#### Before the

# MAHARASHTRA ELECTRICITY REGULATORY COMMISSION World Trade Centre No. 1, 13<sup>th</sup> Floor, Cuffe Parade, Mumbai – 400 005 Tel. No. 022 22163964/65/69 – Fax 022 22163976 E –mail: <u>mercindia@merc.gov.in</u> Website: <u>www.merc.gov.in</u>

#### Case No. 327 of 2019

## Case of Maharashtra State Electricity Transmission Company Limited for Determination of Multi-Year Tariff for Intra-Sate Transmission System for the 4<sup>th</sup> MYT Control Period from FY 2020-21 to FY 2024-25

#### <u>Coram</u>

Anand B. Kulkarni, Chairperson I.M. Bohari, Member

#### <u>ORDER</u>

#### Date: 30 March, 2020

Maharashtra State Electricity Transmission Company Limited (**MSETCL**) a company incorporated under the provisions of the Companies Act, 1956 having its registered office at "Prakshganga", Plot No. C-19, E-Block, Bandra-Kurla Complex, Mumbai-400051 has filed the Petition for determination of Intra-State Transmission Tariff for the 4<sup>th</sup> MYT Control Period from FY 2020-21 to FY 2024-25 for Long Term as well as short term Intra-State Transmission System (**InSTS**) Users.

MSETCL has been designated the State Transmission Utility (**STU**) for Maharashtra. The Petition has been filed under provisions of Regulations 64.5 of the Maharashtra Electricity Regulatory Commission (**MERC**) Multi Year Tariff Regulations, 2019 (**MYT Regulations, 2019**) for determination of the share of Total Transmission System Cost (**TTSC**) to be recovered from Transmission System Users (**TSUs**) in the state.

The Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act (**EA**), 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by STU, approves the InSTS Tariff for the 4th MYT Control Period from FY 2020-21 to FY 2024-25.

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#### **1 INTRODUCTION**

#### 1.1 Background

1.1.1 The Commission in its Order dated 27 June 2006 in Case No. 58 of 2005 has set out the Transmission System Pricing Framework for the State Maharashtra in accordance with the principles outlined in that order.

#### **1.2 MYT Regulations**

- 1.2.1 The Commission notified the MYT Regulations, 2019 on 1 August 2019. These Regulations are applicable for the 4<sup>th</sup> MYT Control Period from FY 2020-21 to FY 2024-25.
- 1.2.2 Regulations 64, 65 and 66 of the MYT Regulations, 2019 specifies the methodology and principles for the determination of InSTS Tariff.
- 1.2.3 Up to the 3<sup>rd</sup> MYT Control Period ending FY 2019-20, the InSTS Tariff was determined on a Suo-motu basis by the relevant Orders of the Commission. However, Regulation 64.5 of the MYT Regulations, 2019 requires STU to file a Petition for determination of the InSTS Tariff for the 4<sup>th</sup> Control Period. The relevant extract of the regulation is as provided below:

"The State Transmission Utility shall file the Petition for determination of Intra-State Transmission Tariff for the MYT Control Period latest by November 30,2019, and latest by November 30, 2022 at the time of Mid-term Review for modification of intra-State transmission tariff for the fourth and fifth year of the Control Period, on the basis of Base Transmission Capacity Rights of each TSU, and the summation of the Aggregate Revenue Requirement projected by the Transmission Licensees for each Year of the Control Period: "

## **1.3** Filing of Petition under MYT Regulations, 2019

1.3.1 In accordance with the Regulation 64.5 of the MYT Regulations, 2019, STU has filed the present Petition for determination of the share of Total Transmission System Cost (TTSC) to be recovered from TSUs in the State on 30 November 2019. The revised Petition was filed on 24 December 2019 and the final Petition was admitted on 26 December,2019.

#### 1.4 Main Prayers of STU are as under:

- a) "Approve the In-STS transmission tariff forecast for Long term, Medium Term and Shortterm transmission system users for FY 2020-21 to FY 2024-25 as provided in the Petition according to the principle of the Commission set out in MERC (MYT) Regulations, 2019;
- b) Approve the Intra-State Transmission Loss for FY 2020-21 to FY 2024-25.
- c) 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 MYT Control Period

from FY 2020-21 to FY 2024-25"

- 1.4.1 On 6 December 2019, the Commission conveyed preliminary data gaps and information required by STU. Subsequently, STU submitted the replies to the preliminary data gaps on 20 December ,2019.
- 1.4.2 The Technical Validation Session (**TVS**) on the Petition was held on 17 December 2019. The list of persons who participated in the TVS is at Appendix I.
- 1.4.3 STU filed the revised Petition on 24 December 2019, in accordance with the relevant provisions of MYT Regulations, 2019, incorporating replies to the queries raised in preliminary data gaps and clarifications on the issues raised during the discussion.

#### 1.5 Admission of the Petition and Public Hearing Process

- 1.5.1 The Commission admitted the Petition on 26 December 2019 and directed STU to publish it in accordance with Section 64 of the EA 2003, in the specified abridged form and manner, and to reply expeditiously to any suggestions and comments received.
- 1.5.2 STU published a Public Notice inviting comments/suggestions/objections on its Petition. The Public Notice was published in English in Times of India and The Indian Express, and in Marathi in Loksatta and Maharashtra Times, all daily newspapers, on Monday 30 December, 2019. The Petition and its Summary was made available for inspection/purchase at STU's offices and Website (www.mahatransco.in). The Public Notice and Executive Summary of the Petition were also made available on the websites of the Commission (www.merc.gov.in) in downloadable format.
- 1.5.3 The Commission received few suggestions or Objections on the Petition. A Public Hearing was held in Mumbai on 27 January 2020 at 10:00 hrs at the office of the Commission. The List of Persons who attended the Public Hearing is at Appendix-II.
- 1.5.4 The Commission has ensured the due process contemplated under the law to ensure transparency and Public participation followed at every stage and adequate opportunity was given to all concerned to express their views.

#### **1.6** Organisation of the Order

1.6.1 This Order organized in the following sections

**Section 1:** of the Order provides a brief history of the quasi-judicial regulatory process undertaken by the Commission.

**Section 2:** of the Order details suggestions, objection received, STU's replies and Commission's response on the same.

**Section 3:** of the Order details the determination of TTSC for the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25.

Section 4: of the Order details the sharing of TTSC among TSUs and its recovery.

**Section 5:** of the Order details the Energy Accounting and Transmission Loss for 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25.

Section 6: deals with the applicability of this Order.

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

#### 2.1 Growth rate considered for Projection of Future year demand

#### **Objections**

- 2.1.1 Adani Electricity Mumbai Limited (AEML-D) stated that the growth rate considered by STU for projection of Base TCR for future is the average of the growth rate of historic demand and future growth rate. The future demand considered by STU is same as the demand projected by TSUs in their respective MYT Petitions. STU has used the actual CPD/NCPD data for FY 2016-17 and 2017-18 and the approved Base TCR for FY 2018-19 and FY 2019-20 while computing the growth rate based on historic demand. Further AEML-D suggested that since the Commission approves the sales based on the projections made by the TSU while approving the ARR projections, the historic growth rate of demand should remain consistent with the forecast demand. For the above reason STU is to compute the growth rate based on historic demand by consistently using the actual value of CPD/NCPD for all the past years considered. AEML-D as well as BEST has stated that there is a computational error in the computation of Compound Annual Growth Rate (CAGR) for projection of Base TCR.
- 2.1.2 AEML-D further submitted that the Base TCR as per the current scenario is considered as a single number which is derived as the average of all months and has suggested to compute monthly CPD/NCPD average on a 15 minute basis and be compared with monthly approved CPD and capacity contracted for 15 minutes.
- 2.1.3 The Central Railways has stated that the projection of demand for future years as provided by STU in the MYT Petition is on the higher side. STU has submitted the actual past period Base TCR for the period from FY 2016-17 to FY 2019-20. Revised projections based on the past period data should be as shown in the table below:

Particulars	FY	FY	FY	FY	FY
	2020-21	2021-22	2022-23	2023-24	2024-25
Base TCR	362.64	375.19	388.17	401.6	415.49

It has also stated that the demand for Central Railways during the night-time goes as low as 220 to 230 MW resulting in non-utilization of Base TCR.

2.1.4 In the rejoinder, Central Railways stated that STU has considered only NCPD while calculating Base TCR for the year FY 2016-17. Hence, the Base TCR computed for the FY 2016-17 by STU was 288 MW while the actual should have been 316.3 MW by considering both CPD and NCPD. BEST has also raised a similar objection

as far as the computation of Base TCR for FY 2016-17 is concerned.

- 2.1.5 Further in the rejoinder the Central Railway has also stated that STU had omitted CPD and NCPD data for the month of September 2019 while computing Base TCR for FY 2019-20. It added that the growth rate of 6% submitted to STU for future demand projections is considering the electrification plans for India as a while and does not apply to the State of Maharashtra as most parts of the Railway network in the State is already electrified and hence a more realistic value of 3.46% should be considered by STU for projecting demand by STU for the 4<sup>th</sup> Control Period.
- 2.1.6 It has also stated that STU has considered separate NCPD by treating Mumbai and rest of Maharashtra as two separate control areas while computing Base TCR, as result of which the Base TCR has a higher value as compared to when the Base TCR for Central Railways is computed for Maharashtra as a whole. It has added that keeping Mumbai and rest of Maharashtra as two separate control areas was a commercial decision taken by MSLDC and since December 2018 Central Railways is considered as a single entity for scheduling and deviation settlement mechanism.
- 2.1.7 The deemed distribution licensees consisting of Business Parks, namely Gigaplex Electricity Private Limited (**GEPL**), KRC Infrastructure and Projects Private Limited (**KRCIPPL**) and Mindspace Business Park Private Limited (**MBPPL**) have raised the common issue and stated that computation of Base TCR should be based on the actual value of historic and future demand and not as the average of CPD and NCPD. Further, they also stated that the Base TCR allotted for them for the next MYT Control Period is lower than the demand projected by the respective Licensees and hence STU needs to revise the projections in line with the power procurement plan submitted by such deemed Distribution Licensees.
- 2.1.8 Nidar Utilities Panvel LLP (**NUPLLP**) has also raised objection regarding the computation of Base TCR. STU has currently carried out the projection of Base TCR based on the contracted capacity as provided in the amended PPA. However, NUPLLP has stated that contracted capacity as provided in the PPA is for planning purposes while in the normal course the contracted capacity declared in a month shall be as per monthly contracted capacity which is in the range of 0.3 to 0.5 MW for the peak time slot and 0.6 to 0.7 MW for the off-peak time slot. NUPLLP has never scheduled above 0.7 MW till date and that the average of its CPD and NCPD for last 12 months is 0.481 MW.

# STU's Reply

2.1.9 STU in response to AEML-D's objections, has stated that while market scenario is subject to change considering the dynamic nature of market, the TSU is best placed to project the future demand. However, since the demand growth in the past would differ from the future trend, STU has adopted a balance approach of taking the average of growth rate obtained from past trends and future demand projections. It has also stated that considering the evident error in the computation of Base TCR, it has made a revised submission to the Commission after rectification of the error.

- 2.1.10 In response to the initial objections by Railways, STU has stated that based on the CPD/NCPD data received for FY 2019-20 from SLDC and considering the growth rate as submitted based on the submission of the Railways the demand was extrapolated based in the growth rate of 6% in the absence of relevant historic data. The Base TCR for FY 2019-20 was arrived at 353.28 MW and considering the annual growth rate of 6%, the Base TCR for FY 2020-21 was obtained as 375 MW.
- 2.1.11 Responding to the rejoinder filed by Central Railways and objections raised by BEST, the STU has stated that lower value of Base TCR as observed by the objector was a presentation or computation error, however in the actual submissions filed with the Commission both CPD and NCPD data has been used for computation of Base TCR for 2016-17 and the future demand has been projected by considering the average value of growth rate based on the historical trend and future demand projections in compliance with the MYT Regulations. STU has verified that there is a difference in value of Base TCR computed for Railways while treating its Mumbai and Maharashtra operations separately as compared to a lower value of Base TCR when its aggregate demand for Maharashtra as whole is considered. However, it has further added that only a single bill is raised for transmission charges by MSETCL for Railways since September 2018 as, it was only after September 2018 that the objector was treated as a single entity and not before that. Hence, while separate demand projections computed by STU considers historically approved demand and future demand projections, the treatment for growth rate shall remain separate while computation of Base TCR shall be carried out by considering the objector as a single entity and the Commission may provide necessary directions to implement the submission.
- 2.1.12 Regarding omission of data for month of September 2019, the STU has submitted that it has considered the same in the revised submission. Further regarding the consideration of 6% growth rate, STU has revised the growth rate as 4.16% after correction of the computational error by considering the historic demand and future projections.
- 2.1.13 In response to objections of IT Business parks which are deemed licensees, STU has stated that it has projected the demand in accordance with the Regulation 64.2 of MYT Regulation 2019 and any further scrutiny may be undertaken by the Commission on the issue.
- 2.1.14 In response to NUPLLP 's objection, STU stated that no growth has been considered in TCR from the base year TCR. The Commission may take an appropriate view for suggestions/objections made by TSU.

## **Commission's Ruling**

- 2.1.15 The Commission has noted the objections raised by objectors and replies provided by STU on the issue of Base TCR and projection of Base TCR.
- 2.1.16 As regards the projection of base TCR, the Commission observes that Proviso to Regulation 64.2 specifies as under:

"Provided also that the Yearly CPD and NCPD or the Allotted capacity, as the case may be, to be considered for determination of the subsequent yearly Base Transmission Capacity Rights shall be computed at the beginning of the Control Period based on the past trend and on the basis of demand projections made by various TSUs connected to the Intra-State transmission system as part of their MYT Petitions for the Control Period (Emphasis Added)"

- 2.1.17 In accordance with above Regulations, projection of Base TCR has to be done based on past trend as well as future projections by various TSUs, which are subject to scrutiny and prudence check. In this context, the methodology adopted by STU is in line with the regulatory provisions. The Commission in its analysis while approving the Base TCR for 4<sup>th</sup> Control Period has done so in accordance with this regulatory provision and also scrutinized the same for prudence check which is detailed out in the relevant section of this Order.
- 2.1.18 The Base TCR of Railways for FY 2019-20 is calculated considering actual available monthly CPD & NCPD data of CR till December 2019. Also, the escalation rate of 3.46% is considered as proposed by CR to project future years Base TCR. The projection of base TCR for CR for the 4<sup>th</sup> Control Period is presented in relevant section of this Order.
- 2.1.19 With respect to computational errors highlighted in Petition, the Commission notes that STU has corrected the said errors in a subsequent submission.
- 2.1.20 The Commission has projected the Base TCR of relatively new Licensees based on the projections submitted by respective Licensee in the MYT Petition as there is no adequate trend of CPD and NCPD available for such Licensees. The approved projection of Base TCR of these Licensees are shown in the respective section in this Order

## 2.2 Hike in Transmission Tariff for FY 2020-21

# **Objections**

2.2.1 MSEDCL, BEST, Indian Energy Exchange (IEX) and Captive Power Producers Association (CPPA) have submitted that there is significant hike in transmission tariff due to the increase in TTSC as compared to the 3<sup>rd</sup> MYT Control Period. This has resulted from a large of recovery of past gaps as claimed by MSETCL in its Petition and the spike in the first year of the Control Period i.e. FY 2020-21 as the entire recovery is claimed in the first year. Hence, a detailed scrutiny of the expenses as claimed by MSETCL including O&M expenses, Return on Equity and carrying cost in its MYT Petition is necessary. Railways in its rejoinder has raised objections regarding the overinflated ARR of MSETCL requiring detailed scrutiny of various expense headers. Regarding the recovery of cumulative gap, the revenue gap recovery projected by MSETCL constitutes a large share of the total revenue gap claimed by all the Transmission Licensees. **BEST as well as IEX has**  suggested that recovery of large cumulative gap, if any, of prior period in the ARR of Transmission Licensees should be spread over suitable period 4<sup>th</sup> MYT Control Period rather than recovery of huge annual Transmission charges at one go.

- 2.2.2 Objectors including Shree Cements, BEST, Bharat Forge Utilities, Bajaj FinServ and others have stated that Tariff in Maharashtra is one of the highest as compared to other States and the proposed Transmission Tariff for the 4<sup>th</sup> Control Period results in a hike in transmission tariff amounting to 265% of the current tariff. Such huge hike reflected in increase of short-term transmission tariff from 29 ps./kWh to 77 ps./kWh. Further, for RE transactions transmission tariff will be Rs 1.54 /kWh, which will be onerous for RE transactions.
- 2.2.3 BEST has also stated that the transmission tariff in Maharashtra remains high on account of delays in project execution, lack of proper coordination among the Transmission Licensees in execution of transmission network, etc. and has referred to the commissioning of 400 kV Vikhroli project as an example. It has also added that non-execution of this project in time results in delay in evacuation of cheaper power for Mumbai Discoms. Delay is execution raises project costs and ultimately burdens TSUs and its retail consumers. Hence, BEST has suggested that proper planning on the part of STU is required for timely completion of projects to keep tariff in control.
- 2.2.4 BEST has also added that during the approval of higher capitalization it needs to be ensured that Transmission Licensees are completing projects within the stipulated time limit and within estimated cost and the assets are put into use for the benefit of TSUs. Proper justification for increase in actual cost against approved cost needs to be taken from Transmission Licensees to avoid passing on additional burden on TSUs.

# STU's Reply

- 2.2.5 With reference to the high value of TTSC resulting a spike in Transmission Tariff for the 4<sup>th</sup> Control Period, the STU has stated that the final approved ARR figures for computation of TTSC was not available at the time of filing of the Petition. Hence, it has considered the estimated numbers of ARR as submitted by the Transmission Licensees in their Petitions.
- 2.2.6 It has further added that the scrutiny of expense headers in the MYT Petition of MSETCL, recovery of Transmission system cost from the TSUs and approval/disallowance of capitalization of schemes is beyond its purview and is falls under the powers of the Commission to carry out the above functions.

# Commission's Ruling

2.2.7 The Commission has carried out prudence check and rationalized the projection of ARR of the respective Transmission Licensees including MSETCL. The impact of the same is also considered in the present Order, whereby the transmission charges

per unit approved for the 4<sup>th</sup> Control Period is lower at Rs. 0.41/Unit, Rs. 0.41/Unit, Rs 0.41/Unit, Rs 0.41/Unit. Rs 0.40/Unit and Rs 0.39/Unit in the respective years against that proposed by STU at Rs 0.77/Unit, Rs 0.46/Unit, Rs 0.57/Unit, Rs 0.49/Unit and Rs 0.52/Unit.

- 2.2.8 Regarding impact of past period revenue gaps in first year of Control Period and consequent higher transmission charges in first year, scenarios has been worked out for spreading the past period gaps over the 4<sup>th</sup> Control Period to even out the impact over Control Period rather than over one year alone. It is observed that subsequent to scrutiny, prudence check and true-up exercise undertaken by the Commission, the impact of past period surplus/gaps of is now at a significant lower value than that claimed by the Petitioners. Further, spreading of past period gap is undertaken in the present Order, to even out the its impact over the Control Period, allowing carrying cost for such spreading of past period gaps for concerned Transmission Licensee in its ARR.
- 2.2.9 The Commission notes the submission of BEST regarding the increase in cost of the transmission project because of delay in execution and its impact on the end consumers. Hence, the Commission has approved the capitalization after due diligence and take an appropriate view on time over and cost run of the transmission project. It is worth to note that the Commission approves the capitalization against the scheme only if the assets are put to use benefiting the consumers or the Transmission System improvement. Also, the Commission has disallowed the capital cost for the project of all the transmission licensees if the asset is erected but not put to use. Also, the Commission approves the capital cost at depreciated cost if the assets is put to use beyond the approved dated as a disincentive to the Transmission Licenses for delay in execution of the scheme. In this regard, the Commission also note that the Distribution Licensees raise the demand to the Transmission Licensees for erection of new substations, line and outlets. However, they become reluctant to utilize such assets constructed by Transmission Licensees as per their requirement leading to idling of the assets. Hence, the Commission also directs the Distribution Licensees/Consumers to raise the demand as per their realistic projects and shall utilize the assets on priority once constructed to avoid the idling.
- 2.2.10 Besides, the Commission would like to highlight that, while approving the ARR for the 4<sup>th</sup> Control Period of most of the Transmission Licensees in the State of Maharashtra, it was seen that because of the impact of truing up of 2 years and provisional truing up for 1 year, the cumulative Revenue Requirement of FY 2020-21 is significantly higher than that approved for FY 2019-20, which reduces significantly in FY 2021-22 and future years. As a result, the InSTS Charges in the State will spike in FY 2020-21 and reduce in subsequent years. This will have a consequential adverse effect on the ARR of the Distribution Licensees in Maharashtra, who share the pooled InSTS Charges in the ratio of their share of Coincident Peak Demand (CPD) and Non-Coincident Peak Demand (NCPD). In view of the above, the Commission has decided to smoothen the recovery of the

InSTS Charges, by spreading the Revenue Requirement of Transmission Licensees in the State over the 5 years of the MYT Control Period in such a manner that the intra-State Transmission Charges are around the same level for the entire Control Period, in terms of Rs/kWh. The same treatment has been given in the respective MYT Orders of the Transmission Licensees. **Thus, any spike in transmission tariff is avoided and the tariff increase is smoothened over the years of the 4<sup>th</sup> Control Period.** 

## 2.3 Tariff Base Competitive Bidding (TBCB) based transmission projects

# Objection

2.3.1 Tata Power Company (Distribution) has stated that TBCB process to establish transmission system for 400 kV Vikhroli receiving station and associated incoming transmission lines for strengthening of Mumbai Transmission system for "Kharghar Vikhroli Transmission Private Limited" has concluded and the project will be completed and commissioned by 31st March 2022. TPC-D has submitted that the above project should be considered for determination of TTSC as per proviso of Regulation 64.1 of MYT Regulations, 2019.

# STU's reply

2.3.2 STU in its reply has stated that the current status of the project is such that, LoI has been issued to M/s Adani Transmission Ltd. (ATL). The process of acquisition of SPV and subsequent application of Transmission license is yet not complete. STU has also submitted the quoted annual transmission charges as per the LoA, which comes to Rs. 287.8 Crores for the first 6 years from the date of commissioning and Rs. 201.7 Crores for the rest of the life of asset. It has further suggested that the Commission may take this submission into consideration and act accordingly.

## **Commission's Ruling**

2.3.3 The Commission has noted the comments of TPC-D and reply of STU on the subject. The Commission observes that regulatory process of adoption of transmission tariff and grant of Transmission Licence to implementing agency has not yet been initiated in case of 400 kV Vikhroli project awarded under TBCB. Further, considering the fact that the expected CoD of the project, and consequent expected first year of operation for said scheme being FY 2022-23, the cost of the referred project could be included in TTSC at the time MTR or earlier, in accordance with the following provision of the MYT Regulations, 2019.

"Provided also that in case new Transmission Licensees are added to the intra-State transmission network during the Control period, then the TTSC, Base TCR and Base Transmission Tariff as referred under Regulations 64.1, 64.2 and 64.3 shall be re-determined for each of the remaining Year of the Control Period.

#### 2.4 Treatment of Transmission Losses

#### Objection

2.4.1 MSEDCL in its objection has stated that the InSTS losses for FY 2017-18 and FY 2018-19 are 3.3% and 3.11% respectively. However, STU has projected InSTS losses for Control Period as 3.17%. MSEDCL has further added that efficiency parameters should always show a progressive trend in which case transmission loss should show a declining trend. In view of the same the loss projection should be revised as 3.11%.

## STU's Reply

2.4.2 STU in its reply has stated that the loss of 3.17% projected for the 4<sup>th</sup> Control Period is based on the data for FY 2019-20 as submitted by MSLDC and the loss projected has been kept at the same level envisaging that at most the current level of losses will prevail since projecting the loss levels is not feasible at present. Although, any improvement in loss levels would be factored in before publishing of the final Order.

#### Commission's Ruling

**2.4.3** The Commission notes the submission of MSEDCL. Average of 12-month losses as reported by SLDC is considered for the purpose of approval of the actual annual transmission loss of respective years. For FY 2018-19 loss is 3.11% and for FY 2019-20, considering monthly loss data received till January 2020 (10 months), the annual loss is approved as 3.18%. The loss for FY 2019-20 is approved as transmission loss for the 4<sup>th</sup> Control Period on projection basis. However, the loss will be as per actual. Also, the Commission directs STU/Transmission Licenses to take the efforts to reduce the Transmission Losses which benefits the TSUs and the consumers.

#### 2.5 Criterion for Selection of Transmission System User

## Objection

- 2.5.1 Mr. Amol Lakade stated that Maharashtra Airport Development Company Ltd. (MADC) has been accorded the status of "Deemed Distribution Licensee" vide Government of India, Ministry of Commerce and Industry Notification bearing S.O. 528 (E) dated 3 March 2010.
- 2.5.2 Since 11 June 2015, MADC had been purchasing power from MSEDCL at Rs.3.15 per kWh at the interface point of 220 kV Abhijeet MADC Nagpur Energy Pvt. Ltd. (AMNEPL) bus and MSETCL Transmission Network at Khairi-Khurd, Hingna, Nagpur (which is the STU). However, MADC has not been included in the InSTS Orders previously issued by the MERC and has enquired in the objection as to why MADC is granted this special status having approved its latest PPA in Case No.

244 of 2019 dated 30 august, 2019, wherein the InSTS losses of 3.3% is considered and SLDC charges is considered.

# STU's Reply

2.5.3 STU stated that MADC is not connected directly to the InSTS network and hence is not treated as TSU and the demand of MADC gets subsumed in the demand of MSEDCL. It has further added that NCPD and CPD data is not available with STU as MADC is not a TSU and that Grid Connectivity does not imply STU connectivity as in this case MADC is connected to 220 kV transmission line of AMNEPL. Hence MADC cannot be included in the Transmission System User pool of InSTS.

# **Commission's Ruling**

- 2.5.4 The Commission observes that MADC is a Distribution Licensee operational in the State. The Commission vide Order dated 3 August 2012, in Case No. 16 of 2011 declared MADC to be a deemed Distribution Licensee under Section 14 of the Electricity Act, 2003 (EA) for the notified SEZ area. Thus, it is more than 7 years since such declaration. Besides, it is noted that Commission through various past Orders (Case No. 213 of 2018 and 244 of 2019) have been approving power procurement plan for MADC. Being a Distribution Licensee, which is operational in the State and thereby qualifying as a TSU in accordance with the definition of TSU in the MYT Regulations, 2019, MADC shall also share the TTSC charges, alike any other TSU in the State. Accordingly, the Commission has considered MADC as an TSU through the present Order for the purpose of sharing of TTSC.
- 2.5.5 As regards Base TCR consideration for MADC and corresponding adjustment in Base TCR for MSEDCL has been elaborated separately under **section 3.4** of this Order.

## 2.6 Recovery of Transmission infrastructure cost spent for Mumbai Utilities

## Objection

2.6.1 MSEDCL submitted that various transmission licensees are developing transmission networks for Mumbai Area from the power supply reliability point of view. Major of Mumbai's power procurement comes from Thermal Power Plants in Trombay of about 1430 MW capacity and Dahanu of capacity 500 MW catering to energy generation of approximately 9500 MU. Per unit cost of generation of these plants is high at a rate of Rs. 4.75/unit while power in open market is available at 3.5 Rs. /unit. Transmission constraints force Mumbai utilities to buy power imposing a burden of Rs. 1188 Cr. per year. The proposed transmission network for Mumbai will resolve this issue and Mumbai utilities will able to procure cheaper power from Power exchange. As Mumbai utilities benefit from savings in power

purchase cost, MSEDCL requested that expenses towards development of said transmission network be adjusted against the ARR of only Mumbai utilities and should not be socialized for other Discoms.

# STU's Reply

2.6.2 STU submitted that the issue is beyond the purview of the STU under this Petition

#### Commission's Ruling

2.6.3 The Commission would like to highlight that the proposed arrangement of transmission pricing for InSTS network through pooling of transmission ARR of all transmission licensees and its recovery from all TSUs in proportion to Base TCR of TSUs is in accordance with the prevalent transmission pricing framework specified under MYT Regulations, 2019. The Commission is conscious of the fact that efficient, economic development and optimal utilization of transmission network and its cost recovery in fair and equitable manner from all TSUs based on their usage is important and it should guide transmission pricing framework. The Commission is of the view that it would like to take a comprehensive review of all such cases in the State and evolve a transmission pricing framework whereby transmission charges are levied on all the beneficiaries giving due consideration to actual beneficiaries for whom infrastructure was set up, level of utilization by each beneficiaries etc., such that there is no undue benefit or burden on any beneficiaries.

## 2.7 Implementation of Regulation 66 of MYT 2019

#### **Objection**

- 2.7.1 AEML-D submitted that it has been observed that STU has started charging distribution licensees for short-term charges and additional charges even when the recorded demand is within the Base TCR. Therefore AEML-D requested the Commission to clarify the applicability of the same. Thus, in line with its appeal in the MYT Petition so long as recorded demand is within base TCR no other transmission charges including short-term charges and other additional charges should be applicable and contracted capacity should be considered as the demand including Long-term medium-term and short term sources as all sources out together constitutes the TSU's demand. However, STU considers only the long-term contracts for determining the contracted capacity and resulting in TSUs being subjected to Short Term charges and Additional Transmission Charges, despite the fact their Recorded Demand is well within Base TCR.
- 2.7.2 Indian Railway and Nidar Utilities have stated that in any case of recorded demand exceeding the Base TCR they may pay the charges in accordance with Regulation 66.

# STU's Reply

- 2.7.3 STU submitted that the clause (b) and clause (c) of the Regulation 66 of the MERC MYT Regulations, 2019 should be read in conjunction with clause (a). The very provision of the clause (b) and clause (c) in the Regulation clearly prescribed short term charges for exceeding the Base TCR limits and addition transmission charges for exceeding contracted capacity.
- 2.7.4 Long term TSU shall not be subjected to short term charges provided they do not exceed the Base TCR approved for the respective TSU.

## **Commission's Ruling**

2.7.5 The Commission has noted the objection and replies by the STU. It is also noted that a separate Petition has been filed by STU seeking removal of difficulty in implementing the relevant clauses in the MYT Regulations. In view of the same, the matter shall be dealt in the separate Petition already filed before the Commission.

#### 2.8 Other Issues

#### Objection

2.8.1 Applicability of two times the transmission charges for Renewable Energy Open Access transactions should be reviewed and total charges for OA should not exceed 40% of HT industrial tariff.

## STU's Reply

2.8.2 STU has not submitted any response on this issue

## **Commission's Ruling**

**2.8.3** Applicability of two times the transmission charges for renewable energy open access (RE OA) in specific instances has been specifically covered under amended DOA Regulations, 2019 (First Amendment) or TOA Regulations, 2019 (First Amendment), as the case may be, and shall be governed as per provisions stipulated therein. These amendments have been notified upon due regulatory process. **Hence, the Commission does not find merit in the objection on this count.** 

#### 3 INTRA-STATE TRANSMISSION TARIFF FOR 4<sup>th</sup> CONTROL PERIOD

#### 3.1 Framework for determination of Transmission Tariff for 4<sup>th</sup> Control Period

- 3.1.1 MYT Regulation, 2019 are applicable for the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25. Regulation 64 specifies the methodology and principles for determining the Transmission Tariff for the use of InSTS and Base TCR of TSUs.
- 3.1.2 Further, the 4<sup>th</sup> proviso of the Regulation 64.2 specifies the determination of Base TCR for the beginning of the Control Period, on the basis for which the demand projections for the future years of the Control Period would be made. The relevant extract of the proviso is as below:

"Provided also that the Yearly CPD and NCPD or the Allotted capacity, as the case may be, to be considered for determination of the subsequent yearly Base Transmission Capacity Rights shall be computed at the beginning of the Control Period based on the past trend and on the basis of demand projections made by various TSUs connected to the Intra-State transmission system as part of their MYT Petitions for the Control Period:"

3.1.3 For TSUs who are deemed Distribution Licensees for whom the monthly 12-month CPD and NCPD data is not available, the Base TCR for the beginning of the Control Period is determined in accordance with the 3<sup>rd</sup> proviso of Regulation 64.2, the relevant extract of which is given below:

"Provided also that in case of a Deemed Distribution Licensee whose monthly CPD and NCPD data is not available for 12 months at the time of determination of Base TCR, the monthly CPD and NCPD data if available for at least 4 months, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights:"

- 3.1.4 Proviso 3 of Regulation 64.3 states that in case of addition of new Transmission Licensee, TTSC, Base TCR and Transmission Tariff shall be re-determined for each remaining year of the Control Period.
- 3.1.5 Regulation 65 specifies the methodology and principles for sharing of TTSC among the TSUs and Regulation 66 outline the treatment for usage of InSTS by long term TSUs. Regulation 69 specifies the treatment of Transmission Losses of InSTS to be borne by TSUs.

#### **3.2** Constituents for Determination of TTSC for the 4<sup>th</sup> Control Period.

#### STU's Submission

3.2.1 As outlined in the transmission pricing framework, all the Transmission Licensees

in the State form part of the InSTS, and their approved Aggregate Revenue Requirements (ARRs) for FY 2020-21 to FY 2024-25 are considered for determining the TTSC.

- 3.2.2 STU has considered projected ARR of following transmission licensees forming part of TTSC for projections under 4<sup>th</sup> Control Period as under:
  - a. Maharashtra State Electricity Transmission Co. Ltd (MSETCL)
  - b. Adani Transmission (India) Ltd (ATIL)
  - c. Maharashtra Eastern Grid Power Transmission Co. Ltd. (MEGPTCL)
  - d. Vidarbha Industries Power Ltd. (VIPL-T)
  - e. Adani Electricity Mumbai Limited (Transmission) (AEML-T)
  - f. Tata Power Co. Limited (Transmission) (TPC-T)
  - g. Jaigad Power Transmission Limited (JPTL)
  - h. Amaravati Power Transmission Co. Ltd (APTCL)

#### Commission's analysis

- 3.2.3 In accordance with the transmission pricing framework outlined in the MYT Regulations, 2019, the Transmission Licensees in the State from part of the InSTS, and their approved Aggregate Revenue Requirements (ARRs) which are to be considered for determining the TTSC, as follows:
  - a. <u>Maharashtra State Electricity Transmission Co. Ltd.</u> (MSETCL)'s Final ARR True-up of ARR for FY 2017-18 and FY 2018-19, Provisional True-up ARR for FY 2019-20, ARR projection for the 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 302 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
  - b. <u>Tata Power Co. (Transmission Business)</u> (TPC-T)'s Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for the 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 299 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
  - c. <u>Adani Electricity Mumbai Limited (Transmission Business)</u> (AEML-T)'s Final ARR True-up of FY 2017-18 and FY 2016-17, Provisional ARR True-up of FY 2017-18, and Projection of ARR for the 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March , 2020 in Case No. 297 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
  - d. Jaigad Power Transmission Ltd. (JPTL) was granted Transmission Licence No. 1 of 2009. JPTL's Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for the 4th

Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 294 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.

- e. <u>Adani Transmission (India) Ltd.</u> (ATIL)'s Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for the 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 289 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
- f. <u>Maharashtra Eastern Grid Power Transmission Co. Ltd.</u> (MEGPTCL)'s Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for 4th Control Period From has been approved vide Order dated 30 March, 2020 in Case No. 290 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
- g. Vidarbha Industries Power Ltd. (VIPL-T)'s Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 301 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.\
- h. <u>Amaravati Power Transmission Co. Ltd.</u> (APTCL)'s Final ARR True-up of FY 2017-18 and FY 2018-19, Provisional ARR True-up of FY 2019-20, and Projection of ARR for the 4th Control Period from FY 2020-21 to FY 2024-25 has been approved vide Order dated 30 March, 2020 in Case No. 295 of 2019. Accordingly, that Order has been considered for the determination of Transmission Tariff in the present Order.
- i. <u>Sinnar Power Transmission Co. Ltd</u>. (SPTCL)'s, is yet to achieve CoD of its Transmission System, and has not filed its Petition for Capital Cost and ARR approval for the 4<sup>th</sup> Control Period. Accordingly, it has not been considered in the present Order.

# **3.3** TTSC of InSTS for FY 2020-21 to FY 2024-25

## STU's Submission

- 3.3.1 STU has submitted that the projected ARR of all the Transmission Licensees in the state that form a part of InSTS have been considered for determining the TTSC and the figures of ARR have been arrived from MYT Petitions filed by each of the Licensees for Truing-Up of accounts of FY 2017-18 and FY 2018-19, Provisional Truing-Up of FY 2019-20 and for Projection of ARR for the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25.
- 3.3.2 TTSC to be recovered from all the TSUs in the State as the sum of ARRs of the all

the transmission licensees has been computed in accordance with Regulation 64 of MERC MYT Regulations, 2019.

3.3.3 The details of Transmission Licensees and the ARRs projected for the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25 is provided in the Table below:

T	Defense		Ensuing Years (Projected)				
Transmission Licensee	ReferenceFYOrders2020-21		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	
MSETCL	Case No. 302 of 2019	8,591.84	4,775.02	4,977.54	5,101.41	5,250.37	
ATIL	Case No. 289 of 2019	266.97	114.98	110.42	105.86	101.37	
MEGPTCL	Case No. 290 of 2019	1,857.00	1,050.75	1,013.96	977.34	940.90	
VIPL-T	VIPL-T Case No. 301 of 2019		4.07	3.93	3.79	3.66	
AEML-T	Case No. 297 of 2019	401.63	550.65	723.94	1,298.06	1,883.17	
TPC-T	Case No. 299 of 2019	959.29	928.06	1,004.66	1,071.96	1,129.62	
JPTL	Case No. 294 of 2019	96.87	72.92	70.24	66.81	64.15	
APTCL	Case No. 295 of 2019	84.69	46.70	45.04	43.38	41.75	
Total Transmission System Cost		12,260.56	7,543.15	7,949.73	8,668.61	9,414.99	
ТВСВ		-	-	-	-	-	
Total Transmission							
System Cost of all							
Licensees		12260.56	7543.15	7949.73	8668.61	9414.99	

# Table 1: Aggregate Revenue Requirement of Transmission Licensees as submitted by STU (Rs. Crore)

3.3.4 The break-up of the ARR for FY2020-21 amongst past period claims and the ARR projected for FY2020-21 is as provided in the table below:

Name of Transmission	FY 2020-21						
Licensee	Cumulative Gap/Surplus	Projected ARR	Total				
MSETCL	3963.43	4628.41	8591.84				
ATIL	147.45	119.52	266.97				
MEGPTCL	769.2	1087.8	1857				
VIPL-T	-1.94	4.21	2.27				
AEML-T	10.89	390.74	401.63				
TPC-T	105.43	853.86	959.29				
JPTL	21.19	75.68	96.87				
APTCL	35.91	48.78	84.69				
TTSC of all Licensees proposed to be recovered in respective year	5051.56	7209.00	12260.56				

- 3.3.5 SPTCL having been awarded a licensee has neither submitted the MYT Petition with STU nor with the Commission. As the transmission system of SPTCL is yet to achieve CoD the transmission system cost of SPTCL has not been included in the TTSC.
- 3.3.6 Directive for consideration of transmission system projects undertaken in accordance with the guidelines for competitive bidding for transmission under Section 63 of Electricity Act, 2003 is provided by Regulation 64.1 of MYT Regulation, 2019. The relevant extract of the regulation is provided below for ease of reference:

"Provided that in case of transmission system projects undertaken in accordance with the Guidelines for competitive bidding for transmission under Section 63 of the Act, the Aggregate Revenue Requirement as per the annual Transmission Service Charges (TSC) quoted for such projects, shall be considered, for aggregation under the TTSC."

3.3.7 STU has submitted that MSETCL has 400 kV Vikhroli project to be executed under TBCB and to be included while computing TTSC as suggested TBC-D in in its comment. It has further submitted at present LoI for Vikhroli project has been issued to M/s Adani Transmission Ltd. (ATL), while the process of acquisition of SPV and subsequent application of Transmission License is yet not complete. The STU has also submitted the details of the quoted Annual Transmission charges of the entire lifetime of the project. Vikhroli project would be considered in the revised TTSC at a later point in time during the filing of the Mid-Term Review of Petition for the 4<sup>th</sup> Control Period.

#### Commission's Analysis

3.3.8 Regulation 64 of the MYT Regulations, 2019 specifies mechanism of determination of transmission tariff as following:

64 Determination of Intra-State Transmission Tariff

64.1 The aggregate of the yearly revenue requirement for all Transmission Licensees shall form the "Total Transmission System Cost" (TTSC) of the Intra-State transmission system, to be recovered from the Transmission System Users (TSUs) for the respective year of the Control Period, in accordance with the following Formula:

$$TTSC(t) = \sum_{i=1}^{n} ARRi$$

Where,

*TTSC(t)* = *Pooled Total Transmission System Cost of year (t) of the Control Period;* 

*n* = *Number of Transmission Licensee(s);* 

*ARRi* = Yearly revenue requirement approved by the Commission for ith *Transmission Licensee for the yearly period (t) of the Control Period:* 

Provided that in case of transmission system projects undertaken in accordance with the Guidelines for competitive bidding for transmission under Section 63 of the Act, the Aggregate Revenue Requirement as per the annual Transmission Service Charges (TSC) quoted for such projects, shall be considered, for aggregation under the TTSC."

3.3.9 The Commission has approved the ARR of eight out of nine Transmission Licensees in the State for the 4<sup>th</sup> Control Period, which forms part of the TTSC. Further, the Commission has notes the submission of STU with respect to SPTCL and TBCB projects. Accordingly, approved ARR/adopted annual cost of such transmission asset shall be considered at the time MTR or earlier in accordance with the following provision of Regulation 64.2 of the MYT Regulations, 2019:

"...Provided also that in case new Transmission Licensess are added to the intra-State transmission network during the Control period, then the TTSC, Base TCR and Base Transmission Tariff as referred under Regulations 64.1, 64.2 and 64.3 shall be re-determined for each of the remaining Year of the Control Period. "

3.3.10 The approved ARR of eight Transmission Licensee in the State for the 4<sup>th</sup> Control Period, which shall form part of the TTSC is as under.

Transmission			Ensuing Years	(Approved)	(Rs. Crore)	
Licensee		FY	FY	FY	FY	FY
		2020-21	2021-22	2022-23	2023-24	2024-25
MSETCL	Stand-alone ARR	4,499.75	4,460.79	4,589.42	4,701.87	4,767.35
	Past Gaps	103.96	116.46	108.12	99.79	91.45
	Total ARR	4,603.71	4,577.25	4,697.54	4,801.66	4,858.81
ATIL	Stand-alone ARR	113.88	109.39	105.08	100.78	96.55
	Past Gaps	24.95	27.96	25.96	23.95	21.95
	Total ARR	138.83	137.34	131.03	124.74	118.50
MEGPTCL	Stand-alone ARR	935.11	904.09	874.41	844.90	815.55
	Past Gaps	38.22	42.82	39.75	36.69	33.62
	Total ARR	973.33	946.91	914.17	881.59	849.18
VIPL-T	Stand-alone ARR	4.14	4.01	3.87	3.73	3.60
	Past Gaps	0.26	0.29	0.27	0.25	0.23
	Total ARR	4.40	4.29	4.14	3.98	3.82
AEML-T	Stand-alone ARR	325.11	339.36	339.77	341.02	333.72
	Past Gaps	(9.55)	0.00	0.00	0.00	0.00
	Total ARR	315.56	339.36	339.77	341.02	333.72
TPC-T	Stand-alone ARR	738.59	782.48	816.21	850.25	861.27
	Past Gaps	(101.98)	0.00	0.00	0.00	0.00
	Total ARR	636.61	782.48	816.21	850.25	861.27
JPTL	Stand-alone ARR	73.21	70.80	68.12	65.46	62.79
	Past Gaps	(7.19)	0.00	0.00	0.00	0.00
	Total ARR	66.02	70.80	68.12	65.46	62.79
APTCL	Stand-alone ARR	47.47	45.69	43.98	42.28	40.61
	Past Gaps	3.93	4.41	4.09	3.78	3.46
	Total ARR	51.40	50.09	48.08	46.06	44.07
Total	Stand-alone ARR	6,737.27	6,716.61	6,840.86	6,950.29	6,981.44
	Past Gaps	52.60	191.94	178.20	164.46	150.71
	Total ARR	6,789.86	6,908.53	7,019.06	7,114.75	7,132.16

# Table 2: Approved Aggregate Revenue Requirement of Transmission Licensees

## **3.4** Determination of Base TCR

## STU's Submission

3.4.1 STU has submitted that the criterion for consideration of TSU is as per the definition of TSU as provided under Regulation 2.1 (87) of the MYT Regulations, 2019, which is reproduced as under for easy reference.

"(87) "Transmission System User" for the purpose of these Regulations means the Distribution Licensees and long-term Open Access Users but excludes partial Open Access Users.

- 3.4.2 STU has submitted that in addition to the above definition of a TSU, Regulation 66(a) of MYT Regulation 2019, Long-term TSU with recorded demand up to Base TCR shall not be subjected to payment of short-term transmission charges.
- 3.4.3 In view of above, the STU has stated that NUPLLP being a distribution licensee has been considered as TSU for Long-Term Transmission tariff. Further, Indorama Synthetics (India) Ltd. (IRSL) which is neither a distribution licensee, nor a longterm open access user, has not been considered as a TSU.
- 3.4.4 STU has computed the Base TCR as the average of CPD and NCPD of the TSUs from the monthly data for 12 months available for October 2018 to March 2019 and April 2019 to September 2019. For Indian Railways, STU had initially submitted the data upto August of 2019 but later submitted the data for September 2019 when it was available. For all licensees except Indian Railways and KRC Infrastructure and Projects Pvt. Ltd data for 3 additional months from October to December of 2019 was also made available by STU on Commission's directive. The CPD/NCPD data from FY 2016-17 for all TSUs was made available by the STU.
- 3.4.5 STU has submitted that the calculation of Base TCR for the first year of the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25 has been determined in line with the relevant proviso of Regulation 64.2 of MYT Regulations, 2019, the extract of which is provided below:

"...Provided that for the first year of the Control Period, the Base Transmission Capacity Rights for all Transmission System Users shall be determined based on average monthly CPD and NCPD of the Transmission System Users prevalent during the 12 months prior to date of coming into effect of these Regulations or 12 months prior to filing of the Petition by the Transmission Licensees, depending on availability of such data:..."

- 3.4.6 STU has used the demand projected by all the TSU's for determining the future projected growth rates and the historic growth rates for the TSUs have been computed using the approved value of Base TCRs. The growth rate for projection of demand for the 4<sup>th</sup> Control Period has been determined as the average of future growth projections and historical 3-year CAGR for the ensuing years for MSEDCL, AEML-D, TPC-D, BEST, Indian Railways and Mindspace Properties.
- 3.4.7 The STU has considered the KRC Infrastructure Projects Pvt. Ltd. as a new TSU in the InSTS pool and the Base TCR has been computed by STU as the average of monthly CPD and NCPD data which is available from June 2019 to September 2019. However, Base TCR for the ensuing years for KRCIPPL has been assumed in line with the projected demand growth by KRCIPPL.
- 3.4.8 Due to unavailability of historical 3 -year CAGR for Nidar and Gigaplex, a different approach for the same have been used. Gigaplex Properties have been assumed to

grow at their projected 5 year CAGR of 6.61% while Nidar Utilities have been assumed to have no growth. Further the assumption for Nidar Utilities is due to negative growth (as compared to the 6-month average of CPD and NCPD data available for FY 2019-20) in their future projections.

- 3.4.9 Regarding the projection of future demand for NUPLLP, STU has submitted that in the InSTS Order dated 12 September 2018 in Case No. 265 of 2018, the Commission has considered the approved PPA projected demand for the calculation of Base TCR for Nidar Utilities. It may be noted that as per the Order No. 280 of 2018 dated 1January 2019, the Commission has reiterated that the PPA approved was for a period of three years in line with PPA approval Order in Case No. 117 of 2018 dated 3 August 2018. It has further submitted that the revised PPA approval or its status was not available at the time of filing of this Petition.
- 3.4.10 Projections for Base TCR of Nidar Utilities at present has been carried out with the available data and has suggested that the Commission before issuing the Order could consider revising the base TCR value as per the future demand data submitted Nidar utilities in the MYT Petitions, subsequent to the approval of Power procurement plan and revised PPA with Tata Power Company Distribution for Nidar.
- 3.4.11 Based on the historical CPD/NCPD data and the future demand projections for the various TSUs, the Base TCR and the share of each TSU to the total demand as computed by STU is as provided below:

	FY 20	20-21	FY 2021-22		FY 2022-23		FY 2023-24		FY 2024-25	
TSU	TCR (MW)	TCR (%)								
MSEDCL	18434.71	83.91%	19276.72	84.11%	20157.18	84.32%	21077.86	84.53%	22040.59	84.73%
TPCL-D	813.35	3.70%	831.76	3.63%	850.59	3.56%	869.85	3.49%	889.55	3.42%
AEML-D	1502.18	6.84%	1551.46	6.77%	1602.36	6.70%	1654.94	6.64%	1709.24	6.57%
BEST	826.87	3.76%	844.57	3.69%	862.64	3.61%	881.11	3.53%	899.97	3.46%
Indian Railways (DDL)	369.25	1.68%	386.26	1.69%	404.06	1.69%	422.68	1.70%	442.16	1.70%
Mindspace (DDL)	13.10	0.06%	13.12	0.06%	13.14	0.05%	13.15	0.05%	13.17	0.05%
Gigaplex (DDL)	5.82	0.03%	6.20	0.03%	6.61	0.03%	7.05	0.03%	7.51	0.03%
Nidar Utilities (DDL)	0.49	0.00%	0.49	0.00%	0.49	0.00%	0.49	0.00%	0.49	0.00%
Total Transmission Capacity	21970.76	100.00%	22918.08	100.00%	23905.61	100.00%	24936.81	100.00%	26013.67	100.00%

 Table 3: Base TCR of TSUs for 4<sup>th</sup> Control Period as submitted by STU

3.4.12 STU has further submitted that in case of deemed distribution licensees like M/s

Newfound Properties and Leasing Pvt. Ltd. and M/s Quadron Business Park Ltd. neither BPTA for LTOA / MTOA nor visibility of any projected demand is available with STU. Considering the same these deemed distribution licensees have not been considered for the computation of Base TCR.

3.4.13 In case of M/s KRC Infrastructure and Projects STU has submitted that it had received the projected demand for the 4<sup>th</sup> Control Period but the CPD/NCPD data for the licensee was not available from SLDC for the licensee even as its operation has started on 1 June 2019 as submitted by the licensee to STU. Hence the STU has noted that it may be considered in the computation once the CPD and NCPD data for the licensee becomes available by the Commission or by STU itself.

## Commission's Analysis and Ruling

- 3.4.14 The Commission notes the detailed submission made by STU, based on which it has proposed to consider some entities as TSUs and exclusion of few entities for the purpose of sharing of TTSC in the 4<sup>th</sup> Control Period. Further, the assumption made for projection of Base TCR of each of the proposed TSUs, is also noted.
- 3.4.15 Regulation 2.1 (87) and Regulation 65.1 of MYT Regulations, 2019, specifies the entities that can be included as TSUs for sharing the TTSC.
- 3.4.16 The Regulation 2.1 (87) of the MYT Regulations, 2019 defines the TSU as Distribution Licensees and long-term Open Access Users but excludes partial Open Access Users.
- 3.4.17 Regulation 65.1 of the MYT Regulation, 2019 specifies the principles for sharing of TTSC amongst TSUs which is reproduced hereunder:

"65.1 The long-term Transmission System Users shall share the TTSC of the intra-State transmission system in the proportion of Base Transmission Capacity Rights of each Transmission System User to the total Base Transmission Capacity Rights allotted in the intra-State transmission system."

## TSUs to be considered

- 3.4.18 As per above provisions of the MYT Regulations, 2019, all Distribution Licensees, being TSU, shall share TTSC subject to applicable conditions. Accordingly, the Commission in earlier TTSC Order in Case No. 265 of 2018 had considered the following TSUs for sharing of TTSC.
  - MSEDCL
  - TPC-D
  - AEML-D (Erstwhile RInfra-D)
  - BEST
  - Mindspace Business Parks Pvt. Ltd
  - Indian Railways (IR) (Mumbai & Rest of Maharashtra combined)
  - GEPL (Gigaplex Estate Pvt. Ltd.)

- Nidar Utilities Panvel LLP
- 3.4.19 There are other SEZs in the State which have been granted status of Distribution Licensees and are at various stages of operation. While for some of these Distribution Licensees, Commission has issued regulatory Orders for approval of ARR and determination of Tariff as per MYT Regulations, 2019 or approved Power procurement for the 4<sup>th</sup> Control Period through recent Orders, others are yet to initiate process of regulatory filings in line with requirements under their licence conditions of operation. These SEZs are:
  - Maharashtra Airport Development Corporation (MADC)
  - M/s Newfound Properties and Leasing Pvt. Ltd. (Newfound)
  - M/s Quadron Business Park Ltd. (Quadron)
  - Jawaharlal Nehru Port Trust (JNPT)
  - Lakshmipati Balaji Supply Chain Management Ltd.
- 3.4.20 Commission has sought status of each of the above SEZs from STU. STU has submitted the following information with respect to each of them.

Particulars	KRCIPPL	MADC	Quadron	Newfound	JNPT	Laxmipati Balaji Supply Chain Management Ltd.
BPTA Signing Status	Not signed	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Whether LTOA/MTOA applied for?	Not applied	Not applied	Not applied	Not applied	Not applied	Not applied
Justification for non- consideration of TSU.	Operational from June 2019 (included as TSU)	No direct InSTS connectivity	Not Operational	Not Operational	Not Operational	Not Operational

- 3.4.21 As observed, the only operational SEZ are KRCIPPL and MADC and rest of the SEZs are not operational.
- 3.4.22 KRCIPPL is operational since June 2019 and has filed its MYT Petition for the 4<sup>th</sup> Control Period. Being a Distribution Licensee who is operational, the same is considered as a TSU in accordance with the definition of TSU and on the similar lines of other SEZs who are already TSUs and sharing TTSC, such as MBPPL, Gigaplex and Nidar. Accordingly, the proposal of STU to include KRCIPPL is accepted.
- 3.4.23 The Commission observes that MADC is a Distribution Licensee which is operational in the State. The Commission vide Order dated 03 August 2012, in Case No. 16 of 2011 declared MADC to be a deemed Distribution Licensee under

Section 14 of the Electricity Act, 2003 (EA) for the notified SEZ area. Thus, it is more than 7 years since such declaration. Besides, it is noted that Commission vide various past Orders (Case No. 213 of 2018 and 244 of 2019) have been approving power procurement plan for MADC. Being a Distribution Licensee, which is operational in the State and thereby qualifying as a TSU in accordance with the definition of TSU in the MYT Regulations, 2019, quoted above, MADC should also share the TTSC charges, alike any other TSU in the State. Accordingly, the Commission considers MADC as an additional TSU through the present Order.

- 3.4.24 As regards, other SEZs of viz., Quadron, New Found, JNPT and Laxmipati Balaji Supply Chain Management Ltd., they too are Distribution Licensees in the State and qualifies as TSUs. However, at present these are not operational. In case they start their operation they shall be liable to pay Short Term Transmission charges as determined under this Order until Base TCR of such Licensee is determined and considered for sharing of TTSC at the time of the MTR Order for the 4<sup>th</sup> Control Period or later.
- 3.4.25 As regards considering open access transactions in the State by M/s Indo Rama Synthetics Ltd. (IRSL), M/s Sai Wardha Power Company Ltd. and Essel MP Energy Ltd., for TTSC sharing, the Commission had already evaluated these in the previous TTSC Orders in Case No. 57 of 2015 and in view of the same, they have not been considered as TSUs. However as ruled in the said Order, they shall pay the applicable Long Term OA Charges, as determined in this Order. Relevant extract of the said Order is reproduced as under.

"65. In addition to the TSUs presently considered for sharing of the TTSC in FY 2015-16, there are certain other consumers such as Sai Wardha Power Ltd. and Essel M.P. Ltd. who have been granted Long Term OA on the InSTS. However, presently these consumers are embedded in the MSEDCL and TPC-D network areas...

66. As these Long Term OA consumers are embedded in the existing Distribution Licensees' network area, their demand is already factored into the demand of these Licensees. Accordingly, such Long Term OA Consumers are not being considered for sharing of the TTSC at present. However, they shall pay the applicable Long Term OA Charges, as determined at para 58 of this Order and on the basis of the capacity for which the OA has been granted to such consumers."

## Base TCR of latest 12 months

3.4.26 Regulation 64.2 of the MYT Regulations, 2019 specifies the provision for determination of Base TCR as under.

64.2 The Commission shall approve yearly 'Base Transmission Capacity Rights' as average of Coincident Peak Demand and Non-Coincident Peak Demand for TSUs as projected for 12 monthly period of each year (t) of the Control Period, representing the 'Capacity Utilisation' of Intra-State transmission system and accordingly determine yearly 'Base Transmission Tariff', in accordance with the following formula:

"Base Transmission Capacity Rights (Base TCR) for the yearly period (t)

 $= \sum_{u=1}^{n} ([CPD(t) + NCPD(t)]/2)$ 

Where,

CPD(t) = Average of projected monthly Coincident Peak Demand for the yearly period (t) of Control Period for each Transmission System User (u)

NCPD(t) = Average of projected monthly Non-Coincident Peak Demandfor the Yearly period (t) of Control Period for each Transmission SystemUser (u):

Provided that for the first year of the Control Period, the Base Transmission Capacity Rights for all Transmission System Users shall be determined based on average monthly CPD and NCPD of the Transmission System Users prevalent during the 12 months prior to date of coming into effect of these Regulations or 12 months prior to filing of the Petition by the Transmission Licensees, depending on availability of such data:

•••

Provided also that in case of a Deemed Distribution Licensee whose monthly CPD and NCPD data is not available for 12 months at the time of determination of Base TCR, the monthly CPD and NCPD data if available for at least 4 months, or the quantum of Short-term/Medium-Term Open Access applied for by the Deemed Distribution Licensee for the available period, shall be considered in lieu of the average monthly CPD and NCPD for calculating the Base Transmission Capacity Rights:"

3.4.27 STU has provided month-wise CPD and NCPD details for the various TSUs for FY 2016-17 to FY 2019-20 (up to Dec 2019) including MADC. The Commission has considered the Base TCR based on the 12 Monthly Average of CPD and NCPD of TSUs from January 2019 to December, 2019, as latest available, including MADC as summarised in the following Table. The same has been considered as the base line for projection of base TCR for 4<sup>th</sup> Control Period:

Table 4: Month wise Average of CPD and NCPD for Distribution Licenseesin year 2019 (MW)

Year 2019	MSEDCL	TPCL-D	AEML-D	BEST	Indian Railways	MBPPL	GEPL	MADC	Nidar	KRC	Total
					*						
Jan-19	17,395.46	637.25	1,180.91	638.00	358.90	11.44	4.28	7.86	0.43	0	20,234.54
Feb-19	17,044.99	689.06	1,271.60	679.00	342.42	11.97	4.51	9.96	0.42	0	20,053.93
Mar-19	17,718.07	823.65	1,478.54	810.00	358.64	12.98	5.39	10.10	0.48	0	21,217.85
Apr-19	18,514.11	868.40	1,558.57	890.50	368.52	13.90	6.45	12.13	0.52	0	22,233.08
May-19	18,790.69	870.14	1,577.86	886.50	369.44	14.56	6.49	13.32	0.52	0	22,529.50
Jun-19	18,010.71	897.13	1,659.18	938.00	372.84	14.22	6.37	13.22	0.52	0.28	21,912.47
Jul-19	16,289.45	807.74	1,514.98	839.00	336.80	13.29	5.70	12.46	0.59	0.52	19,820.51
Aug-19	16,183.31	776.61	1,423.88	787.50	328.98	12.49	5.76	11.44	0.61	0.89	19,531.45
Sep-19	15,018.69	837.91	1,416.17	794.00	323.14	12.48	5.78	12.62	0.55	0.85	18,422.18
Oct-19	16,412.78	906.00	1,478.50	861.50	330.67	13.50	6.00	12.22	0.65	1.21	20,023.02
Nov-19	17,378.69	737.50	1,431.50	777.50	359.82	10.50	5.00	10.31	0.56	1.21	20,712.58
Dec-19	18,338.38	726.50	1,433.00	764.50	353.91	13.25	5.86	10.12	0.54	1.70	21,647.75
Average	17,257.94	798.16	1,452.06	805.50	350.34	12.88	5.63	11.31	0.53	0.95	20,695.30

\*(In accordance with Order in Case No. 53 of 2017, for the purpose of sharing of standby charges for Mumbai, disaggregated value of 'Average of CPD & NCPD' of Indian Railways amongst its Mumbai Operations and rest of Maharashtra Operations, shall be considered in the respective MTR Orders for such Licensees)

3.4.28 As discussed above, MADC has now been considered as a TSU for sharing TTSC. Since MADC is not connected to InSTS as reported by STU, the CPD and NCPD based on ABT meter data is considered for MADC as submitted by SLDC. Presently, the demand of MADC is embedded in the demand of MSEDCL. However, for the purpose of base line demand estimation of MADC information provided by SLDC from January to December ,2019 has been considered to arrive the CPD and NCPD for the past period. The weighted average Power Demand for MADC approved for the period 1<sup>st</sup> January, 2019 to 31<sup>st</sup> December 2019 works out to 11.31 MW. The same has been considered as Base TCR for MADC and since MADC demand was embedded within MSEDCL, the Base TCR of MSEDCL has to be reduced to this extent. Accordingly, the modified Base TCR for FY 2019-20, which is considered as baseline for the purpose of projection of Base TCR for 4<sup>th</sup> Control Period is tabulated as shown below:

Particulars	FY 2019-20 12 Months (Jan-Dec 19)
MSEDCL	17,257.94
TPCL-D	798.16
AEML-D	1,452.06
BEST	805.50
Indian Railways	350.34
Mindspace	12.88
Gigaplex	5.63

Particulars	FY 2019-20 12 Months (Jan-Dec 19)
MADC	11.31
Nidar Utilities	0.53
KRCIPPL	0.95
Total	20,695.30

#### Projection of Base TCR over 4th Control Period

3.4.29 Regulation 64.2 of the MYT Regulations, 2019 specifies the provision for projection of Base TCR, for each years of the Control Period as following

"Provided also that the Yearly CPD and NCPD or the Allotted capacity, as the case may be, to be considered for determination of the subsequent yearly Base Transmission Capacity Rights shall be computed at the beginning of the Control Period based on the past trend and on the basis of demand projections made by various TSUs connected to the Intra-State transmission system as part of their MYT Petitions for the Control Period:"

- 3.4.30 As per above referred Regulations, the base TCR for the 4<sup>th</sup> Control Period has to be projected considering both past trend and future demand projections by TSUs in the respective MYT Petitions. Considering extent of availability of data of CPD and NCPD, appropriate approaches have been adopted for projection of Base TCR for 4<sup>th</sup> Control Period.
- 3.4.31 For Distribution Licensees with available data of historical trend, average of 3-year CAGR of actual Base TCR and 3-year CAGR of projected TCR has been considered as the escalation rate. Using the same, base data as shown in table above, was escalated y-o-y to arrive at base TCR of each year of the 4<sup>th</sup> Control Period.
- 3.4.32 For MBPPL, GEPL & KRC, demand projection made for the 4<sup>th</sup> Control Period as per their respective MYT Petition has been considered.
- 3.4.33 For Nidar Utilities, projection made by STU has been accepted.
- 3.4.34 For Indian Railways, escalation rate submitted by Indian Railways has been considered with Base TCR as revised as shown in the above table considering CPD & NCPD data for the latest 12 months, i.e., January, 2019 to December 2019.
- 3.4.35 For MADC, growth rate same as that applicable for MSEDCL has been considered for projection of TCR over 4<sup>th</sup> Control Period.
- 3.4.36 Accordingly, the projection of Base TCR for TSUs for the 4<sup>th</sup> Control Period has been approved as shown in the following Table:

Sr. No.		Approved FY 2020-21		Appro FY 202		Approved FY 2022-23	
	Particulars	Share of Avg of CPD and NCPD					
		(MW)	(%)	( <b>MW</b> )	(%)	( <b>MW</b> )	(%)
1	MSEDCL	17,775.72	83.53%	18,309.03	83.70%	18,858.34	83.86%

#### Table 6: Base TCR for TSUs for the 4<sup>th</sup> Control Period as approved

Sr.	Particulars	Approved FY 2020-21		Appro FY 202		Approved FY 2022-23		
No.		Share of Avg of CPD and NCPD (MW)	Share of Avg of CPD and NCPD (%)	Share of Avg of CPD and NCPD (MW)	Share of Avg of CPD and NCPD (%)	Share of Avg of CPD and NCPD (MW)	Share of Avg of CPD and NCPD (%)	
2	TPCL-D	808.72	3.80%	819.42	3.75%	830.26	3.69%	
3	AEML-D	1,482.30	6.97%	1,513.18	6.92%	1,544.70	6.87%	
4	BEST	811.13	3.81%	816.80	3.73%	822.52	3.66%	
5	Indian Railways	362.46	1.70%	375.00	1.71%	387.97	1.73%	
6	Mindspace	15.80	0.07%	15.80	0.07%	15.80	0.07%	
7	Gigaplex	7.25	0.03%	8.00	0.04%	8.00	0.04%	
8	MADC	11.65	0.05%	12.00	0.05%	12.36	0.05%	
9	Nidar Utilities	0.53	0.00%	0.53	0.00%	0.53	0.00%	
10	KRCIPPL	5.00	0.02%	5.00	0.02%	8.50	0.04%	
	Total	21,280.57	100.00%	21,874.77	100.00%	22,488.99	100.00%	

Sr. No.	Particulars	Appro FY 202		Approved FY 2024-25		
		Share of Avg of CPD and NCPD (MW)	Share of Avg of CPD and NCPD (%)	Share of Avg of CPD and NCPD (MW)	Share of Avg of CPD and NCPD (%)	
1	MSEDCL	19,424.14	84.02%	20,006.90	84.19%	
2	TPCL-D	841.24	3.64%	852.38	3.59%	
3	AEML-D	1,576.88	6.82%	1,609.73	6.77%	
4	BEST	828.27	3.58%	834.06	3.51%	
5	Indian Railways	401.40	1.74%	415.28	1.75%	
6	Mindspace	15.80	0.07%	15.80	0.07%	
7	Gigaplex	8.00	0.03%	8.00	0.03%	
8	MADC	12.73	0.06%	13.12	0.06%	
9	Nidar Utilities	0.53	0.00%	0.53	0.00%	
10	KRCIPPL	9.00	0.04%	9.50	0.04%	
	Total	23,117.99	100.00%	23,765.30	100.00%	

<sup>3.4.37</sup> STU is directed to submit, at the time of filing of the MTR Petition for the 4<sup>th</sup> Control Period, variation in actual and approved CPD and NCPD so that revision in Base TCR and Base Transmission Tariff could be made at the time of Mid-Term Review as per the provisions of the Regulations 64.3.

#### 3.5 Determination of Transmission Tariff for the 4<sup>th</sup> Control Period

#### STU's Submission

3.5.1 Base Transmission Tariff has been determined for each year of the Control Period as the ratio of projected TTSC for InSTS and calculated Base TCR and has been denominated in terms of Rs/kW/month (for long-term/medium-term usage) or in terms of Rs/kWh (for short-term bilateral open access transactions usage, short-term collective transactions over Power Exchange and for Renewable Energy transactions) in accordance with regulation 64.3 of the MYT Regulations, 2019.

- 3.5.2 Energy projections made by the TSUs in their respective MYT Petitions have been used to compute the Short-Term Transmission Tariff. STU has submitted that due to unavailability of future-year projections for energy drawl at G<>T interface for the Indian Railways, it has been projected at a growth-rate of 5.91% which is computed as the average of 3-year CAGR for each month of the year for the year for the period FY 2016-17 to FY 2018-19. Further, in the absence of energy projections for Indian Railways at G<>T interface for the ongoing year FY 2019-20, STU has submitted that the base energy transmitted for the base year FY 2019-20 for Indian Railways is calculated at the average of the last three years i.e. FY 2016-17, FY 2017-18 and FY 2018-19 to rule out any abnormalities in the recent year.
- 3.5.3 The transmission Tariff as computed by STU for each year of the 4<sup>th</sup> Control Period from FY 2020-21 to FY 2024-25 is as given in the table below:

TSU - Distribution Licensee	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
TTSC	Rs. Crore	12260.56	7543.15	7949.73	8668.61	9414.99
Base TCR	MW	21970.76	22918.08	23905.61	24936.81	26013.67
Transmission Tariff (long term/medium term)	Rs. /kW/ month	465.03	274.28	277.12	289.69	301.60
Transmission Tariff (short term/short term collective/renewable energy)	Rs. /kWh	0.77	0.46	0.47	0.49	0.52
Energy Units Transmitted (Discom Projections)	MUs	159,701	165,005	170,597	176,499	182,735

Table 7: Transmission Tariff for 4<sup>th</sup> Control Period as proposed by STU

# Commission's Analysis and Ruling

3.5.4 Regulation 64.3 of the MYT Regulations, 2019 specifies the formula for the determination of Base Transmission Tariff of each year for Long, Medium and Short Term transactions as follows:

"Base Transmission Tariff for each Year shall be determined as ratio of approved 'TTSC' for intra-State transmission system and approved 'Base Transmission Capacity Rights' and shall be denominated in terms of "Rs/kW/month" (for longterm/medium-term usage) or in terms of "Rs/kWh" (for short-term bilateral open access transactions usage, short-term collective transactions over Power Exchange and for Renewable Energy transactions) in accordance with the following formula:

Base Transmission Tariff(t) (long-term/medium-term) = TTSC(t) / Base TCR(t) (Rs/kW/month or Rs/MW/day)

Base Transmission Tariff (t) (Short-term) = TTSC (t) /  $\sum_{i=1}^{n}$  (Energy Transmitted by Tx (i)

(Rs/kWh)

Where,

TTSC (t) = Pooled cost for InSTS for yearly period (t) of the Control Period; Base TCR (t) = Base Transmission Capacity Rights for the yearly period (t); n = Total number of Transmission Licensee(s) in that particular year of Control Period;

*Txi* = *ith Transmission Licensee*:

Provided that the energy units transmitted by the Transmission Licensees shall be based on the energy input requirement of the Distribution Licensees at Generation-InSTS interface point, as projected by each Distribution Licensee as part of its MYT Petition for the Control Period and as approved by the Commission:"

3.5.5 In line with Regulation 64.3 and based on the TTSC and Base TCR approved in this Order, the Commission has determined the Transmission Tariff for use of the InSTS from FY 2020-21 to and FY 2024-25. For Energy Units handled, the same has been considered as approved in the respective MYT Orders for such TSUs and for others submission of STU has been considered.

Particulars	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Total Transmission System Cost (TTSC)	Rs. Crore	6,790	6,909	7,019	7,115	7,132
Base Transmission Capacity Rights	MW	21,281	21,875	22,489	23,118	23,765
Transmission Tariff (long term/ medium term)	Rs./kW/ month	266	263	260	256	250
Transmission Tariff (short term/ short term collective/ renewable energy)	Rs./kWh	0.41	0.41	0.41	0.40	0.39
Energy Units Transmitted	Mus	165,557	168,583	171,808	176,777	181,940

Table 8: Transmission Tariff approved for FY 2020-21 to FY 2024-25 considering TTSC
3.5.6 For the purpose of billing for short term/collective/renewable energy open access transactions of consumers where kVAh billing is applicable, Transmission Tariff in (Rs/kVAh) as determined below, shall be applicable, considering a power factor of 0.98 as power factor shall be closer to unity at transmission level.

Particulars	Unit	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Transmission Tariff (short term/ short term collective/ renewable energy*)	Rs./kWh	0.41	0.41	0.41	0.40	0.39
Transmission Tariff (short term/ short term collective/ renewable energy*), where kVAh billing is applicable.	Rs./ kVAh	0.40	0.40	0.40	0.39	0.38

\*( subject to provisions of DOA Regulations, 2019 (First Amendment) and TOA Regulations, 2019 (First Amendment)

## 4 SHARING OF TTSC AMONG TSUS AND RECOVERY

### 4.1 Sharing of TTSC among TSUs

#### STU's submission

- 4.1.1 Sharing of TTSC by the long-term TSUs shall be carried in accordance with the provision laid out in Regulation 65.2 of MYT Regulations, 2019, in the proportion of Base TCR of each TSU to the total Base TCR allotted in the InSTS.
- 4.1.2 Transmission Charges are payable by all long-term TSUs irrespective of their actual utilisation recorded during their period of operation. Any difference between the actual utilization of Transmission Capacity by a long-term TSU and the allocated Transmission Capacity (i.e. Base TCR) shall be governed by Regulation 66 of the MERC (MYT) Regulations, 2019.
- 4.1.3 The sharing of Transmission charges by the licensee on annual basis and monthly basis as per STU's submissions is as shown in Table below.

	]	FY 2020-21	l	]	FY 2021-22	2	]	FY 2022-23	3	]	FY 2023-24		]	FY 2024-25	
TSU- Distribution Licensees	Share of avg. of CPD and NCPD (MW)	Share of avg. of CPD and NCPD (%)	Share of TTSC (Rs. Crore)	Share of avg. of CPD and NCPD (MW)	Share of avg. of CPD and NCPD (%)	Share of TTSC (Rs. Crore)	Share of avg. of CPD and NCPD (MW)	Share of avg. of CPD and NCPD (%)	Share of TTSC (Rs. Crore)	Share of avg. of CPD and NCPD (MW)	Share of avg. of CPD and NCPD (%)	Share of TTSC (Rs. Crore)	Share of avg. of CPD and NCPD (MW)	Share of avg. of CPD and NCPD (%)	Share of TTSC (Rs. Crore)
MSEDCL	18,435	83.91%	10,287	19,277	84.11%	6,345	20,157	84.32%	6,703	21,078	84.53%	7,327	22,041	84.73%	7,977
TPCL-D	813	3.70%	454	832	3.63%	274	851	3.56%	283	870	3.49%	302	890	3.42%	322
AEML-D	1,502	6.84%	838	1,551	6.77%	511	1,602	6.70%	533	1,655	6.64%	575	1,709	6.57%	619
BEST	827	3.76%	461	845	3.69%	278	863	3.61%	287	881	3.53%	306	900	3.46%	326
Indian Railways	369	1.68%	206	386	1.69%	127	404	1.69%	134	423	1.70%	147	442	1.70%	160
Mindspace	13.10	0.06%	7.31	13.12	0.06%	4.32	13.14	0.05%	4.37	13.15	0.05%	4.57	13.17	0.05%	4.77
Gigaplex	5.82	0.03%	3.25	6.20	0.03%	2.04	6.61	0.03%	2.20	7.05	0.03%	2.45	7.51	0.03%	2.72
Nidar Utilities	0.49	0.00%	0.27	0.49	0.00%	0.16	0.49	0.00%	0.16	0.49	0.00%	0.17	0.49	0.00%	0.18
KRCIPPL	5.00	0.02%	2.79	7.50	0.02%	2.47	8.52	0.03%	2.83	9.68	0.02%	3.37	11.00	0.04%	3.98
Total	21,971	100.00%	12,261	22,918	100.00%	7,543	23,906	100.00%	7,950	24,937	100.00%	8,669	26,014	100.00%	9,415

# Table 9: Annual Sharing of TTSC among TSUs as submitted by STU

## Commission's Analysis and Ruling

4.1.4 The TTSC for FY 2020-21 to FY 2024-25, has to be shared among the Long-Term TSUs comprising Distribution Licensees in accordance with their contribution to Base TCR as summarised in the following Table:

	F	FY 2020-21		I	FY 2021-22	2	FY 2022-23 FY 2023-24				FY 2024-25				
TSU- Distributio n Licensees	Share of avg. of CPD and	Share of avg. of CPD and	Share of TTSC	Share of avg. of CPD and	Share of avg. of CPD and	Share of TTSC	Share of avg. of CPD and NCPD	Share of avg. of CPD and	Share of TTSC	Share of avg. of CPD and	Share of avg. of CPD and	Share of TTSC	Share of avg. of CPD and	Share of avg. of CPD and	Share of TTSC
	NCPD (MW)	NCPD (%)	(Rs. Crore)	NCPD (MW)	NCPD (%)	(Rs. Crore)	(MW)	NCPD (%)	(Rs. Crore)	NCPD (MW)	NCPD (%)	(Rs. Crore )	NCPD (MW)	NCPD (%)	(Rs. Crore)
MSEDCL	17,776	83.53%	5,672	18,309	83.70%	5,782	18,858	83.86%	5,886	19,424	84.02%	5,978	20,007	84.19%	6,004
TPCL-D	809	3.80%	258	819	3.75%	259	830	3.69%	259	841	3.64%	259	852	3.59%	256
AEML-D	1,482	6.97%	473	1,513	6.92%	478	1,545	6.87%	482	1,577	6.82%	485	1,610	6.77%	483
BEST	811	3.81%	259	817	3.73%	258	823	3.66%	257	828	3.58%	255	834	3.51%	250
Indian Railways	362	1.70%	116	375	1.71%	118	388	1.73%	121	401	1.74%	124	415	1.75%	125
Mindspace	15.80	0.07%	5.04	15.80	0.07%	4.99	15.80	0.07%	4.93	15.80	0.07%	4.86	15.80	0.07%	4.74
Gigaplex	7.25	0.03%	2.31	8.00	0.04%	2.53	8.00	0.04%	2.50	8.00	0.03%	2.46	8.00	0.03%	2.40
MADC	11.65	0.05%	3.72	12.00	0.05%	3.79	12.36	0.05%	3.86	12.73	0.06%	3.92	13.12	0.06%	3.94
Nidar Utilities	0.53	0.00%	0.17	0.53	0.00%	0.17	0.53	0.00%	0.17	0.53	0.00%	0.16	0.53	0.00%	0.16
KRCIPPL	5.00	0.02%	1.60	5.00	0.02%	1.58	8.50	0.04%	2.65	9.00	0.04%	2.77	9.50	0.04%	2.85
Total	21,281	100.00 %	6,790	21,875	100.00 %	6,909	22,489	100.00 %	7,019	23,118	100.00 %	7,115	23,765	100.00 %	7,132

### Table 10: Annual Sharing of TTSC among TSUs as approved by the Commission

4.1.5 The sharing of Transmission Charges by the licensee on Annual and monthly basis as submitted by STU is as shown in Table below.

TSU - Distribution Licensees	FY 2020-21		FY 20	)21-22	FY 2022-23		FY 20	FY 2023-24 FY 2024		)24-25
Litemsees	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
MSEDCL	10,287.30	857.28	6,344.65	528.72	6,703.20	558.60	7,327.15	610.60	7,977.03	664.75
TPCL-D	453.88	37.82	273.76	22.81	282.86	23.57	302.38	25.20	321.95	26.83
AEML-D	838.27	69.86	510.64	42.55	532.86	44.41	575.29	47.94	618.61	51.55
BEST	461.43	38.45	277.98	23.16	286.87	23.91	306.29	25.52	325.72	27.14
Indian Railways	206.06	17.17	127.13	10.59	134.37	11.20	146.93	12.24	160.03	13.34
Mindspace	7.31	0.61	4.32	0.36	4.37	0.36	4.57	0.38	4.77	0.40
Gigaplex	3.25	0.27	2.04	0.17	2.20	0.18	2.45	0.20	2.72	0.23
Nidar Utilities	0.27	0.02	0.16	0.01	0.16	0.01	0.17	0.01	0.18	0.01
Total	12,260.56	1,021.71	7,543.15	628.60	7,949.73	662.48	8,668.61	722.38	9,414.99	784.58

Table 11: Monthly TTSC payable by TSUs as submitted by STU

## Commission's Analysis

4.1.6 The sharing of Transmission charges by the licensee on Annual and monthly basis as approved is as shown in Table below.

	FY 20	020-21	<b>FY 2</b>	021-22	FY 20	022-23	FY 20	23-24	FY 2024-25	
Particular	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
MSEDCL	5,671.59	472.63	5,782.39	481.87	5,885.89	490.49	5,977.94	498.16	6,004.23	500.35
TPCL-D	258.03	21.50	258.79	21.57	259.13	21.59	258.90	21.58	255.80	21.32
AEML-D	472.95	39.41	477.90	39.82	482.12	40.18	485.30	40.44	483.09	40.26
BEST	258.80	21.57	257.96	21.50	256.72	21.39	254.91	21.24	250.31	20.86
Indian Railways	115.65	9.64	118.43	9.87	121.09	10.09	123.53	10.29	124.63	10.39
Mindspace	5.04	0.42	4.99	0.42	4.93	0.41	4.86	0.41	4.74	0.40
Gigaplex	2.31	0.19	2.53	0.21	2.50	0.21	2.46	0.21	2.40	0.20
MADC	3.72	0.31	3.79	0.32	3.86	0.32	3.92	0.33	3.94	0.33
Nidar Utilities	0.17	0.01	0.17	0.01	0.17	0.01	0.16	0.01	0.16	0.01
KRCIPPL	1.60	0.13	1.58	0.13	2.65	0.22	2.77	0.23	2.85	0.24
Total	6,789.86	565.82	6,908.53	575.71	7,019.06	584.92	7,114.75	592.90	7,132.16	594.35

- 4.1.7 The STU, i.e. MSETCL, shall collect the Transmission Charges from the respective TSUs on monthly basis as provided in the Regulations, with the first monthly period commencing from 1<sup>st</sup> April 2020, as provided in the above table.
- 4.1.8 Above Transmission Charges are payable by all long-term TSUs irrespective of their actual utilisation recorded during their period of operation. Any difference between the actual utilization of Transmission Capacity by a long-term TSU and the allocated Transmission Capacity (i.e. Base TCR) shall be governed by Regulation 66 of the MYT Regulations, 2019 which reads as follows:

"66. Usage of Intra-State Transmission System— The charges for intra-State transmission usage shall be shared among various TSUs in the following manner:

(a) Long-term TSU with recorded demand up to Base TCR shall not be subjected to payment of short-term transmission charges;

(b) Long-term TSU with recorded demand greater than Base TCR but lower than Contracted Capacity shall make payment of short-term Transmission charges for the recorded demand in excess of Base TCR:

(c) Where the recorded demand of long-term TSU is greater than Contracted Capacity, the TSU shall bear additional transmission charges as specified in the Regulations of the Commission Governing Transmission Open Access:

Provided that short-term transmission charges and additional transmission charges, if payable or paid by long-term TSUs in accordance with the clauses (a), (b) and (c) above, shall be adjusted during subsequent billing period upon availability of information regarding actual recorded demand by such long-term TSUs."

4.1.9 In case any new TSU (including deemed distribution licensees such as SEZs) avails open access during the year, or starts operation prior to issuance of the MTR Order, such TSU shall be liable to pay the Transmission Charges as applicable at the rate of short term Transmission Tariff determined as per this Order, corresponding to the energy units procured.

4.1.10 In accordance with the ruling of the 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), Distribution Licensees shall not retain the transmission charges collected from partial open access consumers and shall arrange to remit the same to STU in the immediate next billing cycle, as and when levied/collected from such open access consumers. STU shall maintain separate account of such revenue from transmission charges (month-wise and distribution licensee-wise) and shall publish such monthly statement along with quarterly reconciliation statement on its website.

### 4.2 Recovery of ARR of Transmission Licensees for FY 2020-21 to FY 2024-25

4.2.1 STU has submitted that each Transmission Licensees according to Regulation 64 of MYT Regulations, 2019 are entitled to recover the TTSC obtained by pooling the ARR of all the Transmission Licensees in the state for the 4th Control Period from FY 2020-21 to FY 2024-25 from the Transmission Charges collected by the STU from the TSUs. The allocation charges to be recovered from the TTSC collected by STU on a monthly and annual basis is provided in the table below:

Particulars	FY 2020-21 lars		FY 2(	)21-22	FY 2(	)22-23	FY 2023-24 FY 2024		)24-25	
	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
MSETCL	8,591.84	715.99	4,775.02	397.92	4,977.54	414.80	5,101.41	425.12	5,250.37	437.53
ATIL	266.97	22.25	114.98	9.58	110.42	9.20	105.86	8.82	101.37	8.45
MEGPTCL	1,857.00	154.75	1,050.75	87.56	1,013.96	84.50	977.34	81.45	940.90	78.41
VIPL-T	2.27	0.19	4.07	0.34	3.93	0.33	3.79	0.32	3.66	0.31
AEML-T	401.63	33.47	550.65	45.89	723.94	60.33	1,298.06	108.17	1,883.17	156.93
TPC-T	959.29	79.94	928.06	77.34	1,004.66	83.72	1,071.96	89.33	1,129.62	94.14
JPTL	96.87	8.07	72.92	6.08	70.24	5.85	66.81	5.57	64.15	5.35
APTCL	84.69	7.06	46.70	3.89	45.04	3.75	43.38	3.62	41.75	3.48

## Table 13:Recovery of ARR of Transmission Licensees for the 4<sup>th</sup> Control Period proposed by STU

Particulars	FY 2020-21		FY 20	)21-22	FY 2022-23		FY 2023-24		FY 2024-25	
	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly	Annual	Monthly
Total	12,260.56	1,021.71	7,543.15	628.60	7,949.73	662.48	8,668.61	722.38	9,414.99	784.58

#### Commission's Analysis and Ruling

- 4.2.2 In accordance with Regulation 64, the ARR of the Transmission Licensee are pooled to derive the TTSC, and each Transmission Licensee is entitled to recover its approved ARR from the Transmission Charges collected by the STU from the TSUs.
- 4.2.3 This Transmission Tariff Order is applicable from 1<sup>st</sup> April 2020. The STU shall collect Transmission Tariff for each calendar month from the TSUs as per the timelines provided in the Regulations, with the first monthly period commencing from 1<sup>st</sup> April 2020. Each Transmission Licensee shall be entitled to recover its ARR, as considered in these TTSC workings, from the Transmission Tariff collected by the STU, on a monthly basis. The Transmission Licensees should claim recovery of their respective ARRs by raising monthly bills on the STU covering their component of InSTS Charges as follows:

# Table 14:Recovery of ARR of Transmission Licensees for the 4<sup>th</sup> Control Period Approved by the Commission

	FY 20	)20-21	FY 20	)21-22	FY 20	)22-23	FY 20	)23-24	FY 20	)24-25
Transmission licensees	Annual	Monthly								
MSETCL	4,603.71	383.64	4,577.25	381.44	4,697.54	391.46	4,801.66	400.14	4,858.81	404.90
ATIL	138.83	11.57	137.34	11.45	131.03	10.92	124.74	10.40	118.50	9.88
MEGPTCL	973.33	81.11	946.91	78.91	914.17	76.18	881.59	73.47	849.18	70.76
VIPL-T	4.40	0.37	4.29	0.36	4.14	0.34	3.98	0.33	3.82	0.32
AEML-T	315.56	26.30	339.36	28.28	339.77	28.31	341.02	28.42	333.72	27.81
TPC-T	636.61	53.05	782.48	65.21	816.21	68.02	850.25	70.85	861.27	71.77
JPTL	66.02	5.50	70.80	5.90	68.12	5.68	65.46	5.46	62.79	5.23
APTCL	51.40	4.28	50.09	4.17	48.08	4.01	46.06	3.84	44.07	3.67
Total	6,789.86	565.82	6,908.53	575.71	7,019.06	584.92	7,114.75	592.90	7,132.16	594.35

Provided that if there is any shortfall in the collection of TTSC because of any TSU, such shortfall shall be proportionally apportioned to all Transmission Licenses based

on their share of TTSC. Also, there shall not be netting of the Transmission Charges among the Licensees having Transmission and Distribution business.

Provide that if any payment is made by the TSU towards past arrears it shall be shared among all the Transmission Licenses in proportion to their share including MSETCL.

### 4.3 Optimum Utilisation of Transmission Capacity

- 4.3.1 The Commission, while evaluating the ARR/tariff petitions of the transmission licensees during MYT/MTR proceedings has observed a trend of capitalisation at higher rate than growth rate of peak demand resulting in higher per unit cost of transmission. This seemingly sub optimal utilization of transmission infrastructure could be on account of various factors including lower than expected growth in actual demand as against projected growth at the time of planning and/or excess capacity requirement forecasted by Transmission System Users i.e generators, licensees, captive users, etc.
- 4.3.2 As per the existing Transmission Pricing framework, the intra-state Transmission cost in Maharashtra is shared between all Transmission System Users in proportion to their demand which is then passed on to the end consumers through the retail tariff. Presently, even if the network is specifically proposed and is created for identified beneficiaries, the cost associated with this network is borne by all the consumers in the State. Accordingly, the cost of under-utilised assets is getting socialized and neither the identified beneficiary nor the Licensee is required to directly bear consequences for the assumptions and factors in creating surplus capacity in transmission infrastructure that resulted from their decisions.
- 4.3.3 The Commission expresses its concern on sub-optimal utilisation, or creation of stranded assets of Transmission system. There is a need for the STU, Transmission and the Distribution Licensees to critically review their planning and designing processes for new schemes in closer coordination with the beneficiaries for a least cost solution that would improve overall utilisation of integrated transmission infrastructure.
- 4.3.4 In order to bring into focus accountability, transparency and commercial aspects of financial planning criteria apart from technical planning criteria while undertaking planning of transmission infrastructure, the Commission in its proposed amended Planning Code under the Draft State Grid Code Regulations, 2020 has clearly mandated that the Transmission planning shall be based on the technical as well as the financial criteria to ensure the efficient development of transmission system as a whole.
- 4.3.5 To achieve the objective of optimum utilisation of the existing Transmission infrastructure in the State, the Commission would undertake a status check of the

Transmission and distribution network through a comprehensive review to understand the extent of investments in infrastructure as against its utilization. The review would also bring out options to lower the costs of extending the network and the need for amending the Transmission Pricing framework whereby transmission charges get to be levied to the users of transmission network in fair and equitable manner giving due consideration to actual beneficiaries/user for whom infrastructure was set up, level of utilisation by each beneficiaries/user etc., so that there is no undue benefit or burden on any beneficiary/user. Regulation 67 of MYT Regulations, 2019 enables the Commission, after conducting a detailed study and due Regulatory process, to change the existing transmission framework to one considering the factors such as voltage, distance, direction and quantum of flow based on the methodology specified by CERC, as may deem appropriate.

- **4.3.6** In view of the above, the STU is directed to submit a status report on the extent of infrastructure created so far in the State and its utilization at present and as envisaged when approval was accorded to the plan. The report should cover reasons for any under-utilisation, possibility of optimisation of the transmission network, alternate transmission pricing framework to balance the tendency of over capitalisation without its optimal utilisation while complying with the provisions of the new MEGC, 2020 which will be duly notified shortly. The report shall be submitted to the Commission within 3 months from the date of notification of MEGC, 2020.
- **4.3.7** Based on the report, the Commission will take further necessary steps as may be deemed fit to correct the apparent anomalies in capitalisation of assets by licensees without its commensurate utilization that have crept in over the years.

## 5 TRANSMISSION LOSS FOR THE 4<sup>TH</sup> MYT CONTROL PERIOD

### 5.1 Energy Accounting and Treatment of Transmission Loss

#### STU's submission

5.1.1 Intra-State Transmission Loss for FY2017-18 and FY2018-19 as per submission made by MSLDC is 3.30% and 3.11% respectively. Intra -State Transmission Loss as estimated by the SLDC for FY2019-20 is 3.17%. The projected Intra-State Transmission Loss levels for the ensuing years are projected as under:

# Table 15:Transmission Loss projected for the 4<sup>th</sup> Control Period by STU

Particular	FY	FY	FY	FY	FY
	2020-21	2021-22	2022-23	2023-24	2024-25
Intra-State Transmission Loss	3.17%	3.17%	3.17%	3.17%	3.17%

#### Commission's Analysis

5.1.2 The Intra-State Transmission Loss as recorded and available for the financial year from April, 2019 to January, 2020 (10- month) has been submitted by MSLDC. The weighted average Transmission Loss for the InSTS during this period is 3.18% for a total energy input of 1, 28,330 MU and output of 1,24,251 MU, and is accordingly approved for the 4<sup>th</sup> Control Period.

## 6 APPLICABILITY OF ORDER

### 6.1 Applicability

6.1.1 This Order shall be applicable with effect from 1 April 2020. The Transmission Tariff approved in this Order shall remain in effect until any subsequent revision.



## Appendix-I

## (List of Persons who attended Technical Validation Session)

		Name of
Sl. No.	Name	Organization/Designation
1	Shri Abinash Dash	Sr. Consultant, PwC India
2	Shri Shashank Jewalikar	CE, STU
3	Shri. S. B. Petkar	EE, STU
4	Shri P.S. Sale	SE-RC, STU

# Appendix-II

## (List of Persons who attended Public Hearing held on 27 January 2020)

Sl. No.	Name	Name of Organization/Designation
1	Shri Shashank Jewalikar	CE, STU
2	Shri. S. B. Petkar	EE, STU
3	Ms Vinita Malvin	Indian Railways
4	Ms Hema V. Patil	Central Railways
5	Shri V.V. Kurade	BEST

Sl. No.	Name
	<b>Objections by Transmission and Distribution Licensees</b>
1	Maharashtra State Electricity Distribution Com. Ltd. (MSEDCL)
2	Tata Power Company Limited - Transmission (TPC-D)
	Adani Electricity Mumbai Limited
3	(AEML - D)
4	The Brihanmumbai Electric Supply & Transport Undertaking - (BEST)
5	Indian Railways - Central Railways
6	Mindspace Business Parks Private Limited (MBPPL)
7	M/s. Gigaplex Estate Private Limited (GEPL)
8	Nidar Utilities Panvel LLP (NUPLLP)
	KRC Infrastructure and Projects Private Limited
9	(KRCIPPL)
	<b>Objections/Suggestions by Consumers and Other organizations</b>
10	Indian Energy Exchange (IEX)
11	M/s Shree Cement Ltd.
12	Shri. Amol Lakade
13	AMJ Land Holding Ltd
14	Bajaj Finserv Ltd.
15	Bharat Forge Utilities Ltd
16	Captive Power Producers Association
17	Dhariwal Industries Pvt. Ltd.

## (List of Objectors)

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R. M. Dhariwal HUF