

**BEFORE  
MAHARASHTRA ELECTRICITY REGULATORY  
COMMISSION**

**PETITION FOR  
FINAL TRUE UP FOR FY 2019-20 & FY 2020-21,  
& FY 2021-22, PROVISIONAL TRUE UP FOR FY  
2022-23  
AND  
REVISED PROJECTIONS & TARIFF FOR  
FY 2023-24 TO FY 2024-25**



**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 2019 for the 4th Control Period from FY 2020-21 to FY 2024-25 on 1<sup>st</sup> August, 2019. 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 30<sup>th</sup> November 2022. Accordingly, MSEDCL is submitting this Mid-Term Review Petition as per provisions of MYT Regulations, 2019.

The MTR Petition under section 62 of the Electricity Act, 2003 and MERC MYT Regulations, 2019 comprises of following:

- Truing-up for FY 2019-20 based on Audited Annual Accounts under MERC (MYT) Regulations, 2015;
- Truing-up for FY 2020-21 and FY 2021-22 based on Audited Annual Accounts under MERC (MYT) Regulations, 2019;
- Provisional Truing-up for FY 2022-23 based on provisional information available for FY 2022-23 under MERC (MYT) Regulations, 2019;
- 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 23-24 to FY 24-25 under MYT Regulations, 2019;
- Revision in Schedule of Charges;

### **B. Final True Up for FY 2019-20**

Based on the restated Audited Annual Accounts of MSEDCL, the Aggregate Revenue Requirement (ARR) for FY 2019-20 works out to be at Rs. **86,004.28** Cr. based on all the cost parameters as specified in the following table. The final True Up for FY 2019-20 comparing the actual audited data for FY 2019-20 with those approved by the Hon'ble Commission vide MYT Order dated 30th March, 2020 in Case no. 322 of 2019 is summarized below.

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Power Purchase Expenses	55,967.62	61,897.22	5,929.60
Operation & Maintenance Expenses	7,463.76	7,517.97	54.22
Depreciation Expenses	2,665.53	2,438.03	(227.50)
Interest on Loan Capital	1,328.88	1,274.34	(54.54)
Interest on Normative Working Capital	135.77	131.40	(4.37)
Interest on Consumers Security Deposit	796.03	748.92	(47.11)
Other Finance Charges	31.10	22.08	(9.02)
Provision for bad and doubtful debts	732.63	854.96	122.33
Other Expenses	50.08	83.28	33.20
Income Tax	213.89	-	(213.89)
Intra-State Transmission Charges MSLDC charge	4,867.55	4,871.25	3.70
Incentives/Discounts	307.03	337.25	30.22
Contribution to Contingency Reserves	142.76	128.19	(14.57)
Return on Equity Capital	1,866.79	1,893.43	26.64
RLC refund	1.84	1.77	(0.06)
Effect of sharing of gains/losses	-	347.76	347.76
Past Period Adjustment by Commission	853.08	853.08	-
Revenue Gap Recovery Allowed	2,562.93	2,562.93	-
Impact of payment to MPECS in future years	40.17	40.42	0.25
<b>Aggregate Revenue Requirement</b>	<b>80,027.43</b>	<b>86,004.28</b>	<b>5,976.85</b>
Stabilisation amount as per MYT Order	-	-	-
<b>Total Aggregate Revenue Requirement</b>	<b>80,027.43</b>	<b>86,004.28</b>	<b>5,976.85</b>
<b>Less</b>			
Non-Tariff Income	361.66	494.19	132.52
Income from Open Access Charges	29.59	83.44	53.85
Income from Trading of Surplus Power	298.18	335.99	37.81
Income from Wheeling Charges	1.79	1.10	(0.68)
Income from Additional Surcharge	317.14	575.60	258.46
<b>Net Aggregate Revenue Requirement</b>	<b>79,019.07</b>	<b>84,513.96</b>	<b>5,494.89</b>
Revenue from Sale of Power	78,965.30	72,944.55	(6,020.75)
Revenue from Retail Supply Business			
Revenue from Wires Business			
<b>Revenue Gap/(Surplus)</b>	<b>53.77</b>	<b>11,569.40</b>	<b>11,515.64</b>

Major reasons for deviation are increased power purchase cost due to change in law claims, increase in MSPGCL, PGCIL costs, NPCIL tariff revision and lower revenue realisation due to drop in subsidising sales as against approved by Hon'ble Commission.

MSEDCL submits that at the time of Provisional True up for FY 2019-20, MSEDCL had submitted provisional numbers. As the MSEDCL's Accounts have been audited subsequently, MSEDCL is submitting the final true-up based on the

audited accounts.

**C. Final True Up for FY 2020-21**

Based on the restated Audited Annual Accounts of MSEDCL, the Aggregate Revenue Requirement (ARR) for FY 2020-21 works out to be Rs. **80,376.72 Cr.** based on all the cost parameters as specified in the following table. The final True Up for FY 2020-21 comparing the actual audited data for FY 2020-21 with those approved by the Hon'ble Commission vide MYT Order dated 30th March, 2020 in Case no. 322 of 2019 is summarized below.

Rs. Crs

<b>Particulars</b>	<b>FY 2020-21 (Approved)</b>	<b>FY 2020-21 (Actual)</b>	<b>Deviation</b>
Power Purchase Expenses	59,126.06	56,289.25	(2,836.80)
Operation & Maintenance Expenses	7,571.81	7,498.07	(73.75)
Depreciation Expenses	2,817.91	2,654.18	(163.74)
Interest on Loan Capital	1,320.86	1,179.84	(141.02)
Interest on Normative Working Capital	140.96	2,441.12	2,300.16
Interest on Consumers Security Deposit	540.58	282.70	(257.89)
Other Finance Charges	-	32.19	32.19
Provision for bad and doubtful debts	732.63	465.05	(267.58)
Other Expenses	52.58	113.70	61.12
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,699.92	5,715.74	15.82
Incentives/Discounts	322.38	307.40	(14.98)
Contribution to Contingency Reserves	157.56	157.56	(0.00)
Opex Scheme	110.49	27.05	(83.44)
Return on Equity Capital	2,109.58	1,990.87	(118.70)
Effect of sharing of gains/losses	-	92.81	92.81
Impact of payment to MPECS in future years	37.16	37.41	0.25
Incremental Consumption Rebate	439.66	336.80	(102.86)
<b>Aggregate Revenue Requirement</b>	<b>81,180.15</b>	<b>79,621.72</b>	<b>(1,558.43)</b>
Stabilisation amount as per MYT Order	755.00	755.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>81,935.15</b>	<b>80,376.72</b>	<b>(1,558.43)</b>
<b>Less</b>			
Non-Tariff Income	379.75	316.85	(62.90)
Income from Open Access Charges	215.71	213.07	(2.65)
Income from Trading of Surplus Power	302.05	126.21	(175.84)
Income from Wheeling Charges	-	0.09	0.09
Income from Additional Surcharge	119.65	479.03	359.39
<b>Net Aggregate Revenue Requirement</b>	<b>80,918.00</b>	<b>79,241.47</b>	<b>(1,676.53)</b>
Revenue from Sale of Power	80,918.00	73,309.04	(7,608.96)
Revenue from Retail Supply Business	-	-	
Revenue from Wires Business	-	-	
<b>Revenue Gap/(Surplus)</b>	<b>(0.00)</b>	<b>5,932.43</b>	<b>5,932.43</b>

Major reasons for deviation are increased power purchase cost due to change in law claims, increase in MSPGCL, PGCIL costs, NPCIL tariff revision and lower revenue realisation due to drop in subsidising sales as against approved by Hon'ble Commission.

MSEDCL submits that at the time of Provisional True up for FY 2020-21, MSEDCL had submitted provisional numbers. As the MSEDCL's Accounts have been audited subsequently, MSEDCL is submitting the final true-up based on the

audited accounts.

**D. Final True Up for FY 2021-22**

Based on the Audited Annual Accounts of MSEDCL, the Aggregate Revenue Requirement (ARR) for FY 2021-22 is determined at Rs. **95,990.95** Cr. based on all the cost parameters as specified in the following table. The final True Up for FY 2021-22 comparing the actual audited data for FY 2021-22 with those approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March, 2020 in Case no. 322 of 2019 is summarized below.

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Power Purchase Expenses	60,568.92	69,478.78	8,909.86
Operation & Maintenance Expenses	7,257.69	7,949.79	692.11
Depreciation Expenses	2,963.97	2,880.50	(83.47)
Interest on Loan Capital	1,275.59	1,058.79	(216.80)
Interest on Normative Working Capital	142.71	123.08	(19.63)
Interest on Consumers Security Deposit	567.61	360.38	(207.23)
Other Finance Charges	-	45.47	45.47
Provision for bad and doubtful debts	732.63	459.62	(273.01)
Other Expenses	55.21	655.40	600.19
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,809.25	5,977.83	168.59
Incentives/Discounts	338.50	367.37	28.87
Contribution to Contingency Reserves	171.02	171.02	(0.00)
Opex Scheme	110.49	31.67	(78.82)
Return on Equity Capital	2,195.18	2,122.32	(72.86)
RLC refund	-	-	-
Additional Surcharge refund	-	12.27	12.27
Effect of sharing of gains/losses	-	1,036.82	1,036.82
Impact of payment to MPECS in future years	34.15	34.40	0.25
Incremental Consumption Rebate	548.50	546.44	(2.06)
<b>Aggregate Revenue Requirement</b>	<b>82,771.43</b>	<b>93,311.95</b>	<b>10,540.52</b>
Stabilisation amount as per MYT Order	2,679.00	2,679.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>85,450.43</b>	<b>95,990.95</b>	<b>10,540.52</b>
<b>Less</b>			
Non-Tariff Income	398.73	1,208.37	809.63
Income from Open Access Charges	214.92	129.92	(85.00)
Income from Trading of Surplus Power	319.75	195.93	(123.83)
Income from Wheeling Charges	-	0.04	0.04
Income from Additional Surcharge	117.28	402.62	285.33
<b>Net Aggregate Revenue Requirement</b>	<b>84,399.73</b>	<b>94,054.08</b>	<b>9,654.35</b>
Revenue from Sale of Power	84,400.00	85,903.28	1,503.28
Revenue from Retail Supply Business	-	-	-
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(0.27)</b>	<b>8,150.80</b>	<b>8,151.07</b>

Major reasons for deviation are higher power purchase cost due to increased sales and increase in power purchase cost due to domestic coal shortfall, revision in normative O&M expenses. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL

**E. Provisional True-up for FY 2022-23**

Aggregate Revenue Requirement of MSEDCL for FY 2022-23 is estimated considering the provisional data available for the first six months of the FY 2022-23 and projections for the remaining six months.

Based on the provisional true-up, the Aggregate Revenue Requirement (ARR) for FY 2022-23 is Rs. **1,00,654.12** Cr. The provisional True Up for FY 2022-23, comparing the estimated data with that approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March, 2020 in Case no. 322 of 2019 is summarized below.

Rs. Crs

<b>Particulars</b>	<b>FY 2022-23 (Approved)</b>	<b>FY 2022-23 (Estimated)</b>	<b>Deviation</b>
Power Purchase Expenses	62,337.57	73,529.49	11,191.92
Operation & Maintenance Expenses	7,535.94	7,979.02	443.08
Depreciation Expenses	3,060.76	2,968.79	(91.97)
Interest on Loan Capital	1,121.94	929.95	(191.98)
Interest on Normative Working Capital	145.58	127.89	(17.68)
Interest on Consumers Security Deposit	595.99	438.09	(157.90)
Other Finance Charges	-	-	-
Provision for bad and doubtful debts	732.63	1,059.63	327.00
Other Expenses	57.97	314.10	256.13
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,915.07	5,915.07	-
Incentives/Discounts	355.43	367.37	11.94
Contribution to Contingency Reserves	180.12	90.06	(90.06)
Opex Scheme	110.49	90.20	(20.29)
Return on Equity Capital	2,270.20	1,953.67	(316.53)
Additional Surcharge Refund	-	180.00	180.00
Effect of sharing of gains/losses	-	-	-
Impact of payment to MPECS in future years	31.14	31.14	-
Incremental Consumption Rebate	661.65	661.65	-
<b>Aggregate Revenue Requirement</b>	<b>85,112.48</b>	<b>96,636.12</b>	<b>11,523.64</b>
Stabilisation amount as per MYT Order	4,018.00	4,018.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>89,130.48</b>	<b>1,00,654.12</b>	<b>11,523.64</b>
<b>Less</b>			
Non-Tariff Income	418.67	317.96	(100.71)
Income from Open Access Charges	216.69	216.69	-
Income from Trading of Surplus Power	340.96	175.49	(165.47)
Income from Wheeling Charges	-	-	-
Income from Additional Surcharge	115.52	115.52	-
<b>Net Aggregate Revenue Requirement</b>	<b>88,038.65</b>	<b>99,828.47</b>	<b>11,789.82</b>
Revenue from Sale of Power	88,039.00	99,280.78	11,241.78
Revenue from Retail Supply Business	-	-	-
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(0.35)</b>	<b>547.69</b>	<b>548.03</b>

Major reasons for deviation are increase in power purchase expenses, change in revenue from sale of power due to change in consumer mix; and change in capex related expenses. MSEDCL submits that these deviations are beyond the reasonable control of MSEDCL.

#### **F. Aggregate Revenue Requirement for FY 2023-24 to FY 2024-25**

The revised forecast of aggregate revenue requirement, expected revenue from

existing Tariff, expected revenue gap for the period i.e. FY 2023-24 to FY 2024-25 has been determined based on the provisions of the MYT Regulations, 2019 and certain assumptions.

### 1. Sales Projection

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

MSEDCL has projected the sales for the period FY 2023-24 to FY 2024-25 considering the historical sales. The projection of Sales for HT category is outlined in the following table:

Consumer Category	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
HT-I Industries	37,757	37,901	39,263	39,038
HT-II Commercial	1,974	1,792	2,015	1,828
HT III Railways	85	112	87	116
HT IV-PWW	1,791	1,863	1,836	1,919
HT V Agricultural	1,365	896	1,408	906
HT VI Bulk Supply (Housing Complex)	245	244	247	244
HT Temporary	6	-	6	-
HT-IX Public services	1,257	1,204	1,315	1,227
MSPGCL AUX SUPPLY	184	295	184	295
HT Ag Others	285	283	294	283
HT EV Charging Stations 11 kV	-	5	-	6
HT EV Charging Stations 22 kV	0	53	0	58
<b>Total -HT Sales</b>	<b>44,949</b>	<b>44,648</b>	<b>46,655</b>	<b>45,919</b>

MU

The projection of Sales for LT category is outlined in the following table:

MU

Consumer Category	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
<b>LT Category</b>				
LT I -BPL	52	57	55	60
LT I Domestic	26,070	26,406	27,340	27,199
LT II Non Domestic	8,565	6,196	9,274	6,444
LT III PWW	1,047	920	1,106	970
LT IV Agriculture	28,067	34,369	28,626	35,308
LT V Powerloom	2,496	1,895	2,616	1,952
LT V Industrial General	6,164	7,487	6,462	7,712
LT VI Streetlight	2,719	1,052	2,892	1,052
LT VII- Temporary Connection	24	-	24	-
LT VIII Advertisement & Hoardings	6	-	6	-
LT IX – Crematoriums & Burial Grounds	2	-	2	-
LT X - Public services	683	754	728	795
LT EV Charging Stations	0	2	0	2
<b>Total LT Sales</b>	<b>75,894</b>	<b>79,139</b>	<b>79,130</b>	<b>81,494</b>
<b>Total Sales</b>	<b>1,20,843</b>	<b>1,23,787</b>	<b>1,25,785</b>	<b>1,27,413</b>

## 2. Power Purchase

Considering the sales projections, MSEDCL has projected the power purchase for the period FY 2023-24 to FY 2024-25 based on the availability, operational parameters; expected commissioning of upcoming projects, for the period FY 2023-24 to FY 2024-25 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 2023-24 to FY 2024-25 is summarised below:

FY 2023-24:

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up For FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25**

**25**  
Executive Summary

Particulars	PP Quantum (MUs)			PP Cost (Rs. Cr)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation
MSPGCL	51,351	62,332.57	10,981.63	22,206	29,649.02	7,443.42	4.32	4.76	0.43
NTPC	28,344	29,632.56	1,288.52	11,368	12,239.15	871.41	4.01	4.13	0.12
NPCIL	4,946	4,372.52	(573.22)	1,515	1,389.40	(125.86)	3.06	3.18	0.11
SSP	1,213	451.66	(761.34)	249	92.60	(156.40)	2.05	2.05	(0.00)
Pench	137	96.75	(40.25)	28	19.83	(8.17)	2.04	2.05	0.01
Subhansari		321.93	321.93		144.87	144.87		4.50	4.50
Dodson	116	31.78	(84.22)	28	19.90	(7.85)	2.39	6.26	3.87
JSW	1,462	-	(1,462.47)	663	164.67	(498.33)	4.53		(4.53)
CGPL	5,172	4,694.48	(477.54)	1,685	2,666.43	981.43	3.26	5.68	2.42
Adani Power	21,044	12,169.08	(8,874.79)	8,246	7,975.85	(270.15)	3.92	6.55	2.64
EMCO Power	1,374	1,493.28	119.46	717	620.98	(95.52)	5.22	4.16	(1.06)
Rattan India	1,921	8,959.68	7,038.87	1,424	3,642.71	2,219.11	7.41	4.07	(3.35)
Sai Wardha		1,791.94	1,791.94		838.29	838.29		4.68	4.68
Renewable	31,679	26,408.96	(5,270.23)	12,583	11,859.37	(723.23)	3.97	4.49	0.52
Traders		-	-		-	-			-
PGCIL Charges		0	-	3,845	3845.01	0.01			-
<b>Total Power Purchase</b>	<b>1,48,759</b>	<b>1,52,757</b>	<b>3,998</b>	<b>64,555.05</b>	<b>75,168.09</b>	<b>10,613.04</b>	<b>4.34</b>	<b>4.92</b>	<b>0.58</b>

**FY 2024-25:**

Particulars	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation
MSPGCL	51,409	65,655.99	14,246.86	22,516	31,924.58	9,408.99	4.38	4.86	0.48
NTPC	28,292	28,759.96	467.73	11,582	12,145.96	564.34	4.09	4.22	0.13
NPCIL	4,932	4,932.43	0.20	1,548	1,614.50	66.81	3.14	3.27	0.14
SSP	1,210	450.82	(759.12)	248	92.43	(155.57)	2.05	2.05	0.00
Pench	137	96.55	(39.95)	28	19.79	(8.21)	2.05	2.05	(0.00)
Subhansari		321.12	321.12		144.51	144.51		4.50	4.50
Dodson	116	31.78	(83.94)	33	25.18	(7.75)	2.85	7.92	5.08
JSW	652	-	(651.80)	424	192.64	(231.36)	6.51		(6.51)
CGPL	5,158	2,218.15	(2,939.74)	1,742	1,601.02	(140.98)	3.38	7.22	3.84
Adani Power	20,986	11,314.71	(9,671.65)	8,169	7,473.01	(695.99)	3.89	6.60	2.71
EMCO Power	1,370	1,489.20	119.14	750	637.91	(112.09)	5.47	4.28	(1.19)
Rattan India	1,831	8,935.20	7,104.27	1,413	3,743.69	2,330.69	7.72	4.19	(3.53)
Sai Wardha		1,787.04	1,787.04		830.47	830.47		4.65	4.65
Renewable	37,111	29475.67	(7,635.69)	14,330	12965.75	(1,364.25)	3.86	4.40	0.54
Traders		-	-		-	-			-
PGCIL Charges		-	-	4,037	4,037	0.26			-
<b>Total Power Purchase</b>	<b>1,53,204</b>	<b>1,55,469</b>	<b>2,264</b>	<b>66,819</b>	<b>77,449</b>	<b>10,630</b>	<b>4.36</b>	<b>4.98</b>	<b>0.62</b>

**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 30<sup>th</sup> March, 2020 had set the Distribution Loss reduction targets (excluding EHV Sales and OA sales). MSEDCL has proposed the same trajectory.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Distribution Losses (Excluding EHV & OA Sales)	13.0%	13.0%	12.0%	12.0%

#### **4. Segregation of Wires and Supply Business**

The Regulation 71 of MERC (Multi Year Tariff) Regulations, 2019 provides that ARR of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business.

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

#### **5. Aggregate Revenue Requirement (ARR) for the period FY 2023-24 to FY 2024-25**

Revised Aggregate Revenue Requirement of MSEDCL for the period FY 2023-24 to FY 2024-25 is projected considering projections for various components of ARR and provisions of MERC MYT Regulations, 2019. Also, the Revenue has been considered based on the existing tariff and accordingly the year wise revenue gap has been calculated as summarised in following table.

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Power Purchase Expenses	64,554.92	75,168.09	66,819.60	77,448.70
Operation & Maintenance Expenses	7,824.87	8,382.69	8,124.87	8,806.78
Depreciation Expenses	3,122.45	3,080.11	3,183.82	3,308.73
Interest on Loan Capital	893.88	934.97	659.04	1,116.00
Interest on Working Capital	145.69	138.35	145.64	163.35
Interest on Consumers Security Deposit	625.79	460.00	657.08	483.00
Other Finance Charges	-	-	-	-
Provision for bad and doubtful debts	732.63	1,111.06	732.63	1,165.80
Other Expenses	60.87	329.80	63.91	346.29
Income Tax	-	-	-	-
Intra-State Transmission Charges MSLDC charge	6,009.51	6,009.51	6,036.77	6,036.77
Incentives/Discounts	373.20	385.73	391.86	405.02
Contribution to Contingency Reserves	185.35	174.06	190.57	200.22
Opex Scheme	110.49	652.51	110.49	2,367.12
Return on Equity Capital	2,334.28	1,976.27	2,398.04	1,992.41
Additional Surcharge Refund	-	180.00	-	180.00
Effect of sharing of gains/losses	-	-	-	-
Add: Impact of payment to MPECS in future years	28.13	28.13	21.14	21.14
Incremental Consumption Rebate	426.45	426.45	548.77	548.77
<b>Aggregate Revenue Requirement</b>	<b>87,428.50</b>	<b>99,437.74</b>	<b>90,084.23</b>	<b>1,04,590.10</b>
Stabilisation amount as per MYT Order	5,585.00	5,585.00	7,017.00	7,017.00
<b>Total Aggregate Revenue Requirement</b>	<b>93,013.50</b>	<b>1,05,022.74</b>	<b>97,101.23</b>	<b>1,11,607.10</b>
<b>Less</b>				
Non-Tariff Income	439.60	333.86	461.59	350.55
Income from Open Access Charges	214.76	214.76	216.60	216.60
Income from Trading of Surplus Power	363.02	-	386.30	-
Income from Wheeling Charges	-	-	-	-
Income from Additional Surcharge	112.63	112.63	109.46	109.46
<b>Net Aggregate Revenue Requirement</b>	<b>91,883.49</b>	<b>1,04,361.49</b>	<b>95,927.28</b>	<b>1,10,930.49</b>
Revenue from Sale of Power	91,883.00	90,422.16	95,927.00	92,354.58
Revenue from Retail Supply Business	-	-	-	-
Revenue from Wires Business	-	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>0.49</b>	<b>13,939.34</b>	<b>0.28</b>	<b>18,575.90</b>

### G. Additional Claims

Hon'ble Commission in Order dated 30<sup>th</sup> June, 2020 in Case No. 84 of 2020 on review petition of MSEDCL on MYT Order dated 30<sup>th</sup> March, 2020 (in Case No. 322 of 2019) has approved certain costs along with the claims. MSEDCL has claimed costs allowed by the Hon'ble Commission in the said Order as provided below:

Particulars	Amount (Rs. Crs)
Impact of Review order	247.44
<b>Total</b>	<b>247.44</b>

### H. Carrying Cost

Hon'ble Commission has been allowing carrying cost/holding cost on the revenue gap/surplus respectively. Accordingly, MSEDCL has computed carrying cost on unrecovered gaps and impact of the review order.

#### I. Net recovery required from tariff

Considering the revenue gap for FY 2019-20 to FY 2021-22, impact of order on Review Petition (Case No. 84 of 2020), carrying cost, along with the revenue gap projected for the period FY 2023-24 to FY 2024-25, the net recovery required from tariff works out to be Rs. **67,644** Cr. as shown in the following table.

Particulars	Amount Rs. Cr
Final True Up Requirement for FY 19-20	11,516
Final True Up Requirement for FY 20-21	5,932
Final True Up Requirement for FY 21-22	8,151
Provisional True Up Requirement/Revenue Gap for FY 22-23	548
Revenue Gap for FY 23-24	13,939
Revenue Gap for FY 24-25	18,576
Impact of Review Order (MYT Order)	247
Carrying Cost for previous gaps/impact and unrecovered gaps during Control Period	8,734
<b>Total Revenue Gap for the MYT Period</b>	<b>67,644</b>
<b>Total Recovery</b>	<b>67,644</b>

#### J. 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 appropriate recovery of fixed costs

- through fixed charges;
- Continuation of existing rebates with its linking to payment discipline
  - An amendment in the provision of Pre-paid meter rebate
  - Cheque related
  - Revision in provision for Demand Charges for LT VI: LT – Street Light category
  - Eligibility to avail various incentives and rebates approved by the Hon'ble Commission
  - Tariff applicability related suggestions/clarifications
  - Revision in Schedule of charges;
  - Recovery of Cross Subsidy Surcharge as per NTP formula without any ceiling and all such other charges including wheeling charges & wheeling losses for Open Access consumers as proposed for the Control Period;
  - Applicability of Additional Surcharge extended to Open Access consumers;

#### **K. Rationale for Tariff revision**

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, coal blending due to domestic coal shortfall, change in law claims, increase in MSPGCL, PGCIL costs, NPCIL tariff revision, change in consumer mix and its impact on revenue, etc.

#### **L. Cross-Subsidy Surcharge (CSS)**

Section 2 (47) of the Electricity Act 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.

As per the provisions of Section 42(2) of the Electricity Act 2003, the CSS needs to be based on the current levels 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 being passed on other consumers who are with the

Distribution Licensee.

Accordingly, MSEDCL has calculated the cross subsidy surcharge based on the National Tariff Policy (NTP) formula without putting any ceiling. A representative Cross Subsidy Surcharge for HT Industrial Category is tabulated below:

	Rs./kVAh	
<b>Category</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>
<b>HT   HT - Industry</b>		
HT	4.53	5.80
EHV	4.96	6.23

### M. Wheeling Charges

Considering the provisions of MYT Regulations 2019, MSEDCL has proposed the Wheeling charges for HT (excluding EHV) and LT voltage levels as per the table given below:

<b>Particulars</b>	<b>Units</b>	Rs/Unit	
		<b>FY 23-24</b>	<b>FY 24-25</b>
HT (Excl EHV)	Rs./kVAh	0.74	0.74
LT Level	Rs./kWh	1.43	1.44

For the purpose of commercial settlement, MSEDCL proposes to continue Wheeling Losses which are already approved in previous Tariff Orders.

### N. Additional Surcharge

Section 42(4) provides for the levy of Additional Surcharge to a consumer who receives supply of electricity from a person other than the distribution licensee of his area of supply. Regulation 14.8 of the MERC Distribution OA Regulations, 2016 outlines the principles for determination and levy of Additional Surcharge.

<b>Particulars</b>	<b>FY 2023-24</b>	<b>FY 2024-25</b>
Proposed Additional Surcharge (Rs./Unit)	1.42	1.40

### O. 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.)

MSEDCL has examined the tariff applicability and based on the feedback received during interactions with field officers, MSEDCL has proposed certain modifications in applicability of tariff.

#### **P. Tariff Schedule**

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

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up For FY 2021-22 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25**

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**Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for HT Category**

Particulars	Existing Energy Charges with latest FAC (Rs./kVAh)	FY 2023-24 Energy Charges (Rs/kVAh)		FY 2024-25 Energy Charges (Rs/kVAh)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>HT I HT - Industry</b>					
HT	8.24	9.32	13%	10.50	13%
EHV	8.24	9.32	13%	10.50	13%
<b>HT I (B): HT - Industry (Seasonal)</b>					
HT	8.55	9.70	13%	10.90	12%
EHV	8.40	9.50	13%	10.60	12%
<b>HT II: HT – Commercial</b>					
HT	13.15	14.80	13%	16.60	12%
EHV	13.10	14.80	13%	16.60	12%
<b>HT III : HT - Railways/Metro/Monorail</b>					
HT	7.66	8.70	14%	9.80	13%
EHV	8.21	8.70	6%	9.80	13%
<b>HT IV: HT - Public Water Works and Sewage Treatment Plants</b>					
HT	7.42	8.40	13%	9.40	12%
EHV	7.37	8.40	14%	9.40	12%
<b>HT V(A): HT - Agriculture Pumpsets</b>					
HT	4.34	4.80	11%	5.30	10%
EHV	4.34	4.80	11%	5.30	10%
<b>HT V(B): HT - Agriculture - Others</b>					
HT	6.10	6.10	0%	6.70	10%
EHV	6.10	6.10	0%	6.70	10%
<b>HT VI: HT - Group Housing Societies (Residential)</b>					
HT	6.70	7.60	13%	8.60	13%
EHV	6.80	7.60	12%	8.60	13%
<b>HT VIII(A): HT - Public Services-Govt.</b>					
HT	8.89	10.10	14%	11.30	12%
EHV	9.24	10.10	9%	11.30	12%
<b>HT VIII(B): HT - Public Services-Others</b>					
HT	10.71	12.10	13%	13.70	13%
EHV	10.61	12.10	14%	13.70	13%
<b>HT IX: HT – Electric Vehicle (EV) Charging Station</b>					
HT	5.80	6.10	5%	6.40	5%
EHV	5.95	6.25	5%	6.60	6%

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up For FY 2021-22 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25**

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**Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for LT Category (1/2)**

Particulars	Existing Energy Charges with latest FAC (Rs/Unit)	FY 2023-24		FY 2024-25	
		Energy Charges (Rs/Unit)		Energy Charges (Rs/unit)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT Residential</b>					
LT I(A): LT - Residential-BPL	1.41	1.53	9%	1.70	11%
<i>LT I(B): LT - Residential</i>					
1-100 units	4.01	4.50	12%	5.10	13%
101-300 units	8.79	10.00	14%	11.50	15%
301-500 units	12.42	14.20	14%	16.30	15%
Above 500 units (Balance Units)	14.21	16.30	15%	18.70	15%
<b>LT II: LT - Non-Residential</b>					
(A) 0 – 20 kW	8.47	9.60	13%	11.00	15%
(B): >20 kW and ≤ 50 kW	12.94	14.90	15%	17.10	15%
(C): >50 kW	15.31	17.40	14%	20.00	15%
<b>LT III: LT - Public Water Works (PWW) &amp; STP</b>					
(A): 0-20 kW	2.98	3.40	14%	3.90	15%
(B): >20 kW and ≤ 40 kW	4.59	5.30	15%	6.10	15%
(C): >40 kW	6.09	7.00	15%	8.00	14%
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>		<b>Rs./HP/Month</b>		<b>Rs./HP/Month</b>	
<b>Category 1 Zones (Above 1318 Hrs/HP/Annum)</b>					
(a) 0-5 HP	379	435	15%	500	15%
(b) Above 5 HP - 7.5 HP	407	470	15%	540	15%
(c) Above 7.5 HP	455	525	15%	605	15%
<b>Category 2 Zones (Below 1318 Hrs/HP/Annum)</b>					
(a) 0-5 HP	287	330	15%	380	15%
(b) Above 5 HP - 7.5 HP	319	365	14%	420	15%
(c) Above 7.5 HP	367	420	14%	485	15%
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	2.35	2.70	15%	3.10	15%
<b>LT IV(C): LT - Agriculture Metered – Others</b>	3.94	4.50	14%	5.10	13%

**Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for LT Category (2/2)**

Particulars	Existing Energy Charges with latest FAC (Rs/Unit)	FY 2023-24		FY 2024-25	
		Energy Charges (Rs/Unit)		Energy Charges (Rs/unit)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT V: LT - Industry Total</b>					
(i): 0-20 kW	6.11	6.90	13%	7.90	14%
(ii): Above 20 kW	7.25	8.20	13%	9.40	15%
<b>LT VI: LT - Street Light</b>					
(A): Grampanchayat; A B & C Class Municipal Council	6.10	7.00	15%	8.00	14%
(B): Municipal corporation Area	7.46	8.60	15%	9.90	15%
<b>LT VII (A) - Public Services – Govt.</b>					
(i): ≤ 20 kW	3.83	4.40	15%	5.00	14%
(ii): >20 - ≤ 50 kW	5.47	6.30	15%	7.20	14%
iii): >50 kW	6.88	7.90	15%	9.00	14%
<b>LT VII (B) - Public Services - Others</b>					
(i): ≤ 20 kW	5.47	6.30	15%	7.20	14%
(ii): >20 - ≤ 50 kW	8.68	10.00	15%	11.50	15%
iii): >50 kW	8.99	10.30	15%	11.80	15%
<b>LT VIII – Electric Vehicle (EV) Charging Station</b>	5.00	5.20	4%	5.40	4%

**Comparison of Existing and Proposed Fixed Charges for HT Category**

Particulars	Existing Fixed Charges (Rs/kVA/mth)	FY 2023-24		FY 2024-25	
		Fixed Charges (Rs/kVA/mth)		Fixed Charges (Rs/kVA/mth)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>HT I HT - Industry</b>					
HT, EHV	454	510	12%	572	12%
<b>HT I (B): HT - Industry (Seasonal)</b>					
HT, EHV	454	510	12%	572	12%
<b>HT II: HT – Commercial</b>					
HT, EHV	454	510	12%	572	12%
<b>HT III : HT - Railways/Metro/Monorail</b>					
HT, EHV	454	510	12%	572	12%
<b>HT IV: HT - Public Water Works and Sewage Treatment Plants</b>					
HT, EHV	454	510	12%	572	12%
<b>HT V(A): HT - Agriculture Pumpsets</b>					
HT, EHV	80	89	11%	100	12%
<b>HT V(B): HT - Agriculture - Others</b>					
HT, EHV	80	89	11%	100	12%
<b>HT VI: HT - Group Housing Societies (Residential)</b>					
HT, EHV	362	406	12%	455	12%
<b>HT VIII: HT - Public Services</b>					
<b>HT VIII(A): HT - Public Services-Govt.</b>					
HT, EHV	454	510	12%	572	12%
<b>HT VIII(B): HT - Public Services-Others</b>					
HT, EHV	454	510	12%	572	12%
<b>HT IX: HT – Electric Vehicle (EV) Charging Station</b>					
HT, EHV	70	76	9%	84	11%

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up For FY 2021-22 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25**

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**Comparison of Existing and Proposed Fixed Charges for LT Category (1/2)**

Particulars	Unit	Existing Fixed Charges	FY 2023-24		FY 2024-25	
			Fixed Charges		Fixed Charges	
			Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT Residential</b>						
LT I(A): LT - Residential-BPL	Rs/conn/mth	28	32	14%	36	13%
<i>LT I(B): LT - Residential</i>						
1-100 units	Rs/conn/mth	105	118	12%	132	12%
101-300 units	Rs/conn/mth	105	118	12%	132	12%
301-500 units	Rs/conn/mth	105	118	12%	132	12%
Above 500 units (Balance Units)	Rs/conn/mth	105	118	12%	132	12%
Three Phase Charges	Rs/conn/mth	350	393	12%	439	12%
<b>LT II: LT - Non-Residential</b>						
(A) 0 – 20 kW	Rs/Conn/mth	427	480	12%	538	12%
(B): >20 kW and ≤ 50 kW	Rs/kVA/mth	427	480	12%	538	12%
(C): >50 kW	Rs/kVA/mth	427	480	12%	538	12%
<b>LT III: LT - Public Water Works (PWW) &amp; STP</b>						
(A): 0-20 kW	Rs/kVA/mth	106	119	12%	133	12%
(B): >20 kW and ≤ 40 kW	Rs/kVA/mth	129	144	12%	160	11%
(C): >40 kW	Rs/kVA/mth	160	178	11%	198	11%
<b>LT IV: LT - Agriculture</b>						
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	Rs/HP/mth	43	47	9%	51	9%
<b>LT IV(C): LT - Agriculture Metered – Others</b>	Rs/kW/mth	117	130	11%	145	12%

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up For FY 2021-22 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25**

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**Comparison of Existing and Proposed Fixed Charges for LT Category (2/2)**

Particulars	Unit	Existing Fixed Charges	FY 2023-24		FY 2024-25	
			Fixed Charges		Fixed Charges	
			Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT V: LT - Industry Total</b>						
(i): 0-20 kW	Rs/Conn/mth	482	542	12%	608	12%
(ii): Above 20 kW	Rs/kVA/mth	321	360	12%	404	12%
<b>LT VI: LT - Street Light</b>						
(A): Grampanchayat; A B & C Class Municipal Council	Rs/kW/mth	117	131	12%	147	12%
(B): Municipal corporation Area	Rs/kW/mth	117	131	12%	147	12%
<b>LT VII (A) - Public Services – Govt.</b>						
(i): ≤ 20 kW	Rs/Conn/mth	353	396	12%	444	12%
(ii): >20 - ≤ 50 kW	Rs/kVA/mth	353	396	12%	444	12%
iii): >50 kW	Rs/kVA/mth	353	396	12%	444	12%
<b>LT VII (B) - Public Services - Others</b>						
(i): ≤ 20 kW	Rs/Conn/mth	384	430	12%	482	12%
(ii): >20 - ≤ 50 kW	Rs/kVA/mth	384	430	12%	482	12%
iii): >50 kW	Rs/kVA/mth	384	430	12%	482	12%
<b>LT VIII – Electric Vehicle (EV) Charging Station</b>	Rs/kVA/mth	70	78	11%	87	12%

MSEDCL requests Hon'ble Commission to approve the tariff considering the Tariff Design principles and Other suggestions made by MSEDCL.

**Q. Average Tariff Hike**

Following table provides the average tariff hike for the Control Period.

Rs. Crs

Particulars	Based on Approved tariff for FY 22-23 incl. FAC	Proposed for FY 23-24	Proposed for FY 24-25
ABR in Rs./Unit	7.79	8.90	9.92
<b>Y-o-Y Rise in ABR</b>		<b>14%</b>	<b>11%</b>

**R. 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 2019 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 2019-20 to FY 2024-25 along with other claims as proposed by MSEDCL in the present Petition;
3. To allow the carrying cost on the proposed recovery required during the balance years of this control period;
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 allow actual Interest on Working Capital requirements for FY 2020-21 on account of COVID-19 period.
6. To approve Cross Subsidy Surcharge and all such other charges including wheeling charges and wheeling losses for Open Access consumers as proposed;
7. To approve the suggested categorization for different type of activities as proposed by MSEDCL;
8. To consider the incentives/rebates proposed as part of ARR;
9. To rationalize the incentives and penalties as proposed by MSEDCL;
10. To approve the schedule of charges as proposed by MSEDCL;
11. To approve the CAPEX and Capitalisation as submitted by MSEDCL;
12. To approve the OPEX schemes and expenses as proposed by MSEDCL;

13. To grant any other relief as the Hon'ble Commission may consider appropriate;
14. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;
15. To condone any error/omission and to give opportunity to rectify the same;
16. To permit MSEDCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

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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 MERC (Multi Year Tariff) Regulations 2019 (hereinafter to be referred to as MYT Regulations 2019) for the 4<sup>th</sup> Control Period (FY 2020-21 to FY 2024-25) on 1<sup>st</sup> August 2019. These Regulations have come into force from 1<sup>st</sup> August 2019.

### 1.2 Provisions of Law

- 1.2.1 The MERC (MYT) Regulations, 2019, 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 MYT

Regulations, 2019 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:*

*(a) Multi-Year Tariff Petition, ....*

*...*

*(b) Mid-Term Review Petition, which is complete in all aspects as per these Regulations, shall be filed by November 1, 2022 by Generating Companies, Transmission Licensees and SLDC, and by November 30, 2022, by Distribution Licensees, comprising:*

- i. Truing-up for FY 2019-20 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2015;*
- ii. Truing-up for FY 2020-21 and FY 2021-22 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019;*
- iii. Provisional Truing-up for FY 2022-23 to be carried out under the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2019;*
- iv. Revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff and charges, expected revenue gap, and proposed category-wise Tariff for the fourth and fifth year of the Control Period;”*

1.2.2 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 30<sup>th</sup> November, 2022. Accordingly, MSEDCL is submitting this Mid-Term Review Petition as per provisions of MYT Regulations, 2019.

1.2.3 Further, Regulation 8.2 provides for scope of the Mid-Term Review Petition. The key provisions of the said Regulation are reproduced below for reference.

*“8.2 The scope of the Mid-term Review shall be a comparison of the actual operational and financial performance vis-à-vis the approved forecast for the first three years of the Control Period; and revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff, expected revenue gap, and proposed category-wise Tariffs for the fourth and fifth year of the Control Period:*

*Provided that as part of the Mid-term Review, the Commission may inter-alia modify the category-wise sales, power purchase expenses, O&M expenses, capital expenditure related expenses, principles/basis of tariff categorisation, applicability of charges, Generation Tariff, Transmission Tariff, Wheeling Charges, and category-wise Tariff, as considered appropriate based on the data made available for the first three years of the Control Period:*

*Provided further that necessary justification for the modifications made in the Mid-term Review shall be elaborated in the Mid-term Review Order.”*

### **1.3 Provisions of Law**

1.3.1 Hon'ble Commission has issued Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 (herein after referred as “MYT Order”) for True-up for FY 2017-18 and FY 2018-19, Provisional True up for FY 2019-20 and ARR and Tariff of Control Period from FY 2020-21 to FY 2023-24.

1.3.2 MSEDCL hereby submits the Petition under Section 62 of the Electricity Act, 2003 and MERC (MYT) Regulations, 2015 for True-up for FY 2019-20, and MERC (MYT) Regulations, 2019 for True-up for FY 2020-21 & FY 2021-22, Provisional True up for FY 2022-23 based on latest information for year and Revised Projections for the period FY 2023-24 to FY 2024-25 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 1<sup>st</sup> April 2019 to 31<sup>st</sup> March 2020, 1<sup>st</sup> April 2020 to 31<sup>st</sup> March 2021 and 1<sup>st</sup> April 2021 to 31<sup>st</sup> March 2022 duly audited by the statutory auditors for the purpose of truing up of expenses and revenue for FY 2019-20, FY 2020-21

and FY 2021-22 annexed as **Annexure 2**, **Annexure 3** and **Annexure 4** respectively to this Petition. As per Indian Accounting Standard – (Ind AS) 8 – Accounting Policies, Changes in Accounting Estimated and Errors, if any error or omission result in prior period expenses then, such prior period expenses shall be adjusted in the year in which pertains. The Audited Annual Accounts for FY 2019-20 was restated during approval of Audited Annual Accounts for FY 2020-21 & FY 2021-22. Further, the Audited Annual Accounts for FY 2020-21 was restated during approval of Audited Annual Accounts for FY 2021-22. The copy of restated Audited Accounts for FY 2019-20 and FY 2020-21 annexed as **Annexure 13**. The same may please be referred wherever required.

1.3.3 MSEDCL is also filing the provisional True up for FY 2022-23 based on latest available information for FY 2022-23 and Revised Projections for the period from FY 2022-23 to FY 2023-24 based on the estimates/ projections provided in this Petition.

#### **1.4 Appeal No. 280 of 2019 before the Hon'ble APTEL, New Delhi**

1.4.1 MSEDCL submits that on 29<sup>th</sup> October, 2018, it had filed Petition for review of certain aspects of the Mid-Term Review (MTR) Order dated 12<sup>th</sup> September, 2018 in Case No. 195 of 2017. Hon'ble Commission disposed of the said Petition vide its Order No. 321 of 2018 dated 24<sup>th</sup> December 2018 and partly allowed the certain contentions of MSEDCL. However, aggrieved by the rulings of Hon'ble Commission, MSEDCL preferred an appeal before the Hon'ble APTEL, New Delhi (Appeal No. 280 of 2019) on following major grounds.

- a) Non-consideration of MSEDCL proposal for revision in definition of Billing Demand;
- b) Capping Cross Subsidy Surcharge to 20% of Average Tariff;
- c) Non-consideration of approved trajectory of distribution loss for computation of sharing of Gains and Losses for FY 2016-17;
- d) Non-consideration of MSEDCL submission for mandatory Standby Arrangement for SEZ and Deemed Licensees;
- e) Difference in opening normative equity for FY 2015-16 as submitted in

MTR Petition and as approved in MTR Order.

1.4.2 MSEDCL is submitting the current Petition without prejudice to any of its right and contentions taken by MSEDCL in said Appeal and MSEDCL reserves its right to again approach the Hon'ble Commission depending upon the final decision of the Hon'ble APTEL, New Delhi in said Appeal.

**1.5 Appeal No. 65 of 2022 before the Hon'ble APTEL, New Delhi**

1.5.1 Hon'ble Commission has issued MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 for True-up for FY 2017-18 and FY 2018-19, Provisional True up for FY 2019-20 and ARR and Tariff of Control Period from FY 2020-21 to FY 2023-24. MSEDCL submits that on 14.05.2020 it had filed Petition for review of certain aspects of the MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019. Hon'ble Commission disposed of the said Petition vide its Order in Case No. 84 of 2020 dated 30<sup>th</sup> June 2020 and partly allowed the certain contentions of MSEDCL. However, aggrieved by the ruling of Hon'ble Commission, MSEDCL preferred an Appeal No. 65 of 2022 (DFR No. 318 of 2020) against the Hon'ble Commission Review Order dated 30<sup>th</sup> June 2020 in Case No. 84 of 2020 as well against Hon'ble Commission MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019 on following major grounds:

- a) Revision in Ag sales estimation for FY 2017-18 and FY 2019-20
- b) Ag Sales re-assessment for the year prior to FY 2019-20
- c) Relative reduction of Ag sales for FY 2019-20 than that for FY 2018-19
- d) Grant of consequential impact on Gross Fixed Assets (GFA) i.e., depreciation, interest on loan and equity from FY 2007-08 onwards.

1.5.2 MSEDCL is submitting the current petition without prejudice to any of its rights and contentions taken by MSEDCL in said Appeal and MSEDCL reserves its right to again approach the Hon'ble Commission depending upon the final decision of Hon'ble APTEL in said Appeal.



## **2 FINAL TRUE UP FOR FY 2019-20**

### **2.1 Preamble**

2.1.1 This section outlines the actual performance of MSEDCL for the FY 2019-20. MSEDCL hereby submits final True Up for FY 2019-20 comparing the actual audited data for FY 2019-20 with those approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019.

2.1.2 The Board of Directors of MSEDCL has approved the Audited Annual Accounts for the period April 2019 to March 2020 and Statutory Auditors M/s. CNK & Associates LLP, M/s. Shah & Taparia and M/s. Kalyaniwalla & Mistry LLP have audited the Accounts vide report dated 11/12/2020 attached as **Annexure 1** to this Petition. Subsequently, this Audited Annual Accounts for FY 2019-20 was restated during approval of Audited Annual Accounts for FY 2020-21 & FY 2021-22. MSEDCL hereby proposes to true up its expenses and revenues based on the said Audited Accounts for FY 2019-20. As per Indian Accounting Standard – (Ind AS) 8 – Accounting Policies, Changes in Accounting Estimated and Errors, if any error or omission result in prior period expenses then, such prior period expenses shall be adjusted in the year in which pertains. The Audited Annual Accounts for FY 2019-20 was restated during approval of Audited Annual Accounts for FY 2020-21 & FY 2021-22. The copy of restated Audited Accounts for FY 2019-20 and FY 2020-21 annexed as **Annexure 13**. The same may please be referred wherever required.

2.1.3 Following sections outline the deviations in actual expenses/revenue for FY 2019-20 based on the Audited Accounts of MSEDCL in comparison with the expenses/revenue approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020.

### **2.2 Principles of Truing-up for FY 2019-20**

2.2.1 MSEDCL submits that the MERC (Multi Year Tariff) Regulations, 2019 specifies that the Mid-Term Review Petition shall comprise of Truing up for FY 2019-20 which has to be carried out based on the provisions of the MERC

(Multi Year Tariff) Regulations, 2015.

2.2.2 In line with the provisions of MERC (Multi Year Tariff) Regulations, 2019, MSEDCL has computed this Truing-up for FY 2019-20.

### 2.3 Category Wise Sales for FY 2019-20

2.3.1 Category wise actual sales for FY 2019-20 for MSEDCL excluding all Distribution Franchisee have been summarized in the following table:

**Table 1: Category wise sales for FY 19-20**

Category	Sales (MUs)		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Residential	20,747.29	20,044.65	(702.64)
Commercial	7,745.71	7,302.18	(443.52)
HT-Industrial	30,903.47	29,928.40	(975.07)
LT-Industrial	7,004.10	6,811.33	(192.77)
PWW	2,348.25	2,379.09	30.84
Street Light	1,817.36	1,860.27	42.91
Agriculture	24,551.31	29,246.05	4,694.74
Public Services	1,472.76	1,477.59	4.84
Railways	64.23	71.06	6.83
Others	698.57	670.47	(28.09)
<b>MSEDCL Excl. DF</b>	<b>97,353.03</b>	<b>99,791.09</b>	<b>2,438.06</b>

2.3.2 MSEDCL submits that during the MYT Process, it had submitted the provisional information available for FY 19-20 at the time of filing of the MYT Petition. Subsequently, the actual figures were available and Audited Accounts for FY 19-20 of MSEDCL were finalized. Accordingly, MSEDCL's actual Sales for FY 2019-20 is 99,791.09 MUs (excluding the Franchisee Sales).

### Issues related to re-assessment of Ag Sales for Past period

2.3.3 MSEDCL has already filed an Appeal No. 65 of 2022 (DFR No. 318 of 2020) against the Hon'ble Commission Review Order dated 30<sup>th</sup> June 2020 in Case No. 84 of 2020 as well as against Hon'ble Commission MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 in which following issues related to Ag sales are raised:

- a) Revision in Ag sales estimation for FY 2017-18 and FY 2019-20
- b) Ag Sales re-assessment for the year prior to FY 2019-20
- c) Relative reduction of Ag sales for FY 2019-20 than that for FY 2018-19

2.3.4 As abovementioned appeal No. 65 of 2022 (bearing DFR No. 318 of 2020) is already pending before the Hon'ble APTEL, the issues raised in the said appeal have not been again raised in the present petition except to the extent of Hon'ble Commission ruling produced below. Hon'ble Commission in MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 has ruled as under:

**"5.3 Distribution Loss for FY 2019-20**

*5.3.5 The Commission would undertake a detailed review of the operationalisation of Feeder Input based methodology of determination of AG Sales at the time of MTR, as per roadmap and action plan put in place by MSEDCL. The outcome of results and methodology finalised through this AG exercise shall form the basis for approval of AG sales from FY2019-20 to 2021-22 during truing up exercise to be carried out at time of MTR."*

2.3.5 In case of above Appeal No. 65 of 2022 (bearing DFR No. 318 of 2020) getting finality before the issuance of the Order in the present matter, Hon'ble Commission is hereby requested to incorporate the impact/relief while dealing the present matter. MSEDCL is submitting the current petition without prejudice to any of its rights and contentions taken by MSEDCL in said Appeal and MSEDCL reserves its right to again approach the Hon'ble Commission depending upon the final decision of Hon'ble APTEL in said Appeal.

2.3.6 Accordingly, MSEDCL most earnestly requests the Hon'ble Commission to approve the Sales for FY 19-20 as submitted above.

**2.4 Distribution Losses for FY 2019-20**

2.4.1 In MYT Order dated 3<sup>rd</sup> November, 2016 in Case No. 48 of 2016, the Hon'ble Commission had approved distribution loss of 13.26% (excluding EHV Sales) for FY 19-20. In MTR Order dated 12<sup>th</sup> September 2018 in Case No. 195 of 2017, the Hon'ble Commission continued to approve the same distribution

loss as approved in the last MYT Order. In recent MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019, the Hon'ble Commission restated the distribution loss of 18.26% based on the provisional true-up for FY 2019-20. It is submitted that the actual distribution loss (excluding EHV sales) achieved by MSEDCL for FY 2019-20 is 17.09% which is less by (1.17%) than that of the Distribution Loss level approved by the Hon'ble Commission in MYT Order.

**Table 2: Distribution Losses for FY 19-20**

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Distribution Loss	18.26%	17.09%	(1.17%)

2.4.2 MSEDCL endeavours for taking Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. However, loss reduction is a slow process and becomes increasingly difficult as the loss levels come down. The change in sales mix also impacts the distribution losses. MSEDCL requests the Hon'ble Commission to approve the actual Distribution Loss as achieved by MSEDCL.

## 2.5 Energy Balance for FY 2019-20

2.5.1 The quantum of sales as shown in Table 3 is 99,791.09 MUs, representing the sales of MSEDCL excluding the sales in the areas served by Distribution Franchisees. As per the methodology adopted by the 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 2019-20 is computed as below:

**Table 3: Energy Available for Sales for FY 19-20**

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Energy Sales by MSEDCL for FY 2019-20	97,353.03	99,791.09	2,438.06
Add: Category wise sales in DF area	4,710.04	3,844.49	(865.55)
Add: Solar Offset Units	73.89	76.24	2.35
Add: OA Sales (Conventional)	3,983.40	3,342.82	(640.58)
Add: Renewable OA	859.40	813.11	(46.29)
<b>Total Energy Sales</b>	<b>1,06,979.75</b>	<b>1,07,867.75</b>	<b>887.99</b>

2.5.2 MSEDCL submits that the total energy sales for FY 2019-20 is 1,07,867.75 MUs as compared to 1,06,979.75 MUs which was approved by the Hon'ble Commission in MYT Order dated 30<sup>th</sup> March 2020. The Hon'ble Commission is requested to allow the same.

2.5.3 MSEDCL further submits that it is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs 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.

2.5.4 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.

2.5.5 MSEDCL submits that power purchased or scheduled from Inter State Transmission network is scheduled by Western Region Load Dispatch Centre. The power purchase from inter State can be grouped under following categories.

<b>Type</b>	<b>Purchase Include power from</b>
(Inter State Generating Station ) ISGS	NTPC, NPCIL, SSP, Pench, CGPL
Long Term Access (LTA) i.e. IPP	EMCO
STOA	Short term bilateral power purchase, Power purchase through Power Market like IEX, Banking Arrangement.

2.5.6 MSEDCL submits that based on the power scheduled at generator bus for Maharashtra is available as Full Schedule on WRLDC web based scheduling software. Similarly, power scheduled at Maharashtra state periphery is available as Net schedule on WRLDC web based scheduling software.

- 2.5.7 In case of Tarapur Atomic Power Station of NPCIL (TAPS 1&2) which is considered as ISGS station but connected to Maharashtra State STU network for power evacuation. Hence for scheduling of power to Maharashtra, no PoC / scheduling loss is considered. Similarly, EMCO Warora is located in Maharashtra but this generating station is connected to ISTS network. Hence power is scheduled by WRLDC.
- 2.5.8 For interstate loss computation, power scheduled from ISGS station, CGPL, EMCO, SSP, Pench & short term through Inter-state network i.e. whose scheduling done by RLDC is taken into consideration.
- 2.5.9 MSEDCL also purchase power from power market mainly Indian Energy Exchange as per requirement to meet demand or for cost optimization. The power purchase from Indian Energy Exchange is at Regional periphery and drawal losses are applicable for energy purchased from IEX to compute energy available at Maharashtra State periphery.
- 2.5.10 Further MSEDCL also had agreements for banking of power from States like Haryana, Himachal Pradesh, Punjab and Andhra Pradesh etc. In banking arrangement, Power transactions are settled at Regional Periphery and concern DISCOMs has to bear Drawal loss when receiving power from other DISCOM and has to bear injection loss when delivering power to other DISCOM.
- 2.5.11 MSEDCL submits that the surplus power traded at Exchange is billed at Regional Periphery and bilateral power traded is billed at STU periphery. The quantum of 841 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL at STU periphery during FY 19-20.
- 2.5.12 As per latest DSR available, UI for FY 19-20 is considered as (1,734.30) MUs. MSEDCL submits that the WRLDC provides web based scheduling reports on [HTTP://SCHEDULING.WRLDC.IN/WBES/ACCOUNT/LOGIN](http://scheduling.wrldc.in/wbes/account/login). This site provides the details of full schedule and net schedule from each Inter State Generating Station (ISGS). The WRLDC uses this data for loss calculation.

Further, WRPC prepares the REA from this data which forms the basis of billing for ISGS. MSEDCL prepared the cumulative information for FY 19-20 based on these reports. Considering the energy at ex bus bar and energy received at STU periphery from these reports, MSEDCL has considered the inter-state transmission losses as 2.95%.

**Table 4: Inter-State transmission loss for FY 19-20**

<b>Source of Power (Station wise)</b>	<b>At regional Periphery (MUs)</b>	<b>Energy Received at State Periphery (MUs)</b>	<b>Interstate Loss</b>
NTPC	28671.52	27723.12	3.3%
NPCIL	5163.56	5066.21	1.9%
SSP	1080.08	1080.22	0.0%
Pench	72.37	72.38	0.0%
EMCO Power	1412.71	1365.60	3.3%
CGPL	5017.40	4869.72	2.9%
Short Term Power Purchase	1450.82	1428.30	1.6%
<b>Total Power Scheduled from Inter State Source</b>	<b>42868.47</b>	<b>41605.56</b>	<b>2.95%</b>

2.5.13 MSEDCL further submits that the MSLDC computes the Intra State Transmission System (InSTS) Grid Loss based on the Energy Input and Energy Output. This is grid loss for the Maharashtra Transmission System and not for MSEDCL. Hence, considering the fact that Grid Loss cannot be same for all Distribution Licensees, MSEDCL has computed Intra-State Transmission losses separately. Power purchase, sales and energy at Distribution Periphery being metered figures in this petition, Intra State losses is the number which is required to be computed.

2.5.14 MSEDCL submits that it has considered a normative loss of 6% as considered by the Hon'ble Commission in MYT Order for computing the input for OA consumption.

2.5.15 Considering the energy available for sale for FY 2019-20 as shown in Table 3, the energy balance for MSEDCL is calculated. The following table shows the

energy balance for FY 19-20.

**Table 5: Energy Balance for FY 19-20**

Sr. No.	Particulars	Calculation	UoM	FY 2019-20	
				MYT Order	Actual
1	LT Sales (Including D.F)	a	MU	64,042	67,058
3	HT Sales excluding EHV level sales (Including D.F)	b	MU	28,195	27,708
4	HT/LTIP Credit Sales and HT/LT Offset Export Solar units	c	MU	74	76
<b>4</b>	<b>Total Sales including D.F (Excluding EHV Sales)</b>	<b>d=a+b+c</b>	<b>MU</b>	<b>92,311</b>	<b>94,843</b>
5	OA Sales (Renewables)	e	MU	859	813
6	OA Sales (Conventional)	f	MU	3,983	3,343
<b>7</b>	<b>Retail Energy Sale to Consumers (Excluding EHV Sales)</b>	<b>A=d+e+f</b>	<b>MU</b>	<b>97,154</b>	<b>98,999</b>
<b>8</b>	<b>Total Power Purchase</b>	<b>B=g+h</b>	<b>MU</b>	<b>-</b>	<b>1,32,020</b>
9	Power Purchase Quantum from Intra-State sources	g	MU	-	89,150
10	Power Purchase Quantum from Inter-State sources	h	MU	-	42,870
<b>11</b>	<b>Inter-State Losses</b>	<b>i</b>	<b>%</b>	<b>-</b>	<b>2.95%</b>
12	Power Purchase Quantum from Inter-State sources at MS Periphery	j=h*(1-i)	MU	-	41,607
	Add: FBSM	k		-	(1,734.30)
<b>13</b>	<b>Power Quantum handled at Maharashtra Periphery</b>	<b>l=g+j+k</b>	<b>MU</b>	<b>-</b>	<b>1,29,023</b>
14	Infirm Non-PPA Wind Power	m	MU	-	865.01
15	Input for OA Consumption	n=f/(1-6%)	MU	-	3,556.19
<b>16</b>	<b>Total Power Purchase Quantum Handled</b>	<b>o=l+m+n-w</b>	<b>MU</b>	<b>-</b>	<b>1,32,932</b>
17	Surplus Power Traded	p	MU	-	841
<b>18</b>	<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>q=o-p</b>	<b>MU</b>	<b>-</b>	<b>1,32,092</b>
<b>19</b>	<b>Intra-State Transmission Loss</b>	<b>r</b>	<b>%</b>	<b>0.00%</b>	<b>3.28%</b>
20	Intra-State Transmission Loss	s=q*r	MU	-	4,329
21	Net Energy requirement at T<>D Periphery	t=q-s	MU	1,28,106	1,27,762
22	EHV Sales	u	MU	9,825	8,869
23	Net Energy Available for Sale at 33kV	v=t-u	MU	1,18,281	1,18,893
24	Energy injected and drawn at 33kV	w	MU	573	512
<b>25</b>	<b>Total Energy Available for Sale at 33kV (Metered Energy at EHV and 33 kV Input)</b>	<b>C=v+w</b>	<b>MU</b>	<b>1,18,854</b>	<b>1,19,406</b>
26	Distribution Loss (Excl. EHV Sales)	D=C-A	MU	21,700	20,407
27	Distribution Loss (Excl. EHV Sales)	E=D/C	%	18.26%	17.09%

2.5.16 MSEDCL requests the Hon'ble Commission to approve the Energy Balance for FY 19-20 as submitted by MSEDCL in above table.

## 2.6 Power Purchase Expenses for FY 2019-20

2.6.1 MSEDCL has following sources of firm power viz.

- Maharashtra State Power Generation Company Limited (MSPGCL)
- Purchase from Central Generating Stations
- IPPs (JSW (Ratnagiri), Mundra UMPP CGPL, Adani Power Limited, RattanIndia Limited, Emco Power Limited etc.)

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

and Solar.

2.6.3 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.

2.6.4 Following table summarizes the source wise power purchase done by MSEDCL during the FY 19-20.

**Table 6: Power Purchase Expenses for FY 19-20**

Source	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation
MSPGCL	47,840.33	49,391.74	1,551.41	20,238.13	21,871.72	1,633.59	4.23	4.43	0.20
NTPC	26,638.65	28,671.64	2,032.99	10,452.18	10,430.64	(21.54)	3.92	3.64	(0.29)
NPCIL	5,612.76	5,163.56	(449.20)	1,615.18	2,085.00	469.82	2.88	4.04	1.16
SSP	1,043.46	1,080.08	36.62	213.91	221.42	7.51	2.05	2.05	-
Pench	91.58	72.37	(19.21)	18.77	14.84	(3.94)	2.05	2.05	0.00
Dodson	34.68	45.62	10.94	14.67	16.24	1.57	4.23	3.56	(0.67)
JSW	2,120.32	1,952.79	(167.5)	725.07	685.95	(39.12)	3.42	3.51	0.09
CGPL	4,696.92	5,017.40	320.48	1,350.07	1,437.47	87.40	2.87	2.86	(0.01)
Adani Power	19,710.82	22,019.09	2,308.27	7,496.65	11,246.72	3,750.07	3.80	5.11	1.30
EMCO Power	1,331.67	1,413.87	82.20	569.08	685.16	116.08	4.27	4.85	0.57
Rattan India	3,356.11	2,904.83	(451.28)	2,122.00	1,971.09	(150.91)	6.32	6.79	0.46
Renewable	15,718.00	12,826.99	(2,891.01)	7,761.79	6,818.47	(943.32)	4.94	5.32	0.38
Traders	571.42	1,451.02	879.60	224.84	517.10	292.26	3.93	3.56	(0.37)
RECs			-		-	-			
Other Adjustments		-	-		-	-			
PGCIL Charges	-	-	-	3,163.31	3,902.34	739.04			
FBSM	-	-	-	-	(9.08)	(9.08)			
Intra State Purchase		9.33	9.33	1.98	8.59	6.61			
Rebate			-		(6.45)	(6.45)			
<b>Total Power Purchase</b>	<b>1,28,767</b>	<b>1,32,020</b>	<b>3,254</b>	<b>55,968</b>	<b>61,897</b>	<b>5,930</b>	<b>4.35</b>	<b>4.69</b>	<b>0.34</b>

2.6.5 In the following paragraphs, the detailed reasons for variation in the power purchase quantum and cost are provided.

- a) MSPGCL: Due to coal shortage MSEDCL has purchased power from Bhusawal 4 & 5, Nashik – 3, 4 & 5, Paras – 3, Parli 6-7 & Parli Replacement U-8 which are not in approved MoD stack. Hence, the actual Mus from MSPGCL generating units increased as compared to approved 9,656 Mus. Further, FAC upto January 20 is Rs. 2,103.28 Cr
- b) Central Sector: Due to coal shortage MSEDCL has purchased power from Mauda, NTPC Solapur and Gadarwara which are not approved in MoD stack. Further, incentive, ED, Cess, ECR revision not approved in MYT Order paid as per CERC Order for NTPC stations amounting to

Rs. 46.41 Crs.

- c) JSW: Variable charges are increased more than that approved one (i.e., 2.32 against 2.08). This is because of increase in escalation index of coal.
- d) CGPL: MSEDCL paid change in law claims of Rs. 97 Crs. on account of GST
- e) Adani Power Maharashtra Limited: Rs. 1,680 Crs. are considered against claim under SHAKTI Policy viz. Rs. 68 Crs (in case of APML 125 MW), Rs. 719 Crs (In case of APML 1320 MW), Rs. 653 Crs (in case of APML 1200 MW) and Rs. 240 Crs (in case of APML 440 MW). In case of APML 1320 MW, Rs. 1,663.5 Crs are considered against domestic coal shortfall (for 800 MW portion of 1320 MW). In case of APML 440 MW, actual fixed charges are Rs. 447 Crs as against approved amount of Rs. 77 Crs.
- f) EMCO Power: Transmission charges increased by Rs. 38 Crs. than that of approved of Rs. 84 Crs. Further, payment on account of new change in law event such as BSS, DS evacuation facility charges paid during current year. Further, an amount of Rs. 56.40 Crs paid so as to make 50% payment under NCDP Policy.
- g) RattanIndia Power: Units are not in approved MoD stack, however, due to increased demand power scheduled during the period.
- h) Short Term: Due to increase in demand short term power was procured.
- i) Dodson II: Supplementary capacity incentive of Rs. 1.31 Crs paid for FY 2018-19.
- j) Renewable Energy:
  - Non-Solar:
    - i. Reason for less generation as compared to MYT is due to less generation from the bagasse based co-generation projects. There was drought situation in the districts such as Ahmednagar, Solapur and Marathwada region due to which crushing was less and also generation was less by around 50% as compared to previous year i.e. FY 2018-19. Many of the sugar factories were not even started crushing. Whereas some of the districts such as Kolhapur, Sangli and Satara were

flooded. Due to water logging in this area for very longer period, the crop was damaged and hence, there was less crushing and eventually less generation.

- ii. Increase in rate is due to increase in variable cost in respect of Bagasse and biomass by Rs. 0.21 per unit and Rs. 0.26 per unit respectively.
- iii. Due to pandemic situation of COVID-19 scheduled commercial operation date of about 726 MW wind power projects (which were contracted in FY 2018-19) has been extended almost one and half years and hence, less power received in FY 2019-20.

Solar:

- i. While approving the monthly power purchase from solar generator it was considered that 1501 MW and 862 MW new capacity will be added in the Solar portfolio
- ii. In case of SECI, during FY 2019-20 only 1000MW were commissioned in the month of December 2019. Hence, less power received in FY 2019-20
- iii. In case of Adani Renewable (Rajasthan), major reason for delay in project commissioning is due to pandemic situations
- iv. In case of NVVN Solar, the preferential tariff is much higher than the competitive tariff.

2.6.6 Details of RE Purchase for FY 19-20 are tabulated below:

Source	FY 2019-20	
	Quantum (MU)	Cost (in Rs. Crs.)
Hydro (NCE)	327.52	139.03
Wind	6,371.06	3,205.70
Bagasse based Cogen.	2,622.06	1,713.77
Biomass	368.40	263.83
MSW	0.85	0.41
<b>Total Non-Solar</b>	<b>9,689.89</b>	<b>5,322.74</b>
Solar	1,269.38	650.56
SECI	1,736.62	792.06
Adani Renewable (RJ)	91.29	24.29

Source	FY 2019-20	
	Quantum (MU)	Cost (in Rs. Crs.)
NVVN (Solar)	20.49	21.98
Solar Rooftop	19.32	6.83
<b>Total Solar</b>	<b>3,137.10</b>	<b>1,495.73</b>
<b>Total</b>	<b>12,826.99</b>	<b>6,818.47</b>

2.6.7 During FY 2019-20, MSEDCL has the shortfall of 6115.26 MU in fulfilling cumulative non-Solar RPO Target till FY 2019-20 including the standalone shortfall of 4236.56 MU for FY 2019-20. In case of Solar, MSEDCL has the shortfall of 4320.66 MU in fulfilling cumulative Solar RPO Target till FY 2019-20 including the standalone shortfall of 852.17 MU for FY 2019-20. Further, MSEDCL has the shortfall of its stand-alone Mini/Micro RPO of 22.45 MU for FY 2019-20 with cumulative shortfall till FY 2019-20 of 50.89 MU. Hon'ble Commission vide Case No. 49 of 2021 has allowed MSEDCL to fulfil its cumulative shortfall till FY 2022-23.

2.6.8 MSEDCL requests the Hon'ble Commission to approve the power purchase expenses as per Audited Accounts.

## 2.7 Intra State Transmission Charges for FY 2019-20

2.7.1 MSEDCL submits the actual transmission charges and SLDC charges paid to MSETCL and MSLDC as summarized in following table.

**Table 7: Transmission Charges for FY 2019-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Intra-State Transmission Charges	4,839.42	4,847.57	8.15
MSLDC Charges	24.32	23.68	(0.64)
<b>Total</b>	<b>4,863.74</b>	<b>4,871.25</b>	<b>7.51</b>

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

## 2.8 Fixed Costs for FY 2019-20

2.8.1 Based on the Capital Cost and the consequent Capitalized Expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2019-20 (excluding fixed components of PP cost) 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 along with other items of expenditure:

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

2.8.2 Net Aggregate Revenue Requirement has been computed after netting off Expenses capitalized.

2.8.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 for FY 2019-20 and the values as per the audited accounts.

## 2.9 Actual Operation & Maintenance Expenses for FY 2019-20

2.9.1 Operations and Maintenance (O&M) Expenses of the company consists of the following elements viz. Employee Expenses, Administrative and General Expenses and Repairs and Maintenance Expenses.

2.9.2 The following table provides the actual O&M Expenses (net of Capitalization) for the FY 2019-20.

**Table 8: Actual O&M Expenses for FY 2019-20**

	Rs. Crs
Particulars	Actual
Actual O&M Expenses	6,794.33

2.9.3 Head-wise details of employee expenses, A&G Expenses and R&M Expenses have been provided in Regulatory Formats.

2.9.4 The following paragraphs provide the detailed reasons for change in actual O&M expenses for FY 19-20 over FY 18-19.

2.9.5 Following table provides the comparison of actual O&M expenses for FY 19-20 (excluding arrears) and FY 18-19.

**Table 9: Comparison of actual O&M expenses for FY 19-20 and FY 18-19**

Rs. Crs

Sr. No.	Particulars	FY 2018-19	FY 2019-20	Difference
1	Employee Exp. (Net)	4877.64	5307.38	429.74
2	A & G Exp. (Net)	758.89	713.11	(45.78)
3	R & M Exp.	764.49	773.84	9.35
	<b>Total O &amp; M Exp.</b>	<b>6401.02</b>	<b>6,794.33</b>	<b>393.31</b>

2.9.6 There is an increase of Rs. 393.91 Crs in O&M Expenses for FY 19-20 over FY 18-19.

2.9.7 Following Table summarises the reasons for change in major components of O&M Expenses for FY 19-20 over FY 18-19.

**Table 10: Reasons for change in major components of O&M expenses for FY 2019-20 over FY 18-19**

Sr. No.	Particulars	FY 18-19	FY 19-20	Difference	Remark
1. Employee Cost					
1.1	Basic Salary	1,557.60	2,848.97	1,291.37	There is increase in Basic Salary due to Pay revision
1.2	Expenditure on Outsourced Employees	262.04	371.39	109.35	Due to increase in minimum wage & increase in outsource employees, the expense is increased
1.3	Dearness Allowance	1,651.61	378.93	(1,272.69)	As per the Pay revision the DA has been merged in Basic pay
1.4	Earned Leave Encashment	252.93	573.62	320.69	Due to last year of Block most of employee has applied for Leave

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Sr. No.	Particulars	FY 18-19	FY 19-20	Difference	Remark
					Encashment in FY 2019-20. Also there is impact of Pay revision
1.5	Other Allowances	166.21	204.93	38.71	The allowances has been increased due to pay revision
1.6	Overtime Payment	34.85	24.05	(10.80)	Due to austerity measures taken, this has been controlled
1.7	Gratuity Payment	524.89	415.90	(108.98)	Decrease due to retirement of employees
1.8	Staff Welfare Expenses	20.59	46.63	26.04	Interest on staff welfare fund was previously booked to other interest. From FY 2019-20 it is re-booked another GL
1.9	Provident Fund Contribution	370.73	381.82	11.09	Due to pay revision, PF share has increased
<b>2. Administration &amp; General Expenses</b>					
2.1	Rent Rates & Taxes	100.58	80.35	(20.23)	LBT expenses in respect of Aurangabad Urban Circle booked in FY 2018-19 Rs.20.02 crs
2.2	Security Measures for Safety & Protection	117.15	136.85	19.70	Increase due to change in DA Rates & allowances
2.3	Advertisements	27.54	8.77	(18.77)	Advertisement of Public Notice for inviting Suggestions/Objections on MSEDCL's MTR petition' (Case No 195 of 2017) in the year FY 2018-19
2.4	Expenditure on Computer Billing	296.42	274.05	(22.36)	Decrease due to lockdown
2.5	Commission/Collection charges	81.27	68.63	(12.64)	Decrease due to lockdown and increase in online collection
<b>3. Repair &amp; Maintenance Expenses</b>					
3.1	Plant & Machinery	352.85	283.42	(69.42)	Actual Expenditure
3.2	Civil Works	12.24	34.10	21.86	Actual Expenditure
3.3	Lines & Cable Networks	312.32	357.50	45.18	Actual Expenditure
3.4	Office Equipment	42.73	68.71	25.98	Actual Expenditure
3.5	Others	42.39	29.53	(12.86)	Meter cost of Rs. 69.88 Crs restated, due to earlier Dr to R&M, & other expenses are also restated

2.9.8 MSEDCL further submits that in the employee expenses, MSEDCL has added Rs. 121.13 Crs towards Re-measurement of defined benefit plans. In this regards, MSEDCL would like to submit that the Gratuity is recognised at the year-end by using projected unit credit method as on 31<sup>st</sup> March 2020. It is

unfunded defined benefit plan.

2.9.9 MSEDCL requests the Hon'ble Commission to allow the same as a part of Employee Expenses.

## **2.10 Normative Operation & Maintenance Expenses for FY 2019-20**

2.10.1 MSEDCL submits that Regulation 72 and Regulation 81 of the MERC (MYT) (1<sup>st</sup> Amendment) Regulations, 2017 provides for the O&M Expenses Norm for Distribution Wires Business and Retail Supply of electricity respectively.

2.10.2 Hon'ble Commission has issued an Amendment to the MERC (MYT) Regulations 2015. As per the said Amendment

*"72.3 ...*

*Provided that, in the Truing-up of the Operation and Maintenance expenses for any particular year of the Control Period, 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 (including the year of Truing-up) 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 (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year."*

2.10.3 Hon'ble Commission in MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 opined that principles set or methodology adopted during MYT Period should not be changed during the same Control Period and accordingly has used WPI 2004-05 data series post adjustment for working out escalation factor for O&M expenses for 3<sup>rd</sup> Control Period. MSEDCL submits that it has used WPI 2004-05 data series in line with the approach adopted by the Hon'ble Commission for the Control Period.

2.10.4 Following table provides the year-on-year variations in CPI and WPI for the last five years. Considering the average WPI and CPI and provisions of the

Amendment to the MERC (MYT) Regulations 2015, MSEDCL has calculated the escalation factor as shown in the following table.

**Calculation of Escalation Factor**

Year	WPI 2004-05	Annual Increase	CPI	Annual Increase
FY 2014-15	181.19		250.83	
FY 2015-16	176.68	-2.49%	265.00	5.65%
FY 2016-17	183.20	3.69%	275.92	4.12%
FY 2017-18	188.55	2.92%	284.42	3.08%
FY 2018-19	196.62	4.28%	299.92	5.45%
FY 2019-20	199.92	1.68%	322.50	7.53%
5 Year Avg.		2.02%		5.17%
Weight	30%	0.60%	70%	3.62%
<b>Escalation Factor</b>		<b>4.22%</b>		
<b>Efficiency Factor</b>		<b>1.00%</b>		
<b>Rate with 1% reduction</b>		<b>3.22%</b>		

2.10.5 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. Detailed calculations are given in the Regulatory Formats. MSEDCL submits that calculated O&M expenses are allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulations, 2015), i.e., 65% to Wires Business and 35% to Supply Business. The same is shown in following table.

2.10.6 Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019 for the purpose of provisional true-up for FY 2019-20, provisionally allowed Rs. 291.06 Crore over and above derived normative O&M expenses which would be based on actual disbursement of arrears owing to wage revision during the year. MSEDCL submits that instalment of pay revision of Rs. 302.00 Crs has been given in the month of November 2019. The wage revision related documents are attached as **Annexure 11** to this Petition. Accordingly, for the purpose of true-up, MSEDCL has calculated total allowable O&M expenses for FY 2019-20, by considering Rs. 302.00 Crs over and above derived normative O&M expenses for FY 2019-20, as shown in the following table.

**Table 11: O&M Expenses for Wires and Supply Business for FY 19-20**

	Rs. Crs		
Particulars	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
O&M Expenditure for Wires business	4,662.26	4,690.38	28.12
O&M Expenditure for Retail Supply business	2,510.45	2,525.59	15.14
<b>Operation and Maintenance Expenses (A)</b>	<b>7,172.71</b>	<b>7,215.97</b>	<b>43.26</b>
Impact of arrears - Wires business	189.19	196.30	7.11
Impact of arrears - Supply business	101.87	105.70	3.83
<b>Sub Total (B)</b>	<b>291.06</b>	<b>302.00</b>	<b>10.94</b>
<b>Total O&amp;M Expenses (C = A+B)</b>	<b>7,463.77</b>	<b>7,517.97</b>	<b>54.20</b>

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

## 2.11 Capitalisation for FY 2019-20

2.11.1 MSEDCL has achieved capitalization of Rs. 4,444.48 Cr. in FY 2019-20 as against Rs.Cr. approved by Hon'ble Commission. Following table shows the capitalization in FY 2019-20.

**Table 12: Capitalisation for FY 19-20**

	Rs. Crs		
Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
DPR Scheme	5,700.51	3,907.30	(1,793.21)
Non DPR Scheme	219.49	537.18	317.69
<b>Total Capitalisation</b>	<b>5,920.00</b>	<b>4,444.48</b>	<b>(1,475.51)</b>

2.11.2 As per the Annual Accounts the addition to GFA is Rs. 4,476.57 Crs. whereas in Form 4 MSEDCL has shown Capitalization as Rs. 4,444.48 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.

**Table 13: Addition to GFA as per Annual Accounts for FY 19-20**

Sr. No.	Particulars	Amount (Rs. Crs)
1	Capitalisation as per Note of the Accounts	4,476.57
2	Capitalisation as per Form 4	4,444.48
	Other Assets	
3	Land	2.67
4	Buildings	12.11
5	Vehicles	-0.89
6	Furniture & Fixtures	0.82
7	General Assets	1.57
8	Other Civil Works	5.11
9	Computer Software	10.70
<b>10</b>	<b>Total (2 to 9)</b>	<b>4,477</b>

2.11.3 Further details of General Assets are summarised below:

Particulars	Amount (Rs. Crs)
Hydraulics Works	0.27
Communication Equipment	0.09
IT Equipment	0.02
Office Equipment	1.12
Other Assets	0.08
<b>Total</b>	<b>1.57</b>

2.11.4 Hon'ble Commission in its previous Orders has allowed the capitalization towards schemes not forming part of any specific scheme. 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.

## **2.12 Depreciation for FY 2019-20**

2.12.1 The Opening GFA as per MSEDCL's Audited Accounts is Rs. **57,924.40** Crs excluding the impact of Final Transfer Scheme/Restructuring Plan and subsequent revaluation. Accordingly, the depreciation has been reworked on a pro-rata basis on the revised Opening GFA for FY 2019-20 for the purpose of True-Up which is summarized below.

**Table 14: Depreciation for FY 19-20**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (Rs. Crs)</b>
1	Opening GFA for FY 19-20 (Actual )	57,924.40
2	Opening GFA for FY 19-20 as per MERC	52,374.60
3	Less: Consumer Contribution and Grants	
4	Net Opening GFA (Approved)	52,374.60
5	Depreciation (Actual)	2,696.37
6	Depreciation (Claimed in proportion to Actual)	2,438.03

2.12.2 MSEDCL requests the Hon'ble Commission to allow the Depreciation as computed in above table.

### **2.13 Funding Arrangement for FY 2019-20**

2.13.1 As per the Regulation 26.1 of MERC (MYT), 2015, the debt-equity ratio as on the date of commercial operation shall be 70:30 of the amount of capital cost approved by the Commission. The said Regulation also provides that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Licensee for determination of Tariff.

2.13.2 MSEDCL submits that the Hon'ble Commission has designed the formats for submission of data in respect of Capex and Capitalization on yearly basis. MSEDCL further submits that the information required by Hon'ble Commission is on yearly basis whereas capital expenditure and capitalization of project is a process which continues for 3 to 5 years. With such different timelines, there will be spill-over of capex and capitalization and hence it would be difficult to match the capex and capitalization and its funding on yearly basis. MSEDCL also submits that previously funding gap (if any) was shown as internal accrual and Hon'ble Commission has considered it as a part of normative equity or normative loan. It is pertinent to note that many times the Hon'ble Commission has restricted the equity to 30% if the equity portion of the funding is exceeded 30% and excess equity was treated as normative loan. Thus, Hon'ble Commission has already given the necessary effect for additional equity.

2.13.3 The funding pattern for FY 2019-20 for the capitalization achieved by MSEDCL, in proportion to the funding pattern of capital Expenditure, is presented in the following table:

**Table 15: Funding of Capitalisation for FY 2019-20**

Particular	Amount (Rs. Crs)	Funding Mix (%)
Total Capitalisation	4,444.48	
Less: Consumer Contribution	322.89	
Less: Grants	1,896.69	
<b>Balance to be funded</b>	<b>2,224.90</b>	
Equity	1,041.12	46.79%
Debt	1,183.78	53.21%
Equity	667.47	30.0%
Debt	1,557.43	70.0%

2.13.4 MSEDCL requests the Hon'ble Commission to approve the funding as submitted in above table.

## **2.14 Interest Expenses for FY 2019-20**

2.14.1 MSEDCL has computed the interest expenses on normative basis linked to the normative opening loan and normative loan addition during the year.

2.14.2 MSEDCL submits that the Regulation 29.5 of the MYT Regulations 2015 provides that at the time of Truing-up, the weighted average rate of interest computed on the basis of the actual loan portfolio during the concerned year shall be considered as the rate of interest. Accordingly, for arriving at the interest rate, MSEDCL has considered the weighted average interest rate of actual loan portfolio of FY 2019-20. The computation of weighted average interest rate of actual loan portfolio is shown in following table.

**Table 16: Computation of weighted avg. interest rate for FY 19-20**

Particulars	Formula	Actual (Rs. Crs)
Outstanding Loan at the start of the year	a	14,182.66
Loan drawal during the year	b	5,248.10
Loan repayment during the year	c	2,734.85
Balance outstanding at the end of the year	d=a+b-c	16,695.91
<b>Average Loan for the Year</b>	<b>e=Avg(a,d)</b>	<b>15,439.28</b>
Interest Expense incurred during the year	f	1,569.78
Weighted Average Interest rate	g=f/e	10.17%

2.14.3 Regulation 29.3 of the MERC (MYT) Regulations, 2015 provides for repayment during a year equal to depreciation allowed. 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.”*

2.14.4 Considering the normative opening loan, normative loan addition during the year and loan repayment equal to depreciation and the weighted average interest rate of actual loan portfolio, MSEDCL has computed the interest expenses on normative basis as summarized in table below:

**Table 17: Interest Expenses for FY 19-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	12,973.91	12,973.91	-
Less: Reduction of Normative Loan due to retirement of assets			
Loan Drawal	2,583.70	1,557.43	(1,026.27)
Loan Repayment	2,665.53	2,438.03	(227.50)
Normative Balance Outstanding at the end of the year	12,892.08	12,093.31	(798.77)
Average Balance of Net Normative Loan	12,933.00	12,533.61	(399.38)
Interest Rate	10.28%	10.17%	
<b>Interest Expenses</b>	<b>1,328.88</b>	<b>1,274.34</b>	<b>(54.54)</b>

2.14.5 MSEDCL submits that Hon'ble Commission had approved Funding of Capitalization based on the approved capitalization in the MYT Order dated 30<sup>th</sup> March 2020. However, actual capitalization is lower than the approved capitalization. The normative loan drawal is also lower than that approved in

MYT Order.

2.14.6 MSEDCL requests the Hon'ble Commission to approve the normative interest expenses as submitted in the above table.

**2.15 Interest on Working Capital for FY 2019-20**

2.15.1 MSEDCL submits that the Regulations 31.3 of the MERC (MYT) Regulations, 2015 provides for Interest on Working Capital for Wire business of electricity. Further, the MYT Regulations, 2015 also provides 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. The relevant extract is reproduced below:

*“31.3 (b) ....*

*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.”*

2.15.2 In view of the MYT (First Amendment) Regulations, 2017, Base Rate is considered at one-year MCLR of SBI plus 150 basis points. The relevant extract is reproduced below:

*“2.1 (10) “**Base Rate**” shall mean the one-year Marginal Cost of Funds-based Lending Rate (‘MCLR’) as declared by the State Bank of India from time to time;”*

2.15.3 The detailed working of weighted average Base Rate is provided in following table.

**Table 18: Working of weighted average Base Rate**

<b>From</b>	<b>To</b>	<b>Days</b>	<b>Rate</b>	<b>Days X Rate</b>
01-04-2019	10-04-2019	9	8.55%	77%
10-04-2019	10-05-2019	30	8.50%	255%
10-05-2019	10-06-2019	31	8.45%	262%
10-06-2019	10-07-2019	30	8.45%	254%
10-07-2019	10-08-2019	31	8.40%	260%

From	To	Days	Rate	Days X Rate
10-08-2019	10-09-2019	31	8.25%	256%
10-09-2019	10-10-2019	30	8.15%	245%
10-10-2019	10-11-2019	31	8.05%	250%
10-11-2019	10-12-2019	30	8.00%	240%
10-12-2019	10-01-2020	31	7.90%	245%
10-01-2020	10-02-2020	31	7.90%	245%
10-02-2020	10-03-2020	29	7.85%	228%
10-03-2020	01-04-2020	22	7.75%	171%
Weighted Avg. Rate		<b>366</b>	<b>8.16%</b>	<b>2986%</b>
Plus 150 Basis Points			1.50%	
Total Weighted Avg. Rate			9.66%	

2.15.4 MSEDCL has calculated the interest on working capital at 9.66% as computed in the following table. MSEDCL further 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 relevant extract is reproduced below:

*“29.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Base Rate as on 1<sup>st</sup> April of the Year for which the interest is payable, plus 150 basis points:  
Provided that at the time of Truing-up, the interest on the amount of security deposit for the year shall be considered on the basis of the actual interest paid by the Licensee during the year, subject to prudence check by the Commission.”*

2.15.5 MSEDCL Commercial Circular No. 324 for Rate of Interest on Consumer Security Deposit @10.05% per annum (MCLR plus 150 basis points) for FY 19-20 is attached as **Annexure 5** to this Petition.

2.15.6 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 table below.

**Table 19: Interest on Working Capital for Wire business for FY 19-20**

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
<b>Computation of Working Capital (Wire Business)</b>			
O&M expenses for a month	388.52	407.22	18.70
Maintenance Spares at 1% of Opening GFA	513.94	471.37	(42.57)
1.5 months of expected revenue from charges for use of Distribution wires	1,318.77	1,292.14	(26.63)
Less: Amount held as SD from Distribution System Users	(792.07)	(810.11)	(18.05)
<b>Total Working Capital Requirement</b>	<b>1,429.17</b>	<b>1,360.63</b>	<b>(68.54)</b>
Rate of Interest (% p.a.)	9.50%	9.66%	
<b>Interest on Working Capital</b>	<b>135.77</b>	<b>131.40</b>	<b>(4.37)</b>
<b>Actual Working Capital Interest</b>		160.61	
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.05%		
<b>Interest on Security Deposit</b>	<b>79.60</b>	<b>74.89</b>	<b>(4.71)</b>

2.15.7 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. Further, the MYT Regulations, 2015 also provides 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. In view of the MYT (First Amendment) Regulations, 2017, Base Rate is considered at one-year MCLR of SBI plus 150 basis points. The relevant extract is reproduced below:

*“31.4 (b) ....*

*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.”*

2.15.8 MSEDCL has calculated the interest on working capital at 9.66% as computed above and paid interest on security deposit is at 10.05% i.e. MCLR plus 150 basis points and considered the actual paid amount as per audited accounts.

**Table 20: Working Capital for Retail Supply business for FY 19-20**

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
<b>Computation of Working Capital (Supply Business)</b>			
O&M expenses for a month	209.20	219.27	10.07
Maintenance Spares at 1% of Opening GFA	57.10	52.37	(4.73)
1.5 months equivalent of the expected revenue from sale of electricity at the prevailing Tariff and including revenue from CSS and Additional Surcharge	9,695.24	9,304.36	(390.88)
Less: Amount held as security deposit	(7,128.59)	(7,291.01)	(162.42)
Less: One month equivalent of cost of Power Purchase, Transmission Charges and MSLDC Charges	(5,097.75)	(5,564.04)	(466.29)
<b>Total Working Capital Requirement</b>	<b>(2,264.79)</b>	<b>(3,279.04)</b>	<b>(1,014.25)</b>
Rate of Interest (% p.a.)	9.50%	9.66%	
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	
<b>Actual Working Capital Interest</b>		<b>1,445.45</b>	
Interest on Security Deposit			
Rate of Interest (% p.a.)	10.05%		
<b>Interest on Security Deposit</b>	<b>716.42</b>	<b>674.03</b>	<b>(42.40)</b>

2.15.9 MSEDCL requests the Hon'ble Commission to allow the Security Deposit for supply business as shown in above table.

## 2.16 Other Finance Charges for FY 2019-20

2.16.1 MSEDCL submits that the regulation 29.8 of the MYT Regulations, 2015 provides that the finance charges shall be allowed at the time of True-up. The relevant extract is 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."*

2.16.2 MSEDCL submits that it has incurred Other Finance Charges amounting to Rs. 22.08 Crores during the FY 2019-20. These are the fund raising charges i.e., Guarantee Charges, Finance Charges, Stamp Duty and Service Fee.

**Table 21: Other Finance Charges for FY 19-20**

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Guarantee Charges	-	13.19	13.19
Finance Charges	23.04	5.31	(17.73)
Stamp Duty	1.12	1.05	(0.07)
Service Fee (Fund-raising charges)	6.94	2.53	(4.41)
<b>Total</b>	<b>31.10</b>	<b>22.08</b>	<b>(9.02)</b>

Rs. Crs

2.16.3 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 reasonable control of MSEDCL and hence required to be allowed on actual basis. Therefore, MSEDCL humbly requests the Hon'ble Commission to allow the Other Finance Charges as per the Audited Accounts.

### **2.17 Provision for Bad Debts for FY 2019-20**

2.17.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution and retail supply.

2.17.2 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. The relevant extract is reproduced below:

**“73 Provision for Bad and Doubtful Debts**

*For any Year, the Commission may allow a provision for bad and doubtful debts up to 1.5 % of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee for that Year:*

....”

**“82 Provision for Bad and Doubtful Debts**

*The Commission may allow a provision for bad and doubtful debts 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 for that Year:*

...”

2.17.3 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. A business typically estimates the amount of bad debt based on historical experience.

2.17.4 MSEDCL has written off Rs. 3282.25 Crs against the bad debt during the FY 2019-20.

2.17.5 MSEDCL has computed the provision for bad and doubtful debts for FY 2019-20 as per the provisions of the MYT Regulations, 2015 considering the receivables as per Audited Accounts.

**Table 22: Provision for bad and doubtful debts for FY 2019-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Opening Balance of Provision for bad and doubtful debts	-	0.00	0.00
Receivables for the year	48,842.02	56,997.53	8,155.51
Provision for bad & doubtful debts during the year	1.50%	1.50%	
<b>Provision for bad &amp; doubtful debts during the year</b>	<b>732.63</b>	<b>854.96</b>	122.33
Actual bad and doubtful debts written off		854.96	854.96
Closing Balance of Provision for bad and doubtful debts	732.63		(732.63)
Closing Balance as a % of receivables	1.50%	0.00%	

2.17.6 MSEDCL submits that the above computed provision for Bad Debts is further allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulation, 2015), i.e., 10% to Wires Business and 90% to Supply Business. The same is shown in following table.

**Table 23: Provision for Bad and Doubtful Debt (Wire and Supply) FY 2019-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
Bad Debt Provision for Wires business	73.26	85.50	12.23
Bad Debt Provision for Retail Supply business	659.37	769.47	110.10
<b>Bad Debt Provision</b>	<b>732.63</b>	<b>854.96</b>	<b>122.33</b>

2.17.7 As per the above computation, MSEDCL humbly requests the Hon'ble Commission to approve Rs. 854.96 Cr. towards the provision for Bad Debts for FY 19-20.

### **2.18 Other Expenses for FY 2019-20**

2.18.1 The other expenses of MSEDCL comprise of the expenditure on account of 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 24: Other Expenses for FY 2019-20**

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Compensation for injuries,death to staff	1.26	0.82	(0.44)
Compensation for injuries,death to others	15.22	15.27	0.05
Loss on obsolescence of fixed Assets	1.64	-	(1.64)
Sundry debit balances written off	1.81	6.58	4.77
Non Moving Items	16.89	-	(16.89)
Provision for Non Moving Items	-	0.88	
Other Sundry Expenses	7.74	4.09	
Other Expenses (Payable to DSL towards damages in terms of Arbitral Award dt. 18.06.2004)	-	18.81	
Incentive to Distribution Franchisee		0.22	
Interest to suppliers/Contractors*	-	3.38	3.38
Other Interest and Charges	-	0.10	0.10
Interest on security deposit on bill collection agency	-	7.54	
Interest on income tax for AY 2018-19	-	20.16	
Interest on income tax for AY 2020-21	-	5.39	
Incentive payable to vendor	-	0.05	0.05
Other Expenses for previous years	5.52	-	(5.52)
<b>TOTAL</b>	<b>50.08</b>	<b>83.28</b>	<b>33.20</b>

2.18.2 MSEDCL submits that the amount under the head “interest to suppliers/contractor” as per the Audited Accounts included Delayed Payment Charges / Surcharge payable to MSPGCL, MSETCL, IPPs & Wind Generators for FY 2019-20. MSEDCL has not claimed the same.

## 2.19 Contribution to Contingency Reserves for FY 2019-20

2.19.1 MSEDCL submits that it has invested Rs. 128.19 Cr. towards contribution to contingency reserves. Accordingly, the same is being claimed in the ARR of FY 2019-20.

**Table 25: Contingency Reserve for FY 2019-20**

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Contribution to Contingency Reserves	142.76	128.19	(14.57)

2.19.2 MSEDCL further submits that the investment proof for the said amount is attached as to this Petition. MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves as submitted in above table.

## 2.20 Income Tax for FY 2019-20

2.20.1 MSEDCL submits that it has availed the option of taxation of domestic companies at lower rate u/s 115BAA of the Income Tax Act 1961, hence, there is no tax payable for FY 2019-20 (AY 2020-21)

**Table 26: Income Tax for FY 19-20**

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Rs. Crs
			Deviation
Income Tax	213.89	-	(213.89)

## 2.21 Incentives and Discounts for FY 2019-20

2.21.1 MSEDCL submits that during FY 2019-20, it has paid Rs. 337.25 Crs of incentives/discounts to the consumers for timely payment of bills as against Rs. 307.03 Crs approved by Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020.

**Table 27: Incentives/discounts for FY 19-20**

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Rs. Crs
			Deviation
Incentives and Discount	307.03	337.25	30.22

2.21.2 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as per the Audited Accounts for FY 2019-20.

## 2.22 RLC Refund for FY 2019-20

2.22.1 MSEDCL during FY 2019-20 has made a refund of Rs. 1.77 Crs of RLC. MSEDCL requests the Hon'ble Commission to allow the RLC Refund for FY 2019-20 as per Audited Accounts.

**Table 28: RLC Refund for FY 19-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
RLC Refund	1.84	1.77	(0.06)

### 2.23 Return on Equity for FY 2019-20

2.23.1 Regulation 28.2 of MERC (MYT) Regulations 2015 provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business. Further, considering the funding pattern in Paragraph 2.13, MSEDCL has considered the equity addition during the year.

2.23.2 The return on equity capital is allocated in the ratio of Fixed Assets between the 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.

2.23.3 MSEDCL further submits that it has not reduced the equity corresponding to the assets retired in FY 19-20 since retirement against only land and vehicles is seen and accordingly, claimed the ROE on entire equity.

2.23.4 Considering the provisions of the MYT Regulations 2015, MSEDCL has computed the return on equity as shown in following tables.

**Table 29: RoE for wires business for FY 19-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
<b>Return on Equity (Wires Business)</b>			
Regulatory Equity at the beginning of the year	10,553.23	10,553.23	(0.00)
Equity portion of Assets Capitalisation	295.34	600.72	305.38
Equity portion of Assets Decapitalised	-	-	-
Regulatory Equity at the end of the year	10,848.57	11,153.95	305.38
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 15.5%*(1)	1,635.75	1,635.75	(0.00)
Return on Normative Equity portion of Asset Capitalization - 15.5%*(2)/2	22.89	46.56	23.67
Interest on Equity portion above 30% equity			
<b>Total Return on Regulatory Equity</b>	<b>1,658.64</b>	<b>1,682.31</b>	<b>23.67</b>

**Table 30: RoE for Supply business for FY 19-20**

Rs. Crs

Particulars	FY 2019-20 (Approved)	FY 2019-20 (Normative)	Deviation
<b>Return on Equity (Supply Business)</b>			
Regulatory Equity at the beginning of the year	1,173	1,173	(0.00)
Equity portion of Assets Capitalisation	33	67	33.93
Equity portion of Assets Decapitalised	-	-	-
<b>Regulatory Equity at the end of the year</b>	<b>1,206</b>	<b>1,240</b>	<b>33.93</b>
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 17.5%*(1)	205.28	205.28	(0.00)
Return on Normative Equity portion of Asset Capitalization - 17.5%*(2)/2	2.87	5.84	2.97
Interest on Equity portion above 30%			
<b>Total Return on Regulatory Equity</b>	<b>208.15</b>	<b>211.12</b>	<b>2.97</b>

2.23.5 MSEDCL requests the Hon'ble Commission to allow the RoE as computed above.

## **2.24 Sharing of Efficiency Gains & Losses for FY 2019-20**

2.24.1 Regulations 9, 10 and 11 of the MYT Regulations, 2015 specify the controllable and uncontrollable factors, mechanism of pass-through of gains and losses on account of uncontrollable factors, and the mechanism for their sharing on account of controllable parameters as follows:

*“11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:*

- (a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;*
- (b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.*

*11.2 The approved aggregate loss to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the*

following manner:

- (a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;
- (b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC.”

2.24.2 Parameters such as O&M Expenses, Interest on Working Capital for which specific norms have been specified in the MYT Regulations, have been calculated on normative basis.

2.24.3 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.

2.24.4 **O&M Expenses:** The actual O&M Expenses as per the Audited Accounts for FY 2019-20 are lower than that on normative basis.

2.24.5 **Interest on Working Capital:** The actual IoWC expense as per the Audited Accounts for FY 2019-20 is higher than that on normative basis.

2.24.6 **Distribution Loss:** The actual distribution loss (excluding EHV Sales) for FY 2019-20 is lower than that approved in the MYT Order.

2.24.7 The summary of sharing of efficiency gains/(loss) on account of O&M Expenses and IoWC is shown in the Table below:

**Table 31: Sharing of Efficiency Gains/(Losses) on O&M and IoWC Expenses for FY 2019-20**

Rs. Crs

Particulars	Normative	Actual	Gains/ (Loss)	2/3 of Efficiency gains/Losses	1/3 of Efficiency Gains/Losses	Net Entitlement after sharing
O&M Expenses	7,215.97	6,794.33	421.65	281.10	140.55	6,934.88
Interest on Working Capital	131.40	1,606.06	(1,474.66)	(983.11)	(491.55)	622.95

2.24.8 MSEDCL submits that it has computed the sharing of efficiency gain/ loss considering 18.26% as the approved distribution loss target (Excluding EHV Sales) against the actual distribution losses (Excluding EHV Sales) in accordance with the MERC (MYT) Regulations, 2015. MSEDCL further submits that the approved distribution loss of 13.50% for FY 2015-16 was inclusive of EHV sales. Hence, these two numbers cannot be compared for sharing purpose. It is pertinent to note that in MYT Order dated 3<sup>rd</sup> November 2016 the Hon'ble Commission itself has approved the distribution loss target as 18.26% (excluding EHV sales) for FY 2019-20. The normative loss of 13.50% was approved loss trajectory for FY 2015-16 on provisional basis and was inclusive of EHV Sales.

2.24.9 Since, Distribution Loss Trajectory excluding EHV sales was introduced by Hon'ble Commission for 3rd Control Period in MYT Order, the actual Distribution Loss excluding EHV sales needs to be compared with the approved Distribution Loss Trajectory excluding EHV sales.

2.24.10 The summary of sharing of efficiency gains/(loss) on account of Distribution Losses is shown in the Table below:

**Table 32: Efficiency Gains/(Losses) due to lower Distribution Loss in FY 2019-20**

Particulars	Amount (Rs. Crs)
Actual Distribution Loss	17.09%
MYT approved Loss	18.26%
Sales Excl. EHV sales in MUs	94,843
EHV Sales in MUs	8,869
Total Sales in MUs	1,03,712
IntraSTS loss (Proposed)	3.28%
Power Requirement at Ex-Bus Periphery (Actual) in MUs	1,27,439
Power Requirement at Ex-Bus Periphery (Normative) in MUs	1,29,131
Additional/ (lower) Power purchase due to higher distribution loss in MUs	(1,692.6)
Rate of PP (At average Variable Cost) Rs./kWh	2.43
Additional/(Lower) Power purchase Cost due to lower distribution loss	(411.9)
2/3 Efficiency gain/(loss)	274.6
1/3 Efficiency gain/(loss) to be borne by the consumers	137.3

2.24.11 The total impact of sharing of efficiency gains and losses of various

components have been summarized in the Table below:

**Table 33: Impact of sharing of gains and losses for FY 19-20**

Particulars	Amount Rs. Crs
O&M Expenses	(281.10)
IoWC	491.55
Impact of Gain in Distribution Loss passed on Consumers	137.30
<b>Total</b>	<b>347.76</b>

2.24.12 MSEDCL requests the Hon'ble Commission to allow the sharing of gains and losses as submitted in above table.

**2.25 Impact of payment to MPECS for FY 2019-20**

2.25.1 Hon'ble Commission in the MYT Order dated 3<sup>rd</sup> November 2016 has approved following amounts 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

2.25.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 has approved Rs. 40.17 Crs towards payment to MPECS for FY 2019-20 as the same was allowed under the MTR Order dated 12 September 2018. The Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 also ruled that it shall consider the actual amount towards this head at the time of truing up of FY 2019-20

2.25.3 MSEDCL has claimed Rs. 40.42 Crs towards the payments to MPECS for FY 2019-20 as per the Audited Accounts.

**2.26 Past Period Adjustment by Commission for FY 2019-20**

2.26.1 Hon'ble Commission had considered the past period adjustments of Rs. 853.08 Crs for FY 2019-20 in MYT Order dated 30<sup>th</sup> March 2020 as approved

in the MTR Order. MSEDCL has considered the same for FY 2019-20.

## 2.27 Aggregate Revenue Requirement for FY 2019-20

2.27.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2019 - 20 is as follows:

**Table 34: ARR for Wires Business for FY 19-20**

Rs. Crs			
Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Operation & Maintenance Expenses	4,851.44	4,886.68	35.24
Depreciation	2,398.98	2,194.22	(204.75)
Interest on Loan Capital	1,195.99	1,146.91	(49.08)
Interest on Normative Working Capital	135.77	131.40	(4.37)
Interest on deposit from Consumers and Distribution System Users	79.60	74.89	(4.71)
Other Finance Charges	27.99	19.87	(8.12)
Provision for bad and doubtful debts	73.26	85.50	12.23
Contribution to contingency reserves	128.49	115.37	(13.11)
Income Tax	-	-	-
Return on Equity Capital	1,658.64	1,682.31	23.67
<b>Aggregate Revenue Requirement</b>	<b>10,550.17</b>	<b>10,337.15</b>	<b>(213.01)</b>
<b>Less</b>			
Income from Wheeling Charges	1.79	1.10	(0.68)
Income from Open Access Charges	29.59	83.44	53.85
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>10,518.79</b>	<b>10,252.61</b>	<b>(266.18)</b>
Revenue from Wires Business			
<b>Revenue Gap/(Surplus)</b>	<b>10,518.79</b>	<b>10,252.61</b>	<b>(266.18)</b>

2.27.2 MSEDCL submits that considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) for Supply Business for the FY 2019-20 is as follows:

**Table 35: ARR for Supply Business for FY 19 - 20**

Rs. Crs			
Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Power Purchase Expenses (including Inter-State Transi	55,967.62	61,897.22	5,929.60
Operation & Maintenance Expenses	2,612.31	2,631.29	18.98
Depreciation Expenses	266.55	243.80	(22.75)
Interest on Loan Capital	132.89	127.43	(5.45)
Interest on Normative Working Capital	-	-	-
Interest on Consumers Security Deposit	716.42	674.03	(42.40)
Other Finance Charges	3.11	2.21	(0.90)
Provision for bad and doubtful debts	659.37	769.47	110.10
Other Expenses	50.08	83.28	33.20
Income Tax	213.89	-	(213.89)
Intra-State Transmission Charges MSLDC charge	4,867.55	4,871.25	3.70
Incentives/Discounts	307.03	337.25	30.22
Contribution to Contingency Reserves	14.28	12.82	(1.46)
Return on Equity Capital	208.15	211.12	2.97
RLC refund	1.84	1.77	(0.06)
Effect of sharing of gains/losses	-	347.76	347.76
Past Period Adjustment by Commission	853.08	853.08	-
Revenue Gap Recovery Allowed	2,562.93	2,562.93	-
Impact of payment to MPECS	40.17	40.42	0.25
<b>Aggregate Revenue Requirement for Supply Business</b>	<b>69,477.27</b>	<b>75,667.13</b>	<b>6,189.86</b>
Stabilisation amount as per MYT Order	-	-	-
<b>Total Revenue Expenditure</b>	<b>69,477.27</b>	<b>75,667.13</b>	<b>6,189.86</b>
<b>Less</b>			
Non-Tariff Income	361.66	494.19	132.52
Income from Additional Surcharge	317.14	575.60	258.46
Income from Trading of Surplus Power	298.18	335.99	37.81
<b>Net Aggregate Revenue Requirement</b>	<b>68,500.28</b>	<b>74,261.35</b>	<b>5,761.07</b>
Revenue from Sale of Power	78,965.30	72,944.55	(6,020.75)
Revenue from Retail Supply Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(10,465.02)</b>	<b>1,316.79</b>	<b>11,781.82</b>

## 2.28 Revenue from sale of electricity for FY 2019-20

2.28.1 MSEDCL has considered the revenue for FY 2019-20 based on the Audited Accounts as shown in following table.

**Table 36: Revenue from Sale of power for FY 19-20**

Rs. Crs			
Particulars	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Revenue from Sale of Power	78,965.30	72,944.55	(6,020.75)

2.28.2 The Annual Accounts of MSEDCL shows the revenue from various revenue operations including regulatory income. However, being not part of revenue from sale of power at retail tariff and as per practice in vogue, MSEDCL has shown certain items of revenue separately.

2.28.3 MSEDCL submits that the category wise details of actual revenue *vis-à-vis* approved revenue is summarized in following table.

**Table 37: Category wise Revenue for FY 2019-20**

Category	Revenue (Rs. Crs)		
	Approved	Actual	Deviation
Residential	15,877.43	15,088.92	(788.50)
Commercial	10,097.23	9,752.23	(345.00)
HT-Industrial	28,150.10	24,892.36	(3,257.74)
LT-Industrial	6,298.75	5,059.76	(1,238.98)
PWW	1,678.63	1,603.91	(74.72)
Street Light	1,566.32	1,306.60	(259.72)
Agriculture	10,975.53	10,031.52	(944.01)
Public Services	1,791.55	1,639.19	(152.37)
Railways	71.34	62.75	(8.59)
Other Categories	226.66	244.37	17.72
Other (Incentives/Discounts)	-492.98	-	492.98
Other (Recoveries from Theft etc)	-	303.13	303.13
<b>Sub Total</b>	<b>76,240.56</b>	<b>69,984.76</b>	<b>(6,255.80)</b>
Revenue from DF@input sales	2,328.74	2,560.53	231.79
Standby Charges	396.00	399.26	3.26
<b>Total</b>	<b>78,965.30</b>	<b>72,944.55</b>	<b>(6,020.75)</b>

2.28.4 MSEDCL further submits that the detail of Others (Recoveries from Theft of Power/Malpractice etc.) is provided in following table.

Particulars	Rs. Cr.
	FY 2019-20 (Actual)
Recoveries from Theft of Power/Malpractice	85.01
Income from Wheeling Charges claimed Separately	-1.10
Miscellaneous charges from consumers	219.22
<b>Total</b>	<b>303.13</b>

2.28.5 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.

**2.29 Non-Tariff Income for FY 2019-20**

2.29.1 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 etc.

2.29.2 MSEDCL has claimed a Non-Tariff Income of Rs. 494.19 Crs as against Rs 361.66 Crs as approved by the Hon'ble Commission.

**Table 38: Non-Tariff Income for FY 19-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Rents of land or buildings	1.03	0.99	(0.04)
Sale of Scrap	52.05	46.46	(5.59)
Income from investments	18.50	-	(18.50)
Income from sale of tender documents	8.92	7.80	(1.12)
Prompt payment discount from REC/PFC	12.16	-	(12.16)
Other/Miscellaneous receipts	269.00	381.94	112.94
Revenue from subsidy & grant	-	35.00	35.00
Interest on Contingency Reserve Investments	-	21.99	21.99
<b>Non Tariff Income</b>	<b>361.66</b>	<b>494.19</b>	<b>132.52</b>

2.29.3 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.

2.29.4 MSEDCL has not considered income from grants and contribution reported under non-tariff income, as the treatment (i.e. excluded while calculating depreciation) to the same is already considered while computing the depreciation for the FY 2019-20.

2.29.5 MSEDCL further submits that the major components of Other/Misc. receipts include:

Particulars	Amount (Rs Cr.)
Interest on loans & advances to supplier/contractors:	2.66
Interest Income for prior period	0.31

<b>Particulars</b>	<b>Amount (Rs Cr.)</b>
Interest income from investments in Bank Deposits	30.87
Sundry Credit Balances written back	25.69
Miscellaneous Receipts (NEF Subsidy taken only)	99.18
Penalty charges recovered from vendor	78.28
Other income related to prior period	71.69
Profit on sale of Asset	9.29
Others	4.66
Interest on IPDS , DDUGY and smart Grid	59.30
<b>Total</b>	<b>381.94</b>

### 2.30 Income from Open Access Charges for FY 2019-20

2.30.1 MSEDCL has an income from Open Access Charges of Rs. 83.44 Crs as against Rs. 29.59 Crs as approved by the Hon'ble Commission.

**Table 39: Income from Open Access Charges for FY 19-20**

<b>Particulars</b>	Rs. Crs		
	<b>FY 2019-20 (Approved)</b>	<b>FY 2019-20 (Actual)</b>	<b>Deviation</b>
Income from Open Access Charges	29.59	83.44	53.85

2.30.2 Details of income from Open Access charges are provided in the following Table.

**Table 40: Details of Income Open Access Charges for FY 19-20**

<b>Particulars</b>	<b>Amount (in Rs. Crs)</b>
Energy Charges Open Access	1.37
F.C.A Charges Open Access	0.02
Additional Charges Open Access	0.38
Adjustment to past billing Open Access	-78.91
Cross Subsidy Surcharge Open Access	112.42
Wheeling Charge Open Access	30.35
Transmission Charge Open Access	198.35
Operating Charges Open Access	17.55
Threshold penalty Open Access	0.27
<b>Total Income from Open Access Charges</b>	<b>281.79</b>

2.30.3 Hon'ble Commission vide MYT Order dated 30th March 2020 in Case no. 322 of 2019 for the purpose of provisional true-up for FY 2019-20 while estimating income from OA charges for FY 2019-20 had estimated a same level of transmission charges as in FY 2018-19 i.e. Rs. 182.33 Crore. Further, in accordance with the ruling of Hon'ble Commission in the Order in Case No.361 of 2018 dated 14 June, 2019 and Regulations 14(1)(v) of the DOA Regulations, 2019 (First Amendment), for the purpose of provisional true-up has disallowed Rs. 182.33 Crore from the projected income from OA charges, while approving net income from OA charges for FY 2019-20. Accordingly, MSEDCL has excluded the transmission charges open access revenue from the income from OA charges.

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

### **2.31 Income from Trading of Surplus Power for FY 2019-20**

2.31.1 MSEDCL has an Income of Rs. 335.99 Crs. From trading of surplus power as provided in following table.

**Table 41: Income from Trading of Surplus Power for FY 19-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Income from Trading of Surplus Power	298.18	335.99	37.81

2.31.2 MSEDCL humbly requests to the Hon'ble Commission to approve the income from sale of surplus power as shown in above table.

### **2.32 Income from Wheeling Charges for FY 2019-20**

2.32.1 MSEDCL has an income from Wheeling Charges of Rs. 1.10 Cr. in actual and as approved by the Hon'ble Commission.

**Table 42: Income from Wheeling Charges for FY 2019-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Income from Wheeling Charges	1.79	1.10	(0.68)

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

**2.33 Income from Additional Surcharge for FY 2019-20**

2.33.1 MSEDCL has an income from additional surcharge of Rs. 575.60 Cr during FY 2019-20.

**Table 43: Income from Additional Surcharge for FY 2019-20**

Particulars	Rs. Crs		
	FY 2019-20 (Approved)	FY 2019-20 (Actual)	Deviation
Income from Additional Surcharge	317.14	575.60	258.46

2.33.2 MSEDCL humbly requests the Hon'ble Commission to approve the income from additional surcharge as per the Audited Accounts.

**2.34 Revenue Gap/(Surplus) for FY 2019-20**

2.34.1 Based on the above submissions, 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 2019-20 is presented in the Table below.

**Table 44: Revenue Gap/Surplus for FY 19-20**

Rs. Crs

<b>Particulars</b>	<b>FY 2019-20 (Approved)</b>	<b>FY 2019-20 (Actual)</b>	<b>Deviation</b>
Power Purchase Expenses	55,967.62	61,897.22	5,929.60
Operation & Maintenance Expenses	7,463.76	7,517.97	54.22
Depreciation Expenses	2,665.53	2,438.03	(227.50)
Interest on Loan Capital	1,328.88	1,274.34	(54.54)
Interest on Normative Working Capital	135.77	131.40	(4.37)
Interest on Consumers Security Deposit	796.03	748.92	(47.11)
Other Finance Charges	31.10	22.08	(9.02)
Provision for bad and doubtful debts	732.63	854.96	122.33
Other Expenses	50.08	83.28	33.20
Income Tax	213.89	-	(213.89)
Intra-State Transmission Charges MSLDC charge	4,867.55	4,871.25	3.70
Incentives/Discounts	307.03	337.25	30.22
Contribution to Contingency Reserves	142.76	128.19	(14.57)
Return on Equity Capital	1,866.79	1,893.43	26.64
RLC refund	1.84	1.77	(0.06)
Effect of sharing of gains/losses	-	347.76	347.76
Past Period Adjustment by Commission	853.08	853.08	-
Revenue Gap Recovery Allowed	2,562.93	2,562.93	-
Impact of payment to MPECS in future years	40.17	40.42	0.25
<b>Aggregate Revenue Requirement</b>	<b>80,027.43</b>	<b>86,004.28</b>	<b>5,976.85</b>
Stabilisation amount as per MYT Order	-	-	-
<b>Total Aggregate Revenue Requirement</b>	<b>80,027.43</b>	<b>86,004.28</b>	<b>5,976.85</b>
<b>Less</b>			
Non-Tariff Income	361.66	494.19	132.52
Income from Open Access Charges	29.59	83.44	53.85
Income from Trading of Surplus Power	298.18	335.99	37.81
Income from Wheeling Charges	1.79	1.10	(0.68)
Income from Additional Surcharge	317.14	575.60	258.46
<b>Net Aggregate Revenue Requirement</b>	<b>79,019.07</b>	<b>84,513.96</b>	<b>5,494.89</b>
Revenue from Sale of Power	78,965.30	72,944.55	(6,020.75)
Revenue from Retail Supply Business			
Revenue from Wires Business			
<b>Revenue Gap/(Surplus)</b>	<b>53.77</b>	<b>11,569.40</b>	<b>11,515.64</b>

2.34.2 The Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020 has approved Aggregate Revenue Requirement of Rs. **80,027.43** Cr. for FY 2019-20. MSEDCL submits actual ARR of Rs. **86,004.28** Cr. with a deviation of Rs **5,976.85** Crs. Considering the impact of revenue and other income, the truing

up requirement works out to be Rs. **11,515.64** Cr. MSEDCL requests the Hon'ble Commission to allow MSEDCL the true up requirement as submitted above.

### **3 TRUE UP OF FY 2020-21**

#### **3.1 Preamble**

3.1.1 This section outlines the actual performance of MSEDCL for the FY 2020-21. MSEDCL hereby submits final True Up for FY 2020-21 comparing the actual audited data for FY 2020-21 with those approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019. The Board of Directors of MSEDCL has approved the Audited Annual Accounts for the period April 2020 to March 2021 and Statutory Auditors M/s. CNK & Associates LLP, M/s. Shah & Taparia, and M/s. GMJ & Co have audited the Accounts vide report dated 24/11/2021 attached as to this Petition. Subsequently, this Audited Annual Accounts for FY 2020-21 was restated during approval of Audited Annual Accounts for FY 2021-22. MSEDCL hereby proposes to true up its expenses and revenues based on the said Audited Accounts for FY 2020-21. As per Indian Accounting Standard – (Ind AS) 8 – Accounting Policies, Changes in Accounting Estimated and Errors, if any error or omission result in prior period expenses then, such prior period expenses shall be adjusted in the year in which pertains. The Audited Annual Accounts for FY 2020-21 was restated during approval of Audited Annual Accounts for FY 2021-22. The copy of restated Audited Accounts for FY 2019-20 and FY 2020-21 annexed as **Annexure 13**. The same may please be referred wherever required.

3.1.2 Following section outline the deviations in actual expenses/revenue for FY 2020-21 based on the Audited Accounts of MSEDCL in comparison with the expenses/revenue approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020.

#### **3.2 Principles of Truing-up for FY 2020-21**

3.2.1 MSEDCL submits that the MERC (Multi Year Tariff) Regulations, 2019 specifies that the Mid-Term Review Petition shall comprise of Truing up for FY 2020-21 which has to be carried out based on the provisions of the MERC (Multi Year Tariff) Regulations, 2019.

3.2.2 In line with the provisions of MERC (Multi Year Tariff) Regulations, 2019,

MSEDCL has computed this Truing-up for FY 2020-21.

### 3.3 Category Wise Sales for FY 2020-21

3.3.1 Category wise actual sales for FY 2020-21 for MSEDCL excluding all Distribution Franchisee have been summarized in the following table:

**Table 45: Category wise Sales for FY 2020-21**

Category	Sales (MUs)		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Residential	22,647.41	21,219.70	(1,427.70)
Commercial	8,607.29	4,856.36	(3,750.93)
HT-Industrial	33,577.23	28,285.99	(5,291.23)
LT-Industrial	7,515.43	7,002.98	(512.45)
PWW	2,553.96	2,504.79	(49.17)
Street Light	2,258.45	1,832.03	(426.42)
Agriculture	27,727.32	34,060.49	6,333.17
Public Services	1,663.12	1,278.38	(384.73)
Railways	80.46	67.37	(13.10)
Others	718.60	580.12	(138.48)
<b>MSEDCL Excl. DF</b>	<b>1,07,349.27</b>	<b>1,01,688.22</b>	<b>(5,661.05)</b>

3.3.2 MSEDCL submits that during the MYT process, the Hon'ble Commission had approved the sales based on category-wise sales approved for FY 2018-19 as the base. The Hon'ble Commission had mostly applied 5-year CAGR for projecting the sales for FY 2020-21. Now, the actual figures of FY 2020-21 are available.

3.3.3 As noted by the Hon'ble Commission in MYT Order at the time of MYT process that MSEDCL was in advanced step/stage to introduce franchisee in other areas, and hence, the Hon'ble Commission while projecting sales has only considered Bhiwandi Franchisee and not factored in the impact of other franchisees. Further, the Hon'ble Commission had opined that the same can be done at MTR stage based on actual details.

#### **Bhiwandi DF**

3.3.4 M/s. Torrent Power Ltd. (TPL) has been appointed as Distribution Franchisee for Bhiwandi circle and Distribution Franchise Agreement (DFA) was signed between MSEDCL & M/s TPL on 20.12.2006. Distribution operations of

Bhiwandi circle were handed over to M/s TPL on 26th January 2007. The term of agreement was ten years and got expired on 26.01.2017. As per article 3.2 of DFA, the said agreement has been renewed and extended for 10 Years i.e. up to 25th January 2027. Distribution Franchisee Renewal Agreement was signed on 02.12.2016.

#### **Thane DF – SMK area**

3.3.5 M/s. Torrent Power Ltd. (TPL) has been appointed as Distribution Franchisee for Shil, Mumbra & Kalwa (SMK) sub-divisions under Thane Urban Circle. Distribution Franchisee Agreement (DFA) dated 11<sup>th</sup> February, 2019 is effective for the period commencing from 1<sup>st</sup> March 2020 to 1<sup>st</sup> March 2040. Distribution operations of designated DF area were handed over to M/s. TPL on **1<sup>st</sup> March, 2020.**

#### **Malegaon DF**

3.3.6 M/s. CESC Limited has been appointed as Distribution Franchisee for Malegaon Municipal Corporation area comprising of Malegaon Urban-I, II and III Sub-divisions and 5 villages of Malegaon Rural sub-divisions under Malegaon Circle. Distribution Franchisee Agreement (DFA) dated 29<sup>th</sup> May 2019 is effective for the period commencing from 1<sup>st</sup> March 2020 to 1<sup>st</sup> March 2040. Distribution operations of designated DF area were handed over the M/s. CESC on **1<sup>st</sup> March, 2020.**

3.3.7 Details of month wise sales are given in Form 1 of the Regulatory Formats.

3.3.8 MSEDCL hereby requests the Hon'ble Commission to approve the Sales for FY 2020-21 as submitted as part of this Petition.

#### **3.4 Distribution Losses for FY 2020-21**

3.4.1 In MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019, the Hon'ble Commission had approved distribution loss of 18.01% (excluding EHV Sales and OA Sales) for FY 2020-21. The actual distribution loss of MSEDCL for FY 2020-21 is 16.91% which is (1.10%) less than the Distribution Loss level approved by the Hon'ble Commission.

**Table 46: Distribution Losses FY 2020-21**

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Distribution Loss (excl. EHV Sales & OA Sales)	18.01%	16.91%	(1.10%)

3.4.2 MSEDCL submits that it has been putting best endeavours for lowering the Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. However, loss reduction is a slow process and becomes increasingly difficult for the loss levels to come down after a particular level. The change in sales mix also impact the distribution losses.

3.4.3 MSEDCL requests the Hon'ble Commission to approve the actual Distribution Loss as per the above table.

### 3.5 Energy Balance for FY 2020-21

3.5.1 The quantum of sales as shown in **Table 45** is 1,01,688.22 MUs, representing 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 sales to the consumers within the Distribution Franchisee area has also been considered. Therefore, energy available for sale for FY 2020-21 is computed as below:

**Table 47: Energy Sales for MSEDCL for FY 2020-21**

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Energy Sales by MSEDCL for FY 2020-21	1,07,349.27	1,01,688.22	(5,661.05)
Add: Category wise sales in DF area	3,272.95	3,549.73	276.78
Add: OA Sales (Conventional)	3,983.40	3,319.25	(664.15)
Add: Renewable OA	859.40	956.22	96.82
<b>Total Energy Sales</b>	<b>1,15,465.02</b>	<b>1,09,513.42</b>	<b>(5,951.60)</b>

MUs

3.5.2 MSEDCL submits that the total energy sales for FY 2020-21 is 1,09,513.42 MUs as compared to 1,15,465.02 MUs which was approved by the Hon'ble Commission in MYT Order dated 30<sup>th</sup> March, 2020. The Hon'ble Commission

is requested to allow the same.

- 3.5.3 MSEDCL further submits that it is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs 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.
- 3.5.4 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.
- 3.5.5 MSEDCL submits that based on the power scheduled at generator bus for Maharashtra is available as Full Schedule on WRLDC web based scheduling software. Similarly, power scheduled at Maharashtra state periphery is available as Net schedule on WRLDC web based scheduling software.
- 3.5.6 In case of Tarapur Atomic Power Station of NPCIL (TAPS 1&2) which is considered as ISGS station but connected to Maharashtra State STU network for power evacuation. Hence for scheduling of power to Maharashtra, no PoC / scheduling loss is considered. Similarly, EMCO Warora is located in Maharashtra but this generating station is connected to ISTS network. Hence power is scheduled by WRLDC.
- 3.5.7 For interstate loss computation, power scheduled from ISGS station, CGPL, EMCO, SSP, Pench & short term through Inter-state network i.e. whose scheduling done by RLDC is taken into consideration.
- 3.5.8 MSEDCL also purchase power from power market mainly Indian Energy Exchange as per requirement to meet demand or for cost optimization. The power purchase from Indian Energy Exchange is at Regional periphery and drawal losses are applicable for energy purchased from IEX to compute energy available at Maharashtra State periphery.

3.5.9 Further MSEDCL also had agreements for banking of power from States like Haryana, Himachal Pradesh, and Punjab etc. In banking arrangement, Power transactions are settled at Regional Periphery and concern DISCOMs has to bear Drawal loss when receiving power from other DISCOM and has to bear injection loss when delivering power to other DISCOM.

3.5.10 MSEDCL submits that the surplus power traded at Exchange is billed at Regional Periphery and bilateral power traded is billed at STU periphery. The quantum of 286 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL at STU periphery during FY 20-21

3.5.11 As per provisional monthly settlements by MSLDC imbalance units for FY 20-21 are considered as (805.39) MUs. MSEDCL submits that the WRLDC provides web based scheduling reports on [HTTP://SCHEDULING.WRLDC.IN/WBES/ACCOUNT/LOGIN](http://SCHEDULING.WRLDC.IN/WBES/ACCOUNT/LOGIN). This site provides the details of full schedule and net schedule from each Inter State Generating Station (ISGS). The WRLDC uses this data for loss calculation. Further, WRPC prepares the REA from this data which forms the basis of billing for ISGS. MSEDCL prepared the cumulative information for FY 20-21 based on these reports. Considering the energy at ex bus bar and energy received at STU periphery from these reports, MSEDCL has considered the inter-state transmission losses as 3.17%.

Source of Power (Station wise)	At regional Periphery (MUs)	Energy Received at State Periphery (MUs)	Interstate Loss
NTPC	31415.78	30325.73	3.5%
NPCIL	4066.90	3957.53	2.7%
SSP	855.76	854.19	0.2%
Pench	142.94	142.92	0.0%
EMCO Power	1483.93	1432.71	3.5%
CGPL	5111.51	4954.50	3.1%
Short Term Power Purchase	4084.93	3998.69	2.1%
NVVN + Inter-State	143.98	125.12	3.5%
<b>Total Power Scheduled from Inter State Source</b>	<b>47305.73</b>	<b>45805.23</b>	<b>3.17%</b>

3.5.12 MSEDCL further submits that the MSLDC computes the Intra State Transmission System (InSTS) Grid Loss based on the Energy Input and Energy Output. This is grid loss for the Maharashtra Transmission System and not for MSEDCL. Hence, considering the fact that Grid Loss cannot be same for all Distribution Licensees, MSEDCL has computed Intra-State Transmission losses separately and shown below table of Energy Balance for FY 2020-21. Power purchase, sales and energy at Distribution Periphery being metered figures in this petition, Intra State losses is the number which is required to be computed.

3.5.13 Further, Intra State transmission loss for Maharashtra System is 4.30%. MSEDCL has considered this Intra-State transmission loss for computing the input for OA consumption, as mandated by the Hon'ble Commission in MYT Order.

3.5.14 Considering the energy available for sale for FY 2020-21 as shown in **Table 47**, the energy balance for MSEDCL is calculated. The following table shows the energy balance for FY 20-21.

**Table 48: Energy Requirement and Energy Balance FY 2020-21**

Particulars	Calculation	UoM	FY 2020-21	
			MYT Order	Actual
LT Agriculture Sales (Including D.F)	a	MU	26,354	33,135
LT Sales excluding Agriculture Sales (Including D.F)	b	MU	43,345	38,147
HT Sales excluding EHV level sales (Including D.F)	c	MU	30,565	24,895
<b>Total Sales including D.F (Excluding EHV Sales)</b>	$d=a+b+c$	MU	<b>1,00,265</b>	<b>96,176</b>
OA Sales (Renewables)	e	MU	859	956
OA Sales (Conventional)	f	MU	3,983	3,319
Retail Energy Sale to Consumers (Excluding EHV Sales)	$A=d+e+f$	MU	1,05,108	1,00,452
Sale due to Surplus Energy Traded	$B=1\%*(d+t)$	MU	1,106	286
<b>Retail Energy Sale including surplus traded (Excluding EHV Sales)</b>	$C=A+B$	MU	<b>1,06,214</b>	<b>1,00,738</b>
<b>Total Power Purchase</b>	$D=g+h$	MU	<b>1,39,584</b>	<b>1,32,485</b>
Power Purchase Quantum from Intra-State sources	g	MU	98,524	85,180
Power Purchase Quantum from Inter-State sources	h	MU	41,060	47,305
Inter-State Losses	i	%	3.10%	3.17%
Power Purchase Quantum from Inter-State sources at MS Periphery	$j=h*(1-i)$	MU	39,786	45,805
Add: FBSM	0	MU	-	(805.39)
<b>Power Quantum handled at Maharashtra Periphery</b>	$k=g+j$	MU	<b>1,38,310</b>	<b>1,30,179</b>
Infirm Non-PPA Wind Power	$l=e/(1-q)$	MU	888	999
Input for OA Consumption	$m=f/(1-q)$	MU	4,114	3,468
<b>Total Power Purchase Quantum Handled</b>	$n=k+l+m-v$	MU	<b>1,42,738</b>	<b>1,34,647</b>
Surplus Power Traded	$o=B$	MU	1,106	286
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	$p=n-o$	MU	<b>1,41,632</b>	<b>1,34,361</b>
<b>Intra-State Transmission Loss</b>	q	%	3.18%	4.30%
Intra-State Transmission Loss	$r=p*q$	MU	4,502	5,775
Net Energy requirement at T<>D Periphery	$s=p-r$	MU	1,37,130	1,28,586
EHV Sales	t	MU	10,357	9,062
Net Energy Available for Sale at 33kV	$u=s-t$	MU	1,26,773	1,19,524
Energy injected and drawn at 33kV	v	MU	573	694
<b>Total Energy Available for Sale at 33kV</b>	$E=u+v$	MU	<b>1,27,346</b>	<b>1,20,218</b>
<b>Energy Available for Sale including Surplus traded (excl. OA Sales)</b>	$\# F=E-l-m+o$	MU	<b>1,23,451</b>	<b>1,15,750</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	$\# G=E-A$	MU	<b>22,238</b>	<b>19,574</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	$H=G/F$	%	<b>18.01%</b>	<b>16.91%</b>

3.5.15 MSEDCL submits that while calculating parameter 'G' i.e., 'Distribution Loss (Excluding EHV Sales and OA Sales)', OA sales has been excluded from both parameters 'F' as well as 'd'. MSEDCL has considered the formula as 'G= F-d'. Further, MSEDCL submits that while calculating the parameter 'F' i.e., 'Energy Available for Sale including Surplus traded (Excl. OA sales)', surplus power traded has been excluded as same is being sold at transmission periphery. MSEDCL has considered the formula as 'F= E-l-m'.

3.5.16 MSEDCL requests the Hon'ble Commission to approve the Energy Balance

as shown in the table above.

### 3.6 Power Purchase Expenses for FY 2020-21

3.6.1 MSEDCL has following sources of firm power viz.

- Maharashtra State Power Generation Company Limited (MSPGCL)
- Purchase from Central Generating Stations
- IPPs (JSW (Ratnagiri), Mundra UMPP CGPL, Adani Power Limited, RattanIndia Limited, Emco Power Limited etc.)

3.6.2 MSEDCL also buys power from other sources such as Sardar Sarovar and Pench Hydro project, renewable sources including co-generation, wind power and solar generation.

3.6.3 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.

3.6.4 Following table summarizes the source wise power purchase done by MSEDCL during the FY 20-21.

**Table 49: Source wise Power Purchase for FY 20-21**

Source	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation
MSPGCL	53,130.08	47,684.94	(5,445.14)	22,189.34	20,076.59	(2,112.76)	4.18	4.21	0.03
NTPC	28,082.61	31,545.02	3,462.42	10,627.68	10,840.30	212.62	3.78	3.44	(0.35)
NPCIL	4,932.23	4,066.90	(865.33)	1,407.05	1,253.73	(153.33)	2.85	3.08	0.23
SSP	1,209.94	855.76	(354.18)	248.05	175.43	(72.62)	2.05	2.05	(0.00)
Pench	136.50	142.94	6.44	27.98	29.30	1.32	2.05	2.05	0.00
Dodson	115.72	76.65	(39.07)	17.78	17.64	(0.15)	1.54	2.30	0.76
JSW	1,934.21	1,919.67	(14.5)	698.54	594.77	(103.77)	3.61	3.10	(0.51)
CGPL	5,157.89	5,111.51	(46.37)	1,515.68	1,455.84	(59.84)	2.94	2.85	(0.09)
Adani Power	20,986.36	17,059.49	(3,926.88)	7,829.51	8,249.89	420.37	3.73	4.84	1.11
EMCO Power	1,370.06	1,483.93	113.87	616.88	603.95	(12.93)	4.50	4.07	(0.43)
Rattan India	2,085.63	2,597.62	511.99	1,414.19	1,454.00	39.82	6.78	5.60	(1.18)
Sai Wardha		923.35	923.35		455.03	455.03			
Renewable	20,272.00	14,918.10	(5,353.90)	9,081.89	7,423.00	(1,658.89)	4.48	4.98	0.50
Traders		4,084.93	4,084.93		1,176.16	1,176.16		2.88	2.88
RECs	-	-	-	130.01	-	(130.01)			
PGCIL Charges				3,321.46	3,538.02	216.56			
FBSM		-	-		(1,064.14)	(1,064.14)			-
Inter State Purchase		14.29	14.29		9.75	9.75			
Intra State Purchase									
<b>Total Power Purchase</b>	<b>1,39,413</b>	<b>1,32,485</b>	<b>(6,928)</b>	<b>59,126</b>	<b>56,289</b>	<b>(2,837)</b>	<b>4.24</b>	<b>4.25</b>	<b>0.01</b>

3.6.5 In the following paragraphs, the detailed reasons for variation in the power purchase quantum and cost are provided.

- a) MSPGCL – In view of lower demand due to COVID-19 pandemic and lower prices prevailing on power exchanges, Zero Schedule was given to units of generating stations of MSPGCL such as Nashik, Koradi – 6&7 and Bhusawal – 3. The fixed cost paid towards Reserved Shut down/Zero Schedule have impacted total power purchase cost. Also, FSA bills of Rs. -950 Cr received.
- b) Central Generating Stations- Actual units received from Mouda 1 & 2 was at lower side hence, cost for the same was less. Further, due to ECR revision approx. amount of Rs. 80 Cr received and COVID-19 rebate on Rs. 168 Cr received. Further, NPCIL TAPS 1& 2 units are under shut down from month of January 2021.
- c) JSW- The reduction in rate in on account of negative escalation index for imported coal index.
- d) CGPL – The reduction in rate in on account of negative escalation index for imported coal index.
- e) Adani Power Maharashtra Limited- In view of lower demand in Covid 19 pandemic, units were under Zero Schedule for 4.5 months (in case of APML 125 MW), 4 months (in case of APML 1200 MW), and 5.5 months (in case of APML 440 MW).  
In case of APML 125 MW, APML 1200 MW and APML 440 MW capacity charges had to be paid as per PPA, resulting in increase in per unit cost as compared to previous year.  
Domestic coal shortfall of Rs.11.54 Crs (in case of APML 125 MW), Rs.171.85 Crs (in case of APML 1320 MW), Rs. 82.31 Crs (in case of APML 1200 MW) and Rs. 22.38 Crs (in case of APML 440 MW) is considered.

- f) EMCO Power: PoC charges approved for 12 months however from December 2020 onwards PoC charges subsumed in PGCIL bills. CERC escalation index applicable to Domestic coal and transportation is Nil throughout the year hence, actual rate did not increase in line with MYT rate.
- g) RattanIndia: In view of lower demand in Covid 19 pandemic, units were under Zero Schedule for 8.5 months. Further, capacity charges had to be paid as per PPA, resulting in increase in per unit cost as compared to previous year. Variable per unit cost is reduced from Rs. 2.9013 to Rs. 2.4413 w.e.f. January 2021.
- h) Sai Wardha: Hon'ble Commission has not approved any quantum from newly started IPP.
- i) Inter-State: 14 MUs purchased from MPEB for villages in Nagpur and Amravati.
- j) Short-term PP: During lockdown in Covid-19 pandemic period energy at lower rate was available at power exchange. MSEDCL has done procurement for cost optimisation which resulted in saving in power purchase expenses.
- k) FBSM: MSEDCL received amount to the tune of Rs. 1064.14 Crs against FBSM for various cases.
- ↳ Renewable Energy:  
Non-Solar
- i. Reasons for variation in generation is due to less wind generation may be due to contract violation of O&M between Wind Generator and Wind Developer, RoW issues or due to major breakdown and low wind.
  - ii. Generation from Bagasse is also less due to COVID-19, there were issues related labour those are required for cutting and transporting the sugar cane from the field to sugar plant. This resulted in delay in

start of crushing season and also sugar factories were not able to run at full capacity.

- iii. Due to COVID-19 pandemic situation, Scheduled Commercial operation date of about 726 MW wind power projects has been extended.
- iv. Further, the preferential tariff is much higher than the competitive tariff. Due to delay in project commissioning power purchase through competitive tariff is being delayed.

In case solar, Rs. 63.54 Crs considered towards Change in Law due to which tariff is increased. Major reason for delay in project commissioning is due to outcome of pandemic situations.

- m) PGCIL Charges: Due to implementation of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 PoC charges revised from month of December 2020. MSEDCL also received Covid-19 rebate of Rs. 109.13 Crores and PoC-3 bills for Rs. 421 Crs pertaining to FY 2020-21 and hence same are considered.

3.6.6 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. Hence, MSEDCL requests the Hon'ble Commission to approve the power purchase expenses as per Audited Accounts.

3.6.7 MSEDCL submits that details of RE Purchase for FY 20-21 are provided in following table.

Source	FY 2020-21	
	Quantum (MU)	Cost (in Rs. Crs.)
Wind	5,533.11	2,581.67
SHP	400.55	169.07
Bagasse based Cogen.	3,747.21	2,401.97
Biomass	344.02	247.79
MSW	0.09	0.04

<b>Total Non-Solar</b>	<b>10,024.97</b>	<b>5,400.53</b>
Solar	3,027.13	1,177.93
SECI	1,750.39	803.30
NVVN (Solar)	28.16	30.22
Solar Rooftop	87.46	11.03
<b>Total Solar</b>	<b>4,893.13</b>	<b>2022.47</b>
<b>Total</b>	<b>14,918.10</b>	<b>7,423.00</b>

### 3.7 Transmission Charges for FY 2020-21

3.7.1 MSEDCL submits the actual transmission charges and SLDC charges paid to MSETCL and MSLDC as summarized in following table.

**Table 50: Transmission Charges paid to Transmission Licensee for FY 2020-21**

Rs. Crs

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Intra-State Transmission Charges	5,671.59	5,687.41	15.82
MSLDC Charges	28.33	28.33	0.00
<b>Total</b>	<b>5,699.92</b>	<b>5,715.74</b>	<b>15.82</b>

3.7.2 MSEDCL submits that it pays the transmission charges to STU as per the InSTS Order issued by Hon'ble Commission from time to time. MSEDCL requests the Hon'ble Commission to approve the actual Transmission and MSLDC charges as per the Audited Accounts as shown in above table.

### 3.8 Fixed Costs for FY 2020-21

3.8.1 Based on the Capital Cost and the consequent Capitalized Expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2020-21 (excluding fixed component of PP cost) has been determined in accordance with the provisions of the MYT Regulations, 2019 outlined thereof. As outlined under the regulations, the fixed cost for MSEDCL has been determined under the following major heads along with other items of expenditure:

- Operation and Maintenance Expenses

- Depreciation
- Interest and Finance Charges
- Interest on Working Capital
- Return on Equity

3.8.2 Net Aggregate Revenue Requirement has been computed after netting off Expenses capitalized.

3.8.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 for FY 2020-21 and the values as per the audited accounts.

### **3.9 Actual Operation & Maintenance Expenses for FY 2020-21**

3.9.1 Operations and Maintenance (O&M) Expenses of the company consists of Employee Expenses, Administrative and General Expenses and Repairs and Maintenance Expenses.

3.9.2 The following table provides the actual O&M expenses (net of capitalisation) for the FY 2020-21

**Table 51: Actual O&M Expenses for FY 2020-21**

		Rs. Crs
Particulars	Actual	
Actual O&M Expenses	7,168.28	

3.9.3 Head-wise details of employee expenses, A&G Expenses and R&M Expenses have been provided in Regulatory Formats.

3.9.4 Following table provides the comparison of actual O&M expenses for FY 19-20 and FY 20-21.

**Table 52: Comparison of actual O&M Expenses for FY 19-20 & FY 20-21**

					Rs. Crs
Sr. No.	Particulars	FY 2019-20	FY 2020-21	Difference	
1	Employee Exp. (Net)	5,307.38	5,368.20	60.82	

Sr. No.	Particulars	FY 2019-20	FY 2020-21	Difference
2	A & G Exp. (Net)	713.11	763.87	50.76
3	R & M Exp.	773.84	1,036.21	262.37
	<b>Total O &amp; M Exp.</b>	<b>6,794.33</b>	<b>7,168.28</b>	<b>373.95</b>

3.9.5 There is an increase of Rs. 373.95 Crs in O&M Expenses for FY 20-21 over FY 19-20.

3.9.6 Following Table summarises the reasons for change in major components of O&M Expenses for FY 20-21 over FY 19-20.

**Table 53: Major components of O&M expenses for FY 20-21 over FY 19-20**

Sr. No.	Particulars	FY 19-20	FY 20-21	Difference	Remark
1. Employee Cost					
1.1	Basic Salary	2,848.97	2,806.02	(42.95)	Due to retirement of employees expenditure has decreased
1.2	Expenditure on Outsourced Employees	371.39	497.08	125.69	Due to increase in minimum wage , Allowances & increase in outsource employees, the expense is increased
1.3	Dearness Allowance	378.93	473.22	94.30	There is increased in DA from 17% to 28% in FY 2020-21
1.4	Earned Leave Encashment	573.62	384.66	(188.96)	In FY 2019-20 due to last year 18-20 block, more leave encashment application received, also FY 2020-21 Actuary valuation prov. Pending
1.5	Other Allowances	204.93	167.75	(37.18)	The prov. For fixation for allowances has been made in the GL 40201201, whereas actual payment of arrears is reflected in corresponding Expenditure GLs included in employee cost
1.6	House Rent Allowance	220.57	300.16	79.59	HRA is increased from 24% to 27% in FY 2020-21
1.7	Provident Fund Contribution	381.82	429.92	48.09	Due to increment & rise in DA, the PF has been increased
1.8	Staff Welfare Expenses	46.63	89.92	43.29	Due to Sanitizer impress given to Class 3 and 4, also due to change in method of interest working, also due to new insurance policy premium has increased from Rs. 17951 per employee in FY 2019-20 to Rs. 26255 per employee in FY 2020-21
1.9	Gratuity Payment	415.90	311.66	(104.24)	Due to retirement of employees, expenditure has reduced
2. Administration & General Expenses					

Sr. No.	Particulars	FY 19-20	FY 20-21	Difference	Remark
2.1	Rent Rates & Taxes	80.35	116.74	36.39	Actual expenditure
2.2	Security Measures for Safety Protection	136.85	161.78	24.94	Due to increase in DA of security guard exp. has increased. Also security guard for new substation is employed.
2.3	Expenditure on up keep of office premises	14.05	18.51	4.46	Actual expenditure has increased
2.4	Expenditure on Computer Billing	274.05	257.34	(16.71)	Due to Lockdown exp. is less
2.5	Commission/Collection charges	68.63	60.69	(7.94)	Due to Lockdown exp. in FY 2020-21 is less
<b>3. Repair &amp; Maintenance Expenses</b>					
3.1	Plant & Machinery	283.42	532.47	249.05	Due to Nisarga Cyclone, the exp. has been increased
3.2	Civil Works	34.10	50.05	15.95	Actual expenditure
3.3	Lines & Cable Networks	357.50	433.98	76.47	Due to Nisarga Cyclone, the exp. has been increased
3.4	Office Equipment	68.71	19.28	(49.43)	OPEX expenses exp. are reduced from R & M exp. & shown separately in Admin & General Exp.
3.5	Others	29.53	0.00	(29.53)	Actual expenditure

3.9.7 MSEDCL further submits that in the employee expenses, MSEDCL has reduced Rs. 5.43 Crs towards Re-measurement of defined benefit plans. In this regards, MSEDCL would like to submit that the Gratuity is recognised at the year-end by using projected unit credit method as on 31<sup>st</sup> March 2021. It is unfunded defined benefit plan.

### **3.10 Normative Operation & Maintenance Expenses for FY 2020-21**

3.10.1 MSEDCL submits that Regulation 75 and Regulation 84 of the MERC (MYT) Regulations, 2019 provides for the O&M Expenses norms for Distribution Wires Business and Retail Supply of electricity respectively.

3.10.2 As per the said Regulations relating to the Truing-up of O&M expenses:

“75.2 ....

*Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the*

*base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.*

- 75.3 *The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:*

*Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:*

*Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers connected to the Distribution Wires of at least 2 percent annually over the last 3 years:*

*Provided also that in case such increase in the number of consumers is lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.”*

3.10.3 Following table provides the year-on-year variations in CPI and WPI for the last 5 years. Considering the average WPI and CPI and provisions of the MERC (MYT) Regulations 2019, MSEDCL has calculated the escalation factor as shown in the following table.

**Table 54: Escalation factor for FY 2020-21**

Year	WPI	Annual Increase	CPI	Annual Increase
FY 2014-15	113.88		250.83	
FY 2015-16	109.72	-3.65%	265.00	5.65%
FY 2016-17	111.62	1.73%	275.92	4.12%
FY 2017-18	114.88	2.92%	284.42	3.08%
FY 2018-19	119.79	4.27%	299.92	5.45%
FY 2019-20	121.80	1.68%	322.50	7.53%
FY 2020-21	123.38	1.29%	338.69	5.02%
5 Year Avg		2.38%		5.04%
Weight	30%	0.71%	70%	3.53%
<b>Escalation Factor</b>		<b>4.24%</b>		
<b>Efficiency Factor</b>		<b>1.00%</b>		
Efficiency Factor in case of increase in no. of consumers incl. OA consumers connected to the Distribution wires		<b>0.00%</b>		
<b>Rate with reduction</b>		<b>4.24%</b>		

3.10.4 MSEDCL further submits that MYT Regulations, 2019 quoted above also provides that if the number of consumers of Distribution Licensee are increased by more than 2% annually over the last 3 years, efficiency factor shall be considered as zero. Accordingly, considering the escalation factor with zero efficiency factor, MSEDCL has computed the normative O&M expenses for FY 2020-21. Detailed calculations are given in the Regulatory Formats.

3.10.5 Considering the above escalation factor and O&M expenses for FY 19-20 after considering the impact of sharing of gains computed in Final True Up for FY 2019-20 Chapter 2, MSEDCL has calculated the O&M Expenses. Detailed calculations are given in the Regulatory Formats. MSEDCL submits that calculated O&M expenses are allocated between the Wires Business and

Retail Supply Business in the ratio of allocation matrix provided in the MYT Regulations, 2019), i.e., 65% to Wires Business and 35% to Supply Business. The same is shown in following table.

**Table 55: O&M Expenses for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
O&M Expenditure for Wires business	4,543.31	4,698.89	155.58
O&M Expenditure for Retail Supply business	2,446.40	2,530.17	83.77
<b>Operation and Maintenance Expenses (A)</b>	<b>6,989.71</b>	<b>7,229.07</b>	<b>239.36</b>

3.10.6 Hon'ble Commission in its MYT Order dated 30th March, 2020 in Case No. 322 of 2019 has added Rs. 582.11 Crores in FY 2020-21 to include the impact of arrears on account of wage revision over and above derived normative O&M expenses, which were related to second and third instalment of the arrears proposed to be paid in FY 2020-21. As per the Regulations 75.4 (Wire) & 84.4 (Supply) and 75.5 (Wire) & 84.5 (Supply) of MYR Regulations 2019 impact of wage revision has to be considered at the time of true-up of any year. However, as the impact would be significant and would entail allowing for carrying cost in future, Hon'ble Commission upon due consideration by invoking its power to relax under Regulation 105 of MYT Regulations, 2019 had decided to allow arrears of Rs. 582.11 in FY 2020-21 itself. MSEDCL submits that second instalment of pay revision of Rs. 269.00 Crs has been given in the month of February 2021. Further, third instalment of pay revision of Rs. 355.00 Crs has been given in the month of December 2021. The wage revision related documents are attached as **Annexure 11** to this Petition. Accordingly, for the purpose of true-up, MSEDCL has calculated total allowable O&M expenses for FY 2020-21, by considering Rs. 269.00 Crs over and above derived normative O&M expenses for FY 2020-21, as shown in the following table.

**Table 56: O&M Expenses for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
O&M Expenditure for Wires business	4,543.31	4,698.89	155.58
O&M Expenditure for Retail Supply business	2,446.40	2,530.17	83.77
<b>Operation and Maintenance Expenses (A)</b>	<b>6,989.71</b>	<b>7,229.07</b>	<b>239.36</b>
Impact of arrears - Wires business	378.37	174.85	(203.52)
Impact of arrears - Supply business	203.74	94.15	(109.59)
<b>Sub Total (B)</b>	<b>582.11</b>	<b>269.00</b>	<b>(313.11)</b>
<b>Total O&amp;M Expenses (C = A+B)</b>	<b>7,571.82</b>	<b>7,498.07</b>	<b>(73.75)</b>

3.10.7 Further, as per Regulations 75.4 of the MYT Regulations, 2019 in case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in R&M shall not be set off against other heads of O&M expenses. The relevant extract of the Regulations is reproduced below:

*“75.6 In case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in Repairs & Maintenance shall not be set off against other heads of O&M expenses:”*

3.10.8 MSEDCL submits its R&M expenses are less due to the reasons explained above which are attributable to COVID-19 pandemic situation. Hence, MSEDCL requests Hon’ble Commission to kindly relax these regulations for FY 2020-21 and allow expenses as per normal sharing of gains and losses. MSEDCL requests the Hon’ble Commission to allow the O&M Expenses as computed in above table.

### **3.11 Opex Schemes for FY 2020-21**

3.11.1 MSEDCL submits that as per the Regulation 75.7 and 84.7 of the MYT Regulations, 2019 the distribution licensee is allowed to undertake Opex schemes for wires and supply business for system automation, new technology and IT implementation etc. and such expenses may be allowed over and above normative O&M expenses. The relevant extract of the regulations is reproduced below:

*“75.7 A Distribution Licensee may undertake Opex schemes for system*

*automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.*

84.7 *A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.”*

3.11.2 Based on approval accorded in the MYT Order dated 30<sup>th</sup> March 2019 in Case No. 322 of 2019, MSEDCL has incurred actual expenses of Rs. 27.05 Crs in FY 2020-21 as against Rs. 110.49 Cr. approved by Hon’ble Commission. Following table shows the actual Opex Schemes expenses for FY 2020-21.

3.11.3 Detailed justification, cost benefit analysis of such schemes and savings in O&M expenses has been provided under Chapter 15 of this petition.

3.11.4 MSEDCL requests the Hon’ble Commission to allow the Opex Schemes Expenses as shown in table below.

**Table 57: Opex Scheme Expenses for FY 2020-21**

			Rs. Crs
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
<b>Opex Schemes (Wires Business)</b>			-
Substation Monitoring System (SMS)	69.53	0.47	(69.06)
MSEDCL Cloud Project	8.32	8.55	0.23
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	-	(0.53)
<b>Sub-Total</b>	<b>84.31</b>	<b>9.02</b>	<b>(75.29)</b>
<b>Opex Schemes (Retail Supply Business)</b>			-
Customer Care Center	6.60	6.70	0.10
RF-DCU (Expression of Interest & Tender)	4.80	2.78	(2.02)
MSEDCL Cloud Project	8.32	8.55	0.23
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	-	(0.53)
<b>Sub-Total</b>	<b>26.18</b>	<b>18.03</b>	<b>(8.15)</b>
<b>Total</b>	<b>110.49</b>	<b>27.05</b>	<b>(83.44)</b>

### 3.12 Capitalisation for FY 2020-21

3.12.1 MSEDCL has achieved capitalization of Rs. 4,492.36 Cr in FY 2020-21 as against Rs. 5,385.16 Cr. approved by Hon'ble Commission. Following table shows the capitalization in FY 2020-21.

**Table 58: Capitalisation for FY 2020-21**

			Rs. Crs
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
DPR Scheme	5,110.44	4,049.54	(1,060.90)
Non DPR Scheme	274.72	442.82	168.10
<b>Total Capitalisation</b>	<b>5,385.16</b>	<b>4,492.36</b>	<b>(892.80)</b>

3.12.2 As per the Annual Accounts the addition to GFA is Rs. 4,526.15 Crs. whereas in Form 4 MSEDCL has shown Capitalization as Rs. 4,492.36 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.

**Table 59: Addition to GFA as per Audited Accounts for FY 2020-21**

Sr. No.	Particulars	Amount (Rs. Crs)
1	Capitalisation as per Note of the Accounts	4,526.15
2	Capitalisation as per Form 4	4,492.36
	Other Assets	
3	Land	3.17
4	Buildings	11.31
5	Vehicles	-0.04
6	Furniture & Fixtures	0.65
7	General Assets	2.89
8	Other Civil Works	4.28
9	Computer Software	11.53
<b>10</b>	<b>Total (2 to 8)</b>	<b>4,526</b>

3.12.3 MSEDCL further submits that the additional details of general assets are provided in following table.

Particulars	Amount Rs. Crs
Hydraulic works	0
Communication Equipment	0.81
IT Equipment	0.20
Office Equipment	1.21
Other Assets	0.63
<b>Total</b>	<b>2.89</b>

3.12.4 Hon'ble Commission in its previous Orders has allowed the capitalization towards schemes not forming part of any specific scheme. 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.

### **3.13 Depreciation for FY 2020-21**

3.13.1 The Opening GFA as per MSEDCL's Audited Accounts is Rs. 62,400.97 Crs excluding the impact of Final Transfer Scheme/Restructuring Plan and subsequent revaluation. Accordingly, the depreciation has been reworked on

a pro-rata basis on the revised Opening GFA for FY 2020-21 for the purpose of True-Up which is summarized below.

**Table 60: Depreciation for FY 2020-21**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (Rs. Crs)</b>
1	Opening GFA for FY 20-21 (Actual )	62,400.97
2	Opening GFA for FY 20-21 as per MERC	54,631.59
3	Less: Consumer Contribution and Grants	
4	Net Opening GFA (Approved)	54,631.59
5	Depreciation (Actual)	3,031.64
6	Depreciation (Claimed in proportion to Actual)	2,654.18

3.13.2 MSEDCL requests the Hon'ble Commission to allow the Depreciation as computed in above table.

### **3.14 Funding Pattern for FY 2020-21**

3.14.1 As per the Regulation 27.1 of the MERC MYT Regulations, 2019, the debt-equity ratio as on the date of commercial operation shall be 70:30 of the amount of capital cost approved by the Commission. The said Regulation also provides that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Licensee for determination of Tariff.

3.14.2 MSEDCL submits that the Hon'ble Commission has designed the formats for submission of data in respect of Capex and Capitalization on yearly basis. MSEDCL further submits that the information required by Hon'ble Commission is on yearly basis whereas capital expenditure and capitalization of project is a process which continues for 3 to 5 years. With such different timelines, there will be spill-over of capex and capitalization and hence it would be difficult to match the capex and capitalization and its funding on yearly basis. MSEDCL also submits that previously funding gap (if any) was shown as internal accrual and Hon'ble Commission has considered it as a part of normative equity or normative loan. It is pertinent to note that many times the Hon'ble Commission has restricted the equity to 30% if the equity portion of the funding is exceeded 30% and excess equity was treated as

normative loan. Thus, Hon'ble Commission has already given the necessary effect for additional equity.

3.14.3 The funding pattern for FY 2020-21 for the capitalization achieved by MSEDCL, in proportion to the funding pattern of capital Expenditure, is presented in the following table:

**Table 61: Funding Pattern of Capitalization for FY 2020-21**

Particular	Amount (Rs. Crs)	Funding Mix (%)
Total Capitalisation	4,492.36	
Less: Consumer Contribution	367.83	
Less: Grants	1,120.54	
<b>Balance to be funded</b>	<b>3,003.99</b>	
Equity	1,594.56	53%
Debt	1,409.42	47%
Equity	901.20	30%
Debt	2,102.79	70%

3.14.4 MSEDCL requests the Hon'ble Commission to approve the funding mix as submitted in above table.

### **3.15 Interest Expenses for FY 2020-21**

3.15.1 MSEDCL has computed the interest expenses on normative basis linked to the normative opening loan and normative loan addition during the year.

3.15.2 MSEDCL submits that the Regulation 30.5 of the MYT Regulation, 2019 provides that at the time of Truing-up, the weighted average rate of interest computed on the basis of the actual long-term loan portfolio during the concerned year shall be considered as the rate of interest. Accordingly, for arriving at the interest rate, MSEDCL has considered the weighted average interest rate of actual loan portfolio of FY 2020-21. The computation of weighted average interest rate of actual loan portfolio is shown in following table.

**Table 62: Computation of weighted average interest rate for FY 2020-21**

Particulars	Formula	Actual (Rs. Crs)
Outstanding Loan at the start of the year	a	16,695.90
Loan drawal during the year	b	1,172.23
Loan repayment during the year	c	2,714.58
Balance outstanding at the end of the year	d=a+b-c	15,153.56
<b>Average Loan for the Year</b>	<b>e=Avg(a,d)</b>	<b>15,924.73</b>
Interest Expense incurred during the year	f	1,589.88
Weighted Average Interest rate	g=f/e	9.98%

3.15.3 Regulation 30.3 of the MERC MYT Regulations, 2019 provides for loan repayment during a year equal to depreciation allowed. The relevant extract is reproduced below:

*“30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.”*

3.15.4 Considering the normative opening loan, normative loan addition during the year and loan repayment equal to depreciation and the weighted average interest rate of actual loan portfolio, MSEDCL has computed the interest expenses on normative basis as summarized in table below:

**Table 63: Interest Expenses for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	12,892.08	12,093.31	(798.77)
Less: Reduction of Normative Loan due to retirement of assets			
Loan Drawal	2,743.57	2,102.79	(640.78)
Loan Repayment	2,817.91	2,654.18	(163.74)
Normative Balance Outstanding at the end of the year	12,817.74	11,541.93	(1,275.81)
Average Balance of Net Normative Loan	12,854.91	11,817.62	(1,037.29)
Interest Rate	10.28%	9.98%	
<b>Interest Expenses</b>	<b>1,320.86</b>	<b>1,179.84</b>	<b>(141.02)</b>

3.15.5 MSEDCL submits that Hon'ble Commission had approved Funding of Capitalization based on the approved capitalization in the MYT Order dated 30<sup>th</sup> March 2020. However, actual capitalization is lower than the approved capitalization. The normative loan drawl is also lower than that approved in MYT Order.

3.15.6 MSEDCL requests the Hon'ble Commission to approve the normative interest expenses as submitted in above table.

**3.16 Interest on Working capital & Interest on SD for FY 2020-21**

3.16.1 MSEDCL submits that Regulations 32.3 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Wire business of electricity. Further, the MYT Regulations, 2019 also provides 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. The relevant extract is reproduced below:

*"2.11 (10) "Base Rate" shall mean the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India from time to time;*

...

32.3 (b) ...

*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."*

3.16.2 Base rate is considered at one-year MCLR of SBI plus 150 basis points. MSEDCL has calculated the interest on working capital at 8.57%. The detailed working of weighted average Base Rate is provided in following table:

**Table 64: Working of weighted average Base Rate**

From	To	Days	Rate	Days X Rate
01-04-2020	10-04-2020	9	7.75%	70%
10-04-2020	10-05-2020	30	7.40%	222%
10-05-2020	10-06-2020	31	7.25%	225%
10-06-2020	10-07-2020	30	7.00%	210%
10-07-2020	10-08-2020	31	7.00%	217%
10-08-2020	10-09-2020	31	7.00%	217%
10-09-2020	10-10-2020	30	7.00%	210%
10-10-2020	10-11-2020	31	7.00%	217%

From	To	Days	Rate	Days X Rate
10-11-2020	10-12-2020	30	7.00%	210%
10-12-2020	10-01-2021	31	7.00%	217%
10-01-2021	10-02-2021	31	7.00%	217%
10-02-2021	10-03-2021	28	7.00%	196%
10-03-2021	01-04-2021	22	7.00%	154%
<b>Weighted Avg. Rate</b>		<b>365</b>	<b>7.07%</b>	<b>2582%</b>
Plus 150 Basis Points			1.50%	
<b>Total Weighted Avg. Rate</b>			<b>8.57%</b>	

3.16.3 MSEDCL further submits that the Regulation 30.11 of MYT Regulations, 2019 provides for Interest on Security Deposit at Bank Rate. The relevant extract is reproduced below:

*“30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable:*

*Provided that at the time of Truing-up, the interest on the amount of security deposit for the year shall be considered on the basis of the actual interest paid by the Licensee during the year, subject to prudence check by the Commission.”*

3.16.4 MSEDCL Commercial Circular No. 332 for Rate of Interest on Consumer Security Deposit @ 4.65% per annum for FY 2020-21 is attached as Annexure 7 to this Petition.

### **Impact of additional Working Capital Requirement for FY 2019-20, FY 2020-21 and FY 2021-22**

3.16.5 The additional working capital requirement has been taken into cognizance by the Hon’ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020. The excerpts of the same are reproduced below:

**“Special Interim Dispensation:**

...

*11.1.4 The Distribution Licensees will be required to borrow/avail additional working capital over and above the Regulations. Also, there will be*

*other additional cost required to be incurred for continuing of operations. Associated with this, there will be an additional working capital interest. The Commission opines that in the present situation, relief needs to be given to the electricity consumers affected by the Lockdown directions. **The Commission will take an appropriate view on the additional expenses that are likely to be incurred by the Distribution Licensees on account of additional Interest on Working Capital during the MTR process.***

3.16.6 MSEDCL also submits that from the month of March 2020 onwards, MSEDCL revenue collection was badly hampered due to lockdown situations. Also, the moratorium given by the Hon'ble Commission and relaxation given in Contract Demand revision for Industrial and Commercial (HT and LT) consumers further worsened the revenue recovery of the MSEDCL. Further, actual sales of subsidizing categories have decreased and the sales of the subsidized category have increased. Further, lower recovery from agricultural consumers which account to almost 30% of total sales of the MSEDCL coupled with lower recovery from public water works and street-light consumers has also worsened the financial situation.

3.16.7 MSEDCL also submits that pandemic of COVID-19 and the resultant situation has prevailed for the whole of FY 2020-21. While partial unlock has taken place in phased manner, the complete normalization of business is yet to happen. Hence, the adverse financial impact due to lower sales of subsidizing category consumers continued in FY 2020-21.

3.16.8 In view of the outbreak of COVID-19 being an abnormal circumstance, MSEDCL is suffering from financial crunch due to under recovery. MSEDCL already approached the Hon'ble Commission underlining the need for immediate relief by filing separate petition in the Case No. 60 of 2022. The relevant excerpts of the Petition are reproduced below:

*"48. Considering that the Mid Term Review (MTR) process would be done in November 2022 and subsequently the orders will be issued only by March 2023, this would lead to a long gap, which is difficult for the petitioner to sustain its operations with such precarious financial*

*condition. Hence, an immediate interim relief on account of the reasons discussed above is necessary for the Petitioner in order to sustain its operations. This will also avoid the passing of future carrying cost on consumer. The Petitioner humbly submits that any adjustments due to such relief and the details of the same would be duly submitted during the MTR process.”*

3.16.9 MSEDCL prayed for following reliefs in Case No. 60 of 2022:

- “b. Allow the impact of cross subsidy imbalance and interest on additional working capital requirement for FY 2020-21 by way of interim relief;*
- “c. Allow the interim relief of Rs.7,298 Crore for FY 2020-21 immediately by way of additional charge through an appropriate mechanism as may be approved by Hon’ble Commission”*

3.16.10 Hon’ble Commission vide its Order dated 3 November 2022 allowed MSEDCL to withdraw the petition with liberty to raise the issues in MTR Petition.

3.16.11 MSEDCL submits that due to COVID-19 pandemic, variation on amount of interest of working capital was beyond control of MSEDCL. This has been recorded by the Hon’ble Commission in MYT Order dated 30 March, 2020 in Case No. 322 of 2019. Therefore, no sharing of gains/losses on account of ‘variation on amount of interest of working capital is done, as the same is treated as uncontrollable parameter.

3.16.12 Hon’ble Commission is hereby requested to allow actual working capital requirement on account of COVID-19 during FY 2019-20 and FY 2020-21 while dealing the present matter.

3.16.13 MSEDCL requests the Hon’ble Commission to allow the actual Interest on Working capital along with the actual interest on security deposit paid as per audited account for wire business as shown in table below.

**Table 65: Interest on Working Capital for Wire business for FY 20-21**

Rs. Crs			
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
<b>Computation of Working Capital (Wire Business)</b>			
O&M expenses for a month	370.76	406.15	35.38
Maintenance Spares at 1% of Opening GFA	567.22	511.66	(55.56)
1.5 months of expected revenue from charges for use of Distribution wires	1,377.42	1,323.63	(53.80)
Less: Amount held as SD from Distribution System Users	(831.67)	(852.54)	(20.87)
<b>Total Working Capital Requirement</b>	<b>1,483.74</b>	<b>1,388.90</b>	<b>(94.84)</b>
Rate of Interest (% p.a.)	9.50%	8.57%	
<b>Interest on Working Capital</b>	<b>140.96</b>	<b>119.06</b>	<b>(21.89)</b>
<b>Actual Working Capital Interest</b>		244.11	
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	3.32%	
<b>Interest on Security Deposit</b>	<b>54.06</b>	<b>28.27</b>	<b>(25.79)</b>

3.16.14 MSEDCL further submits that Regulation 32.4 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Retail Supply business of electricity. Further, the MYT Regulations, 2019 also provides 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. The relevant extract is reproduced below:

“2.11 (10) “Base Rate” shall mean the one-year Marginal Cost of Funds-based Lending Rate (‘MCLR’) as declared by the State Bank of India from time to time;

...  
32.4 (b) ...  
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.”

3.16.15 MSEDCL has calculated the interest on working capital at as 8.57% computed above and paid interest on security deposit at 4.65% and

considered the actual paid amount as per audited accounts.

**Table 66: Interest on Working capital for Supply business for FY 20-21**

			Rs. Crs
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
<b>Computation of Working Capital (Supply Business)</b>			
O&M expenses for a month	199.64	218.69	19.05
Maintenance Spares at 1% of Opening GFA	63.02	56.85	(6.17)
1.5 months equivalent of the expected revenue from sale of electricity at the prevailing Tariff and including revenue from CSS and Additional Surcharge	9,734.33	9,305.54	(428.79)
Less: Amount held as security deposit	(7,485.02)	(7,672.82)	(187.80)
Less: One month equivalent of cost of Power Purchase, Transmission Charges and MSLDC Charges	(5,960.70)	(5,167.08)	793.61
<b>Total Working Capital Requirement</b>	<b>(3,448.72)</b>	<b>(3,258.82)</b>	189.90
Rate of Interest (% p.a.)	9.50%	8.57%	
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	
<b>Actual Working Capital Interest</b>		<b>2,197.01</b>	
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	3.32%	
<b>Interest on Security Deposit</b>	<b>486.53</b>	<b>254.43</b>	<b>(232.10)</b>

3.16.16 MSEDCL requests the Hon'ble Commission to allow the actual interest on working capital and actual security deposit for supply business as shown in above table.

### 3.17 Other Finance Charges for FY 2020-21

3.17.1 MSEDCL submits that the regulation 30.8 of the MYT Regulations, 2019 provides that the finance charges shall be allowed at the time of True-up. The relevant extract is reproduced below:

*“30.8 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.”*

3.17.2 MSEDCL submits that it has incurred Other Finance Charges amounting to Rs. 32.19 Crores during the FY 2020-21. These are the fund raising charges

i.e. Guarantee Charges, Finance Charges, Stamp Duty and Service Fee.

**Table 67: Other Finance Charges for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Guarantee Charges	-	20.83	20.83
Finance Charges	-	6.62	6.62
Stamp Duty	-	2.21	2.21
Service Fee (Fund-raising charges)	-	2.53	2.53
<b>Total</b>	-	<b>32.19</b>	<b>32.19</b>

3.17.3 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 reasonable control of MSEDCL and hence required to be allowed on actual basis. Therefore, MSEDCL humbly requests the Hon'ble Commission to allow the Other Finance Charges as per the Audited Accounts.

### **3.18 Provision for Bad Debts for FY 2020-21**

3.18.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution and retail supply.

3.18.2 Regulation 76 and 85 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. The relevant extract is reproduced below:

**“76 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of*

*bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee.”*

**“85 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee.”*

3.18.3 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. A business typically estimates the amount of bad debt based on historical experience.

3.18.4 MSEDCL has written off Rs. 465.05 Cr. towards Bad Debt in FY 2020-21.  
Category wise details of the actual bad debt written off is summarised below:

				Rs. Crs
<b>Consumer Category</b>	<b>Principal</b>	<b>DPC</b>	<b>Interest</b>	<b>Total</b>
HT AG	31.58	0.67	22.89	55.14
LT Ag revised	409.26	9.96	59.08	478.30
As per IT	440.84	10.63	81.96	533.43
Less : Excess bad debt written off in FY 2019-20	-	-	-	68.43
Bad Debt written off in FY 2020-21	-	-	-	<b>465</b>

3.18.5 MSEDCL has computed the provision for bad and doubtful debts for FY 2020-21 as per the provisions of the MYT Regulations, 2019 considering the receivables as per Audited Accounts as shown in following table:

**Table 68: Provision for bad and doubtful debts for FY 2020-21**

				Rs. Crs
<b>Particulars</b>	<b>FY 2020-21 (Approved)</b>	<b>FY 2020-21 (Actual)</b>	<b>Deviation</b>	
Opening Balance of Provision for bad and doubtful debts	-	0.00	0.00	
Receivables for the year	48,842.02	71,433.37	22,591.35	
Provision for bad & doubtful debts during the year	1.50%	1.50%		
<b>Provision for bad &amp; doubtful debts during the year</b>	<b>732.63</b>	<b>1,071.50</b>	338.87	
Actual bad and doubtful debts written off	732.63	465.05	-267.58	
Closing Balance of Provision for bad and doubtful debts		606.45	606.45	
Closing Balance as a % of receivables	0.00%	0.85%		

3.18.6 MSEDCL submits that the above computed provision for Bad Debts is further allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulation, 2019), i.e., 10% to

Wires Business and 90% to Supply Business. The same is shown in following table.

**Table 69: Provision for Bad and Doubtful debts (Wires and Supply) for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
Bad Debt Provision for Wires business	73.26	107.15	33.89
Bad Debt Provision for Retail Supply business	659.37	964.35	304.98
<b>Bad Debt Provision</b>	<b>732.63</b>	<b>1,071.50</b>	<b>338.87</b>

3.18.7 The total Bad Debt provision for FY 2020-21 works out to be Rs. **1,071.50** as against Rs. 732.63 Cr. MSEDCL humbly requests the Hon'ble Commission to approve the actual bad debt written off.

### **3.19 Other Expenses for FY 2020-21**

3.19.1 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 70: Other Expenses FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Compensation for injuries,death to staff	1.32	0.61	-0.71
Compensation for injuries,death to others	15.98	11.08	-4.90
Loss on obsolescence of fixed Assets	1.72	-	-1.72
Sundry debit balances written off	1.90	0.34	-1.56
Non Moving Items	17.74	-	(17.74)
Provision for Non Moving Items	-	15.69	
Other Sundry Expenses	8.13	74.95	
Other Expenses (Payable to DSL towards damages in terms of Arbitral Award dt. 18.06.2004)	-	2.47	
Incentive to Distribution Franchisee	-	0.23	
Interest to suppliers/Contractors*	-	4.32	4.32
Other Interest and Charges	-	0.02	0.02
Interest on security deposit on bill collection agency	-	3.81	
Others	-	0.17	
Other Expenses for previous years	5.79		(5.79)
<b>TOTAL</b>	<b>52.58</b>	<b>113.70</b>	<b>61.12</b>

3.19.2 MSEDCL submits that the amount under the head “interest to suppliers/contractor” as per the Audited Accounts included Delayed Payment Charges / Surcharge payable to MSPGCL, MSETCL, IPPs & Wind Generators for FY 2020-21. MSEDCL has not claimed the same.

3.19.3 MSEDCL hereby requests the Hon’ble Commission to approve the Other Expenses as per actual expenses incurred by MSEDCL as given in the above table.

### **3.20 Contribution to Contingency Reserves for FY 2020-21**

3.20.1 MSEDCL submits that Regulation 35 of the MYT Regulation, 2019 provides for appropriation to Contingency Reserves of not less than 0.25 per cent and not more than 0.5 per cent of the original cost of Fixed Assets annually towards in the calculation of ARR.

3.20.2 MSEDCL submits that it is not getting full recovery of the revenue receivable

from consumers. MSEDCL is managing its working capital requirement need by availing STL/MTL/LTL working capital loans from banks and financial institutions. As such MSEDCL can invest the amount of contingency reserve only if it gets sufficient quantum of loan from banks or financial institutions. MoP through its guidelines on additional prudential norms has restricted working capital borrowings @ 35% of the revenue which MSEDCL already crossed the same. Hence, MSEDCL is getting difficulties in availing loan and not able to invest the amount of contingency reserve. Secondly, MSEDCL's financials has been badly affected by the consequences of COVID-19 pandemic.

3.20.3 Considering the above difficulty and COVID-19 impact, it is requested to Hon'ble Commission to consider positively and not to disallow contingency reserve amount and further provide relaxation from the last proviso to Regulations 35.1 of the MERC MYT Regulation, 2019.

**Table 71: Contingency Reserve for FY 2020-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Contribution to Contingency Reserves	157.56	157.56	-0.00

3.20.4 MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves in line with submission made above by invoking its power to relax under Regulation 105 of the MYT Regulation, 2019.

### **3.21 Income Tax for FY 2020-21**

3.21.1 MSEDCL submits that Regulation 34 of the MYT Regulations, 2019 provides for Income Tax. The relevant extract of the Regulations is reproduced below:

*“34.1 The Income Tax for the Generating Company or Licensee or MSLDC for the regulated business shall be allowed on Return on Equity, including Additional Return on Equity through the Tariff charged to the Beneficiary/ies, subject to the conditions stipulated in Regulations 34.2 to 34.6:*

*Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive approved by the Commission,*

*irrespective of whether or not the amount of such efficiency gains and incentive are billed separately:*

*Provided further that no Income Tax shall be considered on the amount of income from Delayed Payment Charges or Interest on Delayed Payment or Income from Other Business, as well as on the income from any source that has not been considered for computing the Aggregate Revenue Requirement:*

*Provided also that the Income Tax shall be computed for the Generating Company as a whole, and not Unit-wise/Station-wise:*

*Provided also that the deferred tax liability only before March 31, 2020 shall be allowed by the Commission, whenever they get materialised, after prudence check.*

34.2 *The rate of Return on Equity, including additional rate of Return on Equity as allowed by the Commission under Regulation 29 of these Regulations shall be grossed up with the effective tax rate of respective financial year.*

34.3 *The base rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate of Return on Equity / (1-t),*

*Where "t" is the effective tax rate*

34.4 *The effective tax rate shall be considered on the basis of actual tax paid in respect of financial year in line with the provisions of the relevant Finance Acts by the concerned Generating Company or Licensee or MSLDC, as the case may be:*

*Provided that, in case of the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, the actual tax paid on income from any other regulated or unregulated Business or Other Business shall be excluded for the calculation of effective tax rate:*

*Provided further that effective tax rate shall be estimated for future year based on actual tax paid as per latest available Audited accounts, subject to prudence check.*

34.5 *In case of Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess:*

*Illustration:-*

(a) *In case of a Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT) at rate of 21.55% including surcharge and cess:*

*Base rate of return on equity =  $15.50/(1-0.2155) = 19.758\%$*

(b) *In case of Generating Company or Licensee or MSLDC paying normal corporate tax including surcharge and cess:*

(i) *Estimated Gross Income of Company as a whole for FY 2020-21 is Rs. 1,000 crore;*

(ii) *Income Tax for the year on above is Rs 240 crore;*

(iii) *Effective Tax Rate for the year 2019-20 = Rs 240 Crore/Rs 1000 Crore = 24%;*

(iv) *Base rate of return on equity =  $15.50/ (1-0.24) = 20.395\%$ .*

34.6 *Variation between the Income Tax estimated by the Commission for future year during MYT Order and Mid Term Review Order and the Income Tax approved by the Commission for the respective Year after truing up for respective year, shall be allowed for recovery as part of the Aggregate Revenue Requirement at the time of Mid-term Review or Truing-up, subject to prudence check:*

*Income Tax on any income stream from sources other than the Business regulated by the Commission shall not constitute a pass-through component in Tariff, and Income Tax on such other income shall be borne by the Generating Company or Licensee or MSLDC, as the case may be."*

3.21.2 MSEDCL submits that it has not paid Income Tax in FY 2020-21, hence, it has not grossed up the return on equity by income tax.

### **3.22 Incentives and Discounts for FY 2020-21**

3.22.1 MSEDCL submits that during FY 2020-21, it has paid Rs. 307.40 Crs of incentives/discounts to the consumers for timely payment of bills as against Rs. 322.38 Crs approved by Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March, 2020.

**Table 72: Incentives/Discount for FY 20-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Incentives and Discount	322.38	307.40	(14.98)

3.22.2 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as per the Audited Accounts for FY 2020-21.

### **3.23 Return on Equity for FY 2020-21**

3.23.1 MSEDCL submits that Regulation 29.1 of the MYT Regulations, 2019, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

*“29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:*

*Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance:*

*Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission*

*29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:*

*Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:*

*Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable*

- 29.3 *The Base 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:*

*Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.*

...

- 29.8 *In case of Distribution Wires Business, an additional rate of Return on Equity shall be allowed on Wires Availability at the time of true-up as per the following schedule:*
- a) The target Wires Availability for recovery of base rate of return on equity shall be 95 percent for MSEDCL and 98% for other Distribution Licensees;*
  - b) For every 0.50% over-achievement in Wires Availability, rate of return shall be increased by 0.50%, subject to ceiling of additional rate of Return on Equity of 1.50%;*
  - c) Wires Availability shall be computed in accordance with the*

*following formula:*

*Wires Availability = (1 - (SAIDI / 8760)) x 100:*

*Provided that the System Average Interruption Duration Index (SAIDI) shall be calculated in accordance with the definition specified in Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, as amended from time to time.*

29.9 *In case of Retail Supply Business, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:*

- a) *If the percentage of assessed bills is less than 1.5% of the total number of bills issued during the year, then rate of return shall be increased by 1%;*
- b) *If the percentage of assessed bills is more than 1.5% of the total number of bills issued during the year, for every 0.5% reduction in the percentage of assessed billing, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.*
- c) *If overall collection efficiency for the year is above 99 %, then rate of return shall be increased by 1%;*
- d) *If overall collection efficiency for the year is below 99 %, for every 0.5% improvement in the overall collection efficiency, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%."*

3.23.2 MSEDCL submits that the return on equity capital is allocated in the ratio of Fixed Assets between the 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.

3.23.3 MSEDCL has not paid any income tax for FY 2020-21. The return on equity has been computed as per the methodology specified in the MYT Regulations, 2019. Accordingly, MSEDCL has computed the RoE for Wires

Business as shown in following tables:

**Table 73: RoE for Wires Business for FY 20-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
<b>Return on Equity (Wires Business)</b>			
Regulatory Equity at the beginning of the year	10,848.57	11,153.95	305.38
Equity portion of Assets Capitalisation	449.38	811.08	361.70
Equity portion of Assets Decapitalised	-	-	-
Regulatory Equity at the end of the year	11,297.95	11,965.03	667.08
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 14%*(1)	1,840.30	1,561.55	47.33
Return on Normative Equity portion of Asset Capitalization - 14%*(2)/2	38.12	56.78	28.03
Interest on Equity portion above 30% equity			
<b>Total Return on Regulatory Equity</b>	<b>1,878.42</b>	<b>1,618.33</b>	<b>75.37</b>

**Table 74: Additional RoE for Wires Business for FY 20-21**

Particulars	Rs. Crs	
		FY 2020-21 (Approved)
Wires Availability above 98% (95% for MSEDCL)	%	98.95
Additional Rate of Return on Equity for Wire Availability (a) (%)	%	1.50%
<b>Additional Return on Equity Computation</b>		
Return on Regulatory Equity at the beginning of the year	Rs. Crore	167.31
Return on Regulatory Equity addition during the year	Rs. Crore	6.08
<b>Total Additional Return on Equity</b>	Rs. Crore	173.39

3.23.4 Accordingly, MSEDCL has computed the RoE for retail supply Business as shown in following tables:

**Table 75: RoE for Retail Supply Business for FY 20-21**

Rs. Crs

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Normative)	Deviation
<b>Return on Equity (Supply Business)</b>			
Regulatory Equity at the beginning of the year	1,206	1,240	33.93
Equity portion of Assets Capitalisation	50	90	40.19
Equity portion of Assets Decapitalised	-	-	-
<b>Regulatory Equity at the end of the year</b>	<b>1,256</b>	<b>1,330</b>	<b>74.12</b>
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 15.5%*(1)	226.47	192.17	5.94
Return on Normative Equity portion of Asset Capitalization - 15.5%*(2)/2	4.69	6.98	3.52
Interest on Equity portion above 30%			
<b>Total Return on Regulatory Equity</b>	<b>231.16</b>	<b>199.15</b>	<b>9.45</b>

**Table 76: Additional RoE for Retail Supply Business for FY 20-21**

Rs. Crs

Particulars	Unit	FY 2020-21 (Approved)
% of Assessed bills with respect total bills issued during the year	%	28.88%
Additional Rate of Return on Equity for Assesment of bills (a)	%	0.00%
Collection Efficiency for the year	%	93.58
Additional Rate of Return for collection efficiency (b)	%	0.00%
Total Additional Return on Equity (c) = (a) + (b)	%	0.00%
<b>Additional Return on Equity Computation</b>		
Return on Regulatory Equity at the beginning of the year	Rs. Crore	-
Return on Regulatory Equity addition during the year	Rs. Crore	-
<b>Total Additional Return on Equity</b>	Rs. Crore	-

3.23.5 MSEDCL requests the Hon'ble Commission to allow the RoE as computed above.

### 3.24 Sharing of Efficiency Gains & Losses for FY 2020-21

3.24.1 Regulations 9, 10 and 11 of the MYT Regulations, 2019 specify the controllable and uncontrollable factors, mechanism of pass-through of gains and losses on account of uncontrollable factors, and the mechanism for sharing on account of controllable factors respectively. The mechanism for sharing of gains and losses on account of controllable factors are as follows:

*“11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:*

- (a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;*
- (b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.*

*11.2 The approved aggregate loss to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:*

- (a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;*
- (b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC.”*

3.24.2 Parameters such as O&M Expenses, Interest on Working Capital for which specific norms have been specified in the MYT Regulations, have been calculated on normative basis.

3.24.3 As these parameters need to be treated as controllable under the MYT Regulations, 2019, any variation in the actual expenses as against the permissible normative levels has been shared between MSEDCL and consumers.

3.24.4 O&M Expenses: The actual O&M Expenses as per the Audited Accounts for FY 2020-21 is lower than that of allowed on normative basis.

3.24.5 Interest on Working Capital: Due to COVID-19 pandemic, 'variation in amount of interest on working capital' was beyond control of MSEDCL. The same has been recorded in MYT Order dated 30.03.2020 in Case No. 322 of 2019 (Refer Para 11.1.1 to 11.1.4). Therefore, no sharing on this account is done i.e., variation in amount of interest of working capital is treated as uncontrollable

3.24.6 Distribution Loss: The actual distribution loss (excluding EHV Sales) for FY 2020-21 is lower than that approved in the MYT Order.

3.24.7 The summary of sharing of efficiency gains/(loss) on account of O&M Expenses and IoWC is shown in the Table below:

**Table 77: Sharing of Efficiency Gains/(Losses) on O&M and IoWC Expenses for FY 2020-21**

Rs. Crs						
Particulars	Normative	Actual	Gains/ (Loss)	2/3 of Efficiency gains/Losses	1/3 of Efficiency Gains/Losses	Net Entitlement after sharing
O&M Expenses	7,229.07	7,168.28	60.79	40.52	20.26	7,188.54
Interest on Working Capital	2,441.12	2,441.12	-	-	-	2,441.12

3.24.8 MSEDCL submits that it has computed the sharing of efficiency gain/ loss considering 18.01% as approved distribution loss target (Excluding EHV Sales and OA Sales) against the actual distribution losses (Excluding EHV Sales and OA Sales)

3.24.9 The summary of sharing of efficiency gains/(loss) on account of efficiency in Distribution Losses is shown in the Table below:

**Table 78: Sharing of Gains/(Losses) due to lower Distribution Loss in FY 2020-21**

Particulars	Amount (Rs. Crs)
Actual Distribution Loss	16.91%
MYT approved Loss	18.01%
Sales Excl. EHV sales in MUs	96,176
EHV Sales in MUs	9,062
Total Sales in MUs	1,05,238
IntraSTS loss (Proposed)	3.17%
Power Requirement at Ex-Bus Periphery (Actual) in MUs	1,28,901
Power Requirement at Ex-Bus Periphery (Normative) in MUs	1,30,509
Additional/ (lower) Power purchase due to higher distribution loss in MUs	(1,608.8)
Rate of PP (At average Variable Cost) Rs./kWh	2.49
Additional/(Lower) Power purchase Cost due to lower distribution loss	(400.00)
2/3 Efficiency gain/(loss)	266.67
1/3 Efficiency gain/(loss) to be borne by the consumers	133.33

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

**Table 79: Impact of Sharing of Gains/Losses for FY 20-21**

Particulars	Amount Rs. Crs
O&M Expenses	(40.52)
IoWC	-
Impact of Gain in Distribution Loss passed on Consumers	133.33
<b>Total</b>	<b>92.81</b>

3.24.11 MSEDCL requests the Hon'ble Commission to allow the sharing of gains and losses as submitted in above table.

### 3.25 Stabilisation amount as per MYT Order

3.25.1 MSEDCL submits that in the MYT Order, Hon'ble Commission has allowed revenue recovery as shown in the following table. MSEDCL has considered the same.

**Table 80: Stabilisation amount as per MYT Order for FY 2020-21**

Particulars	Formula	Rs. Crs FY 2020-21
ARR approved by the Hon'ble Commission	A	80,163.00
Approved Revenue at existing tariff	B	85,021.00
Approved Revenue Gap	C = A-B	(4,858.00)
Projected Revenue at approved tariff	D	80,918.00
Additional Recovery from approved tariff	E = D-B	(4,103.00)
Previous Revenue Gap recovery allowed after adjustment of current year Revenue Gap	F = E-C	755.00

### 3.26 Impact of payment to MPECS for FY 2020-21

3.26.1 Hon'ble Commission in the MYT Order dated 3rd November 2016 has approved following amounts 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
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3.26.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 has approved Rs. 37.16 Crs towards payment to MPECS for FY 2020-21 as the same was allowed under Order dated 2<sup>nd</sup> May, 2016. The Hon'ble Commission in the MYT Order also ruled that it shall consider the actual amount towards this head at the time of truing up of FY 2020-21.

3.26.3 Accordingly, MSEDCL has claimed Rs. 37.41 Crs. towards the actual payments to MPECS for FY 2020-21 as per the Audited accounts.

**3.27 Incremental and Consumption and Bulk Consumption Rebate for FY 2020-21**

3.27.1 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 has approved cost towards incremental rebate.

3.27.2 MSEDCL has claimed Rs. 336.80 Crs towards Incremental Consumption and Bulk consumption rebate for FY 2020-21 as per the Audited Account as against Rs. 439.66 Crs as approved by the Hon'ble Commission.

**Table 81: Incremental Consumption Rebate for FY 20-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Incremental Consumption & Bulk Consumption Rebate	439.66	336.80	(102.86)

**3.28 Aggregate Revenue Requirement for FY 2020-21**

3.28.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2020-21 is as follows:

**Table 82: ARR for Distribution Wires for FY 20-21**

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Operation & Maintenance Expenses	4,921.68	4,873.74	(47.94)
Depreciation	2,536.12	2,388.76	(147.36)
Interest on Loan Capital	1,188.77	1,061.85	(126.92)
Interest on Normative Working Capital*	140.96	244.11	103.16
Interest on deposit from Consumers and Distribution System Users	54.06	28.27	(25.79)
Other Finance Charges	-	3.22	3.22
Provision for bad and doubtful debts	73.26	46.50	(26.76)
Opex Schemes	84.31	9.02	(75.29)
Contribution to contingency reserves	141.81	141.80	(0.00)
Income Tax	-	-	-
Return on Equity Capital	1,878.42	1,791.72	(86.70)
<b>Aggregate Revenue Requirement</b>	<b>11,019.38</b>	<b>10,589.00</b>	<b>(430.38)</b>
<b>Less</b>			
Income from Wheeling Charges	-	0.09	0.09
Income from Open Access Charges	215.71	213.07	(2.65)
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>10,803.67</b>	<b>10,375.84</b>	<b>(427.82)</b>
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>10,803.67</b>	<b>10,375.84</b>	<b>(427.82)</b>

3.28.2 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2020 -21 is as follows:

**Table 83: ARR for Supply Business for FY 20-21**

Rs. Crs

Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Power Purchase Expenses (including Inter-State Transm	59,126.06	56,289.25	(2,836.80)
Operation & Maintenance Expenses	2,650.13	2,624.32	(25.81)
Depreciation Expenses	281.79	265.42	(16.37)
Interest on Loan Capital	132.09	117.98	(14.10)
Interest on Normative Working Capital*	-	2,197.01	2,197.01
Interest on Consumers Security Deposit	486.53	254.43	(232.10)
Other Finance Charges	-	28.97	28.97
Provision for bad and doubtful debts	659.37	418.54	(240.83)
Other Expenses	52.58	113.70	61.12
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,699.92	5,715.74	15.82
Incentives/Discounts	322.38	307.40	(14.98)
Contribution to Contingency Reserves	15.76	15.76	(0.00)
Return on Equity Capital	231.16	199.15	(32.01)
Effect of sharing of gains/losses	-	92.81	92.81
Impact of payment to MPECS	37.16	37.41	0.25
Opex Scheme	26.18	18.03	(8.15)
Incremental Consumption Rebate	439.66	336.80	(102.86)
<b>Aggregate Revenue Requirement for Supply Business</b>	<b>70,160.77</b>	<b>69,032.71</b>	<b>(1,128.06)</b>
Stabilisation amount as per MYT Order	755.00	755.00	-
<b>Total Revenue Expenditure</b>	<b>70,915.77</b>	<b>69,787.71</b>	<b>(1,128.06)</b>
<b>Less</b>			
Non-Tariff Income	379.75	316.85	(62.90)
Income from Additional Surcharge	119.65	479.03	359.39
Income from Trading of Surplus Power	302.05	126.21	(175.84)
<b>Net Aggregate Revenue Requirement</b>	<b>70,114.33</b>	<b>68,865.62</b>	<b>(1,248.70)</b>
Revenue from Sale of Power	80,918.00	73,309.04	(7,608.96)
Revenue from Retail Supply Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(10,803.67)</b>	<b>(4,443.41)</b>	<b>6,360.26</b>

### 3.29 Revenue from sale of electricity for FY 2020-21

3.29.1 MSEDCL has considered the revenue for FY 2020-21 based on the Audited Accounts as shown in following table.

**Table 84: Revenue from Sale of Power for FY 20-21**

Rs. Crs			
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Revenue from Sale of Power	80,918.00	73,309.04	(7,608.96)

3.29.2 The Annual Accounts of MSEDCL shows the revenue from operations which includes various revenue items. However, being not part of revenue from sale of power at retail tariff and as per practice in vogue, MSEDCL has shown certain items of revenue separately.

3.29.3 MSEDCL further submits that the details of “Others (Recoveries from Theft etc.)” is provided in following table.

**Table 85: Details of Others (Recoveries from Theft etc.) for FY 20-21**

Rs. Cr.	
Particulars	FY 2020-21 (Actual)
Recoveries from Theft of Power/Malpractice	85.84
Income from Wheeling Charges claimed Separately	-0.09
Miscellaneous charges from consumers	268.32
<b>Total</b>	<b>354.07</b>

3.29.4 MSEDCL humbly requests to the Hon’ble Commission to approve the category-wise revenue from sale of power as shown in above table.

### **3.30 Non-Tariff Income for FY 2020-21**

3.30.1 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 etc.

3.30.2 MSEDCL has claimed a Non-Tariff Income of Rs. 316.85 Crs as against Rs. 379.75 Crs as approved by the Hon’ble Commission.

**Table 86: Non-Tariff Income for FY 20-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Rents of land or buildings	1.09	1.01	(0.07)
Sale of Scrap	54.65	31.18	(23.48)
Income from investments	19.43	-	(19.43)
Income from sale of tender documents	9.37	3.66	(5.71)
Prompt payment discount from REC/PFC	12.77	-	(12.77)
Other/Miscellaneous receipts	282.45	254.17	(28.28)
Revenue from subsidy & grant	-	-	-
Interest on Contingency Reserve Investments	-	26.82	26.82
Others		0.01	
<b>Non Tariff Income</b>	<b>379.75</b>	<b>316.85</b>	<b>(62.90)</b>

3.30.3 As provided in the Regulation 37.3 of the MYT Regulations, 2019, delayed Payment Charge and Interest on Delayed Payment is not considered under Non-Tariff Income.

3.30.4 MSEDCL has not considered income from grants and contribution reported under non-tariff income, as the treatment (i.e. excluded while calculating depreciation) to the same is already considered while computing the depreciation for the FY 2020-21.

3.30.5 MSEDCL further submits that the 'Other/Miscellaneous receipts' include

Particulars	Amount (Rs Cr.)
Interest on loans & advances to supplier/contractors:	0.01
Interest Income for prior period	3.74
Interest income from investments in Bank Deposits	0.00
Sundry Credit Balances written back	0.10
Miscellaneous Receipts (NEF Subsidy taken only)	52.87
Penalty charges recovered from vendor	98.06
Other income related to prior period	11.69
Profit on sale of Asset	0.04
Others	13.43
BG encashment	82.73
Interest on Securities	6.28

<b>Particulars</b>	<b>Amount (Rs Cr.)</b>
Restated Amount	-14.79
<b>Total</b>	<b>254.16</b>

### 3.31 Income from Open Access Charges for FY2020-21

3.31.1 MSEDCL has an income of Rs. 213.07 Cr. from Open Access Charges as against Rs. 215.71 Crs as approved by the Hon'ble Commission.

**Table 87: Income from Open Access Charges for FY 20-21**

<b>Particulars</b>	Rs. Crs		
	<b>FY 2020-21 (Approved)</b>	<b>FY 2020-21 (Actual)</b>	<b>Deviation</b>
Income from Open Access Charges	215.71	213.07	(2.65)

3.31.2 Details of income from Open Access charges are provided in the following Table.

**Table 88: Details of Income from Open Access Charges for FY 20-21**

<b>Particulars</b>	<b>Amount (Rs. Crs)</b>
Energy Charges Open Access	-
F.C.A Charges Open Access	-
Additional Charges Open Access	0.38
Adjustment to past billing Open Access	28.47
Cross Subsidy Surcharge Open Access	85.10
Wheeling Charge Open Access	79.23
Transmission Charge Open Access	262.74
Operating Charges Open Access	17.97
Threshold penalty Open Access	1.92
<b>Total Income from Open Access Charges</b>	<b>475.81</b>

3.31.3 Hon'ble Commission vide MYT Order dated 30th March 2020 in Case no. 322 of 2019 has not considered income towards the Transmission Charges proposed to be retained with MSEDCL to be a part of income from OA Charges. Accordingly, MSEDCL has excluded the transmission charges open access revenue from the income from OA charges.

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

### **3.32 Income from Trading of Surplus Power for FY 2020-21**

3.32.1 MSEDCL has reported an Income from Trading of Surplus Power of Rs. 126.21 Crs. Details of surplus power traded is provided in following table.

**Table 89: Income from Trading of Surplus Power for FY 20-21**

			Rs. Crs
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Income from Trading of Surplus Power	302.05	126.21	(175.84)

3.32.2 Hon'ble Commission also ruled that it shall undertake prudence check of sale of surplus power for FY 2020-21 onwards. The detailed compliance to the said directives has already been provided under Chapter 'Compliance to Directives'

3.32.3 MSEDCL humbly requests to the Hon'ble Commission to allow the income from sale of surplus power as shown in above table.

### **3.33 Income from Wheeling Charges for FY 2020-21**

3.33.1 MSEDCL has reported an income from Wheeling Charges of Rs. 0.09 Crs as against Nil as approved by the Hon'ble Commission for FY 20-21

**Table 90: Income from Wheeling Charges for FY 20-21**

			Rs. Crs
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Income from Wheeling Charges	-	0.09	0.09

3.33.2 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Wheeling Charges as per the Audited Accounts as shown in the above table.

### **3.34 Income from Additional Surcharge for FY 2020-21**

3.34.1 MSEDCL has reported an income from Additional Surcharge of Rs. 479.03 Crs.

**Table 91: Income from Additional Surcharge for FY 20-21**

Particulars	Rs. Crs		
	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Income from Additional Surcharge	119.65	479.03	359.39

3.34.2 MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Additional Surcharge as per the Audited Accounts as shown in the above table.

**3.35 Revenue Gap/(Surplus) for FY 2020-21**

3.35.1 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 2020-21 is presented in the Table below.

**Table 92: ARR for Wires & Supply Business for the FY 2020-21**

Rs. Crs			
Particulars	FY 2020-21 (Approved)	FY 2020-21 (Actual)	Deviation
Power Purchase Expenses	59,126.06	56,289.25	(2,836.80)
Operation & Maintenance Expenses	7,571.81	7,498.07	(73.75)
Depreciation Expenses	2,817.91	2,654.18	(163.74)
Interest on Loan Capital	1,320.86	1,179.84	(141.02)
Interest on Normative Working Capital	140.96	2,441.12	2,300.16
Interest on Consumers Security Deposit	540.58	282.70	(257.89)
Other Finance Charges	-	32.19	32.19
Provision for bad and doubtful debts	732.63	465.05	(267.58)
Other Expenses	52.58	113.70	61.12
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,699.92	5,715.74	15.82
Incentives/Discounts	322.38	307.40	(14.98)
Contribution to Contingency Reserves	157.56	157.56	(0.00)
Opex Scheme	110.49	27.05	(83.44)
Return on Equity Capital	2,109.58	1,990.87	(118.70)
Effect of sharing of gains/losses	-	92.81	92.81
Impact of payment to MPECS in future years	37.16	37.41	0.25
Incremental Consumption Rebate	439.66	336.80	(102.86)
<b>Aggregate Revenue Requirement</b>	<b>81,180.15</b>	<b>79,621.72</b>	<b>(1,558.43)</b>
Stabilisation amount as per MYT Order	755.00	755.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>81,935.15</b>	<b>80,376.72</b>	<b>(1,558.43)</b>
<b>Less</b>			
Non-Tariff Income	379.75	316.85	(62.90)
Income from Open Access Charges	215.71	213.07	(2.65)
Income from Trading of Surplus Power	302.05	126.21	(175.84)
Income from Wheeling Charges	-	0.09	0.09
Income from Additional Surcharge	119.65	479.03	359.39
<b>Net Aggregate Revenue Requirement</b>	<b>80,918.00</b>	<b>79,241.47</b>	<b>(1,676.53)</b>
Revenue from Sale of Power	80,918.00	73,309.04	(7,608.96)
Revenue from Retail Supply Business	-	-	
Revenue from Wires Business	-	-	
<b>Revenue Gap/(Surplus)</b>	<b>(0.00)</b>	<b>5,932.43</b>	<b>5,932.43</b>

3.35.2 The Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020 has approved Aggregate Revenue Requirement of Rs. 81,935.15 Crs for FY 2020-21. MSEDCL submits actual ARR of Rs. 80,376.72 Crs. with a deviation of Rs. (1,558.43) Crs. Considering the impact of revenue and other income, the truing up requirement works out to be Rs. 5,932.43 Cr. MSEDCL requests the Hon'ble Commission to allow the true up requirement as submitted above.

## **4 TRUE UP OF FY 2021-22**

### **4.1 Preamble**

4.1.1 This section outlines the actual performance of MSEDCL for the FY 2021-22. MSEDCL hereby submits final True Up for FY 2021-22 comparing the actual audited data for FY 2021-22 with those approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019.

4.1.2 The Board of Directors of MSEDCL has approved the Audited Annual Accounts for the period April 2021 to March 2022 and Statutory Auditors M/s. GMJ & Co, M/s. G.D Apte & Co., and M/s. M.P. Chitale & Co. have audited the Accounts vide report dated 12/10/2022 attached as **Annexure 4** to this Petition. MSEDCL hereby proposes to true up its expenses and revenues based on the said Audited Accounts for FY 2021-22.

4.1.3 Following section outline the deviations in actual expenses/revenue for FY 2021-22 based on the Audited Accounts of MSEDCL in comparison with the expenses/revenue approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020.

### **4.2 Principles of Truing-up for FY 2021-22**

4.2.1 MSEDCL submits that the MERC (Multi Year Tariff) Regulations, 2019 specifies that the Mid-Term Review Petition shall comprise of Truing up for FY 2021-22 which has to be carried out based on the provisions of the MERC (Multi Year Tariff) Regulations, 2019.

4.2.2 In line with the provisions of MERC (Multi Year Tariff) Regulations, 2019, MSEDCL has computed this Truing-up for FY 2021-22.

### **4.3 Category Wise Sales for FY 2021-22**

4.3.1 Category wise actual sales for FY 2021-22 for MSEDCL excluding all Distribution Franchisee have been summarized in the following table:

**Table 93: Category wise Sales for FY 2021-22**

Category	Sales (MUs)		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Residential	23,750.90	21,477.14	(2,273.75)
Commercial	9,202.09	5,745.74	(3,456.35)
HT-Industrial	34,916.20	33,909.97	(1,006.23)
LT-Industrial	7,878.84	8,311.07	432.23
PWW	2,644.54	2,628.89	(15.66)
Street Light	2,402.49	1,262.46	(1,140.03)
Agriculture	28,279.08	36,394.46	8,115.38
Public Services	1,750.44	1,501.34	(249.10)
Railways	82.07	84.30	2.22
Others	729.31	739.13	9.82
<b>MSEDCL Excl. DF</b>	<b>1,11,635.97</b>	<b>1,12,054.50</b>	<b>419</b>

4.3.2 MSEDCL submits that during the MYT process, the Hon'ble Commission had approved the sales based on category-wise sales approved for FY 2018-19 as the base. The Hon'ble Commission had mostly applied 3-year/5-year CAGR for projecting the sales for FY 2021-22. Now, the actual figures of FY 2021-22 are available.

4.3.3 As noted by the Hon'ble Commission in MYT Order at the time of MYT process that MSEDCL was in advanced step/stage to introduce franchisee in other areas, and hence, the Hon'ble Commission while projecting sales has only considered Bhiwandi Franchisee and not factored in the impact of other franchisees. Further, the Hon'ble Commission had opined that the same can be done at MTR stage based on actual details.

**Bhiwandi DF**

4.3.4 M/s. Torrent Power Ltd. (TPL) has been appointed as Distribution Franchisee for Bhiwandi circle and Distribution Franchise Agreement (DFA) was signed between MSEDCL & M/s TPL on 20.12.2006. Distribution operations of Bhiwandi circle were handed over to M/s TPL on 26th January 2007. The term of agreement was ten years and got expired on 26.01.2017. As per article 3.2 of DFA, the said agreement has been renewed and extended for 10 Years i.e. up to 25th January 2027. Distribution Franchisee Renewal Agreement was signed on 02.12.2016.

**Thane DF – SMK area**

4.3.5 M/s. Torrent Power Ltd. (TPL) has been appointed as Distribution Franchisee for Shil, Mumbra & Kalwa (SMK) sub-divisions under Thane Urban Circle. Distribution Franchisee Agreement (DFA) dated 11<sup>th</sup> February, 2019 is effective for the period commencing from 1<sup>st</sup> March 2020 to 1<sup>st</sup> March 2040. Distribution operations of designated DF area were handed over to M/s. TPL on **1<sup>st</sup> March, 2020**.

**Malegaon DF**

4.3.6 M/s. CESC Limited has been appointed as Distribution Franchisee for Malegaon area comprising Malegaon Urban-I, II and III Sub-divisions and 5 villages of Malegaon Rural sub-divisions under Malegaon Circle. Distribution Franchisee Agreement (DFA) dated 29<sup>th</sup> May 2019 is effective for the period commencing from 1<sup>st</sup> March 2020 to 1<sup>st</sup> March 2040. Distribution operations of designated DF area were handed over the M/s. CESC on **1<sup>st</sup> March, 2020**.

4.3.7 Details of month wise sales are given in the Form 1 of the Regulatory Formats.

4.3.8 MSEDCL hereby requests the Hon'ble Commission to approve the Sales for FY 2021-22 as submitted as part of this Petition.

**4.4 Distribution Losses for FY 2021-22**

4.4.1 In MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019, the Hon'ble Commission had approved distribution loss of 16.00% (excluding EHV Sales and OA Sales) for FY 2021-22. The actual distribution loss of MSEDCL for FY 2021-22 is 16.57% which is 0.57% more than the Distribution Loss level approved by the Hon'ble Commission.

**Table 94: Distribution Losses FY 2021-22**

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Distribution Loss (excl. EHV Sales & OA Sales)	16.00%	16.57%	0.57%

4.4.2 MSEDCL submits that it has been putting best endeavours for lowering the

Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. However, loss reduction is a slow process and becomes increasingly difficult for the loss levels to come down after a particular level. The change in sales mix also impact the distribution losses.

4.4.3 MSEDCL requests the Hon'ble Commission to approve the actual Distribution Loss as per the above table.

#### **4.5 Energy Balance for FY 2021-22**

4.5.1 The quantum of sales as shown in Table 95 is 1,12,054.50 MUs, representing 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 sales to the consumers within the Distribution Franchisee area has also been considered. Therefore, energy available for sale for FY 2021-22 is computed as below:

**Table 95: Energy Sales for MSEDCL for FY 2021-22**

Particulars	MUs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Energy Sales by MSEDCL for FY 2021-22	1,11,635.97	1,12,054.50	418.53
Add: Category wise sales in DF area	3,427.25	4,274.48	847.23
Add: Solar Offset Units		-	-
Add: OA Sales (Conventional)	3,983.40	4,435.55	452.15
Add: Renewable OA	859.40	1,247.70	388.30
<b>Total Energy Sales</b>	<b>1,19,906.02</b>	<b>1,22,012.23</b>	<b>2,106.21</b>

4.5.2 MSEDCL submits that the total energy sales for FY 2021-22 is 1,22,012.23 MUs as compared to 1,19,906.02 MUs which was approved by the Hon'ble Commission in MYT Order dated 30<sup>th</sup> March, 2020. The Hon'ble Commission is requested to allow the same.

4.5.3 MSEDCL further submits that it is procuring power from various Sources including MSPGCL, CGS including nuclear power plants, Traders, IPPs 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.

- 4.5.4 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.
- 4.5.5 MSEDCL submits that based on the power scheduled at generator bus for Maharashtra is available as Full Schedule on WRLDC web based scheduling software. Similarly, power scheduled at Maharashtra state periphery is available as Net schedule on WRLDC web based scheduling software.
- 4.5.6 In case of Tarapur Atomic Power Station of NPCIL (TAPS 1&2) which is considered as ISGS station but connected to Maharashtra State STU network for power evacuation. Hence for scheduling of power to Maharashtra, no PoC / scheduling loss is considered. Similarly, EMCO Warora is located in Maharashtra but this generating station is connected to ISTS network. Hence power is scheduled by WRLDC.
- 4.5.7 For interstate loss computation, power scheduled from ISGS station, CGPL, EMCO, SSP, Pench & short term through Inter-state network i.e. whose scheduling done by RLDC is taken into consideration.
- 4.5.8 MSEDCL also purchase power from power market mainly Indian Energy Exchange as per requirement to meet demand or for cost optimization. The power purchase from Indian Energy Exchange is at Regional periphery and drawal losses are applicable for energy purchased from IEX to compute energy available at Maharashtra State periphery.
- 4.5.9 Further MSEDCL also had agreements for banking of power from States like Haryana, Himachal Pradesh and Delhi etc. In banking arrangement, Power transactions are settled at Regional Periphery and concern DISCOMs has to bear Drawal loss when receiving power from other DISCOM and has to bear

injection loss when delivering power to other DISCOM.

4.5.10 MSEDCL submits that the surplus power traded at Exchange is billed at Regional Periphery and bilateral power traded is billed at STU periphery. The quantum of 334 MUs shown under 'Surplus Energy Traded' is the actual energy traded by MSEDCL at STU periphery during FY 21-22.

4.5.11 As per provisional monthly settlements by MSLDC imbalance units for FY 21-22 is considered as -282 MUs. MSEDCL submits that the WRLDC provides web based scheduling reports on [HTTP://SCHEDULING.WRLDC.IN/WBES/ACCOUNT/LOGIN](http://SCHEDULING.WRLDC.IN/WBES/ACCOUNT/LOGIN). This site provides the details of full schedule and net schedule from each Inter State Generating Station (ISGS). The WRLDC uses this data for loss calculation. Further, WRPC prepares the REA from this data which forms the basis of billing for ISGS. MSEDCL prepared the cumulative information for FY 21-22 based on these reports. Considering the energy at ex bus bar and energy received at STU periphery from these reports, MSEDCL has considered the inter-state transmission losses as 3.38%.

**Table 96: Inter-State transmission loss for FY 2021-22**

Source of Power (Station wise)	At regional Periphery (MUs)	Energy Received at State Periphery (MUs)	Interstate Loss
NTPC	34,623.17	33,439.96	3.4%
NPCIL	4,257.52	4,112.86	3.4%
SSP	460.61	460.64	0.0%
Pench	98.51	98.84	-0.3%
EMCO Power	1,393.46	1,345.59	3.4%
CGPL	785.97	760.83	3.2%
Short Term Power Purchase	4,059.03	3,917.51	3.5%
NVVN + Inter-State	152.43	147.53	3.2%
<b>Total Power Scheduled from Inter State Source</b>	<b>45,830.69</b>	<b>44,283.77</b>	<b>3.38%</b>

4.5.12 MSEDCL further submits that the MSLDC computes the Intra State Transmission System (InSTS) Grid Loss based on the Energy Input and

Energy Output. This is grid loss for the Maharashtra Transmission System and not for MSEDCL. Hence, considering the fact that Grid Loss cannot be same for all Distribution Licensees, MSEDCL has computed Intra-State Transmission losses separately and shown below table of Energy Balance for FY 2021-22. Power purchase, sales and energy at Distribution Periphery being metered figures in this petition, Intra State losses is the number which is required to be computed.

4.5.13 Further, Intra State transmission loss for Maharashtra System is 4.11%. MSEDCL has considered this Intra-State transmission loss for computing the input for OA consumption, as mandated by the Hon'ble Commission in MYT Order.

4.5.14 The following table shows the energy balance for FY 21-22.

**Table 97: Energy Requirement and Energy Balance FY 2021-22**

Particulars	Calculation	UoM	FY 2021-22	
			MYT Order	Actual
LT Agriculture Sales (Including D.F)	a	MU	26,867	35,390
LT Sales excluding Agriculture Sales (Including D.F)	b	MU	45,727	40,619
HT Sales excluding EHV level sales (Including D.F)	c	MU	31,718	28,970
<b>Total Sales including D.F (Excluding EHV Sales)</b>	<b>d=a+b+c</b>	<b>MU</b>	<b>1,04,313</b>	<b>1,04,978</b>
OA Sales (Renewables)	e	MU	859	1,248
OA Sales (Conventional)	f	MU	3,983	4,436
Retail Energy Sale to Consumers (Excluding EHV Sales)	A=d+e+f	MU	1,09,155	1,10,662
Sale due to Surplus Energy Traded	B=1%*(d+t)	MU	1,151	334
<b>Retail Energy Sale including surplus traded (Excluding EHV Sales)</b>	<b>C=A+B</b>	<b>MU</b>	<b>1,10,306</b>	<b>1,10,996</b>
<b>Total Power Purchase</b>	<b>D=g+h</b>	<b>MU</b>	<b>1,41,940</b>	<b>1,44,535</b>
Power Purchase Quantum from Intra-State sources	g	MU	1,01,459	98,704
Power Purchase Quantum from Inter-State sources	h	MU	40,481	45,831
Inter-State Losses	i	%	3.10%	3.38%
Power Purchase Quantum from Inter-State sources at MS Periphery	j=h*(1-i)	MU	39,224	44,284
Add: FBSM	0	MU	-	-282
<b>Power Quantum handled at Maharashtra Periphery</b>	<b>k=g+j</b>	<b>MU</b>	<b>1,40,683</b>	<b>1,42,706</b>
Infirm Non-PPA Wind Power	l=e/(1-q)	MU	888	1,301
Input for OA Consumption	m=f/(1-q)	MU	4,114	4,626
<b>Total Power Purchase Quantum Handled</b>	<b>n=k+l+m-v</b>	<b>MU</b>	<b>1,45,112</b>	<b>1,48,633</b>
Surplus Power Traded	o=B	MU	1,151	334
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>p=n-o</b>	<b>MU</b>	<b>1,43,961</b>	<b>1,48,299</b>
<b>Intra-State Transmission Loss</b>	<b>q</b>	<b>%</b>	<b>3.18%</b>	<b>4.11%</b>
Intra-State Transmission Loss	r=p*q	MU	4,576	6,097
Net Energy requirement at T<>D Periphery	s=p-r	MU	1,39,385	1,42,202
EHV Sales	t	MU	10,751	11,351
Net Energy Available for Sale at 33kV	u=s-t	MU	1,28,635	1,30,851
Energy injected and drawn at 33kV	v	MU	573	905
<b>Total Energy Available for Sale at 33kV</b>	<b>E=u+v</b>	<b>MU</b>	<b>1,29,208</b>	<b>1,31,756</b>
<b>Energy Available for Sale including Surplus traded (excl. OA Sales)</b>	<b>F=E-l-m+o</b>	<b>MU</b>	<b>1,25,357</b>	<b>1,25,829</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>G=E-A</b>	<b>MU</b>	<b>20,052</b>	<b>20,851</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>H=G/F</b>	<b>%</b>	<b>16.00%</b>	<b>16.57%</b>

4.5.15 MSEDCL requests the Hon'ble Commission to approve the Energy Balance as shown in the table above.

#### 4.6 Power Purchase Expenses for FY 2021-22

4.6.1 MSEDCL has following sources of firm power viz.

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

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 Following table summarizes the source wise power purchase done by MSEDCL during the FY 21-22.

**Table 98: Source wise Power Purchase for FY 21-22**

Source	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation	Approved in MYT Order	Actual	Deviation
MSPGCL	52,402.95	51,005.09	(1,397.86)	22,056.38	21,498.11	(558.28)	4.21	4.21	0.01
NTPC	27,674.55	34,764.32	7,089.77	10,724.94	12,867.77	2,142.84	3.88	3.70	(0.17)
NPCIL	4,932.23	4,257.52	(674.71)	1,440.83	1,365.52	(75.30)	2.92	3.21	0.29
SSP	1,209.94	460.61	(749.34)	248.06	94.42	(153.63)	2.05	2.05	(0.00)
Pench	136.50	98.51	(37.99)	27.98	20.19	(7.79)	2.05	2.05	0.00
Dodson	115.72	32.43	(83.29)	17.92	12.01	(5.91)	1.55	3.70	2.16
JSW	1,934.21	855.16	(1,079.1)	738.09	259.29	(478.80)	3.82	3.03	(0.78)
CGPL	5,157.89	785.97	(4,371.92)	1,568.26	249.96	(1,318.30)	3.04	3.18	0.14
Adani Power	20,986.36	20,457.57	(528.80)	7,965.76	15,590.03	7,624.27	3.80	7.62	3.82
EMCO Power	1,370.06	1,393.46	23.40	654.24	579.77	(74.48)	4.78	4.16	(0.61)
Rattan India	1,855.61	8,141.30	6,285.70	1,355.49	3,252.98	1,897.49	7.30	4.00	(3.31)
Sai Wardha		1,257.05			614.63	614.63			
Renewable	24,164.00	16,955.69	(7,208.31)	10,283.43	8,200.21	(2,083.23)	4.26	4.84	0.58
Traders		4,020.10	4,020.10		1,785.58	1,785.58		4.44	4.44
RECs	-		-	-	-	-			
Other Adjustments		38.94	38.94		21.91	21.91			
PGCIL Charges				3,487.53	3,294.10	(193.43)			
FBSM		(281.98)	(281.98)		(236.34)	(236.34)			-
Inter State Purchase		11.60	11.60		8.64	8.64			
Intra State Purchase									
<b>Total Power Purchase</b>	<b>1,41,940</b>	<b>1,44,253</b>	<b>1,056</b>	<b>60,569</b>	<b>69,479</b>	<b>8,910</b>	<b>4.27</b>	<b>4.82</b>	<b>0.55</b>

4.6.5 In the following paragraphs, the detailed reasons for variation in the power purchase quantum and cost are provided.

- a) MSPGCL – The power purchase quantum from MSPGCL stations has reduced in FY 2021-22 as compared to the quantum approved by Hon'ble Commission. The lower quantum of purchase from MSPGCL stations is mainly due to lower availability from MSPGCL stations on account of shortage of coal availability which also resulted into forced shut down of Chandrapur-9 and Paras-3 Unit. Moreover, Koradi Unit-7 was retired on

3<sup>rd</sup> August 2021. Both the factors have resulted into overall reduction in cost as compared to approved. However, the average rate of purchase has remained in line with the approved average rate for FY 2021-22.

- b) Central Generating Stations- It is submitted that there was an increase in energy charge rate of NTPC stations due to increase in coal cost by Rs. 0.11 per unit. However, Actual units received from Mouda 1 & 2 was at lower side hence, cost for the same was less. Further, due to ECR revision approx. amount of Rs. 80 Cr received and COVID-19 19 rebate on Rs. 168 Cr received. Further, NPCIL TAPS 1& 2 units are under shut down from month of January 2021MSEDCL purchased almost ~7000 MUs addition from NTPC stations as compared to approved, which resulted into overall average rate per unit from NTPC stations. Further, it is submitted that due to non-availability of APM gas, NTPC stations of Kawas and Gandhar were under zero scheduling during the months of June and July. It is further submitted that the issue of higher gas prices continued for the entire year resulting in negligible amount of purchase from these stations during FY 2021-22. Further, there was a refund received of Rs. 22.02 Crore from Central RRAS.
- c) JSW- The unit was back down during the months of April 2021 and from October 2021 to January 2022. This has resulted in reduction of overall purchase from JSW station. Further, the reduction in rate is on account of less increase in CERC index for domestic coal and transportation as against CAGR considered in MYT projections.
- d) CGPL – The unit was under zero availability with effect from 18th September 2021. The overall purchase from CGPL is hence reduced as compared to approved. Further, the reduction in rate is on account of less increase in CERC index for domestic coal and transportation as against CAGR considered in MYT projections.
- e) Adani Power Maharashtra Limited- It is submitted that MSEDCL has paid Rs. 7920.72 Crores towards Change in Law claims made by APML for the period from 2014 onwards, in line with the directions of the Hon'ble

Supreme Court Order for payment of outstanding amounts. Further, MSEDCL has also paid Rs. 301.97 Crore towards Evacuation Facility charges. These charges have been approved by Hon'ble MERC under 'Change in Law' claims made by APML. These charges have resulted into a jump in average rates of APML by almost 100% from the approved rates. There was a slight decrease in per unit rates due to lower increase of CERC indices for domestic coal and transportation as compared to approved.

- f) EMCO Power: As submitted earlier, the average rates of EMCO Power have reduced due to lower CERC indices as compared to approved. The power purchased is almost in line with the approved quantum. The approved transmission charges were Rs. 107.10 Crore. However, due to implementation of CERC (Sharing of Inter-State transmission charges & losses) Regulation, 2020, these charges were waived off. Further, additional payment of Rs. 57.70 Crore was made in October 2021 on account of coal shortfall in line with the judgement of Hon'ble APTEL.
- g) RattanIndia: There has been a significant increase in quantum purchased from RattanIndia as compared to approved due to the unit falling under MoD stack. In addition to this, MSEDCL has paid Rs. 198.30 Crore towards domestic coal shortfall and Rs. 78.15 Crore towards Evacuation Facility Charges.
- h) Sai Wardha: It is submitted that the unit of Sai Wardha was started in July 2020. The Hon'ble Commission in its MYT Order for MSEDCL had not the considered purchase from this unit. This has resulted into increase in deviation from approved power purchase cost.
- i) Inter-State: 12 MUs purchased from MPEB for villages in Nagpur and Amravati.
- j) Short-term PP: It is submitted that there has been an increase in purchase from power exchanges by almost around ~4000 MUs mainly on account of lower availability due to coal shortfall witnessed in contracted sources of

MSEDCL and non-availability of CGPL and JSW units as discussed above. MSEDCL has purchased from exchanges mainly to optimise the power purchase cost and meet the higher demand. It is submitted that the average rate of power purchase has been lower than the ceiling rate of Rs. 4.50 per unit approved by the Hon'ble Commission in MYT Order.

- k) FBSM: MSEDCL received amount to the tune of Rs. 1064.14 Crs against FBSM for various cases.
- l) Renewable Energy: In case of non-Solar, i) old projects having preferential tariff is much more the new competitive tariff projects. ii) in case of wind most of the EPA's are expired and wind generators have opted for open access NOC.  
In case of Solar,
- i. Rs. 71.67 crs considered towards Change in Law due to resulting in tariff increase.
  - ii. In FY 2021-22 only 200MW of new capacity were added out of on and around remaining 1200 MW capacity.
  - iii. COVID-19 pandemic resulted is delay in commissioning of projects
  - iv. Solar generation in MUs is not as expected due to variation in radiation according to climate conditions for that time period.
- m) PGCIL Charges: Due to implementation of CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020, PoC charges have been revised from the month of December 2020. This has resulted into an increase in amount of PGCIL charges for FY 2021-22 as well as compared to the cost approved by the Hon'ble Commission.

4.6.6 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. Hence, MSEDCL requests the Hon'ble Commission to approve the power purchase expenses as per Audited Accounts.

4.6.7 MSEDCL submits that details of RE Purchase for FY 21-22 are provided in

following table.

Source	FY 2021-22	
	Quantum (MU)	Cost (in Rs. Crs.)
Wind	6,068.25	2,707.30
SHP	591.01	190.38
Bagasse based Cogen.	4,486.81	2,882.41
Biomass	324.85	231.45
MSW	0.25	0.12
<b>Total Non-Solar</b>	<b>11,471.16</b>	<b>6,011.66</b>
Solar	3,667.60	1,358.25
SECI	1,700.27	770.77
NVVN (Solar)	27.38	29.34
Solar Rooftop	89.28	30.18
<b>Total Solar</b>	<b>5,484.53</b>	<b>2,188.54</b>
<b>Total</b>	<b>16,955.69</b>	<b>8,200.21</b>

4.6.8 It is submitted that MSEDCL has purchased additional RE power by almost more than 2000 MUs in FY 2021-22 as compared to FY 2020-21.

#### 4.7 Transmission Charges for FY 21-22

4.7.1 MSEDCL submits the actual transmission charges and SLDC charges paid to MSETCL and MSLDC as summarized in following table.

**Table 99: Transmission Charges paid to Transmission Licensee for FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Intra-State Transmission Charges	5,782.39	5,950.98	168.59
MSLDC Charges	26.86	26.86	-0.00
<b>Total</b>	<b>5,809.25</b>	<b>5,977.83</b>	<b>168.59</b>

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. MSEDCL requests the Hon'ble Commission to approve the actual Transmission and MSLDC charges as per the Audited Accounts as shown in above table

4.7.3 It is submitted that the Intra-state Transmission charges have increased by Rs. 168.59 Crore on account of revision in Base TCR as compared to the approved Base TCR in InSTS Order. This is majorly due to unexpected increase in demand during FY 2021-22. It is submitted that the revision in Base TCR is beyond control of MSEDCL. Therefore, MSEDCL requests the Hon'ble Commission to kindly approve the actual Transmission and MSLDC charges as per the Audited Accounts as shown in above table.

#### **4.8 Fixed Costs for FY 2021-22**

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 2021-22 (excluding fixed component of PP cost) has been determined in accordance with the provisions of the MYT Regulations, 2019 outlined thereof. As outlined under the regulations, the fixed cost for MSEDCL has been determined under the following major heads along with other items of expenditure:

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

4.8.2 Net Aggregate Revenue Requirement has been computed after netting off Expenses capitalized.

4.8.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 for FY 2021-22 and the values as per the audited accounts.

#### **4.9 Actual Operation & Maintenance Expenses for FY 2021-22**

4.9.1 Operations and Maintenance (O&M) Expenses of the company consists of Employee Expenses, Administrative and General Expenses and Repairs and

Maintenance Expenses.

4.9.2 The following table provides the actual O&M expenses (net of capitalisation) for the FY 2021-22

**Table 100: Actual O&M Expenses for FY 2021-22**

	Rs. Crs
<b>Particulars</b>	<b>Actual</b>
Actual O&M Expenses	8,735.25

4.9.3 Head-wise details of employee expenses, A&G Expenses and R&M Expenses have been provided in Regulatory Formats.

4.9.4 Following table provides the comparison of actual O&M expenses for FY 21-22 and FY 19-20.

				Rs. Crs
<b>Sr. No.</b>	<b>Particulars</b>	<b>FY 2020-21</b>	<b>FY 2021-22</b>	<b>Difference</b>
1	Employee Exp. (Net)	5,368.20	6,397.36	1,029.16
2	A & G Exp. (Net)	763.87	969.95	206.08
3	R & M Exp.	1,036.21	1,367.95	331.74
	<b>Total O &amp; M Exp.</b>	<b>7,168.28</b>	<b>8,735.25</b>	<b>1,566.97</b>

4.9.5 There is an increase of Rs. 1566.97 Crs in O&M Expenses for FY 21-22 over FY 20-21.

4.9.6 Following Table summarises the reasons for change in major components of O&M Expenses for FY 21-22 over FY 20-21.

**Table 101: Major components of O&M expenses for FY 21-22 over FY 20-21**

<b>Sr. No.</b>	<b>Particulars</b>	<b>FY 20-21</b>	<b>FY 21-22</b>	<b>Difference</b>	<b>Remark</b>
1. Employee Cost					
1.1	Basic Salary	2,806.02	2,965.99	159.97	Due to increment in employee's salary, exp. has increased
1.2	Expenditure on Outsourced Employees	497.08	584.29	87.21	

Sr. No.	Particulars	FY 20-21	FY 21-22	Difference	Remark
1.3	Dearness Allowance	473.22	656.58	183.35	
1.4	Earned Leave Encashment	384.66	414.90	30.25	
1.5	Other Allowances	167.75	175.01	7.25	
1.6	Overtime Payment	19.49	22.81	3.32	
1.7	Provident Fund Contribution	429.92	694.62	264.70	Due to increment & rise in DA, the PF has been increased
1.8	Staff Welfare Expenses	89.92	163.24	73.32	Due to increase in mediclaim premium, this exp. has increased
1.9	Gratuity Payment	311.66	420.78	109.12	
<b>2. Administration &amp; General Expenses</b>					
2.1	Rent Rates & Taxes	116.74	46.96	(69.78)	Actual expenditure
2.2	Security Measures for Safety & Protection	161.78	175.46	13.67	
2.3	Advertisements	6.59	7.48	0.89	
2.4	Expenditure on Computer Billing	257.34	378.74	121.40	Actual expenditure
2.5	Commission/Collection charges	60.69	85.95	25.26	Actual expenditure
<b>3. Repair &amp; Maintenance Expenses</b>					
3.1	Plant & Machinery	532.47	464.65	(67.82)	Actual expenses
3.2	Civil Works	50.05	130.55	80.50	Actual expenses
3.3	Lines & Cable Networks	433.98	711.81	277.83	Actual expenses
3.4	Office Equipment	19.28	47.35	28.07	
3.5	Others	0.00	13.15	13.15	

4.9.7 MSEDCL further submits that in the employee expenses, MSEDCL has considered Rs. 98.94 Crs towards Re-measurement of defined benefit plans. In this regards, MSEDCL would like to submit that the Gratuity is recognised at the year-end by using projected unit credit method as on 31<sup>st</sup> March 2022. It is unfunded defined benefit plan.

#### **4.10 Normative Operation & Maintenance Expenses for FY 2021-22**

4.10.1 MSEDCL submits that Regulation 75 and Regulation 84 of the MERC (MYT)

Regulations, 2019 provides for the O&M Expenses norms for Distribution Wires Business and Retail Supply of electricity respectively.

4.10.2 As per the said Regulations relating to the Truing-up of O&M expenses:

“75.2 ....

*Provided also that at the time of true-up for each Year of this Control Period, the Operation and Maintenance expenses shall be derived on the basis of the Final Trued-up Operation and Maintenance expenses after adding/deducting the sharing of efficiency gains/losses, for the base year ending March 31, 2020, excluding abnormal expenses, if any, subject to prudence check by the Commission, and shall be considered as the Base Year Operation and Maintenance expenses.*

75.3 *The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:*

*Provided that, in the Truing-up of the O&M expenses for any particular year of the Control Period, an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective past five financial years (including the year of Truing-up) and 70% weightage to the average yearly inflation derived based on the monthly Consumer Price Index for Industrial Workers (all-India) of the respective past five financial years (including the year of Truing-up), as reduced by an efficiency factor of 1% or as may be stipulated by the Commission from time to time, shall be applied to arrive at the permissible Operation and Maintenance Expenses for that year:*

*Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers connected to the Distribution Wires of at least 2 percent annually over the last 3 years:*

*Provided also that in case such increase in the number of consumers is lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.”*

4.10.3 Following table provides the year-on-year variations in CPI and WPI for the last 5 years. Considering the average WPI and CPI and provisions of the MERC (MYT) Regulations 2019, MSEDCL has calculated the escalation factor as shown in the following table.

**Table 102: Escalation factor for FY 2021-22**

Year	WPI	Annual Increase	CPI	Annual Increase
FY 2016-17	111.62		275.92	
FY 2017-18	114.88	2.92%	284.42	3.08%
FY 2018-19	119.79	4.28%	299.92	5.45%
FY 2019-20	121.80	1.68%	322.50	7.53%
FY 2020-21	123.38	1.29%	338.69	5.02%
FY 2021-22	139.41	13.00%	356.06	5.13%
5 Year Avg		4.63%		5.24%
Weight	30%	1.39%	70%	3.67%
<b>Escalation Factor</b>		<b>5.06%</b>		
<b>Efficiency Factor</b>				
Efficiency Factor in case of increase in no. of consumers incl. OA consumers connected to the Distribution Wires		<b>0.00%</b>		
<b>Rate with 1% reduction</b>		<b>5.06%</b>		

4.10.4 MSEDCL further submits that MYT Regulations, 2019 quoted above also provides that if the number of consumers of Distribution Licensee are

increased by more than 2% annually over the last 3 years, efficiency factor shall be considered as zero. Accordingly, considering the escalation factor without reducing efficiency factor, MSEDCL has computed the normative O&M expenses for FY 2021-22. Detailed calculations are given in the Regulatory Formats.

4.10.5 Considering the above escalation factor and revised normative O&M expenses for FY 2020-21, MSEDCL has calculated the O&M Expenses. MSEDCL submits that calculated O&M expenses are allocated between the Wires Business and Retail Supply Business in the ratio of allocation matrix provided in the MYT Regulations, 2019), i.e., 65% to Wires Business and 35% to Supply Business. The same is shown in following table.

**Table 103: O&M Expenses for FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
O&M Expenditure for Wires business	4,717.50	4,936.62	219.12
O&M Expenditure for Retail Supply business	2,540.19	2,658.18	117.99
<b>Operation and Maintenance Expenses (A)</b>	<b>7,257.69</b>	<b>7,594.79</b>	<b>337.10</b>

4.10.6 Hon'ble Commission in its MYT Order dated 30th March, 2020 in Case No. 322 of 2019 has added Rs. 582.11 Crores in FY 2020-21 to include the impact of arrears on account of wage revision over and above derived normative O&M expenses, which were related to second and third instalment of the arrears proposed to be paid in FY 2020-21. As per the Regulations 75.4 (Wire) & 84.4 (Supply) and 75.5 (Wire) & 84.5 (Supply) of MYT Regulations 2019 impact of wage revision has to be considered at the time of true-up of any year. However, as the impact would be significant and would entail allowing for carrying cost in future, Hon'ble Commission upon due consideration by invoking its power to relax under Regulation 105 of MYT Regulations, 2019 had decided to allow arrears of Rs. 582.11 in FY 2020-21 itself. MSEDCL submits that second instalment of pay revision of Rs. 269.00 Crs has been given in the month of February, 2021. Further, third instalment of pay revision of Rs. 355.00 Crs has been given in the month of December, 2021. The wage revision related documents are attached as **Annexure 11** to this Petition. Accordingly, for the purpose of true-up, MSEDCL has calculated

total allowable O&M expenses for FY 2021-22, by considering Rs. 355.00 Crs over and above derived normative O&M expenses for FY 2021-22, as shown in the following table.

**Table 104: O&M Expenses for FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
O&M Expenditure for Wires business	4,717.50	4,936.62	219.12
O&M Expenditure for Retail Supply business	2,540.19	2,658.18	117.99
<b>Operation and Maintenance Expenses (A)</b>	<b>7,257.69</b>	<b>7,594.79</b>	<b>337.10</b>
Impact of arrears - Wires business	0	230.75	230.75
Impact of arrears - Supply business	0	124.25	124.25
<b>Sub Total (B)</b>	<b>-</b>	<b>355.00</b>	<b>355.00</b>
<b>Total O&amp;M Expenses (C = A+B)</b>	<b>7,257.69</b>	<b>7,949.79</b>	<b>692.10</b>

4.10.7 Further, as per Regulations 75.6 and 84.6 of the MYT Regulations, 2019 in case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in R&M shall not be set off against other heads of O&M expenses. The relevant extract of the Regulations is reproduced below:

*“75.6 In case the expenditure on Repairs & Maintenance falls below 20% of total O&M expenses allowed under these Regulations, then such savings in Repairs & Maintenance shall not be set off against other heads of O&M expenses:”*

4.10.8 MSEDCL submits its R&M expenses are less due to the reasons explained above which are attributable to COVID-19 pandemic situation. Hence, MSEDCL requests Hon’ble Commission to kindly relax these regulations for FY 2021-22 which affected during some part of the year and allow expenses as per normal sharing of gains and losses.

4.10.9 MSEDCL requests the Hon’ble Commission to allow the O&M Expenses as computed in above table.

#### **4.11 Opex Schemes for FY 2021-22**

4.11.1 MSEDCL submits that as per the Regulation 75.7 and 84.7 of the MYT Regulations, 2019 the distribution licensee is allowed to undertake Opex schemes for wires and supply business for system automation, new technology and IT implementation etc. and such expenses may be allowed over and above normative O&M expenses. The relevant extract of the regulations is reproduced below:

*“75.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.*

*84.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.”*

4.11.2 Based on approval accorded in the MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019 MSEDCL has incurred actual expenses of Rs. 31.67 Crs in FY 2021-22 as against Rs. 110.49 Cr. approved by Hon’ble Commission. Following table shows the actual Opex Schemes expenses for FY 2021-22.

4.11.3 Detailed justification, cost benefit analysis of such schemes and savings in O&M expenses has been provided under Chapter 15 of this petition.

4.11.4 MSEDCL requests the Hon’ble Commission to allow the Opex Schemes Expenses as shown in table below.

**Table 105: Opex Scheme Expenses for FY 2021-22**

	Rs. Crs		
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
<b>Opex Schemes (Wires Business)</b>			-
Substation Monitoring System (SMS)	69.53	1.03	(68.50)
MSEDCL Cloud Project	8.32	7.56	(0.76)
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	-	(0.53)
<b>Sub-Total</b>	<b>84.31</b>	<b>8.59</b>	<b>(75.72)</b>
<b>Opex Schemes (Retail Supply Business)</b>			-
Customer Care Center	6.60	13.91	7.31
RF-DCU (Expression of Interest & Tender)	4.80	1.61	(3.19)
MSEDCL Cloud Project	8.32	7.56	(0.76)
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	-	(0.53)
<b>Sub-Total</b>	<b>26.18</b>	<b>23.08</b>	<b>(3.10)</b>
<b>Total</b>	<b>110.49</b>	<b>31.67</b>	<b>(78.82)</b>

#### 4.12 Capitalisation for FY 2021-22

4.12.1 MSEDCL has achieved capitalization of Rs. 3,442.01 Cr. in FY 2021-22 as against Rs. 3,638.60 Cr. approved by Hon'ble Commission. Following table shows the capitalization in FY 2021-22.

**Table 106: Capitalisation for FY 2021-22**

	Rs. Crs		
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
DPR Scheme	3,291.09	3,469.82	178.73
Non DPR Scheme	347.51	-27.81	(375.32)
<b>Total Capitalisation</b>	<b>3,638.60</b>	<b>3,442.01</b>	<b>(196.59)</b>

4.12.2 As per the Annual Accounts the addition to GFA is Rs. 3,467.47 Crs. whereas in Form 4 MSEDCL has shown Capitalization as Rs. 3,442.01 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.

**Table 107: Addition to GFA as per Audited Accounts for FY 2021-22**

Sr. No.	Particulars	Amount (Rs. Crs)
1	Capitalisation as per Note of the Accounts	3,467.47
2	Capitalisation as per Form 4	3,442.01
	Other Assets	
3	Land	7.83
4	Buildings	32.79
5	Vehicles	-5.13
6	Furniture & Fixtures	-2.62
7	General Assets	-8.70
8	Other Civil Works	-23.10
9	Computer Software	24.39
<b>10</b>	<b>Total (2 to 8)</b>	<b>3,467</b>

4.12.3 MSEDCL further submits that the additional details of general assets are provided in following table.

**Table 108: Details of General Assets for FY 2021-22**

Particulars	Amount Rs. Crs
Hydraulic works	-1.90
Communication Equipment	2.15
IT Equipment	-13.40
Office Equipment	4.48
Other Assets	0.08
Batteries & Charging	-0.04
<b>Total</b>	<b>-8.64</b>

4.12.4 Hon'ble Commission in its previous Orders has allowed the capitalization towards schemes not forming part of any specific scheme. 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.

#### 4.13 Depreciation for FY 2021-22

4.13.1 The Opening GFA as per MSEDCL's Audited Accounts is Rs. **66,927.14** Crs (excluding the impact of Final Transfer Scheme/Restructuring Plan and subsequent revaluation). Accordingly, the depreciation has been reworked on a pro-rata basis on the revised Opening GFA for FY 2021-22 for the purpose of True-Up which is summarized below.

**Table 109: Depreciation for FY 2021-22**

Sr. No.	Particulars	Amount (Rs. Crs)
1	Opening GFA for FY 21-22 (Actual )	66,927.14
2	Opening GFA for FY 21-22 as per MERC	57,669.39
3	Less: Consumer Contribution and Grants	
4	Net Opening GFA (Approved)	57,669.39
5	Depreciation (Actual)	2,968.79
6	Depreciation (Claimed in proportion to Actual)	2,558.13

4.13.2 MSEDCL requests the Hon'ble Commission to allow the Depreciation as computed in above table.

#### **4.14 Funding Pattern for FY 2021-22**

4.14.1 As per the Regulation 27.1 of the MERC MYT Regulations, 2019, the debt-equity ratio as on the date of commercial operation shall be 70:30 of the amount of capital cost approved by the Commission. The said Regulation also provides that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Licensee for determination of Tariff.

4.14.2 MSEDCL submits that the Hon'ble Commission has designed the formats for submission of data in respect of Capex and Capitalization on yearly basis. MSEDCL further submits that the information required by Hon'ble Commission is on yearly basis whereas capital expenditure and capitalization of project is a process which continues for 3 to 5 years. With such different timelines, there will be spill-over of capex and capitalization and hence it would be difficult to match the capex and capitalization and its funding on yearly basis. MSEDCL also submits that previously funding gap (if any) was shown as internal accrual and Hon'ble Commission has considered it as a part of normative equity or normative loan. It is pertinent to note that many times the Hon'ble Commission has restricted the equity to 30% if the equity

portion of the funding is exceeded 30% and excess equity was treated as normative loan. Thus, Hon'ble Commission has already given the necessary effect for additional equity.

4.14.3 The funding pattern for FY 2021-22 for the capitalization achieved by MSEDCL, in proportion to the funding pattern of capital Expenditure, is presented in the following table:

**Table 110: Funding Pattern of Capitalization for FY 2021-22**

Particular	Amount (Rs. Crs)	Funding Mix (%)
Total Capitalisation	3,442.01	
Less: Consumer Contribution	740.83	
Less: Grants	959.20	
<b>Balance to be funded</b>	<b>1,741.98</b>	
Equity	445.97	25.60%
Debt	1,296.01	74.40%
Equity	445.97	26%
Debt	1,296.01	74%

4.14.4 MSEDCL requests the Hon'ble Commission to approve the funding mix as submitted in above table.

#### **4.15 Interest Expenses for FY 2021-22**

4.15.1 MSEDCL has computed the interest expenses on normative basis linked to the normative opening loan and normative loan addition during the year.

4.15.2 MSEDCL submits that the Regulation 30.5 of the MYT Regulation, 2019 provides that at the time of Truing-up, the weighted average rate of interest computed on the basis of the actual long-term loan portfolio during the concerned year shall be considered as the rate of interest. Accordingly, for arriving at the interest rate, MSEDCL has considered the weighted average interest rate of actual loan portfolio of FY 2021-22. The computation of weighted average interest rate of actual loan portfolio is shown in following table.

**Table 111: Computation of weighted average interest rate for FY 2021-22**

Particulars	Formula	Actual (Rs. Crs)
Outstanding Loan at the start of the year	a	15,153.57
Loan drawal during the year	b	1,269.47
Loan repayment during the year	c	2,717.74
Balance outstanding at the end of the year	d=a+b-c	13,705.30
<b>Average Loan for the Year</b>	<b>e=Avg(a,d)</b>	<b>14,429.43</b>
Interest Expense incurred during the year	f	1,421.22
Weighted Average Interest rate	g=f/e	9.85%

4.15.3 Regulation 30.3 of the MERC MYT Regulations, 2019 provides for loan repayment during a year equal to depreciation allowed. The relevant extract is reproduced below:

*“30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.”*

4.15.4 Considering the normative opening loan, normative loan addition during the year and loan repayment equal to depreciation and the weighted average interest rate of actual loan portfolio, MSEDCL has computed the interest expenses on normative basis as summarized in table below:

**Table 112: Interest Expenses for FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
Normative Outstanding Loan at beginning of the year	12,817.74	11,541.93	(1,275.81)
Less: Reduction of Normative Loan due to retirement of assets			
Loan Drawal	2,157.12	1,296.01	(861.11)
Loan Repayment	2,963.97	2,880.50	(83.47)
Normative Balance Outstanding at the end of the year	12,010.89	9,957.44	(2,053.45)
Average Balance of Net Normative Loan	12,414.31	10,749.68	(1,664.63)
Interest Rate	10.28%	9.85%	
<b>Interest Expenses</b>	<b>1,275.59</b>	<b>1,058.79</b>	<b>(216.80)</b>

4.15.5 MSEDCL submits that Hon’ble Commission had approved Funding of Capitalization based on the approved capitalization in the MYT Order dated 30<sup>th</sup> March 2020.

4.15.6 MSEDCL requests the Hon’ble Commission to approve the normative interest

expenses as submitted in above table.

#### **4.16 Interest on Working capital & Interest on SD for FY 2021-22**

4.16.1 MSEDCL submits that Regulations 32.3 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Wire business of electricity. Further, the MYT Regulations, 2019 also provides 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. The relevant extract is reproduced below:

*“2.11 (10) “Base Rate” shall mean the one-year Marginal Cost of Funds-based Lending Rate (“MCLR”) as declared by the State Bank of India from time to time;*

...  
32.3 (b) ...  
*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.”*

4.16.2 Base rate is considered at one-year MCLR of SBI plus 150 basis points. MSEDCL has calculated the interest on working capital at 8.57%. The detailed working of weighted average Base Rate is provided in following table:

**Table 113: Working of weighted average Base Rate**

<b>From</b>	<b>To</b>	<b>Days</b>	<b>Rate</b>	<b>Days X Rate</b>
01-04-2021	10-04-2021	9	7.00%	63%
10-04-2021	15-04-2021	5	7.00%	35%
15-04-2021	15-05-2021	30	7.00%	210%
15-05-2021	15-06-2021	31	7.00%	217%
15-06-2021	15-07-2021	30	7.00%	210%
15-07-2021	15-08-2021	31	7.00%	217%
15-08-2021	15-09-2021	31	7.00%	217%
15-09-2021	15-10-2021	30	7.00%	210%
15-10-2021	15-11-2021	31	7.00%	217%
15-11-2021	15-12-2021	30	7.00%	210%

From	To	Days	Rate	Days X Rate
15-12-2021	15-01-2022	31	7.00%	217%
15-01-2022	15-02-2022	31	7.00%	217%
15-02-2022	15-03-2022	28	7.00%	196%
15-03-2022	31-03-2022	16	7.00%	112%
<b>Weighted Avg. Rate</b>		<b>365</b>	<b>7.00%</b>	<b>2548%</b>
Plus 150 Basis Points			1.50%	
<b>Total Weighted Avg. Rate</b>			<b>8.50%</b>	

4.16.3 MSEDCL further submits that the Regulation 30.11 of MYT Regulations, 2019 provides for Interest on Security Deposit at Bank Rate. The relevant extract is reproduced below:

*“30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable:*

*Provided that at the time of Truing-up, the interest on the amount of security deposit for the year shall be considered on the basis of the actual interest paid by the Licensee during the year, subject to prudence check by the Commission.”*

4.16.4 MSEDCL Commercial Circular No. 335 for Rate of Interest on Consumer Security Deposit @ 4.25% per annum for FY 2021-22 is attached as **Annexure 8** to this Petition.

4.16.5 MSEDCL requests the Hon’ble Commission to allow the Interest on Working capital along with the actual interest on security deposit paid as per audited account for wire business as shown in table below.

**Table 114: Interest on Working Capital & Interest on Security Deposit for Wire business  
for FY 21-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
<b>Computation of Working Capital (Wire Business)</b>			
O&M expenses for a month	384.98	430.61	45.63
Maintenance Spares at 1% of Opening GFA	615.69	552.40	(63.29)
1.5 months of expected revenue from charges for use of Distribution wires	1,374.84	1,371.32	(3.52)
Less: Amount held as SD from Distribution System Users	(873.25)	(906.31)	(33.06)
<b>Total Working Capital Requirement</b>	<b>1,502.25</b>	<b>1,448.02</b>	<b>(54.24)</b>
Rate of Interest (% p.a.)	9.50%	8.50%	
<b>Interest on Working Capital</b>	<b>142.71</b>	<b>123.08</b>	<b>(19.63)</b>
<b>Actual Working Capital Interest</b>		238.50	
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	3.98%	
<b>Interest on Security Deposit</b>	<b>56.76</b>	<b>36.04</b>	<b>(20.72)</b>

4.16.6 MSEDCL further submits that Regulation 32.4 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Retail Supply business of electricity. Further, the MYT Regulations, 2019 also provides 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. The relevant extract is reproduced below:

*“2.11 (10) “Base Rate” shall mean the one-year Marginal Cost of Funds-based Lending Rate (“MCLR”) as declared by the State Bank of India from time to time;*

...

*32.4 (b) ...  
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.”*

4.16.7 MSEDCL has calculated the interest on working capital at as 8.50% computed

above and paid interest on security deposit at 4.25% and considered the actual paid amount as per audited accounts.

**Table 115: Interest on Working capital & Interest on Security Deposit for Supply business for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
<b>Computation of Working Capital (Supply Business)</b>			
O&M expenses for a month	207.30	231.87	24.57
Maintenance Spares at 1% of Opening GFA	68.41	61.38	(7.03)
1.5 months equivalent of the expected revenue from sale of electricity at the prevailing Tariff and including revenue from CSS and Additional Surcharge	10,102.93	10,980.02	877.09
Less: Amount held as security deposit	(7,859.27)	(8,156.79)	(297.52)
Less: One month equivalent of cost of Power Purchase, Transmission Charges and MSLDC Charges	(5,853.95)	(6,288.05)	(434.11)
<b>Total Working Capital Requirement</b>	<b>(3,334.58)</b>	<b>(3,171.57)</b>	163.00
Rate of Interest (% p.a.)	9.50%	8.50%	
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	
<b>Actual Working Capital Interest</b>		<b>2,146.49</b>	
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	3.98%	
<b>Interest on Security Deposit</b>	<b>510.85</b>	<b>324.34</b>	<b>(186.51)</b>

4.16.8 MSEDCL requests the Hon'ble Commission to allow the interest on working capital and actual security deposit for supply business as shown in above table.

#### **4.17 Other Finance Charges for FY 2021-22**

4.17.1 MSEDCL submits that the regulation 30.8 of the MYT Regulations, 2019 provides that the finance charges shall be allowed at the time of True-up. The relevant extract is reproduced below:

*“30.8 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.”*

4.17.2 MSEDCL submits that it has incurred Other Finance Charges amounting to Rs. 32.19 Crores during the FY 2021-22. These are the fund raising charges

i.e. Guarantee Charges, Finance Charges, Stamp Duty and Service Fee.

**Table 116: Other Finance Charges for FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Guarantee Charges	-	20.93	20.93
Finance Charges	-	8.72	8.72
Stamp Duty	-	0.07	0.07
Service Fee (Fund-raising charges)	-	15.76	15.76
<b>Total</b>	-	<b>45.47</b>	<b>45.47</b>

4.17.3 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 reasonable control of MSEDCL and hence required to be allowed on actual basis. Therefore, MSEDCL humbly requests the Hon'ble Commission to allow the Other Finance Charges as per the Audited Accounts.

#### **4.18 Provision for Bad Debts for FY 2021-22**

4.18.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution and retail supply.

4.18.2 Regulation 76 and 85 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. The relevant extract is reproduced below:

**"76 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of*

*bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee.”*

**“85 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee.”*

4.18.3 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. A business typically estimates the amount of bad debt based on historical experience.

4.18.4 MSEDCL has written off Rs. 459.62 Cr. towards Bad Debt in FY 2021-22.

4.18.5 MSEDCL has computed the provision for bad and doubtful debts for FY 2021-22 as per the provisions of the MYT Regulations, 2019 considering the receivables as per Audited Accounts as shown in following table:

**Table 117: Provision for bad and doubtful debts for FY 2021-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Opening Balance of Provision for bad and doubtful debts	-	606.45	606.45
Receivables for the year	48,842.02	83,212.06	34,370.03
Provision for bad & doubtful debts during the year	1.50%	1.50%	
<b>Provision for bad &amp; doubtful debts during the year</b>	<b>732.63</b>	<b>1,248.18</b>	515.55
Actual bad and doubtful debts written off	732.63	459.62	-273.01
Closing Balance of Provision for bad and doubtful debts		1,395.02	1,395.02
Closing Balance as a % of receivables	0.00%	1.68%	

4.18.6 MSEDCL submits that the above computed provision for Bad Debts is further allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulation, 2019), i.e., 10% to Wires Business and 90% to Supply Business. The same is shown in following table.

**Table 118: Provision for Bad and Doubtful debts (Wires and Supply) for FY 2021-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
Bad Debt Provision for Wires business	73.26	124.82	51.56
Bad Debt Provision for Retail Supply business	659.37	1,123.36	464.00
<b>Bad Debt Provision</b>	<b>732.63</b>	<b>1,248.18</b>	<b>515.55</b>

4.18.7 The total Bad Debt provision for FY 2021-22 works out to be Rs. 1,248.18 as against Rs. 732.63 Cr. MSEDCL humbly requests the Hon'ble Commission to approve the actual bad debt written off i.e., Rs. 459.62 Cr. (Rs. 45.96 for Wires business and Rs. 413.66 for Supply business)

#### 4.19 Other Expenses for FY 2021-22

4.19.1 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 119: Other Expenses FY 2021-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Compensation for injuries,death to staff	1.39	1.99	0.60
Compensation for injuries,death to others	16.78	16.03	-0.75
Loss on obsolescence of fixed Assets	1.81	-	-1.81
Sundry debit balances written off	1.99	6.42	4.43
Non Moving Items	18.62	-	(18.62)
Provision for Non Moving Items	-	90.79	90.79
Other Sundry Expenses	8.54	198.01	189.48
Incentive to Distribution Franchisee	-	0.64	0.64
Interest to suppliers/Contractors*	-	0.03	0.03
Other Interest and Charges	-	0.00	0.00
Interest on security deposit on bill collection agency	-	3.73	3.73
Other Expenses for previous years	6.08	-	(6.08)
Provision against Court deposit (MM Cell)	-	205.49	205.49
Write-off of WDV of scrapped assets	-	132.27	132.27
<b>TOTAL</b>	<b>55.21</b>	<b>655.40</b>	<b>600.19</b>

4.19.2 MSEDCL submits that the amount under the head “interest to suppliers/contractor” as per the Audited Accounts included Delayed Payment Charges / Surcharge payable to MSPGCL, MSETCL, IPPs & Wind Generators for FY 2021-22. MSEDCL has not claimed the same.

4.19.3 MSEDCL hereby requests the Hon’ble Commission to approve the Other Expenses as per actual expenses incurred by MSEDCL as given in the above table.

#### 4.20 Contribution to Contingency Reserves for FY 2021-22

4.20.1 MSEDCL submits that Regulation 35 of the MYT Regulation, 2019 provides

for appropriation to Contingency Reserves of not less than 0.25 per cent and not more than 0.5 per cent of the original cost of Fixed Assets annually towards in the calculation of ARR.

4.20.2 MSEDCL submits that it is not getting full recovery of the revenue receivable from consumers. MSEDCL is managing its working capital requirement need by availing STL/MTL/LTL working capital loans from banks and financial institutions. As such MSEDCL can invest the amount of contingency reserve only if it gets sufficient quantum of loan from banks or financial institutions. MoP through its guidelines on additional prudential norms has restricted working capital borrowings @ 35% of the revenue which MSEDCL already crossed the same. Hence, MSEDCL is getting difficulties in availing loan and not able to invest the amount of contingency reserve. Secondly, MSEDCL's financials has been badly affected by the consequences of COVID-19 pandemic.

4.20.3 Considering the above difficulty and COVID-19 impact, it is requested to Hon'ble Commission to consider positively and not to disallow contingency reserve amount and further provide relaxation from the last proviso to Regulations 35.1 of the MERC MYT Regulation, 2019.

**Table 120: Contingency Reserve for FY 2021-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Contribution to Contingency Reserves	171.02	171.02	-0.00

4.20.4 MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves in line with submission made above by invoking its power to relax under Regulation 105 of the MYT Regulation, 2019.

#### **4.21 Income Tax for FY 2021-22**

4.21.1 MSEDCL submits that Regulation 34 of the MYT Regulations, 2019 provides for Income Tax. The relevant extract of the Regulations is reproduced below:

*“34.1 The Income Tax for the Generating Company or Licensee or MSLDC for the regulated business shall be allowed on Return on Equity,*

*including Additional Return on Equity through the Tariff charged to the Beneficiary/ies, subject to the conditions stipulated in Regulations 34.2 to 34.6:*

*Provided that no Income Tax shall be considered on the amount of efficiency gains and incentive approved by the Commission, irrespective of whether or not the amount of such efficiency gains and incentive are billed separately:*

*Provided further that no Income Tax shall be considered on the amount of income from Delayed Payment Charges or Interest on Delayed Payment or Income from Other Business, as well as on the income from any source that has not been considered for computing the Aggregate Revenue Requirement:*

*Provided also that the Income Tax shall be computed for the Generating Company as a whole, and not Unit-wise/Station-wise:*

*Provided also that the deferred tax liability only before March 31, 2020 shall be allowed by the Commission, whenever they get materialised, after prudence check.*

*34.2 The rate of Return on Equity, including additional rate of Return on Equity as allowed by the Commission under Regulation 29 of these Regulations shall be grossed up with the effective tax rate of respective financial year.*

*34.3 The base rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:*

*Rate of pre-tax return on equity = Base rate of Return on Equity / (1-t),  
Where "t" is the effective tax rate*

*34.4 The effective tax rate shall be considered on the basis of actual tax paid in respect of financial year in line with the provisions of the relevant Finance Acts by the concerned Generating Company or Licensee or MSLDC, as the case may be:*

*Provided that, in case of the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, the actual tax paid on income from any other regulated or unregulated Business or Other Business shall be excluded for the calculation of effective tax rate:*

*Provided further that effective tax rate shall be estimated for future year*

*based on actual tax paid as per latest available Audited accounts, subject to prudence check.*

34.5 *In case of Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT), “t” shall be considered as MAT rate including surcharge and cess:*

*Illustration:-*

(a) *In case of a Generating Company or Licensee or MSLDC paying Minimum Alternate Tax (MAT) at rate of 21.55% including surcharge and cess:*

*Base rate of return on equity =  $15.50/(1-0.2155) = 19.758\%$*

(b) *In case of Generating Company or Licensee or MSLDC paying normal corporate tax including surcharge and cess:*

(i) *Estimated Gross Income of Company as a whole for FY 2020-21 is Rs. 1,000 crores;*

(ii) *Income Tax for the year on above is Rs 240 crore;*

(iii) *Effective Tax Rate for the year 2019-20 =  $\text{Rs } 240 \text{ Crore} / \text{Rs } 1000 \text{ Crore} = 24\%$ ;*

(iv) *Base rate of return on equity =  $15.50 / (1-0.24) = 20.395\%$ .*

34.6 *Variation between the Income Tax estimated by the Commission for future year during MYT Order and Mid Term Review Order and the Income Tax approved by the Commission for the respective Year after truing up for respective year, shall be allowed for recovery as part of the Aggregate Revenue Requirement at the time of Mid-term Review or Truing-up, subject to prudence check:*

*Income Tax on any income stream from sources other than the Business regulated by the Commission shall not constitute a pass-through component in Tariff, and Income Tax on such other income shall be borne by the Generating Company or Licensee or MSLDC, as the case may be.”*

4.21.2 MSEDCL submits that it has not paid Income Tax in FY 2021-22, hence, it has not grossed up the return on equity by income tax.

#### **4.22 Incentives and Discounts for FY 2021-22**

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4.22.1 MSEDCL submits that during FY 2021-22, it has paid Rs. 367.37 Crs of incentives/discounts to the consumers for timely payment of bills as against Rs. 338.50 322.38 Crs approved by Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March, 2020.

**Table 121: Incentives/Discount for FY 21-22**

			Rs. Crs
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Incentives and Discount	338.50	367.37	28.87

4.22.2 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as per the Audited Accounts for FY 2021-22.

#### **4.23 Return on Equity for FY 2021-22**

4.23.1 MSEDCL submits that Regulation 29.1 of the MYT Regulations, 2019, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

*“29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:*

*Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual performance:*

*Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission*

*29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee*

*terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:*

*Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:*

*Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable*

- 29.3 *The Base 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:*

*Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.*

...

- 29.8 *In case of Distribution Wires Business, an additional rate of Return on Equity shall be allowed on Wires Availability at the time of true-up as per the following schedule:*
- a) *The target Wires Availability for recovery of base rate of return on equity shall be 95 percent for MSEDCL and 98% for other Distribution Licensees;*

b) *For every 0.50% over-achievement in Wires Availability, rate of return shall be increased by 0.50%, subject to ceiling of additional rate of Return on Equity of 1.50%;*

c) *Wires Availability shall be computed in accordance with the following formula:*

$$\text{Wires Availability} = (1 - (\text{SAIDI} / 8760)) \times 100:$$

*Provided that the System Average Interruption Duration Index (SAIDI) shall be calculated in accordance with the definition specified in Maharashtra Electricity Regulatory Commission (Standards of Performance of Distribution Licensees, Period for Giving Supply and Determination of Compensation) Regulations, 2014, as amended from time to time.*

29.9 *In case of Retail Supply Business, an additional rate of Return on Equity shall be allowed at the time of true-up, as per the following schedule:*

a) *If the percentage of assessed bills is less than 1.5% of the total number of bills issued during the year, then rate of return shall be increased by 1%;*

b) *If the percentage of assessed bills is more than 1.5% of the total number of bills issued during the year, for every 0.5% reduction in the percentage of assessed billing, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%.*

c) *If overall collection efficiency for the year is above 99 %, then rate of return shall be increased by 1%;*

d) *If overall collection efficiency for the year is below 99 %, for every 0.5% improvement in the overall collection efficiency, rate of return shall be increased by 0.25%, subject to ceiling of additional rate of Return on Equity of 1.00%."*

4.23.2 MSEDCL submits that the return on equity capital is allocated in the ratio of Fixed Assets between the 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.

4.23.3 MSEDCL has not paid any income tax for FY 2021-22. The return on equity has been computed as per the methodology specified in the MYT Regulations, 2019. Accordingly, MSEDCL has computed the RoE for Wires Business as shown in following tables:

**Table 122: RoE for Wires Business for FY 21-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
<b>Return on Equity (Wires Business)</b>			
Regulatory Equity at the beginning of the year	11,297.95	11,965.03	667.08
Equity portion of Assets Capitalisation	449.38	401.37	(48.01)
Equity portion of Assets Decapitalised	-	-	-
Regulatory Equity at the end of the year	11,747.33	12,366.40	619.07
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 14%*(1)	1,916.53	1,675.10	103.40
Return on Normative Equity portion of Asset Capitalization - 14%*(2)/2	38.12	28.10	(3.72)
Interest on Equity portion above 30% equity			
<b>Total Return on Regulatory Equity</b>	<b>1,954.65</b>	<b>1,703.20</b>	<b>99.68</b>

**Table 123: Additional RoE for Wires Business for FY 21-22**

Rs. Crs		
Particulars		FY 2021-22 (Approved)
Wires Availability above 98% (95% for MSEDCL)	%	97.47
Additional Rate of Return on Equity for Wire Availability (a) (%)	%	1.50%
<b>Additional Return on Equity Computation</b>		
Return on Regulatory Equity at the beginning of the year	Rs. Crore	179.48
Return on Regulatory Equity addition during the year	Rs. Crore	3.01
<b>Total Additional Return on Equity</b>	Rs. Crore	182.49

4.23.4 Accordingly, MSEDCL has computed the RoE for retail supply Business as shown in following tables:

**Table 124: RoE for Retail Supply Business for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Normative)	Deviation
<b>Return on Equity (Supply Business)</b>			
Regulatory Equity at the beginning of the year	1,256	1,330	74.12
Equity portion of Assets Capitalisation	50	45	(5.33)
Equity portion of Assets Decapitalised	-	-	-
<b>Regulatory Equity at the end of the year</b>	<b>1,306</b>	<b>1,374</b>	<b>68.79</b>
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 15.5%*(1)	235.85	206.13	12.97
Return on Normative Equity portion of Asset Capitalization - 15.5%*(2)/2	4.69	3.46	(0.47)
Interest on Equity portion above 30%			
<b>Total Return on Regulatory Equity</b>	<b>240.54</b>	<b>209.59</b>	<b>12.50</b>

**Table 125: Additional RoE for Retail Supply Business for FY 21-22**

Rs. Crs

Particulars	Unit	FY 2021-22 (Approved)
% of Assessed bills with respect total bills issued during the year	%	12.02%
Additional Rate of Return on Equity for Assesment of bills (a)	%	1.00%
Collection Efficiency for the year	%	99.12
Additional Rate of Return for collection efficiency (b)	%	1.00%
Total Additional Return on Equity (c) = (a) + (b)	%	2.00%
<b>Additional Return on Equity Computation</b>		
Return on Regulatory Equity at the beginning of the year	Rs. Crore	26.60
Return on Regulatory Equity addition during the year	Rs. Crore	0.45
<b>Total Additional Return on Equity</b>	Rs. Crore	<b>27.04</b>

4.23.5 MSEDCL requests the Hon'ble Commission to allow the RoE as computed above.

#### **4.24 Sharing of Efficiency Gains & Losses for FY 2021-22**

4.24.1 Regulations 9, 10 and 11 of the MYT Regulations, 2019 specify the controllable and uncontrollable factors, mechanism of pass-through of gains and losses on account of uncontrollable factors, and the mechanism for sharing on account of controllable factors respectively. The mechanism for

sharing of gains and losses on account of controllable factors are as follows:

*“11.1 The approved aggregate gain to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:*

- (a) Two-third of the amount of such gain shall be passed on as a rebate in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;*
- (b) The balance amount of such gain shall be retained by the Generating Company or Licensee or MSLDC.*

*11.2 The approved aggregate loss to the Generating Company or Licensee or MSLDC on account of controllable factors shall be dealt with in the following manner:*

- (a) One-third of the amount of such loss may be passed on as an additional charge in Tariff over such period as may be stipulated in the Order of the Commission under Regulation 8.4;*
- (b) The balance amount of such loss shall be absorbed by the Generating Company or Licensee or MSLDC.”*

4.24.2 Parameters such as O&M Expenses, Interest on Working Capital for which specific norms have been specified in the MYT Regulations, have been calculated on normative basis.

4.24.3 As these parameters need to be treated as controllable under the MYT Regulations, 2019, any variation in the actual expenses as against the permissible normative levels has been shared between MSEDCL and consumers.

4.24.4 O&M Expenses: The actual O&M Expenses as per the Audited Accounts for FY 2021-22 are higher than that of allowed on normative basis.

4.24.5 Interest on Working Capital: The actual IoWC expense as per the Audited Accounts for FY 2021-22 is higher than that allowed on normative basis.

4.24.6 Distribution Loss: The actual distribution loss (excluding EHV Sales) for FY 2021-22 is higher than that approved in the MYT Order.

4.24.7 The summary of sharing of efficiency gains/(loss) on account of O&M Expenses and IoWC is shown in the Table below:

**Table 126: Sharing of Efficiency Gains/(Losses) on O&M and IoWC Expenses for FY 2021-22**

Rs. Crs

Particulars	Normative	Actual	Gains/ (Loss)	2/3 of Efficiency gains/Losses	1/3 of Efficiency Gains/Losses	Net Entitlement after sharing
O&M Expenses	7,594.79	8,735.25	(1,140.46)	(760.31)	(380.15)	8,355.10
Interest on Working Capital	123.08	2,384.99	(2,261.91)	(1,507.94)	(753.97)	877.05

4.24.8 MSEDCL submits that it has computed the sharing of efficiency gain/ loss considering 16.00% as approved distribution loss target (Excluding EHV Sales and OA Sales) against the actual distribution losses (Excluding EHV Sales and OA Sales)

4.24.9 The summary of sharing of efficiency gains/(loss) on account of efficiency in Distribution Losses is shown in the Table below:

**Table 127: Sharing of Gains/(Losses) due to lower Distribution Loss in FY 2021-22**

Particulars	Amount (Rs. Crs)
Actual Distribution Loss	16.57%
MYT approved Loss	16.00%
Sales Excl. EHV sales in MUs	1,04,978
EHV Sales in MUs	11,351
Total Sales in MUs	1,16,329
IntraSTS loss (Proposed)	3.38%
Power Requirement at Ex-Bus Periphery (Actual) in MUs	1,41,973
Power Requirement at Ex-Bus Periphery (Normative) in MUs	1,41,082
Additional/ (lower) Power purchase due to higher distribution loss in MUs	890.6
Marginal Variable Cost of Power Purchase Rs./kWh	3.28
Additional/(Lower) Power purchase Cost due to lower distribution loss	291.91
2/3 Efficiency gain/(loss)	(194.60)
1/3 Efficiency gain/(loss) to be borne by the consumers	(97.30)

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

**Table 128: Impact of Sharing of Gains/Losses for FY 21-22**

Particulars	Amount Rs. Crs
O&M Expenses	380.15
IoWC	753.97
Impact of Gain in Distribution Loss passed on Consumers	(97.30)
<b>Total</b>	<b>1,037</b>

4.24.11 MSEDCL requests the Hon'ble Commission to allow the sharing of gains and losses as submitted in above table.

#### **4.25 Stabilisation amount as per MYT Order**

4.25.1 MSEDCL submits that in the MYT Order, Hon'ble Commission has allowed revenue recovery as shown in the following table. MSEDCL has considered the same.

**Table 129: Stabilisation amount as per MYT Order for FY 2021-22**

Particulars	Formula	Rs. Crs FY 2021-22
ARR approved by the Hon'ble Commission	A	81,721.00
Approved Revenue at existing tariff	B	88,667.00
Approved Revenue Gap	C = A-B	(6,946.00)
Projected Revenue at approved tariff	D	84,400.00
Additional Recovery from approved tariff	E = D-B	(4,267.00)
Previous Revenue Gap recovery allowed after adjustment of current year Revenue Gap	F = E-C	2,679.00

#### **4.26 Additional Surcharge refund**

4.26.1 Hon'ble Commission vide MTR Order dated 12th September 2018 in Case No. 195 of 2017 determined the Additional Surcharge (ASC) for the first time. Levy of ASC to Open Access consumer availing power from Group Captive power plant & IPP was started from the month of September 2018.

4.26.2 The Group captive consumers' M/s. JSW Steel Ltd. & Ors and M/. Sai Wardha Power Generation Ltd filed Appeal No. 311 & 315 of 2018 in APTEL against levy of ASC to group captive consumers.

4.26.3 The Hon'ble APTEL vide Order dated 27 March, 2019 disallowed ASC to group captive consumers and set aside the portion of Hon'ble Commission's Order which was discriminating between Captive & Group Captive Consumers.

4.26.4 MSEDCL filed Civil Appeal No. 5074 of 2019 & 5075 of 2019 in Supreme Court with Interlocutory Application for Stay against the APTEL Order dated 27 March 2019 in Appeal No 311 of 2018 and 315 of 2018 respectively.

4.26.5 Hon'ble Supreme Court vide Order dated 1<sup>st</sup> July 2019 granted stay on the APTEL Order dated 27 March 2019. MSEDCL again started levying Additional Surcharge to Group Captive Consumers from July-2019. The Hon. Supreme Court vide Order dated 10<sup>th</sup> December, 2021 in Civil Appeal No 5074/5075 of 2019 upheld the APTEL Order dated 27 March, 2019 and ruled as under:

*"16. ... Therefore, as such once it is held that the captive consumers/captive users are not liable to pay the additional surcharge leviable under Section 42(4) of the Act, 2003, the appellant – distribution licensee has to refund the same. However, considering the fact that there shall be huge liability on the appellant – distribution licensee if they have to now refund the amount of additional surcharge recovered at a stretch, we direct that the additional surcharge already recovered from the captive consumers/captive users shall be adjusted in the future wheeling charges bills."*

4.26.6 Subsequently, the group captive consumers viz M/s JSW Energy Ltd & Ors filed the Contempt Petition (Civil) 112-113 of 2022 in March 2022 for alleged non-compliance of the Hon'ble Supreme Court Order dated 10 December 2021 in Civil Appeal No 5074/5075 of 2019. The Hon'ble Supreme Court vide Order dated 15.3.2022 in Contempt Petition (Civil) 112-113 of 2022 was pleased to close the contempt proceedings and further directed that,

*"... the amount of additional surcharge already recovered which the Distribution Company is liable to refund to the captive consumers/captive users, the same may be adjusted in the future*

*wheeling charge bills (as ordered earlier) by giving 50% of the credit of the actual bills meaning thereby the 50% of the actual wheeling charge bills shall be given credit and adjustment towards the additional surcharge already recovered, meaning thereby the concerned captive consumers/captive users have to make the payment of 50% of the actual wheeling charge bills and the rest 50% would be adjusted towards amount due and payable/refunded to them.”*

4.26.7 As per the Hon. SC orders, MSEDCL immediately stopped levy of ASC to group Captive Consumers in January 2022. MSEDCL has adopted following methodology for refund of ASC.

a) For Non- Open Access Consumer:

Group Captive consumers who are presently not under open access, the ASC is being refunded in installments through IT Billing system from the bill for the month of March-2022. The number of installments are equal to number of months for which ASC was levied in their monthly Open Access bills and paid by the consumers.

b) For Open Access Consumer:

The ASC amount in respect of live group captive open access consumers is being refunded limited to 50% of their Wheeling Charges or Transmission charges in every monthly open access bill as per the directives of the Supreme Court through IT Billing system from the bill for the month of March-2022.

4.26.8 MSEDCL has refunded amount to the tune of Rs. 12.27 Cr in the month of March 2021. MSEDCL is refunding the ASC in every month to eligible consumers to the tune of Rs. 15 Crs. The refund burden will be Rs. 180 Crs annually. The refund will continue at least for three years for such non-OA consumers and more than five years from open access consumers. Accordingly, the same is being claimed in the ARR. Hon'ble Commission is requested to approve the same.

#### **4.27 Impact of payment to MPECS for FY 2021-22**

4.27.1 Hon'ble Commission in the MYT Order dated 3rd November 2016 has

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approved following amounts 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

4.27.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 has approved Rs. 34.15 Crs towards payment to MPECS for FY 2021-22 as the same was allowed under Order dated 2<sup>nd</sup> May, 2016. The Hon'ble Commission in the MYT Order also ruled that it shall consider the actual amount towards this head at the time of truing up of FY 2021-22.

4.27.3 Accordingly, MSEDCL has claimed Rs. 34.40 Crs. towards the actual payments to MPECS for FY 2021-22 as per the Audited accounts.

#### **4.28 Incremental and Consumption and Bulk Consumption Rebate for FY 2021-22**

4.28.1 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 has approved cost towards incremental rebate.

4.28.2 MSEDCL has claimed Rs. 546.44 Crs towards Incremental Consumption and Bulk consumption rebate for FY 2021-22 as per the Audited Account as against Rs. 439.66 Crs as approved by the Hon'ble Commission.

**Table 130: Incremental Consumption Rebate for FY 21-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Incremental Consumption & Bulk Consumption Rebate	548.50	546.44	(2.06)

#### **4.29 Aggregate Revenue Requirement for FY 2021-22**

4.29.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2021-22 is as follows:

**Table 131: ARR for Distribution Wires for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Operation & Maintenance Expenses	4,717.50	5,167.37	449.87
Depreciation	2,667.58	2,592.45	(75.13)
Interest on Loan Capital	1,148.03	952.91	(195.12)
Interest on Normative Working Capital	142.71	123.08	(19.63)
Interest on deposit from Consumers and Distribution System Users	56.76	36.04	(20.72)
Other Finance Charges	-	4.55	4.55
Provision for bad and doubtful debts	73.26	45.96	(27.30)
Opex Schemes	84.31	8.59	(75.72)
Contribution to contingency reserves	153.92	153.92	(0.00)
Income Tax	-	-	-
Return on Equity Capital	1,954.65	1,885.69	(68.96)
<b>Aggregate Revenue Requirement</b>	<b>10,998.72</b>	<b>10,970.55</b>	<b>(28.17)</b>
<b>Less</b>			
Income from Wheeling Charges	-	0.04	0.04
Income from Open Access Charges	214.92	129.92	(85.00)
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>10,783.79</b>	<b>10,840.59</b>	<b>56.80</b>
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>10,783.79</b>	<b>10,840.59</b>	<b>56.80</b>

4.29.2 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2021-22 is as follows:

**Table 132: ARR for Supply Business for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Power Purchase Expenses (including Inter-State Trans)	60,568.92	69,478.78	8,909.86
Operation & Maintenance Expenses	2,540.19	2,782.43	242.24
Depreciation Expenses	296.40	288.05	(8.35)
Interest on Loan Capital	127.56	105.88	(21.68)
Interest on Normative Working Capital*	-	-	-
Interest on Consumers Security Deposit	510.85	324.34	(186.51)
Other Finance Charges	-	40.92	40.92
Provision for bad and doubtful debts	659.37	413.66	(245.71)
Other Expenses	55.21	655.40	600.19
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,809.25	5,977.83	168.59
Incentives/Discounts	338.50	367.37	28.87
Contribution to Contingency Reserves	17.10	17.10	(0.00)
Return on Equity Capital	240.54	236.63	(3.90)
Additional Surcharge Refund	-	12.27	12.27
Effect of sharing of gains/losses	-	1,036.82	1,036.82
Impact of payment to MPECS	34.15	34.40	0.25
Opex Scheme	26.18	23.08	(3.10)
Incremental Consumption Rebate	548.50	546.44	(2.06)
<b>Aggregate Revenue Requirement for Supply Business</b>	<b>71,772.71</b>	<b>82,341.40</b>	<b>10,568.69</b>
Stabilisation amount as per MYT Order	2,679.00	2,679.00	-
<b>Total Revenue Expenditure</b>	<b>74,451.71</b>	<b>85,020.40</b>	<b>10,568.69</b>
<b>Less</b>			
Non-Tariff Income	398.73	1,208.37	809.63
Income from Additional Surcharge	117.28	402.62	285.33
Income from Trading of Surplus Power	319.75	195.93	(123.83)
<b>Net Aggregate Revenue Requirement</b>	<b>73,615.94</b>	<b>83,213.49</b>	<b>9,597.55</b>
Revenue from Sale of Power	84,400.00	85,903.28	1,503.28
Revenue from Retail Supply Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(10,784.06)</b>	<b>(2,689.79)</b>	<b>8,094.27</b>

#### 4.30 Revenue from sale of electricity for FY 2021-22

4.30.1 MSEDCL has considered the revenue for FY 2021-22 based on the Audited Accounts as shown in following table.

**Table 133: Revenue from Sale of Power for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Revenue from Sale of Power	84,400.00	85,903.28	1,503.28

4.30.2 The Annual Accounts of MSEDCL shows the revenue from operations which includes various revenue items. However, being not part of revenue from sale of power at retail tariff and as per practice in vogue, MSEDCL has shown certain items of revenue separately.

4.30.3 MSEDCL humbly requests to the Hon'ble Commission to approve the category-wise revenue from sale of power as shown in above table.

**4.31 Non-Tariff Income for FY 2021-22**

4.31.1 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 etc.

4.31.2 MSEDCL has claimed a Non-Tariff Income of Rs. 1,208.37 Crs as against Rs. 379.75 398.73 Crs as approved by the Hon'ble Commission.

**Table 134: Non-Tariff Income for FY 21-22**

Rs. Crs

Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Rents of land or buildings	1.14	0.91	(0.23)
Sale of Scrap	57.39	41.66	(15.72)
Income from investments	20.40	26.10	5.70
Income from sale of tender documents	9.83	4.71	(5.12)
Prompt payment discount from REC/PFC	13.41	-	(13.41)
Other/Miscellaneous receipts	296.57	1,134.68	838.11
Revenue from subsidy & grant	-	0.30	0.30
Interest on Contingency Reserve Investments	-	-	-
<b>Non Tariff Income</b>	<b>398.73</b>	<b>1,208.37</b>	<b>809.63</b>

4.31.3 As provided in the Regulation 37.3 of the MYT Regulations, 2019, delayed Payment Charge and Interest on Delayed Payment is not considered under

Non-Tariff Income.

4.31.4 MSEDCL has not considered income from grants and contribution reported under non-tariff income, as the treatment (i.e. excluded while calculating depreciation) to the same is already considered while computing the depreciation for the FY 2021-22.

4.31.5 MSEDCL further submits that the 'Other/Miscellaneous receipts' include

<b>Particulars</b>	<b>Amount (Rs Cr.)</b>
Interest income from investments in Bank Deposits	1.38
Sundry Credit Balances written back	137.10
Miscellaneous Receipts	2.43
Penalty charges recovered from vendor	56.96
Other income related to prior period	0.88
Profit on sale of Asset	0.08
Others	9.37
Interest from Banks other than fixed deposit	343.82
Service charges from MNRE	59.71
GBI claims received from IREDA	8.86
Interest subsidy received from NEF Scheme	514.10
<b>Total</b>	<b>1,134.68</b>

**4.32 Income from Open Access Charges for FY2021-22**

4.32.1 MSEDCL has an income of Rs. 129.92 Cr. from Open Access Charges as against Rs. 214.92 Crs as approved by the Hon'ble Commission.

**Table 135: Income from Open Access Charges for FY 21-22**

<b>Particulars</b>	Rs. Crs		
	<b>FY 2021-22 (Approved)</b>	<b>FY 2021-22 (Actual)</b>	<b>Deviation</b>
Income from Open Access Charges	214.92	129.92	(85.00)

4.32.2 Hon'ble Commission vide MYT Order dated 30th March 2020 in Case no. 322 of 2019 has not considered income towards the Transmission Charges proposed to be retained with MSEDCL to be a part of income from OA

Charges. Accordingly, MSEDCL has excluded the transmission charges open access revenue from the income from OA charges.

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

#### **4.33 Income from Trading of Surplus Power for FY 2021-22**

4.33.1 MSEDCL has reported an Income from Trading of Surplus Power of Rs. 195.93 Crs. Details of surplus power traded is provided in following table.

**Table 136: Income from Trading of Surplus Power for FY 21-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Income from Trading of Surplus Power	319.75	195.93	(123.83)

4.33.2 Hon'ble Commission also ruled that it shall undertake prudence check of sale of surplus power for FY 2020-21 onwards. The detailed compliance to the said directives has already been provided under Chapter 'Compliance to Directives'

4.33.3 MSEDCL humbly requests to the Hon'ble Commission to allow the income from sale of surplus power as shown in above table.

#### **4.34 Income from Wheeling Charges for FY 2021-22**

4.34.1 MSEDCL has reported an income from Wheeling Charges of Rs. 0.04 Crs as against Nil as approved by the Hon'ble Commission for FY 21-22

**Table 137: Income from Wheeling Charges for FY 21-22**

Rs. Crs			
Particulars	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Income from Wheeling Charges	-	0.04	0.04

4.34.2 Hence, MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Wheeling Charges as per the Audited Accounts as shown in the above table.

**4.35 Income from Additional Surcharge for FY 2021-22**

4.35.1 MSEDCL has reported an income from Additional Surcharge of Rs. 402.62 Crs.

**Table 138: Income from Additional Surcharge for FY 21-22**

Particulars	Rs. Crs		
	FY 2021-22 (Approved)	FY 2021-22 (Actual)	Deviation
Income from Additional Surcharge	117.28	402.62	285.33

4.35.2 MSEDCL humbly requests to the Hon'ble Commission to true up the Income from Additional Surcharge as per the Audited Accounts as shown in the above table.

**4.36 Revenue Gap/(Surplus) for FY 2021-22**

4.36.1 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 2021-22 is presented in the Table below.

**Table 139: ARR for Wires & Supply Business for the FY 2021-22**

Rs. Crs			
<b>Particulars</b>	<b>FY 2021-22 (Approved)</b>	<b>FY 2021-22 (Actual)</b>	<b>Deviation</b>
Power Purchase Expenses	60,568.92	69,478.78	8,909.86
Operation & Maintenance Expenses	7,257.69	7,949.79	692.11
Depreciation Expenses	2,963.97	2,880.50	(83.47)
Interest on Loan Capital	1,275.59	1,058.79	(216.80)
Interest on Normative Working Capital	142.71	123.08	(19.63)
Interest on Consumers Security Deposit	567.61	360.38	(207.23)
Other Finance Charges	-	45.47	45.47
Provision for bad and doubtful debts	732.63	459.62	(273.01)
Other Expenses	55.21	655.40	600.19
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,809.25	5,977.83	168.59
Incentives/Discounts	338.50	367.37	28.87
Contribution to Contingency Reserves	171.02	171.02	(0.00)
Opex Scheme	110.49	31.67	(78.82)
Return on Equity Capital	2,195.18	2,122.32	(72.86)
RLC refund	-	-	-
Additional Surcharge refund	-	12.27	12.27
Effect of sharing of gains/losses	-	1,036.82	1,036.82
Impact of payment to MPECS in future years	34.15	34.40	0.25
Incremental Consumption Rebate	548.50	546.44	(2.06)
<b>Aggregate Revenue Requirement</b>	<b>82,771.43</b>	<b>93,311.95</b>	<b>10,540.52</b>
Stabilisation amount as per MYT Order	2,679.00	2,679.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>85,450.43</b>	<b>95,990.95</b>	<b>10,540.52</b>
<b>Less</b>			
Non-Tariff Income	398.73	1,208.37	809.63
Income from Open Access Charges	214.92	129.92	(85.00)
Income from Trading of Surplus Power	319.75	195.93	(123.83)
Income from Wheeling Charges	-	0.04	0.04
Income from Additional Surcharge	117.28	402.62	285.33
<b>Net Aggregate Revenue Requirement</b>	<b>84,399.73</b>	<b>94,054.08</b>	<b>9,654.35</b>
Revenue from Sale of Power	84,400.00	85,903.28	1,503.28
Revenue from Retail Supply Business	-	-	-
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(0.27)</b>	<b>8,150.80</b>	<b>8,151.07</b>

4.36.2 The Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020 has approved Aggregate Revenue Requirement of Rs. 85,450.43 Crs for FY 2021-22. MSEDCL submits actual ARR of Rs. 95,990.95 Crs. with a deviation of Rs. 10,540.52 Crs. Considering the impact of revenue and other income,

the truing up requirement works out to be Rs. 8,151.07 Cr. MSEDCL requests the Hon'ble Commission to allow the true up requirement as submitted above.

## **5 PROVISIONAL TRUE UP OF FY 2022-23**

### **5.1 Preamble**

5.1.1 This section outlines the performance of MSEDCL for the FY 2022-23 in line with the provisions of the MERC (MYT) Regulations, 2019. MSEDCL hereby submits detailed Provisional Truing-up for FY 2022-23 comparing the estimated expenditures for FY 2022-23 based on latest available information vis-à-vis the forecast approved by the Hon'ble Commission vide MYT Order dated 30th March, 2020 in Case No. 322 of 2019.

### **5.2 Principles of Truing-up for FY 2022-23**

5.2.1 MSEDCL submits that the MERC (Multi Year Tariff) Regulations, 2019 specifies that the Mid-Term Review Petition shall comprise of Provisional Truing up for FY 2022-23 which has to be carried out based on the provisions of the MERC (Multi Year Tariff) Regulations, 2019.

5.2.2 In line with the provisions of MERC (Multi Year Tariff) Regulations, 2019, MSEDCL has computed this Provisional Truing-up for FY 2022-23.

5.2.3 Accordingly, based on the latest available information, the estimated Aggregate Revenue Requirement, revenue and gap for FY 2022-23 are discussed in detail in the following paragraphs.

### **5.3 Category Wise Sales for FY 2022-23**

5.3.1 MSEDCL submits that it has considered the actual sales till September 2022 and estimated the sales for remaining six months of FY 2022-23 considering historical trend. Details of month wise sales are given in Form 1 of the Regulatory Formats.

5.3.2 Category wise provisional sales for FY 2022-23 for MSEDCL excluding all Distribution Franchisee have been summarized in the following table:

**Table 140: Category wise Sales for FY 2022-23**

Category	Sales (MUs)		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Residential	24,908.16	25,691.93	783.78
Commercial	9,844.71	7,714.52	(2,130.19)
HT-Industrial	36,308.73	36,797.10	488.36
LT-Industrial	8,259.83	9,109.36	849.53
PWW	2,739.23	2,687.52	(51.70)
Street Light	2,555.71	1,052.34	(1,503.38)
Agriculture	28,847.04	34,336.42	5,489.38
Public Services	1,842.58	1,918.62	76.04
Railways	83.72	109.11	25.39
Others	740.32	877.41	137.09
<b>MSEDCL Excl. DF</b>	<b>1,16,130.02</b>	<b>1,20,294.33</b>	<b>4,164</b>

5.3.3 MSEDCL submits that in this petition, LT Agriculture sales for FY 2022-23 have been estimated based on half yearly sales plus the sales for remaining six months keeping in view the water availability for irrigation in the State. The actual sales to Agriculture consumers will depend upon Rabi crop cultivation and the same shall be updated to the Hon'ble Commission during the months of February/March 2023.

5.3.4 MSEDCL hereby requests the Hon'ble Commission to approve the Sales for FY 2022-23 as submitted as part of this Petition.

#### **5.4 Distribution Losses for FY 2022-23**

5.4.1 In MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019, the Hon'ble Commission had approved distribution loss of 14.0% (excluding EHV Sales and OA Sales) for FY 2022-23. MSEDCL has considered targeted loss levels for estimation as shown in the following table.

**Table 141: Distribution Losses FY 2022-23**

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Distribution Loss (excl. EHV Sales & OA Sales)	14.0%	14.0%	-

5.4.2 MSEDCL requests the Hon'ble Commission to approve the Distribution Losses for FY 2022-23 as per the above table.

## 5.5 Energy Balance for FY 2022-23

5.5.1 The quantum of sales as shown in above para represents the sales of MSEDCL excluding the sales in the area served by Distribution Franchisees in the year FY 2022-23.

5.5.2 Further, 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, estimated energy balance for FY 2022-23 is computed as below:

**Table 142: Energy Sales for MSEDCL for FY 2022-23**

Particulars	MUs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Energy Sales by MSEDCL for FY 2020-21	1,16,130.02	1,20,294.33	4,164.31
Add: Category wise sales in DF area	3,589.23	4,651.70	1,062.46
Add: Solar Offset Units			-
Add: OA Sales (Conventional)	3,983.40	4,631.00	647.60
Add: Renewable OA	859.40	1,988.00	1,128.60
<b>Total Energy Sales</b>	<b>1,24,562.05</b>	<b>1,31,565.03</b>	<b>7,002.98</b>

5.5.3 MSEDCL submits that the total energy sales for FY 2022-23 is 1,31,565.03 MUs as compared to 1,24,562.05 MUs which was approved by the Hon'ble Commission in MYT Order dated 30<sup>th</sup> March, 2020. The Hon'ble Commission is requested to allow the same.

5.5.4 Considering the principles discussed in energy balance for FY 2020-21 and FY 2021-22, MSEDCL has computed the energy balance for FY 2022-23 as summarised in the following table.

**Table 143: Energy Requirement and Energy Balance FY 2022-23**

Particulars	Calculation	UoM	FY 2022-23	
			MYT Order	Estimated
LT Agriculture Sales (Including D.F)	a	MU	27,395	33,265
LT Sales excluding Agriculture Sales (Including D.F)	b	MU	48,249	47,464
HT Sales excluding EHV level sales (Including D.F)	c	MU	32,916	31,366
<b>Total Sales including D.F (Excluding EHV Sales)</b>	<b>d=a+b+c</b>	<b>MU</b>	<b>1,08,560</b>	<b>1,12,094</b>
OA Sales (Renewables)	e	MU	859	1,988
OA Sales (Conventional)	f	MU	3,983	4,631
Retail Energy Sale to Consumers (Excluding EHV Sales)	A=d+e+f	MU	1,13,403	1,18,713
Sale due to Surplus Energy Traded	B=1%*(d+t)	MU	1,197	-0
<b>Retail Energy Sale including surplus traded (Excluding EHV Sales)</b>	<b>C=A+B</b>	<b>MU</b>	<b>1,14,600</b>	<b>1,18,713</b>
<b>Total Power Purchase</b>	<b>D=g+h</b>	<b>MU</b>	<b>1,44,484</b>	<b>1,50,619</b>
Power Purchase Quantum from Intra-State sources	g	MU	1,04,046	1,02,748
Power Purchase Quantum from Inter-State sources	h	MU	40,438	47,871
Inter-State Losses	i	%	3.10%	3.10%
Power Purchase Quantum from Inter-State sources at MS Periphery	j=h*(1-i)	MU	39,183	46,385
Add: FBSM	0	MU	-	-331
<b>Power Quantum handled at Maharashtra Periphery</b>	<b>k=g+j</b>	<b>MU</b>	<b>1,43,229</b>	<b>1,48,802</b>
Infirm Non-PPA Wind Power	l=e/(1-q)	MU	888	2,053
Input for OA Consumption	m=f/(1-q)	MU	4,114	4,783
<b>Total Power Purchase Quantum Handled</b>	<b>n=k+l+m-v</b>	<b>MU</b>	<b>1,47,657</b>	<b>1,55,638</b>
Surplus Power Traded	o=B	MU	1,197	-0
<b>Energy Requirement at G&lt;-&gt;T Periphery</b>	<b>p=n-o</b>	<b>MU</b>	<b>1,46,460</b>	<b>1,55,639</b>
<b>Intra-State Transmission Loss</b>	<b>q</b>	<b>%</b>	<b>3.18%</b>	<b>3.18%</b>
Intra-State Transmission Loss	r=p*q	MU	4,655	4,947
Net Energy requirement at T<->D Periphery	s=p-r	MU	1,41,805	1,50,691
EHV Sales	t	MU	11,159	12,852
Net Energy Available for Sale at 33kV	u=s-t	MU	1,30,645	1,37,840
Energy injected and drawn at 33kV	v	MU	573	905
<b>Total Energy Available for Sale at 33kV</b>	<b>E=u+v</b>	<b>MU</b>	<b>1,31,219</b>	<b>1,36,935</b>
<b>Energy Available for Sale including Surplus traded (excl. OA Sales)</b>	<b>F=E-l-m+o</b>	<b>MU</b>	<b>1,27,414</b>	<b>1,30,316</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>G=E-A</b>	<b>MU</b>	<b>17,816</b>	<b>18,222</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>H=G/F</b>	<b>%</b>	<b>14.0%</b>	<b>14.0%</b>

5.5.5 MSEDCL requests the Hon'ble Commission to approve the Energy Balance as shown in the table above.

## 5.6 Power Purchase Expenses for FY 2022-23

5.6.1 MSEDCL submits that it has considered the power purchase till September 2022 (provisional) and projected power purchase for remaining 6 months of FY 2022-23 considering sales projection with the estimated Distribution Losses.

5.6.2 Estimation for H2 of FY 2022-23

A) MSPGCL Stations

MSEDCL has considered the quantum of energy available for sale from MSPGCL stations based on the contracted capacity of each station and average month wise actual availability for last 3 years (i.e. FY 2019-20 to FY 2021-22). The auxiliary consumption is considered as approved by Hon'ble Commission in MYT Order.

The variable cost for H2 of FY 2022-23 is considered same as actual variable cost billed up to the month of September 2022 for each of the station.

The fixed cost is considered same as that approved by the Hon'ble Commission in MYT Order for FY 2022-23.

B) NTPC Stations

MSEDCL has considered the quantum of energy available for sale from NTPC stations based on the contracted capacity of each station and normative availability. The auxiliary consumption is considered as approved by Hon'ble Commission in MYT Order. MSEDCL has considered PGCIL Loss of 3.10% on the ex-bus energy to arrive at the total energy available at State Periphery.

The variable cost for H2 of FY 2022-23 is considered based on the actual variable rate billed by NTPC stations up to August 2022. Accordingly, the variable cost is worked out for H2 of FY 2022-23.

The fixed cost is considered in line with the fixed cost approved by the Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020.

C) IPP Stations

MSEDCL has considered the quantum of energy available for sale from IPPs based on the contracted capacity of each station and normative availability. The auxiliary consumption is considered as approved by Hon'ble Commission in MYT Order.

The variable rates are considered based on the quoted escalable and non-escalable rates of the respective IPPs for FY 2022-23. In addition to this, MSEDCL has also continued the impact of actual rate of transportation and Change in Law claims made by respective IPPs in September 2022 and projected the same for H2 of FY 2022-23.

Further, in case of APML stations (4 units) and RIPL stations (2 units), additional impact of Change in Law with respect to Coal shortfall is also considered in H2 of FY 2022-23 which is in line with the variable rates billed by such power stations in September 2022.

**Impact of MoP direction for blending of 6% imported coal**

It is submitted that MoP vide letter dated 09.01.2023 have directed all Central/State Gencos and IPP's for mandatory blending of 6% (by weight) imported coal for the remaining period of this current financial year and H1 of next financial year (up to September 2023).

In view of the above direction, it is submitted that the impact of blending of imported coal has already been considered for MSPGCL and NTPC stations since the rates projected for H2 of FY 2022-23 for these stations are on the basis of H1 of FY 2022-23, which already accounts for blending of imported coal taking into account the MoP letters dated 20.10.2021, 7.12.2021, 28.04.2022 and 26.05.2022.

Further, in case of APML and RIPL stations, the impact of imported coal blending is already taken into account since the impact of coal shortfall is already reflected in the variable rates.

GMR Warora

As per the tentative calculation of impact of blending of coal for the month of Dec 22 is conveyed by GMR is Rs. 0.3680 per unit

Sai Wardha

SWPGL has blended imported coal for the September-2022, October-

2022 and November-2022 with different blending percentage i.e. 5.52%, 11.04% and 6.41% respectively

Change in Law rate i.e. Change in Law per unit Net scheduled Generation is obtained by taking ratio of change in law and Net Scheduled generation obtained by taking ratio of change in law and Net Scheduled generation Accordingly, Change in Law rate for 1% blending is obtained by dividing the CIL rate by blending percentage

CIL rate for 6% blending is obtained by multiplying CIL Rate for 1% blending with 6%

Finally Average of all 3 months is 0.3237 is being considered for SWPGL Further, it is submitted that in case of CGPL and JSW, the projections submitted up to Mar 23 is per the current CERC index.

The variable cost for each month of H2 of FY 2022-23 is hence derived based on the variable rate considered as discussed in above paragraphs.

The fixed cost for IPPs is considered based on the quoted non-escalable capacity charges of respective IPPs for FY 2022-23 in their respective PPA.

**D) Renewables**

MSEDCL has considered the net purchase from Renewable sources (i.e. Wind, Solar, Biogas, Biomass, MSW and Small Hydro) based on the actual trend in generation seen in the last 3-4 years in each of the sources. MSEDCL has considered the actual CUF for FY 2021-22 for each of the sources and computed expected generation in H2 of FY 2022-23 based actual addition in RE capacity during this period.

The variable rates considered for Renewable sources are the weighted average rates of all generators having PPA with MSEDCL. For estimating rates for H2 of FY 2022-23, MSEDCL has also taken in to account the contracted capacity which are planned to be commissioned in the next 6 months.

E) Short Term Purchase: It is submitted that MSEDCL had filed a Petition for approval of short term purchase during the months of March 2023 and April 2023 before the Hon'ble Commission considering the unprecedented increase in demand and lower availability of generating stations due to coal shortfall, which was witnessed in summer months of 2022. The Hon'ble Commission vide its Order dated 30 August 2022 in Case No. 148 of 2022 had given approval for purchase of short term purchase at a rate of Rs. 7.44 to 7.85 per unit. However, since the situation of coal availability has improved over the last few months, it is submitted that the MSEDCL may be able to meet its demand from its contracted sources itself. However, it is submitted to the Hon'ble Commission that in case such a situation arises again in summer months of 2023, MSEDCL may be allowed to purchase this power in order to meet the increase in demand. However, for the purpose of estimating purchase of power for provisional true-up, MSEDCL has not considered this short term source.

F) PGCIL Charges

MSEDCL has considered the actual PGCIL charges paid during H1 of FY 2022-23 and estimated accordingly for H2 of FY 2022-23

G) Impact on ECR due to installation Emission Control System (ECS) including Flue Gas Desulfurization (FGD):

The Ministry of Environment, Forest and Climate Change, Government of India (MoEFCC) on 07.12.2015, has notified the Environment (Protection) Amendment Rules, 2015 (MoEFCC Notification) which mandates that all thermal power plants are required to comply with the revised emission norms as specified in the MOEF Notification to control the SO<sub>2</sub> by installation of Flue Gas De-sulphurizer (FGD) and NO<sub>x</sub> by Combustion Modification System. Accordingly, Hon. CERC has accorded in-principle approval of capital cost for installation of ECS and further, directed generators to file separate petitions for determination of tariff after implementation of the revised ECS as per provisions in Tariff Regulation, 2019. Further, Hon. MERC ordered that additional capital and operation expenditure and other consequential impact shall be considered on actual

basis for reimbursement under Change in Law subject to prudent check.

After commissioning of the ECS assets, the generators will start the billing towards the cost of the ECS to the beneficiaries, resulting in increased variable cost of generation. It is to submit that the impact of additional expenditure towards implementation of ECS is currently not considered in the present petition.

H) Impact due to Fly Ash Transportation Charges:

The Ministry of Environment, Forest & Climate Change (MOEFCC) issued notification dated 25.01.2016, prescribing bearing of the transportation cost of Fly Ash generated at power stations with the users of Fly Ash. As per Hon. CERC as well as Hon. MERC directives, actual additional expenditure incurred by generators towards transportation of ash is admissible under “Change in Law”.

5.6.3 Following table summarizes the source wise power purchase estimated by MSEDCL for FY 2022-23.

**Table 144: Source wise estimated Power Purchase for FY 2022-23**

Source	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Estimated	Deviation	Approved in MYT Order	Estimated	Deviation	Approved in MYT Order	Estimated	Deviation
MSPGCL	51,879.08	55,640.94	3,761.86	22,122.17	26,078.24	3,956.07	4.26	4.69	0.42
NTPC	27,631.72	35,548.81	7,917.10	10,931.57	15,420.91	4,489.34	3.96	4.34	0.38
NPCIL	4,932.23	4,420.04	(512.19)	1,475.51	1,391.31	(84.20)	2.99	3.15	0.16
SSP	1,209.94	826.91	(383.03)	248.06	169.52	(78.54)	2.05	2.05	(0.00)
Pench	136.50	105.20	(31.30)	27.98	21.57	(6.42)	2.05	2.05	0.00
Dodson	115.72	-	(115.72)	18.11	9.47	(8.64)	1.57		(1.57)
JSW	1,934.21	173.45	(1,760.8)	780.61	169.90	(610.71)	4.04	9.80	5.76
CGPL	5,157.89	3,721.39	(1,436.49)	1,623.54	2,032.18	408.64	3.15	5.46	2.31
Adani Power	20,986.36	17,131.28	(3,855.08)	8,214.29	9,856.35	1,642.06	3.91	5.75	1.84
EMCO Power	1,370.06	1,420.75	50.69	684.14	548.17	(135.97)	4.99	3.86	(1.14)
Rattan India	1,884.11	8,256.55	6,372.44	1,387.59	3,209.20	1,821.61	7.36	3.89	(3.48)
Sai Wardha		1,664.26	1,664.26		759.27	759.27		4.56	4.56
Renewable	27,246.49	19,881.63	(7,364.87)	11,162.10	9,121.59	(2,040.51)	4.10	4.59	0.49
Traders		1,770.95	1,770.95		1,036.10	1,036.10		5.85	
RECs		-	-		-	-			
Other Adjustments		-	-		0.03	0.03			
PGCIL Charges		-	-	3,661.91	3,661.91	0.00			
FBSM		-330.82	(330.82)		1.90	1.90		-0.06	
Inter State Purchase		4.22	4.22		3.02	3.02		7.14	
G-DAM		52.91	52.91		38.86	38.86		7.34	
<b>Total Power Purchase</b>	<b>1,44,484</b>	<b>1,50,288</b>	<b>5,804</b>	<b>62,337.57</b>	<b>73,529</b>	<b>11,192</b>	<b>4.31</b>	<b>4.89</b>	<b>0.58</b>

5.6.4 MSEDCL requests the Hon'ble Commission to approve the power purchase as submitted in the above table.

5.6.5 MSEDCL submits that details of RE Purchase for FY 22-23 are provided in following table.

Source	FY 2022-23	
	Quantum (MU)	Cost (in Rs. Crs.)
Wind	6,163.82	2,771.31
SHP	764.16	229.98
Bagasse based Cogen.	5,004.33	3,186.79
Biomass	273.19	195.71
MSW	0.39	0.20
<b>Total Non-Solar</b>	<b>12,205.88</b>	<b>6,383.99</b>
<b>Total Solar</b>	<b>7,675.74</b>	<b>2,737.60</b>
<b>Total</b>	<b>19,881.63</b>	<b>9,121.59</b>

## 5.7 Transmission Charges for FY 2022-23

5.7.1 The Intra State transmission charges are taken same as that approved in InSTS Order dated 30<sup>th</sup> March, 2020 in Case No. 327 of 2019.

5.7.2 Based on the above submission, the comparison of the approved and the estimated transmission charges for FY 2022-23 is as shown below:

**Table 145: Estimated Transmission Charges paid to Transmission Licensee for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Intra-State Transmission Charges	5,885.89	5,885.89	-
MSLDC Charges	29.18	29.18	-
<b>Total</b>	<b>5,915.07</b>	<b>5,915.07</b>	<b>-</b>

5.7.3 MSEDCL requests the Hon'ble Commission to approve the intra State transmission charges as submitted in the above table.

## **5.8 Fixed Costs for FY 2022-23**

5.8.1 Based on the Capital Cost and the consequent Capitalized Expenditure, Equity Component and Normative Debt, the fixed cost of MSEDCL for FY 2022-23 (excluding fixed component of PP cost) has been determined in accordance with the provisions of the MYT Regulations, 2019 outlined thereof. As outlined under the regulations, the fixed cost for MSEDCL has been determined under the following major heads along with other items of expenditure:

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

5.8.2 Net Aggregate Revenue Requirement has been computed after netting off Expenses capitalized.

5.8.3 Head wise comparison has been made between the values approved by the Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 and the estimated for FY 2022-23.

## **5.9 Normative Operation & Maintenance Expenses for FY 2022-23**

5.9.1 MSEDCL submits that Regulation 75 and Regulation 84 of the MERC (MYT) Regulations, 2019 provides for the O&M Expenses norms for Distribution Wires Business and Retail Supply of electricity respectively.

5.9.2 As per the said Regulations relating to the Truing-up of O&M expenses:  
*“75.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence*

*check by the Commission:*

*Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:*

*Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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 respective past five financial years as per the Labour Bureau, Government of India:*

....

- 75.3 *The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses for each year of the Control Period:*

...

*Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers connected to the Distribution Wires of at least 2 percent annually over the last 3 years:*

*Provided also that in case such increase in the number of consumers is*

*lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.”*

5.9.3 For computation of revised normative O&M expenses for FY 2022-23, revised normative O&M expenses for FY 2021-22 has been escalated by the escalation factor of 5.06% derived for FY 2021-22. Detailed calculations are given in the Regulatory Formats.

5.9.4 MSEDCL submits that calculated O&M expenses are allocated between the Wires Business and Retail Supply Business in the ratio of allocation matrix provided in the MYT Regulations, 2019), i.e., 65% to Wires Business and 35% to Supply Business. The same is shown in following table.

**Table 146: O&M Expenses for FY 2022-23**

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
O&M Expenditure for Wires business	4,898.36	5,186.36	288.00
O&M Expenditure for Retail Supply business	2,637.58	2,792.66	155.08
<b>Operation and Maintenance Expenses (A)</b>	<b>7,535.94</b>	<b>7,979.02</b>	<b>443.08</b>
Impact of arrears - Wires business	0	0	-
Impact of arrears - Supply business	0	0	-
<b>Sub Total (B)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Total O&amp;M Expenses (C = A+B)</b>	<b>7,535.94</b>	<b>7,979.02</b>	<b>443.08</b>

Rs. Crs

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

### 5.10 Opex Schemes for FY 2022-23

5.10.1 MSEDCL submits that as per the Regulation 75.7 and 84.7 of the MYT Regulations, 2019 the distribution licensee is allowed to undertake Opex schemes for wires and supply business for system automation, new technology and IT implementation etc. and such expenses may be allowed over and above normative O&M expenses. The relevant extract of the regulations is reproduced below:

*“75.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such*

*expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.*

84.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.”*

5.10.2 MSEDCL submits that it has considered the expenses till September 2022 (provisional) and projected expenses for remaining six months of FY 2022-23 as against Rs. 110.49 Cr. approved by Hon’ble Commission. Further, MSEDCL is also proposing certain new schemes for inclusion under the Opex schemes. MSEDCL submits that the details of Opex Schemes are provided under chapter Opex. Following table shows the estimated Opex Schemes expenses for FY 2022-23.

5.10.3 MSEDCL requests the Hon’ble Commission to allow the Opex Schemes Expenses as shown in table below.

**Table 147: Opex Scheme Expenses for FY 2022-23**

			Rs. Crs
Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Opex Schemes (Wires Business)</b>			-
Substation Monitoring System (SMS)	69.53	21.30	(48.23)
MSEDCL Cloud Project	8.32	7.98	(0.35)
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	0.77	0.25
Demand forecasting	-	0.68	
GIS	-	0.19	
Network analysis	-	0.19	
SAP s4 hana	-	8.99	
SD wan	-	0.03	
<b>Sub-Total</b>	<b>84.31</b>	<b>40.12</b>	<b>(44.19)</b>
<b>Opex Schemes (Retail Supply Business)</b>			-
Customer Care Center	6.60	26.46	19.86
RF-DCU (Expression of Interest & Tender)	4.80	4.80	-
MSEDCL Cloud Project	8.32	7.98	(0.35)
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	(5.94)
Vehicle Tracking System	0.53	0.77	0.25
Demand forecasting	-	0.68	
GIS	-	0.19	
Network analysis	-	0.19	
SAP s4 hana	-	8.99	
SD wan	-	0.03	
<b>Sub-Total</b>	<b>26.18</b>	<b>50.08</b>	<b>23.90</b>
<b>Total</b>	<b>110.49</b>	90.20	<b>(20.29)</b>

## 5.11 Capitalisation for FY 2022-23

5.11.1 Following table shows the estimated capitalization in FY 2022-23.

**Table 148: Capitalisation for FY 2022-23**

			Rs. Crs
Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Total Capitalisation</b>	2,090.36	4,620.94	2,530.58

5.11.2 Scheme wise details of the capitalisation are provided in the Regulatory Formats. However, for other assets such as land and land rights, buildings, etc., MSEDCL has estimated capitalisation. MSEDCL requests the Hon'ble Commission to approve the capitalisation as estimated above.

**Table 149: Capitalisation for FY 2022-23**

Sr. No.	Particulars	Amount (Rs. Crs)
1	Capitalisation as per Form 4	4,620.94
2	Estimated other Assets	159.83
3	Total	4,780.77

5.11.3 Hon'ble Commission in its previous Orders has allowed the capitalization towards schemes not forming part of any specific scheme. 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 submitted above and revise the GFA accordingly.

## 5.12 Depreciation for FY 2022-23

5.12.1 Considering the Opening GFA for FY 2022-23 without grants and consumer contribution, MSEDCL has estimated the depreciation for FY 2022-23 at weighted average rate for FY 21-22 as summarised in the following table.

**Table 150: Depreciation for FY 2022-23**

Particulars	Approved (Rs. Crs)	Estimated (Rs. Crs)
Net Opening GFA (Regulatory)*		59,436.93
Depreciation	3060.76	2,968.79

\* Excluding consumer contribution and grants

5.12.2 MSEDCL requests the Hon'ble Commission to allow the Depreciation as computed in above table.

## 5.13 Funding Pattern for FY 2022-23

5.13.1 As per the Regulation 27.1 of the MERC MYT Regulations, 2019, the debt-equity ratio as on the date of commercial operation shall be 70:30 of the

amount of capital cost approved by the Commission. The said Regulation also provides that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Licensee for determination of Tariff.

5.13.2 The funding pattern for FY 2022-23 for the capitalization estimated by MSEDCL, in proportion to the funding pattern of capital Expenditure, is presented in the following table:

**Table 151: Funding Pattern of Capitalization for FY 2022-23**

<b>Particular</b>	<b>Amount (Rs. Crs)</b>	<b>Funding Mix (%)</b>
Total Capitalisation	4,620.94	
Less: Consumer Contribution	125.02	
Less: Grants	2,426.87	
<b>Balance to be funded</b>	<b>2,069.06</b>	
Equity	131.87	6%
Debt	1,937.18	94%
Equity	131.87	6%
Debt	1,937.18	94%

5.13.3 MSEDCL requests the Hon'ble Commission to allow the funding pattern as submitted in above table.

#### **5.14 Interest Expenses for FY 2022-23**

5.14.1 MSEDCL has computed the interest expenses on normative basis linked to the normative opening loan and normative loan addition during the year.

5.14.2 Further, MSEDCL has considered the weighted average interest rate of actual loan portfolio of FY 2021-22 as shown in Table below.

5.14.3 Regulation 30.3 of the MERC MYT Regulations, 2019 provides for loan repayment during a year equal to depreciation allowed. The relevant extract is reproduced below:

*“30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.”*

5.14.4 Considering the normative opening loan, normative loan addition during the year and loan repayment equal to depreciation and the weighted average interest rate of actual loan portfolio for FY 2021-22, MSEDCL has computed the interest expenses on normative basis as summarized in table below:

**Table 152: Interest Expenses for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Normative Outstanding Loan at beginning of the year	12,010.89	9,957.44	(2,053.45)
Less: Reduction of Normative Loan due to retirement of assets			
Loan Drawal	876.88	1,937.18	1,060.31
Loan Repayment	3,060.76	2,968.79	(91.97)
Normative Balance Outstanding at the end of the year	9,827.01	8,925.84	(901.17)
Average Balance of Net Normative Loan	10,918.95	9,441.64	(1,477.31)
Interest Rate	10.28%	9.85%	
<b>Interest Expenses</b>	<b>1,121.94</b>	<b>929.95</b>	<b>(191.98)</b>

5.14.5 MSEDCL requests the Hon'ble Commission to approve the interest expenses as submitted in above table.

### **5.15 Interest on Working capital & Interest on SD for FY 2022-23**

5.15.1 MSEDCL submits that Regulations 32.3 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Wire business of electricity. Further, the said Regulations also provides that the Normative Rate of interest on working capital shall be Base Rate as on the date of filing of Petition plus 150 basis points. The relevant extract is reproduced below:

*"2.11 (10) "Base Rate" shall mean the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India from time to time;*

...

*32.3 (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:"*

5.15.2 Accordingly, MSEDCL has calculated the interest on working capital for FY 2022-23 at 9.55% (8.05% + 1.50%) for wire business.

5.15.3 MSEDCL further submits that the Regulation 30.11 of MYT Regulations, 2019

provides for Interest on Security Deposit at Bank Rate. The relevant extract is reproduced below:

*“30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable.”*

5.15.4 MSEDCL submits that it has estimated the security deposit considering a nominal growth of 5% over previous year. Further, Hon'ble Commission notified the MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 repealing the earlier Supply Code Regulations, 2005 Regulations is being amended and for the consumers having billing cycle of one month, it is modified from average bill of one month to average bill of two months. In order to comply the provisions of the regulations, MSEDCL issued Commercial Circular No. 336 dated 16 March 2022 for recovery of the Security Deposit. MSEDCL has considered actual amount of additional security deposit received as on 13th November 2022 in cash for calculation of interest on security deposit. Accordingly, MSEDCL has calculated interest on consumer security deposit for FY 2022-23 @ 4.25% for wires business.

5.15.5 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 table below.

**Table 153: Interest on Working Capital & Interest on Security Deposit for Wire business  
for FY 2022-23**

Rs. Crs			
Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Computation of Working Capital (Wire Business)</b>			
O&M expenses for a month	399.74	432.20	32.46
Maintenance Spares at 1% of Opening GFA	648.43	583.60	(64.83)
1.5 months of expected revenue from charges for use of Distribution wires	1,401.14	1,354.21	(46.93)
Less: Amount held as SD from Distribution System Users	(916.91)	(1,030.80)	(113.89)
<b>Total Working Capital Requirement</b>	<b>1,532.40</b>	<b>1,339.21</b>	<b>(193.19)</b>
Rate of Interest (% p.a.)	9.50%	9.55%	
<b>Interest on Working Capital</b>	<b>145.58</b>	<b>127.89</b>	<b>(17.68)</b>
<b>Actual Working Capital Interest</b>		-	
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	4.25%	
<b>Interest on Security Deposit</b>	<b>59.60</b>	<b>43.81</b>	<b>(15.79)</b>

5.15.6 MSEDCL further submits that Regulation 32.4 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Retail Supply business of electricity. Further, the said Regulations also provides that the Normative Rate of interest on working capital shall be Base Rate as on the date of filing of Petition plus 150 basis points. The relevant extract is reproduced below:

*“2.11 (10) “Base Rate” shall mean the one-year Marginal Cost of Funds-based Lending Rate (‘MCLR’) as declared by the State Bank of India from time to time;*

...

*32.4 (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:”*

5.15.7 Accordingly, MSEDCL has calculated the interest on working capital for FY 2022-23 at 9.55% (8.05% + 1.50%) for wire business.

5.15.8 MSEDCL submits that is has estimated the security deposit considering a nominal growth of 5% over previous year. Further, as mentioned in above,

MSEDCL has considered actual amount of additional security deposit received as on 13th November 2022 in cash for calculation of interest on security deposit. Accordingly, MSEDCL has calculated interest on consumer security deposit for FY 2022-23 @ 4.25% for wires business. Accordingly, MSEDCL has calculated interest on consumer security deposit for FY 2022-23 @ 4.25% for supply business.

5.15.9 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 table below.

**Table 154: Interest on Working capital & Interest on Security Deposit for Supply business for FY 2022-23**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Computation of Working Capital (Supply Business)</b>			
O&M expenses for a month	215.24	232.72	17.48
Maintenance Spares at 1% of Opening GFA	72.05	64.84	(7.20)
1.5 months equivalent of the expected revenue from sale of electricity at the prevailing Tariff and including revenue from CSS and Additional Surcharge	10,491.73	12,513.30	2,021.57
Less: Amount held as security deposit	(8,252.23)	(9,277.24)	(1,025.01)
Less: One month equivalent of cost of Power Purchase, Transmission Charges and MSLDC Charges	(6,180.93)	(6,620.38)	(439.45)
<b>Total Working Capital Requirement</b>	<b>(3,654.14)</b>	<b>(3,086.75)</b>	567.39
Rate of Interest (% p.a.)	9.50%	9.55%	
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	
<b>Actual Working Capital Interest</b>			
Interest on Security Deposit			
Rate of Interest (% p.a.)	6.50%	4.25%	
<b>Interest on Security Deposit</b>	<b>536.40</b>	<b>394.28</b>	<b>(142.11)</b>

### 5.16 Other Finance Charges for FY 2022-23

5.16.1 MSEDCL submits that the regulation 30.8 of the MYT Regulations, 2019 provides that the finance charges shall be allowed at the time of True-up. The relevant extract is reproduced below:

*“30.8 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.”*

5.16.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019 also ruled that it shall consider the Other Finance Charges at the time of truing-up of the respective years of the 4<sup>th</sup> Control Period. Therefore, in line with the above regulations, MSEDCL is not projecting any finance charges for FY 2022-23 and will claim the same during true-up.

### **5.17 Provision for Bad Debts for FY 2022-23**

5.17.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution and retail supply.

5.17.2 Regulation 76 and 85 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. The relevant extract is reproduced below:

**“76 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative*

*provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Wheeling Charges in the audited accounts of the Distribution Licensee.”*

**“85 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

*Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts during the year, subject to the above ceiling of 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee for that Year, after prudence check:*

...

*Provided also that for Distribution Licensees having agricultural sales in excess of 20 percent of their total sales, the ceiling of cumulative provisioning in the above proviso shall be 7.5 per cent of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the audited accounts of the Distribution Licensee.”*

5.17.3 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. A business typically estimates the amount of bad debt based on historical experience.

5.17.4 MSEDCL has computed the provision for bad and doubtful debts for FY 2022-23 as per the provisions of the MYT Regulations, 2019 considering the estimated receivables for FY 2022-23. The receivables are taken as per provisional till September 2022 in order to arrive at the receivables for FY 2022-23. For the interest part a y-o-y rise of 2% and 10% is taken for Non-Ag and Ag respectively. MSEDCL further submits that the provision estimated for FY 2022-23 shall be written off after the approval of the Hon'ble Commission.

5.17.5 MSEDCL for estimation purpose has presently considered provisioning @1.50% instead of 7.50% (as Ag sales are more than 20% of total sales). However, MSEDCL reserves its right to seek claim on bad-debts at the time of truing-up as per the provisions of the MYT Regulations, 2019. The computation of provision for bad debt for FY 22-23 is shown in following table.

**Table 155: Computation of Provision for bad and doubtful debts for FY 2022-23**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Opening Balance of Provision for bad and doubtful debts	-	1,395.02	1,395.02
Receivables for the year	48,842.02	70,641.84	21,799.82
Provision for bad & doubtful debts during the year	1.50%	1.50%	
<b>Provision for bad &amp; doubtful debts during the year</b>	<b>732.63</b>	<b>1,059.63</b>	327.00
Actual bad and doubtful debts written off	732.63	1,059.63	327.00
Closing Balance of Provision for bad and doubtful debts		1,395.02	1,395.02
Closing Balance as a % of receivables	0.00%	1.97%	

5.17.6 MSEDCL submits that the above computed provision for Bad Debts is further allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulation, 2019), i.e., 10% to Wires Business and 90% to Supply Business. The same is shown in following table.

**Table 156: Provision for Bad and Doubtful debts (Wires and Supply) for FY 2021-22**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Bad Debt Provision for Wires business	73.26	105.96	32.70
Bad Debt Provision for Retail Supply business	659.37	953.66	294.30
<b>Bad Debt Provision</b>	<b>732.63</b>	<b>1,059.63</b>	<b>327.00</b>

5.17.7 MSEDCL requests the Hon'ble Commission to allow provision for Bad Debt as shown in above table.

### 5.18 Other Expenses for FY 2022-23

5.18.1 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 has estimated the other expenses for FY 2022-23 considering provisional figures for the first six months and projections for the remaining six months for FY 2022-23 as shown in the table below.

**Table 157: Other Expenses FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Compensation for injuries, death to staff	1.45	2.09	0.63
Compensation for injuries, death to others	17.62	16.83	-0.79
Loss on obsolescence of fixed Assets	1.90	-	-1.90
Sundry debit balances written off	2.09	6.74	4.65
Non Moving Items	19.56	-	(19.56)
Provision for Non Moving Items	-	42.34	42.34
Other Sundry Expenses	8.97	207.91	198.95
Incentive to Distribution Franchisee	-	0.54	0.54
Interest to suppliers/Contractors*	-	-	-
Other Interest and Charges	-	37.47	37.47
Interest on security deposit on bill collection agency	-	0.17	0.17
Other Expenses for previous years	6.39	-	(6.39)
<b>TOTAL</b>	<b>57.97</b>	<b>314.10</b>	<b>256.13</b>

5.18.2 MSEDCL hereby requests the Hon'ble Commission to allow the Other expenses as shown in above table.

### 5.19 Contribution to Contingency Reserves for FY 2021-22

5.19.1 MSEDCL submits that Regulation 35 of the MYT Regulation, 2019 provides for appropriation to Contingency Reserves of not less than 0.25 per cent and not more than 0.5 per cent of the original cost of Fixed Assets annually towards in the calculation of ARR.

5.19.2 MSEDCL submits that it is not getting full recovery of the revenue receivable from consumers. MSEDCL is managing its working capital requirement need

by availing STL/MTL/LTL working capital loans from banks and financial institutions. As such MSEDCL can invest the amount of contingency reserve only if it gets sufficient quantum of loan from banks or financial institutions. MoP through its guidelines on additional prudential norms has restricted working capital borrowings @ 35% of the revenue which MSEDCL already crossed the same. Hence, MSEDCL is getting difficulties in availing loan and not able to invest the amount of contingency reserve. Secondly, MSEDCL's financials has been badly affected by the consequences of COVID-19 pandemic.

5.19.3 Considering the above difficulty and COVID-19 impact, it is requested to Hon'ble Commission to consider positively and not to disallow contingency reserve amount and further provide relaxation from the last proviso to Regulations 35.1 of the MERC MYT Regulation, 2019.

5.19.4 However, owing to above provision, MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves for FY 2022-23 by invoking its power to relax under Regulation 105 of the MYT Regulation, 2019.

5.19.5 MSEDCL humbly request the Hon'ble Commission to allow provision for contribution to contingency reserves for FY 2022-23 and also allow it to make investment during FY 2023-24. Once the approval is available, MSEDCL shall make the necessary investments.

**Table 158: Contingency Reserve for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Contribution to Contingency Reserves	180.12	90.06	-90.06

5.19.6 Accordingly, MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves as shown in above table.

**5.20 Income Tax for FY 2022-23**

5.20.1 MSEDCL submits that Regulation 34 of the MYT Regulations, 2019 provides for Income Tax. Since there is no income tax claimed in FY 2021-22, MSEDCL on similar lines has not claimed any Income Tax for FY 2022-23 and hence it has not grossed up the return on equity by income tax. MSEDCL submits that in case there is tax liability for FY 2022-23 and any income tax is paid, it requests Hon'ble Commission to allow claim on grossing up of return on equity by effective tax rate as per the provisions of the MYT Regulations, 2019.

### 5.21 Incentives and Discounts for FY 2022-23

5.21.1 MSEDCL has estimated the incentives and Discounts for FY 2022-23 at the same level of that of FY 2021-22.

**Table 159: Incentives/Discount for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Incentives and Discount	355.43	367.37	11.94

5.21.2 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as shown in above table.

### 5.22 Return on Equity for FY 2022-23

5.22.1 MSEDCL submits that Regulation 29.1 of the MYT Regulations, 2019, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

*"29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:  
Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual*

*performance:*

*Provided further that Additional Return on Equity shall be allowed at time of trueing up for respective year based on actual performance, after prudence check of the Commission*

- 29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:*

*Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:*

*Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable*

- 29.3 The Base 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:*

*Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.*

...”

5.22.2 MSEDCL submits that the return on equity capital is allocated in the ratio of Fixed Assets between the 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.

5.22.3 The return on equity has been computed as per the methodology specified in the MYT Regulations, 2019. Accordingly, MSEDCL has computed the RoE for Wires Business as shown in following tables:

**Table 160: RoE for Wires Business for FY 2022-23**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Return on Equity (Wires Business)</b>			
Regulatory Equity at the beginning of the year	11,747.33	12,366.40	619.07
Equity portion of Assets Capitalisation	338.22	118.68	(219.54)
Equity portion of Assets Decapitalised	-	-	-
Regulatory Equity at the end of the year	12,085.55	12,485.09	399.53
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 14%*(1)	1,992.76	1,731.30	(261.47)
Return on Normative Equity portion of Asset Capitalization - 14%*(2)/2	28.69	8.31	(20.38)
Interest on Equity portion above 30% equity			
<b>Total Return on Regulatory Equity</b>	<b>2,021.45</b>	<b>1,739.60</b>	<b>(281.85)</b>

5.22.4 Accordingly, MSEDCL has computed the RoE for retail supply Business as shown in following tables:

**Table 161: RoE for Retail Supply Business for FY 2022-23**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
<b>Return on Equity (Supply Business)</b>			
Regulatory Equity at the beginning of the year	1,306	1,374	68.79
Equity portion of Assets Capitalisation	38	13	(24.39)
Equity portion of Assets Decapitalised			-
<b>Regulatory Equity at the end of the year</b>	<b>1,343</b>	<b>1,388</b>	<b>44.39</b>
<b>Return on Computation</b>			
Return on Regulatory Equity at the beginning of the year - 15.5%*(1)	245.23	213.05	(32.18)
Return on Normative Equity portion of Asset Capitalization - 15.5%*(2)/2	3.53	1.02	(2.51)
Interest on Equity portion above 30%			
<b>Total Return on Regulatory Equity</b>	<b>248.75</b>	<b>214.07</b>	<b>(34.69)</b>

5.22.5 MSEDCL requests the Hon'ble Commission to allow the RoE as computed above.

### 5.23 Stabilisation amount as per MYT Order for FY 2022-23

5.23.1 MSEDCL submits that in the MYT Order, Hon'ble Commission has allowed revenue recovery as shown in the following table. MSEDCL has considered the same.

**Table 162: Stabalisation amount as per MYT Order for FY 2022-23**

Rs. Crs

Particulars	Formula	FY 2022-23
ARR approved by the Hon'ble Commission	A	84,021.00
Approved Revenue at existing tariff	B	92,479.00
Approved Revenue Gap	C = A-B	(8,458.00)
Projected Revenue at approved tariff	D	88,039.00
Additional Recovery from approved tariff	E = D-B	(4,440.00)
Previous Revenue Gap recovery allowed after adjustment of current year Revenue Gap	F = E-C	4,018.00

### 5.24 Impact of payment to MPECS for FY 2022-23

5.24.1 Hon'ble Commission in the MYT Order dated 3rd November 2016 has approved following amounts 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

5.24.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 has approved Rs. 34.15 Crs towards payment to MPECS for FY 2021-22 as the same was allowed under Order dated 2<sup>nd</sup> May, 2016. The Hon'ble Commission in the MYT Order also ruled that it shall consider the actual amount towards this head at the time of truing up of FY 2022-23.

5.24.3 Accordingly, MSEDCL has claimed Rs. 31.14 Crs. towards the payments to MPECS for FY 2022-23.

### **5.25 Incremental Consumption and Bulk Consumption Rebate for FY 2022-23**

5.25.1 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 has approved cost towards incremental rebate.

5.25.2 MSEDCL has estimated the Incremental Consumption and Bulk consumption rebate at the same level as that approved by the Hon'ble Commission.

**Table 163: Incremental Consumption Rebate for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Incremental Consumption & Bulk Consumption Rebate	661.65	661.65	-

### **5.26 Additional Surcharge refund for FY 2022-23**

5.26.1 As stated in in previous chapter, MSEDCL has stopped levy of additional surcharge to group captive consumers from since January 2022 and it has adopted methodology for refund of ASC.

5.26.2 MSEDCL is refunding the ASC in every month to eligible consumers to the tune of Rs. 15 Crs. The refund burden will be Rs. 180 Crs annually. Accordingly, the same is being claimed in the ARR and the Hon'ble Commission is requested to approve the same.

### 5.27 Aggregate Revenue Requirement for FY 2022-23

5.27.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2022-23 is as follows:

**Table 164: ARR for Distribution Wires for FY 2022-23**

Rs. Crs			
Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Operation & Maintenance Expenses	4,898.36	5,186.36	288.00
Depreciation	2,754.68	2,671.91	(82.77)
Interest on Loan Capital	1,009.74	836.96	(172.79)
Interest on Normative Working Capital	145.58	127.89	(17.68)
Interest on deposit from Consumers and Distribution System Users	59.60	43.81	(15.79)
Other Finance Charges	-	-	-
Provision for bad and doubtful debts	73.26	105.96	32.70
Opex Schemes	84.31	40.12	(44.19)
Contribution to contingency reserves	162.11	81.05	(81.05)
Income Tax	-	-	-
Return on Equity Capital	2,021.45	1,739.60	(281.85)
<b>Aggregate Revenue Requirement</b>	<b>11,209.09</b>	<b>10,833.67</b>	<b>(375.42)</b>
<b>Less</b>			
Income from Wheeling Charges	-	-	-
Income from Open Access Charges	216.69	216.69	-
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>10,992.41</b>	<b>10,616.99</b>	<b>(375.42)</b>
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>10,992.41</b>	<b>10,616.99</b>	<b>(375.42)</b>

5.27.2 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2022-23 is as follows:

**Table 165: ARR for Supply Business for FY 2022-23**

Rs. Crs

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Power Purchase Expenses (including Inter-State Trans)	62,337.57	73,529.49	11,191.92
Operation & Maintenance Expenses	2,637.58	2,792.66	155.08
Depreciation Expenses	306.08	296.88	(9.20)
Interest on Loan Capital	112.19	93.00	(19.20)
Interest on Normative Working Capital	-	-	-
Interest on Consumers Security Deposit	536.40	394.28	(142.11)
Other Finance Charges	-	-	-
Provision for bad and doubtful debts	659.37	953.66	294.30
Other Expenses	57.97	314.10	256.13
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,915.07	5,915.07	-
Incentives/Discounts	355.43	367.37	11.94
Contribution to Contingency Reserves	18.01	9.01	(9.01)
Return on Equity Capital	248.75	214.07	(34.69)
Additional Surcharge Refund	-	180.00	180.00
Effect of sharing of gains/losses	-	-	-
Impact of payment to MPECS	31.14	31.14	-
Opex Scheme	26.18	50.08	23.90
Incremental Consumption Rebate	661.65	661.65	-
<b>Aggregate Revenue Requirement for Supply Business</b>	<b>73,903.39</b>	<b>85,802.45</b>	<b>11,899.06</b>
Stabilisation amount as per MYT Order	4,018.00	4,018.00	-
<b>Total Revenue Expenditure</b>	<b>77,921.39</b>	<b>89,820.45</b>	<b>11,899.06</b>
<b>Less</b>			
Non-Tariff Income	418.67	317.96	(100.71)
Income from Additional Surcharge	115.52	115.52	-
Income from Trading of Surplus Power	340.96	175.49	(165.47)
<b>Net Aggregate Revenue Requirement</b>	<b>77,046.25</b>	<b>89,211.49</b>	<b>12,165.24</b>
Revenue from Sale of Power	88,039.00	99,280.78	11,241.78
Revenue from Retail Supply Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(10,992.75)</b>	<b>(10,069.30)</b>	<b>923.45</b>

## 5.28 Revenue from sale of electricity for FY 2022-23

5.28.1 MSEDCL has estimated the revenue for FY 2022-23 based on the available information up to September 2022 and projection for balance six months of FY 2022-23 as shown in following table.

**Table 166: Revenue from Sale of Power for FY 2022-23**

	Rs. Crs		
Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Revenue from Sale of Power	88,039.00	99,280.78	11,241.78

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

### **5.29 Outstanding Standby Charges of AEML**

5.29.1 MSEDCL is raising stand by bills as per the orders of Hon'ble Commission only. However, AEML is not paying the stand by charges from Oct-2021 onwards and is claiming that it has opted out of Stand by arrangement since Dec-2021. It is pertinent to mention that the stand by arrangement and the stand by charges thereof have been decided by Hon'ble Commission and hence neither MSEDCL nor any licensee in Mumbai distribution area can take unilateral decision to discontinue with the stand by arrangement.

5.29.2 Hon'ble Commission vide order dated 31.05.2004 in Case No 7 of 2000 has held that standby charges are akin to insurance premium and needs to be paid irrespective of whether the standby facility is availed or not. The corresponding para is reproduced as below;

*“212. The Commission has considered all the aspects of the standby charges and the objects underlying the concept of standby. The **Commission finds that the standby charge is akin to an insurance premium, in the sense that it is a cost necessary to be incurred as an insurance cover for the eventuality of interruptions in power supply in a metropolis like Mumbai.** By payment of this standby charge, the Utilities in Mumbai are assured of supplying uninterrupted power. At the same time, this standby charge has to be incurred irrespective of whether the standby facility is utilized or not. To that extent, the standby charge is a fixed cost for the concerned Utility and has to be recovered from its consumers.”*

5.29.3 AEML claims that Stand by support is not for specific source but for the demand of the licensee. It is using following abstract of MERC order in Case no. 72 of 2016 and is denying to pay stand by charges to MSEDCL.

“16.....

*In the past, Mumbai was entirely dependent for its electricity supply on the embedded generation of TPC-G, to which the embedded generation of Rlnfra-G's DTPS was subsequently added. Hence, the Stand-by support from MSEDCL was in terms of outage or failure of this embedded generation of Mumbai (to the extent of 500 MW, which was the capacity of the largest embedded Generating Unit), which was otherwise the only source of supply in the normal course. Over time, however, in addition to embedded generation, a substantial quantum of power, including from VIPL which is on a long- term basis, is now being sourced by the Mumbai Distribution Licensees from outside Mumbai for supply to their consumers. Considering its basic purpose, therefore, the Stand-by support from MSEDCL is intended and expected to meet eventualities in **any** generation capacity contracted by the Mumbai Distribution Licensees, and is not limited to outages or failure of the embedded generation Units alone; and the Licensees' respective shares in the Stand-by Charges is presently based on the average of CPD and NCPD on the basis of which the Total Transmission System Charges are shared.”*

5.29.4 As per above mentioned directives issued by Hon. Commission in Case no. 72 of 2016 dated 16.03.2018 (filed by REL-D), MSEDCL has given standby support against outage of VIPL unit.

5.29.5 It is also to reiterate that the directives given by the Hon'ble Commission vide Order dated 16.03.2018 in Case No 72 of 2016 are given in the background to consider tripping/outage of **VIPL which was thermal generator contracted by AEML (Erstwhile R-Infra) on long term basis** for the standby support as the same was not part of embedded generation and accordingly the Commission has mentioned that standby support should not be limited to outages or failure of the embedded generation units alone.

5.29.6 This background makes it abundant clear that Hon'ble Commission has directed to provide standby support against VIPL which was not part of embedded generation. With a true spirit of this background, interpretation of word 'any generation' shall not include shortfall in short term/RE/Px power or in cases when there is lesser or no generation due to fuel shortage for providing standby support.

5.29.7 However, AEML is accusing that, MSEDCL has not provided stand by support to it as per its requests against short term/RE/Px power or events of fuel shortage. MSEDCL vide letters has already clarified its stand for the non approval of standby power schedule requested by AEML in some specific instances. It has been clearly conveyed that MSEDCL will not provide standby support against short term/RE/Px power or in cases when there is lesser or no generation due to fuel shortage.

5.29.8 Further, Hon'ble Commission vide its order dtd 31.05.2004 in Case No-7 of 2000, has mentioned that standby is to be activated occasionally under emergent conditions i.e. planned or forced closures or outages in power plants, so as to provide uninterrupted power supply in Mumbai as mentioned below:

*“Standby charges are levied for the **standby capacity** that one utility, generally larger in size, provides to another utility, smaller in size, **to meet emergent conditions**. Standby capacity constitutes a **special backup arrangement, which needs to be activated occasionally under certain special circumstances such as planned or forced closures or outages in power plants**. The purpose behind having this kind of backup arrangement in the case under consideration is **to ensure an uninterrupted supply of electricity in an important metropolitan city like Mumbai**. A metropolis like Mumbai cannot afford to have any interruptions in the supply of electricity for the simple reason that the city is the economic and financial hub of the country.”*

5.29.9 However, it is observed that AEML is trying to take undue advantage of the wordings used in the order by Hon Commission and asking for standby

support for load generation balance which is against the true spirit of the standby mechanism which is to be activated occasionally to maintain uninterrupted power supply to Mumbai consumers.

5.29.10 Therefore, it is to reiterate that Standby power is not meant to take care of revisions in RE/short term power. It is well known that there exists a contractual relationship between short term power provider and buyer. Such obligation mandates short term power provider to supply requisite amount of power. Revisions of RE/Short term power can not be treated as emergency condition as the corrective action of the same is within the control of utility and same can not interrupt the supply of Mumbai consumers.

5.29.11 Stand by Fixed charges bills are being raised by MSEDCL in accordance with the MERC Order dated 30.03.2020 in Case No 322 of 2019 and AEML is liable to pay these bills.

5.29.12 Accordingly, the total outstandings of AEML from Oct 2021 till Nov 2022 as on date 31.12.2022 are mentioned below:

S.N.	Outstanding dues from AEML	Amount (in Rs. Crs.)
1	Stand by fixed charges	215.43
2	Delay Payment Charges (DPC) as on date 31.12.2022	19.62
3	Total	235.05

5.29.13 On the contrary, AEML vide letter dated 30.11.2022, has alleged that MSEDCL has provided partial and selective Standby support. Therefore, MSEDCL is not entitled to full Standby charges. Further, AEML has submitted details of charges allegedly refundable from MSEDCL proportionately from the Standby charges recovered by MSEDCL without providing the Standby support. The total amount claimed by AEML is Rs. 217.37 Crs inclusive of applicable DPC. This baseless claim of AEML is not acceptable to MSEDCL.

5.29.14 Hon'ble Commission is requested to direct AEML to pay outstanding dues against Stand by charges raised by MSEDCL

### **5.30 TPC-D also wants to opt out from standby arrangement**

5.30.1 TPC-D vide letter dated 03.01.2023 has conveyed to MSEDCL that on account of development of the Real Time Market, it is able to manage its Power Procurement through available sources from the Real Time Market on intra- day basis. It has further stated that the mechanism of Stand by facility was envisaged at the time when real time market was not operational, or no power was available in real time.

5.30.2 TPC-D has further stated that, it wishes to discontinue the Standby power facility with effect from 01.04.2023.

5.30.3 MSEDCL submits that in Real Time Market Power Procurement on intra-day basis can be effected only after 4-8 blocks. In this time period, it is obvious that TPC-D will draw excess power from grid which is eventually not good for grid health. TPC-D is indirectly asking for approval to overdraw huge quantum of power from the grid. There are already transmission constraints for bringing power to Mumbai and in this scenario overdrawing from the grid would further stress the grid. In order to avoid events such as the recent grid failure of 12.10.2020, transmission grid supplying power to Mumbai should not be overstressed.

5.30.4 Further, during the said period of 4-8 blocks to reduce overdrawl of the state, SLDC will pick up MSEDCL's contracted resources such as Koyna Hydro Electric Power Plant. Thus, if TPC-D's request is accepted, TPC-D will indirectly utilize MSEDCL's cheaper contracted resources without the liability of standby charges. MSEDCL requests Hon. Commission to issue appropriate directives to TPC-D accordingly.

### **5.31 Non-Tariff Income for FY 2022-23**

5.31.1 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 etc.

5.31.2 Considering the available information for the first six months of FY 2022-23 and projections for the first six months, the Non-Tariff Income for FY 2022-23 has been estimated as given in the table below:

**Table 167: Non-Tariff Income for FY 2022-23**

Particulars	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
			Rs. Crs
Rents of land or buildings	1.20	0.96	(0.24)
Sale of Scrap	60.25	43.74	(16.51)
Income from investments	21.42	-	(21.42)
Income from sale of tender documents	10.33	4.95	(5.38)
Prompt payment discount from REC/PFC	14.08	-	(14.08)
Other/Miscellaneous receipts	311.40	240.41	(70.99)
Revenue from subsidy & grant	-	0.50	0.50
Interest on Contingency Reserve Investments	-	27.41	27.41
<b>Non Tariff Income</b>	<b>418.67</b>	<b>317.96</b>	<b>(100.71)</b>

5.31.3 As provided in the Regulation 37.3 of the MYT Regulations, 2019, delayed Payment Charge and Interest on Delayed Payment is not considered under Non-Tariff Income.

5.31.4 MSEDCL has not considered income from grants and contribution reported under non-tariff income, as the treatment (i.e. excluded while calculating depreciation) to the same is already considered while computing the depreciation for the FY 2022-23.

5.31.5 MSEDCL humbly requests to the Hon'ble Commission to consider the Non-Tariff Income as shown in above table.

### **5.32 Income from Open Access Charges for FY2022-23**

5.32.1 Considering the available information, MSEDCL has estimated the Income from Open Access same as that approved by the Hon'ble Commission for FY 2022-23.

**Table 168: Income from Open Access Charges for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Income from Open Access Charges	216.69	216.69	-

5.32.2 MSEDCL humbly requests the Hon'ble Commission to allow the Income from Open Access Charges as per the Audited Accounts.

### 5.33 Income from Trading of Surplus Power for FY 2022-23

5.33.1 MSEDCL has estimated the Income from Trading of Surplus Power for FY 2022-23 as shown in the table below:

**Table 169: Income from Trading of Surplus Power for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Income from Trading of Surplus Power	340.96	175.49	(165.47)

5.33.2 MSEDCL humbly requests to the Hon'ble Commission to allow the income from sale of surplus power as shown in above table.

### 5.34 Income from Additional Surcharge for FY 2022-23

5.34.1 Considering the available information, MSEDCL has estimated the Income from Additional Surcharge for FY 2022-23 as shown in the table below.

**Table 170: Income from Additional Surcharge for FY 2022-23**

Particulars	Rs. Crs		
	FY 2022-23 (Approved)	FY 2022-23 (Estimated)	Deviation
Income from Additional Surcharge	115.52	115.52	-

5.34.2 MSEDCL humbly requests to the Hon'ble Commission to approve the Income from Additional Surcharge as shown in above table.

### 5.35 Revenue Gap/(Surplus) for FY 2022-23

5.35.1 Based on the above analysis, the summary of ARR for the Wires Business

and Supply Business, estimated and as approved by the Hon'ble Commission for FY 2022-23 is presented in the Table below.

**Table 171: ARR for Wires and Supply Business for FY 2022-23**

Rs. Crs			
<b>Particulars</b>	<b>FY 2022-23 (Approved)</b>	<b>FY 2022-23 (Estimated)</b>	<b>Deviation</b>
Power Purchase Expenses	62,337.57	73,529.49	11,191.92
Operation & Maintenance Expenses	7,535.94	7,979.02	443.08
Depreciation Expenses	3,060.76	2,968.79	(91.97)
Interest on Loan Capital	1,121.94	929.95	(191.98)
Interest on Normative Working Capital	145.58	127.89	(17.68)
Interest on Consumers Security Deposit	595.99	438.09	(157.90)
Other Finance Charges	-	-	-
Provision for bad and doubtful debts	732.63	1,059.63	327.00
Other Expenses	57.97	314.10	256.13
Income Tax	-	-	-
Intra-State Transmission Charges MSLDC charge	5,915.07	5,915.07	-
Incentives/Discounts	355.43	367.37	11.94
Contribution to Contingency Reserves	180.12	90.06	(90.06)
Opex Scheme	110.49	90.20	(20.29)
Return on Equity Capital	2,270.20	1,953.67	(316.53)
Additional Surcharge Refund	-	180.00	180.00
Effect of sharing of gains/losses	-	-	-
Impact of payment to MPECS in future years	31.14	31.14	-
Incremental Consumption Rebate	661.65	661.65	-
<b>Aggregate Revenue Requirement</b>	<b>85,112.48</b>	<b>96,636.12</b>	<b>11,523.64</b>
Stabilisation amount as per MYT Order	4,018.00	4,018.00	-
<b>Total Aggregate Revenue Requirement</b>	<b>89,130.48</b>	<b>1,00,654.12</b>	<b>11,523.64</b>
<b>Less</b>			
Non-Tariff Income	418.67	317.96	(100.71)
Income from Open Access Charges	216.69	216.69	-
Income from Trading of Surplus Power	340.96	175.49	(165.47)
Income from Wheeling Charges	-	-	-
Income from Additional Surcharge	115.52	115.52	-
<b>Net Aggregate Revenue Requirement</b>	<b>88,038.65</b>	<b>99,828.47</b>	<b>11,789.82</b>
Revenue from Sale of Power	88,039.00	99,280.78	11,241.78
Revenue from Retail Supply Business	-	-	-
Revenue from Wires Business	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(0.35)</b>	<b>547.69</b>	<b>548.03</b>

5.35.2 The Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March 2020 has approved Aggregate Revenue Requirement of Rs. 89,130.48 Crs for FY 2022-23. MSEDCL submits actual ARR of Rs. 1,00,654.12 Crs. with a

deviation of Rs. 11,523.64 Crs. Considering the impact of revenue and other income, the truing up requirement works out to be Rs. 548.03 Cr. MSEDCL requests the Hon'ble Commission to allow the true up requirement as submitted above.

## **6 AGGREGATE REVENUE REQUIREMENT FOR FY 2023-24 TO FY 2024-25**

### **6.1 Preamble**

- 6.1.1 Hon'ble Commission has notified the MERC (Multi Year Tariff) Regulations, 2019 on 1<sup>st</sup> August 2019 which are applicable for the period FY 2020-21 to FY 2024-25 (the Control Period).
- 6.1.2 MSEDCL submits that the MERC (Multi Year Tariff) Regulations, 2019 specifies that the Mid-Term Review (MTR) Petition shall comprise of revised forecast of Aggregate Revenue Requirement (ARR), expected revenue from existing Tariff and charges, expected revenue gap for the fourth and fifth year of the Control Period which has to carried out based on the provisions of the MERC (Multi Year Tariff) Regulations, 2019
- 6.1.3 Hon'ble Commission vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019 had approved ARR and Tariff for Control Period for FY 2020-21 to FY 2024-25.
- 6.1.4 This chapter summarizes the revised forecast of ARR, expected revenue from existing Tariff, expected revenue gap for the FY 2023-24 and FY 2024-25 (i.e., for fourth and fifth year of the Control Period respectively) comparing with respective approved forecast of ARR and expected revenue from Tariff and charges vide MYT Order dated 30<sup>th</sup> March 2020 in Case no. 322 of 2019. The revised estimations/ projections for the period FY 2023-24 to FY 2024-25 have been made considering the provisions of the MERC (MYT) Regulations, 2019

### **6.2 Approach for Sales Projection**

- 6.2.1 MSEDCL submits that Regulation 82.1 of the MERC (MYT) Regulations, 2019 provides that the Distribution Licensee is required to 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. The relevant extracts of the regulation are reproduced below.

*“82.1 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.”*

6.2.2 It has been observed from the past experience that the historical trend method has proved to be 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 consumer categories primarily based on the Compound Annual Growth Rate (CAGR) trends during past years. Wherever it is observed that the trend is unreasonable/ unsustainable or recent developments, the growth factors have been corrected to arrive at more realistic projections.

6.2.3 MSEDCL submits that the break-up of the past sales and the CAGR 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 for the period between FY 2016-17 to FY 2021-22 while 3 year CAGR is for the period between FY 2018-19 to FY 2021-22 whereas year-on-year growth rate is for FY 2021-22 over FY 2020-21.

6.2.4 Historical trend in HT Category sales growth for MSEDCL (including sales in Franchisee Area) is given following table:

**Table 172: Historical Sales Growth and CAGR (HT Category)**

Category	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	MUs		
							5 Year CAGR	3 Year CAGR	Y-o-Y Growth
HT-I Industries	23,366	28,470	31,381	30,258	28,473	34,128	8%	3%	20%
HT-II Commercial	1,825	1,926	1,805	1,815	1,203	1,378	-5%	-9%	14%
HT III Railways	86	66	77	76	68	85	0%	3%	25%
HT IV-PWW	1,702	1,911	1,900	1,916	1,917	2,068	4%	3%	8%
HT V Agricultural	1,331	974	1,413	1,103	1,036	1,116	-3%	-8%	8%
HT VI Bulk Supply (Housing Complex)	213	227	236	225	209	214	0%	-3%	3%
HT Temporary	4	5	5	7	-	-			
HT-IX Public services	922	1,003	1,004	1,010	848	951	1%	-2%	12%
MSPGCL AUX SUPPLY	179	218	184	158	120	245	7%	10%	104%
HT EV Charging Stations 11 KV	-	-	-	0	1	2			118%
HT EV Charging Stations 22 KV	-	-	0	8	4	14	0%	253%	258%
<b>Total -HT Sales</b>	<b>29,628</b>	<b>34,799</b>	<b>38,004</b>	<b>36,577</b>	<b>33,879</b>	<b>40,200</b>	<b>6%</b>	<b>2%</b>	<b>19%</b>

6.2.5 Historical trend in LT Category sales growth for MSEDCL (including sales in Franchisee Area) is given following table:

**Table 173: Historical Sales Growth and CAGR (LT Category)**

Category	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	MUs		
							5 Year CAGR	3 Year CAGR	Y-o-Y Growth
<b>LT Category</b>									
LT I -BPL	61	55	41	84	73	53	-3%	9%	-28%
LT I Domestic	18,962	19,994	20,788	20,729	21,847	22,157	3%	2%	1%
LT II Non Domestic	4,524	5,444	5,874	5,791	3,880	4,651	1%	-7%	20%
LT III PWW	691	707	803	802	856	903	5%	4%	5%
LT IV Agriculture	27,525	29,921	32,696	28,401	33,290	35,575	5%	3%	7%
LT V Powerloom	3,270	3,551	3,645	3,762	3,117	3,813	3%	2%	22%
LT V Industrial General	5,114	4,903	5,138	5,077	5,911	7,001	6%	11%	18%
LT VI Streetlight	1,751	1,843	2,007	1,880	1,858	1,289	-6%	-14%	-31%
LT VII- Temporary Connection	16	17	24	28	-	-			
LT VIII Advertisement & Hoardings	4	5	4	3	-	-			
LT IX – Crematoriums & Burial Grounds	2	2	2	2	-	-			
LT X - Public services	361	431	504	499	448	565	9%	4%	26%
LT EV Charging	-	-	-	0	0	1			253%
P.D. Consumers	-5	-	-	-	-	-			
<b>Total LT Sales</b>	<b>62,275</b>	<b>66,874</b>	<b>71,526</b>	<b>67,058</b>	<b>71,281</b>	<b>76,007</b>	<b>4%</b>	<b>2%</b>	<b>7%</b>
<b>Total Sales</b>	<b>91,903</b>	<b>1,01,673</b>	<b>1,09,531</b>	<b>1,03,636</b>	<b>1,05,160</b>	<b>1,16,206</b>	<b>5%</b>	<b>2%</b>	<b>11%</b>

### 6.3 CAGR considered for Sales Projection

6.3.1 MSEDCL submits that it has witnessed a normal growth in Sales in the last few years. MSEDCL has been able to considerably increase the availability of power, because of which the sales of MSEDCL has grown. Additional availability of power to the consumers resulted in uninterrupted supply of power to all consumers (except AG with stipulated hours of supply) and hence

resulted in increase in the consumption and in turn the Sales of MSEDCL.

6.3.2 Keeping the variations over a period in mind, MSEDCL has considered the 3 years/ 5 years CAGRs for projecting the sales. Wherever the trend was unreasonable/ unsustainable, the growth rates have been corrected to arrive at more realistic projections.

6.3.3 The category wise CAGRs considered for the FY 2023-24 and FY 2024-25 along with rationale for HT Category have been shown in the following table.

**Table 174: CAGR considered for Sales Projections (HT Category)**

<b>Consumer Category</b>	<b>CAGR Considered</b>	<b>Justification/Rationale</b>
HT-Industry	3%	5 year CAGR coming quite high, hence realistic 3 year CAGR of 3% has been considered
HT-Commercial	2%	Unrealistic trends in CAGR observed due to change in category of some consumers from Commercial to Public Services. Hence, realistic growth rate of 2% has been considered
HT RAILWAYS/METRO/MONO	3%	Negative trend in CAGR observed due to migration of Railway/ Metro/ Mono Rail consumers to Open Access. Thus, nominal growth rate of 3% has been observed considering upcoming metro rail in Nagpur, Thane & Navi Mumbai
HT-Public Water Works	3%	Varying trends in CAGRs observed in PWW category across all voltage levels. However, considering Government initiative of "Har Ghar Jal", a realistic growth rate of 3% has been considered
HT-AGRICULTURE	1%	Negative CAGRs, hence realistic rate of 1% considered
HT-AGRICULTURE OTHERS	0%	Negative CAGRs, hence, 0% considered
HT-GROUP HOUSING	0%	Negative CAGRs, hence, 0% considered
HT-PUBLIC SER.-GOVT	2%	Varying trends in CAGRs observed hence, a realistic growth rate of 2% has been considered
HT-PUBLIC SER.-OTHER	2%	Varying trends in CAGRs observed hence, a realistic growth rate of 2% has been considered
H.T. EV CHARGING STATIONS 11 KV	10%	Considering Plan as per Maharashtra EV Policy, a realistic growth rate of 10% has been considered across all voltage levels
H.T. EV CHARGING STATIONS 22 KV	10%	

6.3.4 The category wise CAGRs considered for the FY 2023-24 and FY 2024-25 along with rationale for LT Category have been shown in the following table.

**Table 175: CAGR considered for Sales Projections (LT Category)**

<b>Consumer Category</b>	<b>CAGR Considered</b>	<b>Justification/Rationale</b>
LT-I (A): LT- BPL	4%	Considering the vaying CAGRs, realistic growth of 5% considered
<b>LT-I (B) : LT-Residential( Other than BPL)</b>		
1-100 Units	3%	Considering the varying CAGRs, realistic growth of 3% considered which in equivalent to 5 Yr. CAGR;
101-300 Units	3%	Considering the varying CAGRs, realistic growth of 3% considered which in equivalent to 5 Yr. CAGR;
301-500 Units	3%	Considering the varying CAGRs, realistic growth of 3% considered which in equivalent to 5 Yr. CAGR of Domestic consumer category as a whole
above 501 Units	3%	Considering the varying CAGRs, realistic growth of 3% considered which in equivalent to 5 Yr. CAGR of Domestic consumer category as a whole
<b>LT-II : LT- Non Residential</b>		
0-20 KW	4%	Considering the varying CAGRs, realistic growth of 4%
>20-<=50 KW	4%	Considering the varying CAGRs, realistic growth of 4%
>50 KW	4%	Considering the varying CAGRs, realistic growth of 4%
<b>LT-III : LT-Public Water Works</b>		
0-20 KW	5%	Considering the varying CAGRs, realistic growth of 5% considered which in equivalent to 5 Yr. CAGR of PWW consumer category as a whole
20-<=40 KW	5%	Considering the varying CAGRs, realistic growth of 5% considered which in equivalent to 5 Yr. CAGR of PWW consumer category as a whole
> 40 KW	5%	Considering the varying CAGRs, realistic growth of 5% considered which in equivalent to 5 Yr. CAGR of PWW consumer category as a whole
*** LT-AG-Unmetered (Pumpsets)	0%	No new connections, hence 0%
LT-AG Metered (Pumpsets)	4%	5 year CAGR 8%. Realistic growth of 4% which in equivalent to 3 Yr. CAGR
LT-AG Metered (Others)	8%	5 year CAGR 9%. Realistic growth of 8% which in equivalent to 3 Yr. CAGR
<b>LT V: LT Industry- Power Looms</b>		
0-20 KW (Upto & including 27 HP)	3%	Considering the varying CAGRs, realistic growth of 5% considered which in equivalent to 5 Yr. CAGR of Powerloom consumer category as a whole
Above 20 KW (above 27 HP)	3%	
<b>LT V : LT Industry- General</b>		
0-20 KW (Upto & including 27 HP)	4%	Considering the vaying CAGRs, realistic growth of 4% considered
Above 20 KW (above 27 HP)	4%	Considering the vaying CAGRs, realistic growth of 4% considered
<b>LT VII(A) - Public services - Govt</b>		
0-20 KW	6%	CAGRs are varying, realistic growth of 6% considered
>20-50 kW	6%	CAGRs are varying, realistic growth of 6% considered
>50 kW	6%	CAGRs are varying, realistic growth of 6% considered
<b>LT VII(B) - Public services - Other</b>		
0-20 KW	6%	CAGRs are varying, realistic growth of 6% considered
>20-50 kW	6%	CAGRs are varying, realistic growth of 6% considered
>50 kW	6%	CAGRs are varying, realistic growth of 6% considered
<b>LT VI – Street Light</b>		
Gram panchayat A, B & C Class Municipal Council	0%	Negative CAGRs, hence, 0% considered
Municipal corporation Area	0%	Negative CAGRs, hence, 0% considered
LT VIII EV Charging Stations	10%	Considering Plan as per Maharashtra EV Policy, a realistic growth rate of 10% has been considered

#### 6.4 Sales Projection for FY 2023-24 to FY 2024-25

6.4.1 MSEDCL submits that it has considered FY 2022-23 as the base year for projection of sales for FY 2023-24 and FY 2024-25 (i.e., for fourth and fifth year of the Control Period). Based on the sales for FY 2022-23 and the CAGR as shown in above tables, MSEDCL has projected the sales for various categories. The sales projections of HT Categories for FY 2023-24 and FY 2024-25 are shown in the following table:

**Table 176: Sales Projections – Excluding DF (HT Category)**

Consumer Category	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
HT-I Industries	37,757	37,901	39,263	39,038
HT-II Commercial	1,974	1,792	2,015	1,828
HT III Railways	85	112	87	116
HT IV-PWW	1,791	1,863	1,836	1,919
HT V Agricultural	1,365	896	1,408	906
HT VI Bulk Supply (Housing Complex)	245	244	247	244
HT Temporary	6	-	6	-
HT-IX Public services	1,257	1,204	1,315	1,227
MSPGCL AUX SUPPLY	184	295	184	295
HT Ag Others	285	283	294	283
HT EV Charging Stations 11 kV	-	5	-	6
HT EV Charging Stations 22 kV	0	53	0	58
<b>Total -HT Sales</b>	<b>44,949</b>	<b>44,648</b>	<b>46,655</b>	<b>45,919</b>

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6.4.2 The sales projections of LT Categories for FY 2023-24 and FY 2024-25 are shown in the following table:

**Table 177: Sales Projections – Excluding DF (LT Category)**

Consumer Category	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
<b>LT Category</b>				
LT I -BPL	52	57	55	60
LT I Domestic	26,070	26,406	27,340	27,199
LT II Non Domestic	8,565	6,196	9,274	6,444
LT III PWW	1,047	920	1,106	970
LT IV Agriculture	28,067	34,369	28,626	35,308
LT V Powerloom	2,496	1,895	2,616	1,952
LT V Industrial General	6,164	7,487	6,462	7,712
LT VI Streetlight	2,719	1,052	2,892	1,052
LT VII- Temporary Connection	24	-	24	-
LT VIII Advertisement & Hoardings	6	-	6	-
LT IX – Crematoriums & Burial Grounds	2	-	2	-
LT X - Public services	683	754	728	795
LT EV Charging Stations	0	2	0	2
<b>Total LT Sales</b>	<b>75,894</b>	<b>79,139</b>	<b>79,130</b>	<b>81,494</b>
<b>Total Sales</b>	<b>1,20,843</b>	<b>1,23,787</b>	<b>1,25,785</b>	<b>1,27,413</b>

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6.4.3 MSEDCL further submits that the Hon'ble Commission has introduced kVAh based billing for HT consumers with effect from 1 April 2020. So, sales in kVAh is available for FY 2020-21 and FY 2021-22. Further, the Hon'ble Commission has directed MSEDCL to continue maintain kWh sale for Energy Balance. In view of the same, for the purpose of determination of revenue from kVAh based tariff MSEDCL submits that it has considered FY 2022-23 as the base year for projection of kVAh sales for FY 2023-24 and FY 2024-25 (i.e., for fourth and fifth year of the Control Period). Based on the kVAh sales for FY 2022-23 and category wise CAGR considered as shown in above tables, MSEDCL has projected the kVAh sales for various categories.

## **6.5 Sales Projection for Distribution Franchisees for FY 2023-24 to FY 2024-25**

6.5.1 As noted by the Hon'ble Commission in MYT Order at the time of MYT process, MSEDCL was in advanced step/stage to introduce franchisee in

other areas, and hence, the Hon'ble Commission while projecting sales has only considered Bhiwandi Franchisee and not factored in the impact of other franchisee. Further, the Hon'ble Commission opined that the same can be done at MTR stage based on actual basis. MSEDCL has already submitted the details of franchisee viz., Bhiwandi DF, Thane DF – SMK area and Malegaon DF and submits that it has sales projected for aforementioned DF's for FY 2023-24 to FY 2024-25.

6.5.2 MSEDCL further submits that in Form "F1 MSEDCL Yearly Sales Forecast", MSEDCL has shown category wise sales of MSEDCL including Distribution Franchisee. The category wise sales for Distribution Franchisee have been calculated in the respective form using the same methodology and the CAGR for respective category used for MSEDCL.

6.5.3 Details of month wise sales are given in Form 1 of the Regulatory Formats.

## **6.6 Approach for number of consumers Projections**

6.6.1 MSEDCL submits that, similar to sales projections, MSEDCL has also adopted the historical trend method for projecting category wise no. of consumers for MSEDCL. The break-up of category wise number of consumers and 5 year CAGR is for the period between FY 2016-17 to FY 2021-22 while 3 year CAGR is for the period between FY 2018-19 to FY 2021-22 whereas year-on-year growth rate is for FY 2021-22 over FY 2020-21. Wherever it is observed that the trend is unreasonable or unsustainable, the growth factors have been corrected to arrive at more realistic projections.

6.6.2 Historical trend in number of consumers in HT category for MSEDCL (including DF) is given in following table.

**Table 178: Historical Growth and CAGR No. of Consumers (HT Category)**

Category	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	5 Year CAGR	3 Year CAGR	Y-o-Y Growth
HT-I Industries	13,560	13,998	14,353	14,614	14,954	14,945	2%	1%	0%
HT-II Commercial	3,098	3,137	3,165	3,242	3,125	3,076	0%	-1%	-2%
HT III Railways	24	79	82	88	93	101	33%	7%	9%
HT IV-PWW	995	967	983	1,004	1,026	1,027	1%	1%	0%
HT V Agricultural	1,430	1,435	1,446	1,463	1,468	1,419	0%	-1%	-3%
HT VI Bulk Supply (Housing Complex	248	242	266	266	265	262	1%	-1%	-1%
HT Temporary	10	11	11	29	-	-	0%	0%	0%
HT-IX Public services	1,261	1,313	1,357	1,405	1,479	1,517	4%	4%	3%
MSPGCL AUX SUPPLY	28	28	27	27	28	28	0%	1%	0%
HT EV Charging Stations 11 KV	-	-	-	1	3	2	0%	0%	-33%
HT EV Charging Stations 22 KV	-	-	2	2	2	4	0%	0%	100%
<b>Total -HT Consumers</b>	<b>20,654</b>	<b>21,210</b>	<b>21,692</b>	<b>22,141</b>	<b>22,440</b>	<b>22,381</b>	<b>2%</b>	<b>1%</b>	<b>0%</b>

6.6.3 Historical trend in number of consumers in LT category for MSEDCL (including DF) is given in following table.

**Table 179: Historical Growth and CAGR No. of Consumers (LT Category)**

Category	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	5 Year CAGR	3 Year CAGR	Y-o-Y Growth
<b>LT Category</b>									
LT I -BPL	2,09,731	1,76,998	3,50,243	3,74,631	3,03,229	2,29,668	2%	-13%	-24%
LT I Domestic	1,80,24,487	1,86,32,604	1,94,27,851	2,03,78,279	2,09,86,022	2,13,13,414	3%	3%	2%
LT II Non Domestic	17,56,626	18,37,478	19,04,557	19,88,489	20,44,058	20,56,116	3%	3%	1%
LT III PWW	51,833	51,671	52,808	54,880	56,057	56,108	2%	2%	0%
LT IV Agriculture	41,03,781	41,79,004	42,44,685	43,20,830	43,82,159	45,12,918	2%	2%	3%
LT V Powerloom	81,682	73,178	67,653	57,644	58,491	56,864	-7%	-6%	-3%
LT V Industrial General	3,16,776	3,07,183	3,15,673	3,45,753	3,72,968	3,81,297	4%	6%	2%
LT VI Streetlight	91,293	93,798	96,466	99,322	1,01,296	1,02,641	2%	2%	1%
LT VII- Temporary Connection	2,640	3,673	6,028	10,748	-	-	0%	0%	0%
LT VIII Advertisement & Hoardings	2,527	2,543	2,742	3,163	-	-	0%	0%	0%
LT IX - Crematoriums & Burial Grounds	180	244	229	268	-	-	0%	0%	0%
LT X - Public services	83,487	92,691	1,04,129	1,18,667	1,28,319	1,34,260	10%	9%	5%
LT EV Charging	-	-	-	28	66	145	0%	0%	120%
LT Prepaid	13,071	12,097	10,809	9,467	12,670	7,454	-11%	-12%	-41%
<b>Total LT Consumers</b>	<b>2,47,38,114</b>	<b>2,54,63,162</b>	<b>2,65,83,873</b>	<b>2,77,62,169</b>	<b>2,84,45,335</b>	<b>2,88,50,885</b>	<b>3%</b>	<b>3%</b>	<b>1%</b>
<b>Total Consumers</b>	<b>2,47,58,768</b>	<b>2,54,84,372</b>	<b>2,66,05,565</b>	<b>2,77,84,310</b>	<b>2,84,67,775</b>	<b>2,88,73,266</b>	<b>3%</b>	<b>3%</b>	<b>1%</b>

## 6.7 CAGR considered for Projection of number of consumers

6.7.1 MSEDCL has considered CAGR methodology for projections. Wherever it is observed that the trend is unreasonable or unsustainable, the growth rate has been corrected to arrive at more realistic projections considering year on year growth rate.

6.7.2 Following table provide the CAGRs considered for projecting the number of consumers for the FY 2023-24 and FY 2024-25 along with rationale.

**Table 180: CAGR considered for number of consumers Projections (HT Category)**

Category	CAGR Considered	Justification/Rationale
HT-IND 11 KV	1%	3 Year CAGR of category as a whole considered
HT-IND 22 KV	1%	3 Year CAGR of category as a whole considered
HT-IND 33 KV	1%	3 Year CAGR of category as a whole considered
HT-IND EHV	1%	3 Year CAGR of category as a whole considered
HT-COMM 11 KV	1%	Realistic growth of 1% considered
HT-COMM 22 KV	1%	Realistic growth of 1% considered
HT-COMM 33 KV	1%	Realistic growth of 1% considered
HT-COMM EHV	1%	Realistic growth of 1% considered
HT RAILWAY/METRO/MONO 11 KV	4%	3 & 5 year CAGR quite high. Realistic growth of 4%
HT RAILWAY/METRO/MONO 22 KV	4%	3 year CAGR considered
HT RAILWAY/METRO/MONO 33 KV	4%	3 year CAGR quite high. Realistic growth of 4%
HT RAILWAY/METRO/MONO EHV	4%	Realistic growth of 4% considered
HT-PWW 11 KV	1%	3 year CAGR of category as a whole considered
HT-PWW 22 KV	1%	3 year CAGR of category as a whole considered
HT-PWW 33 KV	1%	3 year CAGR of category as a whole considered
HT-PWW EHV	1%	3 year CAGR of category as a whole considered
HT-AGRICULTURE 11 KV	1%	3 & 5 year CAGR negative. Realistic growth of 1%
HT-AGRICULTURE 22 KV	1%	3 year CAGR negative. Realistic growth of 1%
HT-AGRICULTURE 33 KV	1%	3 year CAGR considered
HT-AGRICULTURE EHV	1%	3 year CAGR quite high. Realistic growth of 1% considered
HT-AGRICULTURE OTHERS 11 KV	2%	5 year CAGR negative. 3 year CAGR considered
HT-AGRICULTURE OTHERS 22 KV	2%	3 year CAGR considered
HT-AGRICULTURE OTHERS 33 KV	2%	Realistic growth of 2%
HT-GROUP HOUSING 11 KV	1%	5 year CAGR negative. Realistic growth of 1%
HT-GROUP HOUSING 22 KV	1%	5 year CAGR negative. Realistic growth of 1%
HT-GROUP HOUSING 33 KV	1%	Realistic rate of 1% considered
HT-PUBLIC SER.-GOVT 11 KV	2%	5 Year CAGR considered
HT-PUBLIC SER.-GOVT 22 KV	2%	Realistic rate of 2% considered
HT-PUBLIC SER.-GOVT 33 KV	2%	Realistic rate of 2% considered
HT-PUBLIC SER.-OTHER 11 KV	2%	Y-o-Y growth rate of category as a whole considered
HT-PUBLIC SER.-OTHER 22 KV	2%	Y-o-Y growth rate of category as a whole considered
HT-PUBLIC SER.-OTHER 33 KV	2%	Y-o-Y growth rate of category as a whole considered
HT-PUBLIC SER.-OTHER EHV	2%	Y-o-Y growth rate of category as a whole considered
HT-EV CHARGING STATIONS 11 KV	10%	10% growth considered
HT-EV CHARGING STATIONS 22 KV	10%	10% growth considered

**Table 181: CAGR considered for number of consumers Projections (LT Category)**

Consumer Category	CAGR Considered	Justification/Rationale
<b>LT Category</b>		
LT-I (A): LT- BPL	2%	3 year CAGR negative. 5 Year CAGR considered
LT-I (B) : LT-Residential( Other than BPL)	3%	3 year CAGR considered
<b>LT-II : LT- Non Residential</b>		
0-20 KW	3%	5 year CAGR considered
>20-<=50 KW	3%	3 year CAGR negative. 5 Year CAGR of category as a whole considered
>50 KW	3%	3 & 5 year CAGR coming high. 5 Year CAGR of category as a whole considered
<b>LT-III : LT-Public Water Works</b>		
0-20 KW	2%	3 year CAGR considered
20-<=40 KW	2%	3 year CAGR considered
> 40 KW	2%	3 & 5 year CAGR coming high. 3 Year CAGR of category as a whole considered
<b>LT-IV: LT-Agriculture</b>		
*** LT-AG-Unmetered (Pumpsets)	0%	5 Year CAGR considered
LT-AG Metered (Pumpsets)	2%	Y-o-Y growth rate Considered
<b>LT V : LT Industry- Power Looms</b>		
0-20 KW (Upto & including 27 HP)	0%	3 & 5 year CAGR negative. Realistic growth of 0%
Above 20 KW (above 27 HP)	0%	3 & 5 year CAGR negative. Realistic growth of 0%
<b>LT V : LT Industry- General</b>		
0-20 KW (Upto & including 27 HP)	4%	3 year CAGR quite high. 5 Year CAGR of category as a whole considered
Above 20 KW (above 27 HP)	4%	3 year CAGR quite high. 5 Year CAGR of category as a whole considered
<b>LT VII(A) - Public services - Govt</b>		
0-20 KW	10%	5 year CAGR of this slab quite high. 5 Year CAGR of category as a whole considered
>20-50 KW	10%	3 & 5 year CAGR individual slabs coming quite high. Realistic growth of 10% considered in line with 5 year CAGR of category as a whole considered.
>50 kW	10%	
<b>LT VII(B) - Public services - Other</b>		
0-20 KW	10%	Realistic growth of 10% considered
>20-50 kW	10%	3 & 5 year CAGR individual slabs coming quite high. Realistic growth of 10% considered in line with 5 year CAGR of category as a whole considered.
>50 kW	10%	
<b>Street Light (LT-VI)</b>		
Grampanchayat A, B & C Class Municipal Council	2%	5 Year CAGR of category as a whole considered
Municipal corporation Area	2%	5 Year CAGR of category as a whole considered
L.T. EV Charging Stations	10%	10% growth considered

6.7.3 MSEDCL 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 most of the categories.

## 6.8 Number of consumer Projections for FY 2023-24 to FY 2024-25

6.8.1 MSEDCL submits that it has considered FY 2022-23 (September 2022 figures) as the base number for projection of number of consumers (excluding DF). Based on the number of consumers for FY 2022-23 (September 2022 figures) and the CAGR as shown in the above tables, MSEDCL has projected

the number of consumers (excluding DF) for various categories for FY 2023-24 to FY 2024-25 as shown in the following tables:

**Table 182: No. of consumers projections (HT category) for FY 2023-24 & FY 2024-25**

Category	FY 23-24	FY 24-25
	Projected	Projected
HT-I Industries	15,285	15,496
HT-II Commercial	3,197	3,231
HT III Railways	113	120
HT IV-PWW & STP	1,042	1,051
HT V Agricultural	1,428	1,452
HT VI Bulk Supply (Housing Complex)	254	258
HT-VIII Public services	1,566	1,598
MSPGCL AUX SUPPLY	28	28
HT EV Charging Stations 11 kV	5	7
HT EV Charging Stations 22 kV	10	13
<b>Total -HT Consumers</b>	<b>22,928</b>	<b>23,254</b>

**Table 183: No. of consumers projections (LT category) for FY 2023-24 & FY 2024-25**

Category	FY 23-24	FY 24-25
	Projected	Projected
<b>LT Category</b>		
LT I -BPL	1,94,960	1,98,534
LT I Domestic	2,03,03,905	2,09,13,023
LT II Non Domestic	19,75,301	20,38,484
LT III PWW	55,071	56,175
LT IV Agriculture	42,92,730	43,35,613
LT V Powerloom	34,424	34,424
LT V Industrial General	3,22,879	3,35,076
LT VI Streetlight	99,477	1,01,837
LT VII - Public services	1,20,148	1,32,153
LT EV Charging Stations	525	919
LT Prepaid	10,334	10,334
<b>Total LT Consumers</b>	<b>2,74,09,754</b>	<b>2,81,56,572</b>
<b>Total Consumers (Ex.Franchise)</b>	<b>2,74,32,682</b>	<b>2,81,79,826</b>

## 6.9 Approach for Connected Load/ Contract Demand Projection for FY 2023-24 to FY 2024-25

6.9.1 MSEDCL submits that, similar to sales and no. of consumer's projections,

MSEDCL has also adopted the historical trend method for projecting category wise no. of consumers of MSEDCL. The break-up of category wise load and the 5 year and 3 year CAGR as well as year-on-year growth rates for the period FY 2021-22 over FY 2016-17 is provided in the below table. Wherever it is observed that the trend is unreasonable or unsustainable, the growth rates have been corrected to arrive at more realistic projections.

6.9.2 Historical trend in Load/ Contract Demand in HT Category for MSEDCL (Excluding DF) is given in the following table.

**Table 184: Historical Growth & CAGR connected load/ Contract Demand (HT category)**

Category	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	5 Year CAGR	3 Year CAGR	Y-oY Growth
HT-I Industries	71,89,906	74,33,649	80,25,688	76,31,933	84,91,857	88,50,694	4%	3%	4%
HT-II Commercial	5,69,980	5,46,765	5,51,307	5,02,572	4,65,127	5,58,151	0%	0%	20%
HT III Railways	4,678	27,960	15,639	19,577	21,614	26,874	42%	20%	24%
HT IV-PWW	2,81,579	2,86,229	2,93,325	2,97,586	3,05,429	3,18,404	2%	3%	4%
HT V Agricultural	4,49,457	4,26,420	4,29,748	4,65,830	4,93,152	4,75,576	1%	3%	-4%
HT VI Bulk Supply (Housing Complex)	53,240	50,610	53,235	52,085	50,642	54,077	0%	1%	7%
HT Temporary	1,059	1,666	2,528	6,521	-	-	0%	0%	0%
HT-IX Public services	2,60,319	2,54,829	2,55,751	2,41,247	2,38,630	2,95,596	3%	5%	24%
MSPGCL AUX SUPPLY	1,05,477	80,504	80,156	75,230	61,379	2,40,724	0%	0%	0%
HT EV Charging Stations 11 K	-	-	-	343	1,030	391	0%	0%	-62%
HT EV Charging Stations 22 K	-	-	1,004	4,721	4,028	9,854	0%	114%	145%
<b>Total -HT Consumers</b>	<b>89,15,695</b>	<b>91,08,632</b>	<b>97,08,381</b>	<b>92,97,645</b>	<b>1,01,32,888</b>	<b>1,08,30,341</b>	<b>4%</b>	<b>4%</b>	<b>7%</b>

6.9.3 Historical trend in Load/ Contract Demand in LT Category for MSEDCL (Excluding DF) is given in the following table.

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up for FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25  
Main Petition**

**Table 185: Historical Growth & CAGR connected load/ Contract Demand (LT category)**

Category	Unit	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	5 Year CAGR	3 Year CAGR	Y-o-Y Growth
LT-I (A): LT- BPL	KW	21,245	18,547	40,892	45,163	36,496	27,895	6%	-12%	-24%
LT-I (B) : LT-Residential( Other than BPL)	KW	1,81,57,853	1,91,66,744	2,06,30,120	2,17,22,477	2,24,54,020	2,32,28,744	5%	4%	3%
<b>LT-II : LT- Non Residential</b>										
0-20 KW	KW	30,54,712	33,69,377	35,95,050	36,62,820	36,91,685	37,77,323	4%	2%	2%
>20-<=50 KW	KVA	2,93,322	2,84,148	3,30,884	2,98,523	2,92,153	3,31,106	2%	0%	13%
>50 KW	KVA	1,66,400	1,68,071	2,04,873	2,04,774	2,07,524	2,65,723	10%	9%	28%
<b>LT-III : LT-Public Water Works</b>										
0-20 KW	KVA	89,518	94,077	95,242	94,364	95,294	1,03,176	3%	3%	8%
20-<=40 KW	KVA	1,13,720	20,012	23,954	25,401	27,799	29,584	-24%	7%	6%
> 40 KW	KVA	14,521	14,179	29,826	28,551	33,494	37,383	21%	8%	12%
*** LT-AG-Unmetered (Pumpsets)		78,32,128	75,39,611	74,22,998	73,67,595	75,14,426	79,03,903	0%	2%	5%
LT-AG Metered (Pumpsets)	HP	1,27,02,129	1,35,37,093	1,40,68,615	1,44,97,380	1,47,88,803	1,49,63,501	3%	2%	1%
LT-AG Metered (Others)	HP	1,27,893	1,43,024	3,09,471	3,42,213	2,12,829	2,49,688	14%	-7%	17%
<b>LT V(A) : LT Industry- Power Looms</b>										
0-20 KW (Upto & including 27 HP)	KW	1,84,446	1,82,964	1,82,179	1,39,817	1,38,532	1,33,734	-6%	-10%	-3%
Above 20 KW (above 27 HP)	KVA	1,80,153	1,85,858	2,19,882	2,28,658	2,52,104	2,55,155	7%	5%	1%
<b>LT V(B) : LT Industry- General</b>										
0-20 KW (Upto & including 27 HP)	KW	20,20,358	19,37,360	19,95,328	22,22,240	24,17,044	25,16,915	4%	8%	4%
Above 20 KW (above 27 HP)	KVA	14,25,584	13,50,857	16,46,183	17,96,444	19,93,245	21,45,026	9%	9%	8%
<b>Street Light (LT-VI)</b>										
Grampanchayat A, B & C Class Municipal Council	KW	2,04,399	1,96,144	1,96,761	1,99,598	1,99,828	2,60,694	5%	10%	30%
Municipal corporation Area	KW	1,79,931	1,91,497	1,99,560	2,05,105	2,07,694	2,24,642	5%	4%	8%
<b>Temporary Connection (LT-VII)</b>										
Temporary Connection (Religious)	KW	3,294	2,717	4,224	6,976	-	-	-100%	-100%	0%
Temporary Connection (Other Purposes)	KW	12,443	15,414	25,638	44,015	-	-	-100%	-100%	0%
<b>LT-VIII : LT-Advertisements &amp; Hordings</b>										
LT-VIII : LT-Advertisements & Hordings	KW	6,281	6,464	6,599	7,599	-	-	-100%	-100%	0%
<b>LT-IX : LT-Crematorium and Burial Grounds</b>										
LT-IX : LT-Crematorium and Burial Grounds	KW	1,446	1,608	1,743	2,137	-	-	-100%	-100%	0%
<b>LT X - Public services - Govt</b>										
0-20 KW	KW	21,140	26,379	41,284	49,296	56,001	57,201	22%	11%	2%
>20-50 kW	KVA	2,562	3,291	4,326	4,959	5,895	6,382	20%	14%	8%
>50 kW	KVA	2,785	2,734	3,719	3,804	5,119	8,854	26%	34%	73%
<b>LT X - Public services - Other</b>										
0-20 KW	KW	1,32,980	1,50,619	1,59,127	1,80,102	2,01,551	2,28,179	11%	13%	13%
>20-50 kW	KVA	25,870	27,833	33,221	35,643	36,413	47,295	13%	12%	30%
>50 kW	KVA	23,631	28,080	34,490	37,584	38,476	55,029	18%	17%	43%
LT EV Charging		-	-	144	382	469	1,308	0%	109%	179%

## 6.10 CAGR considered for Connected Load/ Contract Demand Projection

6.10.1 Similar to sales and no. of consumer's, MSEDCL has used the CAGR methodology for projecting the connected load, billing demand/ contract demand. Wherever it is observed that the trend is unreasonable or unsustainable, the growth rates have been corrected too arrive at more realistic projections

6.10.2 Following tables shows the CAGR considered for projection of connected load, billing demand/ contract demand.

**Table 186: CAGR considered for Contract Demand Projections (HT category)**

Category	CAGR Considered
HT-IND 11 KV	1%
HT-IND 22 KV	1%
HT-IND 33 KV	1%
HT-IND EHV	1%
HT-COMM 11 KV	2%
HT-COMM 22 KV	2%
HT-COMM 33 KV	2%
HT-COMM EHV	2%
HT RAILWAY/METRO/MONO 11 KV	5%
HT RAILWAY/METRO/MONO 22 KV	5%
HT RAILWAY/METRO/MONO 33 KV	5%
HT RAILWAY/METRO/MONO EHV	5%
HT-PWW 11 KV	2%
HT-PWW 22 KV	2%
HT-PWW 33 KV	2%
HT-PWW EHV	2%
HT-AGRICULTURE 11 KV	1%
HT-AGRICULTURE 22 KV	1%
HT-AGRICULTURE 33 KV	1%
HT-AGRICULTURE EHV	1%
HT-GROUP HOUSING 11 KV	1%
HT-GROUP HOUSING 22 KV	1%
HT-GROUP HOUSING 33 KV	1%
HT-GROUP HOUSING EHV	0%
HT-PUBLIC SER.-GOVT 11 KV	5%
HT-PUBLIC SER.-GOVT 22 KV	5%
HT-PUBLIC SER.-GOVT 33 KV	5%
HT-PUBLIC SER.-GOVT EHV	0%
HT-PUBLIC SER.-OTHER 11 KV	3%
HT-PUBLIC SER.-OTHER 22 KV	3%
HT-PUBLIC SER.-OTHER 33 KV	3%
HT-PUBLIC SER.-OTHER EHV	3%

**Table 187: CAGR considered for Connected load/ Contract Demand Projections (LT category)**

<b>Category</b>	<b>CAGR Considered</b>
LT-I (A): LT- BPL	5%
LT-I (B) : LT-Residential( Other than BPL)	5%
LT-II : LT- Non Residential	
0-20 KW	4%
>20-<=50 KW	4%
>50 KW	4%
LT-III : LT-Public Water Works	
0-20 KW	2%
20-<=40 KW	2%
> 40 KW	2%
LT-AG Metered (Pumpsets)	2%
LT-AG Metered (Others)	5%
LT V : LT Industry- Power Looms	
0-20 KW (Upto & including 27 HP)	0%
Above 20 KW (above 27 HP)	5%
LT V : LT Industry- General	
0-20 KW (Upto & including 27 HP)	4%
Above 20 KW (above 27 HP)	4%
LT VII(A) - Public services - Govt	
0-20 KW	6%
>20-50 kW	6%
>50 kW	6%
LT VII(B) - Public services - Other	
0-20 KW	6%
>20-50 kW	6%
>50 kW	6%
<b>LT EV Charging</b>	<b>10%</b>

## 6.11 Connected Load Projections

6.11.1 MSEDCL submits that based on the connected load/ contract demand or provisional billing demand for FY 2021-22 and the CAGRs as shown in above tables, MSEDCL has projected the connected load/contract demand for various categories (excluding DF) for the period as shown in the following table:

**Table 188: Connected load/ Contract Demand Projections (HT category)**

Category	kVA	
	FY 23-24 Projected	FY 24-25 Projected
HT-I Industries	90,28,601	91,18,891
HT-II Commercial	5,80,705	5,92,321
HT III Railways	29,633	31,117
HT IV-PWW	3,34,452	3,42,778
HT V Agricultural	4,89,518	4,96,678
HT VI Bulk Supply (Housing Complex)	54,649	54,937
HT-VIII Public services	3,14,962	3,25,168
MSPGCL AUX SUPPLY	2,40,724	2,40,724
HT EV Charging Stations 11 kV	424	441
HT EV Charging Stations 22 kV	10,659	11,086
<b>Total -HT Consumers</b>	<b>1,10,84,327</b>	<b>1,12,14,141</b>

**Table 189: Connected load/ Contract Demand Projections (LT category)**

Category	Unit	FY 23-24	FY 24-25
		Projected	Projected
<b>LT-I (A): LT- BPL</b>	kW	30,756	32,294
<b>LT-I (B) : LT-Residential( Other than BPL)</b>	kW	2,56,09,692	2,68,90,177
<b>LT-II : LT- Non Residential</b>			
0-20 KW	kW	40,85,553	42,48,976
>20-<=50 KW	kVA	3,58,126	3,72,452
>50 KW	kVA	2,87,407	2,98,904
<b>LT-III : LT-Public Water Works</b>			
0-20 KW	kVA	1,07,586	1,09,861
20-<=40 KW	kVA	30,849	31,502
> 40 KW	kVA	38,981	39,806
<b>LT-IV: LT-Agriculture</b>			
*** LT-AG-Unmetered (Pumpsets)	HP	79,03,904	79,03,904
LT-AG Metered (Pumpsets)	HP	1,55,68,027	1,58,79,388
LT-AG Metered (Others)	HP	2,75,282	2,89,047
<b>LT V : LT Industry- Power Looms</b>			
0-20 KW (Upto & including 27 HP)	kW	1,33,735	1,33,735
Above 20 KW (above 27 HP)	kVA	2,81,309	2,95,375
<b>LT V : LT Industry- General</b>			
0-20 KW (Upto & including 27 HP)	kW	27,22,295	28,31,187
Above 20 KW (above 27 HP)	kVA	23,20,061	24,12,864
<b>Street Light (LT-VI)</b>			
Grampanchayat A, B & C Class Municipal Council	kW	2,87,416	3,01,787
Municipal corporation Area	kW	2,47,668	2,60,052
<b>LT VII(A) - Public services - Govt</b>			
0-20 KW	kW	64,271	68,128
>20-50 kW	kVA	7,171	7,602
>50 kW	kVA	9,949	10,546
<b>LT VII(B) - Public services - Other</b>			
0-20 KW	kW	2,56,382	2,71,765
>20-50 kW	kVA	53,141	56,330
>50 kW	kVA	61,831	65,541
<b>LT EV Charging</b>	kVA	1583	1742

## 6.12 Segregation of Wires and Supply Business

6.12.1 MSEDCL submits that Regulation 71 of the MYT Regulations, 2019 provides that ARR of the Distribution Licensee shall be apportioned between the Distribution Wires Business and Retail Supply Business in accordance with the allocation matrix.

**“71 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.”*

6.12.2 MSEDCL has segregated the expenses based on the allocation matrix as provided in the MYT Regulations, 2019 which is reproduced below for ready reference.

**Table 190: Segregation of Retail Supply and Wires Business Expenses**

<b>Particulars</b>	<b>Distribution Wires Business (%)</b>	<b>Retail Supply Business (%)</b>
Power Purchase Expenses	0%	100%
Inter-State Transmission Charges	0%	100%
Intra-State Transmission Charges	0%	100%
Operation & Maintenance Expenses	65%	35%
Depreciation	90%	10%
Interest on Long-term Loan Capital	90%	10%
Interest on Working Capital	10%	90%

<b>Particulars</b>	<b>Distribution Wires Business (%)</b>	<b>Retail Supply Business (%)</b>
Interest on Consumer Security Deposits	10%	90%
Provision for Bad & Doubtful Debts	10%	90%
Income Tax	90%	10%
Contribution to Contingency Reserves	90%	10%
Return on Equity	90%	10%
Non-Tariff Income	10%	90%

### **6.13 Estimation of ARR for FY 2023-24 to FY 2024-25**

6.13.1 MSEDCL submits that the components for the calculation of total expenses for the Aggregate Revenue Requirement for the period FY 2023-24 to FY 2024-25 are as follow:

- Power Purchase expenses
- Intra-State Transmission Charges
- Operation & Maintenance expenses
- Interest on Loan and Financial Charges
- Depreciation
- Interest on Working Capital
- Contribution to Contingency Reserves
- Provision for Bad and doubtful debts
- Return on Equity
- Income Tax

### **6.14 Power Purchase Expenses for FY 2023-24 to FY 2024-25**

6.14.1 MSEDCL has following sources of firm power viz.

- Maharashtra State Power Generation Company Limited (MSPGCL)
- Purchase from Central Generating Stations
- IPPs (JSW (Ratnagiri), Mundra UMPP CGPL, Adani Power Limited, RattanIndia Limited, Emco Power Limited etc.)

6.14.2 MSEDCL also buys power from other sources such as Sardar Sarovar and

Pench Hydro project, renewable sources including co-generation, wind power and solar generation.

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

### **6.15 Assumptions for power purchase for FY 2023-24 to FY 2024-25**

6.15.1 MSEDCL submits that it procures power from different sources on Merit Order Despatch Principle for optimum utilization of the sources at least cost. For projection of availability, MSEDCL has considered the entire power available for 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 2023-24 to FY 2024-25. However, it is submitted that MSEDCL had tied up power from short term sources during April 2023 in case it witnesses similar contingency which it witnessed in April 2022, for which it has already got approval from Hon'ble Commission vide Order dated 30 August, 2022 in Case No. 148 of 2022. It is submitted that though the situation of coal availability has improved in the past few months and it is expected that such a contingency may not rise in the months of April and May 2023, it is submitted that the Hon'ble Commission may allow MSEDCL to procure power at the rate approved vide Order dated 30 August, 2022 in Case No. 148 of 2022 in case it is compelled to procure power from short term sources due to coal shortfall/unavailability of sources or unexpected increase in demand during peak months.

6.15.2 Further, a realistic approach has been adopted in projecting the power purchase availability based on the actual availability and considering upcoming projects in the period FY 2023-24 to FY 2024-25.

6.15.3 For estimating the power purchase cost, merit order despatch principles have been considered. As per the provisions of MYT Regulations, 2019, MSEDCL has projected the monthly power requirement using the monthly sales

projections and applying monthly MOD. The fixed charges have been considered based on the availability assumed for each of the plants. For those stations where normative availability is considered, full fixed (capacity) charges have been considered. Also, fixed charges of those plants have also been considered which are available but not coming under the MoD stack. 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 despatch principles).

6.15.4 For power procurement from competitive bidding route, the tariff has been considered based on the rate quoted for respective years as per the terms of the PPA with the escalation based on the CERC rates, wherever applicable. However, it is observed that the rates discovered in PPA's are no longer applicable in actual case and all the IPP's have made 'Change in Law' claims due to various factors such as taxes and duties/coal shortfall etc. Owing to this, the energy rate considered in MoD stock for projecting power purchase for FY 2023-24 and FY 2024-25 is no longer the discovered rate of PPA. Accordingly, MSEDCL has considered the additional cost of 'Change in Law' over and above the rate discovered in PPA's for working out the MoD stack. Accordingly, power purchase quantum and cost is arrived from IPP's.

## **6.16 Assumptions for power purchase for FY 2023-24 to FY 2024-25**

### **6.16.1 Projection for FY 2023-24 and FY 2024-25**

#### **A) MSPGCL Stations**

MSEDCL has considered the quantum of energy available for sale from MSPGCL stations based on the contracted capacity of each station and average month wise actual availability for last 3 years. The auxiliary consumption is considered as approved by Hon'ble Commission in MYT Order.

The variable cost for FY 2023-24 and FY 2024-25 is worked out considering estimated variable cost considered for H2 of FY 2022-23 for each station and escalated the same by CAGR for last 4 years (i.e. FY 2017-18 to FY 2021-

22).

The fixed cost is considered same as that approved by the Hon'ble Commission in MYT Order for FY 2023-24 and FY 2024-25.

**B) NTPC Stations**

MSEDCL has considered the quantum of energy available for sale from NTPC stations based on the contracted capacity of each station and normative availability for each of the stations. The auxiliary consumption is considered as approved by Hon'ble Commission in MYT Order. MSEDCL has considered PGCIL Loss of 3.10% on the ex-bus energy to arrive at the total energy available at State Periphery.

The variable cost for FY 2023-24 and FY 2024-25 is considered based on estimated variable cost considered for H2 of FY 2022-23 and escalated the same by CAGR for last 4 years (i.e. FY 2017-18 to FY 2021-22).

The fixed cost is considered in line with the fixed cost approved by Hon'ble Commission in MYT Order dated 30<sup>th</sup> March 2022 for each of the stations.

**C) IPP Stations**

MSEDCL has considered the quantum of energy available for sale from IPPs based on the contracted capacity of each station and normative availability approved by Hon'ble commission in MYT Order. The auxiliary consumption is also considered as approved by Hon'ble Commission in MYT Order.

The variable rates are considered based on the quoted escalable and non-escalable rates of the respective IPPs for FY 2023-24 and FY 2024-25. As discussed earlier, MSEDCL has also considered the impact of transportation and taxes and duties in addition to the discovered rate in PPA on similar lines as considered in H2 of FY 2022-23.

Further, in case of APML stations (4 units) and RIPL stations (2 units), additional impact of 'Change in Law' with respect to Coal shortfall is also worked out considering the same rate as estimated for H2 of FY 2022-23). The rate on account of 'Change in Law' claims due to coal shortfall is kept

same for projecting rate of both the years.

**Impact of MoP direction for blending of 6% imported coal**

As discussed in Chapter for Provisional True-up of FY 2022-23, MSEDCL has already considered the impact of blending of 6% imported coal in the rates projected for H2 of FY 2022-23 and hence for FY 2023-24 and FY 2024-25 for MSPGCL and NTPC stations.

Similarly, in case of APML and RIPL stations, the impact of imported coal blending is already taken into account for rates projected for FY 2023-24 and FY 2024-25.

**GMR Warora**

As discussed in previous Chapter, the variable rate has been increased by Rs. 0.3680 per unit for FY 2023-24 and subsequently for FY 2024-25 to take into account the impact of imported coal blending.

**Sai Wardha**

As discussed in previous Chapter, the variable rate has been increased by Rs. 0.3237 per unit for FY 2023-24 and subsequently for FY 2024-25 to take into account the impact of imported coal blending

Further, it is submitted that in case of CGPL and JSW, the variable rates excluding imported coal rates are escalated by CAGR of last 5 years for projecting rates for FY 2023-24 and FY 2024-25.

The variable cost for each month of FY 2023-24 and FY 2024-25 is hence considered based on the variable rate derived as discussed in above paragraphs.

The fixed cost of all IPPs is considered based on the quoted non-escalable capacity charges of respective IPPs for FY 2023-24 and FY 2024-25 in their respective PPA.

**D) Renewables**

MSEDCL has considered the net purchase from Renewable sources (i.e. Wind, Solar, Biogas, Biomass, MSW and Small Hydro) based on the actual trend in generation seen in the last 3-4 years in each of the sources. MSEDCL has considered the actual CUF for FY 2021-22 for each of the sources and computed expected generation in FY 2023-24 and FY 2024-25 based on expected addition in RE capacity during this period.

The variable rates considered for Renewable sources are the weighted average rates of all generators having PPA with MSEDCL. For estimating rates for FY 2023-24 and FY 2024-25, MSEDCL has also taken in to account the contracted capacity which are planned to be commissioned in the next 2 years. The following Table shows the capacity addition plan from FY 2022-23 to FY 2024-25 for each of the RE sources

In MW

Particulars	FY 22-23	FY 23-24	FY 24-25
Solar (MW)	4351	6933	8448
Wind (MW)	3988	3865	3902
Bagasse (MW)	2931	3000	3000
Biomass (MW)	87	77	77
MSW (MW)	4	17	17
SHP (MW)	332	334	334

**E) Inter State Transmission Charges**

MSEDCL has considered the PGCIL charges same as that approved by Hon'ble Commission for FY 2023-24 and FY 2024-25 in MYT Order dated 30<sup>th</sup> March 2020. It is submitted that MSEDCL has not claimed any additional amount with respect to notification of CERC (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022 and CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2022. However, it is submitted that the additional charges if any may be approved by the Hon'ble Commission as it deemed appropriate.

**F) Impact on ECR due to installation Emission Control System (ECS) including Flue Gas Desulfurization (FGD):**

The Ministry of Environment, Forest and Climate Change, Government of India (MoEFCC) on 07.12.2015, has notified the Environment (Protection) Amendment Rules, 2015 (MoEFCC Notification) which mandates that all thermal power plants are required to comply with the revised emission norms as specified in the MOEF Notification to control the SO<sub>2</sub> by installation of Flue Gas De-sulphurizer (FGD) and NO<sub>x</sub> by Combustion Modification System. Accordingly, Hon'ble CERC has accorded in-principle approval of capital cost for installation of ECS and further, directed generators to file separate petitions for determination of tariff after implementation of the revised ECS as per provisions in Tariff Regulation, 2019. Further, Hon'ble MERC ordered that additional capital and operation expenditure and other consequential impact shall be considered on actual basis for reimbursement under Change in Law subject to prudent check.

After commissioning of the ECS assets, the generators will start the billing towards the cost of the ECS to the beneficiaries, resulting in increased variable cost of generation. It is to submit that the impact of additional expenditure towards implementation of ECS is currently not considered in the present petition.

G) Impact due to Fly Ash Transportation Charges:

The Ministry of Environment, Forest & Climate Change (MOEFCC) issued notification dated 25.01.2016, prescribing bearing of the transportation cost of Fly Ash generated at power stations with the users of Fly Ash. As per Hon'ble CERC as well as Hon'ble MERC directives, actual additional expenditure incurred by generators towards transportation of ash is admissible under "Change in Law". The Hon'ble Commission is therefore requested to kindly consider these charges as pass through as and when claimed by the Generating station for the respective years. It is also further submitted that any impact of such charges if allowed to the Generators in their respective Tariff Orders, then such cost may also be passed through in ARR of MSEDCL

H) Power Purchase from Short Term Markets

As discussed earlier, during the higher demand or shortage from regular sources due to various reasons including break downs, fuel shortage, 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 volatile nature of short term power market and uncertainty in supply of power from long term sources on account of various reasons, MSEDCL requests the Hon'ble Commission to accord in principle approval for procurement of power on DEEP e-bidding portal/ power exchange based on the projected average power purchase rate. MSEDCL also requests the Hon'ble Commission to consider the ceiling rate of Rs. 7.44 to Rs. 7.85 per unit as approved in Order dated 148 of 2022 for procurement of power on DEEP e-bidding portal/ power exchange during FY 2022-23 and FY 2024-25 considering the fact that overall discovered average rates on exchanges have increased significantly over the last 1-2 years during the recovery period of COVID-19. It is expected that the rates may show similar trend owing to the fact that demand may constantly rise in future years.

6.16.2 Following tables provide the summary of source wise power purchase quantum and cost for the period FY 2023-24 to FY 2024-25.

**Table 191: Source wise Power Purchase quantum and cost for FY 2023-24**

Particulars	PP Quantum (MUs)			PP Cost (Rs. Cr)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation
MSPGCL	51,351	62,332.57	10,981.63	22,206	29,649.02	7,443.42	4.32	4.76	0.43
NTPC	28,344	29,632.56	1,288.52	11,368	12,239.15	871.41	4.01	4.13	0.12
NPCIL	4,946	4,372.52	(573.22)	1,515	1,389.40	(125.86)	3.06	3.18	0.11
SSP	1,213	451.66	(761.34)	249	92.60	(156.40)	2.05	2.05	(0.00)
Pench	137	96.75	(40.25)	28	19.83	(8.17)	2.04	2.05	0.01
Subhansari		321.93	321.93		144.87	144.87		4.50	4.50
Dodson	116	31.78	(84.22)	28	19.90	(7.85)	2.39	6.26	3.87
JSW	1,462	-	(1,462.47)	663	164.67	(498.33)	4.53		(4.53)
CGPL	5,172	4,694.48	(477.54)	1,685	2,666.43	981.43	3.26	5.68	2.42
Adani Power	21,044	12,169.08	(8,874.79)	8,246	7,975.85	(270.15)	3.92	6.55	2.64
EMCO Power	1,374	1,493.28	119.46	717	620.98	(95.52)	5.22	4.16	(1.06)
Rattan India	1,921	8,959.68	7,038.67	1,424	3,642.71	2,219.11	7.41	4.07	(3.35)
Sai Wardha		1,791.94	1,791.94		838.29	838.29		4.68	4.68
Renewable	31,679	26,408.96	(5,270.23)	12,583	11,859.37	(723.23)	3.97	4.49	0.52
Traders		-	-		-	-			-
PGCIL Charges		0	-	3,845	3845.01	0.01			-
<b>Total Power Purchase</b>	<b>1,48,759</b>	<b>1,52,757</b>	<b>3,998</b>	<b>64,555.05</b>	<b>75,168.09</b>	<b>10,613.04</b>	<b>4.34</b>	<b>4.92</b>	<b>0.58</b>

**Table 192: Source wise Power Purchase quantum and cost for FY 2024-25**

Particulars	PP Quantum (MUs)			PP Cost (Rs. Cost)			PP Cost (Rs. /Unit)		
	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation	Approved in MYT Order	Projected	Deviation
MSPGCL	51,409	65,655.99	14,246.86	22,516	31,924.58	9,408.99	4.38	4.86	0.48
NTPC	28,292	28,759.96	467.73	11,582	12,145.96	564.34	4.09	4.22	0.13
NPCIL	4,932	4,932.43	0.20	1,548	1,614.50	66.81	3.14	3.27	0.14
SSP	1,210	450.82	(759.12)	248	92.43	(155.57)	2.05	2.05	0.00
Pench	137	96.55	(39.95)	28	19.79	(8.21)	2.05	2.05	(0.00)
Subhansari		321.12	321.12		144.51	144.51		4.50	4.50
Dodson	116	31.78	(83.94)	33	25.18	(7.75)	2.85	7.92	5.08
JSW	652	-	(651.80)	424	192.64	(231.36)	6.51		(6.51)
CGPL	5,158	2,218.15	(2,939.74)	1,742	1,601.02	(140.98)	3.38	7.22	3.84
Adani Power	20,986	11,314.71	(9,671.65)	8,169	7,473.01	(695.99)	3.89	6.60	2.71
EMCO Power	1,370	1,489.20	119.14	750	637.91	(112.09)	5.47	4.28	(1.19)
Rattan India	1,831	8,935.20	7,104.27	1,413	3,743.69	2,330.69	7.72	4.19	(3.53)
Sai Wardha		1,787.04	1,787.04		830.47	830.47		4.65	4.65
Renewable	37,111	29,475.67	(7,635.69)	14,330	12,965.75	(1,364.25)	3.86	4.40	0.54
Traders		-	-		-	-			-
PGCIL Charges		-	-	4,037	4,037	0.26			-
<b>Total Power Purchase</b>	<b>1,53,204</b>	<b>1,55,469</b>	<b>2,264</b>	<b>66,819</b>	<b>77,449</b>	<b>10,630</b>	<b>4.36</b>	<b>4.98</b>	<b>0.62</b>

6.16.3 MSEDCL requests the Hon'ble Commission to allow power purchase as shown in table above.

### 6.17 Intra State Transmission Charges

6.17.1 MSEDCL has considered the Intra-State Transmission charges same as that approved by the Hon'ble Commission for FY 2023-24 and FY 2024-25 in MYT Order dated 30<sup>th</sup> March 2020. The following are the Intra State Transmission charges proposed by Hon'ble Commission for approval.

**Table 193: Intra-State Transmission Charges for FY 2023-24 and FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Intra State Transmission Charges	6,009.51	6,009.51	6,036.77	6,036.77

6.17.2 MSEDCL request the Hon'ble Commission to allow the Intra State Transmission charges as may be approved in the InSTS Order after prudence check.

### **6.18 Distribution Loss for FY 2023-24 to FY 2024-25**

6.18.1 MSEDCL submits that it has been putting best endeavours for lowering the Distribution Losses to the lowest possible level. MSEDCL has achieved a significant reduction in distribution losses during recent years. However, loss reduction is slow process and becomes increasingly difficult for the loss levels to come down after a particular level. The change in sales mix also impact the distribution losses.

**Table 194: Distribution Loss for FY 2023-24 to FY 2024-25**

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Distribution Losses (Excluding EHV & OA Sales)	13.0%	13.0%	12.0%	12.0%

6.18.2 MSEDCL has considered distribution losses same as that approved by the Hon'ble Commission in MYT Order dated 30<sup>th</sup> March 2020 for FY 2023-24 and FY 2024-25 respectively. MSEDCL request the Hon'ble Commission to consider the same.

### **6.19 Energy Balance for FY 2023-24 to FY 2024-25**

6.19.1 MSEDCL submits that the quantum of sales shown in Paragraph 6.4 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 sales to the consumers within the Distribution Franchisee area has also been considered. Therefore, total energy available for sale for FY 2023-24 to FY

2024-25 is computed as below:

**Table 195: Total Energy Sales for MSEDCL for FY 2023-24 to FY 2024-25**

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Energy Sales by MSEDCL	1,20,842.58	1,23,786.65	1,25,785.50	1,27,412.88
Add: Category wise sales in DF area (Bhiwandi)	3,759.30	3,462.25	3,937.88	3,567.35
Add: Category wise sales in DF area (Malegaon)	-	764.06	-	787.01
Add: Category wise sales in DF area (Thane)	-	562.41	-	579.78
<b>Energy Sales including DF</b>	<b>1,24,601.88</b>	<b>1,28,575.37</b>	<b>1,29,723.38</b>	<b>1,32,347.02</b>
Add: OA Sales (Conventional)	3,983.40	4,863.00	3,983.40	5,106.00
Add: OA Sales (Non-Conventional)	859.40	2,825.00	859.40	3,826.00
Add: Energy Sales due to Surplus Energy Traded	1,246.02	(0.03)	1,297.23	0.08
<b>Total Energy Sales</b>	<b>1,30,690.69</b>	<b>1,36,263.34</b>	<b>1,35,863.41</b>	<b>1,41,279.11</b>

6.19.2 The Energy Balance for FY 2023-25 to FY 2024-25 is summarised in following table.

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up for FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25  
Main Petition**

**Table 196: Energy Balance for FY 2023-24**

Particulars	Calculation	UoM	FY 2023-24	
			MYT Order	Projected
LT Agriculture Sales (Including D.F)	a	MU	27,939	34,151
LT Sales excluding Agriculture Sales (Including D.F)	b	MU	50,919	48,949
HT Sales excluding EHV level sales (Including D.F)	c	MU	34,160	32,259
<b>Total Sales including D.F (Excluding EHV Sales)</b>	<b>d=a+b+c</b>	<b>MU</b>	<b>1,13,018</b>	<b>1,15,359</b>
OA Sales (Renewables)	e	MU	859	2,825
OA Sales (Conventional)	f	MU	3,983	4,863
Retail Energy Sale to Consumers (Excluding EHV Sales)	A=d+e+f	MU	1,17,860	1,23,047
Sale due to Surplus Energy Traded	B=1%*(d+t)	MU	1,246	-0
<b>Retail Energy Sale including surplus traded (Excluding EHV Sales)</b>	<b>C=A+B</b>	<b>MU</b>	<b>1,19,106</b>	<b>1,23,047</b>
<b>Total Power Purchase</b>	<b>D=g+h</b>	<b>MU</b>	<b>1,48,759</b>	<b>1,52,757</b>
Power Purchase Quantum from Intra-State sources	g	MU	1,07,573	1,11,694
Power Purchase Quantum from Inter-State sources	h	MU	41,186	41,063
Inter-State Losses	i	%	3.10%	3.10%
Power Purchase Quantum from Inter-State sources at MS Periphery	j=h*(1-i)	MU	39,907	39,788
Add: FBSM		MU	-	-
<b>Power Quantum handled at Maharashtra Periphery</b>	<b>k=g+j</b>	<b>MU</b>	<b>1,47,480</b>	<b>1,51,482</b>
Infirm Non-PPA Wind Power	l=e/(1-q)	MU	888	2,920
Input for OA Consumption	m=f/(1-q)	MU	4,114	5,023
<b>Total Power Purchase Quantum Handled</b>	<b>n=k+l+m-v</b>	<b>MU</b>	<b>1,51,909</b>	<b>1,59,425</b>
Surplus Power Traded	o=B	MU	1,246	-0
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	<b>p=n-o</b>	<b>MU</b>	<b>1,50,663</b>	<b>1,59,425</b>
<b>Intra-State Transmission Loss</b>	<b>q</b>	<b>%</b>	<b>3.18%</b>	<b>3.18%</b>
Intra-State Transmission Loss	r=p*q	MU	4,789	5,067
Net Energy requirement at T<>D Periphery	s=p-r	MU	1,45,874	1,54,357
EHV Sales	t	MU	11,584	13,217
Net Energy Available for Sale at 33kV	u=s-t	MU	1,34,290	1,41,141
Energy injected and drawn at 33kV	v	MU	573	905
<b>Total Energy Available for Sale at 33kV</b>	<b>E=u+v</b>	<b>MU</b>	<b>1,34,863</b>	<b>1,40,236</b>
<b>Energy Available for Sale including Surplus traded (excl. OA Sales)</b>	<b>F=E-l-m+o</b>	<b>MU</b>	<b>1,31,107</b>	<b>1,32,548</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>G=E-A</b>	<b>MU</b>	<b>17,002</b>	<b>17,189</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	<b>H=G/F</b>	<b>%</b>	<b>13.0%</b>	<b>13.0%</b>

**Table 197: Energy Balance for FY 2024-25**

Particulars	Calculation	UoM	FY 2024-25	
			MYT Order	Projected
LT Agriculture Sales (Including D.F)	a	MU	28,498	35,073
LT Sales excluding Agriculture Sales (Including D.F)	b	MU	53,747	50,504
HT Sales excluding EHV level sales (Including D.F)	c	MU	35,452	33,178
<b>Total Sales including D.F (Excluding EHV Sales)</b>	$d=a+b+c$	MU	<b>1,17,698</b>	<b>1,18,754</b>
OA Sales (Renewables)	e	MU	859	3,826
OA Sales (Conventional)	f	MU	3,983	5,106
Retail Energy Sale to Consumers (Excluding EHV Sales)	$A=d+e+f$	MU	<b>1,22,540</b>	1,27,686
Sale due to Surplus Energy Traded	$B=1\%*(d+t)$	MU	1,297	0
<b>Retail Energy Sale including surplus traded (Excluding EHV Sales)</b>	$C=A+B$	MU	<b>1,23,838</b>	<b>1,27,686</b>
<b>Total Power Purchase</b>	$D=g+h$	MU	<b>1,53,204</b>	<b>1,55,469</b>
Power Purchase Quantum from Intra-State sources	g	MU	1,12,105	1,17,200
Power Purchase Quantum from Inter-State sources	h	MU	41,099	38,268
Inter-State Losses	i	%	3.10%	3.10%
Power Purchase Quantum from Inter-State sources at MS Periphery	$j=h*(1-i)$	MU	39,823	37,080
Add: FBSM		MU	-	-
<b>Power Quantum handled at Maharashtra Periphery</b>	$k=g+j$	MU	<b>1,51,928</b>	<b>1,54,280</b>
Infirm Non-PPA Wind Power	$l=e/(1-q)$	MU	888	3,954
Input for OA Consumption	$m=f/(1-q)$	MU	4,114	5,274
<b>Total Power Purchase Quantum Handled</b>	$n=k+l+m-v$	MU	<b>1,56,357</b>	<b>1,63,508</b>
Surplus Power Traded	$o=B$	MU	1,297	0
<b>Energy Requirement at G&lt;&gt;T Periphery</b>	$p=n-o$	MU	<b>1,55,059</b>	<b>1,63,508</b>
<b>Intra-State Transmission Loss</b>	q	%	3.18%	3.18%
Intra-State Transmission Loss	$r=p*q$	MU	4,929	5,197
Net Energy requirement at T<>D Periphery	$s=p-r$	MU	1,50,131	1,58,310
EHV Sales	t	MU	12,026	13,593
Net Energy Available for Sale at 33kV	$u=s-t$	MU	1,38,105	1,44,718
Energy injected and drawn at 33kV	v	MU	573	905
<b>Total Energy Available for Sale at 33kV</b>	$E=u+v$	MU	<b>1,38,678</b>	<b>1,43,813</b>
<b>Energy Available for Sale including Surplus traded (excl. OA Sales)</b>	$F=E-l-m+o$	MU	<b>1,34,974</b>	<b>1,34,881</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	$G=E-A$	MU	<b>16,138</b>	<b>16,127</b>
<b>Distribution Loss (Excl. EHV Sales and OA Sales)</b>	$H=G/F$	%	12.0%	12.0%

6.19.3 MSEDCL requests the Hon'ble Commission to approve the Energy Balance for the period FY 2023-24 to FY 2024-25 as submitted by MSEDCL in above tables.

## 6.20 Operation & Maintenance Expenses for FY 2023-24 to FY 2024-25

6.20.1 MSEDCL submits that Regulation 75 and Regulation 84 of the MERC (MYT) Regulations, 2019 provides for the O&M Expenses norms for Distribution

Wires Business and Retail Supply of electricity respectively.

6.20.2 As per the said Regulations relating to the Truing-up of O&M expenses:

*“75.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of efficiency gains/losses, for the three Years ending March 31, 2019, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission:*

*Provided that the average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the Year ended March 31, 2018, and shall be escalated at the respective escalation rate for FY 2018-19 and FY 2019-20, to arrive at the Operation and Maintenance expenses for the base year ending March 31, 2020:*

*Provided further that the escalation rate for FY 2018-19 and FY 2019-20 shall be computed by considering 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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 respective past five financial years as per the Labour Bureau, Government of India:*

*....*

*75.3 The Operation and Maintenance expenses for each subsequent year shall be determined by escalating these Base Year expenses of FY 2019-20 by an inflation factor with 30% weightage to the average yearly inflation derived based on the monthly Wholesale Price Index of the respective 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% or as may be stipulated by the Commission from time to time, to arrive at the permissible Operation and Maintenance expenses*

*for each year of the Control Period:*

...

*Provided further that the efficiency factor shall be considered as zero, in case there is an increase in the number of consumers including Open Access consumers connected to the Distribution Wires of at least 2 percent annually over the last 3 years:*

*Provided also that in case such increase in the number of consumers is lower than 2 percent annually over the last 3 years, then the reduction in efficiency factor shall be considered in proportion to the percentage growth in the number of consumers.”*

6.20.3 For computation of revised normative O&M expenses for FY 2023-24 and FY 2024-25 revised normative O&M expenses of previous year has been escalated by the escalation factor of 5.06% derived for FY 2021-22. Detailed calculations are given in the Regulatory Formats.

6.20.4 MSEDCL submits that calculated O&M expenses are allocated between the Wires Business and Retail Supply Business in the ratio of allocation matrix provided in the MYT Regulations, 2019), i.e., 65% to Wires Business and 35% to Supply Business. The same is shown in following table.

**Table 198: O&M Expenses for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
O&M Expenditure (Wires Business)	5,086.16	5,448.75	5,281.17	5,724.41
O&M Expenditure (Supply Business)	2,738.70	2,933.94	2,843.71	3,082.37
<b>Total O&amp;M Expenditure</b>	<b>7,824.87</b>	<b>8,382.69</b>	<b>8,124.87</b>	<b>8,806.78</b>

6.20.5 MSEDCL requests the Hon’ble Commission to allow the O&M Expenses as computed in above table.

## **6.21 Opex for FY 2023-24 to FY 2024-25**

6.21.1 MSEDCL submits that as per the Regulation 75.7 and 84.7 of the MYT Regulations, 2019 the distribution licensee is allowed to undertake Opex schemes for wires and supply business for system automation, new

technology and IT implementation etc. and such expenses may be allowed over and above normative O&M expenses. The relevant extract of the regulations is reproduced below:

*“75.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.*

*84.7 A Distribution Licensee may undertake Opex schemes for system automation, new technology and IT implementation, etc., and, such expenses may be allowed over and above normative O&M Expenses, subject to prudence check by the Commission:*

*Provided that the Distribution Licensee shall submit detailed justification, cost benefit analysis of such schemes as against capex schemes, and savings in O&M expenses, if any.”*

6.21.2 Hon'ble Commission has already approved Opex schemes in the MYT Order dated 30<sup>th</sup> March, 2019 in Case No. 322 of 2019. As observed by the Hon'ble Commission that the estimation of Opex claimed by MSEDCL is based on the estimation and selection of vendor, award of contract and other factors. MSEDCL submits revised Opex for FY 2023-24 to FY 2024-25.

6.21.3 The above mentioned regulations also provide that License shall submit the detailed justification, cost benefit analysis of such schemes as against capex schemes and savings in O&M expenses, if any. MSEDCL respectfully submits that, MSEDCL had already submitted all the details at the time of MYT process. MSEDCL has only revising the projections of Opex for FY 2023-24 to FY 2024-25. Though, the Hon'ble Commission has accorded its approval after due consideration, MSEDCL is only re-submitting detailed justification, cost benefit analysis of such schemes as against capex schemes and savings in O&M expenses, wherever required.

6.21.4 Further, MSEDCL is also proposing certain new schemes for inclusion under the Opex schemes. MSEDCL submits that the details of Opex Schemes are

provided under Chapter Opex. Following table shows the estimated Opex Schemes expenses for FY 2022-23.

6.21.5 The revenue expenditure against the Opex Schemes is summarised in the following table.

**Table 199: Opex Scheme Expenses for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
<b>Opex Schemes (Wires Business)</b>				
Substation Monitoring System (SMS)	69.53	36.00	69.53	72.00
MSEDCL Cloud Project	8.32	7.97	8.32	7.97
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	5.94	-
Vehicle Tracking System	0.53	0.26	0.53	0.26
Demand forecasting		2.73		2.73
GIS		1.13		1.13
Network analysis		1.32		1.32
SAP s4 hana		8.05		7.06
SD wan		0.27		0.27
RDSS (Smart Metering)		270.53		1,110.83
<b>Sub-Total</b>	<b>84.31</b>	<b>328.25</b>	<b>84.31</b>	<b>1,203.56</b>
<b>Opex Schemes (Retail Supply Business)</b>				
Customer Care Center	6.60	27.20	6.60	27.20
RF-DCU (Expression of Interest & Tender)	4.80	4.80	4.80	4.80
MSEDCL Cloud Project	8.32	7.97	8.32	7.97
Annual Technical Support of SAP/HANA/Oracle Software Licences	5.94	-	5.94	-
Vehicle Tracking System	0.53	0.26	0.53	0.26
Demand forecasting	-	2.73	-	2.73
GIS	-	1.13	-	1.13
Network analysis	-	1.32	-	1.32
SAP s4 hana	-	8.05	-	7.06
SD wan	-	0.27	-	0.27
RDSS (Smart Metering)		270.53		1,110.83
<b>Sub-Total</b>	<b>26.18</b>	<b>324.25</b>	<b>26.18</b>	<b>1,163.56</b>
<b>Total</b>	<b>110.49</b>	<b>652.51</b>	<b>110.49</b>	<b>2,367.12</b>

## 6.22 Capex and Capitalisation for FY 2023-24 to FY 2024-25

6.22.1 MSEDCL submits that the revised projected capital expenditure and capitalisation from FY 2023-24 to FY 2024-25 is summarised below. The scheme wise details of capital expenditure and capitalisation FY 2023-24 to

FY 2024-25 is shown in a separate forms of the Regulatory Formats.

**Table 200: Capital Expenditure and Capitalisation for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Capital Expenditure	-	10,576.77	-	14,869.22
Capitalisation	2,090.36	10,288.21	2,090.36	14,981.66

6.22.2 MSEDCL requests the Hon'ble Commission to allow the capitalisation as shown in above table.

**6.23 Funding Pattern of the Capitalisation for FY 2023-24 to FY 2024-25**

6.23.1 As per the Regulation 27.1 of the MERC MYT Regulations, 2019, the debt-equity ratio as on the date of commercial operation shall be 70:30 of the amount of capital cost approved by the Commission. The said Regulation also provides that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan for the Licensee for determination of Tariff.

6.23.2 MSEDCL submits that it has been the practice of the Hon'ble Commission to consider the consumer contribution, grants etc. in proportion to the funding pattern of capital expenditure. In line with the same methodology, MSEDCL has considered the funding pattern for the revised projected capitalisation, in proportion to the funding pattern of the revised projected capital expenditure. MSEDCL further submits that if the equity portion is more than 30% of the capitalisation to be funded, it has restricted the equity at 30% and balance amount to be considered as normative loan as per the provisions of the Regulations 27 of the MYT Regulations, 2019. The funding pattern of the revised proposed capitalisation is presented in the following table:

**Table 201: Funding Pattern of the Capitalisation for FY 2023-24 to FY 2024-25**

Rs. Cr.

S. No.	Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
		Approved	Projected	Approved	Projected
	<b>Funding pattern of capital expenditure</b>				
1	<b>Total Capital Expenditure</b>	-	<b>10,576.77</b>	-	<b>14,869.22</b>
2	Consumer Contribution	-	100.00	-	100.00
3	Grants received during the year	-	5,952.11	-	8,921.99
4	Equity	-	192.83	-	40.16
5	Debt	-	4,331.83	-	5,807.06
	<b>Funding pattern of capitalisation</b>				
6	<b>Total Capitalisation</b>	<b>2,090.36</b>	<b>10,288.21</b>	<b>2,090.36</b>	<b>14,981.66</b>
7	Consumer Contribution	115.64	97.27	110.81	100.76
8	Grants received during the year	735.73	5,789.72	739.67	8,989.46
	<b>Balance to be funded</b>	<b>1,238.99</b>	<b>4,401.22</b>	<b>1,239.89</b>	<b>5,891.44</b>
9	Equity amount	371.70	187.57	371.97	40.47
10	Debt amount	867.29	4,213.65	867.92	5,850.98
11	Equity (%)	30%	4%	30%	1%
12	Debt (%)	70%	96%	70%	99%
13	Equity Portion above 30%	-	-	-	-
14	Equity amount		187.57		40.47
15	Debt amount		4,213.65		5,850.98
16	Equity (%)		4%		1%
17	Debt (%)		96%		99%

6.23.3 MSEDCL requests the Hon'ble Commission to approve the funding pattern as submitted in above table.

#### **6.24 Depreciation for FY 2023-24 to FY 2024-25**

6.24.1 MSEDCL submits that Regulation 28 of the MERC (MYT) Regulations, 2019 provides for recovery of Depreciation. As per Regulation 28.1 (b) of MYT Regulations, 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 and remaining depreciable value as on 31<sup>st</sup> March of the year closing shall be spread over the balance Useful Life of the asset. The relevant extract is reproduced below:

*“28.1 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:  
(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:  
...”*

6.24.2 MSEDCL submits that depreciation has been calculated taking into considering the opening balance of assets in the beginning of the year and the projected capitalization. Hon’ble Commission has been applying the weighted average rate of depreciation on opening GFA. Considering the actual weighted average rate of depreciation for FY 2021-22, MSEDCL has computed the depreciation which is shown in the following table:

**Table 202: Depreciation for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Opening GFA	62,438.45	61,665.81	63,677.44	66,242.84
<b>Depreciation</b>	<b>3,122.45</b>	<b>3,080.11</b>	<b>3,183.82</b>	<b>3,308.73</b>
% Depreciation	5.00%	4.99%	5.00%	4.99%

6.24.3 MSEDCL request the Hon’ble Commission to approve the depreciation as submitted in above table.

### **6.25 Interest on Long Term Loan for FY 2023-24 to FY 2024-25**

6.25.1 MSEDCL submits 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.

6.25.2 Regulation 30.3 of the MERC MYT Regulations, 2019 provides for loan repayment during a year equal to depreciation allowed. The relevant extract is

reproduced below:

*“30.3 The loan repayment during each year of the Control Period from FY 2020-21 to FY 2024-25 shall be deemed to be equal to the depreciation allowed for that year.”*

6.25.3 Considering the normative opening loan, normative loan addition during the year and loan repayment equal to depreciation and the weighted average interest rate of actual loan portfolio for FY 2021-22 as shown in Table 111, MSEDCL has computed the interest expenses on normative basis for the FY 2023-24 to FY 2024-25 as summarized in table below:

**Table 203: Interest Expenses on Long Term Loan for FY 2023-25 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Normative Outstanding Loan at beginning of the year	9,827.01	8,925.84	7,571.85	10,059.38
Loan Drawal	867.29	4,213.65	867.92	5,850.98
Loan Repayment	3,122.45	3,080.11	3,183.82	3,308.73
Normative Outstanding Loan at the end of the year	7,571.85	10,059.38	5,255.96	12,601.62
Interest Rate	10.28%	9.85%	10.28%	9.85%
<b>Gross Interest Expenses</b>	<b>893.88</b>	<b>934.97</b>	<b>659.04</b>	<b>1,116.00</b>

6.25.4 MSEDCL requests the Hon'ble Commission to approve the interest expenses as submitted in above table.

### **6.26 Interest on Working capital & Interest on SD for FY 2023-24 to FY 2024-25**

6.26.1 MSEDCL submits that Regulation 32 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital. MSEDCL submits that Regulations 32.3 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Wire business of electricity. Further, the MYT Regulations, 2019 also provides that for normative rate of interest working capital shall be equal to Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points. The relevant extract of the said Regulations is reproduced below:

*“2.11 (10) “Base Rate” shall mean the one-year Marginal Cost of Funds-based Lending Rate (“MCLR”) as declared by the State Bank of*

*India from time to time;*

...

32.3 (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:  
..."*

6.26.2 Accordingly, MSEDCL has calculated the interest on working capital for FY 2023-24 and FY 2024-25 at 9.55% for Wires Business.

6.26.3 MSEDCL further submits that the Regulation 30.11 of MYT Regulations, 2019 provides for Interest on Security Deposit shall be at Bank Rate as on 1<sup>st</sup> April of the Year for which the Interest is payable. The relevant extract is reproduced below:

*"30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable:  
..."*

6.26.4 Accordingly, MSEDCL has calculated Interest on Consumer Security Deposit @ 4.25% for Wires Business. MSEDCL has projected the Security Deposit considering a growth of 5% per annum.

6.26.5 Detailed computation of Interest on Working Capital and Security Deposit for Wires business is provided in following table:

**Table 204: Interest on Working Capital and SD for Wire business for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
<b>Computation of Working Capital Requirement</b>				
O&M expenses for a month	415.07	454.06	430.98	477.03
Maintenance Spares at 1% of Opening GFA	667.25	626.63	686.06	720.81
One and half months equivalent of the expected revenue from charges for use of Distribution Wires	1,414.00	1,450.30	1,426.93	1,649.09
Less: Amount held as Security Deposit from Distribution System Users	(962.76)	(1,082.34)	(1,010.90)	(1,136.46)
<b>Total Working Capital Requirement</b>	<b>1,533.56</b>	<b>1,448.65</b>	<b>1,533.07</b>	<b>1,710.47</b>
<b>Computation of Working Capital Interest</b>				
Interest Rate (%) - SBI Base Rate +150 basis points	9.50%	9.55%	9.50%	9.55%
<b>Interest on Working Capital</b>	<b>145.69</b>	<b>138.35</b>	<b>145.64</b>	<b>163.35</b>
<b>Computation of Interest on Security Deposit</b>				
Interest Rate (%) - Bank Rate	6.50%	4.25%	6.50%	4.25%
<b>Interest on Security Deposit</b>	<b>62.58</b>	<b>46.00</b>	<b>65.71</b>	<b>48.30</b>

6.26.6 MSEDCL requests the Hon'ble Commission to allow the Interest on Working Capital along with the Interest on security deposit for wires business as shown in above table.

6.26.7 MSEDCL further submits that Regulation 32.4 of the MERC MYT Regulations, 2019 provides for Interest on Working Capital for Retail Supply business of electricity. Further, the MYT Regulations, 2019 also provides that for normative rate of interest working capital shall be equal to Base Rate as on the date on which the Petition for determination of Tariff is filed, plus 150 basis points. The relevant extract of the said Regulations is reproduced below:

*"2.11 (10) "Base Rate" shall mean the one-year Marginal Cost of Funds-based Lending Rate ('MCLR') as declared by the State Bank of India from time to time;*

...

*32.4 (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:"*

6.26.8 Accordingly, MSEDCL has calculated the interest on working capital for FY 2023-24 and FY 2024-25 at 9.55% for Wires Business.

6.26.9 MSEDCL further submits that the Regulation 30.11 of MYT Regulations, 2019 provides for Interest on Security Deposit shall be at Bank Rate as on 1<sup>st</sup> April of the Year for which the Interest is payable. The relevant extract is reproduced below:

*“30.11 Interest shall be allowed only on the amount held in cash as security deposit from Transmission System Users, Distribution System Users and Retail consumers at the Bank Rate as on 1<sup>st</sup> April of the Year for which the interest is payable:  
...”*

6.26.10 Accordingly, MSEDCL has calculated Interest on Consumer Security Deposit @ 4.25% for Retail Supply Business. MSEDCL has projected the Security Deposit considering a growth of 5% per annum.

6.26.11 Detailed computation of Interest on Working Capital and Security Deposit for Wires business is provided in following table:

**Table 205: Interest on Working capital and SD for Supply business for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
<b>Computation of Working Capital Requirement</b>				
O&M expenses for a month	223.50	244.50	232.07	256.86
Maintenance Spares at 1% of Opening GFA	74.14	69.63	76.23	80.09
One and half months equivalent of the expected revenue from sale of electricity including revenue from CSS and Additional Surcharge	10,905.85	11,385.43	11,345.05	11,628.90
Less: Amount held as security deposit	(8,664.84)	(9,741.10)	(9,098.09)	(10,228.16)
Less: One month equivalent of cost of power purchase, transmission charges and MSLDC Charges	(6,521.85)	(6,764.80)	(6,818.14)	(6,957.12)
<b>Total Working Capital Requirement</b>	<b>(3,983.20)</b>	<b>(4,806.35)</b>	<b>(4,262.89)</b>	<b>(5,219.43)</b>
<b>Computation of Working Capital Interest</b>				
Interest Rate (%) - SBI Base Rate +150 basis points	9.50%	9.55%	9.50%	9.55%
<b>Interest on Working Capital</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Interest on Security Deposit</b>				
Interest Rate (%) - Bank Rate	6.50%	4.25%	6.50%	4.25%
<b>Interest on Security Deposit</b>	<b>563.21</b>	<b>414.00</b>	<b>591.38</b>	<b>434.70</b>

6.26.12 MSEDCL requests the Hon'ble Commission to allow the interest on working capital along with the Interest on security deposit for retail supply business as shown in above table.

### **6.27 Other Finance Charges for FY 2023-24 to FY 2024-25**

6.27.1 MSEDCL submits that the regulation 30.8 of the MYT Regulations, 2019 provides that the finance charges shall be allowed at the time of True-up. The relevant extract is reproduced below:

*“30.8 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.”*

6.27.2 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019 also ruled that it shall consider the Other Finance Charges at the time of truing-up of the respective years of the 4<sup>th</sup> Control Period. Therefore, in line with the above regulations, MSEDCL is not projecting any finance charges for FY 2023-24 to FY 2024-25 and will claim the same during true-up of respective years.

### **6.28 Provision for Bad Debts for FY 2023-24 to FY 2024-25**

6.28.1 MSEDCL submits that bad debts are inseparable incidents of the business of electricity distribution and retail supply.

6.28.2 Regulation 76 and 85 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 from sale of electricity in the Audited Accounts of the distribution licensee duly allocated for wires and supply business respectively. The relevant extract is reproduced below:

**“76 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from*

*Wheeling Charges in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

...  
”

**“85 Provision for Bad and Doubtful Debts**

*In the MYT Order, for each Year of the Control Period, the Commission may allow a provision for writing off of bad and doubtful debts up to 1.5% of the amount shown as Trade Receivables or Receivables from Sale of Electricity in the latest Audited Accounts of the Distribution Licensee in accordance with the procedure laid down by the Licensee, subject to prudence check:*

...  
.”

6.28.3 Further, the provision for bad and doubtful debts is further allocated between the Wires Business and Retail Supply Business (in the ratio of allocation matrix provided in the MYT Regulation, 2019), i.e., 10% to Wires Business and 90% to Supply Business.

6.28.4 MSEDCL submits that Provision of bad debt generally depends on the nature of the business and the risk involved in the business. A business typically estimates the amount of bad debt based on historical experience

6.28.5 MSEDCL submits that for projection of the receivables it has adopted the following approach:

- For interest part a y-o-y rise of 2% and 10% is taken for Non-Ag and Ag respectively, and for the principle part a y-o-y rise of 2% and 5% is taken for Non-Ag and Ag respectively

The projections for the FY 2023-24 to FY 2024-25 is as shown below:

Period	Particulars	Principal	Interest	Total
upto 31.03.2024 (Revised Projected)	Non AG	15,776.58	9,311.62	25,088.21
	AG	35,015.1	13,967.635	48,982.73

Period	Particulars	Principal	Interest	Total
	<b>Total</b>	<b>50,791.68</b>	<b>23,279.26</b>	<b>74,070.94</b>
upto 31.03.2025 (Revised Projected)	Non AG	16,092.12	9,497.85	25,589.97
	AG	36,765.85	15,364.40	52,130.25
	<b>Total</b>	<b>52,857.97</b>	<b>24,862.25</b>	<b>77,720.22</b>

6.28.6 MSEDCL further submits that it will be writing off the provision of the bad debts approved for the year as per the provisions of the MYT Regulations.

6.28.7 MSEDCL for the estimation purpose has presently considered provisioning @1.50% instead of @7.50% (as Ag sales are more than 20% of total sales). However, MSEDCL reserves its right to seek claim on bad-debts at the time of truing-up as per the per provisions of MYT Regulations, 2019.:

**Table 206: Provision for Bad and Doubtful debts for Wires Business for FY23-24 to FY 24-25**

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Bad Debt Provision for Wire Business	73.26	111.11	73.26	116.58
Receivables	4,884.20	7,407.09	4,884.20	7,772.02
% of Receivables	1.50%	1.50%	1.50%	1.50%

**Table 207: Provision for Bad and Doubtful debts for Supply Business for FY23-24 to FY24-25**

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Bad Debt Provision for Supply Business	659.37	999.96	659.37	1,049.22
Receivables	43,957.82	66,663.84	43,957.82	69,948.20
% of Receivables	1.50%	1.50%	1.50%	1.50%

6.28.8 MSEDCL requests the Hon'ble Commission to allow the provision for bad and doubtful debts as shown in above tables.

## 6.29 Other Expenses for FY 2023-24 to FY 2024-25

6.29.1 MSEDCL submits that the other expenses of MSEDCL comprise of the expenditure on account of interest to suppliers/contractors, Incentive to distribution franchisee and other expenses viz. compensation for injuries to

staff and outsiders.

6.29.2 Nature of Other expenses is summarised below

- Interest to Suppliers/ Contractors: This amount represents the interest expenses 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.
- Incentive to distribution franchisee: This is the incentive given to the distribution franchisee for recovery of MSEDCL's arrears from Live & PD Consumers.

6.29.3 The projections for FY 2023-24 to FY 2024-25 have been made on the basis of an annual 5% increase over the previous year

6.29.4 Other Expenses projected for FY 2023-24 to FY 2024-25 is summarised in the following table.

**Table 208: Other Expenses for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Other Expenses	60.87	329.80	63.91	346.29

6.29.5 The detailed break-up of other expenses is given in the Form No. 6B of the Regulatory Formats. MSEDCL requests the Hon'ble Commission to allow the other expenses as submitted above.

### **6.30 Contribution to Contingency Reserves for FY 2023-24 to FY 2024-25**

6.30.1 MSEDCL submits that Regulation 35 of the MYT Regulation, 2019 provides for appropriation to Contingency Reserves of not less than 0.25 per cent and not more than 0.5 per cent of the original cost of Fixed Assets annually towards in the calculation of ARR. The relevant extract is reproduced below:

6.30.2 MSEDCL submits that it is not getting full recovery of the revenue receivable from consumers. MSEDCL is managing its working capital requirement need by availing STL/MTL/LTL working capital loans from banks and financial institutions. As such MSEDCL can invest the amount of contingency reserve

only if it gets sufficient quantum of loan from banks or financial institutions. MoP through its guidelines on additional prudential norms has restricted working capital borrowings @ 35% of the revenue which MSEDCL already crossed the same. Hence, MSEDCL is getting difficulties in availing loan and not able to invest the amount of contingency reserve. Secondly, MSEDCL's financials has been badly affected by the consequences of COVID-19 pandemic.

6.30.3 Considering the above difficulty and COVID-19 impact, it is requested to Hon'ble Commission to consider positively and not to disallow contingency reserve amount and further provide relaxation from the last proviso to Regulations 35.1 of the MERC MYT Regulation, 2019.

6.30.4 MSEDCL has considered 0.25% of the Gross Fixed Assets and computed contribution to contingency reserves. The expenses towards contribution to contingency reserves are allocated in the ratio of fixed assets between wires and retail supply business i.e. 90% to wires business and 10% to supply business

**Table 209: Contribution to Contingency Reserve for FY 2023-24 & FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Contribution to Contingency Reserves (Wire Business)	166.81	156.66	171.52	180.20
Contribution to Contingency Reserves (Supply Business)	18.53	17.41	19.06	20.02
<b>Total contribution to Contingency Reserves</b>	<b>185.35</b>	<b>174.06</b>	<b>190.57</b>	<b>200.22</b>

6.30.5 MSEDCL requests the Hon'ble Commission to allow the contribution to contingency reserves in line with submission made above by invoking its power to relax under Regulation 105 of the MYT Regulation, 2019.

### **6.31 Income Tax for FY 2023-24 to FY 2024-25**

6.31.1 MSEDCL submits that Regulation 34 of the MYT Regulations, 2019 provides for Income Tax. Since there is no income tax claimed in FY 2021-22, MSEDCL on similar lines has not claimed any Income Tax for FY 2023-24 &

FY 2024-25. Hence it has not grossed up the return on equity by income tax. MSEDCL submits that in case there is tax liability for FY 2022-23 and any income tax is paid, it requests Hon'ble Commission to allow claim on grossing up of return on equity by effective tax rate as per the provisions of the MYT Regulations, 2019.

### **6.32 Incentives and Discounts for FY 2023-24 to FY 2024-25**

6.32.1 MSEDCL submits that the Incentives and discounts are projected for FY 2023-24 to FY 2024-25 considering a nominal rise of 5% over previous year.

6.32.2 The incentives and discounts for FY 2023-24 to FY 2024-25 is summarised in following table.

**Table 210: Incentives/Discount for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Incentives/ Discounts	373.20	385.73	391.86	405.02

6.32.3 MSEDCL requests the Hon'ble Commission to allow the incentives/discounts as submitted above.

### **6.33 Return on Equity for FY 2023-24 to FY 2024-25**

6.33.1 MSEDCL submits that Regulation 29.1 of the MYT Regulations, 2019, provides for Return on Equity (RoE) for Distribution Licensee for both Wire and Supply Business which is reproduced as under:

*“29.1 Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of up to 15.5 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of up to 17.5 per cent per annum in Indian Rupee terms:*

*Provided that Return on Equity shall be allowed in two parts viz. Base Return on Equity, and Additional Return on Equity linked to actual*

*performance:*

*Provided further that Additional Return on Equity shall be allowed at time of truing up for respective year based on actual performance, after prudence check of the Commission*

*29.2 Base Return on Equity for the Generating Company, Transmission Licensee, Distribution Wires Business and MSLDC shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of 14 per cent per annum in Indian Rupee terms, and for the Retail Supply Business, Return on Equity shall be allowed on the amount of equity capital determined in accordance with Regulation 27 at the rate of 15.5 per cent per annum in Indian Rupee terms:*

*Provided that in case the Generation Company or Licensee or MSLDC claims Return on Equity at a rate lower than the normative rate specified above for any particular year, then such claim for lower Return on Equity shall be unconditional:*

*Provided further that such claim for lower Return on Equity shall be allowed subject to the condition that the reduction in Return on Equity shall be foregone permanently for that year and shall not be allowed to be recouped at the time of Mid-Term Review or true-up as applicable*

6.33.2 The methodology to compute return on equity is provided in Regulation 29.3 and the same is produced below:

*“29.3 The Base 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:*

*Provided that Base Return on Equity in respect of additional capitalization after cut-off date beyond the original scope excluding*

*additional capitalization due to Change in Law or revised emission standards, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system.  
...*

6.33.3 Considering the funding pattern at Table 201, MSEDCL has considered the equity addition during the year.

6.33.4 MSEDCL submits that the return on equity capital is allocated in the ratio of Fixed Assets between the 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.

6.33.5 The return on equity has been computed as per the methodology specified in the MYT Regulations, 2019.

6.33.6 Accordingly, the RoE for Wires Business for FY 2023-24 to FY 2024-25 is projected as under:

**Table 211: RoE for Wires Business for FY 2023-24 to FY 2024-25**

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Regulatory Equity at the beginning of the year	12,085.55	12,485.09	12,420.08	12,653.90
Capitalisation during the year \$	1,115.09	3,961.10	1,115.90	5,302.30
Equity portion of capitalisation during the year	334.53	168.81	334.77	36.42
Reduction in Equity Capital on account of retirement / replacement of assets	-	-	-	-
<b>Regulatory Equity at the end of the year</b>	<b>12,420.08</b>	<b>12,653.90</b>	<b>12,754.85</b>	<b>12,690.32</b>
<b>Return on Equity Computation</b>				
Base Rate of Return on Equity				
Return on Regulatory Equity at the beginning of the year	2,050.14	1,747.91	2,106.88	1,771.55
Return on Regulatory Equity addition during the year	28.37	11.82	28.39	2.55
Interest on Equity portion above 30%	-	-	-	-
<b>Total Return on Equity</b>	<b>2,078.51</b>	<b>1,759.73</b>	<b>2,135.28</b>	<b>1,774.09</b>

6.33.7 Further, MSEDCL has computed the RoE for retail supply Business as shown

in following tables:

**Table 212: RoE for Retail Supply Business for FY 2023-24 to FY 2024-25**

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Regulatory Equity at the beginning of the year	1,343.29	1,387.68	1,380.46	1,406.44
Capitalisation during the year \$	123.90	440.12	123.99	589.14
Equity portion of capitalisation during the year	37.17	18.76	37.20	4.05
Reduction in Equity Capital on account of retirement / replacement of assets	-	-	-	-
<b>Regulatory Equity at the end of the year</b>	<b>1,380.46</b>	<b>1,406.44</b>	<b>1,417.65</b>	<b>1,410.48</b>
<b>Return on Equity Computation</b>				
Base Rate of Return on Equity				
Pretax Return on Equity after considering effective Tax rate				
Return on Regulatory Equity at the beginning of the year	252.28	215.09	259.26	218.00
Return on Regulatory Equity addition during the year	3.49	1.45	3.49	0.31
Interest on Equity portion above 30%	-	-	-	-
<b>Total Return on Equity</b>	<b>255.77</b>	<b>216.54</b>	<b>262.76</b>	<b>218.31</b>

6.33.8 MSEDCL requests the Hon'ble Commission to approve the return on equity for wheeling and retail supply as computed above.

#### **6.34 Stabilisation amount as per MYT Order for FY 2023-24 to FY 2024-25**

6.34.1 MSEDCL submits that in the MYT Order, Hon'ble Commission has allowed revenue recovery as shown in the following table. MSEDCL has considered the same.

**Table 213: Stabilisation amount as per MYT Order for FY 2023-24 to FY 2024-25**

Rs. Crs

Particulars	Formula	FY 2023-24	FY 2024-25
ARR approved by the Hon'ble Commission	A	86,298.00	88,910.00
Approved Revenue at existing tariff	B	96,504.00	1,00,738.00
Approved Revenue Gap	C = A-B	(10,206.00)	(11,828.00)
Projected Revenue at approved tariff	D	91,883.00	95,927.00
Additional Recovery from approved tariff	E = D-B	(4,621.00)	(4,811.00)
Previous Revenue Gap recovery allowed after adjustment of current year Revenue Gap	F = E-C	5,585.00	7,017.00

#### **6.35 Impact of payment to MPECS for FY 2023-24 to FY 2024-25**

6.35.1 Hon'ble Commission in the MYT Order dated 3rd November 2016 has

approved following amounts 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

6.35.2 Subsequently, Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 has approved annual amount towards monthly user charges to be paid to MPECS by MSEDCL for each year of the Control Period, as the same was allowed under Order dated 2<sup>nd</sup> May, 2016. The following table summarises the payment to be paid to MPECS during the FY 2023-24 to FY 2024-25

**Table 214: Impact of payment to MPECS for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Impact of Payment to MPECS	28.13	28.13	21.14	21.14

6.35.3 MSEDCL requests the Hon'ble Commission to allow the impact of payment to MPECS for FY 2023-24 to FY 2024-25 as submitted above.

### **6.36 Incremental Consumption and Bulk Consumption Rebate for FY 2023-24 and FY 2024-25**

6.36.1 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 has accepted the MSEDCL proposal on allowing rebate for incremental consumption and approved cost towards Incremental Renate for each year of the Control Period.

6.36.2 MSEDCL has estimated the Incremental Consumption rebate and bulk consumption rebate at the same level as that approved by the Hon'ble Commission.

**Table 215: Incremental Consumption Rebate and Bulk Consumption Rebate for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Incremental Consumption Rebate	426.45	426.45	548.77	548.77

### 6.37 Additional Surcharge refund for FY 2023-24 and FY 2024-25

6.37.1 As stated in previous chapter, MSEDCL has stopped levy of additional surcharge to group captive consumers from January 2022 and it has adopted methodology for refund of ASC.

6.37.2 MSEDCL is refunding the ASC in every month to eligible consumers to the tune of Rs. 15 Crs. The refund burden will be Rs. 180 Crs annually. Accordingly, the same is being claimed in the ARR and the Hon'ble Commission is requested to approve the same.

### 6.38 Revenue from sale of electricity for FY 2023-24 to FY 2024-25

6.38.1 MSEDCL has considered the projected sales, number of consumers and connected load/contract/billing demand for FY 2023-24 to FY 2024-25 and tariff prevailing (approved for respective years) as on date of submission of the Petition

6.38.2 Year wise revenue for FY 2023-24 to FY 2024-25 is summarised in the following table.

**Table 216: Revenue from Sale of Power at Existing Tariff for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Revenue from Sale of Power at Existing Tariff	91,883.00	90,422.16	95,927.00	92,354.58

6.38.3 MSEDCL humbly requests to the Hon'ble Commission to allow the revenue from sale of power at existing tariff as shown in above table.

### 6.39 Non-Tariff Income for FY 2023-24 to FY 2024-25

6.39.1 MSEDCL has certain sources of non-tariff income viz. interest on arrears of consumers, interest on staff loans and advances, sale of scrap, interest on investment etc. Annual increase of 5% over previous year is considered for the year is considered for the heads covered under non-tariff income.

6.39.2 However, Regulation 37.3 of the MERC MYT Regulations, 2019 provides for non-inclusion of the Delayed Payment Charges and Interest on Delayed Payment in Non-Tariff Income. The relevant Regulation is reproduced below for reference:

*“37.3 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.”*

6.39.3 Accordingly, MSEDCL has not projected any Delayed Payment Charge and Interest on Delayed Payment in Non-Tariff Income. MSEDCL further has not projected the deferred income since the consumer contribution and grants is being getting subtracted from opening GFA

6.39.4 Following table shows the projected non-tariff income for FY 2023-24 to FY 2024-25.

**Table 217: Non-Tariff Income for FY 2023-24 to FY 2024-25**

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Rents of land or buildings	1.26	1.00	1.32	1.05
Sale of Scrap	63.27	45.93	66.43	48.23
Income from investments	22.49	-	23.61	-
Income from sale of tender documents	10.84	5.19	11.38	5.45
Prompt payment discount from REC/PFC	14.78	-	15.52	-
Other/Miscellaneous receipts	326.97	252.43	343.32	265.05
Revenue from subsidy & grant	-	0.53	-	0.55
Interest on Contingency Reserve Investments	-	28.78	-	30.21
<b>Total</b>	<b>439.60</b>	<b>333.86</b>	<b>461.59</b>	<b>350.55</b>

Rs. Cr.

6.39.5 MSEDCL requests the Hon'ble Commission to approve the Non-Tariff Income as per above projections.

**6.40 Income from Open Access Charges for FY2023-24 to FY 2024-25**

6.40.1 MSEDCL submits that the income from Open Access Charges (including CSS, Transmission Charges, Operating Charges etc.) which is inclusive of the Income from Wheeling charges has been estimated at the same level as that approved by the Hon'ble Commission. The following table summarises the income from Open Access Charges for FY 2023-25 to FY 2024-25

**Table 218: Income from Open Access Charges for FY 20-21**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Income from Open Access Charges	214.76	214.76	216.60	216.60

6.40.2 MSEDCL requests the Hon'ble Commission to approve the income from Open Access Charges as per above projections.

**6.41 Income from Additional Surcharge for FY 2023-24 to FY 2024-25**

6.41.1 MSEDCL has considered the Income from additional surcharge same as that approved by the Hon'ble Commission for FY 2023-24 and FY 2024-25 respectively.

6.41.2 The summary of projected income from FY 2023-24 to FY 2024-25 is summarised in following table:

**Table 219: Income from Additional Surcharge for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Income from Additional Surcharge	112.63	112.63	109.46	109.46

6.41.3 MSEDCL requests to the Hon'ble Commission to approve the income from Additional Surcharges as per above projections.

**6.42 Income from Trading of Surplus Power for FY 2023-24 to FY 2024-25**

6.42.1 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 has approved Income from Trading of Surplus Power for FY 2023-24 to FY 2024-25.

6.42.2 MSEDCL submits that at present it has not estimated any income from trading of surplus power.

**Table 220: Income from Trading of Surplus Power for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Income from Trading of Surplus Power	363.02	-	386.30	-

6.42.3 MSEDCL requests to the Hon'ble Commission to allow the income from sale of surplus power as shown in above table.

**6.43 Aggregate Revenue Requirement for FY 2023-24 to FY 2024-25**

6.43.1 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Wires Business for the FY 2023-24 to FY 2024-25 is summarised as follows:

**Table 221: ARR for Distribution Wires Business for FY 2023-24 to FY 2024-25**

Particulars	Rs. Cr.			
	FY 23-24 Approved	FY 23-24 Projected	FY 24-25 Approved	FY 24-25 Projected
Operation & Maintenance Expenses	5,086.16	5,448.75	5,281.17	5,724.41
Depreciation	2,810.20	2,772.10	2,865.44	2,977.86
Interest on Loan Capital	804.49	841.48	593.13	1,004.40
Interest on Working Capital	145.69	138.35	145.64	163.35
Interest on deposit from Consumers and Distribution System Users	62.58	46.00	65.71	48.30
Other Finance Charges	-	-	-	-
Provision for bad and doubtful debts	73.26	111.11	73.26	116.58
Opex Schemes	84.31	328.25	84.31	1,203.56
Contribution to contingency reserves	166.81	156.66	171.52	180.20
Income Tax	-	-	-	-
Return on Equity Capital	2,078.51	1,759.73	2,135.28	1,774.09
<b>Aggregate Revenue Requirement</b>	<b>11,312.02</b>	<b>11,602.42</b>	<b>11,415.46</b>	<b>13,192.75</b>
<b>Less</b>				
Income from Wheeling Charges	-	-	-	-
Income from Open Access Charges	214.76	214.76	216.60	216.60
<b>Aggregate Revenue Requirement from Distribution Wires</b>	<b>11,097.26</b>	<b>11,387.66</b>	<b>11,198.85</b>	<b>12,976.14</b>
Revenue from Wires Business	-	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>11,097.26</b>	<b>11,387.66</b>	<b>11,198.85</b>	<b>12,976.14</b>

6.43.2 Considering the parameters discussed above, the Aggregate Revenue Requirement (ARR) of MSEDCL for Supply Business for the FY 2023-24 to FY 2024-25 is summarised as follows:

**Table 222: ARR for Supply Business for FY 2023-24 to FY 2024-25**

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Power Purchase Expenses (including Inter-State Transmission Charges)	64,554.92	75,168.09	66,819.60	77,448.70
Operation & Maintenance Expenses	2,738.70	2,933.94	2,843.71	3,082.37
Depreciation	312.24	308.01	318.38	330.87
Interest on Loan Capital	89.39	93.50	65.90	111.60
Interest on Working Capital	-	-	-	-
Interest on Consumer Security Deposit	563.21	414.00	591.38	434.70
Other Finance Charges	-	-	-	-
Provision for bad and doubtful debts	659.37	999.96	659.37	1,049.22
Other Expenses	60.87	329.80	63.91	346.29
Income Tax	-	-	-	-
Intra-State Transmission Charges	6,009.51	6,009.51	6,036.77	6,036.77
Incentives/Discounts	373.20	385.73	391.86	405.02
Contribution to contingency reserves	18.53	17.41	19.06	20.02
Return on Equity Capital	255.77	216.54	262.76	218.31
Additional Surcharge Refund	-	180.00	-	180.00
Effect of sharing of gains/losses	-	-	-	-
Impact of payment to MPECS in future years	28.13	28.13	21.14	21.14
Opex Scheme	26.18	324.25	26.18	1,163.56
Incremental Consumption Rebate	426.45	426.45	548.77	548.77
<b>Aggregate Revenue Requirement for Supply Business</b>	<b>76,116.48</b>	<b>87,835.32</b>	<b>78,668.77</b>	<b>91,397.35</b>
Stabilisation amount as per MYT Order	5,585.00	5,585.00	7,017.00	7,017.00
<b>Total Revenue Expenditure</b>	<b>81,701.48</b>	<b>93,420.32</b>	<b>85,685.77</b>	<b>98,414.35</b>
<b>Less</b>				
Non-Tariff Income	439.60	333.86	461.59	350.55
Income from Additional Surcharge	112.63	112.63	109.46	109.46
Income from Trading of Surplus Power	363.02	-	386.30	-
<b>Net Aggregate Revenue Requirement</b>	<b>80,786.22</b>	<b>92,973.83</b>	<b>84,728.43</b>	<b>97,954.34</b>
Revenue from Sale of Power	91,883.00	90,422.16	95,927.00	92,354.58
Revenue from Retail Supply Business	-	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>(11,096.78)</b>	<b>2,551.67</b>	<b>(11,198.57)</b>	<b>5,599.76</b>

#### 6.44 Revenue Gap/(Surplus) for FY 2023-24 to FY 2024-25

6.44.1 Based on Wire and Supply Business ARR discussed above, the stand alone Revenue gap (combined for the Wires Business and Supply Business) as against the approved by the Hon'ble Commission, for FY 2023-24 to FY 2024-25 is presented in the Table below:

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up for FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25  
Main Petition**

**Table 223: Combined ARR for Wires & Supply Business for FY 2023-24 to FY 2024-25**

Rs. Cr.

Particulars	FY 23-24	FY 23-24	FY 24-25	FY 24-25
	Approved	Projected	Approved	Projected
Power Purchase Expenses	64,554.92	75,168.09	66,819.60	77,448.70
Operation & Maintenance Expenses	7,824.87	8,382.69	8,124.87	8,806.78
Depreciation Expenses	3,122.45	3,080.11	3,183.82	3,308.73
Interest on Loan Capital	893.88	934.97	659.04	1,116.00
Interest on Working Capital	145.69	138.35	145.64	163.35
Interest on Consumers Security Deposit	625.79	460.00	657.08	483.00
Other Finance Charges	-	-	-	-
Provision for bad and doubtful debts	732.63	1,111.06	732.63	1,165.80
Other Expenses	60.87	329.80	63.91	346.29
Income Tax	-	-	-	-
Intra-State Transmission Charges MSLDC charge	6,009.51	6,009.51	6,036.77	6,036.77
Incentives/Discounts	373.20	385.73	391.86	405.02
Contribution to Contingency Reserves	185.35	174.06	190.57	200.22
Opex Scheme	110.49	652.51	110.49	2,367.12
Return on Equity Capital	2,334.28	1,976.27	2,398.04	1,992.41
Additional Surcharge Refund	-	180.00	-	180.00
Effect of sharing of gains/losses	-	-	-	-
Add: Impact of payment to MPECS in future years	28.13	28.13	21.14	21.14
Incremental Consumption Rebate	426.45	426.45	548.77	548.77
<b>Aggregate Revenue Requirement</b>	<b>87,428.50</b>	<b>99,437.74</b>	<b>90,084.23</b>	<b>1,04,590.10</b>
Stabilisation amount as per MYT Order	5,585.00	5,585.00	7,017.00	7,017.00
<b>Total Aggregate Revenue Requirement</b>	<b>93,013.50</b>	<b>1,05,022.74</b>	<b>97,101.23</b>	<b>1,11,607.10</b>
<b>Less</b>				
Non-Tariff Income	439.60	333.86	461.59	350.55
Income from Open Access Charges	214.76	214.76	216.60	216.60
Income from Trading of Surplus Power	363.02	-	386.30	-
Income from Wheeling Charges	-	-	-	-
Income from Additional Surcharge	112.63	112.63	109.46	109.46
<b>Net Aggregate Revenue Requirement</b>	<b>91,883.49</b>	<b>1,04,361.49</b>	<b>95,927.28</b>	<b>1,10,930.49</b>
Revenue from Sale of Power	91,883.00	90,422.16	95,927.00	92,354.58
Revenue from Retail Supply Business	-	-	-	-
Revenue from Wires Business	-	-	-	-
<b>Revenue Gap/(Surplus)</b>	<b>0.49</b>	<b>13,939.34</b>	<b>0.28</b>	<b>18,575.90</b>

6.44.2 MSEDCL requests the Hon'ble Commission to allow the expenditure and revenue gap as show in the above table.

**7 ADDITIONAL CLAIMS AND NET RECOVERY FROM TARIFF**

**7.1 Impact of Review Order**

7.1.1 It is submitted that MSEDCL had filed a Petition (Case No. 84 of 2020) seeking review of MYT Order dated 30<sup>th</sup> March 2020. The Hon'ble Commission vide its Order dated 30 June 2020 had allowed MSEDCL certain claims in the Review Order.

7.1.2 The Hon'ble Commission admitted that is an error in the energy input considered for various years for computing efficiency loss on account of increased Distribution Loss. Accordingly, the Hon'ble Commission revised the computation of sharing of efficiency gain/loss on account of increased Distribution Loss. In addition to this, the Hon'ble Commission also determined the holding cost on MSEDCL's share of efficiency loss recalculated in this review Order. The following Table shows the net impact allowed to MSEDCL on account of sharing of loss of higher distribution loss form FY 2014-15 onwards.

Particulars	Unit	Amount
Incremental Principal Amount to be allowed on account of revision in Impact of Sharing of Distribution Loss	Rs. Cr.	432
Revised Holding Cost workings (now from FY 15 to FY 21; Earlier it was worked out from FY 18 to FY 21)	Rs. Cr.	-187
<b>Net Impact of Review</b>	<b>Rs. Cr.</b>	<b>246</b>

7.1.3 Hon'ble Commission had allowed Income Tax of Rs. 215.08 Crore against Rs. 213.89 Crore approved in MYT Order for FY 2017-18, thereby allowing an additional claim of Rs. 1.18 Crore against Income Tax.

7.1.4 MSEDCL has submitted its reconciliation regarding impact of payment to MPECS for FY 2017-18 at **Annexure 12** of this Petition.

7.1.5 Accordingly, MSEDCL has claimed **Rs. 247.44 Crore** as an additional impact of Review Order dated 30<sup>th</sup> June 2020.

## **7.2 Carrying Cost in previous Gap and other Claims**

7.2.1 Hon'ble Commission has been allowing carrying cost/ holding cost on the revenue gap/ surplus respectively. MSEDCL request the Hon'ble Commission to allow the carrying cost on the previous gaps.

7.2.2 MSEDCL further submits that the APTEL, New Delhi in its Judgement dated 8<sup>th</sup> 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.

7.2.3 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 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 in which such revenue gap is allowed to be recovered.

7.2.4 Hon'ble Commission in MYT Order already followed the similar principle. MSEDCL requests the Hon'ble Commission to allow the carrying cost on same principle so as to avoid any legitimate revenue loss.

7.2.5 MSEDCL submits that details of carrying cost on the revenue gap of FY 2019-20 to FY 2022-23 along with the additional claims is given in following table. The Interest Rate is taken as per the rate on Interest on Working Capital for the respective year.

**Table 224: Calculation of carrying cost on previous claims**

Rs. Crs					
Particulars	FY 19-20	FY 20-21	FY 21-22	FY 22-23	Total
Impact of Review Order		247.44			
Revenue Gap	11,516	5,932	8,151	548	
<b>Total</b>	<b>11,515.64</b>	<b>6,179.87</b>	<b>8,151.07</b>	<b>548.03</b>	
Interest Rate	9.66%	8.57%	8.50%	9.55%	
From	01-10-2019	01-10-2020	01-10-2021	01-10-2022	
To	31-03-2023	31-03-2023	31-03-2023	31-03-2023	
FY 19-20	556.05				
FY 20-21	987.19	264.89			
FY 21-22	978.83	525.29	346.42		
FY 22-23	1,099.74	590.18	778.43		
<b>Total</b>	<b>3,621.81</b>	<b>1,380.36</b>	<b>1,124.85</b>	<b>-</b>	<b>6,127.01</b>

### 7.3 Carrying Cost on unrecovered revenue gap during

7.3.1 MSEDCL submits that it has computed the carrying cost on the unrecovered revenue gap as shown in following table.

**Table 225: Carrying Cost on Unrecovered Revenue Gap**

Rs. Crs				
Revenue Recovery	Formula	FY 2023-24	FY 2024-25	Total
Total Revenue Gap for previous years	a	26,395	14,101	
Revenue Gap for current year	b	13,939	18,576	32,515
<b>Total Revenue Gap upto current year</b>	<b>c=a+b</b>	<b>40,334</b>	<b>32,677</b>	
<b>Net Revenue Gap upto current year</b>	<b>d</b>	<b>40,334</b>	<b>32,677</b>	
Recovery from Tariff hike	e	-26,233	-41,448	67,681
<b>Revenue gap to be carried forward</b>	<b>f=d+e</b>	<b>14,101</b>	<b>-8,771</b>	
Interest Rate	g	9.55%	9.55%	
<b>Carrying Cost on unrecovered Gap</b>	<b>h=a*g</b>	1,260	1,347	2,607
Carrying Cost on previous claims till FY 22-23	i	6,127		
<b>Total Carrying Cost</b>	<b>j=h+i</b>	<b>7,387</b>	<b>1,347</b>	<b>8,734</b>

#### **7.4 Net Recovery from Tariff**

7.4.1 Considering the above, MSEDCL has computed the net recovery from tariff as shown in following table.

302.00

7.4.2 MSEDCL requests the Hon'ble Commission to approve the net recovery from tariff as computed above.

## **8 TARIFF DESIGN & METHODOLOGY**

### **8.1 Background**

8.1.1 Section 42(4) of the Electricity Act, 2003, provides that

### **8.2 Tariff Design Principles**

8.2.1 Hon'ble Commission has been guided by the Electricity Act, 2003 and the National Tariff Policy 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 guidelines Hon'ble Commission may apply similar principles considering the ground realities as well as to ensure the financial viability of the Licensee.

8.2.2 Tariffs linked to cost of supply and gradual reduction of cross-subsidies in a given time frame is an important feature of the Electricity Act, 2003 and the Tariff Policy. 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.

8.2.3 MSEDCL submits that there is an urgent need for ensuring recovery of cost of service 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 has now become a necessity and an essential driver of growth in an agrarian economy of the State.

### **8.3 Full Cost Recovery**

8.3.1 MSEDCL submits that the present Petition is based on full cost recovery of the total revenue gap computed for the previous years. Section 61 of the Act mandates that the Appropriate Commission, while determining tariff, shall not only ensure safeguarding of consumer's interest but shall also ensure the recovery of the cost of electricity in a reasonable manner.

8.3.2 MSEDCL submits that the MTR period can be period can be utilized to re-visit the approach adopted by Hon'ble Commission in MYT Order. MSEDCL humbly request the Hon'ble Commission to evolve a methodology during remaining two years of the fourth Control Period to re-determine the commercial principle to sustain growth, ensure financial viability of the Licensee, avoid financial losses and at the same time protect the consumer interests. In this context, Paragraph 5.10 of the Tariff Policy notified on 28th January, 2016 states as follows:

*"5.10 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.**" (emphasis added)*

8.3.3 MSEDCL thus proposes the following Tariff Philosophy which may be considered while deciding the retail tariffs as well as the terms and conditions of the tariff schedule:

#### **8.4 Rationalization of Fixed Cost**

8.4.1 It has been the Hon'ble Commission's policy of recovering the Fixed Cost of MSEDCL through a Fixed Tariff applicable to the consumers (to the extent possible). Hon'ble Commission in its first Tariff Order dated 5<sup>th</sup> May, 2000 while determining the fixed charge component of the tariff ruled that the recovery of fixed costs should come from fixed charges and also observed that the fixed charge component of tariff needs to be gradually increased in due course to cover the actual fixed cost incurred.

8.4.2 The Hon'ble Commission has articulated its view point in December 2003 Tariff Order as follows:

**“2.2.3 Commission’s Ruling**

*The Commission has already elaborated the rationale for levy of demand charges in its previous Tariff Orders. 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. The revised fixed/demand charges have been designed to recover around 40% of MSEB’s fixed costs, as compared to the existing level of recovery of around 35% of fixed costs. The balance fixed costs are recovered through energy charges. Thus, for any disruption in supply, the MSEB is effectively losing out on the recovery of fixed costs to that extent. If MSEB is not allowed to recover fixed cost for the period of interruptions and low voltage period, it would further affect the financial viability of MSEB. ...” (Emphasis added)***

8.4.3 In the Annual Performance Review Order for FY 2007-08 for MSEDCL, Hon’ble Commission unilaterally decided to reduce the fixed charges applicable to different categories of consumers citing the reasons for reduced availability of power.

8.4.4 In the said Order, Hon’ble Commission had observed as under:

*“33. ... As and when sufficient power is available and contracted by the licensees, the fixed charges can again be increased, and energy charges reduced correspondingly.”*

8.4.5 Similarly, in the Tariff Order dated September 12, 2010, Hon’ble Commission had observed as under:

**“5.3 ...**

...

**(a) Restoration of Fixed Charges**

**Commission’s Ruling**

*... The Commission has already clarified that once sufficient power is available and contracted by the licensees, the fixed/demand charges can again be increased, and energy charges reduced correspondingly. ...”*

- 8.4.6 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.
- 8.4.7 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 draws and/or grid collapse. It is not 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.
- 8.4.8 As present, due to sufficient availability of power, there is no Load Shedding in the State. MSEDCL therefore categorically submits that it has sufficient power and has contracted enough power to meet the present and ever-increasing future demand of the State.
- 8.4.9 MSEDCL submits that out of the total ARR, major expenses are fixed in nature and need to be incurred irrespective of any distribution / retail business undertaken by it. A similarity can be drawn in case of generator i.e. even if power plant is shut down, the generating companies need to incur expenses for employees, minor R&M to other assets, depreciation, obligation for loan repayment, interest on loan payments etc. MSEDCL also has similar type of fixed expenses which need to be incurred irrespective of any distribution / retail business undertaken by it. MSEDCL submits that ideally these fixed expenses should be recovered by a combination of Fixed & Demand

Charges. MSEDCL has carried out the detailed exercise wherein the fixed cost obligations are mapped out and which it intends that Hon'ble Commission may align the fixed charges accordingly.

8.4.10 MSEDCL submits that all its expenditure excluding the variable cost (fuel related cost) of Power Purchase Expenses is fixed in nature. Thus ideally these fixed cost expenses should be recovered through Fixed/Demand Charges.

8.4.11 The Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March, 2020 had allowed recovery of only 16% to 18% through fixed charges as against 55% of recovery that should have been allowed then. This under-recovery has led to inadequacy of funds. Further, the recovery from Fixed Charges is much lower which is against the basic principles of recovery of fixed costs through fixed charges as agreed by the Hon'ble Commission in previous Tariff Orders.

8.4.12 As stated rightly by the Hon'ble Commission in its tariff Order dated 26<sup>th</sup> June, 2015 that

*"6.7.6 ...Levy of Fixed Charges and Demand Charges do not result in any windfall gain to MSEDCL, since it is recovering only a part of the Fixed Costs through such Charges...."*

the question is about the principle of applicability and recovery of fixed liabilities and not continue to dependent on the consumption.

8.4.13 In the last MYT order dated 30<sup>th</sup> March, 2020, the Hon'ble Commission has accepted the prayer of MSEDCL for increase in the Fixed Charges to certain extent and this may be considered as a gradual approach so as to ensure proper recovery process for MSEDCL. This may not result into any undue tariff burden on the consumers because, to maintain the full cost recovery, the tariff will either have a corresponding change on fixed charges or energy charges.

8.4.14 Therefore, MSEDCL has proposed increasing the Fixed/Demand Charges for various categories for each category of consumers every year as a step towards gradual balancing the fixed changes recovery with fixed charges

obligation. This is in line with the Hon'ble Commission observation that the recovery of fixed costs should come from fixed charges and the fixed charge component of tariff needs to be gradually increased in due course of time to cover the actual fixed costs incurred by the licensee

## **8.5 Continuation of 30 minutes Demand Integration Period for LT meters**

8.5.1 Hon'ble Commission MERC notified the Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards of Performance of Distribution Licensee including Power Quality) Regulations, 2021 whereby it modified the definition of Maximum Demand to include Fifteen (15) minute time block instead of Thirty (30) minute time block to compute the Maximum Demand. The relevant extract is reproduced below:

*“gg. “Maximum Demand” in kilowatts or kilo-volt-amperes, in relation to any period shall, unless otherwise provided in any general or special order of the Commission, mean four times the largest number of kilowatt-hours or kilo-volt-ampere-hours supplied and taken during any consecutive Fifteen (15) minutes blocks in that period:*

*Provided that **Licensee shall continue to compute Maximum Demand in Thirty (30) minute blocks till the meters are replaced/re-programmed for Fifteen (15) minute blocks, as per the plan approved by the Commission.” (emphasis added)***

8.5.2 MSEDCL submits that presently in MSEDCL network there are 1,34,900 nos. of 40 - 200 Amps CT Embedded meters functioning with Demand Integration Period of 30 minutes. All 40 - 200 Amps CT Embedded meters has to be reprogrammed from Demand Integration Period of 30 minutes block to 15 minutes' block.

8.5.3 MSEDCL submits that to reprogram 1,34,900 nos. of 40-200 Amps CT Embedded meters, it shall approximately take time duration of minimum 18 months and estimated cost of such reprogramming is approximately Rs. 19

Crs.

- 8.5.4 MSEDCL further submits that under the proposed Detailed Project Report as per Revamped Distribution Sector Scheme (RDSS), all three phase meters will be replaced by smart meters in near future
- 8.5.5 Further, it is to mention that since three phase LT consumers do not have much fluctuating loads, hence a shorter time interval of Maximum Demand calculation will not have much significant effect in Maximum Demand values for three phase LT consumers.
- 8.5.6 Considering time and cost involved, Hon'ble Commission is humbly requested to allow MSEDCL to continue with Demand Integration Period of 30 minutes for existing three phase LT 40-200 Amps CT Embedded meters till replacement of existing three phase LT 40-200 Amps CT Embedded meters by smart meters under RDSS scheme.

## **8.6 Multiple Sources of Supply**

- 8.6.1 Hon'ble Commission MERC notified the Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards of Performance of Distribution Licensee including Power Quality) Regulations, 2021, wherein enabling provision for recovery of additional fixed charges from Consumers availing additional/multiple source of supply has been specified. The relevant extract is reproduced below:

*"3.2 Except where otherwise previously approved by the Authority, the classification of installations shall be as follows: -*

*...*

*Provided further the Distribution Licensee, having regard to the nature of supply and purpose for which supply is required, **may adopt special system of supply including multiple source of supply for specific Consumers, if it is demanded by the Consumer and if the same is technically feasible.** However, additional cost towards such special system of supply over and above the cost towards applicable system of supply shall be borne by the concerned Consumers:*

...

***Provided further that Consumer having multiple sources of supply may be subjected to additional fixed charges as determined by the Commission from time to time based on Distribution Licensee's proposal in Tariff Petition.*** (Emphasis added)

8.6.2 MSEDCL submits that presently under MSEDCL's jurisdiction there are 210 nos. of HT&EHV consumers who are availing double / multiple feeder supply of electricity.

8.6.3 MSEDCL further submits that, the said double /multiple feeder supply arrangement has been provided by MSEDCL on the specific request of the consumer.

8.6.4 Accordingly, MSEDCL proposes to levy additional demand charges for each additional feeder. The demand rate approved by MERC for single feeder consumer will be applied additionally for each extra feeder.

## **8.7 Rebate for Incremental Consumption**

8.7.1 Regulation 81.4 of the MERC MYT Regulations, 2019 allows for provisioning of various rebates. The relevant extract is reproduced below:

*"81.4 The Distribution Licensee may propose other rebates for inter-alia, taking supply at higher voltages, bulk consumption, power factor, etc., as a part of their Petition, and the revenue impact of rebates shall be passed on through the Aggregate Revenue Requirement and tariffs, subject to the Commission's approval."*

8.7.2 Hon'ble Commission in the MTR Order dated 12th September, 2018 has observed that encouraging incremental consumption by way of discount would be good in surplus power scenario and contracted capacity is available in excess which otherwise would be subjected to backing down.

8.7.3 Accordingly, based on MSEDCL's Proposal during MYT Order dated 30th

March 2020 in Case No. 322 of 2019 Hon'ble Commission allowed rebate for incremental consumption with certain modifications to MSEDCL's proposal, the Hon'ble Commission in principle accepted the proposal of MSEDCL. The rebate for incremental consumption allowed at @Rs. 0.75/kVAh and further detailed modalities for operationalization of rebate for incremental consumption along with relevant conditions for applicable consumer categories and eligible consumers were laid out. The relevant extract of MYT Order is provided below:

*"8.15.8 .... .With surplus contracted energy available at its disposal, the Commission agrees with MSEDCL about exploring avenues for increasing sales within its distribution area as well as opportunities of surplus trading of power through power exchanges and inter-utility exchange within state. In addition any incremental consumption by existing or future consumers would help MSEDCL gainfully utilise surplus /stranded power generation/contracted capacity available with it instead of backing down. So long as the opportunity for revenue recovery from such sources exceeds the variable/incremental cost of sourcing of such power, it would only benefit MSEDCL to reduce burden of surplus/stranded power capacity. In that sense, offering such rebate for incremental consumption to direct consumers as well as open access consumers would be in order, since aim for offering such rebate is to increase incremental consumption/sale by Licensee. Hence, the Commission opines that offering such rebate for incremental consumption to all consumers including partial open access consumers, subject to clearly laid out conditions would be appropriate."*

8.7.4 Hon'ble Commission while providing detailed modalities in its MYT Order also stated as under:

*"8.15.12 Detailed modalities for operationalization of rebate for incremental consumption along-with relevant conditions for applicable consumer categories and eligible consumers shall be governed as per following conditions:*

- *The rebate for incremental consumption shall be applicable for HT industries, HT commercial, HT public services, HT-PWW, HT Railways/Metro/Mono and HT-Group Housing Society (Residential).*
- *The rebate shall be given to eligible consumers including partial open access consumers falling under above consumer categories to the extent of procurement from MSEDCL.*
- ***The rebate shall be for a period of 3 years subject to reconsideration during the MTR.***
- *The rebate shall be allowed to eligible consumers who consume power above threshold limit*
- *The 3-year average monthly consumption by consumer from FY 2017-18 to FY 2019-20 shall be considered as baseline consumption (or monthly threshold consumption) for determination of incremental consumption by such eligible consumers.*
- *In case of a consumer registered into system for duration lower than 3 years, such consumer shall be eligible for availing incremental rebate from the next billing cycle upon completion of 3-year period and average monthly consumption for past three years shall be considered as its baseline consumption (or monthly threshold consumption) in such cases for determination of their incremental consumption for the purpose of rebate.*
- ***For the purpose of determination of Incremental consumption post MTR period of 4th Control Period, (i.e. for FY 2023-24 and FY 2024-25), baseline consumption (or monthly threshold consumption) shall be reset based on 3-year average from FY 2020-21 to FY 2022-23.***
- *The billing at the reduced rates after allowing the rebate shall be done on monthly basis subject to condition that net entitlement for the rebate under this head of incremental consumption shall be determined on annual basis (April to March) equal to energy units consumption in excess of baseline consumption (i.e. annual threshold consumption). The adjustment for shortfall/excess in case cumulative monthly consumption for the*

*yearly consumption vis-à-vis its baseline consumption (i.e. annual threshold consumption) shall be effected in the last monthly (for March) billing period. No carry-forward of shortfall/excess shall be allowed from one year to next year.*

*Provided that such adjustment of rebate for yearly incremental consumption vis-à-vis baseline consumption (i.e. annual threshold consumption) shall be undertaken from FY 2021-22 onwards and no such adjustment shall be undertaken for FY 2020-21 wherein monthly rebate shall continue considering emergent situation arising in FY 2020-21 due to global pandemic of COVID-19 and its possible fall out on annual electricity consumption by industry and society at large.*

- *For example, If a consumer's 3-year average annual consumption in was 12,000 units, the consumer shall be entitled for the rebate of Rs.0.75/kVAh for consumption exceeding its monthly threshold consumption (not below the baseline consumption of 1,000 units per month) in FY 2021-22 onwards. However, in case its cumulative monthly consumption for the yearly period falls short of annual threshold consumption of 12,000 units then, consumer shall not be entitled for incremental consumption rebate for that financial year and shortfall (or rebate already availed by consumer in earlier months, if any) shall be adjusted for recovery in monthly billing period for March.*
- **The Commission has not considered isolated cases which may become Permanently Disconnected during the year in which a rebate has been availed for some months. The details of such cases, if any will be dealt based on the data as may be submitted by MSEDCL during MTR.**
- *The rebate shall be over and above the existing rebates subject to the fact that the consumer's total variable charges should not be less than Rs.4/ kVAh after accounting for all applicable rebates.*
- *The rebates would also be applicable to Open Access consumers, subject to conditions outlined above.” (emphasis added)*

8.7.5 MSEDCL proposes to continuation of such rebate as the opportunity for revenue recovery from such sources exceed the variable/incremental cost of sourcing of such power, and it would benefit MSEDCL to reduce burden of surplus/stranded power capacity.

8.7.6 MSEDCL submits that it is observed that some consumers are merging their existing connections by permanently disconnecting one of existing connection and shifting the load on existing another connection and increasing contract demand and availing benefit of incremental consumptions rebate.

e.g. A1 consumer having Contract demand of 12100 kVA & A2 consumer having Contract demand of 3600 kVA. A1 got permanently disconnected and shifted load on A2. The resultant contract demand of A2 became 18000 kVA by marginal addition of new demand. Hence after merging the load the monthly consumption of A2 having 18000 kVA demand compared with 3 years average of A2's old demand i.e. 3600 considered for baseline consumption. Thus consumer has availed more benefit of Incremental consumptions rebate.

MSEDCL submits that the proposal of introduction of incremental consumption rebate is to increase consumption by existing / new consumers. However, the practices followed by certain consumers for getting benefit of incremental consumption rebate need to be restricted as there is no additional consumption by consumer. Hence, it is submitted that consumers increasing their demand by merger, amalgamation of existing connections should not get benefit of Rebate on Incremental Consumption to full extent.

However, if consumer increases their demand over and above the merged demand only that increased demand and consumption should be compared with the base load and incremental consumption should be considered while giving the benefit of such rebate.

8.7.7 MSEDCL further submits that in order to encourage timely payments by defaulting consumers this rebate need to be governed by following conditions so as to create deterrent to defaulting consumers, if any.

- Incremental Consumption Rebate will be available only if the consumer

has no arrears with the Distribution Licensee, and payment is made within seven days from the date of electricity bill.

- HT Industrial and HT Commercial consumers shall be allowed to revise their Contract Demand upto 2 times in a Billing cycle. Provided that subsequent to second change in Contract Demand in a Billing Cycle by HT Consumers, for the remaining period of that particular billing cycle, such benefit of rebate shall be withdrawn for the entire billing period. For subsequent Billing Cycle, rebate shall be restored if the consumer does not exercise its option of changing Contract Demand for the second time in that Billing Cycle.
- In case of not availing a prompt payment discount i.e., non-adherence to bill payment within date for availing prompt payment discount for any billing month, such benefit of rebate shall be withdrawn for the entire period of next billing month.
- In case of any default or non-adherence to bill payment within the due date of Payment mentioned on the bill for any month in previous quarter, such benefit of rebate shall be withdrawn for the next quarter.
- However, the consumer shall be entitled to rebate in subsequent quarters in case it maintains payment track record within due date for every month in the previous quarter.

## **8.8 Bulk Consumption Rebate**

8.8.1 Hon'ble Commission in its MYT Order dated 30<sup>th</sup> March, 2020 observed that Regulation 81.4 of the MERC MYT Regulations, 2019 allows for provisioning of various rebates and on its own allowed 'Rebate for Bulk consumption' within HT- Industrial category. This rebate has been allowed to be passed through the ARR. The relevant extract of the Regulations is reproduced below:

*"81.4 The Distribution Licensee may propose other rebates for inter-alia, taking supply at higher voltages, bulk consumption, power factor, etc., as a part of their Petition, and the revenue impact of rebates shall be passed on through the Aggregate Revenue Requirement and tariffs, subject to the Commission's approval."*

8.8.2 MSEDCL requests Hon'ble Commission to continue the bulk consumption rebate.

### 8.9 Proposal for Green Tariff as per MERC Case No. 134 of 2020

8.9.1 Hon'ble Commission determined Green Power Tariff to the consumers opting for meeting its 100% of power requirement through RE sources in the Case No. 134 of 2020 dated 22.03.2021. The relevant excerpts are reproduced below:

*"17.8 Based on the above discussion and considering difficulties in stipulating Discom wise green tariff, the Commission by using its inherent regulatory powers rules that Green Power Tariff which would be uniform for all Distribution Licensees in the State is to be computed as difference between pooled power purchase cost of non-conventional and conventional sources of energy (only variable cost) for all Distribution Licensees in the State. While doing so, instead of computing year wise different tariff, uniform number for MYT control period is computed for providing certainty in rate. However, this approach may be reviewed at the time of MTR proceedings. Accordingly, computation of green power tariff is tabulated below:*

Total	RE power Procurement for MYT Period			Non-RE power procurement (only variable) for MYT Period			Diff Bet RE & Non-RE power
	MU	Rs. Cr	Rs/kWh	MU	Rs. Cr	Rs/kWh	Rs/kWh
MSEDCL	141772	57440	4.05	586029	146412	2.50	1.55
AEML-D	13295	4691	3.53	38206	15367	4.02	-0.49
BEST Undertaking	2949	940	3.19	22534	7938	3.58	-0.34
TPC-D	3927	1491	3.80	22377	8069	3.61	0.19
MBPPL	58	17	2.88	348	161	4.19	-1.31
GEPL	41	12	2.88	248	101	4.08	-1.20
KRC	35	10	2.89	190	76	4.02	-1.14
Total	162077	64600	3.99	669968	178125	2.66	1.33

*17.9 Thus, as per methodology explained above Rs. 1.33/kWh could be Green Power Tariff. However, as this concept is being introduced for the first time and also considering the fact that Distribution Licensee would be able to use such power consumed by consumers towards*

*fulfilment of its RPO target, certain benefit of the same needs to be passed on to concerned consumers. Hence, the Commission decides to levy only 50% of charge determined above i.e. 0.66/kWh as Green Power Tariff to the consumer opting for meeting its 100% of power requirement through RE sources. Such Green Power Tariff would be in addition to regular tariff approved in MYT Order.*

*17.10 All electricity consumers in the State have the option to source 100% RE power by additionally paying above stated Green Power Tariff. Distribution Licensee shall issue monthly certificate to such consumers stating that all power requirement of such consumer has been sourced through RE sources.*

***17.11 The commission will undertake review of Green Power Tariff during MTR proceedings”.***

8.9.2 In the above methodology, Hon’ble Commission uniform rate of Green tariff determined based on difference between pooled power purchase cost of non-conventional and conventional sources of energy (only variable cost) for all Distribution Licensees in the State. Further, instead of computing year wise different tariff, uniform number for MYT control period is computed. Now, MSEDCL proposes DISCOM specific year wise different green tariff since power purchase expenses of each DISCOM is different and it would be important for each DISCOM to recover its additional cost to be incurred towards additional RE Purchase

8.9.3 As per the methodology explained, MSEDCL proposes year wise specific green power tariff for FY 2023-24 and FY 2024-25 for consumers who opts for 100% RE power procurement from MSEDCL and the calculations are as follows:

Total	RE power Procurement for FY 2023-24 (Projected)			Non-RE power procurement (only variable) for FY 2023-24 (Projected)			Diff Bet. RE & Non-RE power
	MU	Rs. Cr.	Rs./kWh	MU	Rs. Cr.	Rs./kWh	
MSEDCL	26409	11859	4.49	126348	41772	3.31	1.18

*The value of difference between RE and Non-RE power procurement (only variable)*

*will change as per the figures approved by the Hon'ble Commission in the MTR order of FY 2023-24.*

Total	RE power Procurement for FY 2024-25 (Projected)			Non-RE power procurement (only variable) for FY 2024-25 (Projected)			Diff Bet. RE & Non-RE power
	MU	Rs. Cr.	Rs./kWh	MU	Rs. Cr.	Rs./kWh	
MSEDCL	29476	12966	4.40	125993	42601	3.38	1.02

*The value of difference between RE and Non-RE power procurement (only variable) will change as per the figures approved by the Hon'ble Commission in the MTR order of FY 2024-25.*

8.9.4 MSEDCL shall also proposes to levy only 50% of charge determined i.e., Rs. 0.59/kWh and Rs. 0.51/kWh as Green Power Tariff to the consumer opting for meeting its 100% of power requirement through RE sources for FY 2023-24 and FY 2024-25 respectively. Further, such Green Power Tariff would be in addition to regular tariff to be approved in MTR Order for FY 2023-24 and FY 2024-25.

### **8.10 Amendment in provisions regarding Prepaid Meters for LT CT Operated (Above 20kW) and HT Consumers**

8.10.1 MSEDCL submits that the Hon'ble Commission has notified MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (MERC Supply Code & SOP Regulations, 2021), which amongst various other things provides inter alia for installation of pre-paid meters, security deposit in case of pre-paid Meters and rebate thereof. In this context, the relevant extract of the said regulations is reproduced below:

**“13. Security Deposit**

...

13.2 *The amount of the security referred to in Regulation 13.1 above shall be twice the average billing of the billing cycle period. ....*

...

*Provided further that **in case of installation of pre-paid meters, the security deposit shall not be collected by the Distribution Licensee and that the Consumer shall be eligible for a rebate/incentive as approved by the Commission for making the pre-payment.***

....  
16.5. *Payment of Bills*

...  
16.5.12 *In case of pre-paid metering, the Licensee shall pay a rebate/incentive to the Consumer in accordance with the relevant orders of the Commission.”*

8.10.2 MSEDCL submits that as against MSEDCL proposal of reduction of pre-paid meter rebate from 5% to 2% of the consumer's total monthly bill, Hon'ble Commission vide its MYT Order dated 30th March, 2020 in Case No. 322 of 2019 has continued such rebate of 5% in the Energy Charge (incl. FAC) for consumers having pre-paid meters. The relevant extract of the MYT Order is reproduced below:

**“Rebate for consumers with Prepaid connections**

*Consumers with prepaid metered connections shall be entitled for rebate of 5% in the Energy Charge Rate (incl FAC) applicable for the consumer category.”*

8.10.3 MSEDCL submits that in view of aforementioned provisions of MERC Supply Code & SOP Regulations, 2021) and ruling of MYT Order 2019, various consumer's association and consumers having CT operated Meter (LT above 20kW) and HT Meter have approached MSEDCL with a request of installation of pre-paid meter so that the consumers can be exempted from payment of Security Deposit and will receive rebate entitled for pre-paid meters.

8.10.4 MSEDCL submits that it is observed that in case of consumers with HT & above 20 kW load metering is indirect metering i.e. meter is connected through CT/PT and hence disconnection / reconnection cannot be implemented in case of insufficient funds / payment of bills respectively. Hence, the request of consumers for installation of prepaid meters is not technically feasible.

8.10.5 In order to sort out this issue, MSEDCL has collected information from the various Meter manufacturers viz M/s. Schneider, M/s. Genus, M/s. Secure,

M/s. Vision Tek, M/s. Avon and M/s. HPL whether the pre-paid meters could be installed to the LT consumers above 20 kW and HT consumers or otherwise. The response received from above mentioned meter manufacturers are as below:

Sr. No.	Meter Manufacturer	Response
1	M/s. Schneider Ltd.	We regret to inform you that we don't have these products in our present product range.
2	M/s. Genus Power Ltd.	Prepaid as concept is not applicable for LT CT and HT CT meters as there is no provision of relay in these metes. This is in line with IS 16444 (Part 2) definitions.
3	M/s. Secure Meters Ltd.	1) As per IS 16444 (Part 2), which is applicable to HT & LT Meters, there is no Connect-Disconnect facility available as the metering is on secondary side. 2) In view of the same, meters cannot work on Pre-Paid Mode. 3) The LT CT operated & HT CT operated meters can work only on post-paid mode and perform all the functionality of a Smart Meter for data polling as defined in IS -16444 (Part 2).
4	M/s. Vision Tek Ld.	We have LT Three Phase 10-60 Amp and 10-100 Amp Smart Energy Meters which can be used for prepaid meters. We don't have HT Meters as of now.
5	M/s. Avon Meters Ltd.	In this regard, we would like to intimate that supply of Pre-paid meters (HT) is not available in our range of products. However, we have Whole Current Meters complied to IS 16444 having pre-paid and connect / disconnect application.
6	M/s. HPL Ltd.	We have BIS Certification for all type of Smart Meters, for both communication technologies i.e. RF Cellular.

		<p>1. 1Ph &amp; 3 Ph Whole Current Smart Meters as per IS 16444 Part-1.</p> <p>2. LT CT &amp; HT CT Smart Meters as per IS 16444 Part-II LTCT &amp; HTCT Smart Meters do not have provision for switch / relay, hence pre-payment/ dis-connection function cannot be performed.</p>
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8.10.6 MSEDCL further submits that as per IS 16444 (Part 2), connect / dis-connect facility is not available for LT CT operated meters and HT meters as these meters are connected on secondary side of metering equipment. In absence of the connect /disconnect facility to these meters, pre-paid meters could not be installed to HT and LT (load above 20 kW) consumers.

8.10.7 In view of the above, MSEDCL request the Hon'ble Commission to allow pre-paid rebate only for consumers having LT Whole Current Meters

8.10.8 MSEDCL further requests the Hon'ble Commission an amendment to the MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 to that effect may please be issued.

**8.11 Cheque related**

8.11.1 MSEDCL submits that it has filed the Petition in Case No. 44 of 2021 before the Hon'ble Commission to apply ceiling of Rs. 10,000/- on acceptance of monthly electricity bill through cheque and to mandate online payment for any payment amounting to more than Rs. 10,000/- by invoking the clause removal of difficulties in implementation of MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021.

8.11.2 However, Hon'ble Commission vide its Order dated 23rd August, 2021 in Case No. 44 of 2021 stated that the Supply Code Regulations have been notified after due public consultation process. For any change in the

Regulations, the opportunity of expressing their views is to be given to all stakeholders. Hon'ble Commission dismissed the case with liberty to MSEDCL to approach the Hon'ble Commission with all the details, during Mid-Term Review of tariff. The relevant extract is reproduced below:

“22. As stated earlier, the Commission has notified Supply Code & SoP Regulations, 2021 by following due public consultation process. Any change in the notified principles by way of Petition under removal of difficulty clause does not offer opportunity to all the stakeholders to express their views on an issue that affects all consumers. For complying with principle of natural justice, larger public consultation process needs to be undertaken. Further, Distribution Licensees have themselves suggested preparatory time for creating consumer awareness about such decision before its actual implementation. **Hence, it is appropriate that Distribution Licensees may approach the Commission during Mid Term Review proceedings with specific prayer and rationale for fixing an upper ceiling for cheque payments / putting additional charges on cheque payment.** In the meantime, all Distribution Licensee should utilize this time (before going in for public consultation) to educate the consumers in this respect promoting the advantages of online payment to the consumers. The Distribution Licensees may use all the options available with them (SMS, Circulars, Website Alerts, advertisement on the Energy Bills, etc.) for this purpose.

23. Hence the following Order:

ORDER

1. Case No 44 of 2021 is dismissed with liberty to the petitioner to **approach the Commission with all the details, during the Mid Term Review of the tariff in the ongoing tariff control period.”**

**(emphasis added)**

8.11.3 MSEDCL submits that Regulation 16.5.6 of the MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 provides for

cash payment limit of Rs. 5,000/ or limit as may be decided by the Hon'ble Commission. The relevant extract of the said regulations is reproduced below:

*“16.5.6. Consumer may pay the bill by Cash, Cheque, Demand Draft, Money Order or through electronic modes. The date of realisation of cheque or Three (3) days from the submission of cheque shall be deemed to be the date of receipt of the payment provided that the cheque is not dishonoured:*

*Provided that if cheque of a Consumer dishonoured for Two (2) occasions in any Financial Year, then such Consumer shall not have facility of paying electricity bill through cheque for balance period of Financial Year:*

*Provided further that cash payment limit for each monthly bill shall not exceed Rs 5,000/- or as may be decided by the Commission from time to time in the tariff order.”*

8.11.4 MSEDCL submits that there are certain operational difficulties in implementation of MERC Supply Code and SoP Regulations, 2021 in true spirit. Therefore, MSEDCL is submitting following details as directed by the Hon'ble Commission.

8.11.5 MSEDCL submits that it has enabled the online payment facility for its consumers since 2005. All types of payment mode such as debit card, credit card, net banking, UPI, digital wallets, cash card, paytm etc. are available. On an average around 90 lakhs LT consumers pay through online modes amounting to approximately Rs.1750 Crs. Per month. MSEDCL submits that Digital India Programme (Digital Programme) was launched by the Government of India (GoI) with an objective to ensure that the services of the government are made available to citizens electronically by improving online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. Considering this, MSEDCL has initiated various activities to promote the online payment facilities like SMS to

consumers informing various modes of online payment, wide publicity through newspaper, discount for online payment etc. As a result of these initiatives, average monthly online collection has been increased upto 58% in FY 2021-22 as compared to 11.89 % in FY 2015-16.

8.11.6 MSEDCL submits that it has also introduced RTGS/NEFT payment facility to LT and HT consumers through virtual account system. Virtual accounts are created for all HT consumers and for LT consumers having bill amount above Rs. 5000/- (total around 90 lakhs Virtual accounts), which cover demand of around Rs. 3000 Crs per month. Currently all HT consumers are making payment of their monthly energy bills using Virtual Account system and LT consumers are being persuaded to adopt the system in addition to regular online payment options.

8.11.7 MSEDCL submits that implementation of limit on cash acceptance will have adverse impact on its revenue realization. Currently, on an average around 80 lakhs consumers pay electricity bills by cash with monthly approximately of Rs. 1,100 Crs. Details of category wise average monthly cash collection is given **Annexure 9** of this Petition. Further, as per Section 269ST of the Income-tax Act, 1961, limit for non-acceptance of cash above Rs. 2.00 lakhs have been already implemented by MSEDCL since April 2019. Even though the tendency of cash payment by consumer has not reduced, as expected.

8.11.8 MSEDCL submits that due to COVID-19 lockdown situation and slowdown of economy, many consumers were not able to pay energy bills. As such arrears are being accumulated. Continuous efforts for revenue realization are done through recovery drives. During the recovery drives many consumers prefer to pay the bill on the spot with cash. However, due to limitation for non-acceptance of cash above Rs. 5,000/- such payments cannot be accepted and it results in non-realization of revenue.

8.11.9 MSEDCL further submits that it has experienced following behavioural patterns of consumers towards preference to cash payment while making collection

a. In Rural area consumer are not well acquainted with digital modes of

payment and afraid to pay online or through net banking/cheque.

- b. Ag consumer's day-to-day transactions are in cash and due to ongoing Ag Policy, 2020, they are paying their bills in cash, as they do not want to use any other mode of payment.
- c. Senior citizens and housewives who are staying alone have difficulties in Online payment.
- d. In case of theft, bills which are always more than Rs. 5,000/-, consumer is reluctant to pay online.
- e. If we do not accept cash payment, there would be significant rise in consumer grievances and ultimately it will affect MSEDCL recovery.

8.11.10 MSEDCL further submits that, as per average monthly collection data, there are around 3.11 lakhs consumer pay the bill amount above Rs. 5,000/- in cash with value of Rs. 370 Crs which is 35% of total cash collection per month. (Please refer **Anneuxre 9**). Due to restriction of acceptance of cash amount above Rs. 5,000/- MSEDCL is facing difficulty in realization of huge amount as above, which directly affects MSEDCL's funding arrangements.

8.11.11 MSEDCL further submits that all consumer paying through cash currently will not easily adopt for online payment options which may lead to possibility of more cheque payments resulting to further delay in realization of bill amount to MSEDCL. Additionally, as per Regulation 16.5.6 of Supply Code and SoP Regulations, 2021, MSEDCL shall be compelled to pass on credit to consumers on T+3 days irrespective of cheque realization amount credited to MSEDCL account or not.

8.11.12 MSEDCL submits that it has banking transactions with Nationalised banks. Some of the key issues faced by MSEDCL with nationalised banks in cheque clearances are:

- a) Reluctance in accepting the Cheque collections due to higher quantum
- b) Delay in processing and realization of cheques
- c) Delay in intimation of cheque dishonoured
- d) Cheque wise clearing and return details are not provided
- e) Demand of cheque processing charges ranging from Rs. 6 to Rs. 12 per cheque by some banks.

As a result of these issues, even though updation of consumer ledger is not delayed due to Regulation 16.5.6, there is delay in realization of revenue to MSEDCL and additional manual work & reconciliation issues.

8.11.13 MSEDCL further submits that the slab-wise payment analysis shows that consumers having average monthly bill payment above Rs. 20,000/- through cash mode area around 31,000 with amount of ~ Rs. 130 Crs and through cheque mode are around 41,000 with amount of Rs. 250 Crs

8.11.14 Considering the number of consumers and amount affected by limit of Rs. 5,000/- on acceptance of amount through cash and cheque as mentioned in para above, MSEDCL requests Hon'ble Commission

- i) To increase the Cash acceptance limit from Rs. 5,000/- to Rs. 20,000/- for initial implementation to minimise the impact of MSEDCL's revenue realization
- ii) To set the limit on acceptance of amount through Cheque / Demand Draft for Rs. 20,000/- to overcome cheque clearance related issues.
- iii) All payments to MSEDCL above Rs. 20,000/- should be through online payment modes.

8.11.15 MSEDCL submits that Hon'ble Commission has inherent powers to decide the matter under Regulation 32 of Supply Code & SoP Regulations, 2021. The relevant extract of said regulations is reproduced below:

**“32. Power to Remove Difficulties**

*If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific order, make such provisions not inconsistent with the provisions of the Act, as may appear to be necessary for removing the difficulty.”*

**8.12 Clarification on Demand Charges for LT VI: LT – Street Light category**

8.12.1 MSEDCL submits that Hon'ble Commission in MYT Order dated 30th March, 2020 in Case No. 322 of 2019 has stipulated following applicability LT VI: LT-Street Light category for the Control Period.

**“LT VI: LT- Street Light**

**Applicability:**

This tariff category is applicable for ...

...

**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’.”*

8.12.2 MSEDCL submits that applicability of demand charges for street lights having non-automatic / manual operations is not mentioned. MSEDCL requests the Hon’ble Commission to provide the clarity on the same

8.12.3 MSEDCL further submits that it is proposed that the demand charges *for the street and other lighting facilities having ‘Automatic Timers’ for switching On/Off* shall be charged Demand charges on “higher” of the following

- i) Actual Recorded demand or
- ii) 50% of contract demand.

**8.13 Clarification on Penalty for exceeding Contract Demand**

8.13.1 MSEDCL submits that Hon’ble Commission in MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 has stipulated detailed criteria for Penalty for exceeding Contract Demand wherein the Distribution licensee can enhance the Contract Demand of the consumer when the consumers exceed the Contract Demand on more than three occasions during a calendar year irrespective whether the Consumer submits an application for the same. The relevant extract is reproduced below:

**“Penalty for exceeding Contract Demand**

...

*Further Distribution licensee can enhance the Contract Demand of the*

*consumer when the consumer exceeds the Contract Demand on more than three occasions **during a calendar year**, irrespective whether the Consumer submits an application for the same or otherwise. However, before such revision of Contract Demand, Distribution Licensee must give 15 days' notice to such consumer. Also, the Consumer is liable to pay necessary charges as may be stipulated in the approved Schedule of Charges for the revised Contract Demand.” (Emphasis added)*

8.13.2 MSEDCL submits that subsequently, the Hon'ble Commission has notified MERC Supply Code & SOP Regulations, 2021. As per regulations 7.6 of the aforementioned regulations distribution licensee is mandated to revise the Contract Demand to highest of demand recorded during a financial year. The relevant extract is reproduced below:

*“7.6 The Distribution Licensee shall revise (increase or decrease) the Contract Demand / Sanctioned Load of the Consumer upon receipt of an application for the same from the Consumer:  
Provided that in case Consumer exceeds its Contract Demand on Three (3) occasions in **any Financial Year**, then Distribution Licensee shall intimate such Consumer to apply for regularising its Contract Demand. In case Consumer refuses or fails to do so, Distribution Licensee shall revise its Contract Demand to the highest recorded Maximum Demand in **that Financial Year** in the immediate next ensuing bill:  
...”*

8.13.3 MSEDCL request the Hon'ble Commission to revise the condition as per the MERC Supply Code & SOP Regulations, 2021.

#### **8.14 Eligibility to avail various incentives and rebates approved by the Hon'ble Commission**

8.14.1 Petitioner humbly submits that a high proportion of consumers in LT category do not pay on time resulting in blocking of revenue. Further, cost and

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expenses have to be incurred to take necessary steps to realise the unpaid dues of the electricity bill from the defaulting consumers. Thus, MSEDCL has to incur the administrative charges and expenses for service notice on such consumers.

8.14.2 Consumers paying regular bills within the timelines stipulated get prompt payment discount of 1%. Further, for normative working capital, Commission provides interest rate of about 8%-10% p.a. which is less than 1% per month. Such extra expenditure due to certain non-timely paying consumers gets passed on to other consumers.

8.14.3 MSEDCL further submits that in order to encourage timely payments by defaulting consumers, it is high time that various applicable rebate(s) and incentives(s) need to be governed by following conditions so as to create deterrent to defaulting consumers, if any.

- Various applicable rebate(s) and incentive(s) will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of electricity bill.
- In case of not availing a prompt payment discount i.e., non-adherence to bill payment within date for availing prompt payment discount for any billing month, benefit of various applicable rebate(s) and incentive(s) shall be withdrawn for the entire period of next billing month. As well as if consumer exceeds his contract demand in a particular month, in that month consumer will not be liable for any type of incentive or rebate approved by MERC.

### **8.15 Additional Suggestions for Tariff Applicability**

8.15.1 MSEDCL submits that Hon'ble Commission in its past tariff Orders has explicitly spelt tariff applicability to various usages. With growth in economy, new usages patterns have emerged, which require clarification and confirmation of Hon'ble Commission. Though the applicability specified by the Hon'ble Commission is representative, MSEDCL prays for confirmation on following usage categorisation

8.15.2 Following new usages have been identified and added in tariff applicability proposal

8.15.3 Residential consumer category

8.15.3.1 Private corporate bodies Staff quarters / Hostels / Rest Houses  
MSEDCL proposes to include private corporate bodies staff quarters/ Hostels/ Rest Houses under Residential category

8.15.3.2 Temporary purposes for public religious functions  
MSEDCL is already charging residential rates to temporary purposes for public religions function, for areas where community prayers held and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared. MSEDCL proposes to include Gopalkala Utsav and Maharashtra Day under this list.

8.15.3.3 Crematoriums and Burial Grounds for all purposes, including lighting  
MSEDCL proposes to include “electric kiln, water pumps, etc.” under this list

8.15.4 Non- Residential or Commercial consumer category

- 8.15.4.1 Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms  
MSEDCL proposes to include Exhibition Centres, Ware Houses/Godowns MSEDCL proposes to include Resorts, Canteens/ Cafeterias, Tea shops, Logistics and Transportation services under this category
- 8.15.4.2 MSEDCL proposes to include Toll Collection plazas including lightings on Express / National / State Highways not included under any other categories under this category
- 8.15.4.3 MSEDCL proposes to include Mobile Shoppe's under this category
- 8.15.4.4 Separate Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not included in other categories also include in this category  
MSEDCL proposes to include Training Centres under this category

## **8.16 Modification in Tariff Applicability**

### **8.16.1 Applicability of BPL category tariff**

MSEDCL submits that as per the exhaustive eligibility criteria prescribed by the Hon'ble Commission, applicability of BPL category will have to be assessed at the end of each financial year. MSEDCL submits that such assessment at the end of each financial year is not justified because if a consumer consumes more than 360 units cumulatively at the end of any billing cycle, then such consumer should be billed at LTI (B) - Residential tariff for the remaining period. Since the objective of the BPL category is to supply electricity at subsidised rates to the needy persons in society, then this creates a situation in which benefits of such tariff may get passed on to underserving consumers. Hence, it is proposed to add a constraint on applicability of BPL category such that eligibility of such consumer will be reassessed regularly cumulatively at the end of each billing cycle in a financial year. Further, Revenue loss at current energy charge of Rs. 3.55/unit and at Rs. 77/connection/month will not get cross-subsidised.

### **8.16.2 Residential category**

8.16.2.1 Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes  
MSEDCL proposes to modify replace the term ‘captive purposes’ with ‘self-use’.

8.16.3 Retail Gas Filling Stations including Gas bottling plants in the same premises

8.16.3.1 Hon’ble Commission in MYT Order has recognised ‘retail gas filling station’ as separate activity and categorised under Commercial Tariff. Further, during the proceedings before the Hon’ble Commission in Case No. 26 of 2022 (Order dated 18<sup>th</sup> July, 2022), issue of tariff categorization of two activities viz., Compression (Bottling) and Dispensing undertaken by CNG station raised. Hon’ble Commission in the Order dated 18<sup>th</sup> July, 2022 opined as under

*“14.7 ... At the same time it is also important to note that other somewhat similar activity (though not exactly similar to the CNG filling stations) of fuelling the vehicle i.e. Petrol Pump is categorised under Commercial category. Therefore, even if MSEDCL wants the Commission to relook the categorisation of ‘retail gas filling station’, the same cannot be done through present proceeding and **needs to be undertaken through public consultation process in tariff proceeding...**” (emphasis added)*

As per the Tariff Orders of the Hon’ble Commission, CNG bottling plants fall under industrial category whereas retail sale of the gas fall under commercial category. Hence, it is proposed that ‘Gas bottling and filling plants in the same premises’ to be included under Commercial tariff category.

8.16.4 Ready-mix concrete or hot mix plants used for construction of infrastructure projects

8.16.4.1 During the proceedings before the Consumer Grievance Redressal Forum, Vasai in Case No. 16, 17, 20, 21 and 28 of 2022 (Separate Orders dated 25<sup>th</sup> May, 2022), issue of tariff categorization regarding ‘Ready-mix Concrete’ raised. CGRF, Vasai vide its aforementioned ruled as under:

*“6. Observations*

*...*

*c) Honorable Commission in tariff order in case No. 116 of 2008*

*and case no. 111 of 2009 has clearly given that the categorization of industry is applicable to such activities which entail “manufacture”. Moreover MERC ordered that all the construction activities on infrastructure projects, building etc. will be classified under the commercial category. The applicant is engaged in the business of infrastructure project and hence Commercial tariff is the proper tariff applicable to applicant.*

...

- g) Hon’ble MERC in its order dated 17.08.2009 in Case No. 116 of 2008 stated that all Construction activity, on infrastructure projects, buildings, hill station, etc., will be classified under „Commercial Category“ and be charged at HT Commercial or LT Commercial, as applicable.”*

So, Ready-mix Concrete (RMC) or hot mix plants or mining/ stone crushing plants exclusively used for construction of any infrastructures projects are included in construction activity. In order to get clarity and to avoid conflicts on this, MSEDCL proposes that the category for Ready-mix and Hot Mix plants used for construction of infrastructure projects mentioned in clause (i) of LT Commercial as Commercial category.

#### 8.16.5 Categorisation of Ordinance Factories of Defence establishments

8.16.5.1 MSEDCL submits that in MTR Petition in Case No. 195 of 2017 it had requested the Hon’ble Commission to provide the clarification regarding categorisation of Ordinance Factories and Ammunition Factories and decide the applicability of Tariff for such establishment. Hon’ble Commission vide its Order dated 12<sup>th</sup> September, 2018 in this matter ruled as under:

*“9.8.8. The Commission clarifies that the activities of the Ordinance Factories and Ammunition Factories of the Defence Establishments are akin to the manufacturing/industrial activity. **Hence, it would be appropriate to classify such Ordinance/Ammunition Factories as industrial and Industrial Tariff, at appropriate voltage level shall be applicable in such cases.** However, other Defence Establishments would continue to be categorised as Public Service and corresponding Tariff shall be applicable for other Defence Establishments **excluding***

***Ordinance/Ammunition Factories, Suitable clarification has been incorporated in the Tariff Schedule as such.” (Emphasis added)***

8.16.5.2 However, no such explicit clarification was incorporated in the Tariff Schedule in MTR Order dated 12<sup>th</sup> September, 2018 as such. Subsequently, MSEDCL has again proposed inclusion of ‘Ordinance Factories of Defence Establishments’ under Industrial category. The same was not incorporated in the MYT Order dated 30<sup>th</sup> March, 2020.

8.16.5.3 MSEDCL has again proposed categorisation of Ordinance Factories of Defence Establishments under Industrial category. MSEDCL requests the Hon’ble Commission to provide clarification on this and decide the applicability of Tariff for such establishments.

**8.16.6 Packaged drinking water plants**

8.16.6.1 Packaged drinking water uses water from any source which has to be treated and disinfected, a process that mainly involve filtration, UV or ozone treatment or reverse osmosis (RO) before it is fit for human consumption. There are mainly four sections in a packaged drinking water plant: water treatment, bottling, quality control (lab) and overall utility. Considering nature of usage, MSEDCL proposed to charge Industrial Tariff to Packaged drinking water plants.

**8.16.7 Dam operation including Lighting and other activities**

- Motors and allied load used for dam operations i.e. opening / closing of dam gates to control water flow.
- In tariff order applicability for Construction of dam is mentioned.
- Due to this ambiguity tariff applied to the dam operation is HT Group Housing Societies (Residential).
- Industrial or Public Water Works tariff may not appropriate as not falling under Industrial activity or any water supply schemes.
- Benefit of dam water is availed by public at large hence dam operations proposed under Public Services – Others category.

**8.16.8 Accommodation facilities provided by religious trusts registered under**

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**Maharashtra Public Trust Act for devotees**

- Accommodation facility (Bhakta Nivasa) is provided by various religious places to the devotees visiting at these places.
- These religious places registered under Maharashtra Public Trust Act.
- Though the charges / rent are taken from the visitors / devotees who availed the accommodation but are of less than the Hotels, lodge, guest house etc.
- Thus, services provided by these trusts are not commercial in nature, hence Public Service-Others is proposed to the accommodation facilities provided by religious trusts registered under Maharashtra Public Trust Act for devotees.

**8.16.9 Water ATM (RO/UV/UF) Water Purifier Plants**

8.16.9.1 The novel concept of 'water ATMs', has been initiated in remote areas of vidharbha where there is severe water scarcity or flow of contaminated water. Majority of Water ATMs are being installed with the funds received from multinational Companies and state run Mahagenco under corporate social responsibility fund. In some cases, these machines are being handed over to Gram panchayat or directly to women's self-help groups for operation. Considering this MSEDCL proposes to charge such units under Public services (Others) category, if Gram panchayat or local body operates the same. Otherwise Non-residential tariff may be made applicable.

**8.16.10 Godowns and Warehouses**

8.16.10.1 MSEDCL submits that warehousing means are of storage goods, making maximum use of available space of storage of goods (Raw and Finished). Godowns and warehouses are third party logistic providers and meant for temporary storage of goods. There exists the cluster of warehouse outside Bhiwandi and Pune in Maharashtra. The facilities of godowns and warehouses are leased by owner to any company, who intend to store the goods near to its demand centre. Presently, Hon'ble Commission has not explicitly mentioned usages for Godowns and warehouses in any category. Hence, MSEDCL proposes to classify the Godowns and warehouses in Non-Residential category.

## **8.17 Clarificaiton regarding Tariff Applicability**

### **8.17.1 Clarifications regarding categorization of Phalsheti**

8.17.1.1 Various representations addressed in Agricultural Land to Government have been submitted to MSEDCL to categorize Phalsheti under Ag Pump-sets Category. However, in the current MYT Order, Phalsheti is not specifically mentioned under any category. Considering the difficulties in implementation, MSEDCL requests Hon'ble Commission to specify the category for Phalsheti in Agricultural Land.

### **8.17.2 Clarification on applicability of Tariff to Hotels registered with the Ministry of Tourism, Government of India**

8.17.2.1 Government of Maharashtra State issued the Government Resolution (G.R.) No. टीडीएस २०२०/९/प्र.क्र.५०२/पर्यटन, दि.०३ डिसेंबर, २०२० regarding promotion of tourism. In the said Government Resolution (G.R.), it has been mentioned as below,

*"केंद्र शासनाच्या पर्यटन मंत्रालयाकडे नोंदणीकृत असलेल्या हॉटेल व्यवसायिकांकडून दि. १ एप्रिल, २०२१ पासून वीज दर, वीज शुल्क, पाणी पट्टी, मालमत्ता कर, विकास कर, वाढीव चटई क्षेत्र निर्देशांक व अकृषिक कराची आकरणी औद्योगिक दराने करण्यात यावी."*

8.17.2.2 The said GR is enclosed herewith as **Annexure 14** to the Petition. In view of this Hon'ble Commission is requested to clarify the categorization of the hotels registered with the Ministry of Tourism, Government of India.

## **8.18 Any Other submission**

### **8.18.1 Decisions of various Regulatory Forums**

The Aggregate Revenue Requirement has been arrived at on the basis of firmed up data from various Utilities like MSPGCL, MSETCL, NTPC, 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.

**9 WHEELING CHARGES**

**9.1 Network Cost of MSEDCL**

9.1.1 Hon'ble Commission in the MYT Regulations, 2019 has specified the ratio of network and supply cost segregation. The same has been provided below for ready reference.

**Table 226: Segregation of Retail Supply and Wires Business Expenses**

<b>Particulars</b>	<b>Distribution Wires Business (%)</b>	<b>Retail Supply Business (%)</b>
Power Purchase Expenses	0%	100%
Inter-State Transmission Charges	0%	100%
Intra-State Transmission Charges	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 & Doubtful Debts	10%	90%
Income Tax	90%	10%
Contribution to Contingency Reserves	90%	10%
Return on Equity	90%	10%
Non-Tariff Income	10%	90%

9.1.2 MSEDCL has considered the same for segregation of aggregate revenue requirement for the period FY 2023-24 to FY 2024-25 and arrived at the Wires Business and Retail Supply Business Cost. Following table provides the summary of Network Cost of MSEDCL for FY 2023-24 to FY 2024-25.

**Table 227: Network Cost of MSEDCL for FY 2023-24 to FY 2024-25**

		Rs. Crs	
S. No.	Particulars	FY 2023-24	FY 2024-25
1	Operation & Maintenance Expenses	5,449	5,724
2	Depreciation	2,772	2,978
3	Interest on Loan Capital	841	1,004
4	Interest on Working Capital	138	163
5	Interest on deposit from Consumers and Distribution System Users	46	48
6	Other Finance Charges	-	-
7	Provision for bad and doubtful debts	111	117
8	Opex Schemes	328	1,204
9	Contribution to contingency reserves	157	180
10	Income Tax	-	-
11	Return on Equity Capital	1,760	1,774
<b>12</b>	<b>Total Revenue Expenditure</b>	<b>11,602</b>	<b>13,193</b>

9.1.3 MSEDCL submits that the Regulation 73.2 of the MERC MYT Regulations, 2019 provides for computation of wheeling charges separately for LT voltage, HT voltage and EHT voltage levels. The relevant extract of such regulations are given below:

*“73.2 The Wheeling Charges of the Distribution Licensee shall be determined by the Commission on the basis of a Petition for determination of Tariff filed by the Distribution Licensee in accordance with Part B of these Regulations:*

*Provided that the Wheeling Charges may be denominated in terms of Rupees/kWh or Rupees/kVAh or Rupees/kW/month or Rupees/kVA/month, for the purpose of recovery from the Distribution System User, or any such denomination, as may be stipulated by the Commission:*

*Provided further that the Wheeling Charges shall be determined separately for LT voltage, HT voltage, and EHT voltage, as applicable:”*

9.1.4 Further, Hon'ble Commission in MYT Order dated 30<sup>th</sup> March, 2020 in Case No. 322 of 2019 has determined the Wheeling Charges for LT, HT and EHV

levels only.

9.1.5 Accordingly, MSEDCL submits that for the balance years of the Control Period from FY 2023-24 to FY 2024-25, it is proposed Wheeling Charges for three levels only, EHV (66 kV and above), HT (combined wheeling charges for 33, 22 & 11 kV) and LT level.

9.1.6 MSEDCL further submits that it does not maintain audited accounts for voltage wise assets and thus it does not have segregation of GFA between HT and LT levels. Hence, MSEDCL for the purpose of projection has considered GFA segregated into HT and LT as considered by the Hon'ble Commission in the Multi Year Tariff Order dated 30<sup>th</sup> March, 2020. MSEDCL further submits that in order to arrive at the proportion of GFA for HT Level, it has added the GFA proportion for 33 kV, 22 kV and 11 kV voltage levels and the same is shown in the table below

**Table 228: Segregation of GFA FY 2023-24 to FY 2024-25**

Particulars	FY 2023-24	FY 2024-25
HT (Excl EHV)	60%	60%
LT Level	40%	40%

9.1.7 MSEDCL has then applied ration of Voltage-wise GFA shown in the table above to arrive at GFA of HT (Excluding EHV Level) and LT levels assets which has been approved by the Hon'ble Commission in its Order 30<sup>th</sup> March 2020.

9.1.8 The Network Cost is apportioned among voltage level in the ratio of GFA as computed above:

**Table 229: Network cost apportioned for FY 2023-24 to FY 2024-25**

Particulars	Rs. Crs	
	FY 2023-24	FY 2024-25
HT (Excl EHV)	6,961	7,916
LT Level	4,641	5,277

9.1.9 MSEDCL has considered the voltage wise consumption (in kVAh also) as projected for the balance years of the Control Period i.e., from FY 2023-24 to FY 2024-25 for determining the wheeling charges. The projected consumption

at different voltage levels is shown below:

**Table 230: Voltage Wise Consumption for FY 2023-24 to FY 2024-25**

Particulars	MUs	
	FY 2023-24	FY 2024-25
HT (Excl EHV)	32,637	33,565
LT Level	79,139	81,494

*Note: HT in MkvAh and LT in MUs*

9.1.10 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., HT (Excluding EHV) 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 in the same ratio, since the HT system is also being used for supply to the LT consumers.

**Table 231: Calculation of Wheeling Cost for FY 2023-24**

Particulars	Network Cost (Rs. Crs)	Sales (MUs)	% of Sales	Wheeling Cost (Rs. Crs)
HT (Excl EHV)	6,961	32,637	29%	2,033
LT Level	4,641	79,139	71%	9,570
<b>Total</b>	<b>11,602</b>	<b>1,11,775</b>	<b>100%</b>	<b>11,602</b>

**Table 232: Calculation of Wheeling Cost for FY 2024-25**

Particulars	Network Cost (Rs. Crs)	Sales (MUs)	% of Sales	Wheeling Cost (Rs. Crs)
HT (Excl EHV)	7,916	33,565	29%	2,309
LT Level	5,277	81,494	71%	10,884
<b>Total</b>	<b>13,193</b>	<b>1,15,059</b>	<b>100%</b>	<b>13,193</b>

9.1.11 Hon'ble Commission in the MYT Order dated 30<sup>th</sup> March 2020 in Case No. 322 of 2019, in addition to the allocation of yearly wheeling cost to recover projected ARR of wire business through wheeling charge, has also considered to recover the past period gaps in recovery of Wire ARR through Wheeling Charges over the ensuing years of the Control Period. The wheeling charge gap has been spread over the balance two years of the Control Period. Thus, proposed recovery of Wires cost (incl. past period gaps for Wires business for ensuing years in provided in the following table:

**Table 233: Wire recovery including past period gaps**

Particulars	Units	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Wheeling ARR	Rs Cr	10,253	10,376	10,841	10,617	11,388	12,976
Recovery allowed	Rs Cr	-	657	657	657	657	657
Wheeling Revenue	Rs Cr	8,897	10,664	10,905	12,430	11,832	11,835
<b>Gap</b>	<b>Rs Cr</b>	<b>1,356</b>	<b>369</b>	<b>593</b>	<b>-1,156</b>	<b>213</b>	<b>1,798</b>

9.1.12 Accordingly, the proposed Wheeling Charges are given below:

**Table 234: Proposed Wheeling Charges for FY 2023-24 to FY 2024-25**

Particulars	Units	FY 2023-24	FY 2024-25
<b>Wheeling Cost</b>			
HT (Excl EHV)	Rs Cr	2,403	2,494
LT Level	Rs Cr	11,314	11,756
<b>Wheeled Units</b>			
HT (Excl EHV)	MU	32,637	33,565
LT Level	MU	79,139	81,494
<b>PU Wheling Charges</b>			
HT (Excl EHV)	Rs/kVAh	0.74	0.74
LT Level	Rs/kWh	1.43	1.44

9.1.13 Hon'ble Commission in MYT Order dated 30<sup>th</sup> March 2020 has approved Wheeling Loss of 7.5% at HT and 12% at LT. MSEDCL for the purpose of commercial settlement, proposed to continue aforementioned Wheeling Losses which are already approved in MYT Order. MSEDCL requests the Hon'ble Commission to approve the wheeling charges as proposed above.

## 10 TARIFF RECOVERY MECHANISM

### 10.1 Background

10.1.1 As discussed in previous Chapter, MSEDCL has considered the following while proposing the revised tariff for the period i.e., FY 2023-24 to FY 2024-25

- Rationalisation of Fixed Charges to ensure appropriate recovery of fixed costs through fixed charges;
- Continuation of existing rebate with its linking to payment discipline
- Tariff applicability related suggestions

10.1.2 MSEDCL submits that the National Tariff Policy envisages that the consumer tariff should progressively reflect the cost of supply of electricity.

10.1.3 MSEDCL submits that Regulation 6.5 of the MERC (MYT) Regulations, 2019 provides for forecast of expected revenue from Tariff and Charges. The relevant provisions are reproduced below for reference:

*“6.5 The forecast of expected revenue from Tariff and charges shall be based on the following:*

*(a) ...*

*(b) ...*

*(c) In the case of a Distribution Licensee, estimates of quantum of electricity to be supplied to consumers and wheeled on behalf of Distribution System Users for each year of the Control Period:*

*Provided that the Distribution Licensee shall submit relevant details of category-wise sales separately for each Distribution Franchisee area, including the Input Energy and the Input Rate;*

*(d) Prevailing Tariff as on the date of filing of the Petition.”*

10.1.4 Accordingly, MSEDCL has projected the revenue at existing tariff considering the Prevailing Tariff as on the date of filing of the MTR Petition which is based on the MYT Order dated 30<sup>th</sup> March 2020.

10.1.5 Therefore, MSEDCL has shown the prevailing tariff (including wheeling

charges) as on the date of filing the MYT Petition and compared the proposed tariff with the same.

## **10.2 Rationale of Tariff Hike**

10.2.1 MSEDCL submits that there was a huge reduction in approved revenue gap vis-à-vis the revenue gap sought by MSEDCL in MYT Order dated 30<sup>th</sup> March, 2020. 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, deferred recovery of power purchase variations due to monthly cap of 20% of variable component of approved tariff, 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 has compelled MSEDCL to seek revision in Tariffs so as to meet 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.

10.2.2 Accordingly, MSEDCL in the current Petition filed under Section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003, for determination of revised Tariff for FY 2023-24 to FY 2025-26 has proposed tariff considering increase in various costs.

10.2.3 MSEDCL has proposed a revision in fixed and energy charges for various categories in order to bridge revenue gap. The tariff revision is necessary for meeting additional costs due to increase in generation and transmission costs and legitimate expenses of MSEDCL. The revenue gap has emerged due to additional costs, which are beyond the control of MSEDCL.

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

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up for FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25  
Main Petition**

**Table 235: Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for HT Category**

Particulars	Existing Energy Charges with latest FAC (Rs./kVAh)	FY 2023-24		FY 2024-25	
		Energy Charges (Rs/kVAh)		Energy Charges (Rs/kVAh)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>HT I HT - Industry</b>					
HT	8.24	9.32	13%	10.50	13%
EHV	8.24	9.32	13%	10.50	13%
<b>HT I (B): HT - Industry (Seasonal)</b>					
HT	8.55	9.70	13%	10.90	12%
EHV	8.40	9.50	13%	10.60	12%
<b>HT II: HT – Commercial</b>					
HT	13.15	14.80	13%	16.60	12%
EHV	13.10	14.80	13%	16.60	12%
<b>HT III : HT - Railways/Metro/Monorail</b>					
HT	7.66	8.70	14%	9.80	13%
EHV	8.21	8.70	6%	9.80	13%
<b>HT IV: HT - Public Water Works and Sewage Treatment Plants</b>					
HT	7.42	8.40	13%	9.40	12%
EHV	7.37	8.40	14%	9.40	12%
<b>HT V(A): HT - Agriculture Pumpsets</b>					
HT	4.34	4.80	11%	5.30	10%
EHV	4.34	4.80	11%	5.30	10%
<b>HT V(B): HT - Agriculture - Others</b>					
HT	6.10	6.10	0%	6.70	10%
EHV	6.10	6.10	0%	6.70	10%
<b>HT VI: HT - Group Housing Societies (Residential)</b>					
HT	6.70	7.60	13%	8.60	13%
EHV	6.80	7.60	12%	8.60	13%
<b>HT VIII(A): HT - Public Services-Govt.</b>					
HT	8.89	10.10	14%	11.30	12%
EHV	9.24	10.10	9%	11.30	12%
<b>HT VIII(B): HT - Public Services-Others</b>					
HT	10.71	12.10	13%	13.70	13%
EHV	10.61	12.10	14%	13.70	13%
<b>HT IX: HT – Electric Vehicle (EV) Charging Station</b>					
HT	5.80	6.10	5%	6.40	5%
EHV	5.95	6.25	5%	6.60	6%

**Final True Up For FY 2019-20, FY 2020-21, & FY 2021-22  
Provisional True Up for FY 2022-23 and  
Revised Projections & Tariff For FY 2023-24 to FY 2024-25  
Main Petition**

**Table 236: Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for LT Category (1/2)**

Particulars	Existing Energy Charges with latest FAC (Rs/Unit)	FY 2023-24		FY 2024-25	
		Energy Charges (Rs/Unit)		Energy Charges (Rs/unit)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT Residential</b>					
LT I(A): LT - Residential-BPL	1.41	1.53	9%	1.70	11%
<i>LT I(B): LT - Residential</i>					
1-100 units	4.01	4.50	12%	5.10	13%
101-300 units	8.79	10.00	14%	11.50	15%
301-500 units	12.42	14.20	14%	16.30	15%
Above 500 units (Balance Units)	14.21	16.30	15%	18.70	15%
<b>LT II: LT - Non-Residential</b>					
(A) 0 – 20 kW	8.47	9.60	13%	11.00	15%
(B): >20 kW and ≤ 50 kW	12.94	14.90	15%	17.10	15%
(C): >50 kW	15.31	17.40	14%	20.00	15%
<b>LT III: LT - Public Water Works (PWW) &amp; STP</b>					
(A): 0-20 kW	2.98	3.40	14%	3.90	15%
(B): >20 kW and ≤ 40 kW	4.59	5.30	15%	6.10	15%
(C): >40 kW	6.09	7.00	15%	8.00	14%
<b>LT IV: LT - Agriculture</b>					
<b>LT IV(A): LT - AG Un-metered - Pumpsets</b>		<b>Rs./HP/Month</b>		<b>Rs./HP/Month</b>	
<b>Category 1 Zones (Above 1318 Hrs/HP/Annum)</b>					
(a) 0-5 HP	379	435	15%	500	15%
(b) Above 5 HP - 7.5 HP	407	470	15%	540	15%
(c) Above 7.5 HP	455	525	15%	605	15%
<b>Category 2 Zones (Below 1318 Hrs/HP/Annum)</b>					
(a) 0-5 HP	287	330	15%	380	15%
(b) Above 5 HP - 7.5 HP	319	365	14%	420	15%
(c) Above 7.5 HP	367	420	14%	485	15%
<b>LT IV(B): LT - Agriculture Metered Tariff - Pumpsets</b>	2.35	2.70	15%	3.10	15%
<b>LT IV(C): LT - Agriculture Metered – Others</b>	3.94	4.50	14%	5.10	13%

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**Table 237: Comparison of Existing and Proposed Energy Charges (excl. Wheeling Charges) for LT Category (2/2)**

Particulars	Existing Energy Charges with latest FAC (Rs/Unit)	FY 2023-24		FY 2024-25	
		Energy Charges (Rs/Unit)		Energy Charges (Rs/unit)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT V: LT - Industry Total</b>					
(i): 0-20 kW	6.11	6.90	13%	7.90	14%
(ii): Above 20 kW	7.25	8.20	13%	9.40	15%
<b>LT VI: LT - Street Light</b>					
(A): Grampanchayat; A B & C Class Municipal Council	6.10	7.00	15%	8.00	14%
(B): Municipal corporation Area	7.46	8.60	15%	9.90	15%
<b>LT VII (A) - Public Services – Govt.</b>					
(i): ≤ 20 kW	3.83	4.40	15%	5.00	14%
(ii): >20 - ≤ 50 kW	5.47	6.30	15%	7.20	14%
(iii): >50 kW	6.88	7.90	15%	9.00	14%
<b>LT VII (B) - Public Services - Others</b>					
(i): ≤ 20 kW	5.47	6.30	15%	7.20	14%
(ii): >20 - ≤ 50 kW	8.68	10.00	15%	11.50	15%
(iii): >50 kW	8.99	10.30	15%	11.80	15%
<b>LT VIII – Electric Vehicle (EV) Charging Station</b>	5.00	5.20	4%	5.40	4%

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**Table 238: Comparison of Existing and Proposed Fixed Charges for HT Category**

Particulars	Existing Fixed Charges (Rs/kVA/mth)	FY 2023-24		FY 2024-25	
		Fixed Charges (Rs/kVA/mth)		Fixed Charges (Rs/kVA/mth)	
		Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>HT I HT - Industry</b>					
HT, EHV	454	510	12%	572	12%
<b>HT I (B): HT - Industry (Seasonal)</b>					
HT, EHV	454	510	12%	572	12%
<b>HT II: HT – Commercial</b>					
HT, EHV	454	510	12%	572	12%
<b>HT III : HT - Railways/Metro/Monorail</b>					
HT, EHV	454	510	12%	572	12%
<b>HT IV: HT - Public Water Works and Sewage Treatment Plants</b>					
HT, EHV	454	510	12%	572	12%
<b>HT V(A): HT - Agriculture Pumpsets</b>					
HT, EHV	80	89	11%	100	12%
<b>HT V(B): HT - Agriculture - Others</b>					
HT, EHV	80	89	11%	100	12%
<b>HT VI: HT - Group Housing Societies (Residential)</b>					
HT, EHV	362	406	12%	455	12%
<b>HT VIII: HT - Public Services</b>					
<b>HT VIII(A): HT - Public Services-Govt.</b>					
HT, EHV	454	510	12%	572	12%
<b>HT VIII(B): HT - Public Services-Others</b>					
HT, EHV	454	510	12%	572	12%
<b>HT IX: HT – Electric Vehicle (EV) Charging Station</b>					
HT, EHV	70	76	9%	84	11%

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**Table 239: Comparison of Existing and Proposed Fixed Charges for LT Category (1/2)**

Particulars	Unit	Existing Fixed Charges	FY 2023-24		FY 2024-25	
			Fixed Charges		Fixed Charges	
			Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT Residential</b>						
LT I(A): LT - Residential-BPL	Rs/conn/mth	28	32	14%	36	13%
LT I(B): LT - Residential						
1-100 units	Rs/conn/mth	105	118	12%	132	12%
101-300 units	Rs/conn/mth	105	118	12%	132	12%
301-500 units	Rs/conn/mth	105	118	12%	132	12%
Above 500 units (Balance Units)	Rs/conn/mth	105	118	12%	132	12%
Three Phase Charges	Rs/conn/mth	350	393	12%	439	12%
<b>LT II: LT - Non-Residential</b>						
(A) 0 – 20 kW	Rs/Conn/mth	427	480	12%	538	12%
(B): >20 kW and ≤ 50 kW	Rs/kVA/mth	427	480	12%	538	12%
(C): >50 kW	Rs/kVA/mth	427	480	12%	538	12%
<b>LT III: LT - Public Water Works (PWW) &amp; STP</b>						
(A): 0-20 kW	Rs/kVA/mth	106	119	12%	133	12%
(B): >20 kW and ≤ 40 kW	Rs/kVA/mth	129	144	12%	160	11%
(C): >40 kW	Rs/kVA/mth	160	178	11%	198	11%
<b>LT IV: LT - Agriculture</b>						
LT IV(B): LT - Agriculture Metered Tariff - Pumpsets	Rs/HP/mth	43	47	9%	51	9%
LT IV(C): LT - Agriculture Metered – Others	Rs/kW/mth	117	130	11%	145	12%

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**Table 240: Comparison of Existing and Proposed Fixed Charges for LT Category (2/2)**

Particulars	Unit	Existing Fixed Charges	FY 2023-24		FY 2024-25	
			Fixed Charges		Fixed Charges	
			Proposed	% Change over FY 2022-23 Approved	Proposed	% Change over FY 2023-24 Proposed
<b>LT V: LT - Industry Total</b>						
(i): 0-20 kW	Rs/Conn/mth	482	542	12%	608	12%
(ii): Above 20 kW	Rs/kVA/mth	321	360	12%	404	12%
<b>LT VI: LT - Street Light</b>						
(A): Grampanchayat; A B & C Class Municipal Council	Rs/kW/mth	117	131	12%	147	12%
(B): Municipal corporation Area	Rs/kW/mth	117	131	12%	147	12%
<b>LT VII (A) - Public Services – Govt.</b>						
(i): ≤ 20 kW	Rs/Conn/mth	353	396	12%	444	12%
(ii): >20 - ≤ 50 kW	Rs/kVA/mth	353	396	12%	444	12%
(iii): >50 kW	Rs/kVA/mth	353	396	12%	444	12%
<b>LT VII (B) - Public Services - Others</b>						
(i): ≤ 20 kW	Rs/Conn/mth	384	430	12%	482	12%
(ii): >20 - ≤ 50 kW	Rs/kVA/mth	384	430	12%	482	12%
(iii): >50 kW	Rs/kVA/mth	384	430	12%	482	12%
<b>LT VIII – Electric Vehicle (EV) Charging Station</b>	Rs/kVA/mth	70	78	11%	87	12%

### 10.3 Proposed Recovery from Tariff

10.3.1 Following table summarised the year on year increase in ACoS along with the recovery from revised tariff.

Particulars	Based on Approved tariff for FY 22-23 incl. FAC	Proposed for FY 23-24	Proposed for FY 24-25
ABR in Rs./Unit	7.79	8.90	9.92
<b>Y-o-Y Rise in ABR</b>		<b>14%</b>	<b>11%</b>

#### 10.4 ABR/ACoS Ratio

10.4.1 Following table provides the ABR/ACoS ratio for the Control Period.

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**Table 241: ABR and Cross Subsidy trajectory for FY 2023-24**

Category	Existing Average Cost of Supply (Rs/kWh)	Average Billing Rate (Rs/kWh)		Ratio of Average Billing Rate to Projected Average Cost of Supply (%)		% increase / decrease in Cross-subsidy	% increase in tariff (%)	
		Existing Tariff for FY 2022-23	Proposed Tariff for FY 2023-24	Existing Tariff for FY 2022-23	Proposed Tariff for FY 2023-24			
HT I (A): HT - Industry	8.90	9.86	11.03	115%	124%	9%	12%	
HT II: HT - Commercial		16.59	17.36	178%	195%	17%	5%	
HT III: HT - Railways/Metro/Monorail Traction		9.40	10.73	115%	121%	6%	14%	
HT IV: HT - Public Water Works (PWW)		8.90	9.93	103%	112%	9%	12%	
HT V: HT - Agriculture Pumps		5.31	5.84	60%	66%	6%	10%	
HT VI: HT - Group Housing Societies (Residential)		8.35	9.39	97%	106%	9%	12%	
HT VIII(A) : HT - Public Services Govt		10.52	12.14	127%	136%	9%	15%	
HT VIII(B) : HT - Public Services Others		12.58	14.20	146%	160%	14%	13%	
<b>HT Total</b>								
LT I: LT - Residential		8.51	9.38	102%	105%	3%	10%	
LT II: LT - Non-Residential		12.91	15.10	154%	170%	16%	17%	
LT III: LT - Public Water Works (PWW)		5.10	5.90	61%	66%	5%	16%	
LT IV: LT - Agriculture Metered		4.13	4.51	51%	51%	0%	9%	
LT V (B): LT - Industry		9.72	10.63	117%	119%	2%	9%	
LT VI: LT - Street Light		8.02	9.73	95%	109%	14%	21%	
LT VII(A)- Public Services Govt.		8.47	9.85	105%	111%	6%	16%	
LT VII(B)- Public Services Others	9.43	10.96	114%	123%	9%	16%		
<b>LT Total</b>								

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**Table 242: ABR and Cross Subsidy trajectory for FY 2024-25**

Category	Projected Average Cost of Supply (Rs/kWh)	Average Billing Rate (Rs/kWh)		Ratio of Average Billing Rate to Projected Average Cost of Supply (%)		% increase / decrease in Cross-subsidy	% increase in tariff (%)	
		Proposed Tariff for FY 2023-24	Proposed Tariff for FY 2024-25	Proposed Tariff for FY 2023-24	Proposed Tariff for FY 2024-25			
HT I (A): HT - Industry	9.92	11.03	12.36	124%	125%	1%	12%	
HT II: HT - Commercial		17.36	19.40	195%	196%	0%	12%	
HT III: HT - Railways/Metro/Monorail Traction		10.73	12.04	121%	121%	1%	12%	
HT IV: HT - Public Water Works (PWW)		9.93	11.06	112%	111%	0%	11%	
HT V: HT - Agriculture Pumps		5.84	6.01	66%	61%	-5%	3%	
HT VI: HT - Group Housing Societies (Residential)		9.39	10.53	106%	106%	1%	12%	
HT VIII(A) : HT - Public Services Govt		12.14	13.57	136%	137%	0%	12%	
HT VIII(B) : HT - Public Services Others		14.20	16.01	160%	161%	2%	13%	
<b>HT Total</b>								
LT I: LT - Residential			9.38	10.50	105%	106%	0%	12%
LT II: LT - Non-Residential			15.10	17.04	170%	172%	2%	13%
LT III: LT - Public Water Works (PWW)			5.90	6.55	66%	66%	0%	11%
LT IV: LT - Agriculture Metered			4.51	4.94	51%	50%	-1%	10%
LT V (B): LT - Industry			10.63	11.97	119%	121%	1%	13%
LT VI: LT - Street Light			9.73	10.97	109%	111%	1%	13%
LT VII(A)- Public Services Govt.			9.85	11.07	111%	112%	1%	12%
LT VII(B)- Public Services Others		10.96	12.35	123%	124%	1%	13%	
<b>LT Total</b>								



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## **10.5 Cross Subsidy Trajectory**

10.5.1 MSEDCL submits that for most of categories there is increasing trend in cross subsidy. However, considering the recovery of proposed revenue gap, changes in tariff design and philosophy, there is need to revise the tariff for various categories. Accordingly, MSEDCL has proposed the tariffs to recover the proposed revenue gap.

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**Table 243: Cross Subsidy trajectory for FY 2023-24 to FY 2024-25**

Category	FY 2023-24	FY 2023-24	FY 2024-25	FY 2024-25
	Approved	Revised Projected	Approved	Revised Projected
HT I (A): HT - Industry	115%	124%	114%	125%
HT II: HT - Commercial	174%	195%	171%	196%
HT III: HT - Railways/Metro/Monorail Traction	115%	121%	114%	121%
HT IV: HT - Public Water Works (PWW)	105%	112%	107%	111%
HT V: HT - Agriculture Pumps	61%	66%	62%	61%
HT VI: HT - Group Housing Societies (Residential)	97%	106%	98%	106%
HT VIII(A) : HT - Public Services Govt	127%	136%	129%	137%
HT VIII(B) : HT - Public Services Others	137%	160%	132%	161%
<b>HT Total</b>				
LT I: LT - Residential	101%	105%	100%	106%
LT II: LT - Non-Residential	152%	170%	150%	172%
LT III: LT - Public Water Works (PWW)	61%	66%	60%	66%
LT IV: LT - Agriculture Metered	51%	51%	50%	50%
LT V (B): LT - Industry	118%	119%	117%	121%
LT VI: LT - Street Light	95%	109%	94%	111%
LT VII(A)- Public Services Govt.	104%	111%	102%	112%
LT VII(B)- Public Services Others	113%	123%	112%	124%
<b>LT Total</b>				

## 11 CROSS SUBSIDY SURCHARGE

### 11.1 Background

11.1.1 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.

11.1.2 MSEDCL further submits that Section 42(2) of the Act provides for levy of Cross Subsidy Surcharge (CSS). The relevant provision of the Act is reproduced below:

*“Section 42. (Duties of distribution licensee and open access):-*

*...*

*(2) ...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 a 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 current level of cross subsidy within the area of supply of the distribution licensee:***

*...” (emphasis added)*

11.1.3 Section 86(1)(a) of the said Act inter- alia mandates the Hon’ble Commission to determine the “Cross Subsidy Surcharge”, “Additional Surcharge” & other applicable charges payable by the consumers opting for Open Access

11.1.4 MSEDCL submits that the National Electricity Policy as stipulated by the Central Government provides that-

*“5.8.3 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 the cross-subsidy element built into the tariff of such consumers. ....”*

11.1.5 The Central Government notified the revised Tariff Policy on 28<sup>th</sup> January, 2016 and has revised the “Surcharge Formula” as follows:

“8.5.1 ...

*Surcharge formula:*

$$S = T - [C / (1 - L / 100) + D + R]$$

*Where*

*S is the surcharge*

*T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation*

*C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation*

*D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level*

*L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level*

*R is the per unit cost of carrying regulatory assets.”*

11.1.6 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.

## **11.2 Lower CSS approved**

11.2.1 To examine the issues related to Open Access along with issues related to amendments in provisions relating to captive Generating plant in the Electricity Rules, 2005, a committee was constituted by CEA on the advice of the Ministry of Power. In the Consultation paper by MoP issued on 24<sup>th</sup>

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 the 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:

*“3.6 Proposal*

*(a) 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.”*

11.2.2 While approving the CSS in Case No. 322 of 2019, Hon'ble Commission worked out the various components of CSS formulae based on the approved values for 4<sup>th</sup> 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 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 leading to incomplete recovery of Cross Subsidy from Open Access consumers

11.2.3 For example, the CSS calculated by the Hon'ble Commission as per the Tariff Policy formula for HT Industry (General) at EHV level for FY 2020-21 was Rs. 3.39 per unit whereas the CSS approved for that category was Rs. 1.67 per unit only. This leads to loss of legitimate revenue due to lower level of approved CSS.

11.2.4 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 revenue realisation which comes only after true-up exercise; and
- b) Further tariff increase of MSEDCL consumers at large, despite not being at any fault.

11.2.5 In the process, OA consumers unduly get benefited due to less cross subsidy surcharge. As Industrial consumers are subsidising consumers, the more impact get 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 CS for period to maintain the prevailing level of cross subsidy and should not be loaded onto MSEDCL's consumers at large.

11.2.6 One of the reasons for tariff hike for MSEDCL was incomplete recovery of CSS as discussed above.

### **11.3 CSS as compensatory Charge**

11.3.1 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. The same has been upheld in the APTEL in its Judgment dated 2<sup>nd</sup> December 2013 in Appeal No. 178 of 2011 (*supra*) which is reproduced below:

*"60. Summary of the findings:-*

*...*

*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 change-over 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 of 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)*

11.3.2 MSEDCL has determined the cross subsidy surcharge based on the Tariff Policy formula without putting any ceiling.

11.3.3 In view of the submissions in foregoing paragraphs, MSEDCL requests the Hon’ble Commission to determine the Cross Subsidy Surcharge considering the formula prescribed by the NTP 2016 without putting any ceiling.

#### **11.4 Computation of Cross Subsidy Surcharge for the Control Period**

11.4.1 Computation of ‘C’

11.4.1.1 Computation of 'C' is based on the projected power purchase quantum and price for the Control Period as submitted in Form 2 of the Regulatory Formats for the respective year. The definition/ explanation for 'C' has been revised in the Tariff Policy dated 28<sup>th</sup> January, 2016 with inclusion of renewable power purchase in the computation of 'C'.

11.4.1.2 Therefore, computation of 'C' can be taken as the total power purchase cost based on MOD principle to the total power purchase scheduled to be purchased as per MOD principle. Therefore, the 'C' computed for MSEDCL for FY 2023-24 to FY 2024-25 are shown in the following table.

**Table 244: Computation of C for FY 2023-24 to FY 2024-25**

Financial Year	Details of Power Purchase		
	MUs	Rs. Crs*	Rs./kWh
2023-24	1,52,757	71,323	4.67
2024-25	1,55,469	73,411	4.72
* - Power Purchase Cost is excluding the PGCIL transmission Charges			

11.4.2 Computation of System Loss 'L'

11.4.2.1 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 245: Computation of System Loss for FY 2023-24 to FY 2024-25**

Particulars	EHV	HT	LT Level
Transmission Losses (%)	3.18%	3.18%	3.18%
Wheeling Losses LT (%)	0.00%	7.50%	12.00%
<b>Total System Losses (%)</b>	<b>3.18%</b>	<b>10.44%</b>	<b>14.80%</b>

11.4.3 Computation of Wheeling Charge 'D'

11.4.3.1 The projected wheeling charges as shown in the Chapter 9 at the respective voltage levels for MSEDCL along with the 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 FY 2023-24 to FY 2024-25.

**Table 246: Computation of Wheeling Charges and Transmission Charges for FY 2023-24 to FY 2024-25**

<b>Wheeling Charges and Transmission Charges</b>			
<b>Wheeling Charges (Rs./Unit)</b>			
<b>Particulars</b>	<b>EHV</b>	<b>HT</b>	<b>LT Level</b>
FY 2023-24	-	0.74	1.43
FY 2024-25	-	0.74	1.44
<b>Transmission Charges (Rs./Unit)</b>			
<b>Particulars</b>	<b>EHV</b>	<b>HT</b>	<b>LT Level</b>
FY 2023-24	0.77	0.77	0.77
FY 2024-25	0.76	0.76	0.76
<b>Wheeling and Transmission Charges (Rs./Unit)</b>			
<b>Particulars</b>	<b>EHV</b>	<b>HT</b>	<b>LT Level</b>
FY 2023-24	0.77	1.50	2.20
FY 2024-25	0.76	1.50	2.20

11.4.4 Computation of Average Billing Rate “T”

11.4.4.1 ABR of MSEDCL has been taken as the effective average billing rate as per the proposed tariff for the FY 2023-24 to FY 2024-25

11.4.5 Computation of Cross Subsidy Surcharge “S”

11.4.5.1 The category wise CSS applicable to open access consumers arrived on consideration of the components ABR, C, L & D from the above referred respective sections is provided in tables below:

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**Table 247: Detailed computation of CSS for FY 2023-24 for HT Consumers**

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
<b>HT I HT - Industry</b>							
HT	11.25	4.67	7.50%	3.18%	10.44%	1.50	4.53
EHV	10.55	4.67	0.00%	3.18%	3.18%	0.77	4.96
<b>HT I (B): HT - Industry (Seasonal)</b>							
HT	18.51	4.67	7.50%	3.18%	10.44%	1.50	11.79
EHV	9.80	4.67	0.00%	3.18%	3.18%	0.77	4.21
<b>HT II: HT – Commercial</b>							
HT	17.38	4.67	7.50%	3.18%	10.44%	1.50	10.66
EHV	16.84	4.67	0.00%	3.18%	3.18%	0.77	11.25
<b>HT III : HT - Railways/Metro/Monorail Traction</b>							
HT	11.00	4.67	7.50%	3.18%	10.44%	1.50	4.28
EHV	9.77	4.67	0.00%	3.18%	3.18%	0.77	4.18
<b>HT IV: HT - Public Water Works</b>							
HT	9.99	4.67	7.50%	3.18%	10.44%	1.50	3.28
EHV	8.99	4.67	0.00%	3.18%	3.18%	0.77	3.40
<b>HT V(B): HT - Agriculture - Others</b>							
HT	7.14	4.67	7.50%	3.18%	10.44%	1.50	0.42
EHV	-	4.67	0.00%	3.18%	3.18%	0.77	-
<b>HT VI: HT - Group Housing Societies (Residential)</b>							
HT	9.39	4.67	7.50%	3.18%	10.44%	1.50	2.67
EHV	-	4.67	0.00%	3.18%	3.18%	0.77	-
<b>HT IX: HT - Public Services</b>							
<b>HT VIII(A): HT - Public Services-Govt. Edu. Institutions and Hospitals</b>							
HT	12.14	4.67	7.50%	3.18%	10.44%	1.50	5.42
<b>HT VIII(B): HT - Public Services-Others</b>							
HT	14.38	4.67	7.50%	3.18%	10.44%	1.50	7.66
EHV	12.77	4.67	0.00%	3.18%	3.18%	0.77	7.18
<b>HT X: HT – Electric Vehicle Charging Station</b>							
HT	7.42	4.67	7.50%	3.18%	10.44%	1.50	0.70

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**Table 248: Detailed computation of CSS for FY 2023-24 for LT Consumers (1/2)**

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
<b>LT Residential</b>							
LT I(A): LT - Residential-BPL	2.83	4.67	12.00%	3.18%	14.80%	2.20	-
<i>LT I(B): LT - Residential</i>							
1-100 units	7.07	4.67	12.00%	3.18%	14.80%	2.20	-
101-300 units	12.44	4.67	12.00%	3.18%	14.80%	2.20	4.76
301-500 units	16.70	4.67	12.00%	3.18%	14.80%	2.20	9.02
Above 500 units	18.09	4.67	12.00%	3.18%	14.80%	2.20	10.41
<b>LT II: LT - Non-Residential</b>							
(A) 0 – 20 kW	13.44	4.67	12.00%	3.18%	14.80%	2.20	5.76
(B): >20 kW and ≤ 50 kW	18.75	4.67	12.00%	3.18%	14.80%	2.20	11.07
(C): >50 kW	20.98	4.67	12.00%	3.18%	14.80%	2.20	13.30
<b>LT III: LT - Public Water Works (PWW)</b>							
(A): 0-20 kW	5.05	4.67	12.00%	3.18%	14.80%	2.20	-
(B): > 20 kW and ≤ 40 kW	7.24	4.67	12.00%	3.18%	14.80%	2.20	-
(C): > 40 kW	9.02	4.67	12.00%	3.18%	14.80%	2.20	1.35
<b>LT IV(C): LT - Agriculture Metered – Others</b>	7.72	4.67	12.00%	3.18%	14.80%	2.20	0.04

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**Table 249: Detailed computation of CSS for FY 2023-24 for LT Consumers (2/2)**

Consumer Category	T (ABR)	C	WL	TL	L	D = WL + Tx	CSS Computed
	Rs./Unit*		%	%	%	Rs./Unit*	
<b>LT V: LT - Industry</b>							
LT V-Industry (0-20 kW)	8.89	4.67	12.00%	3.18%	14.80%	2.20	1.21
LT V-Industry (Above 20 kW)	11.79	4.67	12.00%	3.18%	14.80%	2.20	4.12
<b>LT VI: LT - Street Light</b>							
(A): Grampanchayat; A B & C Class Municipal Council	9.05	4.67	12.00%	3.18%	14.80%	2.20	1.37
(B): Municipal corporation Area	11.15	4.67	12.00%	3.18%	14.80%	2.20	3.48
<b>LT VII (A) - Public Services – Govt.</b>							
(i): ≤ 20 kW	9.24	4.67	12.00%	3.18%	14.80%	2.20	1.56
(ii): >20 - ≤ 50 kW	9.85	4.67	12.00%	3.18%	14.80%	2.20	2.17
(iii): >50 kW	11.94	4.67	12.00%	3.18%	14.80%	2.20	4.26
<b>LT VII(B) - Public Services - Others</b>							
(i): ≤ 20 kW	8.75	4.67	12.00%	3.18%	14.80%	2.20	1.08
(ii): >20 - ≤ 50 kW	13.35	4.67	12.00%	3.18%	14.80%	2.20	5.67
(iii): >50 kW	13.34	4.67	12.00%	3.18%	14.80%	2.20	5.66
<b>LT XI – Electric Vehicle Charging Station</b>	10.53	4.67	12.00%	3.18%	14.80%	2.20	2.85

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**Table 250: Summary of CSS for FY 2023-24 to FY 2024-25 for HT Consumers**

Consumer Category	FY 2023-24	FY 2024-25
	Rs/Unit	Rs/Unit
<b>HT I HT - Industry</b>		
HT	4.53	5.80
EHV	4.96	6.23
<b>HT I (B): HT - Industry (Seasonal)</b>		
HT	11.79	13.76
EHV	4.21	5.31
<b>HT II: HT – Commercial</b>		
HT	10.66	12.64
EHV	11.25	13.26
<b>HT III : HT - Railways/Metro/Monorail Traction</b>		
HT	4.28	5.55
EHV	4.18	5.38
<b>HT IV: HT - Public Water Works</b>		
HT	3.28	4.34
EHV	3.40	4.44
<b>HT V(A): HT - Agriculture Pumpsets</b>		
HT	-	-
EHV	-	-
<b>HT V(B): HT - Agriculture - Others</b>		
HT	0.42	1.02
EHV	-	-
<b>HT VI: HT - Group Housing Societies (Residential)</b>		
HT	2.67	3.75
EHV	-	-
<b>HT VIII: HT - Public Services</b>		
<b>HT VIII(A): HT - Public Services-Govt. Edu. Institutions and Hospitals</b>		
HT	5.42	6.79
<b>HT VIII(B): HT - Public Services-Others</b>		
HT	7.66	9.42
EHV	7.18	8.85
<b>HT IX: HT – Electric Vehicle Charging Station</b>		
HT	0.70	1.01
EHV	-	-

**Table 251: Summary of CSS for FY 2023-24 to FY 2024-25 for LT Consumers (1/2)**

Consumer Category	FY 2023-24	FY 2024-25
	Rs/Unit	Rs/Unit
<b>LT Residential</b>		
LT I(A): LT - Residential-BPL	-	-
<i>LT I(B): LT - Residential</i>		
1-100 units	-	0.08
101-300 units	4.76	6.33
301-500 units	9.02	11.19
Above 500 units	10.41	12.79
<b>LT II: LT - Non-Residential</b>		
(A) 0 – 20 kW	5.76	7.37
(B): >20 kW and ≤ 50 kW	11.07	13.51
(C): >50 kW	13.30	16.10
<b>LT III: LT - Public Water Works (PWW)</b>		
(A): 0-20 KW	-	-
(B): > 20 kW and ≤ 40 kW	-	0.35
(C): > 40 kW	1.35	2.33
<b>LT IV(C): LT - Agriculture Metered – Others</b>	0.04	0.74

**Table 252: Summary of CSS for FY 2023-24 to FY 2024-25 for LT Consumers (2/2)**

Consumer Category	FY 2023-24	FY 2024-25
	Rs/Unit	Rs/Unit
<b>LT V(B): LT - Industry</b>		
LT V-Industry (0-20 kW)	1.21	2.23
LT V-Industry (Above 20 kW)	4.12	5.55
<b>LT VI: LT - Street Light</b>		
(A): Grampanchayat; A B & C Class Municipal Council	1.37	2.43
(B): Municipal corporation Area	3.48	4.92
<b>LT X (A) - Public Services – Govt.</b>		
(i): ≤ 20 kW	1.56	2.65
(ii): >20 - ≤ 50 kW	2.17	3.29
(iii): >50 kW	4.26	5.69
<b>LT X(B) - Public Services - Others</b>		
(i): ≤ 20 kW	1.08	2.09
(ii): >20 - ≤ 50 kW	5.67	7.36
(iii): >50 kW	5.66	7.35
<b>LT XI – Electric Vehicle Charging Station</b>	2.85	3.43

11.4.6 As stipulated in the Open Access Regulations, the cross-subsidy surcharge shall be based on the current level of cross subsidy of the tariff category / tariff slab and/ or voltage level to which such consumer or person belong area connected to. Accordingly, the consumers who opt for Open Access during the FY 2023-24 to FY 2024-25 (i.e., balance period of the Control Period) need to be charged to compensate the level of cross subsidy which will prevail during FY 2023-24 to FY 2024-25 (i.e., balance period of the Control Period) and to avoid burden of the same on other consumers. Therefore, MSEDCL requests the Hon'ble Commission to approve the CSS for FY 2023-24 to FY 2024-25 as computed above.

## 12 ADDITIONAL SURCHARGE

### 12.1 Background

12.1.1 Section 42(4) of the Electricity Act, 2003, provides that

***“Section 42. (Duties of distribution licensee and open access):***

...

*(4) 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.”*

12.1.2 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 than the Distribution Licensee of his area of supply shall pay to the Distribution Licensee an Additional Surcharge on the charges of wheeling and Cross-Subsidy Surcharge to meet the fixed cost of such Distribution Licensee arising out of its obligation to supply, as provided in sub-section (4) of Section 42 of the Act.*
- b. *The Additional Surcharge shall become applicable only when, due to the Open Access being granted or having been granted, the obligation of the Distribution Licensee in terms of power purchase commitments has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such commitments.*
- c. *The Distribution Licensee shall submit to the Commission, with its Petitions under the Commission’s Regulations governing Multi-Year Tariff, detailed computations of the fixed cost which it is incurring towards its obligation to supply, and the actual*

- expenses incurred vis-à-vis those approved by the Commission.*
- d. *The Commission shall determine the category-wise Additional Surcharge to be recovered by the Distribution Licensee from an Open Access Consumer, based on the following principles:*
- i. *The cost must have been incurred by or be expected, with reasonable certainty, to be incurred by the Distribution Licensee on account of such Consumer; and*
  - ii. *The cost has not been or cannot be recovered from such Consumer, or from other Consumers who have been given supply from the same assets or facilities, through Wheeling Charges, stand-by charges or other charges approved by the Commission:*  
*Provided that such Additional Surcharge shall be applicable to all Consumers who have availed Open Access to receive supply from a source other than the Distribution Licensee to which they are connected.*
- e. ...
- f. ...”

## **12.2 Backing down due to surplus power scenario**

12.2.1 It is submitted that the Section 43 of the Electricity Act 2003 casts Universal Service Obligation (USO) on MSEDCL. Accordingly, in order to cater the consumer demand, MSEDCL purchases power on long term basis from Mahagenco, NTPC under MOU route and from IPPs through competitive bidding process. The tariff for generation as per PPA/MoU comprises of two parts viz. Fixed Charge which is dependent on declared availability of generator and variable charge which is dependent on actual energy supplied.

12.2.2 MSEDCL submits that capacity addition was done by signing the PPAs with generating companies after due approval of Hon’ble Commission and based on estimated demand as per the projections published in 16th Electric Power Survey (EPS) published by CEA. However, there is a variation in projected and actual demand due to various reasons such as increase in Open Access, RE capacity addition to fulfil RPO Target, RE capacity addition by CPP because of low tariff and Net Metering etc. This is resulting into surplus power

availability.

12.2.3 Further, MSEDCL submits that to fulfill the RPO targets set by Hon'ble Commission, MSEDCL has to plan prospective power purchase from renewable energy sources. Also, as per the RPO Regulations 2019 notified on 27th December 2019, MSEDCL is required to procure at least 25% of power from Renewable Sources by FY 2024-25 which includes 13.5% of Solar and 11.5% of Non-Solar power. Keeping up pace with the RPO requirement, MSEDCL has tied up total 12,806 MW capacity of Renewable Energy as on 31st October 2022 of which 9,749 MW capacity is commissioned. This includes Wind Generation of 3,512 MW, Solar of 5928 MW, Bagasse based cogeneration of 2,635 MW, Biomass capacity of 87 MW, Small Hydro of 327 MW, Wind-Solar Hybrid of 300 MW & Municipal solid waste of 17 MW capacity. Further, by the end of FY 2024-25 to meet the RPO target, MSEDCL has planned to increase the solar capacity to 8,488 MW. Due to such addition of renewable power, the surplus power is expected to be continued further since the renewable energy is treated as "Must Run".

12.2.4 MSEDCL also submits that due to lower prices of solar energy and MERC Net Metering Regulations 2019, various consumers are now converting to captive power plants (CPP) by installing solar projects through Developers. Due to this, the surplus power is also likely to increase further.

12.2.5 To manage the surplus power, MSEDCL gives zero schedule/ backdown the high variable cost thermal generation as per Merit Order Despatch or sell in energy market depending upon market rates thereby reducing the burden of energy charges. However, whenever such surplus capacity remains available, MSEDCL has to pay fixed/capacity charges irrespective of the scheduling or non-scheduling of power from the units which declares its availability.

12.2.6 Further, whenever there is unavailability of generation due to the forced outage/coal shortage, there is requirement of additional power during certain blocks of the day, sometimes the duration of shortfall during the day is so small that to cater the demand for such small period, it is unviable to take a generation unit on bar to cater the demand for small period. In such cases,

MSEDCL forecast the demand, availability and shortfall on day-ahead basis and procures power from Short Term Markets such as Energy Exchanges.

12.2.7 Furthermore, considering the historical trend of demand, coal shortage scenario, trend of rates in Exchanges, etc. MSEDCL in advance plans and procures the power on short term through bilateral transactions on DEEP Portal.

12.2.8 In addition to this, MSEDCL also explores the option of optimization of power purchase cost by backing down of costly generation unit as per MoD and procuring the cheaper power available in Short Term Market/Exchange.

12.2.9 It is further submitted that MSEDCL has to pay Fixed Charges to the Generators as per the terms and conditions of the PPAs irrespective of utilization of generation capacity and thus the surplus capacity adds the fixed cost burden on MSEDCL. The details of back down quantum for the period April 2022 to September 2022 is provided in table below:

<b>Particulars</b>	<b>Quantum (MU)</b>
Backdown	4,424
Zero Schedule /RSD	3,448
Total	7,872

12.2.10 From above, it is clear that MSEDCL is in power surplus and will continue to be in surplus for balance years of the Control Period. However, short term power is purchased for cost optimization or to meet demand during coal shortage scenario and hence, additional surcharge is justifiable & needs to be made applicable to all OA consumers.

### **12.3 Surcharge Computation**

12.3.1 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.

12.3.2 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 and subsequently in MTR Order dated 12th September 2018 and in the fourth control period MYT Order dated 30th March 2020.

12.3.3 In line with the methodology adopted by Hon'ble Commission in the MYT Order dated 30th March 2020, MSEDCL computed the Additional Surcharge as per DOA Regulations, 2016 based on the data for the FY 2022-23 (upto September 2022).

**Table 253: Proposed Additional Surcharge for FY 2023-24**

Particulars	Reference	Unit	Value
<b>Step-1: Establishing contribution of OA to backing-down/stranded capacity</b>			
OA volume for FY 2022-23 (Upto Sept.-22)	(a)	MU	3,334
Backing Down quantum for FY 2022-23 (Upto Sept.-22)	(b)	MU	7,872
Ratio to OA to Backed down for FY 2022-23 (Upto Sept.-22)	(c)=(b)/(a)	%	42%
<b>Step-2: Ascertaining Cost of Stranded Capacity</b>			
Fixed Cost of Thermal Generating Sources for FY 2023-24	(d)	Rs. Crs	20,693
Total Available MU from Thermal Generating Stations for FY 2023-24	(e)	MUs	1,45,612
Wt. Avg. Per Unit FC of Thermal Generating Stations for FY 2023-24	(f)=(d)/(e) x10	Rs/kWh	1.42
Total Projected Backdown/RSD Volume for FY 2023-24	(g)	MUs	24,496
Projected Open Access Volume for year for FY 2023-24	(h)	MUs	7,688
Fixed Cost pertaining to Backdown/RSD capacity for FY 2023-24	(i)=(f)*(h)/10	Rs. Crs	1,093
<b>Step-3: Determination of Additional Surcharge</b>			
Per Unit Additional Surcharge (to be applicable on OA Consumers)	j=(i)/(h)*10	Rs/Unit	1.42

**Table 254: Proposed Additional Surcharge for FY 2024-25**

Particulars	Reference	Unit	Value
<b>Step-1: Establishing contribution of OA to backing-down/stranded capacity</b>			
OA volume for FY 2022-23 (Upto Sept.-22)	(a)	MU	3,334
Backing Down quantum for FY 2022-23 (Upto Sept.-22)	(b)	MU	7,872
Ratio to OA to Backed down for FY 2022-23 (Upto Sept.-22)	(c)=(b)/(a)	%	42%
<b>Step-2: Ascertaining Cost of Stranded Capacity</b>			
Fixed Cost of Thermal Generating Sources for FY 2024-25	(d)	Rs. Crs	21,037
Total Available MU from Thermal Generating Stations for FY 2024-25	(e)	MUs	1,49,903
Wt. Avg. Per Unit FC of Thermal Generating Stations for FY 2024-25	(f)=(d)/(e) x10	Rs/kWh	1.40
Total Projected Backdown/RSD Volume for FY 2024-25	(g)	MUs	29,129
Projected Open Access Volume for year for FY 2024-25	(h)	MUs	8,932
Fixed Cost pertaining to Backdown/RSD capacity for FY 2024-25	(i)=(f)*(h)/10	Rs. Crs	1,253
<b>Step-3: Determination of Additional Surcharge</b>			
Per Unit Additional Surcharge (to be applicable on OA Consumers)	j=(i)/(h)*10	Rs/Unit	1.40

**Table 255: Summary of Additional Surcharge**

Particulars	FY 2023-24	FY 2024-25
Proposed Additional Surcharge (Rs./Unit)	1.42	1.40

12.3.4 Hon'ble Supreme Court vide Judgment dated 10th December, 2021 ruled as under:

"13. ...In the case of the captive consumers/captive users, they have also to incur the expenditure and/or invest the money for constructing,

*maintaining or operating a captive generating plant and dedicated transmission lines. Therefore, as such the Appellate Tribunal has rightly held that so far as the captive consumers/captive users are concerned, the additional surcharge under sub-section (4) of Section 42 of the Act, 2003 shall not be leviable.”*

As per Hon'ble supreme court's ruling in above case MSEDCL submits that the Captive consumer is the consumer who has constructed, maintained and operate a captive generating plant and dedicated transmission Lines through its own cost for availing electricity for his own use and liable for exemption from additional Surcharges to meet the fixed cost incurred due to obligation to supply of Distribution Licensee.

12.3.5 Accordingly, MSEDCL humbly requests the Hon'ble Commission to approve the levy of Additional Surcharge to all Open Access consumer excluding those OA consumers who incur the expenditure and/or invest the money for constructing, maintaining or operating a captive generating plant and dedicated transmission lines.



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## 13 PROPOSED TARIFF APPLICABILITY

### 13.1 Background

13.1.1 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.

13.1.2 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.)

13.1.3 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.

13.1.4 A comparison of the existing applicability as per the MYT Order dated 30<sup>th</sup> March, 2020 and proposed applicability of tariff for different categories of consumer is given in the following table.

13.1.5 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 this Petition is indicative and may not cover some of the activities. Such cases will be dealt by the respective field officer/ concerned authority of MSEDCL for the purpose of categorization based on the nature of usages.

### 13.2 LT Category

Sr. No.	Existing Applicability	Proposed Applicability
1.	<p><b>LT I (A): LT – Residential (BPL)</b></p> <p><u>Applicability:</u> 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.</p> <p>The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata</p>	<p><b>LT I (A): LT – Residential (BPL)</b></p> <p><u>Applicability:</u> 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 <b>regularly</b> at the end of <b>each billing cycle</b> <del>each financial year</del>. If more than 360 units have been consumed <del>in the previous financial year upto current billing month in a financial year</del>, then 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.</p> <p>The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year. The categorisation of BPL consumers who have been added</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>basis, i.e., 30 units per month.</p> <p>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.</p> <p>The BPL tariff is applicable only to individuals and not to institutions.</p>	<p>during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.</p> <p>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.</p> <p>The BPL tariff is applicable only to individuals and not to institutions.</p>
2.	<p><b>LT I (B): LT – Residential</b></p> <p><u>Applicability:</u> 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;</p>	<p><b>LT I (B): LT – Residential</b></p> <p><u>Applicability:</u> 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>Private corporate</b></p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>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 out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;</p> <p>c) 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.;</p> <p>d) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;</p> <p>e) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;</p>	<p><b>bodies staff quarters / Hostels / Rest Houses</b></p> <p>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 out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff, <b>unless specified in any other category;</b></p> <p>c) Government / Private / Co-operative Housing <b>Societies/</b> 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.;</p> <p>d) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>f) 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;</p> <p>g) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;</p> <p>h) A residential LT consumer with consumption up to 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;</p> <p><u>Note:</u></p> <p>This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (h) above.</p> <p>i) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their</p>	<p>e) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;</p> <p>f) 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;</p> <p>g) Single-phase household Flour Mills (Ghar-ghanti) used only for <del>captive purposes</del> self-use;</p> <p>h) A residential LT consumer with consumption up to 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;</p> <p><u>Note:</u></p> <p>This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (h) above.</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>residence, whose monthly consumption is up to 300 units a month and annual consumption in the previous financial year was up to 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.</p> <p>j) 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:</p> <p>(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</p> <p>(ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.</p>	<p>i) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is up to 300 units a month and annual consumption in the previous financial year was up to 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.</p> <p>j) 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:</p> <p>(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</p> <p>(ii) a person, for making electricity available to its</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>k) Crematoriums and Burial Grounds for all purposes, including lighting.</p> <p>l) Temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc. Provided that such temporary connection shall be subjected to 1.5 times of fixed charges.</p> <p><u>Note:</u></p> <p>a) An Additional Fixed Charge of Rs.185 per 10 kW load or part thereof above 10 kW load shall also be payable for FY 2020-21. This amount will increase to Rs. 190 per month and per 10 kW, respectively, in FY 2021-22, and to Rs. 195 per month and per 10 kW, respectively, in FY 2022-23, and Rs. 200 per month and per 10 kW,</p>	<p>employees residing in the same premises for residential purposes.</p> <p>k) Crematoriums and Burial Grounds for all purposes, including lighting, <b>Electric Kiln, water pumps etc.</b></p> <p>l) Temporary purposes for public religious functions/<b>festivals</b> like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, <b>Gopalkala Utsav, Dashahara</b> etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, <b>Maharashtra Day</b> etc. Provided that such temporary connection shall be subjected to 1.5 times of fixed charges.</p> <p><u>Note:</u></p> <p>a) An Additional Fixed Charge of Rs.185 per 10 kW load or part thereof above 10 kW load shall also be payable</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>respectively, in FY 2023-24, and Rs. 205 per month and per 10 kW, respectively, in FY 2024-25</p> <p>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.</p> <p>c) Additional Fixed Charge of Rs 10 per connection per month shall be applicable for LT-Domestic category consumers in Urban Divisions of MSEDCL.</p>	<p>for FY 2020-21. This amount will increase to Rs. 190 per month and per 10 kW, respectively, in FY 2021-22, and to Rs. 195 per month and per 10 kW, respectively, in FY 2022-23, and Rs. 200 per month and per 10 kW, respectively, in FY 2023-24, and Rs. 205 per month and per 10 kW, respectively, in FY 2024-25</p> <p>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.</p> <p>Additional Fixed Charge of Rs 10 per connection per month shall be applicable for LT-Domestic category consumers in Urban Divisions of MSEDCL.</p>
3.	<p><b>LT II: LT– Non-Residential</b></p> <p><u>Applicability:</u> <b>(A) 0-20 kW</b> This tariff category is applicable for electricity used at</p>	<p><b>LT II: LT– Non-Residential</b></p> <p><u>Applicability:</u> <b>(A) 0-20 kW</b> This tariff category is applicable for electricity used at</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>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:</p> <p>a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;</p> <p>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; Offices, including Commercial Establishments; 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;</p> <p>c) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations,</p>	<p>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:</p> <p>a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms, <b>Exhibition Centres, Ware houses/Godowns</b>;</p> <p>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; Offices, including Commercial Establishments; Marriage Halls, <b>Resorts</b>, Hotels / Restaurants /<b>Canteens / Cafeterias</b>, Ice-cream parlours, Coffee / <b>Tea</b> Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops; <b>Logistics and Transportation services</b></p> <p>c) Automobile and all other types of repairs, servicing and</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>Petrol Pumps and Service Stations, including Garages;</p> <p>d) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Beauty Parlours and Saloons;</p> <p>e) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations;</p> <p>f) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;</p> <p>g) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;</p> <p>h) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;</p> <p>i) Construction of all types of structures/ infrastructures such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;</p> <p><u>Note:</u> Residential LT consumers with consumption</p>	<p>maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations including Gas bottling plants in the same premises, Petrol Pumps, and Service Stations, including Garages, Toll Collection plazas including lightings on Express / National / State Highways not included under any other categories;</p> <p>d) Tailoring Shops, Computer Training Institutes, Private Training centres, Typing Institutes, Photo Laboratories, Beauty Parlours and Saloons, Mobile Shoppe's;</p> <p>e) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations;</p> <p>f) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;</p> <p>g) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;</p> <p>h) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>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;</p> <p>j) Milk Collection Centres;</p> <p>k) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;</p> <p>l) 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.</p> <p>m) Temporary supply for any of the activity not covered under Residential category Provided that Temporary supply consumer shall pay 1.5 time applicable fixed/demand charges and 1.25</p>	<p>Local Authority;</p> <p>i) Construction of all types of structures/ infrastructures such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes <b>and Ready-mix Concrete or hot mix plants used for construction of above infrastructure projects;</b></p> <p><u>Note:</u> 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;</p> <p>j) Milk Collection Centres; <b>standalone milk refrigeration and storage centres i.e., chilling plants</b></p> <p>k) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;</p> <p>l) Advertisements, hoardings (including hoardings fixed</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>time applicable energy charge. Provided further that temporary supply for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the Tariff category applicable to such premises.</p> <p><b>(B) &gt; 20 kW and ≤ 50 kW and (C) &gt; 50 kW</b></p> <p><u>Applicability:</u></p> <p>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).</p> <p>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.</p>	<p>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.</p> <p>m) Temporary supply for any of the activity not covered under Residential category Provided that Temporary supply consumer shall pay 1.5 time applicable fixed/demand charges and 1.25 time applicable energy charge. Provided further that temporary supply for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the Tariff category applicable to such premises.</p> <p><b>(B) &gt; 20 kW and ≤ 50 kW and (C) &gt; 50 kW</b></p> <p><u>Applicability:</u></p> <p>As per the applicability described in LT II (A) and for the Sanctioned Load in the range applicable in this sub-</p>

Sr. No.	Existing Applicability	Proposed Applicability
		<p>category, i.e. LT II (B) and LT II (C).</p> <p>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.</p>
4.	<p><b>LT III: LT - Public Water Works (PWW) and Sewage Treatment Plants</b></p> <p><u>Applicability:</u></p> <p>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, Sewage Treatment Plants and Waste Processing Units, 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.</p>	<p><b>LT III: LT - Public Water Works (PWW) and Sewage Treatment Plants</b></p> <p><u>Applicability:</u></p> <p>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, Sewage Treatment Plants and Waste Processing Units, 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.</p>

Sr. No.	Existing Applicability	Proposed Applicability
	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.	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.
5.	<p><b>LT IV: LT – Agriculture</b> <b>LT IV (A): LT - Agriculture Un-metered –Pumpsets</b></p> <p><u>Applicability:</u></p> <p>This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>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.</li> <li>ii. The list of Category 1 Zones (with consumption norm</li> </ul>	<p><b>LT IV: LT – Agriculture</b> <b>LT IV (A): LT - Agriculture Un-metered –Pumpsets</b></p> <p><u>Applicability:</u></p> <p>This tariff category is applicable for motive power supplied for Agriculture <b>un</b>-metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.</p> <p>Note:</p> <ul style="list-style-type: none"> <li>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.</li> </ul>

Sr. No.	Existing Applicability	Proposed Applicability								
	<p>above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given as below:</p> <table border="1"> <thead> <tr> <th>Category 1 Zones (with consumption norm above 1318 hours/HP/year)</th> <th>Category 2 Zones (with consumption norm below 1318 hours/HP/year)</th> </tr> </thead> <tbody> <tr> <td>Bhandup (U), Pune, Nashik, Baramati, Jalgaon</td> <td>Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola</td> </tr> </tbody> </table> <p>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.</p> <p><b>LT IV (B): LT – Agriculture Metered – Pumpsets</b></p> <p><u>Applicability:</u></p>	Category 1 Zones (with consumption norm above 1318 hours/HP/year)	Category 2 Zones (with consumption norm below 1318 hours/HP/year)	Bhandup (U), Pune, Nashik, Baramati, Jalgaon	Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola	<p>ii. The list of Category 1 Zones (with consumption norm above 1318 hours/ HP/year) and Category 2 Zones (with consumption norm below 1318 hours/HP/year) is given as below:</p> <table border="1"> <thead> <tr> <th>Category 1 Zones (with consumption norm above 1318 hours/HP/year)</th> <th>Category 2 Zones (with consumption norm below 1318 hours/HP/year)</th> </tr> </thead> <tbody> <tr> <td>Bhandup (U), Pune, Nashik, Baramati, Jalgaon</td> <td>Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola</td> </tr> </tbody> </table> <p>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.</p> <p><b>LT IV (B): LT – Agriculture Metered – Pumpsets</b></p>	Category 1 Zones (with consumption norm above 1318 hours/HP/year)	Category 2 Zones (with consumption norm below 1318 hours/HP/year)	Bhandup (U), Pune, Nashik, Baramati, Jalgaon	Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola
Category 1 Zones (with consumption norm above 1318 hours/HP/year)	Category 2 Zones (with consumption norm below 1318 hours/HP/year)									
Bhandup (U), Pune, Nashik, Baramati, Jalgaon	Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola									
Category 1 Zones (with consumption norm above 1318 hours/HP/year)	Category 2 Zones (with consumption norm below 1318 hours/HP/year)									
Bhandup (U), Pune, Nashik, Baramati, Jalgaon	Amaravati, Aurangabad, Kalyan, Konkan, Kolhapur, Latur, Nagpur (U), Chandrapur, Gondia, Nanded, Akola									

Sr. No.	Existing Applicability	Proposed Applicability
	<p>This tariff category is applicable for motive power supplied for Agriculture metered pumping loads, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage. It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive. This Tariff is also applicable to Feeder Input based Group Metering wherein Input recorded on 11/22 kV Feeder minus Technical Loss of that particular feeder is billed to the consumers connected on that Feeder in proportionate to the sanctioned load of pump.</p> <p><b>LT IV (C): LT - Agriculture – Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for: a. Pre-cooling plants and cold storage units for</p>	<p><u>Applicability:</u> This tariff category is applicable for motive power supplied for Agriculture metered pumping loads <b>for irrigation purposes</b>, and for one lamp of wattage up to 40 Watt to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage. It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive. This Tariff is also applicable to Feeder Input based Group Metering wherein Input recorded on 11/22 kV Feeder minus Technical Loss of that particular feeder is billed to the consumers connected on that Feeder in proportionate to the sanctioned load of pump.</p> <p><b>LT IV (C): LT - Agriculture – Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for use of electricity /</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>Agricultural Products as defined under APMC Act, 1963 – processed or otherwise;</p> <p>b. Poultries exclusively undertaking layer and broiler activities, including Hatcheries;</p> <p>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;</p> <p>d. Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;</p> <p>e. Tabela, which involves no associated industrial/commercial activity of milk processing or Dairy/Chilling plant are undertaken, which are separately covered under LT-Industrial/ Commercial.</p>	<p>power supply at Low / Medium Voltage for:</p> <p>a. Pre-cooling plants and cold storage units <b>and packaging of the stored goods (in the same premises without changing its form)</b> for Agricultural Products as defined under APMC Act, 1963 – processed or otherwise;</p> <p>b. Poultries exclusively undertaking layer and broiler activities, including Hatcheries;</p> <p>c. High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities, <b>Banana Ripening</b>), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;</p> <p>d. Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc; Tabela, which involves no associated industrial/commercial activity of milk processing or Dairy/Chilling plant are undertaken, which are separately covered under LT-Industrial/ Commercial.</p>
6.	<b>LT V: LT- Industry</b>	<b>LT V: LT- Industry</b>

Sr. No.	Existing Applicability	Proposed Applicability
	<p><u>Applicability:</u> 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.</p> <p>It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, dhobi/laundry etc. -</p> <p>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</p>	<p><u>Applicability:</u> 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.</p> <p>It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, dhobi/laundry etc. -</p> <p>Provided that all such facilities are situated within the same industrial premises <b>agreed between the Licensee and consumer as per the agreement</b> 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</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>applicable IT/ITeS Policy of Government of Maharashtra.</p> <p>It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:</p> <ol style="list-style-type: none"> <li>Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;</li> <li>Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);</li> <li>Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Rethreading units; and Vulcanizing units;</li> <li>Mining, Quarrying and Stone Crushing units;</li> <li>Garment Manufacturing units;</li> <li>LPG/CNG bottling plants, etc.;</li> <li>Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category</li> <li>Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during</li> </ol>	<p>(IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra.</p> <p><b>Provided that the purpose of use shall be verified and certified by Sanctioning Authority of the Distribution Licensee.</b></p> <p>It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:</p> <ol style="list-style-type: none"> <li>Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill, <b>Cattle / Poultry Feed Manufacturing plants;</b></li> <li>Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);</li> <li>Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Rethreading units; and Vulcanizing units, <b>Rubber product manufacturing, Packaging material manufacturing, Ordinance/Ammunition Factories of Defence Establishments;</b></li> </ol>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);</p> <p>i. Brick Kiln (Bhatti);</p> <p>j. Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;</p> <p>k. Cold Storages not covered under LT IV (C) – Agriculture (Others);</p> <p>l. Food (including seafood and meat) Processing units;</p> <p>m. Stand-alone Research and Development units;</p> <p>n. Telecommunications Towers;</p> <p>o. Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.</p> <p>Provided that for Powerlooms, 2.5% discount on Energy Charge (including FAC) shall be applicable.</p> <p><u>Note:</u> The ToD Tariff is compulsorily applicable for LT V (ii) (i.e. above 20 kW), and optionally available to LT-V (i) (i.e. up to 20 kW) having ToD meter installed.</p>	<p>d. Mining, Quarrying and Stone Crushing units;</p> <p>e. Garment Manufacturing units;</p> <p>f. Soap and cosmetics, Deodorant manufacturing, etc.</p> <p>g. Bulk LPG/CNG bottling plants, etc.;</p> <p>h. Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category</p> <p>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);</p> <p>j. Brick Kiln (Bhatti), Biomass Pellet;</p> <p>k. Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;</p> <p>l. Cold Storages not covered under LT IV (C) – Agriculture (Others), Packaged Drinking Water Plant;</p> <p>m. Food (including seafood and meat) Processing</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p><i>Lower tariff (discount/rebate) of (2.5%) shall be available in Energy Charge Component (including FAC, if applicable) of Tariff for both slabs (&lt;20 kW and &gt; 20 kW) for LT – Industry (Powerloom) as against approved Energy Charge Component of Tariff applicable for respective slabs under LT-Industry.</i></p>	<p>units, <b>Khandsari/Jaggery Manufacturing Units</b>;</p> <p>n. Stand-alone Research and Development units, ;</p> <p>o. Telecommunications Towers;</p> <p>p. Powerlooms including other allied activities like, Warping, Doubling, Twisting, etc., connected at Low/Medium Tension only.</p> <p><b>q. Auxiliary Power Supply to EHV/Distribution Substations (but not for construction)</b></p> <p><b>Provided that for Powerlooms, 2.5% discount on Energy Charge (including FAC) shall be applicable.</b></p> <p><u>Note:</u> The ToD Tariff is compulsorily applicable for LT V (ii) (i.e. above 20 kW), and optionally available to LT-V (i) (i.e. up to 20 kW) having ToD meter installed.</p> <p><i>Lower tariff (discount/rebate) of (2.5%) shall be available in Energy Charge Component (including FAC, if applicable) of Tariff for both slabs (&lt;20 kW and &gt; 20 kW) for LT – Industry (Powerloom) as against approved Energy Charge Component of Tariff applicable for respective slabs under LT-Industry.</i></p>
7.	<b>LT VI: LT – Street Light</b>	<b>LT VI: LT – Street Light</b>

Sr. No.	Existing Applicability	Proposed Applicability
	<p><u>Applicability:</u> This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and 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:</p> <ul style="list-style-type: none"> <li>a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);</li> <li>b) Traffic Signals and Traffic Islands;</li> <li>c) Public Water Fountains; and</li> <li>d) Such other public places open to the general public</li> </ul>	<p><u>Applicability:</u> This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and 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:</p> <ul style="list-style-type: none"> <li>a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);</li> <li>b) Traffic Signals and Traffic Islands;</li> <li>c) Public Water Fountains; and</li> <li>d) Such other public places open to the general public</li> </ul>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>free of charge.</p> <p><u>Note:</u></p> <p>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–</p> <p>i) 50 percent of 'Contract Demand' or ii) Actual 'Recorded Demand'.</p>	<p>free of charge.</p> <p><u>Note:</u></p> <p>The above street and other lighting facilities having 'Automatic Timers' for switching On/Off would be levied Demand Charges on the <del>lower</del> higher of the following–</p> <p>i) 50 percent of 'Contract Demand' or ii) Actual 'Recorded Demand'.</p>
8.	<p><b>LT VII: LT - Public Services</b></p> <p><b>LT VII (A): LT - Government Educational Institutes and Hospitals</b></p> <p><u>Applicability:</u></p> <p>This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres, Blood Bank and Pathology Laboratories; Libraries and public reading rooms - of the</p>	<p><b>LT VII: LT - Public Services</b></p> <p><b>LT VII (A): LT - Government Educational Institutes and Hospitals</b></p> <p><u>Applicability:</u></p> <p>This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres, Blood Bank and Pathology Laboratories; Libraries and public reading rooms - of the</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>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 Hostels/ 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. This Tariff is also applicable for electricity supply at Public Sanitary Conveniences; <u>Note:</u> The ToD Tariff is applicable for LT-VII (A) (ii) and LT-VII (A) (iii) (i.e., above 20 kW) and optionally available to LT-VII (A) (i) (i.e., up to 20 kW) having ToD meter installed.</p> <p><b>LT VII (B): LT - Public Services – Others</b> <u>Applicability:</u> This tariff category is applicable for electricity supply at Low/Medium Voltage for:</p>	<p>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 Hostels/ 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. This Tariff is also applicable for electricity supply at Public Sanitary Conveniences; <u>Note:</u> The ToD Tariff is applicable for LT-VII (A) (ii) and LT-VII (A) (iii) (i.e., above 20 kW) and optionally available to LT-VII (A) (i) (i.e., up to 20 kW) having ToD meter installed.</p> <p><b>LT VII (B): LT - Public Services – Others</b> <u>Applicability:</u> This tariff category is applicable for electricity supply at Low/Medium Voltage for:</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>a) Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres, Blood Banks, 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.</p> <p>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;</p> <p>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;</p> <p>d) Service-oriented Spiritual Organisations;</p>	<p>a) Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres, Blood Banks, 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.</p> <p>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;</p> <p>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 <b>sector of Central Government used for supplying entire load on single-point metering</b> and Para-Military</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>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.  j) Waste processing units not covered under LT PWW category  k) All Students Hostels affiliated to Educational Institutions not covered under LT Public Service - Government;  l) All other Students' or Working Men/Women's Hostels;  m) 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</p>	<p>establishments;  d) Service-oriented Spiritual Organisations;  e) <b>Accommodation facilities provided by religious trusts registered under Maharashtra Public Trust Act for devotees.</b>  f) State or Municipal/Local Authority Transport establishments, including their Workshops;  g) Fire Service Stations; Jails, Prisons; Courts;  h) Airports;  i) Ports and Jetties;  j) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.  k) Waste processing units not covered under LT PWW category, <b>Water ATM</b>  l) All Students Hostels affiliated to Educational Institutions not covered under LT Public Service - Government;  m) All other Students' or Working Men/Women's Hostels;  n) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>Engineer or equivalent; <u>Note:</u> The ToD Tariff is applicable for LT-VII (B) (ii) and LT- VII (B) (iii) (i.e., above 20 kW) and optionally available to LT-VII (B) (i) (i.e., up to 20 kW) having ToD meter installed.</p>	<p>(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; o) <b>Dam operation including Lighting and other activities, etc.</b> <u>Note:</u> The ToD Tariff is applicable for LT-VII (B) (ii) and LT- VII (B) (iii) (i.e., above 20 kW) and optionally available to LT-VII (B) (i) (i.e., up to 20 kW) having ToD meter installed.</p>
9.	<p><b>LT VIII: LT - Electrical Vehicle (EV) Charging Stations</b></p> <p><u>Applicability:</u> This Tariff category is applicable for Electric Vehicle Charging Station including battery swapping station for electric vehicle.</p> <p>In case the consumer uses the electricity supply for charging his own electric vehicle at his premises, the tariff</p>	<p><b>LT VIII: LT - Electrical Vehicle (EV) Charging Stations</b></p> <p><u>Applicability:</u> This Tariff category is applicable for Electric Vehicle Charging Station including battery swapping station for electric vehicle.</p> <p>In case the consumer uses the electricity supply for charging his own electric vehicle at his premises, the tariff</p>

Sr. No.	Existing Applicability	Proposed Applicability
	<p>applicable shall be as per the category of such premises.</p> <p>Electricity consumption for other facilities at Charging Station such as restaurant, rest rooms, convenience stores, etc., shall be charged at tariff applicable to Commercial Category.</p>	<p>applicable shall be as per the category of such premises.</p> <p>Electricity consumption for other facilities at Charging Station such as restaurant, rest rooms, convenience stores, etc., shall be charged at tariff applicable to Commercial Category.</p>

### 13.3 HT Category

Sr.No.	Existing Applicability	Proposed Applicability
1.	<p><b>HT I: HT- Industry</b> <b>HT I (A): Industry- General</b></p> <p><u>Applicability:</u> 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</p>	<p><b>HT I: HT- Industry</b> <b>HT I (A): Industry- General</b></p> <p><u>Applicability:</u> 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 <b>in the same contiguous premises</b> for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>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. –</p> <p>Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.</p> <p>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.</p> <p>It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:</p> <ol style="list-style-type: none"> <li>Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;</li> <li>Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);</li> <li>Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Rethreading units, and Vulcanizing units;</li> <li>Mining, Quarrying and Stone Crushing units;</li> </ol>	<p>facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. –</p> <p>Provided that all such facilities are situated within the same industrial premises <b>agreed between the Licensee and consumer as per the agreement</b> and supplied power from the same point of supply.</p> <p>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.</p> <p><b>Provided that the purpose of use shall be verified and certified by Sanctioning Authority of the Distribution Licensee.</b></p> <p>It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:</p> <ol style="list-style-type: none"> <li>Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills, <b>Cattle / Poultry Feed Manufacturing plants;</b></li> <li>Ice Factories, Ice-cream manufacturing units, Milk</li> </ol>

Sr.No.	Existing Applicability	Proposed Applicability
	<ul style="list-style-type: none"> <li>e) Garment Manufacturing units</li> <li>f) LPG/CNG bottling plants, etc.;</li> <li>g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category</li> <li>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);</li> <li>i) Brick Kiln (Bhatti);</li> <li>j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;</li> <li>k) Cold Storages not covered under HT – Agriculture (Others);</li> <li>l) Food (including Seafood and meat) Processing units.</li> <li>m) Stand-alone Research and Development units.</li> <li>n) Seed manufacturing.</li> <li>o) Dedicated Water Supply Schemes to Power Plants</li> <li>p) Auxiliary Power Supply to EHV/Distribution Substations (but not for construction)</li> <li>q) Telecommunications Towers</li> </ul>	<ul style="list-style-type: none"> <li>Processing / Chilling Plants (Dairy);</li> <li>c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Remoulding/Rethreading units, and Vulcanizing units, <b>Rubber product manufacturing, Packaging material manufacturing, Ordinance/Ammunition Factories of Defence Establishments;</b></li> <li>d) Mining, Quarrying and Stone Crushing units;</li> <li>e) Garment Manufacturing units</li> <li>f) <b>Soap and cosmetics, Deodorant manufacturing, etc.</b></li> <li>g) <b>Bulk</b> LPG/CNG bottling plants, etc.;</li> <li>h) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category</li> <li>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);</li> <li>j) Brick Kiln (Bhatti), <b>Biomass Pellet;</b></li> <li>k) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;</li> </ul>

Sr.No.	Existing Applicability	Proposed Applicability
	<p><b>HT I (B): Industry – Seasonal</b></p> <p><u>Applicability:</u> 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.</p> <p>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 first quarter of the financial year.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>High Tension Industrial consumers having captive generation facility synchronised with the grid may opt for Standby Capacity at rate of 25% of applicable Demand Charges.</li> <li>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.</li> </ol>	<ol style="list-style-type: none"> <li>Cold Storages not covered under HT – Agriculture (Others), <b>Packaged Drinking Water Plant</b>;</li> <li>Food (including Seafood and meat) Processing units.</li> <li>Stand-alone Research and Development units</li> <li>Seed manufacturing.</li> <li>Dedicated Water Supply Schemes to Power Plants</li> <li>Auxiliary Power Supply to EHV/Distribution Substations (but not for construction)</li> <li>Telecommunications Towers</li> </ol> <p><b>HT I (B): Industry – Seasonal</b></p> <p><u>Applicability:</u> 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.</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>iii. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.</p>	<p>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 first quarter of the financial year.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>i. High Tension Industrial consumers having captive generation facility synchronised with the grid may opt for Standby Capacity at rate of 25% of applicable Demand Charges.</li> <li>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.</li> <li>iii. Demand Charge shall be applicable at 75% of the above rates for Steel Plant operating with electric arc furnaces.</li> </ul>
2.	<p><b>HT II: HT- Commercial</b></p> <p><u>Applicability:</u> 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</p>	<p><b>HT II: HT- Commercial</b></p> <p><u>Applicability:</u> 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</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>water pumping in, but not limited to, the following premises:</p> <p>a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;</p> <p>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;</p> <p>c) Offices, including Commercial Establishments;</p> <p>d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;</p> <p>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 &amp; Service Stations, including Garages; -</p> <p>f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Beauty Parlours and Saloons;</p> <p>g) Banks and ATM centres, Telephone Exchanges, TV Stations,</p>	<p>water pumping in, but not limited to, the following premises:</p> <p>a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;</p> <p>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;</p> <p>c) Offices, including Commercial Establishments;</p> <p>d) Marriage Halls, <b>Resorts</b>, Hotels / Restaurants/<b>Canteens / Cafeterias</b>, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops, <b>Logistics and Transportation services</b>;</p> <p>e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations <b>including Gas bottling plans in the same premises</b>, Petrol Pumps &amp; Service Stations, including Garages, <b>Toll Collection plazas including lightings on Express / National / State Highways not included under any other categories</b>; -</p> <p>f) Tailoring Shops, Computer Training Institutes, <b>Private</b></p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>Micro Wave Stations, Radio Stations;</p> <p>h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;</p> <p>i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;</p> <p>j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;</p> <p>k) Construction of all types of structures/ infrastructures such as buildings, bridges, flyovers, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;</p> <p>l) Milk Collection Centres;</p> <p>m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes, not covered under the HT- PWW category or HT I – Industry</p> <p>n) Advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial</p>	<p><b>Training centres</b>, Typing Institutes, Photo Laboratories, Beauty Parlours and Saloons,;</p> <p>g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations;</p> <p>h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;</p> <p>i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;</p> <p>j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;</p> <p>k) Construction of all types of structures/ infrastructures such as buildings, bridges, flyovers, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes <b>and Ready-mix Concrete or hot mix plants used for construction of above infrastructure projects;</b></p> <p>l) Milk Collection Centres, <b>standalone milk refrigeration and</b></p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments</p> <p>o) Temporary supply for any of the activity not covered under any other HT category</p> <p>Provided that Temporary supply consumer shall pay 1.5 time applicable fixed/demand charges and 1.25 time applicable energy charge.</p> <p><u>Note:</u></p> <p>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.</p>	<p><b>storage centres i.e., chilling plants;</b></p> <p>m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes, not covered under the HT- PWW category or HT I – Industry</p> <p>n) 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</p> <p>o) Temporary supply for any of the activity not covered under any other HT category</p> <p>Provided that Temporary supply consumer shall pay 1.5 time applicable fixed/demand charges and 1.25 time applicable energy charge.</p> <p><u>Note:</u></p> <p>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</p>

Sr.No.	Existing Applicability	Proposed Applicability
		downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.
3.	<p><b>HT III: HT – Railways/Metro/Monorail</b></p> <p><u>Applicability:</u> This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.</p>	<p><b>HT III: HT – Railways/Metro/Monorail</b></p> <p><u>Applicability:</u> This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.</p>
4.	<p><b>HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants</b></p> <p><u>Applicability:</u> 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, Sewage Treatment Plants and waste processing units, 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.</p>	<p><b>HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants</b></p> <p><u>Applicability:</u> 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, Sewage Treatment Plants and waste processing units, 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.</p>

Sr.No.	Existing Applicability	Proposed Applicability
	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.	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.	<p><b>HT V: HT – Agricultural</b> <b>HT V (A) – Agriculture Pumpsets</b></p> <p><u>Applicability:</u> 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</p> <p><b>HT V (B): HT – Agricultural Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for use of electricity / power supply at High Voltage for:</p>	<p><b>HT V: HT – Agricultural</b> <b>HT V (A) – Agriculture Pumpsets</b></p> <p><u>Applicability:</u> 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</p> <p><b>HT V (B): HT – Agricultural Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for use of electricity / power supply at High Voltage for:</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>a) Pre-cooling plants and cold storage units for Agriculture Products as defined under APMC Act 1963 – processed or otherwise;</p> <p>b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;</p> <p>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;</p> <p>d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;</p>	<p>a) Pre-cooling plants and cold storage units for Agriculture Products as defined under APMC Act 1963 – processed or otherwise;</p> <p>b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;</p> <p>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;</p> <p>Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;</p>
6.	<p><b>HT VI: HT – Group Housing Society (Residential)</b></p> <p><u>Applicability:</u> 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:</p> <p>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</p>	<p><b>HT VI: HT – Group Housing Society (Residential)</b></p> <p><u>Applicability:</u> 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:</p> <p>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</p>

Sr.No.	Existing Applicability	Proposed Applicability
	b) a person, for making electricity available to its employees residing in the same premises for residential purposes.	a person, for making electricity available to its employees residing in the same premises for residential purposes.
7.	<p><b>HT VIII: HT Public Services</b> <b>HT VIII - (A): HT - Public Services - Government Educational Institutes and Hospitals</b></p> <p><u>Applicability:</u> 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 Hostels/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</p>	<p><b>HT VIII: HT Public Services</b> <b>HT VIII - (A): HT - Public Services - Government Educational Institutes and Hospitals</b></p> <p><u>Applicability:</u> 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 Hostels/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</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>Hospitals.</p> <p><b>HT IX (B): Public Services – Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for electricity supply at High Voltage for:</p> <p>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.</p> <p>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;</p> <p>c) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla</p>	<p>Hospitals.</p> <p><b>This Tariff is also applicable for electricity supply at Public Sanitary Conveniences</b></p> <p><b>HT IX (B): Public Services – Others</b></p> <p><u>Applicability:</u> This tariff category is applicable for electricity supply at High Voltage for:</p> <p>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.</p> <p>b) Sports Clubs and facilities / Health Clubs, <b>Student/Working Men/ Women Hostel</b> 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</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;</p> <p>d) Service-oriented Spiritual Organisations;</p> <p>e) State or Municipal/Local Authority Transport establishments, including their Workshops;</p> <p>f) Fire Service Stations; Jails, Prisons; Courts.</p> <p>g) Airports</p> <p>h) Ports and Jetties</p> <p>i) Waste processing units not covered under HT IV category</p>	<p>primarily for their students / faculty/ employees/ patients;</p> <p>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 <b>sector of Central Government used for supplying entire load on single-point metering</b> and Para-Military establishments;</p> <p>d) Service-oriented Spiritual Organisations,</p> <p>e) <b>Accommodation facilities provided by religious trusts registered under Maharashtra Public Trust Act for devotees.</b> State or Municipal/Local Authority Transport establishments, including their Workshops;</p> <p>f) Fire Service Stations; Jails, Prisons; Courts.</p> <p>g) Airports</p> <p>h) Ports and Jetties</p> <p>i) Waste processing units not covered under HT IV category, <b>Water ATM</b></p> <p>j) <b>Dam operation including Lighting and other activities, etc.</b></p>
8.	<p><b>HT (X): Electrical Vehicle (EV) Charging Stations</b></p> <p>Applicability:</p>	<p><b>HT (X): Electrical Vehicle (EV) Charging Stations</b></p> <p>Applicability:</p>

Sr.No.	Existing Applicability	Proposed Applicability
	<p>This Tariff category is applicable for Electric Vehicle Charging Station including battery swapping station for Electric Vehicle</p> <p>In case the consumer uses the electricity supply for charging his own electric vehicle at his premises, the tariff applicable shall be as per the category of such premises.</p> <p>Electricity consumption for other facilities at Charging Station such as restaurant, rest rooms, convenience stores, etc., shall be charged at tariff applicable to Commercial Category.</p>	<p>This Tariff category is applicable for Electric Vehicle Charging Station including battery swapping station for Electric Vehicle</p> <p>In case the consumer uses the electricity supply for charging his own electric vehicle at his premises, the tariff applicable shall be as per the category of such premises.</p> <p>Electricity consumption for other facilities at Charging Station such as restaurant, rest rooms, convenience stores, etc., shall be charged at tariff applicable to Commercial Category.</p>

## 14 DETAILS OF CAPEX SCHEMES

### 14.1 High Loss Feeder (HLF) Scheme

14.1.1 MSEDCL is implementing High Loss Feeder (HLF) scheme to bring down distribution losses in 259 High Loss Feeders (more than 50% losses). In the 1st Phase 185 feeders are chosen to be taken up in FY 2018-19, FY 2019-20 with total capital cost of Rs 316.22 Crores to bring down distribution losses in 185 high loss feeders (more than 50% losses).

14.1.2 MERC has accorded in-principle approval to the scheme vide Letter No. MERC/ Capex/2018-19/1258 Date 11 October, 2018.

14.1.3 The objectives of the scheme are

- Introduce HVDS (High Voltage Distribution System) for reducing HT: LT ratio and providing AB (Aerial Bunched) cable to prevent theft and pilferage of electricity by hooking.
- To shift energy meters from consumers premises and providing multimeter boxes to outside to prevent tampering of energy meters.
- Replacement of faulty energy meters.
- To replace old, corroded and deteriorated LT conductor and providing AB switches and wedge connectors to reduce power supply interruptions and prevent accidents.

14.1.4 The following benefits are envisaged from the scheme

- Increase in revenue and reduction in losses.
- Reduction of power supply interruptions and accidents.
- Improvement in reliability of power supply due to introduction of HVDS.
- Meeting Universal Supply Obligation

#### 14.1.5 Scope of Work

Sr No.	Description	Unit	Scope
1	Installation/ Replacement of Meters	No.	208868
2	HVDS (New DTC)	No.	11234
3	Conversion of LT Line to HT Line	km	296.15
4	Provision of AB cable	km	3672.86
5	Shifting of meters from Inside to Outside consumers premises	No.	276996
6	Installation of 1 Ph/ multi meter/ service box boxes	No.	20630

#### 14.1.6 Current Progress/Status

The turnkey tenders for execution of project are floated in FY 2018-19. The work is completed and financial closure of projects is in progress.

Sr No.	Description	Unit	Target	Completed
1	Installation/Replacement of Meters	No.	54244	27966
2	HVDS (New DTC)	No.	761	595
3	Conversion of LT Line to HT Line	km	108.48	69.13
4	Provision of AB cable	km	918.16	724.10
5	Shifting of meters from Inside to Outside consumers premises	No.	124733	47310
6	Installation of 1 Ph/multi meter/service box boxes	No.	13745	8065

#### 14.1.7 Funding Details

The funds for execution of the project are arranged by availing loan from REC Limited up to 90% of project cost, Balance 10% from internal resources

### 14.2 System Strengthening in Metropolitan Region (SSMR Scheme)

14.2.1 MSEDCL is implementing System Strengthening in Metropolitan Region (SSMR) Scheme in Financial Year 2018-19, 2019-20 & 2020-21 with total capital cost of Rs 438 Crores to strengthen existing distribution network and reduce power supply interruptions in high revenue pocket areas in Mumbai & Pune Metropolitan Region consisting of Bhandup, Kalyan & Pune Zones.

14.2.2 MERC has accorded in-principle approval to the scheme vide Letter No. MERC/ CAPEX/ 2019-20/ 9170 Date 22nd October, 2019.

14.2.3 The objectives of the scheme are:

- Strengthening & Augmentation of existing distribution network.
- To reduce power supply interruptions in High Revenue pocket areas of Mumbai & Pune Metropolitan Regions.
- Replacement of existing feeder pillars with RMUs and providing RMUs at multiple locations for easier load diversion, fault isolation & minimizing interruption area.
- Laying of additional link lines for conversion of existing Radial network to Ring Mains.
- To replace old, corroded and deteriorated aging infrastructure like Electric Poles, Feeder Pillars, Conductors, etc to reduce frequent power supply interruptions

14.2.4 The following benefits are envisaged from the scheme

- 24x7 reliable power supply to consumers in high revenue pocket areas.
- Reduction of power supply interruptions and breakdowns.
- Reducing overloading of existing network and meeting load of prospective consumers.
- Meeting Universal Supply Obligation

**14.2.5 Scope of Work**

Sr No.	Description	Unit	Scope
1	Installation/ Replacement of R.M.U	No.	636
2	Augmentation/ Conversion of Lines	km	733.43
3	New Lines	km	836.52
4	Replacement of Feeder Pillars	No.	814
5	Replacement of Poles	No.	3129
6	Replacement of DB	No.	95
7	Provision/ Replacement of isolators/ AB switches/VCB	No.	361
8	Replacement of Line accessories	Lot	8605
9	R&M of DTC	Lot	793
10	Installation of multi meter/ service box	No.	1847

	boxes		
11	Others (R&M)- Guarding, etc	Lot	8085.5
12	DTC New/ Augmentation/Conversion	No.	374
13	Substation		
a	Augmentation of Power Transformer	No.	10
b	Renovation of Existing Substation	Lot	25
c	Establishment of New Substation / Switching station	No.	18

#### 14.2.6 Current Progress/Status: -

The full turnkey tenders for execution of project are floated and balance work is in progress. The financial closure of completed works is in progress.

Sr No.	Description	Unit	Target	Completed
1	R.M.U	No.	613	568
2	HT Lines	km	820.21	621.52
3	LT Lines	Km	414.50	379.97
4	Feeder Pillars	No.	678	678
5	Replacement of Poles	No.	603	599
7	Distribution Box	No.	925	630
8	Narrow Base Tower	No.	31	31
9	AB Switch	No.	402	335
10	Multimeter Boxes	No.	1798	1798
11	DTC-New	No.	103	102
12	DTC-Augmentation	No.	141	141
13	Substation			
a	Augmentation/Additional Power Transformer	No.	6	6
b	Establishment of New Substation/ Switching Station	No.	11	5

#### 14.2.7 Funding Details: -

The funds for execution of the project are arranged by availing loan from REC Limited up to 80% of project cost. Balance 20% from internal resources.

**14.3 Evacuation of Power (EoP) from EHV Substation Scheme: -**

14.3.1 MSEDCL is implementing Evacuation of Power from EHV Substation (EoP) Scheme for Evacuation of Power from various commissioned and to be commissioned EHV Substations.

14.3.2 In the 1st Phase Evacuation of Power from 11 Nos. EHV Substations is sanctioned and 2nd Phase Evacuation of Power from 17 Nos. EHV Substations is approved. MERC has accorded in-principle approval to the scheme Phase-I&II vide Letter No. MERC/ CAPEX/ 2021-22/ 312 Date 13th July 2021.

14.3.3 The objectives of the scheme are:

- To evacuate Power from EHV substation commissioned/ to be commissioned.
- To reduce loading of existing feeders and reduction in line length.
- To improve voltage regulation of existing feeders.
- To improve reliability of system.
- To reduce technical losses.

14.3.4 The following benefits are envisaged from the scheme: -

- Utilization of EHV Substations commissioned by MSETCL.
- Reducing overloading of existing network, improvement in reliability and meeting load of prospective consumers.

**14.3.5 Scope of Work: -**

Sr No.	Description	Unit	Scope
<b>Phase-I</b>			
1	132 kV Deulgaon Raja	km	65
2	220 kV Nagewadi	km	10.5
3	220 kV Narangwadi	km	35
4	132 kV Ralegaon	km	51.5
5	220 kV Karanja	km	30
6	132 kV Babhulwada	km	65
7	220 kV Vihigaon	km	64.4

8	132 kV Chamorshi	km	47.5
9	220 kV Kekatnimbhora	km	97
10	132 kV Kolsa	km	25
11	132 kV Renukapur	km	57.5
<b>Phase-II</b>			
12	132 kV Kanzara	km	23
<b>Sr No.</b>	<b>Description</b>	<b>Unit</b>	<b>Scope</b>
13	Link line Kotamgaon-Gavandgaon	km	13.5
14	132 kV Wayal	km	30
15	220 kV Loni Deokar	km	17.8
16	132 kV Wagdari	km	25
17	132 kV Kawathe Yamai	km	48
18	132 kV Jawala	km	46.62
19	220 kV Renukapur	km	40
20	132 kV Nimbhoni	km	78
21	220 kV Jalkot	km	69
22	132 kV Dhadgaon	km	18
23	220 kV Nagbhid	km	39
24	132 kV Kolari	km	64.9
25	132 kV Kothali	km	116
26	132 kV Karki	km	32.2
27	132 kV Sinnar Shaha	km	104
28	220 kV Bhose	km	51

**14.3.6 Current Progress/Status: -**

The full turnkey tenders for execution of projects in Phase-I are floated and all

works are physically completed except for 132 kV Chamorshi and 220 kV Kekatnimbhora projects. The financial closure of completed works is in progress.

Sr No.	Description	Unit	Target	Completed
<b>Phase-I</b>				
1	132 kV Deulgaon Raja	km	59.15	59.15
2	220 kV Nagewadi	km	12.5	12.5
3	220 kV Narangwadi	km	20.93	20.93
4	132 kV Ralegaon	km	31.2	31.2
5	220 kV Karanja	km	14.64	14.64
6	132 kV Babhulwada	km	72.59	72.59
7	220 kV Vihigaon	km	61.11	61.11
8	132 kV Chamorshi	km	45	36.24
9	220 kV Kekatnimbhora	km	101	100.5
10	132 kV Kolsa	km	22	22
11	132 kV Renukapur	km	57.5	57.5
<b>Phase-II</b>				
12	132 kV Kanzara	km	23	23

The full turnkey tenders for execution of projects in Phase-II are floated, work is completed in respect of 132 kV Kanzara EHV Substation, balance LOAs for execution of work shall be issued after financial tie up.

#### 14.3.7 **Funding Details:** -

The funds for execution of the project in Phase-I are arranged by availing loan from REC Limited up to 80% of project cost. Balance 20% from internal resources. The financial tie up for Phase-II is in process.

#### 14.4 **MIDC Network Strengthening (Phase-I):** -

14.4.1 MSEDCL provides power supply to 3,20,723 Industrial consumers in the state of Maharashtra through its vast network consisting of substations, feeders, Distribution transformers and electric lines. The Industrial consumers

contribute a majority of revenue to MSEDCL. The Maharashtra Industrial Development Corporation (MIDC) the premier infrastructure development agency has set up 289 Industrial areas in the state in a planned and systematic manner since its inception. The electrical distribution infrastructure has been set up by MSEDCL for providing reliable and uninterrupted power supply in these MIDC areas. Majority of Industrial consumers in the state are covered in MIDC areas.

14.4.2 The existing infrastructure has been in existence for more than 25 years. There have been rising cases of power supply interruptions and breakdowns in these areas especially in rainy season due to deterioration of existing infrastructure, ageing and non-availability of alternate supply arrangement for ensuring 24x7 reliable power supply in these areas. The consumers in these areas have a higher average billing rate and contribute major portion of MSEDCL revenue. They are cross subsidizing consumers for lower income groups and Agricultural sector in the state. The Interruptions in power supply even if for a few minutes in duration, results in heavy loss of revenue to MSEDCL and also cause severe production loss to Industrial MIDC consumers. There are many industries like Paper & Pulp, Cement, Pharmaceuticals, Cold Storage, Electroplating Industries, Starch Manufacturing, Petrochemicals, etc which require continuous power supply.

14.4.3 In 1<sup>st</sup> Phase system strengthening & Ring Main System Development in 26 nos. MIDC areas planned with an estimated cost of Rs 276 Crores. MERC has accorded in-principle approval to the scheme with approved cost of Rs 267.37 Crores vide Letter No. MERC/ CAPEX/ 2021-22/ 315 Date 22 July 2021.

14.4.4 **Objectives: -**

The project is formulated with following activities for addressing deficiencies in the existing infrastructure & achieving following objectives:

- Strengthening & Augmentation of existing distribution network.
- Providing RMUs at multiple locations for easier load diversion, fault

isolation & minimizing interruption area.

- Laying of additional link lines for conversion of existing Radial network to Ring Mains
- Conversion of OH to UG in densely populated & accident prone areas.

14.4.5 The following benefits are envisaged from the scheme: -

- 24x7 reliable power supply to consumers in high revenue pocket areas.
- Reduction of power supply interruptions and breakdowns.
- Reducing overloading of existing network and meeting load of prospective consumers.
- Meeting Universal Supply Obligation.

14.4.6 **Scope of Work: -**

Sr. No.	Description	Unit	Scope
1	New HV substation/ switching station	No.	11
2	Additional Power Transformer	No.	4
3	33 kV/ 11 kV Bay	No.	16
4	Installation of RMUs	No.	205
5	Augmentation of Distribution Transformer	No.	167
6	Additional Distribution Transformer	No.	134
7	33 kV Isolators	No.	62
8	AB Switches	No.	142

14.4.7 **Current Progress/Status: -**

The full turnkey tenders for execution of project are floated circle wise and LOAs are issued in September 2022 where financial tie up is available. The

work is in progress.

**14.4.8 Funding Details: -**

The fund of Rs 190 Crores for execution of the project are sanctioned with interest free loan from Government of India (GoI) under Special Assistance to States for Capital Investment. Balance financial tie up is in progress.

**14.5 Backlog Scheme (Regional Imbalance):**

**14.5.1 Objectives:**

The Indicator & Backlog Committee nominated by Hon'ble Governor, Maharashtra in March 1996, worked out the backlog in different areas (such as Education, Irrigation etc.) in various districts of Maharashtra State, taking average of state as a base for calculation of same. The I & B committee worked out the backlog of Ag pump Energization based on Nos. of Ag pump sets energized & sown area in that particular district. In order to remove the regional imbalance of Ag. pump energisation in the State, I & B Committee declared the backlog of 2,98,225 nos. of Ag. pumps as on March 96 in 18 nos. of districts (Akola, Washim, Amravati, Yavatmal, Wardha, Bhandara, Gondia, Chandrapur, Gadchiroli, Jalna, Parbhani, Hingoli, Beed, Nanded, Thane, Raigad, Sindhudurg and Ratnagiri). Under this scheme, backlog of Ag. Pump energisation has been removed completely from Vidarbha & Marathwada and Rest of Maharashtra except Ratnagiri district.

**14.5.2 Benefits:**

As the present tariff of Agricultural category is much less than average cost of supply, there is no direct monetary benefits envisaged. But still new Ag connections needs to be released to meet statutory obligation of Electricity Act 2003.

**14.5.3 Scope of the work:**

The Indicator & Backlog Committee declared the backlog of 2,98,225 nos. of Ag. pumps as on March 96 in 18 nos. of backlog districts.

**14.5.4 Current Progress/ Status:**

Out of declared the backlog of 2,98,225 nos. of Ag. pumps as on March 96 in

18 nos. of backlog districts, 2,93,650 Ag pumps are energized and work of energization of balance backlog of 4,575 Ag pumps is under progress in Ratnagiri district.

**14.5.5 Details of Funding :**

Earlier, work of energization of Ag Pumps (thereby removing Ag. Backlog) in Backlog notified districts were carried out by MSEB by taking loan from funding agency. As per the directives issued by Hon'ble Governor in the FY 2005-06, the fund is being made available as grant to Mahavitaran under the scheme of removal of regional imbalance of Ag. pump energisation to remove backlog of Ag. pumps from the backlog districts.

**14.6 East Vidarbha Scheme (Shet-tale)**

**14.6.1 Objectives:**

In State, most of the part of 5 nos. of districts namely Chandrapur, Gadchiroli, Bhandara, Gondia and Nagpur of East Vidarbha Region is remote and naxalite. In these districts the work of strengthening, renovation and modernization of distribution network had not been carried out since last 2 to 3 years. Also, connections were released to new Ag consumers on the existing network. Due to burden on existing network, Ag consumers were not getting quality power supply. Hence, it was necessary to carry out strengthening and augmentation of distribution networks in order to provide quality power supply to Ag consumers which in turn will help increasing agriculture production and living standard of farmers. Considering above facts, GoM has sanctioned the scheme of Rs. 749.72 Crs. for strengthening, renovation and modernization of existing distribution network in 5 nos. of districts of East Vidarbha Region namely Chandrapur, Gadchiroli, Bhandara, Gondia and Nagpur.

**14.6.2 Benefits:**

As the present tariff of Agricultural category is much less than average cost of supply, there is no direct monetary benefits envisaged. But still new Ag connections needs to be released to meet statutory obligation of Electricity Act 2003.

**14.6.3 Scope of the work:**

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In East Vidarbha Scheme under Phase-I, scope of works includes 13 new Sub-station, Augmentation of 5 nos. of power transformers, 11 nos. of additional power transformers, 546 nos. of new distribution transformers, 803 km HT line, Augmentation of 84 nos. of DTC, Sub-station Capacitor 9, Line Capacitor 39 and replacement of 4896 nos. of distribution box etc.

**14.6.4 Current Progress/ Status :**

As on 31.07.2022, out of above scope, 13 new Sub-stations, Augmentation of 5 nos. of power transformers, 9 nos. of additional Power Transformers, 535 nos. of new distribution transformers, 773 km HT line, Augmentation of 78 nos. of DTC, Sub-station Capacitor 9, Line Capacitor 38 and replacement of 4795 nos. of distribution box etc. work has been completed.

**14.6.5 Details of Funding :**

GoM has sanctioned Rs. 749.72 Crs. as a grant and disbursed the fund of Rs. 350 Crs. to Mahavitaran.

Scheme is completed as per the funds received from the GoM

**14.7 DPDC Scheme**

**14.7.1 Objectives:**

After formation of the Maharashtra state in 1960, Government has adopted a policy of balanced development on the basis of District as a unit for formulation of Five year plans and Annual plans. For this purpose, District Planning and Development Council (D.P.D.C.) have been constituted in every District. The District Planning and Development Council has now been replaced by District Planning Committee Constituted as per article 243 Z.D. of the 74th Amendment of constitution. The Minister in charge of the district is Chairman of the Committee. The Collector of the district is member Secretary of this committee. All the matters are put in front of the District Planning Committee and are to be sanctioned by this Committee.

The objective of GoM for implementing this scheme is for benefit as well as economic development of Scheduled Caste, Nav Buddha beneficiaries. Also this scheme is formulated to fill gap of development between Tribal and non-tribal area, to improve living status of Tribal peoples, to increase rate of social as well as economic development of Tribal peoples. This scheme is executed for the benefit of

the common people by general electrification and by carrying out system improvement works.

**14.7.2 Benefits :**

The work of general electrification such as new connections and System Improvement work are carried out from this fund. The electrification of streetlight connection, release Ag connections to Scheduled Caste & Nav Buddha beneficiaries & associated infrastructure work are carried out through these funds. Further, the electrification of un-electrified Tribal Wadi / Vastis, release of L&F as well as Ag connections to Tribal beneficiaries & associated infrastructure work are carried out through this fund.

**14.7.3 Details of Funding:**

As per Government Resolution No. Sankirna-2013/ Pra. Kra. 189/ Energy -5 Dt. 30.12.2013, funds under this scheme are released as grant to MSEDCL from the year 2013-14.

**14.8 Metering plan for Distribution Transformers of selected 502 AG feeders**

14.8.1 To study agricultural consumption in Maharashtra, Maharashtra Electricity Regulatory Commission (MERC) formed a working group (AGWG). AGWG selected 502 nos. of AG feeders to carry out the study. The assessment methodologies adopted by various DISCOMs of various states for electricity consumptions by Agricultural consumers were studied.

14.8.2 AGWG submitted its final report on 12.03.2020, with conclusion that, Feeder input based and Distribution Transformer based metering would be the best available solution for assessing agricultural consumption in the state.

14.8.3 In the MYT Order dated 30.03.2020, Case no. 322 of 2019, while addressing the challenges pointed out by AGWG in its report, the Commission conceded the interim solution suggested for AG billing based on Feeder-input and consumption of Distribution Transformer. Accordingly, MSEDCL was directed to operationalize feeder-input based AG billing on these selected 502 AG feeders.

14.8.4 With respect to feeder metering, MSEDCL has achieved 100% progress. As per the directives of MERC, MSEDCL submitted the DPR for “Metering plan for Distribution Transformers of selected 502 AG feeders” vide Ltr. No. Ce (Dist.)/ M-III/ DPR/ 502 Feeders/ 29761 dated 07-12-2021. The in-principle approval to the scheme is yet awaited.

14.8.5 The objectives of the scheme are:

- To operationalize Feeder-input and Distribution Transformer (DT) consumption based AG billing.
- To upgrade old/ obsolete meters and to replace the faulty meters of Distribution Transformers by advanced meters with sustainable technology.
- To assess accurate AG billing by avoiding any manual intervention in meter readings..
- To facilitate area specific energy audit, accounting energy in the feeder, DT phase balancing, Network and new connection planning.
- To collect consumption data for monitoring important distribution parameters to identify energy thefts, loss prone areas and take remedial actions towards loss reduction etc.

14.8.6 Funding Details: -

The funds for execution of the project will be arranged by availing loan from finance institutes up to 90% of project cost. Balance 10% from internal resources.

#### **14.9 New Service Connection (NSC) Scheme:**

14.9.1 There is a consistent increase in electricity demand, due to changes in lifestyle, consumption pattern and increase in customer base. The prime contributor for raising the electricity demand is the Industrialization process. To meet these requirements, continual up-gradation, extension of distribution lines and creation of new infrastructure such as Distribution Transformers, HT Lines, LT Lines and Substations etc. is of vital need for DISCOMs.

14.9.2 Approximately 9 – 10 Lakhs new power supply connections are released by MSEDCL every year. Therefore, 3 year (for FY 2019-20 to FY 2021-22) rolling CAPEX scheme proposed for 29,26,847 prospective consumers is as below:

Financial Years	FY 2019-20	FY 2020-21	FY 2021-22	Total
Nos. of Consumers	9,36,698	9,75,020	10,15,129	29,26,847
Load Demand (MW)	1,812.47	1,892.94	1,977.37	5,682.78

14.9.3 The objectives of the scheme are:

- To comply the provisions of EA-2003 by developing and maintaining an efficient, coordinated and economical distribution system in the area of Licensee.
- To release the new power supply connections to owners or occupiers of any premises on a complete application.
- To increase billing revenue.
- To reduce the HT - LT line ratio for improving reliability of Power Supply.

14.9.4 The Scope is as under:

Scope of works	New HV substation	43 Nos.
	Additional/Augmentation of Power Transformer	19 Nos.
	HT Lines-33 kV/ 22 kV/ 11 kV	1783.15 km
	LT Lines	786 km
	Distribution Transformers	7415 Nos.
	New Service Connections	29,26,847 Nos.

14.9.5 Funding Details: -

The funds for execution of the project will be arranged through the Financial Institutions like Rural Electrification Corporation Ltd./ Power Finance Corporation/ any other Financial Institution in the debt-equity ratio of 70:30%. The funds through loan are yet to be received.

Present Progress/ Status: The year-wise New connections released under the scheme is as below-

FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23 (up to date)
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FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23 (up to date)
900364	527337	746018	473465

#### 14.10 Revamped Distribution Sector Scheme (RDSS)

14.10.1 The Government of India (GoI) has come up with the Reforms-Based and Results-Linked Revamped Distribution Sector Scheme (RDSS) for supporting DISCOMs (except private DISCOMs) to undertake reforms and performance improvement in a time bound manner. The Scheme aims to carry out the works enabling improvement in the quality and reliability of power supply to consumers, by providing conditional financial assistance to DISCOMs to make the sector financially sustainable and operationally efficient.

14.10.2 The State Cabinet govt. of Maharashtra in its meeting dated 27-07-2022 has approved the RDSS scheme amounting to Rs. 39,602 Crore for further submission to GoI for sanction.

14.10.3 As per the approval of GoM, the Action Plan and DPR was submitted to the Nodal Agency for detailed scrutiny on 27-07-2022 and for appraisal of the Monitoring Committee for scheme approval. The Monitoring Committee in its 12th meeting held on 29-08-2022 sanctioned the Action Plan and DPR of MSEDCL for metering work and loss reduction work. The sanction was conveyed on 22-09-2022 by M/s. PFC Ltd.

14.10.4 DPR Cost and Government Budgetary support (GBS) approved by Govt. of India (GoI) for MSEDCL is as under-

Rs.Crore

Sr. No.	Name of Project	Total Project Cost	GBS *	Additional Incentive ** for Phase-I Smart metering (GoI grant)
1	Smart Metering Works	14547.45	2182.12	505.82
2	Loss reduction Works	13149.32	7889.59	NA
3	PMA Charges	26.96	16.18	NA
<b>Grand Total</b>		<b>27723.73</b>	<b>10087.89</b>	<b>505.82</b>

\* 15%of the approved cost of the metering including the operational cost, provided that it is

Sr. No.	Name of Project	Total Project Cost	GBS *	Additional Incentive ** for Phase-I Smart metering (Gol grant)
not more than Rs. 900 per meter for consumer metering only.				
** Maximum incentive GBS for deployment of prepaid Smart meters by December, 2023- 7.50% of the cost per consumer meter including operational cost or Rs. 450 per consumer meter, whichever is lower.				

- 14.10.5 The scope of the scheme is
- To install Prepaid Smart Meters to all the Non-Ag Consumers, Non-Ag DTC above 25 kVA Capacity & all outgoing Feeders & Boundary Locations.
  - To implement the activities like Ag Feeder Separation, HVDS, AB Cabling, Capacitor Installation, Up gradation of Conductor, Feeder Bifurcation etc. for Reduction of Distribution Losses.

- 14.10.6 The Brief Scope of Works Approved by MoP, Gol are:
- Consumer Metering : 2,24,88,866 Consumers (Non-Ag)
  - DTC Metering: 4,07,507 DTCs
  - Feeder & Boundary Metering: 27,826 Feeders
  - Separation of Ag and Non-Ag Feeders : 4,712 Feeders
  - Arial Bunch (AB) Cable to reduce the theft. : 30,332 Km
  - Upgradation of conductor (33,22,11kV & LT) : 19,884 Km
  - Multi Meter Boxes : 3,98,080 Nos.
  - Feeder bifurcation (33, 22 & 11kV feeders) : 9,843 Km
  - Provision of HVDS (DT and HT line). : 5,170 DTCs
  - Installation of Capacitor to Substations : 2,051 Nos.
  - IT/OT : Rs. 168 Crores

14.10.7 Smart Metering Works under RDSS is proposed under Chapter "Details of Opex Schemes"

**14.11 DDF/Non-DDF Scheme: -**

14.11.1 MSEDCL implements DDF Scheme for individual or group of applicant/consumers that are on the same/contiguous premise/s and requesting power supply through Dedicated Distribution Facility (DDF) as per provisions of MERC Supply Code Regulations, 2021. The DDF Scheme is also implemented for execution of works of establishment of 33/11 kV S/s on specific demand, laying and shifting of OH lines/ UG cables up to 33 kV.

14.11.2 MSEDCL implemented the Non-DDF CC&RF Scheme for providing infrastructure to provide power supply to new consumer's/group of consumer's who want early connection's & opts to execute the work and bears the cost of infrastructure then the refund of the cost of infrastructure given by way of adjustment through energy bills.

14.11.3 The objectives of DDF/Non-DDF scheme are:-

- To provide Dedicated Distribution Facility (DDF) i.e. separate dedicated electric line from substation or DTC and the substation or DTC to the applicant or group of applicant's on the same/contiguous premises.
- Establishment of 33/11 kV S/s on specific demand, laying & shifting of OH lines/ UG cables up to 33 kV.
- The development of infrastructure required for release of new connection's.

14.11.4 The following benefits are envisaged from the scheme:-

- Providing reliable and uninterrupted power supply to DDF consumers.
- Meeting Universal Supply Obligation.

14.11.5 **Current Status:** -

The DDF Scheme is an ongoing scheme & estimates are sanctioned as per request's of applicants.

14.11.6 **Funding Details:** -

The 100% funds for execution of DDF scheme are provided by the applicant/consumers as per provisions of MERC Supply Code Regulations, 2021. The works in Non DDF CC&RF Scheme are executed by the applicant/consumers and infrastructure cost is refunded by MSEDCL through internal sources.

#### **14.12 Underground Works in Extended area of Baramati Municipal Corporation Scheme: -**

14.12.1 MSEDCL is implementing Underground Works under Extended area of Baramati Municipal Corporation Scheme in Baramati Municipal Corporation area with total capital cost of Rs 103.62 Crs. In order to meet the load demand. The project is divided into 3 phases.

- a. **Phase-I:-** Underground Works of Extended area of Baramati Municipal Corporation- **Total Cost Rs 54.03 Crs.**
- b. **Phase-II:-** New Substations & Conversion of 22 kV to 11 kV network in Baramati Extended area-**Total Cost Rs 30.11 Crs.**
- c. **Phase-III:-** New Substation at Medad & additional Underground works in Baramati Extended area-**Total Cost Rs 19.48 Crs.**

The scheme is 100% funded by Government of Maharashtra (GoM) grant.

14.12.2 The objectives of the scheme are:

- Strengthening & Augmentation of Distribution Network.
- Reduction of AT&C losses.
- Conversion of OH to UG network at accident prone area & densely populated area. By providing RMU at multiple locations, easily load diversion can be done by isolating faulty section and minimize interruption area.
- Laying Ring Main lines results all network convert to Ring Main network rather than existing radial network.

#### **14.13 MIDC RED GRADE SCHEME:**

14.13.1 MSEDCL has implemented “MIDC RED GRADE” Scheme with Total Estimated Cost Rs 98.47 Crores for the up-gradation of 31 Nos. identified high risk “RED GRADE” Substation[s] in MIDC area[s]. In March 2015, major fire incident occurred in 33/11 KV Lote MIDC Substation, after which analysis of analysis of loading, infrastructure and operational parameters in MIDC Substations was carried out and graded as Red, Yellow and Green.

14.13.2 It was observed that many substations were more than 20 years old. The power transformers have served useful life and many were found overloaded [above 80%]. The substations do not have adequate infrastructure to cater future load. The Ring Mains system is not available for the outgoing feeders at many Substations. The spares are not available in many substations and sufficient ground clearance of lines is not maintained due to subsequent increase in height of roads over span of time. The “MIDC RED GRADE” Scheme has been implemented for all up-gradation of the identified 31 Nos. high risk “RED GRADE” Substations under Baramati, Solapur, Gondia, Kolhapur, Hingoli,, Nanded, Parbhani, Aurangabad Urban, Ratnagiri, Vashi, Wardha, Palghar, Ahmednagar and Nashik Urban Circle.

14.13.3 The “MIDC RED GRADE” Scheme is approved by Board of Directors vide Board Resolution No. 830, Dated: 09-02-2017. The in – principal approval for “MIDC RED GRADE” Scheme has been received from Hon’ble MERC vide Letter No. MERC/ Capex/ 2017-18/ 4783, Dated: 28-11-2017.

14.13.4 The objectives of “MIDC RED GRADE” Scheme are:

- Establishment of New Substations and Augmentation of Capacity of Existing Substations for meeting future load growth.
- Renovation & Modernization of Substations and Distribution Network in MIDC areas.
- Providing Ring Mains system in MIDC areas.

14.13.5 The brief Scope of Works in “MIDC RED GRADE” Scheme are as given below:

Sr No.	Particulars	Unit	Quantity
1	33/11 KV New Substations	No	6
2	Augmentation of Power Transformers	No.	19
3	Outdoor type VCB[s]	No.	21
4	Conductor Augmentation	Km	86
5	Underground Cables	Km	86
6	33 KV Feeder Bay	No.	5
7	33 KV Line Feeder	Km	5.2
8	Ring Main Unit	No.	15
9	11 KV Feeder Bay	No.	2
10	New DTC[s] and Augmentation of DTC[s]	No.	72
11	Other Works [AB Switches, LT Cables, Renovation, etc]	EA	-

14.13.6 The following benefits are envisaged by the implementation of “MIDC RED GRADE” Scheme:

- 24x7 reliable and quality power supply to the industrial [high end] consumers of MSEDCL.
- Increase in revenue of MSEDCL.

14.13.7 Current Status:

The majority of work has been completed and financial closure of the scheme is under process.

14.13.8 Funding Details:

The fund of Rs 98.47 Crores for the execution of “MIDC RED GRADE” Scheme has been provided by Maharashtra Industrial Development Corporation [MIDC] to MSEDCL as an Interest Free loan.

#### 14.14 HVDS Scheme

14.14.1 Approval of HVDS scheme:

- Government of Maharashtra vide G.R. dated 05.05.2018 has approved Ag HVDS scheme of Rs 5048.13 Crs, for providing power supply to the Agriculture paid pending applicants as on 31 March 2018 and for establishment of new sub stations to cater the agriculture load.
- For Vidharbha & Marathwada, Government of Maharashtra will borrow loan (USD \$ 346.00 Mn ) from Asian Development bank and provide financial support in terms of Grant to MSEDCL for implementation of HVDS scheme.
- For Rest of Maharashtra Rs. 2800 Crs loan approved by GoM is being borrowed by MSEDCL from Financial Institutions (Punjab National Bank Rs.1500 Crs & Punjab & Sind Bank Rs.1300 Crs).
- GOM vide G.R. dated 15.09.2021 has given approval to revised scheme cost Rs.4734.61 Crs of HVDS scheme and also granted time limit extension to HVDS scheme till March-23.
- Under HVDS scheme Distribution transformers of capacity 10kVA, 16kVA & 25kVA will be used for releasing Ag connections. Maximum One or Two Ag connection will be released on each transformer

14.14.2 **Advantages of HVDS**

- Reliable and uninterrupted Power Supply
- In the existing LVDS, due to lengthy LT lines and high current flowing through it, there is issue of low voltage at consumer end. The low voltage is causing frequent motor burnt out incidences. If HVDS system is implemented, the current flowing through the lines and associated equipment will be reduced by more than 25 times. This will result into improvement in the voltage resulting into reduction in failure of equipment like DTs, motors, breaking of conductors, etc. and hence substantial reduction in interruption of electric supply. Better voltage and less interruption will facilitate the reliability and quality of power supply to Ag. consumers. Further, there will be increase in the life of equipment, saving the maintenance cost of utility
- Reduction in electrical accidents:  
As the HT line is controlled by circuit breaker in the sub-station, the circuit breaker will trip whenever line conductor snaps on the ground, avoiding

the electrical accidents due to live conductor.

- Reduction in distribution losses:  
As mentioned above, the current flowing through HT line in HVDS will reduce by more than 25 times in LVDS will result into reduction in the distribution losses. Further, in HVDS, theft of energy by hooking the lines, as frequently observed in LVDS will be eliminated. This will result into further reduction in distribution losses.
- Reduction in DT fail:  
In HVDS, there will be only one or two Ag. consumers on one DT. Hence, the consumer will feel ownership of the DT, will take responsibility and will not allow any unauthorized connection on the DT. This will avoid overloading of DTs and hence, there will be substantial reduction in DT failure rate due to overloading of DTs, as observed in LVDS. Further, in the event of failure of DT, only one or two consumers will be affected as against 15-20 consumers in existing LVDS.

Thus, it can be seen that by implementing HVDS, reliability and quality of power supply to Ag. Consumers in the state will be improved to great extent, thereby securing the stable energy supply and improving the efficiency of Ag. production as well as living standard of rural population in the state.

#### 14.14.3 Tenderization

- Standard Bidding Documents (SBD) is prepared by HO for full turnkey and partial turnkey tenders.
- In case of full turnkey tenders circle wise tenders are floated by concerned chief engineers and in case of partial turnkey sub division wise and section wise tenders are floated by concerned circle office.
- E-Tendering process is adopted for all tenders.

#### 14.14.4 Progress (As on 15<sup>th</sup> September, 2022)

#### **Progress of AG Connection:**

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Name of Region	Freezed Ag Paid Pending consumer Scope	DTC Commissioned	AG Pump Commissioned
Vidarbha & Marathwada	78719	73080	74428
Rest of Maharashtra	62477	60361	61633
<b>Maharashtra</b>	<b>141196</b>	<b>133441</b>	<b>136061</b>

**Substation progress:**

Region	New Substation		Additional Power Transformer		Capacitor Bank	
	Scope	Comm	Scope	Comm	Scope	Comm
Vidarbha & Marathawada	63	48	34	32	13	9
Rest of Maharashtra	39	10	27	18	2	-
<b>Total</b>	<b>102</b>	<b>58</b>	<b>61</b>	<b>50</b>	<b>15</b>	<b>9</b>

**14.15 Incomer Metering**

14.15.1 Providing and fixing energy metering arrangement on 33kV and 22kV Incomer feeders at 33 or 22/11kV substations and 22kV switching stations.

14.15.2 **Objective:** -

The source of power to MSEDCL substation comes from MSETCL's substation at 33/22kV level (i.e. Incoming line to MSEDCL Substation). For proper energy audit of substation i.e. for calculating energy loss, accurate measurement of incoming units and outgoing units is important, hence energy meters should be provided on all Incoming lines of the substation.

14.15.3 Benefits of the incomer metering Scheme are as below:

- There will be accurate measurement of incoming units to MSEDCL Substation.
- Accuracy in substation Energy audit.

14.15.4 **Scope of Work:** -

To provide, install and commission Metering arrangement for incoming feeders at 765 Sub-stations.

- 1) 33kV CTs: 2112 Nos.
- 2) 22kV CTs: 18 Nos.
- 3) 33kV PTs: 2112 Nos.
- 4) 22kV PTs: 9 Nos.
- 5) HT ToD Meter: 765 Nos.
- 6) AMR: 765 Nos.
- 7) Metering Cubicle: 55 Nos.

Sr no.	ZONE	DPR Amount in Crs	LOCATIONS IN NOS.
	AURANGABAD ZONE	0.036	1
	NANDED ZONE	0.985	27
	LATUR ZONE	4.67	128
<b>1</b>	<b>AURANGABAD REGION</b>	<b>5.691</b>	<b>156</b>
	BHANDUP ZONE	4.152	55
	KONKAN ZONE	0.109	3
	KALYAN ZONE	0.875	24
	NASHIK ZONE	4.561	125
<b>2</b>	<b>KONKAN REGION</b>	<b>9.697</b>	<b>207</b>
	AKOLA ZONE	5.838	160
	AMRAVATI ZONE	5.327	146
	CHANDRAPUR ZONE	0.182	5
	GONDIA ZONE	0.401	11
	NAGPUR ZONE	1.736	46
<b>3</b>	<b>NAGPUR REGION</b>	<b>13.484</b>	<b>368</b>
	KOLHAPUR ZONE	1.095	30
	PUNE ZONE	0.114	4
<b>4</b>	<b>PUNE REGION</b>	<b>1.209</b>	<b>34</b>
<b>STATE TOTAL</b>		<b>30.081</b>	<b>765</b>
		<b>30.1</b>	

## **14.16 Business Analytics and Demand Forecasting Solution**

### **14.16.1 Objective**

Mahavitaran distributes electricity to consumers across the State excluding some parts of Mumbai. MSEDCL sources power from Mahagenco, Central Sector and Private Sector projects. Around 75% of revenue of MSEDCL goes towards power purchase expenses. The constant pressure to optimize the cost of power purchase due to the danger of the industrial sector moving out of state (Open Access) owing to higher power tariffs. In view of this, MSEDCL intends to purchase a Software Solution with the capability of energy load forecasting and power trade strategy management along with power purchase optimization/power portfolio optimization.

The demand-supply gap forecast is the difference between power demand and power availability. The different parameters that influence power demand and hence load forecasting are Weather Parameters, historical demand/load, load growth projections, historical lifestyle & lifestyle projections, festivals, holidays, elections, the economic behavior of the country, policy decision of different statutory bodies/ Govt. etc. The different parameters that affect power availability from Generating units are maintenance schedule, Maintenance Planning of generating stations, Outage planning of generating units, the life of generating units, long & short-term power purchase contracts with generating units, fuel availability for generating units on short term & long term basis, various commercial conditions of power purchase contracts & their legal dispute status, various past, present & future decisions/ stays on various Power Purchase Agreements (PPAs) & other related parameters.

### **14.16.2 Benefits**

The proposed solution will enable measurable improvements including:

- Demand Forecasting
- Scenario Analysis
- Demand Supply Position Map (Load Generation Balance)
- Power Portfolio Management
- Scheduling Optimization

- Trade Optimization
- Enterprise Visualization

**14.16.3 Scope of the work**

- Design, Implementation, commissioning of Business Analytics and Demand forecasting, Power Optimization Solution
- Integration of proposed solution with MSEDCL existing system, SCADA & proposed Substation Monitoring Scheme (SMS) of MSEDCL, existing AMR & SCADA, Scheduling software of MSLDC/WRLDC.
- Fetching all necessary data from external sources required as input for forecasting, Optimization and analysis purposes.
- Debriefing with Analytics including optimization with AI and ML and documenting causes, effects, patterns and results using incident-specific data based on time, date and location.
- Designing Live Dashboard for Business Analytics and Current Status of Incidents
- Providing Cloud Services for the deployment of the proposed solution.
- Provide Facility Management Service (FMS) for Application Maintenance for five years

**14.16.4 Current Progress/ Status**

- Tender with an approved estimate Rs. 47.34 Crs is floated on MSEDCL eTender Portal.

**14.16.5 Funding of details**

- As envisaged under the RDSS IT / OT scheme, a 60 % grant is considered. Balance expenditure will be made from internal resources/loans.

**14.17 Enterprise GIS & Network Analysis Solution**

**14.17.1 Objectives**

MSEDCL implemented GIS and Network Analysis (NA) as part of the R-APDRP IT program for 130 towns in 2011 (data updated up to July 2016). It has also mapped the whole distribution network at the HT level and all AG

Consumers (updated up to Mar-2020). MSEDCL desires to implement a comprehensive GIS & NA solution with updated GIS & NA data of all areas under MSEDCL jurisdiction to efficiently maintain the electrical network, carry out smooth network planning and derive useful analysis of network parameters.

The proposed GIS and NA system will expand the capabilities at the Enterprise Level. MSEDCL intends to have an integrated WEB-MOBILITY-GIS-Analytics-based System, conceptualized to cater to core technical requirements of the processes under day-to-day Operations, Maintenance and Projects activities of MSEDCL staff, officers and Management.

The proposed Network Analytics solution is an integrated platform of web and mobile applications. Network addition, deletion, and changes to be captured on the Mobile application. Network shall be created automatically, online, based on Mobile App information.

The NA System will be able to simulate or demonstrate technical impact of Distributed Generation (like Grid connected RE Generation Systems), EV Charging Stations, and Critical Harmonic/power quality-prone consumption points. System may derive Grid Synchronization/Stability/Quality parameters/requirements of such elements.

The software will support various analysis including

- Network Planning Software Basic Module,
- Network Configuration Optimization,
- Enhanced Substation Modeling,
- Load flow with Load Profiles,
- Contingency Analysis,
- Reliability Analysis,
- Advanced Project manager,
- Long-Term Dynamics,
- Techno-economic Analysis

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14.17.2 **Benefits**

The proposed solution will enable measurable improvements including:

- GIS Implementation at Enterprise Level
- Reliability and Performance Indices
- Network System behavior and response to disturbances
- Optimization of asset utilization and operating efficiency of the electric power system.

**14.17.3 Scope of the work**

- Implementation of Enterprise GIS solution for MSEDCL with 1-year warranty and 4 years of Annual Technical Support (ATS).
- Implementation of Enterprise Network Analysis solution for MSEDCL with 1-year warranty and 4 years of Annual Technical Support (ATS) from OEM.
- Integration of GIS Solution & NA Solution with each other and other systems of MSEDCL. Eg. Load Forecasting, SAP-ERP, MDAS, ECCC, Dashboard.
- Provision of Facility Management Services (FMS) for GIS Solution & NA Solution for 5 years for operation & maintenance.
- Training of GIS Solution & NA Solution to MSEDCL users.
- Provision of Cloud Services for deploying GIS Solution & NA Solution from a MeitY empaneled and SQTC Audit Complaint Cloud Service Provider for 5 years.

**14.17.4 Current Progress/ Status**

- Tender with an approved estimate Rs. 49.81 Crs is floated on MSEDCL eTender Portal

**14.17.5 Funding of details**

- As envisaged under the RDSS IT / OT scheme, a 60 % grant is considered. Balance expenditure will be made from internal resources/loans.

**14.18 SUB-STATION MONITORING SYSTEM:**

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**14.18.1 Objective:**

Substations are inevitable components in all power networks. It is the heart of the distribution network. The entire downstream network is controlled and managed by sub-stations. Substation equipment health monitoring is very important for providing reliable and continuous power to consumers. Substation equipment failure plays a major role in the reliability of power delivery. Having an important role within the power system, substations are required to be equipped with a great variety of monitoring and control devices. Therefore, it becomes of utmost importance to have real-time data of sub-stations.

**14.18.2 Benefits to MSEDCL:**

- Improved monitoring and situational awareness of remote substations
- Monitoring of substation data in real-time
- Reducing the work of operators like taking hourly data, recording the tripping, etc.
- Substation equipment health monitoring
- Feeder Interruption analysis and computation of reliability indices such as SAIDI, SAIFI, etc.
- Monitoring failures and breakdowns, Feeder load profiling, Load growth planning, and management
- Feeder demand monitoring, Energy Accounting
- Reporting of violations/exceptional values of different equipment in substations
- Analysis and diagnosis of the condition of the substation equipment
- Load balancing, Data for Load forecasting
- Data for Strategic, Managerial, and Operational decisions

**14.18.3 Benefits to Customers:**

- Quick actions from MSEDCL to reduce downtime and improve consumer satisfaction.
- SMS alerts facility can be extended to consumers so that consumers will know that the feeder is under breakdown.

**14.18.4 Brief Scope of work:**

- Supply, customization, installation, deployment and maintenance of necessary hardware, centralized software and communication equipment at 3257 nos. of 33/22/11 kV Substations and switching stations across MSEDCL and necessary HES/DAS software at cloud on CAPEX+OPEX basis.
  
- Monitoring of
  - Incoming and outgoing feeders
  - Capacitor bank
  - Station distribution transformer
  - Substation DC auxiliary power supply
  - Power Transformer's
    - Oil temperature, Winding temperature, On Load Tap changer (OLTC), Oil level, Buchholz relay & Differential relay
  
- Feeder control action also proposed under ADMS (Automatic Demand Management Scheme) for all feeders.
  
- The time for implementation of project is proposed to be 1 year from date of issue of LOA and FMS period as 8 years. Total contract period will be 9 years.

**14.18.5 Funding Details:**

As envisaged under the RDSS IT / OT scheme, a 60 % grant is considered. Balance expenditure will be made from internal resources/loans. Scheme approval from MoP is awaited.

**14.19 ERP SAP S4 HANA**

**14.19.1 SAP ERP up-gradation to S/4 HANA & implementation of SAP TRM module**

**14.19.2 Objectives**

MSEDCL has automated its business processes by implementing SAP-ERP which covers Financial Accounting & Control (FICO), Projects Systems (PS), Plant Maintenance (PM), Material Management (MM) ERP core modules are live since 2015. In addition to ERP core modules MSEDCL has developed five custom modules.

Further SAP HRMS modules such as Payroll (PY), Organizational Management (OM), Personal Administration (PA), Time Management (TM), Travel Management and Performance Management along with 13 nos. of custom-developed allied modules developed on SAP ERP platform are live since Dec-2020.

MSEDCL has implemented SAP ECC 6.0 EHP 5 (702) with database Sybase 15.7. SAP application and Database are hosted on the AWS Cloud.

Due to manifold increase in transactions every year, the performance of SAP ERP is degrading gradually. Also, M/s SAP has declared end of support for SAP ERP ECC 6.0 in the year 2027. Hence, it is planned to upgrade existing SAP ERP ECC 6.0 platform to S/4 HANA platform. S/4 HANA platform is the latest version of SAP ERP, wherein due to change in database from Sybase to HANA the performance of the system will improve. Further, SAP S/4HANA offers increased scalability to better support data storage and data analysis needs.

MSEDCL, is also planning to implement additional SAP ERP modules SAP Treasury and Risk module (TRM) for loan and grant management required by finance section.

**14.19.3 Benefits of SAP S4 HANA:**

- The SAP HANA in-memory database helps organizations to execute transactions and analyse business data in real-time.
- User experience is powered by Fiori – browser based and convenient to use.
- Embedded real-time analytics, and HANA powered in-memory processing to handle large data volumes of operational and transactional business data.

**14.19.4 Benefits of SAP Treasury and Risk Module (TRM)**

- With the SAP Treasury and Risk Management application, one can integrate cash flows, transactions, loan ,grant and optimize straight-through processing with full-view and real-time analysis, audit trails, and compliance reporting.

**14.19.5 SCOPE:**

- I. Upgradation of existing SAP ECC 6 EHP 5.0 platform to SAP S/4 HANA latest version including database migration
- II. Implementation of SAP TRM module
- III. Upgradation of Solution Manager from 7.1 to 7.2 (latest version).
- IV. Training to end users on new system.
- V. Deployment of SAP S/4 HANA on cloud for 5 years
- VI. Application Maintenance Services (AMS) towards Support, Maintenance & Enhancement of all existing SAP-ERP modules, newly implemented SAP TRM module & Dashboards (including Custom developed modules) for 5 years.

**14.19.6 Current Progress / Status**

Tender preparation is in the progress.

**14.20 Procurement of SD-WAN Solution:**

**14.20.1 Overview**

MSEDCL wishes to procure SD-WAN solution to reduce the high cost of WAN bandwidth, enable better application performance, and improve internal business communication and IT agility by deploying Software-Defined WAN (SD-WAN) across MSEDCL remote offices up to Circle offices.

**14.20.2 Benefits**

- i. SD-WAN solution shall improve performance of connectivity by using link optimization. The solution shall also manage the Link Load on available paths and auto failover for better performance of links.
- ii. SD-WAN Solution shall have inbuilt QoS mechanism which is having application recognition and provide the bandwidth priority for most critical applications. This may include dynamic path selection, sending an application on faster link or even splitting an application between two paths to improve performance by delivering it faster.
- iii. SD-WAN solution shall improve the MSEDCL Video Conferencing ( Data/Voice/Video traffic ) by using polices, performance of the links such as jitter, latency, packet loss, etc and features like Video stream splitting ,de-duplications and automatic traffic diversion for better link performance for MSEDCL video Conferencing Solution.
- iv. SD-WAN solution shall create full mesh connectivity among all the MSEDCL remote offices and integrated with existing network.

#### **14.20.3 Scope of Work**

MSEDCL is looking for upgrading of its existing Network with SD-WAN across Maharashtra up to Circle Office level with high performance, reliable, consistent network to achieve best performance of MSEDCL applications. It shall be bidder's responsibility to integrate any new or existing FTTH broadband, MPLS, ILL, broadband link on supplied wifi enabled SD-WAN device during the contract period. The SD WAN Device(s) integrated with external WiFi access points, must be configured as per requirement.

#### **14.21 Extension of SIM based services under Network Bandwidth Service Providers NBSP contract**

##### **14.21.1 Objectives**

Maharashtra State Electricity Distribution Company Limited (MSEDCL) is Electricity Distribution Company having consumer base of approx. 2.80 Crore consumers throughout Maharashtra. MSEDCL has followed innovative procedures for meter reading and billing such as photo meter reading, spot

billing, reading through mobile app etc. to maintain transparency and accuracy of LT energy bills. The HT consumer meter readings were taken from the meter data downloaded from HT consumer meters using MRI instruments. To avoid human intervention in the meter reading process, MSEDCL has adopted metering technologies such as RF Meters for LT consumers and AMR-enabled (Automated Meter Reading System) meters for HT consumers and LT consumers having load above 20kW.

The GPRS enabled DCUs will have RF port and meter data of approx. 2000 RF meters can be stored in a DCU. Using DCUs, RF meter readings are available remotely through GPRS network, at central AMR server. GSM/GPRS modems are installed at HT Consumer meter locations and LT consumers having load above 20kW and meter readings of these consumers, are available through GPRS network at centralized AMR server.

MSEDCL is using AMR system, since more than a decade, thus building a comprehensive, transparent, system based, truly automatic metering reading system without any scope of manual intervention. Further, Meters at Feeder and DTC (Distribution Transformer) are AMR enabled meters, wherein a modem is installed at each metering location and meter reading of Feeders and DTCs is done through AMR.

#### 14.21.2 **Benefits**

The proposed solution will enable network connectivity for AMR activities by appointing different network bandwidth service providers (NBSP contract) for SIM and backhaul link services. This will in turn help in building comprehensive, transparent, system based, truly automatic metering reading system without any scope of manual intervention.

The proposed data enabled SIMs will be utilized in various MSEDCL projects such as:

- i.* Smart Prepaid Meters of Ag Consumers
- ii.* Substation Monitoring System for all substations in Maharashtra

- iii.* Other IoT projects planned under RDSS scheme such as DT Health Monitoring system, communicable FPI etc.
- iv.* LT connections above 20 kW, HT connections, feeders and DTCs

**14.21.3 Scope of Work**

- i. Supply of the required no. of 4G/4G LTE project SIMs (Public or Private as per requirement) with data and SMS services enabled to MSEDCL.
- ii. Provision for sufficient Backhaul leased lines/secure tunnels through internet at MSEDCL Data Center (Mumbai) and MSEDCL Cloud Data Center along with the configuration and integration of the Backhaul leased lines/secure tunnels through internet with the Data Centre, MSEDCL Cloud Data Centre.
- iii. Provision of leased lines of following capacity at Data Center and MSEDCL Cloud Data Center :

Sr. No.	Location	No. of Links per Service Provider	Minimum Bandwidth required
1	MSEDCL Data Center Mumbai	1 Nos.	2 MBPS
2	MSEDCL Cloud Data Center on AWS	1 Nos.	8 MBPS

- iv. Provision for web portal which should have minimum following facilities.  
Dashboard, Management of SIM cards, SIM diagnosis, Ticket Management, Reports, User management
- v. Approx. 6,00,000 AMR endpoints are estimated to be covered during contract period in phase wise manner. At present, 2,07,750 SIMs are in use for AMR activities. Additionally, 3,92,250 no. of SIMs are estimated in phase wise manner for AMR activities during the period of contract.
- vi. **BANDWIDTH REQUIREMENT**  
AMR endpoints in different projects of MSEDCL have different bandwidth requirements. Therefore, Cellular Data Plans with following data usage limits will be required,
  - 50 Mb per SIM per month

- 100 Mb per SIM per month
- 500 Mb per SIM per month
- 1000 Mb per SIM per month

## **14.22 Procurement of IT Infra**

### **14.22.1 Objectives:**

Procurement of IT Infrastructure equipment such as laptops, printers, scanners etc. is done centrally by IT Department after evaluating the requirement received from concerned MSEDCL offices.

### **14.22.2 Benefits:**

- The IT infra equipment is procured across various offices for similar specifications.
- It is ensured whether adequate security policies are taken care at the time of Installation & Commissioning of the IT infra.
- To introduce best practices for Refreshment-Disposal of ICTE resources (Hardware/Software) of MSEDCL.
- To establish cost effective structure for life cycle of ICTE items and optimum resource utilization & reutilization.

### **14.22.3 Scope of work**

Scope of work will include procurement of IT infrastructure equipment such as laptops, printers, scanners etc.

### **14.22.4 Funding of Details:**

Procurement is done through capital budget as per the MSEDCL requirements.

### **14.22.5 Phasing Details etc.**

Procurement of IT equipment is done as per requirement received from various MSEDCL office.

## **14.23 INFRA-II SCHEME DETAILS**

**14.23.1 GENERAL INFORMATION:**

To erect and commission new infrastructures such as New Sub-stations, Additional Power Transformers, Erection of New and augmentation of DTCS with associated HT LT Lines, etc. and also includes Up gradation and Modernization of existing infrastructure and New Service Connections to the prospective consumers.

**14.23.2 OBJECTIVES**

- Meeting Load Growth
- Enhancing network for releasing new connections of Residential, Commercial, Industrial as well as Agriculture Pump Consumers
- Up-gradation of existing system
- Providing reliable & quality supply
- Reduction in Distribution Loss
- Reduction in Distribution Transformer Failure Rates

**14.23.3 Financial Details of Infra-II Scheme**

- Total scheme cost of Infra-II scheme is Rs. 8304.32 Crs.
- REC has sanctioned 80% loan of Rs. 6643.45 Crs.
- GoM has sanctioned 20% Equity of Rs.1660.86 Crs .  
The total expenditure up to March-2022 is Rs. 7903.14 Crs.

Infra-II Scheme is closed in March-2019. Physical Closure of Infra-II Scheme is done.

However, expenditure is incurring due to release of final 10% retention amounts of some balance tenders.

**14.24 R-APDRP Scheme**

14.24.1 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.

14.24.2 R-APDRP scheme includes following:

- Urban areas- Towns and cities with population of more than 30,000 are covered under the scheme.
- Project is taken up in Two parts Part 'A' and Part 'B',
- Part A includes the projects for establishment of Base Line Data and IT applications for energy Accounting /Auditing and IT Based Consumer Service centres.
- Part B includes regular distribution strengthening and augmentation projects to reduce AT&C Losses upto 15%.

14.24.3 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.

14.24.4 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
- 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.

14.24.5 Progress of works:

A) 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) All 128 towns Declared as go-Live as on Oct'14.
- c) 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.

B) Achievements of R-APDRP Part B and SCADA Part B:

- a) The achievements are as given below:

Sr. No	Activities	Unit	Scope	Achievement
1	New Sub-stations	Nos	135	135
2	Aug Of Power Transformers	Nos	29	29
3	Add of Power Transformers	Nos	35	35
4	New Distribution Transformers HVDS	Nos	5823	5823
5	Aug of Dist. Transformer	Nos	3624	3624
6	RMU	Nos	1370	1370
7	Numerical Relay	Nos	3913	3913
8	WTI/OTI	Nos	403	403

- c) All 123 Towns are declared as completed and financially closed.

**14.25 SCADA Part A**

14.25.1 SCADA is 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. The eligible towns are Amravati, Malegaon, Sangli, Solapur and Greater Mumbai for SCADA and DMS, and Pune, Nashik and Kolhapur for Only substation SCADA.

14.25.2 The SCADA Part A Includes the following scope of work:

- a) Establishment of SCADA/DMS control centre 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

14.25.3 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	1653	1653

- a) All 8 towns are completed as on March 2018
- b) The third party verification by the Agency appointed by PFC is completed and the reports are accepted by PFC.

### **14.26 Integrated Power Development Scheme (IPDS-I)**

14.26.1 Government of India has launched Integrated Power Development Scheme (IPDS) for urban area (Statutory Towns) only. The existing scheme of R-APDRP is subsumed in this new IPDS scheme.

14.26.2 Objectives of IPDS:

- 24x7 Hrs Power supply for consumers.
- Strengthening of electrical distribution network.
- Reduction of AT&C Losses.

14.26.3 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.

14.26.4 The DPRs have been prepared as per the guidelines of IPDS and in consultation with Local MP's. Government of India has approved the Project cost of Rs 2300.43 Crs for IPDS under MSEDCL on 16.03.2016. The works under this scheme are executed on Full Turnkey Contract basis. The tenders of the same have been floated at HO and Zonal level.

#### **14.27 Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY)**

14.27.1 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.

14.27.2 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

14.27.3 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.

#### **14.28 Saubhagya Scheme**

14.28.1 Govt. of India has launched 'Pradhan Mantri Sahaj Bijli Har Ghar Yojana "Saubhagya", on September 25, 2017.

14.28.2 Objectives of Saubhagya Scheme:

- Providing last mile connectivity and electricity connections to all un-electrified households in rural areas.
- Providing Solar Photo Voltaic (SPV) based standalone systems for un-electrified households located in remote and inaccessible villages/Habitations where Grid extension is not feasible or cost effective.
- Providing last mile connectivity and electricity connections to all remaining economically poor un-electrified households in urban areas.

14.28.3 Provision of Funds: 60% Grant Central Government.

10% Utility/ State Government

30% Loan from FIs/ Banks

- Additional grant (50% of loan component i.e. 5% for special category states and 15% for other states) under the scheme will be released subject to achievement of 100% household electrification of all willing households by 31st December, 2018.

14.28.4 Household Electrification as per Saubhagya Dashboard:

- Maharashtra has completed the 100% electrification total 10,93,614 nos. of connections are released i.e. up to 27.12.2018, as per the Saubhagya Dashboard. Fortnightly progress report (till 31th December-2018) is submitted to REC/MoP.
- As on 31.03.2019 15,17,922 households are electrified after 10.10.2017 and achieved 100% electrification in Maharashtra State.

**14.29 Reactive Power Management Scheme**

14.29.1 Ministry of MoP, Gol has sanctioned the project through PSDF (Power System Development Fund) on 25.08.2022 for Rs 132.62 Crs. The amount of grant sanctioned is Rs 119.36 Crs ( 90 % of the approved project cost).

14.29.2 Funding Mechanism: 90% grant and 10% own contribution

14.29.3 Time period of Completion:

As per the sanction letter the work (including the financial closure is to be

completed within 13 (Thirteen) months from the date of release of the first installment.

#### **14.30 Feeder Separation under RDSS**

14.30.1 Feeder separation scheme for separating agriculture consumer on a feeder from other domestic and non-domestic consumers for balanced mix feeder is considered.

14.30.2 Feeder segregation allows greater revenue potential as it helps in reducing the theft and technical losses that prevail in unmetered agricultural consumption. Feeder separation also helps in reducing the peak power purchase cost through better distribution of agricultural load, leading to savings. The core objective of feeder separation is to provide regulated supply to agricultural consumers and continuous supply to non-agricultural consumers in rural areas.

14.30.3 There are total 10811 no of Mixed feeders already separated feeders with AG load are 6099. Balance 4712 nos. of feeder are considered for segregation under RDSS.

14.30.4 In all 21 tender package wise will be floated in 2022-23.

#### **14.31 Mukhyamantri Saur Krishi Vahini Yojana (MSKVY):**

##### **14.31.1 Objective:**

MSEDCL is implementing Mukhyamantri Saur Krishi Vahini Yojana (MSKVY) announced by Govt. of Maharashtra vide G.R. 14.6.2017 & 17.03.2018 by installing decentralized solar power projects for giving day time power to farmers. MERC has given capex approval for 92.77 Crs vide Capex no/18-19/035 dtd 29.09.19.

##### **14.31.2 Benefits:**

The scheme has manifold benefits which are as under,

1. Farmer will get good quality day time power supply.
2. Reduced peak energy demand

3. Saving the transmission & distribution network losses due generation at distribution point.
4. Increase in consumer satisfaction.
5. To fulfill RPO Targets.

14.31.3 **Scope of work:**

1. MSEDCL has executed 200 MW PPA with M/s. EESL on 20.01.2018 for 25 years @Rs. 3.00 pu.
2. Installation of solar power project is in scope of M/s. EESL.
3. Power Evacuation arrangement is in scope of MSEDCL.

14.31.4 **Current Status of project:**

At present 167.63 MW capacity out of total 200 MW is commissioned as on 31.10.2022

## 15 DETAILS OF OPEX SCHEMES

### 15.1 Centralised Customer Care Center

#### 15.1.1 Objective:

The purpose of setting up the Centralised Customer Care Center is to improve the supply /billing related complaint handling processes of MSEDCL and enhance the customer servicing capabilities of MSEDCL. Centralized Customer Care Center (CCCC) is equipped with latest technology & multi skilled customer service representatives. CCCC are manned by trained and polite personnel, who are sensitive to customer needs. CCCC take the complaints and feedback through Telephone calls, e-mail etc. and each communications are answered and forwarded to concerned office.

#### 15.1.2 Scope:

To improve Customer Care Services, MSEDCL has outsourced the entire CCC Operations (incl. Manpower, Infra, Links, etc.) on turnkey basis to a professional large scale BPO company. It includes establishment of 134 CFCs at all Division locations (Total 145 divisions, 11 divisions are co-located)

#### 15.1.3 Benefits:

- Better & professional Customer Care service to MSEDCL Consumers calling its Toll-free numbers (1912, 19120, 1800-233-3435, 1800-212-3435). High Availability of CCC operations. BPO companies maintain robust CCC Infrastructures, trained manpower backups & redundant telecom lines to avoid disruptions and SLA penalty.
- Faster call handling and quicker resolution of Consumers' Calls.
- Outbound campaign like payment follow-ups can be easily arranged for better outcome.

CFC are established to enhance customer experience equipped with state-of-the-art facilities with following objectives:

- Division level Facilitation Centers (for in-person resolutions).
- Single Window Service for all types of consumer complaints / issues.
- Quick In-Person resolutions of all Complaints/Enquiries/Service Request, etc.

- Improved quality of services.
- Ease of Access to all consumer related information.

#### 15.1.4 Project Status:

Letter of Award for 'Providing Customer Care Services and establishment of Consumer Facilitation Centers (CFC) at all O&M Divisions of MSEDCL for the period of 5 years' is issued on dated 16.06.2022 for Rs.136.13 crores.

#### 15.1.5 Cost Benefit:

In addition to address the consumer complaints for which Customer Care Centre has been established, MSEDCL has utilized Centre for follow up of payments and achievements of Outbound Campaign for payment follow-ups as under: -

For the period Apr-2019 to Mar-2020 total no. of calls made to defaulting consumers were 2,59,733 nos. (monthly avg. 21,644 nos.) and payment received from consumers was of Rs. 220.08 crore (monthly avg. Rs. 18.34 crore). For the period Apr-2020 to Mar-2021, no outbound calls for Arrears feedback were made due to COVID 19 Lockdown guidelines. For the period Apr-2021 to Mar-2022, total no. of calls made to defaulting consumers were 7,35,547 nos. (monthly avg. 61,295 nos.) and payment received is of Rs. 1739.82 Crore (monthly avg. Rs. 144.99 crore). Outbound Campaign for payment follow-ups with defaulting consumers helped MSEDCL in realization of revenue.

#### 15.1.6 Board Approval:

Vide Board Resolution No. 2491 dt. 29th April 2022, The Board of Directors has considered the note & presentation submitted by the Chief General Manager (IT) seeking approval for issuing a Letter of Award to the L1 bidder of Tender for Providing Customer Care Services and establishment of Consumer Facilitation Centers (CFC) at all O&M Divisions of MSEDCL for 5 years.

#### 15.1.7 Life-Cycle Cost Analysis:

Particulars		Cost Per Year (Rs)	Cost for 5 Years (Rs)
A	Call Center Cost	8,89,45,568	44,47,27,840
B	Toll Free & Telephone lines cost	2,14,04,020	10,70,20,100
C	Consumer Facilitation Centers Cost	16,19,15,012	80,95,75,061
<b>GRAND TOTAL (A+B+C)</b>		<b>27,22,64,600</b>	<b>1,36,13,23,001</b>

15.1.8 Funding Details:

Proposed in Revenue budget.

**15.2 RF-DCU (Expression of Interest & Tender)**

15.2.1 Objective:

To take readings of RF meters by installing DCUs so as to achieve automatic meter reading (AMR) for single phase & three phase consumers.

15.2.2 Scope:

- The vendor has to supply, install, commission and configure RF DCU in the pilot area having RF Meters installed.
- Installation and Configuration of RF DCU in field where RF Meters are installed
- Commissioning of RF Meters for existing and newly installed RF Meters
- Downloading of Reading data, Tamper data, Bill History & Load survey data of RF Meter data (from all the RF Meter make) through RF DCU.
- Installation and configuration of data collection software at MSEDCL.
- Network debug, validation of data. Maintenance of RF Networks in the field.
- 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.

15.2.3 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%.

#### 15.2.4 Project Status:

- LoA against EOI is awarded for 3 years for Rs 30.6 Lakh
- LoA against EOI is awarded for 5 years for Rs 24.18 Crs

#### 15.2.5 Cost Benefit:

RF-DCU project is implemented in towns with high losses like Jalgaon, Nanded and Latur on pilot basis. The detailed analysis has shown rise of 1.63% in sale for FY21-22 after RF DCU implementation in above zones. Also there is rise of 1.87% in sale for FY21-22 in all RF-DCU project area across Maharashtra.

#### 15.2.6 Funding of Details:

Proposed in Revenue budget.

### **15.3 Substation Monitoring System (SMS)**

#### 15.3.1 Objective:

Substations are inevitable components in all power networks. It is the heart of the distribution network. The entire downstream network is controlled and managed by sub-stations. Substation equipment health monitoring is very important for providing reliable and continuous power to consumers. Therefore, it becomes of utmost importance to have real-time data of sub-stations.

#### 15.3.2 Brief Scope of Work:

- Supply, customization, installation, deployment and maintenance of necessary hardware, centralized software and communication equipment at 3257 nos. of 33/22/11 kV Substations and switching stations across MSEDCL on CAPEX+OPEX basis.
- Monitoring of
  - ✓ Incoming and outgoing feeders
  - ✓ Capacitor bank
  - ✓ Station distribution transformer
  - ✓ Substation DC auxiliary power supply
  - ✓ Power Transformer's

- Feeder control action also proposed under ADMS (Automatic Demand Management Scheme) for all feeders.
- The time for implementation of project is proposed to be one and half year from date of issue of LOA and FMS period as 8 years. Total contract period will be 9 years and 6 months.

**15.3.3 Benefits of Substation Monitoring System:**

- Benefits to MSEDCL:
  - ✓ Improved monitoring and situational awareness of remote substations
  - ✓ Feeder Interruption analysis and computation of reliability indices such as SAIDI, SAIFI, etc.
  - ✓ Monitoring failures and breakdowns, Feeder load profiling, Load growth planning, and management
  - ✓ Data for Strategic, Managerial, and Operational decisions
- Benefits to Customers:
  - ✓ Quick actions from MSEDCL to reduce downtime and improve customer satisfaction.
  - ✓ SMS alerts facility can be extended to consumers so that consumers will know that the feeder is under breakdown.

**15.3.4 Current Progress/Status:**

- Due to poor response from bidder, previous tender was cancelled and Tender No: MSEDCL/HO/CGM-IT/Substation Monitoring System/22-23/1 Version 1.0 is floated on date 25.08.2022 on CAPEX + OPEX basis
- The estimated cost of the tender is Rs 450.41 Crore wherein opex cost is Rs 180.16 Crs considering sr.no. 3 from below table

<b>SUBSTATION MONITORING SYSTEM COST</b>		
<b>Sr. No.</b>	<b>Particulars</b>	<b>Cost (Rs. Cr)</b>
1	Equipment cost	225.205
2	Installation and commissioning cost and other cost	45.042
3	FMS	180.164
<b>Total cost</b>		<b>450.411</b>

#### 15.3.5 Funding Details:

As envisaged under the RDSS IT / OT scheme, a 60 % grant is considered. Balance expenditure will be made from internal resources/loans. Scheme approval from MoP is awaited.

### 15.4 MSEDCL Cloud Project

#### 15.4.1 Objective:

Vide Maharashtra Government Circular (सातसं-060/3/2017 dtd. 29th Jan 2018) on Cloud Computing Policy, instructions were given to the Govt. Departments, Local Bodies & PSUs to migrate all their existing IT applications onto Cloud Platform. In pursuance to this, MSEDCL Competent Authority vide Board Resolution no. 1242 dtd. 07/04/2018, has accorded approval to migrate all MSEDCL IT applications (hosted at On-premise Data Centre) to Cloud Platform.

#### 15.4.2 Scope:

MSEDCL has appointed a Managed Service Provider to migrate all its applications over to Amazon Cloud (MeitY empanelled Cloud Service Provider) and maintain them as per MSEDCL's requirement in the cloud environment for the period of 5 years. The cost of Project is Rs. 88.77 Crs. (Opex cost Rs. 80.56, Capex cost Rs. 8.21crs)

#### 15.4.3 Benefits:

- Less operational issues: The cloud service provider company has to maintain the cloud uptime as per the Service level Agreement with the Customer which is normally 99.99%. Therefore, cloud computing actually has fewer issues than On-Premises infrastructures.
- Security: Cloud Service Provider is usually backed by top class security professionals managing the security infrastructure of Cloud 24x7. The cloud service providers also perform more regular security audits. Cloud providers even back up data to additional remote servers so data loss just won't happen.

#### 15.4.4 Project Status:

The migration of applications from On-premise Data Center to Amazon Web

Service (AWS) Cloud is completed and running successfully till date.

#### 15.4.5 Cost Benefit Analysis:

- Lower Total Cost of Ownership:  
MSEDCL's On-premise IT-infrastructure estimated cost for 5 years (2018-19 to 2022-23) is approx. Rs. 205.79 Crores i.e. approx. Rs. 41.15 Crores per year. Whereas for cost of Cloud Computing (as per recent LOA awarded by MSEDCL) for availing same type of services is approx. Rs. 17.75 Crs per year (thus saving Rs. 23.40 Crs per year).

#### 15.4.6 Life-Cycle Cost Analysis:

- No Capital Expenditure:  
Cloud operational cost is billed to MSEDCL on quarterly basis for the amount of computing resources (servers & storage) utilized per quarter.

#### 15.4.7 Savings in O&M expenses:

MSEDCL's On-premise IT-infrastructure estimated cost for 5 years (2018-19 to 2022-23) is approx. Rs. 205.79 Crores i.e. approx. Rs. 41.15 Crores per year. Whereas for cost of Cloud Computing (as per recent LOA awarded by MSEDCL) for availing same type of services is approx. Rs. 17.75 Crs per year (thus saving Rs. 23.40 Crs per year).

#### 15.4.8 Funding Details

Proposed in Revenue budget.

### **15.5 Vehicle Tracking System**

#### 15.5.1 Objective:

The objective of this project is to establish robust and reliable mechanism of GPS Monitoring System (on OPEX basis) for effective monitoring, better decision making, planning and management of MSEDCL vehicles.

#### 15.5.2 Scope of work:

- Design, Development, Customization, Supply, Installation, configuration of the GPS based VTS tracking Solution on successful bidder's own cloud.

- The fitment of GPS device for vehicles shall enable on-line, real-time monitoring of their movement and effective enforcement through a web-based Vehicle Tracking Application Solution.

**15.5.3 Benefits:**

- Provide effective monitoring, better decision making, planning and management of MSEDCL vehicles.
- Track the vehicles on real-time basis, so that the current location of the vehicle can be identified for effective monitoring.
- Identify the vehicles doing violations based on the time of travel, distance travelled, destinations, etc.
- Generate analytical / graphical reports based on the various parameters, as desired by MSEDCL from time-to-time (development/customization to be done if required).

**15.5.4 Contract Details**

The contract was awarded to M/s CE Info Systems Ltd vide Letter of Award No. CGM/IT/F-0000841/85 dt. 15/01/2020 for Rs. 2,55,62,340/- including taxes for five years.

**15.5.5 Funding Details**

Proposed in Revenue budget.

**15.5.6 Cost Benefit analysis:**

The benefits of this project are intangible eg.

- Better Customer Services

When Customer is having an outage, we need to respond quickly. Sending the closest vehicle during the outage will enhance customer service.

- Faster Access to help in Emergencies.

**15.5.7 Life-Cycle Cost Analysis:**

<b>COST SUMMARY</b>	<b>Cost Per Year (Rs)</b>	<b>Cost for 5 Years (Rs)</b>
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A	Vehicle Tracking System	51,12,468	2,55,62,340
<b>GRAND TOTAL</b>		<b>51,12,468</b>	<b>2,55,62,340</b>

## 15.6 Business Analytics and Demand Forecasting Solution

### 15.6.1 Objectives:

Mahavitaran distributes electricity to consumers across the State excluding Mumbai. MSEDCL sources power from Mahagenco, Central Sector and Private Sector projects. The constant pressure to optimize the cost of power purchase due to the danger of the industrial sector moving out of state (Open Access) owing to higher power tariffs. In view of this, MSEDCL intends to purchase a Software Solution with the capability of energy load forecasting and power trade strategy management along with power purchase optimization/power portfolio optimization.

### 15.6.2 Benefits

The proposed solution will enable measurable improvements including:

- Demand Forecasting
- Scenario Analysis
- Demand Supply Position Map (Load Generation Balance)
- Power Portfolio Management
- Scheduling Optimization
- Trade Optimization
- Enterprise Visualization

### 15.6.3 Scope of work

- Design, Implementation, commissioning of Business Analytics and Demand forecasting, Power Optimization Solution
- Integration of proposed solution with MSEDCL existing system, SCADA & proposed Substation Monitoring Scheme (SMS) of MSEDCL, existing AMR & SCADA, Scheduling software of MSLDC/WRLDC.
- Fetching all necessary data from external sources required as input for forecasting, Optimization and analysis purposes.

- Debriefing with Analytics including optimization with AI and ML and documenting causes, effects, patterns and results using incident-specific data based on time, date and location.
- Designing Live Dashboard for Business Analytics and Current Status of Incidents
- Providing Cloud Services for the deployment of the proposed solution.
- Provide Facility Management Service (FMS) for Application Maintenance for five years

#### 15.6.4 Current Progress/ Status:

- Tender with an approved estimate Rs. 47.34 Crs is floated on MSEDCL eTender Portal.

#### 15.6.5 Life Cycle Cost Analysis:

Estimated cost of Tender is Rs 47.34 Crs (incl. taxes) which includes Licenses cost, Implementation cost, Training cost, cloud Infrastructure cost, FMS cost, ATS cost.

#### 15.6.6 Funding Details:

Proposed in RDSS scheme and approved. (60% of the approved cost of Distribution infrastructure work)

### **15.7 Enterprise GIS & Network Analysis Solution**

#### 15.7.1 Objectives:

MSEDCL desires to implement a comprehensive GIS & NA solution with updated GIS & NA data of all areas under MSEDCL jurisdiction to efficiently maintain the electrical network, carry out smooth network planning and derive useful analysis of network parameters.

The proposed GIS and NA system will expand the capabilities at the Enterprise Level. MSEDCL intends to have an integrated WEB-MOBILITY-GIS-Analytics-based System, conceptualized to cater to core technical requirements of the processes under day-to-day Operations, Maintenance and Projects activities of MSEDCL staff, officers and Management.

The proposed Network Analytics solution is an integrated platform of web and

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mobile applications. Network addition, deletion and changes to be captured on the Mobile application. Network shall be created automatically, online, based on Mobile App information.

#### 15.7.2 Benefits

The proposed solution will enable measurable improvements including:

- GIS Implementation at Enterprise Level
- Reliability and Performance Indices
- Network System behaviour and response to disturbances
- Optimization of asset utilization and operating efficiency of the electric power system.

#### 15.7.3 Scope of work

- Implementation of Enterprise GIS solution for MSEDCL with 1-year warranty and 4 years of Annual Technical Support (ATS).
- Implementation of Enterprise Network Analysis solution for MSEDCL with 1-year warranty and 4 years of Annual Technical Support (ATS) from OEM.
- Integration of GIS Solution & NA Solution with each other and other systems of MSEDCL. Eg. Load Forecasting, SAP-ERP, MDAS, ECCC, Dashboard.
- Provision of Facility Management Services (FMS) for GIS Solution & NA Solution for 5 years for operation & maintenance.
- Training of GIS Solution & NA Solution to MSEDCL users.
- Provision of Cloud Services for deploying GIS Solution & NA Solution from a MeitY empanelled and SQTC Audit Complaint Cloud Service Provider for 5 years.

#### 15.7.4 Current Progress/ Status

- Tender with an approved estimate Rs. 49.80 Crs is floated on MSEDCL eTender Portal

#### 15.7.5 Life Cycle Cost Analysis

15.7.6 Estimated cost of Tender is 49.80 Crs (incl. taxes) which includes Lines cost,

Implementation cost, Training cost, cloud deployment cost, FMS cost, ATS cost.

## **15.8 ERP SAP S4 HANA**

### **15.8.1 Objectives**

MSEDCL has automated its business processes by implementing SAP-ERP which covers Financial Accounting & Control (FICO), Projects Systems (PS), Plant Maintenance (PM), Material Management (MM) ERP core modules are live since 2015. Further SAP HRMS modules such as Payroll (PY), Organizational Management (OM), Personal Administration (PA), Time Management (TM), Travel Management, Performance Management along with 13 nos. of custom-developed allied modules developed on SAP ERP platform are live since Dec-2020.

Due to manifold increase in transactions every year, the performance of SAP ERP is degrading gradually. Also, M/s SAP has declared end of support for SAP ERP ECC 6.0 in the year 2027. Hence, it is planned to upgrade existing SAP ERP ECC 6.0 platform to S/4 HANA platform. S/4 HANA platform is the latest version of SAP ERP, wherein due to change in database from Sybase to HANA the performance of the system will improve. Further, SAP S/4HANA offers increased scalability to better support data storage and data analysis needs. MSEDCL is also planning to implement additional SAP ERP modules SAP Treasury and Risk module (TRM) for loan and grant management required by finance section.

### **15.8.2 Benefits of SAP S4 HANA:**

- The SAP HANA in-memory database helps organizations to execute transactions and analyse business data in real-time.
- User experience is powered by Fiori - browser based and convenient to use.

- Embedded real-time analytics, and HANA powered in-memory processing to handle large data volumes of operational and transactional business data.

#### 15.8.3 Benefits of SAP Treasury and Risk Module (TRM):

- With the SAP TRM application, one can integrate cash flows, transactions, loan, grant and optimize straight-through processing with full-view and real-time analysis, audit trails, and compliance reporting.

#### 15.8.4 Scope:

- Upgradation of existing SAP ECC 6 EHP 5.0 platform to SAP S/4 HANA latest version including database migration
- Implementation of SAP TRM module
- Upgradation of Solution Manager from 7.1 to 7.2 (latest version).
- Training to end users on new system.
- Deployment of SAP S/4 HANA on cloud for 5 years
- Application Maintenance Services (AMS) towards Support, Maintenance & Enhancement of all existing SAP-ERP modules, newly implemented SAP TRM module & Dashboards (including Custom developed modules) for 5 years.

#### 15.8.5 Life Cycle Cost Analysis

Cost estimate as per budgetary quote from M/s SAP (without GST)

License cost	:Rs. 25.43 Crores
ATS for one year	:Rs. 12.24 Crores (opex)
Implementation Cost	:Rs. 15.00 Crores
AMS for 5 years	:Rs. 37.25 Crores (opex)
Cloud IT Infra	:Rs. 22.60 Crores (opex)
Training to end users	:Rs. 01.68 Crores (opex)

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Total Cost :Rs. 114.20 Crores

#### 15.8.6 Current Progress/ Status

Tender preparation is in the progress.

#### 15.8.7 Funding Details

Proposed in RDSS scheme and approved (60% pf the approved cost of Distribution infrastructure work.

### **15.9 Procurement of SD-WAN Solution**

#### 15.9.1 Overview

MSEDCL wishes to procure SD-WAN solution to reduce the high cost of WAN bandwidth, enable better application performance, and improve internal business communication and IT agility by deploying Software-Defined WAN (SD-WAN) across MSEDCL remote offices up to Circle offices.

#### 15.9.2 Benefits

- SD-WAN solution shall improve performance of connectivity by using link optimization. The solution shall also manage the Link Load on available paths and auto failover for better performance of links.
- SD-WAN Solution shall have inbuilt QoS mechanism which is having application recognition and provide the bandwidth priority for most critical applications. This may include dynamic path selection, sending an application on faster link or even splitting an application between two paths to improve performance by delivering it faster.
- SD-WAN solution shall improve the MSEDCL Video Conferencing (Data/Voice/Video traffic) by using polices, performance of the links such as jitter, latency, packet loss, etc and features like Video stream splitting, de-duplications and automatic traffic diversion for better link performance for MSEDCL video Conferencing Solution.
- SD-WAN solution shall create full mesh connectivity among all the MSEDCL remote offices and integrated with existing network.

#### 15.9.3 Scope of Work

- MSEDCL is looking for upgrading of its existing Network with SD-WAN across Maharashtra up to Circle Office level with high performance, reliable, consistent network to achieve best performance of MSEDCL applications.
- It shall be bidders responsibility to integrate any new or existing FTTH broadband, MPLS, ILL, broadband link on supplied Wi-Fi enabled SD-WAN device during the contract period.
- The SD WAN Device(s) integrated with external Wi-Fi access points, must be configured as per requirement.

#### 15.9.4 Current Progress/ Status

Tender with an approved estimate Rs. 6.8 Crs is floated on MSEDCL eTender Portal.

#### 15.9.5 Funding of Details

Proposed in RDSS scheme and approved. (60% of the approved cost of Distribution infrastructure work)

### **15.10 Smart Metering under Revamped Distribution Sector Scheme (RDSS)**

15.10.1 The Government of India (GoI) has come up with the Reforms-Based and Results-Linked Revamped Distribution Sector Scheme (RDSS) for supporting DISCOMs (except private DISCOMs) to undertake reforms and performance improvement in a time bound manner. The Scheme aims to carry out the works enabling improvement in the quality and reliability of power supply to consumers, by providing conditional financial assistance to DISCOMs to make the sector financially sustainable and operationally efficient.

#### 15.10.2 **Advantages of Smart Metering:**

- Regular availability of meter readings / data without manual interventions.
- Due to the accurate readings, average billing will be reduced & there will be no need to revise the bill. Hence, consumer billing complaints will also be reduced.

- Losses will be reduced due to accurate energy accounting.
- Disconnection & Reconnection of consumers in arrears can be done remotely.

15.10.3 As per the Guidance notes by REC for Standard Bidding Document (SBD) for appointment of Advanced Metering Infrastructure Service Provider (AMISP) for Smart Prepaid Metering in India Accounting process of AMISP payment is as below:

- Transaction Nature: Payment to the AMISP by the DISCOM shall be considered as an **Operational Expenditure on DISCOM's account.**
- **Regulatory Treatment:** DISCOM to consider AMISP payments (AMISP service charge along with the lump sum payment per meter) **as operational expenditure while filing ARR and tariff review petition to the state ERC.**

Operational Expenditure – Maintenance of meters installed, online communication of meters with MSEDCL Server, Online Connection / disconnection of meters etc. Advanced Metering Infrastructure Service Provider (AMISP) should make available the above mentioned services for 93 months after meter installation.

As per said guidelines, against the total rate received in tender, initially, after installation of meters and operational Go-Live (First reading of meter received at DISCOM end) minimum Rs. 900/- per meter is to be paid to AMISP.

Balance amount against each installed meter to be paid on equated monthly basis for Service Period up to 93 months. This will also include the FMS charges for these meters.

**15.10.4 Yearwise AMISP Smart Metering Expenditure under Opex Scheme**

<b>FY</b>	<b>Rs. in Crs.</b>
2023-24	541.07
2024-25	2,221.66
2025-26	2,110.76
2026-27	1,679.03
2027-28	1,679.03

2028-29	1,679.03
2029-30	1,679.03
2030-31	1,679.03
2031-32	1,650.13
2032-33	390.03
<b>Total</b>	<b>15,308.79</b>

**15.10.5 The Brief Scope of Works & Opex Cost Considered during last 2 years of 4<sup>th</sup> Control Period:**

<b>Smart Meters</b>		<b>FY 2023-24</b>	<b>FY 2024-25</b>
Consumer Meters	Nos	54,13,127	1,43,85,006
Amount	Rs. Cr.	449.98	2,039.02
DT Meters	Nos	2,03,760	2,03,747
Amount	Rs. Cr.	69.29	169.82
Feeder Meters	Nos	27826	0
Amount	Rs. Cr.	21.80	12.82
<b>Total Opex Cost</b>	Rs. Cr.	<b>541.07</b>	<b>2,221.66</b>

## 16 PROPOSAL FOR SCHEDULE OF CHARGES

### 16.1 Background

- 16.1.1 Presently, MSEDCL is recovering various charges from the consumers for various services provided as per the Schedule of charges approved by Hon. Commission vide its Order dated 30 March, 2020 (Case No. 322 of 2019).
- 16.1.2 Basically these charges are for recovery of cost incurred for availing supply of electricity and various other services provided to the consumers. In order to shield regular consumers from consumer's service specific costs, provision for schedule of charges has been made.
- 16.1.3 The section 46 of the Electricity Act, 2003 herein after referred as the EA, 2003, 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. Otherwise these costs will get passed on to regular consumers of MSEDCL.
- 16.1.4 The 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.

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 .....*

*(5) The charges fixed by the distribution licensee shall be in accordance*

*with the provisions of this Act and the regulations made in this behalf by the concerned State Commission. "*

16.1.5 In accordance with the provisions of EA 2003, Hon'ble Commission has notified MERC (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021, herein after referred as MERC (Supply code and SOP including power quality) Regulations, 2021. MSEDCL submits that as per Regulation 19.1 of the MERC (Supply code and SOP including power quality) Regulation, 2021, Distribution Licensees are required to submit the proposal before Commission for approval of Schedule of Charges (SoC) for such matters required by the Distribution Licensee to fulfill its obligation to supply electricity to its consumers along with every application for determination of tariff under Section 64 of the Act together with such particulars as the Commission may require under the EA, 2003 and other relevant Regulations.

16.1.6 As per order in the Writ Petitions No. 6382/6383/6384 of 2020 decided on dated 22.01.2021, the Hon. High Court, Bombay, Aurangabad Bench has mentioned in Para 24 and 27 of the judgment that If the consumer has opted and agreed to bear the infrastructure cost and does accordingly then Distribution licensee cannot be said to be under any statutory obligation to refund the infrastructural cost.

The relevant ruling of Hon'ble High Court i.e. Para 24 and 27 of the said order are reproduced below for ready reference and consideration of Hon'ble Commission: -

*"...24 .As a logical and legal corollary, if a consumer agrees to purchase a meter, it cannot be said that such an agreement is unconscionable or against public policy merely because like in the present case, a proposal was made by the Distribution Licensee to provide electricity supply subject to various terms and conditions, including the one obligating the consumers in installing the electricity meters and developing necessary infrastructure for facilitating a DDF connection. Therefore, the submission of the learned Advocate for the Consumers that a consumer cannot be legally contracted out is fallacious. **As is demonstrated hereinabove, a DDF connection is a facility which has***

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***been duly recognized by Regulations of 2005 and if the Consumers have opted to have it, no statutory obligation is created in their favour to claim the refund. And***

*..... 27. In this respect, it is also pertinent to note that although a Distribution Licensee is under statutory obligation to provide electricity supply, in a given case like the present ones, the Consumers have opted to succumb to the demand of the Distribution Licensee wherein by separate communications, terms and conditions were put to them subject to which they were supposed to enter into an agreement and receive electricity supply. The terms and conditions inter alia require them to bear the expenditure on a non-refundable basis. After having availed of the benefit, they cannot now be allowed to turn around and claim refund. They could have very well insisted for supply of electricity strictly in accordance with the provisions of the Electricity Act and the Regulations framed thereunder. **They having agreed to bear such infrastructural costs and agreed to purchase meters and metering cubicles, the Distribution Licensee cannot be said to be under any statutory obligation to refund the infrastructural cost and metering cubicles cost.....**"*

Accordingly if consumer opts or agrees to bear the infrastructure cost, then it has to bear the Infrastructure cost incurred at actual and the same cannot be claimed for refund in future. Hence MSEDCL humbly request the Hon'ble Commission to include the following provisions in Schedule of charges;

**"If consumer opts or agrees to bear the charges of infrastructure including meter cost for getting electricity supply, then he will cease its right to claim the refund of the cost of infrastructure in future before any forum".**

16.1.7 MSEDCL submits that Schedule of Charges (SoC) represent the charges levied to consumers/ applicants for new connection and on existing consumers for various activities carried out by the Licensee such as load enhancement, change of name, category, etc., meter testing and various other miscellaneous activities required to be performed as a Distribution

Licensee.

16.1.8 Income from these charges form a part of the non-tariff income of MSEDCL and such benefit is passed on to all the consumers of the State by way of reduced ARR.

16.1.9 The Service Connection Charges (SCC) will be discriminated based on the connected load, current carrying capacity of service line and standard construction norms for Service line setup. In metro and big cities, MSEDCL's infrastructure is mostly underground and service line setup offered to the prospective consumers is also underground. On the other hand, in rural areas the infrastructure is mostly overhead. The existing categorization of SCC has addressed all these issues.

16.1.10 It is submitted that, the existing Schedule of Charges has been enforced from 1<sup>st</sup> Apr-2020. During the year 2020, due to the Covid-19 pandemic and lockdown imposed by the Government, disruption to supply chains occurred. From the second year of the epidemic, the rising inflation has been seen. Further, the Russia-Ukraine war has also influenced the rise in material/ equipment prices. Prices of metals, raw materials, energy, food, non-food items and inputs, supply disruptions, disruptions in the global supply chain and rising global freight prices pushed up the inflation. The same will be witnessed from increase in inflation indices viz. Wholesale Price Index (WPI) and Consumer Price Index (CPI). The rise in material prices is the one of the cause for revision in Schedule of Charges.

16.1.11 Further, as per clause no. 3.2 System of Supply and Classification of Consumers of MERC (Supply code and SOP including power quality) Regulations, 2021, maximum load to be released in the identified areas has been revised. Now maximum load of 160 kW/ 200 kVA can be supplied on Low Tension Supply. These modifications are also required to be addressed in the Schedule of Charges.

16.1.12 The relevant clauses of MERC (Supply code and SOP including Power Quality) Regulation, 2021 is summarized as under:

Sr. No	Board Head	Relevant Regulation	Provision in the Regulation
1.	Service Connection Charges	4.2(a), 4.3.1, 4.3.2, 4.3.3	<p><b>4.2.</b> <i>The charges that a Distribution Licensee is authorized to recover under these Regulations include-</i></p> <p><b>(a)</b> <i>recovery of such expenses as may be reasonably incurred by the Distribution Licensee in providing electric line or electrical plant used for the purpose of giving supply, in accordance with Regulation 4.3 below:</i></p> <p><i>Provided that the cost of network for providing connection to a EHT Consumer shall be borne by the Transmission Licensee and the Consumer may be charged according to the Schedule of Charges as specified in Regulation 19</i></p> <p><b>4.3.1</b> <i>The Distribution Licensee shall recover the expenses referred to in Regulation 4.2 (a) above, in accordance with the principles contained in this Regulation 4.3 and based on the rates contained in the Schedule of Charges approved by the Commission under Regulation 19:</i></p> <p><b>4.3.2</b> <i>The Distribution Licensee shall be authorised to recover expenses reasonably incurred on providing supply to the Applicant based on the Schedule of Charges approved by the Commission under Regulation 19.</i></p> <p><b>4.3.3</b> <i>Where an Applicant opts for DDF for</i></p>

Sr. No	Board Head	Relevant Regulation	Provision in the Regulation
			<p><i>his premises, the Distribution Licensee shall be authorized to recover all expenses reasonably incurred on such works from the Applicant.</i></p> <p><i>Provided that the Distribution Licensee may, with the approval of the Commission, in case of any category of Consumers, recover such expenses on the basis of an average or normative rate for providing the electric line or electrical plant for the purpose of giving supply.</i></p> <p><i>Provided further that the Distribution Licensee shall be entitled to use service-line setup for the Applicant to provide supply to any other Applicant, notwithstanding that all expenses reasonably incurred have been recovered in accordance with this Regulation 4.3, except if such supply is detrimental to the supply to the existing Consumer already connected therewith.</i></p>
2.	Charges for temporary supply	4.3.5	<p><b>4.3.5</b> <i>Where an Applicant requires temporary supply, the Distribution Licensee shall be authorized to recover expenses reasonably incurred for the purpose of giving such temporary supply and for the purpose of discontinuance of such temporary supply based on the Schedule of Charges approved by the Commission under Regulation 19...</i></p>

Sr. No	Board Head	Relevant Regulation	Provision in the Regulation
3.	Supervision charges	4.3.7	<p><i>4.3.7 Where the Distribution Licensee permits an Applicant to carry out works under the Regulation 4.3 through a Licensed Electrical Contractor, the Distribution Licensee shall not be entitled to recover expenses relating to such portion of works so carried out by the Applicant:</i></p> <p><i>Provided however the Distribution Licensee shall be entitled to recover, from the Applicant, charges for supervision undertaken by the Distribution Licensee, at such rate, as may be approved in the Schedule of Charges under Regulation 19 not exceeding Fifteen (15) per cent of the cost of labour that would have been employed by the Distribution Licensee in carrying out such works...</i></p>
4.	Processing of applications	6.8, 5.4 (viii)	<p><i>6.8 Notwithstanding anything contained in these Regulations, an application shall be deemed to be received on the date of receipt of the duly completed application containing all the necessary information/ documents and payment of all approved charges of the Distribution Licensee in accordance with Regulation 5.4</i></p> <p><i>5.4 The Applicant shall provide the following information / particulars / documents to the Distribution Licensee while making an application through hard copy (only for Rural</i></p>

Sr. No	Board Head	Relevant Regulation	Provision in the Regulation
			<p><i>Area) or on Web Portal or Mobile App for supply or for revision in load, shifting of service, extension of service or restoration of supply:.....</i></p> <p><i>viii. All applicable charges, based on the Schedule of Charges approved by the Commission under Regulation 19:</i></p>
5.	Charges for increases /reduction in contract demand/sanctioned load	7.6, 5.4 (viii)	<p><i>7.6 The Distribution Licensee shall revise (increase or decrease) the Contract Demand / Sanctioned Load of the Consumer upon receipt of an application for the same from the Consumer:</i></p> <p><i>.....</i></p> <p><i>Provided further that where such revision (increase or decrease) in Contract Demand/Sanctioned Load entails any works, the Distribution Licensee may recover expenses relating thereto in accordance with the principles specified in Regulation 4, based on the rates contained in the Schedule of Charges approved by the Commission under Regulation 19</i></p>

<b>Sr. No</b>	<b>Board Head</b>	<b>Relevant Regulation</b>	<b>Provision in the Regulation</b>
6.	Processing fee for change of name	12.2	<i>12.2 The application for change of name shall only be submitted online for Urban Area accompanied by such charges as are required under the approved Schedule of Charges of the Distribution Licensee.....</i>
7.	Cost of meter	15.3.4	<i>15.3.4. Except in the case of a burnt meter or a lost meter, the Distribution Licensee shall not be authorized to recover the price of the meter from the Consumer.</i>
8.	Meter testing charges	15.6.2, 15.2.5	<i>15.6.2. The Consumer may, upon payment of such testing charges as may be approved by the Commission under Schedule of Charges can request the Distribution Licensee to test the accuracy of the meter by applying to the Distribution Licensee .</i>  <i>15.2.5 Distribution Licensee or a Consumer may install a check meter conforming to the technical specifications as laid down in the Central Electricity Authority (Installation &amp; Operation of Meters) Regulations, 2006 as amended from time to time. This check meter shall be installed at the cost of the entity proposing such an installation. This check meter may be calibrated by the Distribution Licensee upon payment of prescribed fee as per the relevant Schedule of Charges as determined by the</i>

<b>Sr. No</b>	<b>Board Head</b>	<b>Relevant Regulation</b>	<b>Provision in the Regulation</b>
			<i>Commission from time to time. In both the cases, the Distribution Licensee shall be responsible for application of seals to the meters and monitoring the same .....</i>
9.	Charges for restoration of supply	17.2	<i>17.2. Where, upon settlement of any grievance or dispute in this regard, the Consumer is required to bear the costs of restoration, the Distribution Licensee shall restore supply to the Consumer upon payment by the Consumer of such charges, as approved by the Commission under Regulation 19</i>

Considering the above provisions, MSEDCL has proposed following **revision in Schedule of charges:**

**16.2** In this Section, MSEDCL has provided the necessary calculation to rationalize the proposed charges.

16.2.1 While providing power supply to prospective consumer(s), the Discoms are entitled to recover the infrastructure costs to the extent of the Schedule of Charges (SoC) as determined by Hon'ble MERC. MERC had determined SoC applicable to MSEDCL vide its MYT Order in Case No. 322 of 2019 dated 30.03.2020.

16.2.2 While going through the existing Schedule of Charges being recovered from prospective consumer(s), it is observed that these are quite subnormal as

compared to the actual expenditure incurred by MSEDCL in providing power supply to new consumers. MSEDCL has to therefore incur additional expenditure over and above the “Schedule of Charges” in providing power supply to the prospective consumer/s. Due to this, the overall CAPEX is increased exorbitantly causing to the rise in tariff.

16.2.3 If we compare the SCC for overhead and underground, it is observed that there is a marginal difference between charges (SCC) of Over Head (O/H) and Under Ground (U/G) system. But there is appreciable difference in the service standards being mandated by MERC and rendered by MSEDCL to its Rural and Urban consumers. For this, MERC has prescribed the norms of different service standards in respect of Rural and Urban consumers. Due to the U/G infrastructure, obviously urban consumers have more privilege to enjoy better quality power supply by paying meagre charges towards U/G infrastructure. On the contrary the tariff for Rural and Urban consumers is same. The cost of U/G infrastructure unfortunately is socialized even though the Rural Consumers are not being benefitted.

**Advantages of U/G System:**

- i. It is not affected by Rain, Storms/ Cyclones, lightning.
- ii. It hardly requires any maintenance and thus helping to provide uninterrupted power supply and thus no power outages or lesser in number when compared to O/H.
- iii. In big cities outages are paid immediate attention. However, in rural areas, the O/H system is often affected by rain, storms/ cyclones, lightning, or external forces. Power failures/ outages during night are sometimes not attended immediately but attended in the next morning due to atmospheric conditions. It means service quality being rendered by MSEDCL may be somewhat inferior in the case of rural consumers when compared to urban.

16.2.4 The following is the table which provides the information on the power supply released to the new consumers:

CIRCLE_NAME	CAT	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
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<b>AKOLA CIRCLE</b>	1.RES	12134	11439	8611	12352
	2.COMM	2169	1864	1877	2312
	3.IND	267	230	287	371
	6.AG	2882	2225	913	1431
	9B.OTHER	400	302	166	193
<b>AMARAVATI CIRCLE</b>	1.RES	26265	18893	13151	20663
	2.COMM	2701	2303	1784	2410
	3.IND	331	272	385	455
	6.AG	3927	2268	1459	3578
	9B.OTHER	725	704	420	485
<b>A-NAGAR CIRCLE</b>	1.RES	43524	33258	22409	26860
	2.COMM	4543	4886	4241	5419
	3.IND	682	639	968	1348
	6.AG	2170	5510	5048	12205
	9B.OTHER	712	1128	595	797
<b>AURANGABAD (U) CIRCLE</b>	1.RES	14409	14076	10630	12497
	2.COMM	2159	2104	1654	1806
	3.IND	301	339	349	430
	6.AG	16	1	4	60
	9B.OTHER	389	303	280	468
<b>AURANGABAD CIRCLE</b>	1.RES	30629	17097	15160	16642
	2.COMM	2309	2171	2030	2326
	3.IND	594	522	582	745
	6.AG	2987	2330	1570	4424
	9B.OTHER	451	590	221	301
<b>BARAMATI CIRCLE</b>	1.RES	20848	17402	11324	17050
	2.COMM	3146	3103	2418	3333
	3.IND	561	531	715	817
	6.AG	2565	3551	3077	8681
	9B.OTHER	1448	813	447	663
<b>BEED CIRCLE</b>	1.RES	21440	19142	10216	13288
	2.COMM	1782	1799	1440	1806
	3.IND	323	271	235	455
	6.AG	1683	849	2634	2900
	9B.OTHER	234	375	152	217
<b>BHANDARA</b>	1.RES	13601	7931	7053	7277

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<b>CIRCLE</b>	2.COMM	1240	1252	1177	1119
	3.IND	156	139	285	245
	6.AG	656	1533	1515	2300
	9B.OTHER	318	319	281	328
<b>BHIWANDI AUXILLARY CIRCLE</b>	3.IND	0	0	0	1
<b>BULDHANA CIRCLE</b>	1.RES	14617	15006	10425	15959
	2.COMM	1885	1872	1446	2378
	3.IND	272	278	365	421
	6.AG	4242	3482	1237	1815
	9B.OTHER	465	368	175	271
<b>CHANDRAPUR CIRCLE</b>	1.RES	12933	11892	7683	10181
	2.COMM	2520	2513	1820	2901
	3.IND	232	153	247	304
	6.AG	484	1734	1040	1190
	9B.OTHER	675	918	497	494
<b>DHULE CIRCLE</b>	1.RES	33938	12820	8534	9027
	2.COMM	2124	2018	1689	1902
	3.IND	246	281	291	378
	6.AG	744	717	1914	3693
	9B.OTHER	338	388	228	266
<b>GADCHIROLI CIRCLE</b>	1.RES	31674	12371	8223	7441
	2.COMM	1104	1215	889	1111
	3.IND	151	148	161	214
	6.AG	1175	1357	820	2257
	9B.OTHER	583	773	388	779
<b>GANESHKHIND (U) CIRCLE</b>	1.RES	54002	57982	33237	53443
	2.COMM	7310	8564	4622	7563
	3.IND	1151	1223	847	1156
	6.AG	42	1	8	130
	9B.OTHER	457	649	284	711
<b>GONDIA CIRCLE</b>	1.RES	15641	8973	8053	7363
	2.COMM	1064	1039	957	961
	3.IND	151	135	287	254
	6.AG	740	1630	1219	2480
	9B.OTHER	652	618	364	390

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<b>HINGOLI CIRCLE</b>	1.RES	46490	6773	4503	6554
	2.COMM	529	585	595	730
	3.IND	89	73	154	201
	6.AG	708	1907	1527	926
	9B.OTHER	62	157	70	74
<b>JALGAON CIRCLE</b>	1.RES	79748	23444	19928	22540
	2.COMM	3235	3123	2756	3217
	3.IND	387	407	607	635
	6.AG	2682	2015	3665	4996
	9B.OTHER	659	679	499	608
<b>JALNA CIRCLE</b>	1.RES	25536	10664	8682	9921
	2.COMM	1335	1278	1149	1170
	3.IND	186	200	254	321
	6.AG	2461	2280	2487	2526
	9B.OTHER	270	213	129	128
<b>KALYAN CIRCLE - I</b>	1.RES	25141	30976	19073	27916
	2.COMM	3225	3586	2233	3766
	3.IND	119	89	129	252
	6.AG	0	0	1	1
	9B.OTHER	600	704	405	549
<b>KALYAN CIRCLE - II</b>	1.RES	31022	39990	16794	33227
	2.COMM	4295	5343	2753	5178
	3.IND	705	686	657	779
	6.AG	195	47	106	421
	9B.OTHER	536	654	309	676
<b>KOLHAPUR CIRCLE</b>	1.RES	26073	25964	20312	29162
	2.COMM	5572	5484	4588	6643
	3.IND	1533	1674	1975	1855
	6.AG	4568	1929	3767	5887
	9B.OTHER	1167	1242	671	911
<b>LATUR CIRCLE</b>	1.RES	31770	15415	13682	18958
	2.COMM	1913	2055	1664	1986
	3.IND	304	340	392	536
	6.AG	1089	2028	1487	2994
	9B.OTHER	405	674	418	525
<b>MALEGAON</b>	1.RES	39862	11743	7440	7412

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<b>CIRCLE</b>	2.COMM	1277	1472	1462	1633
	3.IND	417	950	245	312
	6.AG	1935	4909	2923	5278
	9B.OTHER	286	340	205	350
<b>Malegaon DF Circle</b>	1.RES	2876	3559	3890	5702
	2.COMM	521	708	549	695
	3.IND	174	409	862	665
	6.AG	2	3	2	9
	9B.OTHER	65	53	28	42
<b>NAGPUR (R) CIRCLE</b>	1.RES	15765	15225	12500	17465
	2.COMM	2052	1807	1491	1826
	3.IND	333	356	437	507
	6.AG	710	1796	1429	2141
	9B.OTHER	559	777	429	414
<b>NAGPUR (U) CIRCLE</b>	1.RES	14547	21766	25187	30651
	2.COMM	2311	3429	4191	6067
	3.IND	404	425	483	630
	6.AG	72	88	33	169
	9B.OTHER	433	805	329	547
<b>NANDED CIRCLE</b>	1.RES	34395	23865	16740	19910
	2.COMM	2594	2735	2137	2357
	3.IND	298	298	400	467
	6.AG	571	1460	2539	2580
	9B.OTHER	229	555	833	380
<b>NANDURBAR CIRCLE</b>	1.RES	75556	6038	4166	5921
	2.COMM	1118	1124	1165	1177
	3.IND	126	126	133	238
	6.AG	1500	1493	946	1292
	9B.OTHER	268	253	139	210
<b>NASHIK CIRCLE</b>	1.RES	43370	33856	22212	30635
	2.COMM	5974	7333	5894	9160
	3.IND	440	503	617	916
	6.AG	2494	1883	1500	4895
	9B.OTHER	1143	1209	582	956
<b>OSMANBAD CIRCLE</b>	1.RES	14926	12724	6326	9701
	2.COMM	1051	1520	1046	1282

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	3.IND	194	214	192	348
	6.AG	703	925	2595	3492
	9B.OTHER	148	756	115	180
<b>PALGHAR (MINI) CIRCLE</b>	1.RES	37153	24830	11439	18891
	2.COMM	2285	2532	1232	2388
	3.IND	266	255	267	382
	6.AG	300	103	195	504
	9B.OTHER	732	585	324	590
<b>PARBHANI CIRCLE</b>	1.RES	13616	7717	6192	8919
	2.COMM	1008	887	781	914
	3.IND	232	183	226	350
	6.AG	278	1858	1215	856
	9B.OTHER	111	141	96	202
<b>PEN CIRCLE</b>	1.RES	28814	26554	19347	28203
	2.COMM	3373	3675	2687	4340
	3.IND	187	180	219	306
	6.AG	438	103	184	1292
	9B.OTHER	904	788	554	1027
<b>PUNE (R) CIRCLE</b>	1.RES	43559	44788	27619	48560
	2.COMM	5307	5588	3110	6289
	3.IND	1059	1110	878	1624
	6.AG	961	782	1881	5021
	9B.OTHER	1209	701	386	724
<b>RASTAPETH (U) CIRCLE</b>	1.RES	66659	64954	32755	51136
	2.COMM	9252	8530	4961	7369
	3.IND	725	598	589	651
	6.AG	27	9	11	60
	9B.OTHER	565	628	199	290
<b>RATNAGIRI CIRCLE</b>	1.RES	16202	15371	9958	13831
	2.COMM	2433	2467	1841	2569
	3.IND	224	176	217	283
	6.AG	477	148	369	883
	9B.OTHER	709	845	611	1031
<b>SANGLI CIRCLE</b>	1.RES	18785	19320	14689	21981
	2.COMM	4297	4237	3483	4793
	3.IND	546	521	592	739

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	6.AG	7105	2594	4737	8780
	9B.OTHER	648	765	444	955
<b>SATARA CIRCLE</b>	1.RES	29813	22329	16662	24618
	2.COMM	4322	4229	2856	4391
	3.IND	399	429	584	676
	6.AG	3096	4540	6312	9833
	9B.OTHER	1066	1141	444	595
<b>SINDUDURG CIRCLE</b>	1.RES	7833	9148	6277	7527
	2.COMM	1240	1357	984	1203
	3.IND	158	163	141	205
	6.AG	631	279	324	1991
	9B.OTHER	870	905	826	861
<b>SOLAPUR CIRCLE</b>	1.RES	27557	30877	17570	27519
	2.COMM	3637	3943	3038	4496
	3.IND	879	829	948	1187
	6.AG	4194	5970	5408	12685
	9B.OTHER	897	1127	296	642
<b>THANE (U) CIRCLE</b>	1.RES	23391	21649	15799	16708
	2.COMM	3388	3251	2408	2695
	3.IND	136	186	171	274
	6.AG	0	0	1	1
	9B.OTHER	1318	1375	377	676
<b>Thane DF Circle</b>	1.RES	16660	21728	0	0
	2.COMM	1870	2590	0	0
	3.IND	115	153	0	0
	6.AG	0	1	0	3
	9B.OTHER	266	178	0	0
<b>VASAI CIRCLE</b>	1.RES	54349	48843	17178	39763
	2.COMM	5329	6800	3617	7235
	3.IND	1677	1625	1560	2439
	6.AG	127	25	49	184
	9B.OTHER	524	602	222	485
<b>WARDHA CIRCLE</b>	1.RES	9995	8094	7640	8078
	2.COMM	2047	1963	1793	1967
	3.IND	210	172	262	246
	6.AG	1198	1215	1137	1336

From above, it is observed that power supply to @12-15 Lakhs		9B.OTHER	504	419	309	258
	<b>WASHI CIRCLE</b>	1.RES	38928	37508	20580	42083
		2.COMM	6283	6421	3229	5547
		3.IND	413	322	398	673
		6.AG	33	0	1	47
		9B.OTHER	1280	2102	712	1010
	<b>WASHIM CIRCLE</b>	1.RES	8480	8390	6450	7137
		2.COMM	962	907	845	937
		3.IND	101	87	148	155
		6.AG	2515	2517	1314	1167
		9B.OTHER	137	132	94	110
	<b>YAVATMAL CIRCLE</b>	1.RES	24623	19402	12396	19587
		2.COMM	2260	2312	1660	2456
		3.IND	305	317	501	446
		6.AG	1213	3210	1992	2016
		9B.OTHER	913	743	337	515
	<b>MSEDCL Total</b>	1.RES	1319149	971786	618695	890259
		2.COMM	132351	139974	100242	143823
		3.IND	18759	19217	21242	26891
		6.AG	66596	73305	72595	131410
9B.OTHER		27330	30496	15890	22884	
<b>Grand Total</b>		<b>1564185</b>	<b>1234778</b>	<b>828664</b>	<b>1215267</b>	

hs new applicants is provided every year. Out of these 5-6 lakhs, new consumers are added in the Big/ Metros cities. In metro cities power supply to consumers is mostly provided with U/G system.

16.2.5 With the SOC approved by MERC in MYT order, MSEDCL is unable to recover the expenses incurred for providing power supply to the consumers in Metro and Big Urban cities through U/G system, which are more than rural consumers or Semi urban consumers, supplied by overhead system. MSEDCL prepared estimates load slab wise with latest approved cost data and observed that there is huge difference in cost incurred and approved SOC for giving power supply to the consumers.

Sr.No	Load of the consumer	Range of Estimated Amount of service connection charges required for Overhead System in Rural and semi urban Areas in Rs.	Range of Estimated amount of service connection charges required for Underground system in Metro and Big Cities in Rs.
1.	up to 0.5 kW	1700	15000
2.	0.5 up to 20 kW	1700 to 10300	15000 to 30000
3.	< 20 to 160 kW	1,28,120 to 4,39,377	2,79,203 to 9,95,576
4.	Above 160kW and up to 20MVA	6,51,833-10,44,847	10,27,119to 22,88,986

Because of such huge difference in estimated amount to provide Power supply, which varies according to the load of the consumer under Metro big cities (for UG system) and rural or semi urban areas (For OH System), MSEDCL is not able to recover actual cost incurred from these consumers and cost of infrastructure charges has been passed on to other consumers of MSEDCL, which is against the principal defined in Latin legal maxim “Actus legis nemini facit injuriam”, which means act of law does injury to no one, so to avoid injustice to the other consumers and in order to achieve social justice, MSEDCL Proposes the SOC to be paid by the consumers for availing power supply for Load above 20kW in OH and UG system on actual basis (as per rates in approved cost Data).

16.2.6 The Hon'ble Commission is therefore requested to revise the Schedule of Charges approved in the Case No. 322 of 2019 dt 30.03.2020 (MYT Order) with a request to reasonably increase the SoC in case of new applicants from residential and commercial complexes of Metro/Big Cities. This will help to mitigate the gap between the actual recovery of SoC and the actual expenditure done while providing power supply to such consumers. If this is not done judiciously then tariff increase is bound to be there and the rural consumers would be unnecessarily burdened due to U/G infrastructure.

16.2.7 The SoC for the consumers having load above 27 HP/ 20 kW is proposed at actual irrespective of jurisdiction whether it is urban or rural or industrial zone. This will help to mitigate the gap between SoC and the actual expenditure incurred by MSEDCL in providing the power supply. Especially, SoC (charges) while releasing power supply on EHV is very meagre. For e.g. a new applicant seeking power supply on EHV has to pay maximum Rs 5,00,000/-. The socialization of infrastructure cost being incurred in giving power supply to such consumer/s, unnecessarily burdens the consumers of Rural and other areas. This is great deal of injustice being done to the rest of the consumers, which needs to be addressed immediately.

16.2.8 Hence with such revision in SOC, MSEDCL will be in position of keeping the tariff hike to the bare minimum level on account of CAPEX. The Hon'ble Commission is therefore requested to kindly review the present level of SoC.

16.2.9 The Commission in its order in Case No. 322 of 2019 dated 30.03.2020 has estimated the service connection charges on the basis of 20 meters as the average length. MSEDCL in present proposal has followed the same estimation and worked out the service connection charges.

16.2.10 As per revision (provisional) in cost data of FY 2019-20 and centages, the estimates are prepared to derive the Service Connection charges. In this proposal the loading- unloading and handling charges for meter, Contingencies, insurance of material & price variation/ escalation were taken into consideration. The centages over and above the total estimated cost of materials is 25.50%. All other things are kept unchanged such as supervision charges, variable charges etc.

16.2.11 While estimating charges for new HT Overhead connection, MSEDCL has considered all the legitimate expenditure for works of Gantry, Earthing, protection and metering etc. The same works has considered in case of HT underground below service connection. Accordingly, MSEDCL has proposed the new service connection charges based on all legitimate costs. The detail cost estimations are enclosed as **Annexure 10** to this Petition.

16.2.12 Generally, in Metro/ Big cities for new consumers in bulk for residential complexes, the connections are released on underground system only and since the charges for underground connections are proposed, the separate charges were not proposed. Now as suggested separate charges for Metro/ Big cities are proposed.

16.2.13 In view of the above, MSEDCL has proposed following schedule of charges for approval of Hon'ble Commission to be made applicable for future years of this control period.

**16.3 The proposed normative service connection charges are as below:**

**16.3.1 Service Connection Charges:**

**I) SERVICE CONNECTION CHARGES FOR NEW OVERHEAD CONNECTION**

Sr. No.	CATEGORY	Existing SOC (w.e.f. 01-04-2022) RS.	Proposed SoC RS.	Justification	
1	<b>Low Tension (LT) Supply</b>				
	<b>a. Single Phase.</b>				
	i.	For load up to 0.5 kW	1,300.00	1,700.00	The estimated amount to release one no of overhead connection is Rs. 1700/-.
	ii.	For load above 0.5 kW and up to 7.5 kW	1,700.00	2,700.00	The estimated amount to release one no of overhead connection is Rs. 2700/-.
	<b>b. Three Phase</b>				
	i.	Motive power up to 27 HP or other loads up to 20 kW.	7,200.00	10,300.00	The estimated amount to release one no of overhead connection is Rs. 10300/-.
ii.	Motive power above 27 HP but up to 107 HP or other loads above 20 kW but up to 80 kW.	12,600.00	As per Estimate on case to case basis	Proposed on actual basis as per the estimate to recover all the legitimate cost for	

Sr. No.	CATEGORY	Existing SOC (w.e.f. 01-04-2022) RS.	Proposed SoC RS.	Justification
	iii. Motive power above 107 HP but up to 214 HP or other loads above 80 kW but up to 160 kW.	21,600.00	As per Estimate on case to case basis	releasing new service connection.
2	<b>High Tension (HT) Supply &amp; Extra High Voltage (EHV) Supply</b>			
	i. 11kV Supply up to 1000 kVA.	2,20,000.00	As per Estimate on case to case basis	
	iii. 22kV Supply up to 1000 kVA.	2,60,000.00	As per Estimate on case to case basis	
	iv. 11kV above 1000 KVA up to 5000 kVA	2,58,000.00	As per Estimate on case to case basis	
	vi. 22kV above 1,000 kVA up to 10,000 kVA	3,17,000.00	As per Estimate on case to case basis	
	vii. 33kV Supply up to 20,000 kVA.	3,68,000.00	As per Estimate on case to case basis	
	x. EHV Supply and beyond SOP Cases	"At Actual" on case to case basis subject to ceiling of ₹ 5,00,000	As per Estimate on case to case basis	

**II) SERVICE CONNECTION CHARGES FOR NEW UNDERGROUND CONNECTION**

Sr. No.	CATEGORY.	Existing SOC (w. e. f. 01-04-2022) RS.	Proposed SoC RS.	Justification
1	L T. Supply.			

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<b>a. Single Phase</b>				
i.	For load up to 0.5 kW	3,400.00	4,200.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
ii	For load up to 0.5 kW	3,400.00	15,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
iii	For loads above 0.5 kW & up to 7.5kW	7,600.00	7,900.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
ii.	For loads above 0.5 kW & up to 7.5kW	7,600.00	25,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
<b>b. Three Phase</b>				
i.	Motive power up to 27 HP or other loads up to 20 kW	13,800.00	19,600.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
ii.	Motive power up to 27 HP or other loads up to 20 kW	13,800.00	30,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
iii.	Motive power above 27HP but up to 67 HP or for other loads above 20 kW but up to 50 kW	24,300.00	As per Estimate on case to case basis	Proposed on actual basis as per the estimate to recover all the legitimate cost for releasing new service connection.
iv.	Motive power above 67HP but up to 134 (201)HP or for other loads above 50 kW but up to 100 kW(150)	46,900.00	As per Estimate on case to case basis	
v.	Motive power above 134HP but up to 214 HP or for other loads above 100 kW but up to 160 kW	71,100.00	As per Estimate on case to case basis	
<b>c. For Metro and Big Cities</b>				

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	i	LT <b>Single Phase</b> for load up to 0.5 kW	-	4,200.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
	ii	LT <b>Single Phase</b> for load up to 0.5 kW		15,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
	iii	LT <b>Single Phase</b> for loads above 0.5 kW & up to 7.5kW	-	7,900.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
	iv	LT <b>Single Phase</b> for loads above 0.5 kW & up to 7.5kW		25,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
	v	LT 3-Phase Motive power up to 27 HP or other loads up to 20 kW	-	19,600.00	To extend the supply for releasing individual connections where infrastructure is generally not required.
	vi	LT 3-Phase Motive power up to 27 HP or other loads up to 20 kW		30,000.00	The charges proposed are per consumer, to extend the supply for releasing new consumers in bulk for residential/ commercial complexes where infrastructure is generally required.
	vii	Motive power above 27HP but up to 67 HP or for other loads above 20 kW but up to 50 kW	-	As per Estimate on case to case basis	Proposed on actual basis as per the estimate to recover all the legitimate cost for releasing new service connection.
	viii	Motive power above 67HP but up to 134 (201)HP or for other loads above 50 kW but up to 100 kW(150)	-	As per Estimate on case to case basis	
	ix	Motive power above 134HP but up to 214 HP or for other loads above 100 kW but up to 160 kW	-	As per Estimate on case to case basis	
2	<b>H.T. Supply</b>				
	i.	11kV H.T supply up to 1000 kVA	2,53,000.00	As per Estimate on case to case basis	

	ii.	22kV H.T supply up to 1000 kVA	2,64,000.00	As per Estimate on case to case basis	
	iii.	11kV above 1000 KVA up to 5000 kVA	3,05,000.00	As per Estimate on case to case basis	
	iv.	22kV above 1,000 kVA up to 10,000 kVA	3,23,000.00	As per Estimate on case to case basis	
	iv.	33kV H.T supply up to 20,000 kVA	3,78,000.00	As per Estimate on case to case basis	
	v.	EHV Supply and beyond SOP Cases	"At Actual" on case to case basis subject to ceiling of ₹ 5,00,000	As per Estimate on case to case basis	

Notes:

1. In case MSEDCL permits an applicant to carry out the works through a licensed Electrical contractor (LEC), a rate of 1.30% of the normative charges will be applicable towards supervision charges.
2. In case of extension of load entails any work or change in load slab, the normative charges will be applicable on the total load (existing) as well as additional load demanded) as per the load slabs indicated above.
3. The road opening charges vary from area to area hence will be levied on actual basis.
4. The GST will be levied extra as per applicable rates.

**16.3.2 COST OF METER, METERING CUBICLE ETC.:**

**16.3.2.1** As per Maharashtra Electricity Regulatory Commission (Electricity Supply Code and Standards of Performance of Distribution Licensees including Power Quality) Regulations, 2021 (hereinafter referred to as 'MERC (Supply code and SOP including power quality) Regulations, 2021'), at the time of releasing a new connection, the MSEDCL shall not recover any cost towards meter and allied equipment. The Consumer may opt to purchase the meter and allied equipment from the DISCOM or suppliers empanelled by the DISCOM, provided the same are of a specification approved by the Distribution Licensee from time to time. The consumer can also install the check meter as per specification approved by the technical specifications as laid down in the Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006 as amended from time to time.

16.3.3 In the case of a burnt meter or a lost meter, the Distribution Licensee is authorized to recover the price of the meter from the Consumer in accordance with the clause 15.3 of the MERC (Supply code and SOP including power quality) Regulations, 2021.

16.3.4 The metering rates are proposed based on rates obtained through e-procurement in addition 4% indirect costs towards transportation from store to consumer premise, handling charges etc. The proposed rates are as under:

Sr. No.	Category	Existing Charges (₹)	Proposed Charges (₹)
<b>Applicable in case consumer opts to purchase the meter, metering Cabinet/ cubicle from MSEDCL &amp; in case of Lost &amp; Burnt Meter &amp; metering Cabinet/ cubicle.</b>			
<b>1</b>	<b>LT Single Phase</b>		
a.	5-30A 6LoWPAN RF Meter without enclosure	₹ 820.00	₹ 820.00
b.	10-60A Smart Meter (including GPRS communication Module) as per IS:16444 Part-I	₹ 2,610.00	₹ 2,610.00
<b>2</b>	<b>LT Three Phase</b>		
a.	10-40A 6LoWPAN RF Meters without enclosure	₹ 1,520.00	₹ 1,770.00
b.	10-60A Smart Meter (including GPRS communication Module) as per IS:16444 Part-I	₹ 3,790.00	₹ 4,050.00
<b>3</b>	<b>LT-CT Operated Three Phase Metering Unit</b>		
a.	250/5 A Meter with CTs & MCCB	₹ 22,500.00	₹ 22,500.00
b.	40-200A CT embedded Meter	₹ 13,840.00	₹ 14,200.00

c.	i.	LT-CT Operated Three Phase Smart Meter (including GPRS Communications Module) as per 15:16444 Part-2 with Accuracy Class 0.5S and current rating of -/5 A.	₹ 3,570.00	₹ 3,570.00
	ii.	Supporting CTs and MCCB for LT-CT Operated Three Phase Smart Meters as above	₹ 18,720.00	₹ 18,750.00
<b>4</b>	<b>HT (Time of Day) TOD Meter</b>			
a.	5A rating with 0.5s accuracy class		₹ 2,420.00	₹ 2,420.00
b.	1A rating with 0.5s accuracy class		₹ 2,650.00	₹ 3,750.00
c.	5A & 1A rating with 0.2s accuracy class		₹ 5,930.00	₹ 7,200.00
<b>5</b>	<b>HT Metering cubical including C.T. &amp; P.T.</b>			
a.	For 11 kV Supply		₹ 85,000.00	₹ 91,500.00
b.	For 22 kV Supply		₹ 1,30,000.00	₹ 1,38,500.00
c.	For 33 kV Supply		₹ 1,90,000.00	₹ 2,01,500.00

**Note:**

1. In case of lost and burnt meter and metering cabinet/cubicle, the installation testing fees will be recovered from the consumer as per approved Schedule of Charges.
2. Meter box will be provided by MSEDCL at its own cost.
3. The GST will be levied extra as per applicable rates.

**16.3.5 Application Registration and Processing Charges:**

Most of the activities covered under this category are labour intensive viz. Application scrutiny & processing, written/e-mails, telephonic correspondence, web based services for New connections/ Change of name/ Reduction or Enhancement of Load/ Shifting of service/ Temporary connection etc. Considering the inflation witnessed from the rise in WPI and CPI, 6-9% rise on existing charges is proposed.

Sr. No.	Particulars	Existing Charges (Rs.)	Proposed Charges (Rs.)
1	Single Phase	110	120
2	Three Phase	160	170
3	LT (Agriculture)	160	170
4	HT Supply up to 33 kV	2,500	2,700
5	EHV Supply	5,100	5,400

Note: The GST will be levied extra as per applicable rates.

**16.3.6 MISCELLANEOUS AND GENERAL CHARGES:**

The Charges of testing of electrical equipment are not revised. Whereas charges for testing of installation, changing of meter location within same premise, reconnection charges (proposed to encourage consumer for prompt payment and discourage from becoming a defaulter) are increases on notional basis.

Sr. No.	Category	Existing Charges Rs.	Proposed Charges Rs.	
1	Installation Testing Fees #			
	Low Tension Services			
	a.	Single Phase	₹ 110.00	₹ 130.00
	b.	Three Phase	₹ 220.00	₹ 250.00
	High Tension Services			
	a.	Agricultural	₹ 600.00	₹ 600.00
	b.	All categories except Agricultural	₹ 750.00	₹ 900.00
	Renewable Energy Installations with Net Metering features			
	a.	Single Phase	₹ 500.00	₹ 500.00
b.	Three Phase	₹ 1,000.00	₹ 1,000.00	
2	Reconnection Charges			
	Low Tension Service at Meter incomer			
	a.	Single Phase	₹ 200.00	₹ 250.00
	b.	Three Phase	₹ 400.00	₹ 450.00
	At overhead mains			
	a.	Single Phase	₹ 300.00	₹ 350.00
	b.	Three Phase	₹ 500.00	₹ 550.00
	Reconnection in underground cable works			
	a.	Single Phase	₹ 300.00	₹ 350.00
b.	Three Phase	₹ 500.00	₹ 550.00	
High Tension Supply		₹ 3,000.00	₹ 3,500.00	
3	Changing location of meter within same premises at consumers request at consumer request (Utility's services viz. Service Line Setup, Poles, HT-LT-EHV Lines, DTCs, and Substations etc. are not required) *			
	a.	Single Phase	₹ 385.00	₹ 500.00
	b.	Three Phase	₹ 1,000.00	₹ 1,200.00
4	Shifting of Utility's services (Service Line Setup, Poles, HT-LT-EHV Lines, DTCs, and Substations etc.)			
	a.	Single Phase	At Actual	At Actual
	b.	Three Phase	At Actual	At Actual
5	A. Testing of Meters			

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Sr. No.	Category	Existing Charges Rs.	Proposed Charges Rs.
a.	Single Phase	₹ 220.00	₹ 220.00
b.	Poly-phase meter/ RKVAH meter	₹ 880.00	₹ 880.00
c.	LTMD (with/without CTs)	₹ 1,100.00	₹ 1,100.00
d.	Tri vector Meter	₹ 1,100.00	₹ 1,100.00
e.	Metering equipment like CT/PT per unit for LT	₹ 1,000.00	₹ 1,000.00
f.	Metering equipment like CT/PT per unit for HT up to and including 33kV	₹ 3,000.00	₹ 3,000.00
g.	Metering equipment like CT/PT per unit for EHT above 33 kV	₹ 5,000.00	₹ 5,000.00
h.	Net Meter		
	i. Single Phase	₹ 500.00	₹ 500.00
	ii. Three phase LT CT Operated Bidirectional	₹ 1,100.00	₹ 1,100.00
	iii. Three phase HT TOD Bidirectional	₹ 1,100.00	₹ 1,100.00
<b>B. Testing of Meters at TQA Laboratories</b>			
a.	Single Phase	₹ 2,000.00	₹ 2,000.00
b.	Three Phase	₹ 9,500.00	₹ 9,500.00
c.	LT CT OP Meters	₹ 10,000.00	₹ 10,000.00
d.	HT ToD Meters	₹ 15,000.00	₹ 15,000.00
e.	ABT/Apex	₹ 20,000.00	₹ 20,000.00
f.	Summator Meter Module		
	i. Two module + Summator	₹ 46,500.00	₹ 46,500.00
	ii. Three module + Summator	₹ 68,200.00	₹ 68,200.00
	iii. Four module + Summator	₹ 89,990.00	₹ 89,990.00
<b>C. Calibration of Testing Equipment of Other Utilities' request at TQA Laboratories</b>			
a.	Active/ Reactive Energy	Rs. 400 per load point	Rs. 400 per load point
b.	Active/ Reactive/ Apparent Power		
c.	Voltage	Rs. 500 per load point	Rs. 500 per load point
d.	Current		
e.	Power Factor		
f.	Frequency		
6	Cable Testing and fault Detection on request of other utilities		
	33/11KV cable fault location	₹ 12,000.00	₹ 12,000.00
	33/11KV cable Hi-pot	₹ 4,500.00	₹ 4,500.00
	33/11KV Cable Identification	₹ 4,500.00	₹ 4,500.00
	33/11KV Cable fault Identification	₹ 4,500.00	₹ 4,500.00
	LT U.G. Cable Fault location and identification	₹ 4,500.00	₹ 4,500.00
7	Testing of Distribution Transformer	₹ 3,000.00	₹ 3,000.00
8	Administrative charges for cheque bouncing	Rs. 750/- or Bank charges whichever is higher	Rs. 750/- or Bank charges whichever is higher

**Note:**

1. # Applicable only after first inspection for the release of new service connection.
2. \* Inclusive of material, labour and all other costs.
3. The GST will be levied extra as per applicable rates.

**16.3.7 Processing and Operating Charges for Open Access:**

A steep increase is observed in the number of open access applications received at MSEDCL in the recent past. Approximately 250 no of applications are being received every month.

As per new promotional RE Policies by Gol and GoM, installation of RE power plants like Solar, Small Hydro are on rise.

There is a substantial rise in inflation due to COVID-19 pandemic which has resulted in the increase in expenditure of MSEDCL.

In view of the above, there is a need to revise the processing charges and operating charges. The pertinent reasons for considering the revision in the processing charges and the operating charges are enlisted below:

**16.3.8 Processing Charges- Activities**

1. As per regulatory provisions, an open access consumer can avail open access from multiple generator and multiple sources, the numbers of applications are increased.
2. MSEDCL has developed online system for submission of Open Access application.
3. MSEDCL has to pay service charges to service provider of online payment system.
4. The Open Access consumers apply every month for STOA and upload the required documents having 50 to 100 MB Capacity. Thus, MSEDCL has to purchase additional storage space to save all the documents.
5. Discrepancies in Open Access applications are required to be communicated to applicants within three working days via electronic media.
6. Issuance of Periodical Open Access permissions.
7. Execution of Open Access Agreement.
8. The information of open access consumers like list of open access applications, date of application, open access quantum, generating stations, period of open access, action taken and status is provided in downloadable

format on internet web-site every month. The MIS information is also required to be shared with various authorities like MERC, GoM, MNRE, MoP, etc as and when required from time to time.

9. The applicant wise details are to be made available on public domain.

#### 16.3.9 Operating Charges- Activities

1. Deployment of Engineers and staff.
2. As per DOA Regulations 2019, Individual SEM is being installed for every RE generator, hence the work of meter reading and collection of meter data has increased significantly.
3. The work of Testing of generation/ consumer end meters has increased.
4. Purchase of meter reading instruments and Laptops for meter reading.
5. A multiple monthly joint meter reading is to be taken and processed for consumers from multiple generators.
6. Providing vehicle for monthly joint meter reading. The rate of fuel is almost doubled.
7. Forwarding the metering data from the consumer end through electronic media.
8. Monitoring of daily schedule of open access consumers.
9. Keeping the track of schedules from WRLDC, MSLDC and Exchange website for billing.
10. Compilation of consumer wise, date wise monthly schedule.
11. Development in open access billing software as per changes in Regulations and various Orders of Hon MERC.
12. Separate IT system and IT manpower for processing of open access bills.

As the volume of Open Access applications is increasing day to day basis, the expenditure of MSEDCL has increased with reference to the reasons cited above. In view of the above, the **proposed Processing charges and Operating charges** for the open access are as below:

Load Requisitioned (OA Capacity)	Processing Charges per Application (Rs)		Operating Charges per transaction/ Permissions (Rs)	
	Existing	Proposed	Existing	Proposed
Up to 1 MW	14,500	<b>20,000</b>	14,500	<b>25,000</b>
More than 1 MW and up to 5 MW	22,000	<b>30,000</b>		
More than 5 MW and up to 20 MW	44,000	<b>60,000</b>	28,000	<b>40,000</b>
More than 20 MW	75,000	<b>1,00,000</b>		

**17 COMPLIANCE TO THE DIRECTIVES IN CASE No. 322 OF 2019**

**17.1 Background**

17.1.1 MSEDCL submits that the Hon'ble Commission in its Multi Year Tariff Order dated 30 March 2020 (Case No. 322 of 2019) has given various directives to MSEDCL for submission of their compliances. The same along with its compliances are reproduced as below:

Order Ref. No. and Topic	MERC Directives in MYT Order in Case No. 322 of 2019	Timeline	Compliance	Implementation Status
6.6.54 Surplus Trading Power	MSEDCL should explore various options for selling the surplus power through short-term/ medium-term bilateral contracts or through Power Exchanges in an optimal and efficient manner such that the revenue from surplus trade of power can help in optimising effective cost of power procurement.		<p><b>FY 2020-21</b> MSEDCL has been exploring the option of sell of surplus power through Energy Exchanges and participating in Short Term Tenders on DEEP E-bidding portal.</p> <ul style="list-style-type: none"> <li>For doing this, during the lean demand period and as and when available, MSEDCL bids the power for sell in energy exchanges. In FY-2020-21, as and when feasible, MSEDCL has sold around 223 MUs amounting ~ Rs 87 Crs. at an average rate of Rs. 3.89 per unit.</li> <li>In FY 2020-21, due to nationwide Lockdown imposed, the MSEDCL's power demand was less, however at the same time the rates in the market were also on lower side and hence it was not feasible for MSEDCL for sell of power in exchanges. During this period instead of selling power in the market MSEDCL had given zero</li> </ul>	Complied

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			<p>schedule to high cost generating units and purchased power from the market for optimisation of power purchase cost.</p> <ul style="list-style-type: none"> <li>• In addition to that MSEDCL also participated in the short term tenders floated by various utilities such as Gigaplex Estate Pvt,Ltd, EON Kharadi Infrastructure Pvt Ltd, etc, However as rates discovered in tenders were lower than as quoted by MSEDCL, MSEDCL could not succeed in the tenders. MSEDCL was successful in the tender floated by Maharashtra Airport Development Co. and thus in FY-2020-21 MSEDCL sold 63 MUs amounting Rs. 31 Crs at an average rate of Rs. 4.94 per unit.</li> <li>• Thus in FY 2020-21, MSEDCL has sold total 286 MUs amounting 117.83 CRs at an average rate of Rs. 4.12 per unit.</li> <li>• Earlier, MSEDCL due to project site issues, vide letter dated 22.04.2019 had informed GoM regarding surrendering of MSEDCL's share of 1000 MW in CKPL M/s. Coastal Karnataka Power Limited and vide letter dated 08.02.2019, MSEDCL's share of 2000 MW in the Coastal Maharashtra Mega Power Project Limited (CMMPL), Munage UMPP.</li> <li>• Further, MSEDCL vide letter dated 30.03.2020, requested MSPGCL to provide economical shut down</li> </ul>	

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			<p>of plants which has completed their useful life and having high variable cost. Thus, Koradi Unit-7 has been declared retired from 3.08.2021, reducing its fixed cost burden.</p> <p><b>FY 2021-22</b> In FY 2021-22, MSEDCL had explored various option for sell of surplus power.</p> <ul style="list-style-type: none"> <li>• MSEDCL bidded the power for sell in energy exchanges, as and when feasible, In FY-2021-22, as and when feasible, MSEDCL had sold around 291 MUs amounting ~ Rs 167 Crs. at an average rate of Rs. 5.76 per unit.</li> <li>• During the lean demand months, to manage the available surplus power, MSEDCL had given zero schedule to high cost generating units as per MoD to avoid the burden due to the running of generating units on technical minimum.</li> <li>• In addition to that MSEDCL had also participated in the short term tenders floated by various utilities such as Gigaplex Estate Pvt,Ltd, EON Kharadi Infrastructure Pvt Ltd, Nidar Utilities Panvel LLP, Lakshimati Balaji Supply Chain Management, Jawaharlal Neharu Port Trust, etc, However as rates discovered in tenders were lower than as quoted by MSEDCL, MSEDCL</li> </ul>	

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			<p>could not succeed in the tenders. MSEDCL was successful in the tender floated by Maharashtra Airport Development Co. and thus in FY-2021-22 MSEDCL had sold 43 MUs amounting Rs. 22 Crs at an average rate of Rs. 5.27 per unit.</p> <ul style="list-style-type: none"> <li>Thus in FY 2021-22, MSEDCL has sold total 334 MUs amounting 190 CRs at an average rate of Rs. 5.70 per unit.</li> </ul> <p><b>FY 2022-23 (Upto Sept-22)</b> In FY 2022-23 (Upto September-22), MSEDCL has also explored various option for sell of surplus power.</p> <ul style="list-style-type: none"> <li>MSEDCL bids the power for sell in energy exchanges, as and when feasible, and sold around 195 MUs amounting ~ Rs 175 Crs. at an average rate of Rs. 9.00 per unit.</li> <li>Further MSEDCL had participated and succeeded in the short term tender floated by BRPL Delhi and sold 21 MUs amounting ~11 Crs at an average rate of Rs. 5.13 per unit.</li> <li>Further in FY 2022-23, under Banking arrangement with Tata Power Delhi Distribution Company Ltd (TPDDL) for the period from 16<sup>th</sup> June-2022 to 15<sup>th</sup> Sept-2022, MSEDCL exported 436 MUs (at Regional Periphery.) to TPDDL against the banked power supplied by TPDDL in the October-21, November-21,</li> </ul>	

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			<p>February-22 and March-23.</p> <ul style="list-style-type: none"> <li>Also MSEDCL has also floated Power Banking Tender and issued LOA to successful bidder. As per the banking arrangement for the period from 21<sup>st</sup> June-2022 to 15<sup>th</sup> September-2022, MSEDCL had exported 714 MUs (at Regional Periphery) to the utilities i.e. Punjab, BYPL Delhi and India Power Corporation Pvt Ltd, and these utilities shall supply the banked power at 110% premium to MSEDCL in the month of October-2022 and March-2023 to May-2023 as per the LOA issued, expected MUs to be imported from the other utilities during this period is around 785 MUs.</li> </ul>	
6.5.7	<p>.....MSEDCL should maintain separate account of its market operations and should regularly undertake analysis of market information/transactions for future learning.</p> <p>The Commission shall scrutinise and undertake prudence check of such trading activities for efficacy of trading contracts, optimisation power purchase cost and shall also scrutinise reasons for</p>	<p>Maintaining separate accounts of Market operations/ information/ transactions-</p> <p>At the time of MTR</p>	<p>There is separate settlement account for Exchange wherein daily pay in/out takes place. MSEDCL analyses the market operations for future learning and accordingly incorporate it in the daily bids. Also MSEDCL analyses its transactions for future learnings. MSEDCL make optimum use of the various contracts at power exchange for efficient trading.</p>	Complied

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	missed opportunities (if any), at the time of MTR			
2.14.15	MSEDCL should review its billing related processes, identify current limitations/gaps and areas for improvement and take corrective steps and monitor the implementation of necessary actions at the highest level. MSEDCL may also conduct a third-party process audit of its billing processes, including audit of its billing software/system		<p><b>1. Centralized Billing system</b> MSEDCL has implemented Centralized Billing system (Metering-Billing-Collection) for its 2.88+ crore consumers of various categories with HT/LT supply. The features of centralized billing system are as below :</p> <ul style="list-style-type: none"> <li>• The entire process from meter reading to bill generation is scheduled and automated without any manual intervention.</li> <li>• Billing is completed from 1 to 25 of every month.</li> <li>• Centralized Billing system has regulated the cash flow through scheduled billing activity i.e. billing of each consumer on fix date – each meter to be read on fix date of every month.</li> <li>• Centralized validation and sanitization of data has improved quality of billing resulting into reduction in billing complaints and losses.</li> <li>• Average time taken from meter reading to bill distribution is reduced to 5 days.</li> <li>• There is minimum delay in generating the MIS information due to centralized system.</li> <li>• Centralized database of all consumers.</li> <li>• Meter reading of single phase and three phase meters of LT consumers is done through mobile app. SMS of Bill &amp; consumption, probable bill amount is sent to consumer immediately after</li> </ul>	Centralized Billing system (Metering-Billing-Collection), SMS Alerts and E-Bills through Emails is adopted for 2.88+ crore consumers

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			<p>meter reading submitted through mobile app.</p> <ul style="list-style-type: none"> <li>• Meter reading of LT consumers having load above 20kW and all HT consumers is received through AMR and MRI without manual intervention.</li> </ul> <p><b>SMS Alerts and E-Bills through Email</b></p> <ul style="list-style-type: none"> <li>• SMS are issued to consumers for various billing related services such as Bill Alerts, Bill reminders, Payment Acknowledgement, Meter Reading , Request for Self-Reading ,Complaint Acknowledgement (LT Consumer), etc.</li> <li>• Link to view and pay bill is sent through bill alert SMS.</li> <li>• SMS for advance intimation of scheduled reading is sent to consumer.</li> <li>• SMS are sent to consumers in Marathi and English language as per consumer preference.</li> <li>• Monthly E-Bills are sent through e-mail to all consumers having registered mail ID. Also for Go-green registered consumers, E-Bills are sent to registered mail ID and Go-Green discount of Rs.10/- per bill is offered to such consumers.</li> </ul> <p><b>Additional processes integrated with Billing software to avoid manual intervention</b></p> <ul style="list-style-type: none"> <li>• Online application for new connection, load change, demand change, activity declaration/tariff change, name change, address correction etc. through consumer portal and mobile app.</li> </ul>	

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			<ul style="list-style-type: none"> <li>• Online application for SD refund and its approval through system is implemented.</li> <li>• Online provision for updating consumer profile i.e. contact details (mobile number/E-mail ID), PAN number, GST ID etc.</li> <li>• Online applications authenticated through OTP on consumer's registered mobile number.</li> <li>• Online application for Go-Green registration / de-registration.</li> <li>• Open Access permission portal integrated with centralized billing system</li> </ul> <p><b>Dashboard</b></p> <ul style="list-style-type: none"> <li>• A centralized dashboard designed and used to present important KPI's at various office levels from state to sub-division level. This dashboard enables management for data driven decision based on latest information.</li> </ul> <p>2. MSEDCL submits that internal audit for billing process of LT and HT billing is being carried out by third party auditors every year. The audit of billing software/system is being planned.</p>	

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2.13.18	<p>Having said that the Commission is cognizant of the issue of power quality. Hence, in order to ensure that requisite data is available before next tariff determination process, the Commission in Section 8.25 of this Order has laid down time frame for installation of power quality meter as per mandate of CEA Regulations. Accordingly, all Bulk Consumers with Contract Demand above 20 MVA shall install power quality meter by March 2021 (and above 10 MVA by March 2022) and share monthly data with Distribution Licensee. <i>Also, Distribution Licensee needs to install power quality meter at their selected substations and share the data from these meters on its website</i></p>	<p>Installation of power quality meters by the consumers having contract demand-</p> <p>CD &gt; 20 MVA by March 2021</p> <p>CD&gt;10 MVA by March 2022)</p>	<p><b>1. Installation of power quality meters by the consumers having contract demand above 10 MVA &amp; 20 MVA-</b></p> <p>MSEDCL submits that out of total 57 nos of 20MVA consumers 06 nos. of consumers have installed power quality Meters. Further, out of 77 nos of 10MVA consumers, 12 nos of consumers have installed Power Quality Meters. MSEDCL mentions that the specifications for Power Quality Meter/Analyser are already made available on MSEDCL website.</p> <p><b>2. Status of installation of power quality meters at selected MSEDCL substations and availability of its data on MSEDCL website-</b></p> <p>MSEDCL has processed a proposal for procurement of 6626 nos of Power quality meters for installation at Power Transformers LV side having approximate tender cost of Rs 232 Crs. The specifications are also in process of approval. The scope includes providing end-to end solution including supply, installation, commissioning and provision of HES for data collection.</p> <p><b>Details of programs conducted for awareness of effects of Harmonics amongst consumers-</b></p> <p>1. MSEDCL earlier conducted the workshops at Sangli, Pune, Vashi and Aurangabad with detailed discussions with the stakeholders regarding the harmonics and maintaining the same within prescribed levels. The workshops had extensive coverage on adequate topics:</p>	<p>No of consumers who have installed Power Quality Meters</p> <table border="1" data-bbox="1696 592 2018 824"> <thead> <tr> <th>CD</th> <th>PQM Installed</th> <th>Total Consumers</th> </tr> </thead> <tbody> <tr> <td>&gt; 20 MVA</td> <td>06</td> <td>57</td> </tr> <tr> <td>&gt;10 MVA</td> <td>12</td> <td>77</td> </tr> </tbody> </table>	CD	PQM Installed	Total Consumers	> 20 MVA	06	57	>10 MVA	12	77
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			<ul style="list-style-type: none"> <li>□ Power Quality and Standards</li> <li>□ Impact of Harmonics on utility asset and operations</li> <li>□ IEEE Provisions on Harmonics</li> <li>□ Steps for Harmonics reduction</li> <li>□ Financial impact of poor Power Quality</li> </ul> <p>2. However, considering the limited scope of awareness in workshops, MSEDCL has prepared awareness letters regarding harmonics and the same are being distributed by testing divisions at the time of routine testing of HT consumers(total 4303 nos upto Dec-22). The awareness letter/information is also made available online under consumer portal-Knowledge tab on MSEDCL Website.</p>	
2.18.15	Regarding, Prayas suggestions of making operational details of franchisee in public domain, the Commission is of the opinion that it will help in monitoring performance of franchisee as well as to analyse whether the intended purpose of introducing franchisee is being meet. Hence, the Commission directs MSEDCL to host on the lines indicated by Prayas Energy Group, the periodic performance details of franchisee area on its website.		In this regard, MSEDCL submits that the performance of operational Distribution Franchisee in MSEDCL is uploaded on MSEDCL website. The link for the same is as below:  <a href="https://www.mahadiscom.in/wp-content/uploads/2023/01/19.01.2023-Performance-of-DF-for-Website.pdf">HTTPS://WWW.MAHADISCOM.IN/WP-CONTENT/UPLOADS/2023/01/19.01.2023-PERFORMANCE-OF-DF-FOR-WEBSITE.PDF</a>	Complied
2.25.18	The Commission also suggests to		MSEDCL submits that all three phase meters which MSEDCL is	All three phase meters are with

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ToD Features in 3 Phase Meters	Distribution Licensees to include ToD features in three phase meters so that all new connection would have these facilities and need not be replaced if in future, depending upon feasibility, it is decided to introduce ToD tariff structure to 10 kW and above consumers.		procuring presently are having ToD features.	ToD features
2.30.14 Reliability indices (SAIFI/SAIDI/CAIDI)	The Commission has taken serious note of the views expressed by the objectors/consumers during public hearing regarding the interruptions, performance on reliability indices and service quality standards suffered by consumers particularly in the rural area. Even the reliability indices (SAIFI/SAIDI/CAIDI) for Urban and Rural Areas vary significantly. The Commission has directed MSEDCL to initiate corrective actions in expeditious way particularly, where performance on reliability indices is reported to be consistently poor.		<p>To minimise the interruptions, and to improve performance on reliability indices and service quality standards the following steps are taken:</p> <ol style="list-style-type: none"> <li>1) Strengthening of HT/LT line network.</li> <li>2) Providing Ring Main Unit system for alternative supply arrangement in urban/ metropolitan areas.</li> <li>3) Bifurcation of overloaded HT feeders.</li> <li>4) Crimping of HT/LT line jumpers.</li> <li>5) Tree Trimming on HT/LT line.</li> <li>6) Regular DTC/ HT/LT line preventive maintenance work.</li> <li>7) Maintenance of Sub-station equipment's.</li> </ol> <p>To carry out the above said work, the empanelled agencies are deployed at field offices. The routine maintenance work is carried out by the Preventive Maintenance (PM) agencies. So that uninterrupted &amp; quality power supply will be provided to the consumers in Urban as well as Rural areas. Further, separate agencies for Breakdown Maintenance are empanelled to restore power supply in minimum time.</p> <p>Above activities are implemented by the field offices to</p>	<p>Appropriate measures are carried out to improve Reliability Indices and service quality standards.</p> <p>Empanelled agencies are deployed at field offices to minimize interruptions.</p> <p>Poor performance parameters of RI of Parbhani, Osmanabad, Hingoli &amp; Washim are improved as compared to April-2019.</p>

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			<p>minimise the interruptions and to provide quality Power supply to the consumers. For any inconvenience in power supply (planned outages and breakdowns) are being informed to the consumers via SMS through mobile.</p> <p>The circles whose performance of Reliability Indices (RI) is poor have taken following corrective measures to improve its performance as below:</p> <p><b>1. Parbhani Circle:</b></p> <ul style="list-style-type: none"> <li>• Maintenance of 33 kV Breaker – 32 No.</li> <li>• Maintenance of 11 kV Breaker – 74 No.</li> <li>• Maintenance of 33 kV isolator - 65 No.</li> <li>• Maintenance of 11kV isolator – 112 No.</li> <li>• Crimping of 33 kV line jumpers – 24 no.</li> <li>• Crimping of 11 kV line jumpers – 147 no.</li> <li>• Distribution box maintenance – 382 no.</li> <li>• Distribution box replacement – 162 no.</li> <li>• Replacement of deteriorated HT conductor – 34.4 km</li> <li>• Replacement of deteriorated LT conductor – 66.65 km</li> <li>• Restringing of loose HT span – 196 Spans</li> <li>• Restringing of loose LT span – 425 Spans</li> </ul> <p><b>2. Osmanabad Circle:</b></p> <ul style="list-style-type: none"> <li>• Tree trimming of HT line – 70 km</li> <li>• Tree trimming of LT line – 45 Km</li> <li>• Loose span restringing of HT line – 150 Span</li> <li>• Loose span restringing of LT line – 185 Span</li> </ul>	

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			<ul style="list-style-type: none"> <li>• DTC box maintenance – 215 no.</li> <li>• Maintenance of 11 kV VCB - 8 No.</li> <li>• Maintenance of 11 kV isolators – 5 No.</li> </ul> <p><b>3. Hingoli Circle</b></p> <ul style="list-style-type: none"> <li>• Strengthening of 11 kV HT line - 17.90 km</li> <li>• Providing 11kV link line – 3.18 km</li> </ul> <p><b>4. Washim Circle</b></p> <ul style="list-style-type: none"> <li>• Replacement of HT jumper – 1624 No.</li> <li>• Replacement of deteriorated Distribution boxes-336 No.</li> <li>• Replacement of damaged LT cable between LV side of DTC to distribution box &amp; feeder pillar – 2.875 km</li> <li>• DTC maintenance – 632 No.</li> </ul> <p>Due to above, the poor performance parameters of Reliability Indices of Parbhani circle, Osmanabad circle, Hingoli circle &amp; Washim circle are improved as compared to April-2019.</p>	
2.31.9 Suggestions by Shri. Jain	The Commission noted the suggestions of Shri. Jain for financial management which can create saving through interest to be earned. MSEDCL is directed to look into this suggestion and implement it if feasible.		MSEDCL submits that it repatriate all funds to Cash Credit/Overdraft accounts on daily basis, so that the interest burden will be reduced to the maximum possible extend.	
2.34.7	The Commission directs MSEDCL to		1. MSEDCL submits that it has circulated Commercial Circular	MSEDCL has circulated

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Net-metering procedure and Timelines for processing Applications	comply with the process and the timelines specified under the Regulations for completing various activities		<p>No. 322 vide CE/Comm/GIRREGS Regulations 2019/No. 02184 dated 21.01.2020 to provide information on enactment of MERC (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 and its various provisions to field offices.</p> <p>2. MSEDCL upgraded Online application portal in May 2020. Under this portal facility is provided to consumer to view application status, to receive SMS/E-mail about sanction.</p> <p>3. Further, MSEDCL has given Instructions to field offices to follow timelines specified under the Regulations for completing various activities vide Letter No. CE/Comm/GIRREGS Regulations 2019/No. 12627 dated 20.07.2020.</p> <p>4. Standard operating procedure for installation of solar rooftop systems is issued on 12.05.2022 vide letter no. CE/COMM/RooftopSolar/11837 dated 12.05.2022 .SOP is uploaded on <a href="http://WWW.MAHADISCOM.IN/SMART">WWW.MAHADISCOM.IN/SMART</a> Mahavitaran web portal</p>	<p>Commercial Circular No. 322 dated 21.01.2020 to provide information on enactment of MERC (Grid Interactive Rooftop RE Generating Systems) Regulations, 2019 and its various provisions to field offices.</p> <p>Online application portal is upgraded in May 2020.</p> <p>Instructions given to field offices to follow timelines specified under the Regulations.</p>
4.2.25 & 4.2.26 Action Plan for Agriculture Sales Estimation	The Commission hereby directs MSEDCL to submit detailed roadmap and action plan for undertaking above activities mentioned at 4.2.25 and also additional activities that MSEDCL wishes to undertake so as to improve the estimation process. The roadmap and the action plan shall be submitted to the	Submission of Action Plan for Agriculture Sales Estimation - Two months from the issuance of MYT Order)	For effective implementation of survey/consumer mapping activity, the guidelines vide Circular No. CE (Dist.)/9182 dated 21.04.2020 have been circulated to field offices. The survey of the DTs in view of consumer mapping, Feeder-wise mapping of consumers (AG and Non-AG), indexing/geo-tagging of consumer data to DTC, finding working status of meters, etc. was completed. The IT team has developed mobile application to collect the information for planning to operationalize the	For effective implementation of survey/consumer mapping activity, the guidelines vide Circular have been circulated to field offices and the detailed road-map regarding the same has been submitted to Hon'ble Commission

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	Commission within two months from issuance of this Order		<p>feeder-input based energy accounting and to further improve the estimation of AG consumption.</p> <p>MSEDCL submits that it is in process of implementing the directives regarding the DT metering on selected 502 AG feeders. The detailed road-map in this regard has been submitted to Hon'ble Commission vide Letter No. Dir. (Op.)/Dist./ MERC /502 Fdrs./03410 dated 09.02.2021.</p> <p>In order to implement the DTs metering plan, the DPR for providing meter with AMR facility for all DTs of selected 502 Ag Feeders is submitted for approval of Hon'ble Commission vide Letter No. CE (Dist.)/M-III/DPR/502 Feeders. /29761 dated 07.12.2021.</p> <p>The tendering activity for providing meter with AMR facility for DTs of selected 502 Ag Feeders is under process.</p>	
4.16.7 Contingency reserves	.....Hence, considering the purpose of the fund, the Commission is of the view that the Licensee shall not invest the Contingency Reserves amount in market linked instruments such as Mutual Funds, etc., since the uncertainty associated with the Mutual Funds cannot be passed on to consumers. Therefore,		MSEDCL submits that it has invested amount of Contingency reserve as per the Indian Trust Act,1882 i.e. Government Securities as mentioned in MYT Order 322 of 2019 (Clause No. 5.15.1)	Complied

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	the Commission in exercise of inherent powers to deal in the best interest of utility and consumers in just and equitable manner and also in exercise of "Power to remove difficulties" as per Regulation 102 of MYT Regulations, 2015 directs MSEDCL to ensure that contingency reserve is invested only in specified investment instruments, i.e., Fixed Deposit or Government Securities (G-Sec – 10 year).			
4.25.7 InSTS Transmission Charges for OA Consumer	.....Thus, Transmission charge Open access revenue of Rs 220.17 Cr and Rs 182.33 Cr in FY 2017-18 and FY 2018-19 respectively is not allowed to be retained by the petitioner. The Commission hereby directs to transfer such amount to STU in six months from the issuance of this Order with monthly equal instalments	Transmission charge Open access revenue- To transfer such amount to STU in six months from the issuance of this Order with monthly equal instalments	MSEDCL has remitted the Transmission charges amounting Rs 402.50 Cr for FY 2017-18 and FY 2018-19 to the STU in nine equal installments ending on 13.06.22.	Complied

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8.10.37 kVAh Metering	Thus, after understanding the proposal and preparedness of MSEDCL, the Commission allows MSEDCL to implement kVAh based billing for HT Consumers at present. The same shall be effective from 1 April, 2020. As regards, the LT consumers above 20 kW load, the Commission directs MSEDCL to complete its meter conversion process alongwith other system modifications for such consumer categories and shall target to implement the same at the time of MTR i.e. by 1 April, 2023.	LT consumers - Meter conversion process + other system modifications- implement at the time of MTR i.e. by 1 April, 2023.	MSEDCL submits that as per billing data, out of total 1,12,324 No of above 20 KW live consumers, 40-200 A CT Embedded meters are installed to 91,301 No of consumers. For balance 21,023 consumers, meter installation work will be completed by Jan-2024.  In addition to above, activity of reprogramming of already installed 14,518 nos. of 40-200 A CT Embedded meters is likely to be completed by May-2023.	<table border="1"> <tr> <td>Total No of Consumers above 20kW</td> <td>Installation activity of Meters completed</td> </tr> <tr> <td align="center">1,12,324</td> <td align="center">91,301</td> </tr> </table>	Total No of Consumers above 20kW	Installation activity of Meters completed	1,12,324	91,301
Total No of Consumers above 20kW	Installation activity of Meters completed							
1,12,324	91,301							
8.10.38 Power Factor Recording	For smooth transition to new billing system and to keep Consumer aware at all times, the Commission directs MSEDCL to display PF (computed by considering leading and lagging RkVAh) recorded during the month in the bill of all the Consumer categories till further directions.		1. MSEDCL submits that the Power Factor (PF) is displayed in the bill issued to consumer is 'calculated PF' based on leading and lagging RkVAh.	Complied				
8.10.40 kVAh Billing	While determining per unit charges in kVAh, the Commission has used category wise PF which could be lower than unity. This makes per unit tariff		MSEDCL submits that the Open Access Energy Accounting & Billing is carried out on kWh basis. MSEDCL further submits that for the purpose of Energy Balance it is maintaining the HT sale in kWh.	Complied				

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	<p>lower than the tariff which would have been determined in kWh term. Further, in case of Energy Balance, the utility shall always maintain sale in kWh only. Tax on Sale of Electricity and Electricity duty shall be converted from kVAh to kWh. All the OA transactions will be maintained in kWh sale only, kVAh based sales shall be converted in kWh based on the Power Factor for the month provided in the Energy Bills</p>			
8.17.8 AG Metering	<p>The Commission directs MSEDCL that all the HVDS connections shall be released through prepaid meters only. Also, HVDS Ag connections released earlier should also be converted into prepaid meters within 6 months. Also, in case of non-availability of prepaid meters, the released connections should be converted to prepaid meters within 6/12 months</p>	<p>HVDS Ag connections released earlier should be converted into prepaid meters within 6 months.</p> <p>In case of non-availability of prepaid meters, the released connections should be converted to prepaid meters within 6/12 months</p>	<p>MSEDCL submits that the Tender (Tender No. MMD/T/NSC 01/0121/T-01) was floated for supply and fixing of 1,50,000 Prepaid Meters to Ag HVDS Connections. Now, the LoA has been awarded to the agency M/s ZenMeter Solutions Pvt. Ltd. Bangalore vide letter no MMD/L-27/T-NSC-01/0121/5763 dated 8-Mar-2022 &amp; inspection call raised for 5000 nos. of meters is underway.</p>	<p>Inspection process is completed &amp; 5000 no of meters are received in stores of MSEDCL.</p>

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8.27.8 Go Green Rebate	As far as proposal for rebate to consumers for opting for Go Green initiative is concerned, the same is allowed and costs pertaining to such rebate shall be allowed as pass through in ARR in line with Regulation 84.1 of MYT Regulations 2019. However, MSEDCL should maintain separate account of such rebates and details of consumers opting for such Go-Green initiative. Further, MSEDCL should also arrange awareness campaigns through mailers/bills, engage in outreach activities to promote this initiative and also through its customer care centres		MSEDCL submits that a separate GL Account (Go Green discount to consumers) is created. Various outreach activities undertaken by MSEDCL are provided in response to 8.1.42 below.	Complied

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8.1.42 Customer service & consumer outreach	The Commission has advised MSEDCL to further improve upon their consumer outreach activities and extend use of technological solutions through mobile alerts, e-bills through emails and more payment options to facilitate online payment & other modes of payment gateways.		<p>MSEDCL submits consumer outreach activities and use of technological solutions through mobile alerts, e-bills through emails and payment options to facilitate online payment &amp; other modes of payment gateways as under:</p> <ol style="list-style-type: none"> <li>1. Online Consumer services: MSEDCL has provided all consumer services through online platform Mobile App and consumer portal such as               <ol style="list-style-type: none"> <li>a) View &amp; pay Energy Bill / Other charges / Estimate / Processing fee,</li> <li>b) View Bill History/ Payment History,</li> <li>c) Register Complaint,</li> <li>d) Apply for new connection/ Change in Name/ Address correction/ Load change/ change in contract demand / Solar Rooftop/ Ag Solar connection ,</li> <li>e) Upload documents for various applications,</li> <li>f) Online approval of various applications,</li> <li>g) SMS / E-mail notification for application status,</li> <li>h) Track / View application status,</li> <li>i) Update contact details and consumer profile - Mobile number / E-mail / GST ID / PAN ID,</li> <li>j) Submit Self Meter Reading,</li> <li>k) Declaration of single shift operation for Industrial connection,</li> <li>l) Refund of Security Deposit,</li> <li>m) Tariff change / Change in consumer activity,</li> </ol> </li> </ol>	Complied

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			<p>n) No dues certificate, Go Green registration / de-registration</p> <p>2. Mobile Alerts and E-Bills through Email: MSEDCL submits that SMS alerts / Notifications are issued to consumers for various services such as SMS to Consumer at every stage of New Connection/Change of name approval, Bill Alerts, Bill reminders, Payment Acknowledgement, Outage Notification, Meter Reading, Request for Self Reading, Complaint Acknowledgement (LT Consumer), and Acknowledgement for Mobile Registration etc. SMS are sent to consumers in Marathi and English language as per consumer preference. Monthly E-Bills are sent through e-mail to all consumers having registered their e-mail ID. Also, for Go-green registered consumers, E-Bills are sent to registered mail ID and Go-Green discount of Rs.10/- per bill is offered to such consumers.</p> <p>3. Various payment options to facilitate online payment to consumers: Consumer is given facility for Online Payment through various channels such as</p> <ol style="list-style-type: none"> <li>Mahavitaran Website,</li> <li>Mahavitaran Mobile App for consumers,</li> <li>UPI QR Code printed on bills,</li> <li>Web link through bill alert SMS,</li> <li>Bharat Bill Payment Service (BBPS),</li> </ol>	

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			<ul style="list-style-type: none"> <li>f) NEFT/RTGS for all HT consumers and LT consumers having load above 20kW,</li> <li>g) ECS/EBPP/NACH,</li> <li>h) Centralized Group Bill Payment,</li> <li>i) Online payment for Agriculture consumers under AG policy 2020 Also following various payment modes are made available to consumers through multiple payment gateways such as               <ul style="list-style-type: none"> <li>a) Net Banking,</li> <li>b) Credit / Debit Cards,</li> <li>c) Prepaid card,</li> <li>d) Cash Cards,</li> <li>e) Mobile Wallets</li> </ul> </li> </ul>	
6.16.5 Provision for Bad Debt	Stringent measures should be initiated by MSEDCL to improve collection efficiency reduce receivable incl. recovery of past dues. MSEDCL should strengthen its collection drive and put every efforts in clearing its receivable in a time bound manner		<p>MSEDCL submits that for 100 % recovery of past dues following initiatives are taken by it:</p> <ul style="list-style-type: none"> <li>a) Disconnection notices are issued to consumers under default u/s. 56 immediately after due dates are over</li> <li>b) Prompt disconnection is being done of consumers if not paid even after expiry of notice period</li> <li>c) Legal notices through advocate are given to defaulting consumers through Junior Law Officer</li> <li>d) Even after issuing of notice if not paid due amount legal suite are filed against defaulter consumers.</li> <li>e) Law Officer keeps the status of legal suite for necessary follow up</li> </ul>	Complied

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			<ul style="list-style-type: none"> <li>f) Fortnightly review is taken by Corporate Office.</li> <li>g) Targets for recovery are assigned for every month to all officers and performance is monitored.</li> <li>h) Installment scheme is brought for facilitating recovery of accumulated arrears.</li> <li>i) No new connections are given in PD premises.</li> <li>j) Rigorous follow-up with all consumers in arrears.</li> <li>k) Appeal is made through various media, TV, Radio, Social media etc.</li> </ul>	

## **18 PRAYERS TO THE HON'BLE COMMISSION**

18.1.1 MSEDCL most respectfully prays to the Hon'ble Commission:

1. To admit the MTR Petition as per the provisions of the MERC (MYT) Regulations 2019 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 2019-20 to FY 2024-25 along with other claims as proposed by MSEDCL in the present Petition;
3. To allow the carrying cost on the proposed recovery required during the balance years of this control period;
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 allow actual Interest on Working Capital requirements for FY 2020-21 on account of COVID-19 period.
6. To approve Cross Subsidy Surcharge and all such other charges including wheeling charges and wheeling losses for Open Access consumers as proposed;
7. To approve the suggested categorization for different type of activities as proposed by MSEDCL;
8. To consider the incentives/rebates proposed as part of ARR;
9. To rationalize the incentives and penalties as proposed by MSEDCL;

10. To approve the schedule of charges as proposed by MSEDCL;
11. To approve the CAPEX and Capitalisation as submitted by MSEDCL;
12. To approve the OPEX schemes and expenses as proposed by MSEDCL;
13. To grant any other relief as the Hon'ble Commission may consider appropriate;
14. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice;
15. To condone any error/omission and to give opportunity to rectify the same;
16. To permit MSEDCL to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

Director (Commercial)  
MSEDCL