing for HT category consumers;
9) To allow separate category for Charging Stations/Centers for Electrical Vehicles with Tariffs as proposed by MSEDCL;
10) To allow the creation of New Sub-Categories in HT for New Consumers as proposed by MSEDCL;
11) To allow a rebate for incremental consumption of existing HT consumers of selected categories as proposed by MSEDCL;
12) To allow to sell energy to the HT consumers in SEZ areas whosoever approach MSEDCL treating them at par with New Consumers in Sr. No. 10 above;
13) To consider the incentives/rebates proposed as above as part of ARR;
14) To rationalize the incentives and penalties as proposed by MSEDCL;
15) To allow the revision in ToD Charges as proposed by MSEDCL;
16) To approve Cross Subsidy Surcharge and all such other charges including wheeling charges and wheeling losses for Open Access consumers as proposed for FY 2018-19 to FY 2019-20;
17) To approve the Additional Surcharge for all Open Access consumers including those sourcing power from CPPs as proposed for FY 2018-19 to FY 2019-20;

18) To allow increase in standby charges for embedded CPP consumers;
19) To allow levy of compulsive regulatory provision for standby agreement for SEZ and railways;
20) To approve the suggested categorization for different type of activities as proposed by MSEDCL in applicability of tariff;
21) To allow recovery of wheeling charges from the consumers who are connected at a higher voltage level than as stipulated in MERC SOP Regulations
22) To allow levy of wheeling charges to rooftop system users;
23) To approve the schedule of charges as proposed by MSEDCL;
24) To approve the capex and capitalisation as submitted by MSEDCL;
25) To grant any other relief as the Hon'ble Commission may consider appropriate;
26) 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;
27) To condone any error/omission and to give opportunity to rectify the same;
28) To permit MSEDCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time;

Satish Chavan
Director (Commercial)

Annexure 1: Regulatory Formats

Annexure 2: Annual Accounts for FY 2015-16

Annexure 3: Annual Accounts for FY 2016-17

Annexure 4: AG sales analysis report based on EHV input

Annexure 5: AG sales analysis report based on rainfall, AG production

Annexure 6: Interest Rates for Interest Paid on Security Deposit for FY 2015-16

Annexure 7: Interest Rates for Interest Paid on Security Deposit for FY 2016-17

Annexure 8: Interest Rates for Interest Paid on Security Deposit for FY 2017-18

Annexure 9: Letter to MERC regarding AG metering plan

Annexure 10: Letter to MERC regarding FAC

Annexure 11: Letter to MERC regarding compliance of directives on actual daily data of load generation

Annexure 12: Letter to MERC regarding status of payments to distribution franchisees

Annexure 13: Proposed Schedule of Charges

Annexure 14: Cost Benefit Analysis report of various schemes of MSEDCL