

Multi Year Tariff (MYT) Petition
Executive Summary
Tata Power-Transmission
Case No. 299 of 2019

Lighting up Lives!

Executive Summary

1.1. Tata Power-Transmission Historical Perspective:

1. The Tata Power Company Limited (“Tata Power”) is a company established in 1919. On 1st April, 2000, The Tata Hydro-Electric Power Supply Company Limited (established in 1910) and The Andhra Valley Power Supply Company Limited (established in 1916) were merged into Tata Power, to form one unified entity. Consequent to the merger, the Licences of the above-mentioned companies were also merged and Tata Power was granted a Licence by the Government of Maharashtra (GoM) for the supply of energy to the public in its Mumbai Licence Area and to supply energy in bulk to Distribution Licensees, vide resolution No: IEA –2001/ CR-10509/NRG-1, dated 12th July, 2001.
2. The above-mentioned Licences were valid till 15th August, 2014. Thereafter, an application was made by the Transmission Business of Tata Power (Tata Power-T) for grant of Transmission Licence in Case No. 112 of 2014. The Hon’ble Commission on 14th August, 2014 granted Transmission Licence to Tata Power for the Transmission Lines and the Receiving Stations (or Transmission Receiving Stations) located in and outside the Mumbai area, owned by Tata Power or proposed to be constructed and owned by Tata Power in future and forming part of the Intra-State Transmission System of Maharashtra for a period of 25 years effective from 16th August, 2014.
3. The Hon’ble Commission, had amended the Transmission Licence No. 1 of 2014 (First Amendment) of Tata Power-T by their Order in Case No. 137 of 2016 dated 1st August, 2018.

1.2. Operations of Tata Power Transmission

4. The Transmission Business of Tata Power (Tata Power-T) is one of the Transmission Licensees of Maharashtra and has completed over 100 years of operations in Mumbai. During these years of operation, Tata Power-T has continually ensured that a reliable,

technologically advanced and best-in-class transmission network is available for the consumers in and around Mumbai.

5. Further, Tata Power-T has been a partner of the State Transmission Utility (STU) to ensure expeditious completion of projects to maintain grid stability, reliability and capacity enhancement of the transmission network, overcoming the severe right of way issues, legal issues, expediting the statutory approvals, working out the best fit solutions to overcome topographical issues of hill & forest crossing, CRZ restrictions, Railway crossings, Flight path restrictions etc.
6. A Transmission network forms the vital link between the Generating stations and load centres for distribution of electricity to the consumers. A Transmission Business unit comprises of Receiving Stations and Transmission Lines. The Receiving Stations of Tata Power-T are located in and around Mumbai. Transmission Lines at various high voltages including EHV underground cables / lines are spread in and around Mumbai and are connected to Thermal as well as Hydro-electric power plants of Tata Power in Maharashtra. The Receiving stations and Transmission Line network including EHV cables are operated and maintained by skilled & trained engineers and staff of Tata Power-T.
7. The Transmission system for Mumbai licence area is provided with "Islanding" facility which ensures isolation of Mumbai grid in case of grid failure outside Mumbai thereby ensuring uninterrupted power supply to Mumbai consumers.
8. Latest technology is deployed for protection of key elements of transmission network such as Lines, switchgear and transformers etc. The Transmission line network of Tata Power-T is around 1200 circuit km and comprises of 110 kV and 220 kV overhead lines and Underground cables with N-1 support. There are 22 Transmission Receiving Stations installed, with a combined Transformation capacity of 9802.5 MVA.
9. Keeping safety of people at utmost priority, Tata Power-T has always kept pace with technology change and load growth. The enhancement of capacity of transmission lines &

transformers, addition of switchgear, introduction of updated operating IT systems, replacement of long standing assets before their failure are well planned & engineered in advance. The same is implemented to ensure highest level of safety in operation and reliability of the transmission network.

10. In addition to local & manual operations of transmission lines and equipment, Tata Power has installed "Supervisory Control and Data Acquisition System" (SCADA) across the transmission network which is operated by Power System Control Centre (PSCC) for real time remote monitoring and control of its all receiving stations. This facilitates faster operations and reduction in the downtime to Transmission System Users (TSUs) in case of power shutdowns through remote operations.
11. Tata Power-T is committed to Safety, Social Responsibility and Environment Sustenance. Various initiatives on these fronts are being successfully organised and implemented every year at various operating locations in Mumbai.
12. Tata Power-T strives to manage disruptive incidents with utmost care and maximum speed with focus on saving human life followed by environmental damage and then addressing the economic loss. A Disaster Management Plan and Disaster Management Team is in place for handling emergencies during disaster such as earthquake, flooding, fire, catastrophic failure of major equipment, riots and terrorist attack.
13. The broad synopsis of the extent and spread of the transmission system of Tata Power-T for the past few years is as follows:

Table 1: Tata Power-T Network Details

Parameters	Unit	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Total length of 220 kV line	Ckt. Kms.	401	411	416	416	417
Total no. of 220 kV bays	Nos.	82	88	88	88	88
Total length of 110 kV line	Ckt. Kms.	773	788	769	769	783
Total no. of 110 kV bays	Nos.	278	282	274	280	290
220 / 110 kV EHV substation	Nos.	21	21	21	21	22

14. Transmission Line Availability - Tata Power-T has been achieving Grid Availability equal to or more than 99.45 % consistently over the years. Higher Grid Availability results in higher level of reliability of power supply to TSUs and consequently to the end consumers in Mumbai Licence Area. The Grid Availability at Tata Power-T is achieved through co-ordination with TSUs for planned outages, effective preventive maintenance of lines and equipment to avoid forced outages and repeat outages.

Table 2: Transmission Grid Availability of Tata Power-T Network

Financial Year	Tata Power-T Grid Availability in %
FY 2014-15	99.65%
FY 2015-16	99.45%
FY 2016-17	99.63%
FY 2017-18	99.48%
FY 2018-19	99.50%

1.3. Filings under submitted MYT Petition

15. Tata Power-T, in the MYT submitted petition, has presented the following for different years as given below:
- Truing up of FY 2017-18 as per MERC (MYT) Regulations, 2015
 - Truing up of FY 2018-19 as per MERC (MYT) Regulations, 2015
 - Provisional Truing Up for FY 2019-20 as per MERC (MYT) Regulations, 2015
 - Gap / (Surplus) at the end of FY 2019-20
 - ARR Projections for FY 2020-21 to FY 2024-25 as per MERC (MYT) Regulations, 2019
 - Status of Compliance to Directives

1.4. Truing up of FY 2017-18

16. The break-up of expenditure for FY 2017-18 for Tata Power-T along with the adjustments on account of sharing of gains and losses is as follows:

Table 3: Net Annual Transmission Charges and Gap for FY 2017-18

Rs. Crores

Sr. No.	Particulars	Approved Figures of FY 2017-18	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Uncontrollable Factors	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	Revenue					
	-Transmission Charges		661.68			661.68
	- Less Cash Discount					2.89
	- Add Non Tariff Income	18.11	14.58			14.58
II	Total Revenue		676.26			673.37
II	Expenditure					
1	Operation & Maintenance Expenses	185.63	188.59	25.14	0.00	163.45
2	Depreciation	137.55	131.08			131.08
3	Int. on Long-term Loan Capital	92.63	92.59			92.59
4	Interest on Working Capital	13.22	13.22	1.13		12.09
5	Refinancing and Other Finance Charges	0.00	2.22			2.22
6	Incentive	0.00	2.97			2.97
7	Contingency Reserve	7.87	7.87			7.87
8	Income Tax	21.23	55.36			55.36
9	Return on Equity	163.93	164.85			164.85
II	Total Expenditure	622.05	658.74			632.47
III	Pure Gap / (Surplus) for FY 2017-18 (I - II)					-40.90

18. As can be seen from the Table above, the Surplus for FY 2017-18 stands at **Rs. 40.90 Crores** which is computed as the difference between the Revenue earned during FY 2017-18 and the expenditure of FY 2017-18 alone.

1.5. Truing up of FY 2018-19

19. During FY 2018-19, In line with the directive of the Hon'ble Commission and the STU recommendation, Tata Power-T has recorded auxiliary consumption for the month of June, 2018 to March, 2019 for all its Receiving Stations which are located in Mumbai Licence Area where the auxiliary consumption of these receiving stations has been fed by Tata Power-D. The auxiliary consumption measured for this period for all such Receiving Stations taken together is **0.79 MUs**.

20. Accordingly, Tata Power-T has requested the Hon'ble Commission to consider **Rs. 10.52 Crores** and include the expenditure towards auxiliary consumption of its Receiving Stations while approving the O&M expenditure for FY 2018-19 and appropriately during subsequent financial years.
21. Further, the break-up of expenditure for FY 2018-19 for Tata Power-T along with the adjustments on account of sharing of gains and losses is as follows:

Table 4: Net Annual Transmission Charges and Gap for FY 2018-19

Rs. Crores

Sr. No.	Particulars	Approved Figures of FY 2018-19	Entitlement as per the Regulations	Efficiency Gains / (Loss) from Controllable factors shared with Consumers	Uncontrollable Factors	Net Entitlement after Impact of Gains / (Loss) from Controllable factors
I	Revenue					
	-Transmission Charges					604.80
	- Less Cash Discount					1.45
	- Non Tariff Income	16.83				12.27
II	Total Revenue					615.62
II	Expenditure					
1	Operation & Maint. Expenses	179.18	205.20	-2.33	0.00	218.04
2	Depreciation	117.59	138.27			138.27
3	Int. on Long-term Loan Capital	103.08	91.85			91.85
4	Interest on Working Capital	12.41	12.48	-0.72		13.20
5	Other Finance Charges	0.00	0.06			0.06
6	Incentive	0.00	3.37			3.37
7	Contingency Reserve	7.43	8.37			8.37
8	Income Tax	66.74	33.24			33.24
9	Return on Equity	155.38	177.28			177.28
II	Total Expenditure	641.82	670.13			683.69
	Past recoveries					
III	Pure Gap / (Surplus) for FY 2018-19 (I - II)					68.07

22. As can be seen from the above Table, there is a Gap of **Rs. 68.07 Crores** for FY 2018-19 which is computed as the difference between the Revenue earned during FY 2018-19 and the expenditure of FY 2018-19 alone.

1.6. Provisional Truing up of FY 2019-20

23. In addition, to the ARR of FY 2019-20, Tata Power-T have made a detailed submission with respect to transfer of certain assets from the Generation Business of Tata Power to the Transmission Business of Tata Power and the consequent financial impact to be considered during FY 2019-20.

24. The ARR for FY 2019-20 has been arrived at considering the revised opening GFA, Equity and Loan on account of transfer of assets and the same is presented below. Addition / Retirement of assets in FY 2019-20 have been considered as part of the asset addition of Tata Power-T. Further, the impact on the O&M expenditure on account of addition of assets has also been considered. The addition in Tata Power-T ARR will get deducted from the ARR of Tata Power-G and Tata Power-D respectively.

25. The provisional Gap / (Surplus) for FY 2019-20 is worked out as given below:

Table 5: Net Annual Transmission Charges and Gap for FY 2019-20

		<i>Rs. Crores</i>
Sr. No.	Particulars	Net Entitlement
I	Revenue	715.42
	-Transmission Charges	703.15
	- Non Tariff Income	12.27
II	Total Revenue	715.42
II	Expenditure	
1	Operation & Maintenance Expenses	256.09
2	Depreciation	160.11
3	Interest on Long-term Loan Capital	110.43
4	Interest on Working Capital	14.27
5	Other Finance Charges	0.00
7	Contingency Reserve	9.39
8	Income Tax	33.24
9	Return on Equity	203.09
II	Total Expenditure	786.63
III	Pure Gap / (Surplus) for FY 2019-20 (I - II)	71.21

26. As can be seen from the Table above, there is a Gap of **Rs. 71.21 Crores**, computed as the difference between the Revenue projected for FY 2019-20 and the expenditure of FY 2019-20 alone.

1.7. ARR including the Past Recoveries

27. Based on the above approved Surplus, past recoveries of previous period (impact of brand equity considered for FY 2016-17 and FY 2017-18), actual Gap / (Surplus) of FY 2017-18 and FY 2018-19 and revised ARR of FY 2019-20, the total amount of past recoveries for future Tariff is presented below:

Table 6: Impact of Brand Equity of FY 2015-16 and FY 2016-17

			<i>Rs. Crores</i>	
Sr. No.	Particulars		FY 2015-16	FY 2016-17
1	Normative O & M Expenses	a	197.23	176.05
2	Employee Expenses	b	82.65	88.43
3	A&G Expenses (After adjustment of Brand Equity Computation)	c	52.38	59.43
4	R&M Expenses	d	23.59	19.67
5	Less: Centenary Celebration	e	-0.75	-0.11
6	Actual Operation & Maintenance Expenses (Net of capitalisation)	f=b+c+d+e	157.87	167.41
7	Gain /(loss) retained by Tata Power-T	g=(a-f)*2/3	26.24	2.88
8	Net Entitlement	h=f+g	184.11	170.29
9	Net O&M Entitlement allowed in MTR Order	i	183.51	169.19
10	Incremental Gap	j=h-i	0.60	1.10

28. The Interest computation is represented in the Table below:

Table 7: Interest Computation for Gap Recovery in FY 2019-20

Particulars		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Holding Cost Rate	A	14.75%	10.79%	10.18%	9.89%	9.80%
Opening Balance	B	-	93.66	94.76	50.89	0.49
Addition during the year	C	93.66	1.10	(40.90)	(47.03)	71.21
Less Incentive	D			2.97	3.37	
Closing Balance	E=(B+C-D)	93.66	94.76	50.89	0.49	71.69
Holding Cost on Opening	F=(A*B)	-	10.11	9.65	5.03	0.05
Holding Cost on Addition	G=(A*C/2)	6.91	0.06	(2.08)	(2.33)	
Holding Cost	H=(E+F)	6.91	10.16	7.56	2.71	0.05
Total Holding Cost #	I					27.39

Summation of Holding Cost from FY 2017-18 to FY 2019-20

Table 8: Past Recovery Computation for Gap Recovery in FY 2019-20

							<i>Rs. Crores</i>
Particulars		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Balance	A	-	93.66	94.76	53.86	6.83	78.04
Gap/(Surplus) Addition during the year	B	93.66	1.10	(40.90)	68.07	71.21	-
Revenue Gap/(Surplus) approved in MTR Order 204 of 2017	C	-	-	-	(115.10)	-	-
Interest on past recovery	D						27.39
Closing Balance	E=(A+B-C+D)	93.66	94.76	53.86	6.83	78.04	105.43
Total of past recoveries in FY 2020-21	F=(D+E)						105.43

29. The MYT Regulations, 2019 under section 57.10 provides for the recovery of the Aggregate Revenue Requirement of the Transmission Licensee for the respective Year of the Control Period, as approved by the Commission and comprising the ARR components:

1.8. Aggregate Revenue Requirement from FY 2020-21 to FY 2024-25

30. Based on the projections on the various elements given in the submitted petition, the Aggregate Revenue Requirement of Tata Power-T for FY 2020-21 to FY 2024-25 is as given below:

Table 9: Annual Transmission Charges for FY 2020-21 to FY 2024-25

Particulars	<i>Rs. Crores</i>				
	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
	Proposed	Proposed	Proposed	Proposed	Proposed
O&M Expenditure	262.71	274.93	293.59	308.41	322.45
Interest on Long-term Loan	129.71	143.03	153.75	161.43	164.82
Interest on Working Capital	16.89	18.39	19.96	21.37	22.62
Depreciation	182.28	201.74	220.58	238.48	254.54
Return on Equity	263.59	290.03	315.63	339.94	361.76
Contribution to Contingency Reserves	10.95	12.21	13.43	14.61	15.70
Annual Transmission Charges	866.13	940.33	1016.94	1084.23	1141.90
Less: Non Tariff Income	12.27	12.27	12.27	12.27	12.27
Total Transmission Charges	853.86	928.06	1004.66	1071.96	1129.62

31. Further, considering the Gap / (Surplus) of the previous years as computed in the previous section, the Annual Transmission Charges for FY 2020-21 to FY 2024-25 are as presented in the Table below:

Table 10: Net Annual Transmission Charges for FY 2020-21 to FY 2024-25 considering Gap / (Surplus) of previous years

		<i>Rs. Crores</i>				
Sr.No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
1	Past Recovery upto FY 2019-20	105.43	-	-	-	-
2	Stand-alone ARR	853.86	928.06	1004.66	1071.96	1129.62
3	Total ARR	959.29	928.06	1004.66	1071.96	1129.62

1.9. Prayers to the Hon'ble Commission

In view of the above, the Petitioner respectfully prays that the Hon'ble Commission may:

- Accept the Truing-up for FY 2017-18, FY 2018-19 and Provisional Truing-up of FY 2019-20 and past Gap / (Surplus) as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2015 and its First Amendment dated 29th November, 2017;
- Accept the Projections of Aggregate Revenue Requirement for the period FY 2020-21 as worked out in this Petition in accordance with the guidelines & principles outlined in MYT Regulations, 2019;
- Allow the transfer of certain assets pertaining to Transmission from the Generation Business of Tata Power to the Transmission Business of Tata Power and from the Distribution Business of Tata Power to the Transmission Business of Tata Power;
- To direct MSETCL (STU) to reimburse **Rs. 135.55 Crores** along with carrying cost as applicable towards pre-development expenditure in "400 kV Receiving Station at Vikhroli";



- Condone any inadvertent omissions / errors / rounding off differences / shortcomings and permit Tata Power- T to add / change / modify / alter this filing and make further submissions as may be required at a future date;
- Pass such further and other orders, as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case.

-Sd-

(Peyush Tandon)

Head -Regulatory, MO

The Tata Power Company Limited