

## 1 Executive Summary

### 1.1 About STU

1.1.1 Maharashtra State Electricity Transmission Company Limited (MSETCL) is a State Transmission Utility (hereinafter referred to as 'STU') with a dedicated responsibility of planning, developing, operating and maintaining the State Transmission System to facilitate transmission of electricity from its source to load centres. Maharashtra State Electricity Transmission Company Limited (MSETCL) was incorporated under the provisions of the Companies Act, 1956.

1.1.2 Maharashtra State Electricity Transmission Company Limited was designated State Transmission Utility by the State Government vide Section 131 and Section 39 of the Electricity Act, 2003. The major functions of STU are:

- to undertake transmission of electricity through Intra-State transmission system
- to discharge all functions of planning and coordination relating to intra-State transmission system with CTU, State Government, Generating Companies, RPC, Authority, Licensees, and any other person notified by the state government
- to ensure the development of an efficient, co-ordinated and economical system of intra-State transmission lines for smooth flow of electricity from a generating station to the load centres;
- to provide non-discriminatory open access to its transmission system

1.1.3 In line with the functions mentioned above, STU intends to discharge its duty by analysing the Transmission Cost of the Intra state Transmission System in the State and apportion the costs to the users appropriately, in line with the MERC (MYT) Regulations, 2019 as amended from time to time.

### 1.2 Background

1.2.1 The Hon'ble Commission, in its Order dated 27 June 2006 in Case No. 58 of 2005, the Commission set out the Transmission Pricing Framework for the State of Maharashtra in accordance with the principles specified in that Order.

1.2.2 While MERC (MYT) Regulations, 2019 govern the Tariff determination for the fourth control period from FY 2020-21 to FY 2024-25, Regulations 64, 65 and 66 of the same dictate the methodology and principles for determination of Transmission

- Tariff for the use of the Intra-State Transmission System (hereinafter referred to as 'InSTS').
- 1.2.3 The Hon'ble Commission has previously notified Transmission Tariff of InSTS Transmission System for 3rd Control Period FY 2016-17 to FY 2019-20 in its Order in Case No. 91 of 2016. It further modified the Transmission Tariff for FY 2018-19 and FY 2019-20 vide its Order in Case No. 265 of 2018 dated 12 September 2018.
- 1.2.4 The Hon'ble Commission has previously notified Transmission Tariff of InSTS Transmission System for 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25 in its Order in Case No. 327 of 2019.
- 1.2.5 The Transmission Tariff is proposed through detailed computation in different sections of this petition. The Constituents of the Intra-State Transmission System are finalized at the beginning. This is followed by computation of Total Transmission System Cost (TTSC) and determination of Base Transmission Capacity Rights (Base TCR). On identifying Base TCR, Transmission Tariff is computed. Further, a proposal for sharing of "TTSC among the TSUs is humbly submitted to the Hon'ble Commission for its perusal.
- 1.3 The Present Petition
- 1.3.1 As per MYT Order no.327 of 2019 for InSTS, there were eight (8) transmission licensees for whom ARR for 4th control period was approved. Kharghar Vikhroli Transmission Limited (KVTL) is a Special Purpose Vehicle (SPV) incorporated for the purpose of implementing the 400 kV Vikhroli receiving station and associated incoming transmission lines for strengthening of Mumbai Transmission System (Vikhroli Project). Based on the progress report and discussion/ meeting with KVTL and STU's assessment on pending permissions/ approvals, the project may get commissioned on April 2024 (FY 2024-25) as against SCOD 31.07.2023. The ARR of Rs.302.50 Cr is considered for FY 2024-25.
- 1.3.2 As per Regulation 64.3 and 64.5 of MYT Regulations 2019, STU needs to submit true-up of FY 2020-21 and FY 2021-22 based on the actual CPD & NCPD vis-à-vis approved Base TCR in MYT order. STU has computed the final true-up for both years which is adjusted inter-se between TSU and such deviation which is to be factored in TTSC of FY 2023-24 and FY 2024-25 of respective TSU. The true-up of FY 2020-21 and FY 2021-22 are provided below:

**Table 1: True-up for FY 2020-21**

Sr. No.	Particulars	FY 2020-21							
		MYT Order Approved TCR (%)	Share of Avg of CPD and NCPD (%)	TTSC as billed as per MYT Order (Rs.Cr)	Share of TTSC as per Actual TCR	Difference payable/(receivable)	ATC (Rs.Cr)	ATC Adj amount with True-up (Rs.Cr) - Prorata reduction to ATC	Final True-up (Rs.Cr)
		(a)	(b)	(c)	(d)	(e) = (d)-(c)	(f)	(g)	(h) = (e) + (g)
1	MSEDCL	83.530%	86.560%	5,671.56	5,877.21	205.65	83.5461	122.11	122.11
2	TPCL-D	3.800%	3.217%	258.00	218.44	-39.56	-	16.09	(23.47)
3	AEML-D	6.966%	5.956%	472.92	404.41	-68.51	-	27.87	(40.65)
4	BEST	3.812%	3.016%	258.84	204.79	-54.05	-	21.98	(32.07)
5	Indian Railways (Deemed Distribution Licencee)	1.703%	1.137%	115.68	77.18	-38.50	0.0002	15.66	(22.84)
6	Mindspace (Deemed Distribution Licencee)	0.074%	0.033%	5.04	2.24	-2.80	-	1.14	(1.66)
7	Gigaplex Properties (Deemed Distribution Licencee)	0.034%	0.015%	2.28	1.02	-1.26	-	0.51	(0.74)
8	MADC	0.055%	0.050%	3.72	3.41	-0.31	-	0.12	(0.18)
9	Nidar Utilities	0.002%	0.007%	0.12	0.46	0.34	0.0999	-0.24	0.10
10	KRC Infrastructure (Deemed Distribution Licencee)	0.023%	0.008%	1.56	0.56	-1.00	-	0.41	(0.59)
	<b>Total</b>	<b>100.000%</b>	<b>100.000%</b>	<b>6,789.72</b>	<b>6,789.72</b>	<b>0.00</b>	<b>83.65</b>	<b>205.65</b>	<b>0.00</b>

**Table 2: True-up for FY 2021-22**

Sr. No.	Particulars	FY 2021-22							
		MYT Order Approved TCR (%)	Share of Avg of CPD and NCPD (%)	TTSC as billed as per MYT Order (Rs.Cr)	Share of TTSC as per Actual TCR	Difference payable/(receivable)	ATC (Rs.Cr)	ATC Adj amount with True-up (Rs.Cr) - Prorata reduction to ATC	Final True-up (Rs.Cr)
		(a)	(b)	(c)	(d)	(e) = (d)-(c)	(f)	(g)	(h) = (e) + (g)
1	MSEDCL	83.699%	86.449%	5,782.44	5,972.42	189.98	84.9890	105.00	105.00
2	TPCL-D	3.746%	3.174%	258.84	219.26	-39.58	0.0199	17.81	(21.77)
3	AEML-D	6.917%	5.753%	477.84	397.46	-80.38	0.0024	36.20	(44.18)
4	BEST	3.734%	2.984%	258.00	206.14	-51.86	-	23.36	(28.50)
5	Indian Railways (Deemed Distribution Licencee)	1.714%	1.528%	118.44	105.58	-12.86	0.0565	5.74	(7.12)
6	Mindspace (Deemed Distribution Licencee)	0.072%	0.029%	5.04	2.01	-3.03	-	1.37	(1.67)
7	Gigaplex Properties (Deemed Distribution Licencee)	0.037%	0.015%	2.52	1.06	-1.46	-	0.66	(0.80)
8	MADC	0.055%	0.047%	3.84	3.27	-0.57	0.0000	0.26	(0.32)
9	Nidar Utilities	0.002%	0.010%	0.12	0.68	0.56	0.5073	-0.76	(0.20)
10	KRC Infrastructure (Deemed Distribution Licencee)	0.023%	0.011%	1.56	0.77	-0.79	-	0.36	(0.44)
	<b>Total</b>	<b>100.000%</b>	<b>100.000%</b>	<b>6,908.64</b>	<b>6,908.64</b>	<b>0.00</b>	<b>85.58</b>	<b>189.98</b>	<b>0.00</b>

1.3.3 ARR as submitted in MTR Petition of each of the Transmission Licensees for Truing-up of FY 2020-21, FY 2021-22 and Provisional Truing-up of FY 2022-23 and

projection of revised ARR for FY 2023-24 and FY 2024-25 are tabulated below for arriving at the TTSC along with the break-up of past period claims.

**Table 3: ARR of Transmission Licensees & TTSC with break-up of past period claim / revenue gap**

(Rs. Crore)

Sr. No.	Name of Transmission Licensee	FY 2023-24			FY 2024-25		
		Cumulative Gaps/ (Surplus)	Standalone ARR for FY 2023-24	Revised Projections	Cumulative Gaps/ (Surplus)	Standalone ARR for FY 2024-25	Revised Projections
		(a)	(b)	(c=a+b)	(d)	(e)	(f=d+e)
1	MSETCL	2,832.89	5,891.67	<b>8,724.56</b>	2,598.42	6,155.19	<b>8,753.61</b>
2	ATIL	61.60	128.30	<b>189.90</b>	0.22	121.04	<b>121.26</b>
3	MEGPTCL	1,902.86	998.81	<b>2,901.67</b>	0.32	935.18	<b>935.50</b>
4	VIPL-T	0.93	4.00	<b>4.93</b>	-	3.83	<b>3.83</b>
5	AEML-T	78.70	345.53	<b>424.23</b>	-	458.26	<b>458.26</b>
6	TPC-T	462.40	997.35	<b>1,459.75</b>	-	1,085.33	<b>1,085.33</b>
7	JPTL	2.75	66.28	<b>69.03</b>	-	64.10	<b>64.10</b>
8	APTCL	5.75	44.08	<b>49.83</b>	-	42.43	<b>42.43</b>
9	KVTL	-	-	-	-	302.50	<b>302.50</b>
	<b>Total Transmission System Cost of all Licensees proposed to be recovered in respective year</b>	<b>5,347.88</b>	<b>8,476.02</b>	<b>13,823.90</b>	<b>2,598.96</b>	<b>9,167.86</b>	<b>11,766.82</b>

1.3.4 Hon'ble Commission in the MYT Order in case no 327 of 2019 dated 30 March 2020 of InSTS had considered ten (10) TSUs for the purpose of payment of TTSC namely;

1. MSEDCL
2. TPCL-D
3. AEML-D
4. BEST
5. Indian Railways (IR) (Mumbai & Rest of Maharashtra Combined)
6. Mindspace Business Park Private Limited (MBPPL)
7. Gigaplex Estate Private Limited
8. Maharashtra Airport Development Company (MADC)
9. Nidar Utilities Panvel LLP
10. KRCIPPL

1.3.5 STU submits that post MYT order there have been four (4) new deemed distribution licensees (*EON-I, EON-II, AITL Shendra & Bidkin Industrial area*) which have been issued licence by Hon'ble Commission and two (2) other deemed distribution licensee (*JNPT and Laxmipati Balaji*) which were issued licence prior to MYT order have started operation. STU submits that except AITL Shendra & Bidkin Industrial areas all deemed distribution licensees are operationalised and have power purchase arrangement in place. Hence, STU proposes and requests Hon'ble Commission to consider EON-I, EON-II, JNPT and Laxmipati Balaji as deemed transmission system users akin to the treatment provided earlier to MADC and NIDAR in MYT Order.

1.3.6 STU submits that based on the historic data it had tried to project/ validate the demand data, however; the results were absurd due to covid-19 period. Various scenarios such as year on year growth rate, 3-year CAGR were computed but finally it was deemed fit as per fifth proviso of Regulation 64.2 of MYT Regulations 2019 to rationalise (suitably revise) the growth rate to align with the present average CPD and NCPD data and to ensure that it is also in line with current 8 months average data. The computation of the same is provided in the table below:

*Table 4 : Computation of Revised Demand for Projection period*

Sr. No.	Particulars	Existing Average of CPD and NCPD Data and Growth computations					(Rs. Crore)	
		Projection		Projection		Remarks / Rationalisation	FY 23-24	FY 24-25
		FY 22-23 (Estimation)	Last 3 FY CAGR % (FY18-19 / FY 2021-22) (Scenario-1)	Growth over previous year % (FY22 over FY21) (Scenario-2)	Growth Rate considered over FY22-23 (%)			
1	MSEDCL	21,113.25	3.97%	14.33%	3.97%	3 year CAGR	21,952.24	22,824.57
2	TPCL-D	907.64	-2.41%	12.93%	3.00%	Mumbai Growth trend in general	934.87	962.91
3	AEML-D	1,622.08	-2.14%	10.57%	3.00%		1,670.74	1,720.86
4	BEST	825.37	-4.79%	13.25%	3.00%		850.13	875.63
5	Indian Railways	416.26	1.13%	53.90%	1.13%		3 year CAGR	420.94
6	MindSpace	9.45	-20.22%	1.06%	5.00%	All SEZs 5% growth as they are operational and have positive and increasing trend in Average of CPD & NCPD. Also in line with their projections	9.92	10.42
7	Gigaplex Properties	5.42	-9.49%	16.01%	5.00%		5.70	5.98
8	MADC	13.76	0.00%	7.57%	5.00%		14.45	15.17
9	Nidar Utilities	3.30	0.00%	67.15%	5.00%		3.46	3.63
10	KRC Infrastructure	4.50	0.00%	54.82%	5.00%		4.73	4.96
11	EON Phase-1	7.96	0.00%	144.03%	5.00%		8.36	8.77
12	EON Phase-2	4.33	0.00%	1298.56%	5.00%		4.55	4.77
13	JNPT	0.85	0.00%	0.00%	5.00%		0.90	0.94
14	Laxmipati Balaji	0.66	0.00%	508.00%	5.00%		0.69	0.72
15	<b>Sub-Total (Existing)</b>	<b>24,935</b>	<b>3.02%</b>				-	<b>25,882</b>

*Table 5 : Base Transmission Capacity Rights (TCR) for projection period*

(Rs. Crore)

Name of Distribution Licensee / TSU	Ensuing Years - Revised Projections					
	FY 2022-23		FY 2023-24		FY 2024-25	
	TCR (MW)	TCR (%)	TCR (MW)	TCR (%)	TCR (MW)	TCR (%)
MSEDCL	21,113.251	84.721%	21,952.239	84.818%	22,824.567	84.960%
TPCL-D	907.638	3.642%	934.867	3.612%	962.913	3.584%
AEML-D	1,622.079	6.509%	1,670.742	6.455%	1,720.864	6.406%
BEST	825.366	3.312%	850.127	3.285%	875.630	3.259%
Indian Railways (DDL)	416.256	1.670%	420.939	1.626%	425.676	1.584%
Mindspace (DDL)	9.447	0.038%	9.919	0.038%	10.415	0.039%
Gigaplex Properties (DDL)	5.425	0.022%	5.696	0.022%	5.981	0.022%
MADC (DDL)	13.758	0.055%	14.446	0.056%	15.168	0.056%
Nidar Utilities (DDL)	3.295	0.013%	3.460	0.013%	3.633	0.014%
KRC Infrastructure (DDL)	4.502	0.018%	4.727	0.018%	4.963	0.018%
EON Phase-1 (DDL)	-	0.000%	8.356	0.032%	8.774	0.033%
EON Phase-2 (DDL)	-	0.000%	4.547	0.018%	4.774	0.018%
JNPT (DDL)	-	0.000%	0.898	0.003%	0.943	0.004%
Laxmipati Balaji (DDL)	-	0.000%	0.690	0.003%	0.725	0.003%
<b>Total Transmission Capacity Rights of all TSUs</b>	<b>24,921.016</b>	<b>100.000%</b>	<b>25,881.652</b>	<b>100.000%</b>	<b>26,865.025</b>	<b>100.000%</b>

Table 6: Summary of Approved vs. Actual/ Projected Base Transmission Capacity Rights (TCR)

Sr. No.	Particulars	FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24		FY 2024-25	
		Approved	Actual	Approved	Actual	Approved	Revised Estimate	Approved	Revised Projection	Approved	Revised Projection
1	MSEDCL	83.5303%	86.5605%	83.6993%	86.4486%	83.8559%	84.7207%	84.0218%	84.8178%	84.1853%	84.9602%
2	TPCL-D	3.8003%	3.2172%	3.7460%	3.1737%	3.6919%	3.6421%	3.6389%	3.6121%	3.5867%	3.5843%
3	AEML-D	6.9655%	5.9561%	6.9175%	5.7531%	6.8687%	6.5089%	6.8210%	6.4553%	6.7734%	6.4056%
4	BEST	3.8116%	3.0162%	3.7340%	2.9839%	3.6574%	3.3119%	3.5828%	3.2847%	3.5096%	3.2594%
5	Indian Railways	1.7032%	1.1368%	1.7143%	1.5283%	1.7252%	1.6703%	1.7363%	1.6264%	1.7474%	1.5845%
6	Mindspace	0.0742%	0.0329%	0.0722%	0.0291%	0.0703%	0.0379%	0.0683%	0.0383%	0.0665%	0.0388%
7	Gigaplex Properties	0.0341%	0.0151%	0.0366%	0.0153%	0.0356%	0.0218%	0.0346%	0.0220%	0.0337%	0.0223%
8	MADC	0.0547%	0.0503%	0.0549%	0.0473%	0.0550%	0.0552%	0.0551%	0.0558%	0.0552%	0.0565%
9	Nidar Utilities	0.0025%	0.0067%	0.0024%	0.0098%	0.0024%	0.0132%	0.0023%	0.0134%	0.0022%	0.0135%
10	KRC Infrastructure	0.0235%	0.0082%	0.0229%	0.0111%	0.0378%	0.0181%	0.0389%	0.0183%	0.0400%	0.0185%
11	EON Phase-1	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0323%	0.0000%	0.0327%
12	EON Phase-2	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0176%	0.0000%	0.0178%
13	JNPT	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0035%	0.0000%	0.0035%
14	Laxmipati Balaji	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0000%	0.0027%	0.0000%	0.0027%
	<b>Total</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>	<b>100.0000%</b>

1.3.7 Based on above revised TCR for FY 2023-24 and FY 2024-25 and adjustment pertaining to True-up of FY 2020-21 and FY 2021-22, the Monthly Total Transmission System (TTSC) payable by TSUs given in the table below:

*Table 7: Monthly Total Transmission System (TTSC) payable by TSUs*

Particulars	FY 2023-24		FY 2024-25	
	Revised Projections		Revised Projections	
	Annual	Monthly	Annual	Monthly
MSEDCL	11,952.225	996.019	9,997.107	833.092
TPCL-D	454.086	37.840	421.754	35.146
AEML-D	807.551	67.296	753.734	62.811
BEST	393.505	32.792	383.524	31.960
Indian Railways (DDL)	194.871	16.239	186.445	15.537
Mindspace (DDL)	1.970	0.164	4.562	0.380
Gigaplex Properties (DDL)	1.493	0.124	2.619	0.218
MADC (DDL)	7.219	0.602	6.644	0.554
Nidar Utilities (DDL)	1.747	0.146	1.591	0.133
KRC Infrastructure (DDL)	1.494	0.124	2.174	0.181
EON Phase-1 (DDL)	4.463	0.372	3.843	0.320
EON Phase-2 (DDL)	2.429	0.202	2.091	0.174
JNPT (DDL)	0.479	0.040	0.413	0.034
Laxmipati Balaji (DDL)	0.369	0.031	0.317	0.026
AITL	-	-	-	-
<b>Total</b>	<b>13,823.900</b>	<b>1,151.992</b>	<b>11,766.818</b>	<b>980.568</b>

- 1.3.8 In accordance with Regulation 64, the ARR of the Transmission Licensee are pooled to derive the TTSC, and each Licensee is entitled to recover its projected ARR for the control period FY 2023-24 and FY 2024-25 from the Transmission Charges collected by the STU from the TSUs.

*Table 8: Recovery of ARR for Transmission Licensees*

Particulars	FY 2023-24		FY 2024-25	
	Revised Projection		Revised Projection	
	Annual	Monthly	Annual	Monthly
MSETCL	8,724.560	727.047	8,753.610	729.468
ATIL	189.900	15.825	121.260	10.105
MEGPTCL	2,901.670	241.806	935.500	77.958
VIPL-T	4.930	0.411	3.830	0.319
AEML-T	424.230	35.353	458.260	38.188
TPC-T	1,459.750	121.646	1,085.330	90.444
JPTL	69.030	5.753	64.100	5.342
APTCL	49.830	4.153	42.430	3.536
KVTL	-	-	302.498	25.208
<b>Total</b>	<b>13,823.900</b>	<b>1,151.992</b>	<b>11,766.818</b>	<b>980.568</b>



- 1.3.9 The Transmission Loss as computed by the SLDC for FY2020-21 & FY2021-22 is 3.17%, 2.94% and 3.19% respectively. Further the losses for FY 2022-23 H1 period are estimated at 3.34%. The present approved transmission loss for FY 2023-24 and FY 2024-25 as per Order no.327 of 2019 are 3.18% and STU requests Hon'ble Commission to consider the energy projections as submitted and as being approved by Hon'ble Commission in the MTR orders for Transmission and Distribution licensees and accordingly approve the transmission loss for FY 2023-24 and FY 2024-25.
- 1.3.10 STU would like to submit Hon'ble Commission for approval of the In-STS transmission tariff forecast for long term, Medium-term and Short-term transmission system users for MYT Control Period for FY 2023-24 to FY 2024-25 according to the principle of the Commission set out in MERC (MYT) Regulations, 2019.

*Table 9: Summary of Base TCR, Long-term, Medium-term & Short-term transmission tariff*

Particulars	Unit	Reference	Ensuing Years			
			FY 23-24		FY 24-25	
			MYT Order	Revised Projections	MYT Order	Revised Projections
Total Transmission System Cost (TTSC)	Rs. Crore		7,114.76	13,823.90	7,132.16	11,766.82
Base Transmission Capacity Rights	MW		23,118	25,882	23,765	26,865
Transmission Tariff (long term/ medium term)	Rs./kW/ month		256	445	250	365
Transmission Tariff (short term/ short term collective/ renewable energy)	Rs./kWh		0.40	0.72	0.39	0.58
Energy Units Transmitted (Discom Projections)	MUs		1,76,777	1,91,351	1,81,940	2,03,247

- 1.3.11 The Long- term and Medium-Term Transmission Tariff for FY 2023-24 to 2024-25 is calculated at Rs. 445.10 per kW per month for FY2023-24, and Rs. 365.00 per kW per month for FY2024-25.
- 1.3.12 The Short- term Transmission Tariff for FY 2023-24 to 2024-25 is calculated at Rs. 0.72 per kWh for FY2023-24, and Rs.0.58 per kWh for FY2024-25.



1.4 The Prayers

STU respectfully prays the Hon'ble Commission to:

- 1.4.1 Admit this Mid-Term Review (MTR) Petition for determination of Intra-State Transmission Tariff (InSTS) for the balance Control Period from FY 2023-24 to FY 2024-25 as per MERC (MYT) Regulations, 2019;
- 1.4.2 Approve the true-up of share of InSTS for FY 2020-21 and FY 2021-22 on the basis of actual CPD and NCPD of TSUs in their respective years;
- 1.4.3 Approve new distribution licensees as proposed in this petition as Transmission System Users (TSU) from FY 2023-24 onwards and direct them to execute BPTA;
- 1.4.4 Approve the InSTS transmission tariff forecast for Long-term, Medium-term and Short-term transmission system users for FY 2023-24 and FY 2024-25 as provided in the Petition according to the principle of the Hon'ble Commission set out in MERC (MYT) Regulations, 2019;
- 1.4.5 Approve the Intra-State Transmission Loss for FY 2023-24 and FY 2024-25.
- 1.4.6 Provide the workable excel model used by the Hon'ble Commission for approval of the Petition for determination of Intra-State Transmission Tariff for the balance Control Period from FY 2023-24 and FY 2024-25; and
- 1.4.7 Condone any shortcomings/deficiencies and allow STU to submit additional information/data at a later stage as may be required.