Before the
MAHARASHTRA ELECTRICITY REGULATORY COMMISSION
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CASE No. 47 of 2016

In the matter of

Petition of The Tata Power Company Ltd. (Distribution) for approval of True-up of FY 2014-15, provisional Truing-up for FY 2015-16, and Aggregate Revenue Requirement and Tariff for FY 2016-17 to FY 2019-20

Coram

Shri. Azeez M. Khan, Member
Shri. Deepak Lad, Member

Date: 21 October, 2016

ORDER

In accordance with Regulation 5 of the Maharashtra Electricity Regulatory Commission (Multi Year Tariff) Regulations ('MYT Regulations'), 2015, M/s Tata Power Company Limited (Distribution Business) (TPC-D), Homi Modi Street, Fort, Mumbai, has filed its Petition for approval of truing-up of FY 2014-15, provisional truing-up of 2015-16, and Aggregate Revenue Requirement (ARR) and Tariff for the MYT Control Period from FY 2016-17 to FY 2019-20. The original Petition was filed on 1 March, 2016, and TPC-D submitted the revised Petition on 24 April, 2016.

In exercise of its powers under Sections 62 (read with Section 61) and 86 of the Electricity Act (EA), 2003 and all other powers enabling it in this behalf, and after taking into consideration the submissions made by TPC-D, the public and stake-holders and all other relevant material, the Commission issues the following Order.

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List of Abbreviations

AAD	Advance Against Depreciation
A&G	Administrative and General
ABR	Average Billing Rate
AC	Alternating Current
ACOS	Average Cost of Supply
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal for Electricity
BARC	Bhabha Atomic Research Centre
BEST	Brihanmumbai Electric Supply & Transport Undertaking
BHEL	Bharat Heavy Electricals Limited
BPL	Below Poverty Line
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CBA	Cost Benefit Analysis
COD	Date of Commissioning
CPD	Coincident Peak Demand
CPI	Consumer Price Index
CPP	Captive Power Plant
CSD	Consumer Security Deposit
CSR	Corporate Social Responsibility
CSS	Cross-subsidy Surcharge
DPC	Delayed Payment Charge
DPR	Detailed Project Report
DSM	Demand Side Management
DSS	Distribution Sub-station
EA, 2003	Electricity Act, 2003
FAC	Fuel Adjustment Charge
FBSM	Final Balancing and Settlement Mechanism
FBT	Fringe Benefit Tax
FY	Financial Year
GoM	Government of Maharashtra
GFA	Gross Fixed Assets
G, T & D	Generation, Transmission and Distribution
HO & SS	Head Office and Support Services
HP	Horse Power

HT	High Tension
IoWC	Interest on Working Capital
InSTS	Intra-State Transmission System
LMC	Load Management Charges
LT	Low Tension
kVA	kilo Volt Ampere
kW	kilo Watt
kWh	kilo Watt hour
LCC	Load Control Centre
LSHS	Low Sulphur Heavy Stock
MAT	Minimum Alternate Tax
MCGM	Municipal Corporation of Greater Mumbai
MERC/Commission	Maharashtra Electricity Regulatory Commission
MERC (SoP) Regulations, 2014	MERC (Standards of Performance of Distribution Licensees Period for Giving Supply and Determination of Compensation) Regulations, 2014
Tariff Regulations	MERC (Terms and Conditions of Tariff) Regulations, 2005
MIAL	Mumbai International Airport Ltd.
MMC Act	Mumbai Municipal Corporation Act
MOD	Merit Order Despatch
MSEDCL	Maharashtra State Electricity Distribution Company Ltd.
MSLDC/ SLDC	Maharashtra State Load Despatch Centre
MTDC	Maharashtra Tourism Development Corporation
MTR	Mid-Term Review
MU	Million Units
MVA	MegaVolt Ampere
MW	Mega Watt
MYT Regulations, 2011	MERC (Multi Year Tariff) Regulations, 2011
MYT Regulations, 2015	MERC (Multi Year Tariff) Regulations, 2015
NCPD	Non-coincident Peak Demand
NTI	Non-Tariff Income
OA	Open Access
O&M	Operation and Maintenance
OLA	Outside Licence Area
PBT	Profit Before Tax
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
RE	Renewable Energy
REC	Renewable Energy Certificate
RInfra	Reliance Infrastructure Limited

RInfra-D	Reliance Infrastructure Limited- Distribution Business
RLNG	Re-gasified Liquefied Natural Gas
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RPO Regulations, 2010	MERC (Renewable Purchase Obligation, its Compliance and implementation of REC framework) Regulations, 2010
RPO Regulations, 2016	MERC (Renewable Purchase Obligation, its Compliance and implementation of REC framework) Regulations, 2016
RPS	Renewable Purchase Specification
SAIDI	System Average Interruption Duration Index
SBAR	State Bank of India Advance Rate
SBI	State Bank of India
SBI PLR	State Bank of India Prime Lending Rate
SLDC	State Load Despatch Centre
TL	Transmission Loss
TOD	Time of Day
ToSE	Tax on Sale of Electricity
TPC	The Tata Power Company Limited
TPC-D	The Tata Power Company-Distribution Business
TPC-G	The Tata Power Company-Generation Business
TPC-T	The Tata Power Company-Transmission Business
TVS	Technical Validation Session
UI	Unscheduled Interchange
USO	Universal Service Obligation
VCOS	Voltage wise Cost of Supply
WPI	Wholesale Price Index
WL	Wheeling Loss

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1 BACKGROUND AND BRIEF HISTORY

1.1 BACKGROUND

TPC is an integrated Utility engaged in Generation, Transmission and Distribution of electricity. TPC-D has been granted a Distribution Licence by the Commission for the distribution and supply of electricity in and around Mumbai for 25 years from 15 August, 2014. On the basis of this Licence, which is valid up to 14 August, 2039, TPC-D is entitled to distribute and supply electricity to the public for all purposes in accordance with the provisions of the EA, 2003.

1.2 MYT REGULATIONS, 2015

The Commission notified the MYT Regulations, 2015 on 8 December, 2015, applicable for the 3rd Control Period from FY 2016-17 to FY 2019-20. In accordance with Regulation 5.1 (a), the Generating Companies and Licensees were required to file their MYT Petitions by January 15, 2016. Considering requests to extend the time in view of difficulties in collecting data and preparation of the Petitions, vide Order dated 15 January, 2016, the Commission granted extension of time to TPC-D till 15 February, 2016 for filing its MYT Petition.

1.3 MYT ORDER FOR FY 2012-13 TO FY 2015-16

On TPC-D's MYT Petition in Case No. 179 of 2011, the Commission issued its Order ('previous MYT Order') on 28 June, 2013 approving the ARR for FY 2012-13 to FY 2015-16 and retail tariffs and Wheeling Charges for the period FY 2013-14 to FY 2015-16. The Order also stated that the Commission would undertake the mid-term review (MTR) of TPC-D's performance during the 3rd quarter of FY 2014-15, and directed TPC-D to submit its Petition by 30 November, 2014.

1.4 MID TERM REVIEW ORDER

In its Order dated 26 June, 2015 in Case No. 18 of 2015 ('MTR Order'), the Commission approved the true-up for FY 2012-13 and FY 2013-14, provisional true-up for FY 2014-15, and revised ARR and Tariff for FY 2015-16.

1.5 REVIEW PETITION ON MTR ORDER

TPC-D filed a Review Petition on the MTR Order, in Case No. 110 of 2015, on which the Commission issued its Order on 5 November, 2015.

1.6 MYT PETITION FOR 3RD CONTROL PERIOD, ADMISSION OF PETITION AND PUBLIC CONSULTATION PROCESS

TPC-D filed its Petition for approval of truing-up of FY 2014-15, provisional truing-up of FY 2015-16 and ARR and tariff for FY 2016-17 to FY 2019-20 on 1 March, 2016.

The Commission directed TPC-D to address the data gaps raised before the first Technical Validation Session (TVS) held on 21 March, 2016, and to which the authorised Institutional Consumer Representatives were invited. The list of persons who attended the TVS is at Appendix-1.

During the TVS, the Commission directed TPC-D to provide additional information and clarifications on the issues raised, and to submit a revised Petition after incorporating all the necessary data and changes. TPC-D submitted its replies to the data gaps and filed its revised Petition on 24 April, 2016, with the following prayers:

1. *"Accept the Truing-up for FY 2014-15, Provisional Truing-up of FY 2015-16 and past (Gap)/ Surplus as worked out in this Petition.*

2. *Accept the Projections for FY 2016-17 to FY 2019-20 and Tariff for FY 2016-17 to FY 2019-20 as worked out in this Petition.*

3. *Approve the methodology for the apportionment of Retail Supply Business cost and Distribution Wires Business cost separately to determine Cross-subsidy Structure and ABRs as proposed in the Petition.*

4. *Approve Wheeling Charge and Cross-subsidy Surcharge as proposed in the Petition for the period FY 2016-17 to FY 2019-20.*

5. *Approve Additional Surcharge as proposed in the Petition for the period FY 2016-17 to FY2019-20.*

6. *Evoke its power under Regulation 102 of MERC (MYT) Regulations, 2015 in order to allow for deviations from the MYT Regulations, 2015 wherever sought in this Petition.*

7. *Condone any inadvertent omissions/ errors / rounding off differences / shortcomings and permit Tata Power- D to add / change / modify / alter this filing and make further submissions as may be required at a future date.*

8. *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."*

The Commission admitted the revised Petition on 26 April, 2016. In accordance with Section 64 of the EA, 2003, the Commission directed TPC-D to publish its Petition in the prescribed abridged form and manner to ensure adequate public participation, and to reply expeditiously to the suggestions and objections received. TPC-D issued a Public Notice inviting suggestions and objections from the public. The Public Notice was published in the daily newspapers Hindustan Times, The Indian Express and The Financial Express (English), and Saamna and Loksatta (Marathi) on 29 April, 2016. The copies of the Petition and its summary were made available for inspection/purchase at TPC-D's offices and on its website (ww.tatapower.com). The Public Notice and Executive Summary of the Petition were also made available on the websites of the Commission (www.merc.gov.in/www.mercindia.org.in) in downloadable format. The Public Notice specified that the suggestions and objections, in English or Marathi, be filed with proof of service on TPC-D.

The Commission received written suggestions and objections and oral submissions on various issues. The Public Hearing was held on 24 May, 2016 at 11.00 hrs at 1st Floor, Centrum Hall, Centre No. 1, World Trade Centre, Cuffe Parade, Colaba, Mumbai. The list of persons who attended the Public Hearing is at **Appendix-2.**

The Commission has ensured that the due process contemplated under law to ensure transparency and public participation was followed at every stage and adequate opportunity was given to all concerned to file their say.

The suggestions and objections made in writing as well as during the Public Hearing, along with TPC-D's responses and the Commission's rulings have been summarised in Section 2 of this Order.

1.7 ORGANISATION OF THE ORDER

This Order is organised in the following six Sections:

- **Section 1** provides a brief history of the regulatory process undertaken by the Commission. A list of abbreviations with their expanded forms has been included.

- **Section 2** lists the suggestions and objections received in writing as well as during the Public Hearing. These have been summarized issue-wise, followed by the response of TPC-D and the rulings of the Commission.

- **Section 3** details the Truing-up of FY 2014-15.

- **Section 4** details the provisional Truing-up of FY 2015-16.

- **Section 5** details the ARR for FY 2016-17 to FY 2019-20 and Cumulative Revenue Gap up to FY 2016-17.

- **Section 6** details the Tariff Philosophy adopted by the Commission and the category-wise tariffs approved for each year of the Control Period.

2 SUGGESTIONS/OBJECTIONS, TPC-D'S RESPONSES AND COMMISSION'S RULINGS

2.1 POWER PURCHASE COST

Shri Kamlakar Shenoy and Shri Guruprasad Shetty, on behalf of the Indian Hotel & Restaurant Association (AHAR) stated that TPC-D is purchasing power from its sister unit within the same Company, i.e., TPC (Generation) (TPC-G) at an inflated cost when power is available at 50% of this cost in the market. The Electricity Department of Goa is buying power at an average cost of Rs 3.15 per kWh, and hence TPC-D can also buy at a lower purchase. This act of TPC-D is not in accordance with Sections 61 and 63 of the EA, 2003, i.e., collecting reasonable cost of electricity, encouraging efficiency and economic use of resources.

They stated that TPC-D is buying electricity at much higher price than Distribution Licensees in other States like Goa, Madhya Pradesh, Gujarat, and Karnataka, who have entered into long-term agreements to buy electricity at around Rs. 2 per unit. However, TPC-D is purchasing power at an exorbitant price of Rs 4.15 per unit from TPC-G when TPC-G is itself selling power at Rs 2 per unit under competitive bidding. Since TPC-D and TPC-G are separate entities, the Commission should not permit such purchase of power at a higher price when it is available at a reasonable rate.

Shri Guruprasad Shetty and Shri Kamlakar Shenoy also stated that the prices of generation inputs such as coal, oil, gas, etc., have been declining in the last 5 years, and have reduced by 75%. In the spot market, electricity is available at Rs 2 per kWh and more than 80,000 MW of capacity has been added in the past 5 years. Therefore, if TPC-D undertakes competitive bidding for long-term Power Purchase Agreements (PPAs), it could source thermal power at Rs. 1.80 per kWh and Solar power at Rs 5.50 per kWh.

They stated further that TPC has inflated the cost of raw materials. As on 10 April, 2016, Low Sulphur Heavy Stock (LSHS) was available in Mumbai from Bharat Petroleum Corporation Ltd. (BPCL) at Rs 15678/MT, while TPC-G's purchase price was Rs 47211/MT. Coal India Ltd. (CIL) was selling thermal grade coke at Rs 1600/MT while TPC-G's purchasing price was Rs 4747/Tonne. Gas Authority of India Ltd. (GAIL)'s price was $2.28 per MMBTU, which works out to Rs 6669/MT, whereas TPC-G's projected cost is 300% more than the actual market cost.

They also stated that TPC-D does not have a PPA with TPC-G. Even if it does, it is unfair and not in the interest of consumers, and violates Section 60 and the 2nd proviso of Section 51 of the EA, 2003, being in the nature of a combine and thereby violating the provisions of the Competition Act.

Prayas Energy Group (‘Prayas’), an authorised Consumer Representative, stated that a Generator’s right to sell its power anywhere and to anyone has been established by the Supreme Court. However, TPC-G sells all its power to Mumbai Distribution Licensees under long-term PPAs under Section 62 of the EA, 2003. More than half the total power purchase of TPC-D is contracted at Rs. 4.30 per unit in FY 2015-16, and is expected to be in the same range during the 3rd Control Period. Even though the PPA with TPC-G is expiring in FY 2017-18, on the pretext of transmission constraints TPC-D has justified extending its PPA beyond FY 2017-18. This shows that TPC as a whole is focussed more on sale of its own power rather than procurement of least-cost power for the Distribution business. Shri A.V. Shenoy, representing Urja Prabodhan Kendra, also stated that TPC, being primarily a Generator, appears to be disinterested in the Distribution Business. If that is the case, then the Brihanmumbai Electric Supply and Transport Undertaking (BEST) or anyone else should take over the Distribution Business of TPC-D.

TPC-D’s Response

The procurement of power is permissible either at the tariff determined under Section 62 or adopted under Section 63 of the EA, 2003. Long-term power purchase from TPC-G has been approved by the Commission after detailed scrutiny under Section 62. Besides, TPC-D is cost-competitive in terms of power purchase cost when compared with other States. This is demonstrated by the comparison it has submitted of levelised tariffs discovered in the Case-1 competitive bids from 2012 onwards for long-term procurement by various Distribution Licensees in India.

TPC-D carries out detailed power procurement planning considering factors such as volatility of sales, availability of low-cost short-term power in the market and availability of long-term sources to decide on the portfolio of short-term, medium-term and long-term power procurement. In recent years, TPC-D has experienced unprecedented volatility in sales caused by tariff-driven migration of consumers between the parallel Licensees through the market-driven mechanism of Open Access (OA), Group Captive consumption, the emergence of a deemed Distribution Licensee, etc.

The movements in sales are due to reasons such as change-over of consumers, which enabled a significant increase in TPC-D’s sales to the extent of around 3100 MU between

FY 2010-11 and FY 2012-13. However, lower tariffs of RInfra-D in its MYT Order dated 28 June, 2013 caused a mass exodus of around 1100 MU of change-over sales back to RInfra-D and the MTR Order dated 26 June, 2015 drastically reduced the Wheeling Charges thereby triggering migration of consumers to OA. In this volatile scenario, TPC-D exercised prudence and relied more on short-term power procurement instead of long-term tie-ups to cater to the additional fluctuating demand. This was done to protect consumers from any undue burden of fixed costs of long-term power tie-ups.

There has been a significant reduction in short-term power prices in the market. The prices, which were around Rs 4.68 per kWh in FY 2011-12, fell to Rs 2.85 per kWh in FY 2013-14 and have maintained steady trend of around Rs 3.13 to Rs 3.20 per kWh till FY 2015-16. Accordingly, TPC-D enhanced its short-term power procurement from 5% in FY 2011-12 to 31% in FY 2014-15 to reduce its power procurement cost, thereby benefiting consumers by lower tariffs. In the 3rd Control Period, it has proposed to convert a major portion of its short-term bilateral tie-ups into medium-term arrangements. This will avoid the risk of dependence on short-term power purchase in case the market prices of short-term power increase.

TPC-D has available installed capacity of 902 MW firm power and 235 MW Renewable Energy (RE) power for supplying to its consumers, and its Supply Availability is always more than 100%. However, the short-term power was required during outages of long-term tied up capacities. TPC-G's 250 MW Unit 8 was shut down under Force Majeure condition from 9 January, 2014 to 21 November, 2014. Due to its high variable cost of generation, Unit 6 has been kept under economic shutdown from 13 July, 2013. Due to the unavailability of long-term tied-up power sources, TPC-D had met its demand during the period through short-term sources to the extent of 21% to 31%. This had enabled it to maintain the power procurement cost lower, benefiting consumers through lower tariff.

TPC-D's prudence in power purchase planning is further substantiated by the fact that, during FY 2012-13, in anticipation of load growth, it had floated a Case I competitive bid for medium-term power. The power was proposed to be purchased from FY 2012-13 to FY 2014-15. However, the lowest bid received was Rs. 4.50 per kWh. The price discovered was very high in comparison with the prices of bilateral power available in the market. Hence, it did not proceed with medium-term bidding tie-up. Similarly, due to volatility of sales because of migration of consumers on OA /Group Captive post the MTR Order, the PPA with Ideal Energy Projects Ltd (IEPL) has been kept in abeyance till greater clarity on sales. A price of Rs. 4.15/kWh (ex-bus) was recently discovered through Case I bidding by Kerala State Electricity Board Ltd.(KSEBL) for first year tariff, i.e., for FY 2015-16. The landed price to TPC-D at this rate would be Rs. 4.84/kWh. In comparison, the weighted average cost of TPC-G in FY 2015-16 was Rs. 4.29/kWh. Hence, the long-term tie-up with TPC-G is competitive.

TPC-D has always evaluated the various parameters impacting power procurement planning and taken a conscious call on the proportion of long-term/medium-term/short-term power required to provide maximum benefit to consumers, as explained above. As maximum volatility in sales was seen in FY 2014-15, it had to plan for a large quantum of short-term purchase. Therefore, TPC-D has purchased power prudently, which has reduced the overall power purchase cost for its consumers.

The PPA with TPC-G is valid till the end of FY 2017-18, i.e., up to 31 March, 2018.

The price of oil includes the price of the stock/inventory of oil, which was purchased at the rates prevailing at that time. It has been confirmed with BPCL that the current price of LSHS with low sulphur content of 0.5-0.65% is Rs 21639/MT, which is higher than the projected oil prices considered for the 3rd Control Period, i.e., Rs 20998/MT.

The price of Rs. 1600/MT cited by the Objectors pertains to domestic coal supplied by CIL. TPC-G's Trombay Generating Station, due to its location in Mumbai city, is constrained by stringent environmental and pollution control norms, and hence uses only imported coal. Thus, the prices projected for power purchase are based on imported coal prices.

The power purchase cost with gas as fuel is based on the pricing guidelines of the Ministry of Petroleum & Natural Gas (MoPNG). The landed price of gas in India includes the cost of liquefaction at the loading port, sea transportation, regasification, pipeline charges, and taxes and duties applicable in India, which have to be considered while projecting the prices.

The operating conditions are quite different in other States and a direct comparison of power purchase cost may be difficult. Mumbai consumers have 24x7 reliable power supply whereas several States are facing load shedding. Further, the overall power purchase cost is a combination of power purchases from different sources, and the combined cost of power purchase has to be seen and not procurement from a single Generator alone. Even TPC-D is purchasing some quantum of power at around Rs 2 per unit. Besides, the following efforts have been undertaken to reduce power purchase cost, which is is reflected in the reducing trend of projected Average Cost of Supply (ACoS) during the 3rd Control Period:

- Purchase from Unit-6 has been stopped, which was a high-cost Unit.
- Long-term tie-up with Trombay Units having depreciated fixed cost.
- Tie-up with Hydro portfolio, providing low-cost peaking power.
- Lowest-cost bilateral tie-ups through reverse bidding mechanism.
- Prudent planning of short-term purchases at costs lower than the Power Exchange rates.
- Reduction of total power purchase cost by optimum utilisation of assets through tie-up with other Distribution Licensees.

Charges such as Cross-Subsidy Surcharge (CSS) and Additional Surcharge are proposed to be recovered from consumers availing power through OA, as such consumers should pay for the cost incurred in serving them and its burden should not be passed on to consumers who continue to receive supply from TPC-D. Further, Time of Day (ToD) charges are applied to bring down the overall power purchase cost and, consequently, the tariff to the consumer. If such restraint is exercised by consumers, the peak procurement at high cost will be reduced, thereby reducing the overall cost passed on to consumers.

TPC-D denies that it is causing wrongful loss to electricity consumers and wrongful gain to TPC-G, which is its sister concern. TPC-D has been following the due regulatory processes, and tariffs are determined after detailed scrutiny by the Commission. All long-term power purchase has been approved by the Commission and it follows all procedures for short-term power purchase. While arriving at the cost of supply, the Objector has failed to consider certain major costs like Stand-by Charges, past recoveries due from consumers, costs relating to wheeling and fixed costs towards supply of energy, etc..

At the Public Hearing, Shri Ashok Sethi, Executive Director of TPC, stated that it is a misconception that TPC is disinterested in the Distribution Business, and the best example of this is Tata Power Delhi Distribution Ltd. (TPDDL) in Delhi, which has done exceptionally well. TPC-D has distribution sector experience of over 100 years and is pro-consumer. It has also recently launched a mobile application for better service delivery.

Commission's Ruling

The Commission has approved the long-term PPA of TPC-D with TPC-G after due regulatory process, and it is valid till 31 March, 2018. Both TPC-G and TPC-D are regulated entities, and the tariff has been determined through separate Orders which have been considered for determining the power purchase cost of TPC-D from these sources.

However, although TPC-D and TPC-G are different Divisions of the same corporate entity, i.e., TPC, it is essential that they operate independently and ensure that their respective interests are protected. TPC-D, as a Distribution Licensee, has to ensure that it procures power from the cheapest sources, irrespective of whether it is TPC-G or any other Generator. Only then will TPC-D be able to ensure that its costs and, therefore, its tariffs are reasonable and competitive.

As regards the price of fuel, that is an issue to be addressed in TPC-G's cost of generation rather than TPC-D's Tariff Order. The variation in fuel prices on cost of electricity gets adjusted under the Fuel Adjustment Charge (FAC) mechanism.

The Commission has given certain directions to TPC-D in this Order for ensuring that power is purchased at competitive prices so that the benefit can be passed on to the consumers. While doing so, the Commission has kept in mind the nature and extent of the transmission constraints for bringing power into Mumbai, and the various capital expenditure schemes that are being implemented in order to mitigate these constraints.

The Commission has approved the levelised generic/preferential tariff for power purchase from different non-Solar and Solar RE sources through separate Orders under the applicable MERC (Terms and Conditions for Determination of Renewable Energy Tariff**)** Regulations (‘RE Tariff Regulations’). The levelised tariff approved for the respective years has been considered while approving the cost of purchase from Solar and non-Solar RE sources that have been commissioned in those years. The purchase of Renewable Energy Certificates (RECs) has been considered at the rates discovered in the Power Exchanges. The purchase of excess non-Solar RE, if any, has been considered in accordance with the established principles in this regard.

The detailed source-wise analysis of power purchase and the quantum and cost of power purchase approved by the Commission in the true-up for previous years and for the 3rd Control Period are detailed in the respective Sections of this Order.

2.2 FIXED/DEMAND CHARGES

Mumbai Metro Rail Corporation Limited (MMRCL) (Shri R. K. Sharma) stated that the Demand Charges proposed for FY 2017-18 to FY 2019-20 are very high. The proposed rate of Rs 300/kVA for FY 2017-18 is a 34% increase over existing rates and 140% higher than Delhi Metro Rail Corporation (DMRC)’s rates (Rs 125/kVA). Since the load requirement of MMRCL will increase substantially, the increase in Demand Charges will result in extra financial burden of Rs 40 crore per annum in FY 2019-20. Demand

Charges should be kept around Rs 150/kVA, as against the existing Rs 220/kVA and proposed Rs 540/kVA for FY 2019-20.

Shri Mahaveer Kumar Jain stated that the Demand Charges vary from consumer category to category, from Rs 50 to Rs 500, and there is no standard process for deciding them. The Commission should decide the Demand Charges in the same manner for all Utilities.

MP Ensystems Advisory Pvt. Ltd. stated that the Fixed Charges for the high-end Commercial and Industrial consumers are still low, at Rs. 300/kVA. TPC-D should propose Fixed Charges-based on the cost-to-serve, which would reflect the appropriate tariff structure.

Mumbai International Airport Limited (MIAL) stated that TPC-D has offered no justification for the proposed hike in Demand Charges from the existing Rs 220/kVA/month to Rs 300/kVA/month in FY 2016-17, Rs 380/kVA/month in FY 2017-18, Rs 460 /kVA/month in FY 2018-19 and Rs 540/kVA/month in FY 2019-20. Hence, it may not be allowed.

TPC-D's Response

TPC-D has made a detailed submission on determination of Fixed/Demand Charges, which is in line with the MTR Order where the Commission had directed it to increase the recovery of fixed costs:

> *"The Commission observes that the recovery of Fixed Cost through Fixed/Demand Charges is quite low. The approved Fixed Costs of TPC-D in FY 2015-16 account for 48% of its ARR, but the revenue from Fixed/Demand Charges enable it to recover only 29% of the Fixed Cost, which is quite low. The recovery of Fixed Costs through Fixed/Demand Charges needs to be increased gradually…"*

Accordingly, an increasing trajectory of recovery of fixed costs of the Supply Business has been proposed through Fixed/Demand Charges. As regards the category-wise Fixed/Demand Charges, the past Charges have been taken into account and the projections for each year of the Control Period have been made accordingly.

Commission's Ruling

The Commission's view and decisions on the increased Fixed/Demand Charges proposed by TPC-D have been elaborated in Section 6 of this Order. Typically, around 50% of the total ARR of the Distribution Licensee, including the Fixed cost of power purchase, is fixed in nature, i.e., it has to be incurred irrespective of whether any energy is sold to the consumer or not. Against this, the recovery of fixed costs through Fixed/Demand Charges is much lower, i.e., only a part of the Fixed costs of the Licensee are recovered through Fixed/Demand Charges, and the balance are recovered through Energy Charges, which are linked to the actual energy sold to consumers. The Distribution Licensee is entitled to some level of assurance regarding recovery of its fixed costs and, while the entire fixed costs may not be recovered through Fixed/Demand Charges, a reasonable proportion of fixed costs should be recovered through them.

The Fixed/Demand Charges for every category have been determined keeping in view the present levels, the Average Billing Rate (ABR), and the cross-subsidy ratio.

The Commission has rationalised the Fixed/Demand Charges keeping in view the share of fixed costs in the total ARR and the present recovery through Fixed/Demand Charges, as elaborated in Section 6 of this Order.

2.3 CAPITAL INVESTMENT

Reliance Infrastructure Ltd. (Distribution) (RInfra-D) stated that, as per the Appellate Tribunal for Electricity (ATE) Judgment dated 28 November, 2014in Appeal No. 246 of 2012, TPC-D was restricted from laying its network in the Licence area common with RInfra-D till the approval of its Network Roll-out Plan. However, in its Petition, TPC-D has presented its actual capital expenditure and capitalisation in FY 2014-15 and estimated capital expenditure and capitalisation in FY 2015-16 without any explanation for the continued capital expenditure even after the ATE Judgment restraining it from doing so. The Petition does not contain any break-up of capital expenditure and capitalisation before and after 28 November, 2014. As per the ATE Judgment, any capital expenditure and capitalisation of assets after the date of the Judgment can only relate to those assets on which capital expenditure was initiated by TPC-D in the past upon directions of the Commission. The details of such capex and capitalisation have already been provided by TPC in Case No. 50 of 2015. Therefore, approval of TPC-D's capitalisation in FY 2014-15 and FY 2015-16 must be related to the proceedings in Case No. 50 of 2015 and, pending its outcome, no such capex and capitalisation should be allowed. In view of the ATE Judgment, any blanket approval of capital expenditure and capitalisation as claimed by TPC-D would amount to regularizing the clear violations of the Judgment by TPC-D.

Prayas stated that TPC-D has been laying wires since the change-over framework was operationalised. However, there is no clarity regarding the modality of meeting its Universal Service Obligation (USO). During the first three years of operation, change-over and capital expenditure for a parallel network have progressed simultaneously. The ATE had directed TPC-D to stop network roll-out till all issues are resolved by the Commission. Therefore, there is no clarity regarding the plans going forward.

TPC-D's Response

The principles regarding laying of network and avoiding duplication of network have been laid down by the ATE in its Judgment dated 28 November, 2014, which has been considered while providing the Network Rollout Plan. Even otherwise, in terms of Proviso 6 to Section 14 read with Section 42 and 43 of the EA, 2003, TPC-D is required to connect to consumers, by laying network, upon a request made by the consumer.

Further, since the matter of network roll-out is sub-judice before the Commission, it would be inappropriate to comment on it.

Apart from the above, no specific response to the comments of RInfra-D has been received from TPC-D.

Commission's Ruling

The Commission has already conducted a Public Hearing on the Report of the Committee constituted under its Interim Order in Case No. 182 of 2014 on the issues relating to network roll-out by TPC-D and switch-over of consumers from one parallel Licensee to another. Responses from all the Mumbai Distribution Licensees and consumers have been received. The other issues relating to assets where capital expenditure was initiated by TPC-D in the past upon directions of the Commission is being addressed in Case No. 50 of 2015. Therefore, as the matter is under consideration in Case Nos. 182 of 2014 and 50 of 2015, it would be premature to express any opinion on this matter at present.

2.4 TIME OF DAY TARIFF

Shri A.V. Shenoy stated that the Commission should introduce Time of Day (ToD) tariffs for at least some Residential category consumers. Shri Kamlakar Shenoy and Shri N. Ponrathnam, an Authorised Consumer Representative, stated that residential consumers and other consumers who use Air Conditioners at night are being charged the same rate. The Tariff Policy, 2016 mandates ToD tariff for the Residential category (cheaper tariff at night) so that the consumers shift their consumption for household purposes such as grinding, washing, and heating for cooking to non-peak hours, thereby flattening the load curve.

Shri Kamlakar Shenoy stated that the Commission has failed to direct TPC-D to install smart meters to measure the electricity consumed as per ToD, thereby causing wrongful gains to TPC-D and wrongful loss to electricity consumers. Such wrongful loss caused to the consumers should be ascertained by using smart meters and be refunded along with interest at 24% (as collected on delayed payments) to consumers.

Shri Mahaveer Kumar Jain stated that there is no ToD control on residential and non-residential consumers, and this is against the general approach that the common person should not be burdened. However, there are high-end residential users whose consumption is more than 6000 units annually. Similarly, common services by Housing Societies such as pumping of water, common lighting, lift, etc. require more power during peak hours. There should be a separate category for these consumers and ToD tariff should be made applicable in order to encourage them to change the usage timings. There should be wide publicity by way of details on the bills of such consumers. This will also help the system.

Shri N. Ponrathnam stated that the Commission should mandate smart meters for consumers with monthly consumption of 500 units and above at the earliest but not later than 31 December, 2017; and for consumers with monthly consumption above 200 units by 31 December, 2019, considering the provisions of the Tariff Policy 2016. It should also change the present demand recording period from 22:00 hrs to 06:00 hrs to 22:00 hrs to 18:00 hrs so as to flatten the load curve of the Western Grid. Since Maharashtra is a power surplus State, consumers should be encouraged to consume more. Further, there could be a ToD Demand Charge as follows:

- One amount for the hours when the Utility must produce the most power (the time period from 18:00 hrs to 22:00 hrs) and
- No charges for off-peak demand (the time period from 22:00 hrs to 18:00 hrs).

TPC-D's Response

ToD for residential consumers requires replacement of a large number of meters as their existing meters may not have the facility to record ToD consumption. Further, even after incurring the costs for change in meters, the impact may not be significant. Also, the percentage share of high-end residential consumers in case of TPC-D is only 5%. TPC-D has used various Demand-Side Management (DSM) initiatives to create awareness among residential consumers and also runs a programme to encourage people to buy energy-efficient products so that the overall consumption itself is reduced. However, the suggestion is for betterment of the overall distribution system and TPC-D is open to any further implementable solution.

At the Public Hearing, Shri Ashok Sethi stated that a ToD tariff for residential consumers in the form of rebate is a good idea and can be given to consumers from 24:00 hours to 06:00 hours, as enough power is available. However, he stated that smart meters are very expensive. If any consumers are willing, TPC-D would install smart meters at their premises. TPC-D cannot put the burden of smart meters on all consumers.

As regards ToD-based Demand Charges, the suggestion to allow consumers to exceed their Contract Demand during off-peak hours (2200 to 1800 hours, i.e., 20 hours in a day) will lead to undue stress on the distribution system and the sanctity of Contract Demand will be lost. The consumers would deliberately opt for a lower Contract Demand as compared to their actual requirement and then exceed it.

Commission's Ruling

The Commission has analysed the System Load Curve and individual Load Curves of the Distribution Licensees in the State, as elaborated in Section 6 of this Order. It has given certain directions taking these into account to enable further consideration of this issue after public consultation at the time of the next MTR.

Introduction of ToD tariffs for the Residential category has practical complexities as it would involve replacement of a large number of meters, with associated costs of metering, as well as meter reading. Further, the extent to which residential consumers can actually shift their consumption to off-peak hours in response to ToD tariff differentials, and the impact arising from the nature of existing off-peak uses needs to be assessed.

Similarly, the objective and efficacy of installing smart meters vis-a-vis the cost of such installation has to be studied before undertaking any programme of installation of smart meters.

As regards the suggestion on ToD-based Demand Charges, the objective of ToD tariffs is to shift the consumption to off-peak hours in order to reduce costly power purchase.

Introduction of differential Demand Charges depending on the time of the day may not help to reduce the consumption during peak hours. Further, this will result in arithmetic addition of the demand recorded in different time slots, although the demand in one time slot is subsumed in the demand of the other. On the other hand, the Objector has himself proposed in the larger context that Fixed/Demand Charges should not be levied.

2.5 REVENUE GAP

Shri Kamlakar Shenoy and Shri Guruprasad Shetty, representing AHAR, stated that TPC-D requires consumers to pay more than Rs. 2500 crore as Revenue Gap from 2012 to 2016, but does not want to repay consumers for the 70% decline in input costs in the last 5 years. Also, the Profit and Loss Statement of TPC for the last 5 years shows that revenue has increased from Rs. 7412 crore to Rs. 9702 crore, i.e., by around Rs. 2300 crore.

They also stated that the cost of fuel has reduced from Rs. 3485 crore to Rs. 3142 crore and profits have increased from Rs. 1111.82 crore to Rs. 1515.65 crore. Inspite of adjusting the increase in Other Expenses from Rs. 719 crore to Rs. 1782 crore and Finance Costs from Rs. 459.80 crore to Rs. 1047.46 crore, TPC-D’s investors require more ARR, thereby adversely affecting the business viability and survival of consumers compared to other States.

TPC-D’s Response

Revenue Gaps are expenditures approved by the Commission and deferred for phased recovery. The reduction in fuel cost has been already passed on to consumers through revised power purchase cost and negative FAC in electricity bills.

As regards Profit and Loss figures, TPC has many businesses other than Distribution. Hence, the figures from the Annual Report of TPC, which is an aggregate of all its operations in India and abroad, cannot be linked in any way with the returns of TPC-D.

Commission’s Ruling

Payment of Revenue Gap and reduction in fuel costs are matters to be treated separately. The Revenue Gap of a Distribution Licensee is approved in the Tariff Order whereas the benefit of reduction in fuel costs is governed by the FAC mechanism.

2.6 WHEELING CHARGES

Shri Kamlakar Shenoy and Shri Guruprasad Shetty, representing AHAR, stated that, as per the EA, 2003, Wheeling Charges can only be levied when the Distributor is making available its distribution assets as a carrier for supply to a consumer who requires electricity from some other supplier. TPC-D is unfairly charging Wheeling Charges, which should not be permitted.

MIAL stated that Regulation 14.6 (a) of the MERC (Distribution Open Access) Regulations (‘DOA Regulations’), 2016 specifies that Wheeling Charges be payable on the basis of actual energy drawal at the consumption end, but TPC-D has proposed to charge these for HT consumers based on the cumulative demand of each category instead of MUs as per the existing practice. However, the same pricing policy has not been applied to LT category consumers. Also, it is not clear whether the Wheeling Charges so proposed factor in the average loss compensation of the relevant voltage level, which is also mandated by the revised Tariff Policy, 2016. In the name of change in pricing philosophy, TPC-D has in effect sought an increase of more than 200% in Wheeling Charges. For HT consumers, the Wheeling Charges are proposed to increase from existing Rs 0.36/unit to around Rs 1.01/unit, and from Rs 0.77/unit to Rs 2.05/unit for LT consumers.

Shri N. Ponrathnam stated that the simplest method of charging Wheeling Charges is in terms of Rs/kWh, i.e., total cost incurred for network for supply of total units. This is followed at present and should be continued. Besides, Wheeling Charges should be scientifically calculated and there should be a ceiling on any increase.

MMRCL stated that the proposed Wheeling Charges on the basis of kVA will increase the tariff per unit from Rs 0.36/kWh to Rs 1.01/kWh, i.e., by 180%. This will adversely affect MMRCL’s operational cost, which is indirectly reflected in the fares payable by the public. Hence, the Commission may retain the existing Wheeling Charges, i.e., Rs 0.36/kWh, in public interest.

TPC-D’s Response

Wheeling Charges are applicable to all consumers who use the distribution network for availing power supply and not only to those who avail power under OA.

As per Clause 8.5.5 of the Tariff Policy, 2016, Wheeling Charges should be determined on the basis of principles laid down for intra-State Transmission Charges, and in addition include average loss compensation of the relevant voltage level. Since inter-State Transmission Charges are determined and paid in terms of MVA of demand, TPC-D has proposed to apply the same methodology for Wheeling Charges. However, in the first phase, this has been proposed only for HT consumers due to the intricacies of calculation. There is no additional cost due to this proposal, since the Wheeling Charge as arrived at on a per kWh basis has only been converted into kVA/month.

TPC-D denies that the Wheeling Charges are being increased in the name of change in pricing philosophy. On the contrary, the Wheeling Charges for FY 2015-16, as approved in the MTR Order at Rs 0.36/unit, was artificially low since the entire surplus of previous years had been allowed to be adjusted in that year, which is an aberration. The Wheeling Charges now proposed are in line with those approved by the Commission for FY 2013-14 and FY 2014-15. TPC-D has given the detailed methodology for calculation of Wheeling Charges in its Petition.

Commission's Ruling

The total ARR of TPC-D has been segregated into the Wires ARR and Supply ARR, and the Wheeling Charges are computed on the basis of the Wires ARR. Thus, the Wheeling Charges determined in this Order are payable by all consumers who are using TPC-D's wires, and not only OA consumers. The Commission has approved the Wheeling Charges for the 3rd Control Period taking the ARR of the Wires Business approved in accordance with the MYT Regulations, 2015. The Wheeling Charges of TPC-D shall be applicable only to its direct consumers and OA consumers who are taking supply on TPC-D's wires. For change-over consumers, the Wheeling Charges of RInfra-D shall be applicable.

As regards the change in computation methodology proposed by TPC-D from per unit basis to per kVA basis, that has been dealt with in Section 6 of this Order.

2.7 DEMAND SIDE MANAGEMENT

MP Ensystems Advisory Pvt. Ltd. suggested that there is a need to scale up the DSM programmes by creating an alternative entity with representation from all Distribution Licensees, State Energy Department, State Finance Department and regulatory oversight of the Commission, which can be entrusted with the responsibility of DSM implementation in the entire State. Further, a Public Benefit Charge (PBC) of Rs. 0.01/kWh may be levied, which would collect a fund of around Rs. 100 crore for the State as a whole. This would be a seed fund for implementation of clean energy and energy efficiency projects, and provide low interest loans to consumers for investment in energy efficiency measures, equity investment in clean energy projects, incentives for energy-efficient equipment for domestic consumers, free distribution of energy-efficient equipment to Below Poverty Line consumers, etc.

Shri Mahaveer Jain stated that DSM should provide for Thermal Energy Storage with a special rebate so that uses can be shifted from peak to off-peak. TPC-D should come out with a DSM plan for ceiling fans with lower power consumption. This can help to reduce load significantly as compared to LED bulbs which only save a few Watts.

TPC-D's Response

TPC-D is implementing DSM programmes under the DSM Regulatory Framework established by the Commission, and several approved DSM programmes are either being or have been implemented. It has also participated in Domestic Efficient Lighting Programme (DELP) and proposed LED Tube Light programme.

As regards the suggestion to establish a State-level entity and levy a Public Benefit Charge, there already exists a framework established by the Commission under which DSM programme implementation is being carried out, and the feasibility of such suggestions could be considered under that framework. Further, establishment of a separate entity is beyond the scope of this Petition.

TPC-D is running various DSM programmes from 2008 in accordance with the Regulations. It also provides a quarterly report of DSM programmes to the Commission.

Commission's Ruling

The Commission's DSM Implementation Framework Regulations, 2010 provide a comprehensive framework for Distribution Licensees to plan and execute cost-effective DSM measures and to meet their costs. The Regulations also provide a forum to recommend cost-effective DSM proposals (the DSM Co-Ordination Committee) to the Commission in the context of the objectives set out in the Regulations. The Committee brings together Commission officials, the Licensees and expert technical institutions and individuals. Thus, a mechanism is already available for dealing with one aspect of the proposed entity, and MP Ensystems is free to suggest any specific DSM scheme to the Licensees or to the Committee. As regards funding, on an earlier occasion the Commission had mandated a Load Management Charge (LMC) Fund with the Distribution Licensees. Most of the DSM schemes were undertaken from this Fund, and as a normal part of the ARR once it is exhausted. At this stage, the Commission is of the view that no separate Fund needs to be carved out now by the Licensees since the DSM schemes, once approved by the Commission and the Committee, are funded through the ARR as required. It would be more appropriate to address the suggestion for planning and funding broader State-wide policies and programmes to the State Government rather than the Commission.

2.8 CATEGORISATION AND TARIFF DETERMINATION

Shri Mahaveer Kumar Jain stated that there is no basis for determining the tariff rate for each category. For instance, the Below Poverty Line (BPL) consumer category tariff in FY 2013-14 was 1.6% of ACoS, which became 6% in FY 2015-16 at the time of the MTR Order and 7.8% in the revised FY 2015-16 submissions. Similarly, costs for consumers in the 0-100 units slab are increasing without any logic. The rate for each category is fixed arbitrarily without any basis and is unjustified. Rates have to be decided based on ACoS for each category with a fixed percentage, and it should be applicable to all the Licensees in Maharashtra in order to promote fair competition. The approach for determining tariff for each category needs to be systematic so that operating efficiencies are reflected in tariff changes.

He also stated that there are differences in the applicability of particular categories between Distribution Licensees. For instance, in case of LT II category, the applicability provided in the Maharashtra State Electricity Distribution Co. Ltd (MSEDCL) MTR Order in Case No. 121 of 2014 is different to that applicable to TPC-D, RInfra-D and BEST as per the last Orders concerning them. In the case of MSEDCL, the coverage is wider, while the description in the RInfra-D, TPC-D, and BEST Orders is brief, which might lead to different interpretations. In case of TPC-D, the LT III category is Industry, while for MSEDCL it is Public Water Works and Sewage Treatment Plant. In case of TPC-D, there is no category for the latter.

AHAR stated that TPC-D is discriminating between consumers by classifying them into two types, viz., Direct and Change-over consumers, and charging two separate tariffs, making the tariffs complex. Also, tariff determination is not dictated by the ARR but by competitive compulsions and market distortions. It is unfair to charge a higher tariff for direct consumers and less to change-over consumers in order to compete with RInfra-D. This amounts to unfair trade practice and discrimination.

Shri Guruprasad Shetty and Shri Kamlakar Shenoy stated that the TPC-D Petition lacks transparency, with no clarity on how much it proposes to charge. Table 30 of the MYT Petition details only one tariff, but Table 31 proposes an increase to direct consumers and

Table 32 proposes an increase to change-over consumers, without details of the base tariff for each type of consumer.

AHAR stated that the tariff should be simple and understandable to consumers, who should be informed clearly what will be the cost of electricity they are buying without technicalities like direct charges, RAC, change-over, wheeling, FAC, CSS, Additional Surcharge, ToD, etc.

MIAL stated that, in view of the essential services provided by it and the peculiarities of its operation, the ATE had, vide its Judgments dated 26 February, 2009 in Appeal No. 106 of 2008, dated 31 May, 2011 in Appeal No. 195 of 2009, and dated 18 July, 2011 in Appeal No. 144 of 2009, held that, for the purpose of tariff determination, MIAL is a class in itself. However, TPC-D has proposed to categorise MIAL under the generic category of HT VI Public Services (B) – Others and LT IX Public Services (B) – Others. The Commission should create a separate category for MIAL and determine a separate tariff for it.

Shri N. Ponrathnam stated that BPL consumers who consume below a specified level, as stipulated in the National Electricity Policy, may receive special support through cross-subsidy as per the Tariff Policy dated 28 January, 2016. The Commission should determine the actual cost of supply (efficient and prudent cost) for each category of consumer. These details have not been submitted by TPC-D.

He also stated that there should be a uniform tariff across Licensees based on the Commission's rulings in Case Nos. 25 and 53 of 2005. Besides, competition should be encouraged, and Group non-Residential, and Group Industrial categories should be introduced, with the tariff reflecting the cost of supply.

RInfra-D stated that uniformity in cross-subsidy cannot be brought about without uniformity in consumer mix. In fact, the high gradient of tariff differential for the low-end residential category among Licensees with wide differences in consumer mix has been effective in achieving parity in the consumer mix. Mix balancing is essential for long-term sustainability and fairness of competition. TPC-D's proposal of uniformity in tariff for 0-300 residential slab is an artificial distortion to disrupt consumer choice.

RInfra-D further stated that it is evident from the proposal of TPC-D that, even though it does not really need an overall tariff increase, it has proposed a drastic increase in tariffs of residential consumers and used it to significantly reduce the commercial and industrial consumer tariffs. In other words, the advantage of not requiring an overall tariff increase is passed on to high-end consumers with heavy discounts, while leaving the low-end consumers with a rude tariff shock. This is clearly done with the intent of eliminating the competitor parallel Licensee, which is saddled with a poor consumer mix due to historical reasons, and is nothing but predatory pricing which is both illegal and illegitimate.

Shri Ganesh Khankar, Shri Kamlesh Gaglani, Shri Anil Chaskar representing Parvatibai Pratishthan, Mahila Muktai Morcha and Shri Willie Shirsat of Borivali Dahisar Jagruk Nagarik Manch stated that TPC-D is proposing a tariff increase of 50 to 80% for the next four years for consumers using less than 300 units in a month. The cross-subsidy which is given to the lower segment of society is now being used to reduce tariff for large consumers such as commercial shops, restaurants, shopping malls, etc, and all these lower-end consumers will have to migrate back to RInfra-D.

Shri J.J. Phadnavis urged that there should either be a separate category for senior citizens with free power up to 100 units, or some rebate for senior citizens consuming power upto 100 units.

Shri Guruprasad Shetty and Shri Kamlakar Shenoy stated that, despite lower overheads and better operational efficiency, TPC-D is selling power at Rs. 10 per unit to consumers when electricity consumers in Goa, Gujarat and other States are paying around Rs 4 per unit.

AHAR also stated that the Energy Charges of TPC-D are nearly double those in other States. Levying Wheeling Charges, Regulatory Asset Charge (RAC), CSS, Additional Surcharge, ToD charge, etc., in addition amounts to extortion. TPC-D's cost should be around Rs 1600 crore, with Operation and Maintenance (O&M) cost of Rs 113 crore, and transmission cost is Rs 207 crore, which totals Rs 1920 crore. The cash surplus for TPC-D would be more than Rs. 3000 crore.

Parvatibai Pratishthan stated that TPC-D has proposed a 86 to 106% hike in tariff for consumers below 100 units, and 49 to 58% hike for consumers in the slab of 101 to 300 units, whereas only 8.6% tariff hike has been proposed for 301 to 500 units slab in FY 2016-17, decreasing up to 28.7% in the next 3 years

Shri Milind Rane of Maharashtra Navnirman Sena (MNS) and Shri Randhir Paralkar of Nationalist Congress Party (NCP) stated that the proposed tariff hike for 0-300 residential category will burden the low-end residential consumers and is against the dream of cheap power for these consumers. Shri Rane added that consumers cannot flip-flop between

TPC-D and RInfra-D and, therefore, the Commission should not approve the tariff increase proposed by TPC-D for the 0-300 units residential category.

Mumbai Mahanagar Pratishthan stated that, since Railways and other bulk supply consumers are moving out of TPC-D, the cross-subsidy received from them will reduce and consequently the tariff of low-end consumers will increase. This will force low-end consumers to migrate from TPC-D. Therefore, the Commission should levy some charge on other bulk consumers to reduce the impact on low-end consumers.

BEST stated that TPC-D has a higher percentage of sales of subsidising consumers as compared to BEST. TPC-D has proposed a very steep increase in tariff of low-end residential consumers with monthly consumption of 0-300 units. On the other hand, it has proposed a reduction in tariff for high-end consumers, which will influence the migration of only high-end consumers from BEST to TPC-D.

BEST also stated that, for FY 2016-17, TPC-D has proposed a 71.2% increase in the slab of 0-100 units and 52.78% for 101-300 units. At the same time, tariffs of high-end consumers are proposed to be reduced. The same is the case in FY 2017-18. With such tariff design, TPC-D will attract migration of only high-end commercial consumers from BEST.

BEST stated further that, in the present situation, the ABR offered by TPC-D is lower as its distribution network is small, and inadequate for meeting its USO. TPC-D has also proposed a meagre capital expenditure during the 3rd Control Period, which will not enable it to be USO-ready. On the other hand, the ABR offered by BEST is in a USO-ready situation, and hence the competition is unfair.

TPC-D's Response

TPC-D has proposed the tariffs considering the existing levels and in line with the Tariff Policy. The proposed tariff is optimal for a category, so that a consumer is not unduly burdened and TPC-D's revenue requirement is also met. Tariffs are proposed as per the set norms of the Commission. Guidelines are set out in the MYT Regulations, 2015 and the Tariff Policy for how tariffs should be set for individual categories, and the tariff determination depends upon various factors which are Distribution Licensee-specific.

It is incorrect to compare only the Energy Charge trend over the years and infer that there has been no basis for determining the tariff. While, from the consumer perspective, the point may be understandable, the aspects of tariff determination carry significant weightage, and considering those, maintaining a trend in Energy Charge may be difficult.

As regards different applicability of consumer categories across Licensees, it is at the discretion of the Commission to decide upon a common applicability.

Table 24 of the MYT Petition provides the category-wise individual tariff applicable on a monthly basis for direct consumers of TPC-D. The change-over consumer only pays fixed/Demand Charges and Energy Charges of TPC-D, which are reflected in Table 24 of the Public Notice. The other charges applicable to change-over consumers are Wheeling Charges, RAC and CSS, and are payable as per the RInfra-D tariff as its network is utilised for providing the power supply. Tables 25 and 26 of the Petition show the increase in ABR for direct and change-over consumers year on year, with FY 2015-16 as the base year. The ABR for change-over consumer does not include Wheeling Charges, RAC and CSS.

TPC-D is not discriminating between consumers. The Energy Charges and Fixed/Demand Charges are the same for both sets of consumers, viz., direct and change-over consumers. The difference is on account of the applicable Wheeling Charges, RAC and CSS which need to be paid to RInfra-D for using its network. Since RInfra-D charges would be separately determined by the Commission while considering the MYT Petition of RInfra-D, the tariff has to be derived after considering the relevant network-related cost of RInfra-D. Hence, there is no question of reducing the tariff for change-over consumers and increasing that of direct consumer of TPC-D.

As regards the complexity of charges, TPC is following the directions of the Commission, whereby it has been directed to provide a detailed break up of various charges in the electricity bill. Consumers are informed of different charges to provide clarity. The intention is not to confuse, but to make aware.

As per the directions of ATE and the Commission, TPC-D had proposed a separate category of HT Airports for MIAL in its MTR Petition. However, the MTR Order had created a separate category of HT Public Services (Others), which included MIAL and also a number of other similar consumers. MIAL has filed an appeal for a separate tariff category which is pending before ATE.

The tariff of BPL consumers of TPC-D is less than 50% of ACoS. However, TPC-D has proposed a trajectory for bringing tariffs within ±20% of ACoS during the 3rd Control

Period. It has also proposed to bring uniformity in tariff for the residential consumers in the slab of 0-100 units consumption.

As per the tariff structure approved in the MTR Order, there is a very high degree of cross-subsidisation of residential categories of TPC-D as compared to other Distribution Licensees. The subsidisation level in 0-100 units consumption slab is 81%, while for 101-300 units slab, it is 51%. TPC-D has submitted the following comparison of cost recovery by various Distribution Licensees from residential consumers:

Table 2-1: Comparison of Cost recovery for Residential Consumers as submitted by TPC-D

Utility	0-100 units	101-300 units
TPC-D	19%	49%
MSEDCL	72%	129%
R Infra-D	62%	88%
BEST	35%	73%
CESC	81%	103%
Torrent	67%	75%

The burden of abnormally high subsidisation of residential consumers is borne by the subsidising consumers of industrial and commercial categories. The subsidy burden for TPC-D's HT Industrial consumers is 120% and HT Commercial is 125%, whereas for BEST's HT Industrial consumers it is 102% and for HT Commercial it is 110%. This has forced such consumers to opt for OA and Group Captive opportunities and created a subsidy gap and under-recovery of costs, which lead to creation of Regulatory Assets.

TPC-D's consumer mix has also changed over the past 2 to 3 years and now consists of more than 5 lakh consumers in the residential category, and sales to these consumers have gone up by 18%. As per the Tariff Policy, the tariff should be within ±20% of ACoS. Hence, TPC-D has proposed to bring about uniformity in tariffs and subsidy structure across Distribution Licensees, which will ensure fair competition and a level playing field.

As regards the Energy Charge mentioned by the Objectors, it is unclear which categories of consumers across which States are being compared. For the residential category, subsequent to the MTR Order, TPC-D has one of the lowest Energy Charges in Mumbai, and it is comparable to that charged by many Utilities in other States.

As regards meeting its USO, TPC-D has submitted its Network Roll-out Plan in Case No. 182 of 2014 detailing the expenditure in line with the Judgement of the Supreme Court as well as the directives of the Commission in the Licence Order for TPC-D in Case No. 90 of 2014. The Network Roll-out Plan is under consideration of the Commission, and TPC-D would follow the directives regarding capital expenditure for the 3rd Control Period as issued by the Commission.

During the Public Hearing, Shri Ashok Sethi stated that only the needy should be cross-subsidised and not all consumers. The inconvenience of change-over and reverse change-over will be removed if a uniform tariff is determined for the 0-300 units residential category, as proposed by TPC-D in its Petition.

Commission's Ruling

The Commission has reviewed and further rationalised the consumer categories and applicability of tariffs to different consumer categories across the Distribution Licensees in Maharashtra in the current round of MYT proceedings.

In its Tariff Order in Case No. 18 of 2003 dated 1 July, 2004 for RInfra-D (erstwhile Reliance Energy Ltd./BSES Ltd.), the Commission had stated its intention to initiate a movement towards uniform tariffs in Mumbai. However, it had also clarified that the EA 2003 does not mandate uniform tariffs across a geographical area and encourages competition, and that the tariffs have to be determined keeping in mind the differing consumer mix, network configuration and varying levels of operational efficiency of the different Licensees:

> *"As regards the suggestion that the tariff for consumers in the same category should be uniform across the city of Mumbai, irrespective of the Distribution Licensee that is supplying electricity, the Commission is of the opinion that the EA 2003 encourages competition, and it is not the intent of the EA 2003 that the retail tariffs should be same across a particular geographical area. However, the Commission has endeavoured to determine the tariffs such that there is no substantial disparity in the tariff applicable to the same consumer category across different licensees, keeping in mind the different consumer mix, network configuration and varying level of operating efficiency."*

The Commission had further elaborated its philosophy in its subsequent Report on RInfra-D addressed to the Government of Maharashtra, as elaborated in Section 6 of this Order.

As regards the suggestion to create a Group non-Residential or other Group categories, this is not envisaged under the EA, 2003 and the Electricity Rules, 2005, which permit such an arrangement for Co-operative Group Housing Societies. The Removal of Difficulties (Eighth) Order, 2005 dated 9 June, 2005, stipulates as follows:

"2. Supply of electricity at single point by the Distribution Licensee to a Cooperative Group Housing Society.-

A Distribution Licensee shall give supply of electricity for residential purposes on an application by a Cooperative Group Housing Society which owns the premises at a single point for making electricity available to the members of such Society residing in the same premises on such terms and conditions as may be specified by the State Commission:..."

The issue of categorisation of MIAL and other Airports, Ports, etc., has been addressed in Section 6 of this Order, where the Commission's decisions on consumer categorisation and category-wise tariffs for the 3rd Control Period are also elaborated.

As regards the details of the various components of the amount payable by consumers provided in electricity bills, these are detailed in the bill for transparency and so as to make available to the consumer the break-up of what he has to pay. A consumer is free to ignore them and only refer to the total amount payable, but other consumers may also like to know the details of its components without having to seek this information separately from the Licensee. As such, there cannot be any reason not to provide such details in the bills, and this is also broadly mandated by the Electricity Supply Code Regulations.

Change-over consumers of TPC-D are charged more than its direct consumers since, apart from the base tariff, they are also required to pay the CSS, wheeling charges, etc. of RInfra-D, which provides the network. This is a basic feature of the change-over tariffs.

2.9 VOLTAGE-WISE TARIFF

Shri Mahaveer Kumar Jain stated that there is a specific direction of the Commission and the ATE to propose voltage-wise tariffs, but TPC-D has chosen not to submit them. The proposed ABR is burdening HT consumers even though their Distribution Losses are low. Voltage-wise tariff will ensure that the cost of power is as per the voltage level. Further, the overheads should also be considered considering the number of consumers, time/efforts actually required on system/maintenance, etc., and accordingly the same principles should be applied to all Distribution Licensees.

TPC-D's Response

TPC-D has submitted its computation for the voltage-wise cost of supply (VCoS) in its Petition.

Commission's Ruling

The Commission's decisions on consumer categorisation, category-wise tariffs, and cross-subsidy reduction approved for the 3rd Control Period are elaborated in Section 6 of this Order.

The MYT Regulations, 2015 specify that:

> *"88.2* ***The retail supply tariff for different consumer categories shall be determined on the basis of the Average Cost of Supply****, computed as the ratio of the Aggregate Revenue Requirement of the Distribution Licensee for the Year determined in accordance with Regulation 78, and including unrecovered Revenue Gaps of previous years to the extent proposed to be recovered, to the total sales of the Distribution Licensee for the respective Year.*
>
> *88.3* ***The Commission shall endeavour to gradually reduce the cross-subsidy between consumer categories with respect to the Average Cost of Supply*** *in accordance with the provisions of the Act.*
>
> *88.4 While determining the tariff,* ***the Commission shall also keep in view the cost of supply at different voltage levels*** *and the need to minimise tariff shock to consumers."*

Accordingly, the Commission has endeavoured to gradually reduce the category-wise cross-subsidies with respect to the ACoS, while also keeping in view the VCoS calculated by the Commission.

2.10 BALANCE SHEET DATA

Shri Mahaveer Kumar Jain stated that the complete Balance Sheet of TPC has not been submitted by TPC-D, which has a direct relation with actual performance. The performance can only be measured if full financial data are provided, and not merely income or expenditure data.

TPC-D's Response

The Annual Report of TPC has been submitted with the Petition. Being a public document, it is also available on its website. Further, the contact details of TPC-D were provided in the Public Notice for any documentation required.

As regards the reference to the Balance Sheet by Objectors, Shri Ashok Sethi stated at the Hearing that the Balance Sheet refers to the entire 9000 MW of generation capacity of TPC and not only or specifically to the 853 MW of Mumbai-based capacity.

Commission's Ruling

The Balance Sheet submitted by TPC-D pertains to TPC as a whole. The Commission asked TPC-D for a Reconciliation Statement certified by the Statutory Auditor. However, a separate Balance Sheet for TPC-D will have to be submitted from FY 2016-17 onwards, at the time of MTR, as specified in the MYT Regulations, 2015.

2.11 SECURITY DEPOSIT

Shri Mahaveer Kumar Jain stated that, as per the Supply Code Regulations, 2005 and past Tariff Orders, there are specific provisions to recover Consumer Security Deposit (CSD) from consumers based on annual assessment if there is an increase. However, there is no information as to how much additional CSD on this account is unrecovered and is therefore, adding to the Interest on Working Capital (IoWC).

TPC-D's Response

TPC-D follows the due process regarding collection of CSD if the amount payable by the consumer has changed on an annual basis. TPC-D also sends periodic reminders for recovery of additional CSD. The interest on CSD is paid to the consumer only on the amount which has been paid by the consumer.

Commission's Ruling

The Commission agrees with the replies of TPC-D in this regard. However, the Distribution Licensees are required to do the needful to ensure that the due amount of CSD is recovered from consumers. It may be noted, however, that under the MYT Regulations, 2015 the rate of interest on CSD and IoWC is the same, i.e., the State Bank of India (SBI) Base Rate plus 150 basis points.

2.12 WORKING CAPITAL INTEREST

Shri Mahaveer Kumar Jain stated that, in case of working capital, the estimated value is taken, and on that estimated value the interest is considered at 14.75% for FY 2015-16, whereas the cost of funds of TPC-D is around 10.50%. Therefore, the amount of working capital computed is wrong. Besides, TPC-D has not clarified what treatment is given to the CSD of non-live consumers, where there is no payment of interest. In addition, by giving interest at 14.75%, TPC-D is being paid higher interest than what is being actually incurred.

TPC-D's Response

The working capital interest proposed is as per the norms set by the Commission.

Commission's Ruling

The normative amount of working capital and the interest thereon have been allowed for FY 2015-16 as specified in the MYT Regulations, 2011. The rate of IoWC specified in those Regulations was linked to the State Bank of India (SBI) Advance Rate (SBAR). However, it has now been linked to the SBI Base Rate plus 150 basis points in the MYT Regulations, 2015.

2.13 ENERGY AUDIT

Shri Mahaveer Kumar Jain stated that there is a need for energy audit of the distribution network. This should be done preferably by reputed Government agencies who have proven expertise in some specific areas. This will help to reduce losses and bring efficiencies which will ultimately benefit the consumer and system as a whole.

TPC-D's Response

TPC-D's Distribution Loss is quite low, in the range of 0.6 to 0.8%. It carries out energy audit of the distribution network monthly and critically monitors the Distribution Loss.

Commission's Ruling

TPC-D's Distribution Losses are relatively low, at around 1%, primarily because of the HT:LT ratio of its network. However, it is expected that TPC-D would continuously monitor the Loss level and maintain it at the lowest possible level through Energy Audits.

2.14 REGULATORY ASSET CHARGES

Shri Mahaveer Kumar Jain stated that TPC-D has recovered RAC in excess of the rate approved by the Commission from customers who are using the wires of RInfra-D. The RAC approved in Order in Case No. 9 of 2013 and the charges recovered by TPC-D are shown in the Table below:

Table 2-2: Details of RAC as submitted by Objector (Rs./kWh)

Category LT – I	RAC Approved by MERC for FY 2014-15	RAC actually charged by TPC-D
0 – 100	0.52	0.57
101 – 300	0.74	0.74
301 – 500	0.86	0.86
501 & above	1.17	1.17

Shri N. Ponrathnam stated that there is no need to create a Regulatory Asset and levy RAC. The Gap and Surplus of previous years should be trued-up now.

MMRCL stated that Mumbai Metro 3 (MML-3) is a new project and has not consumed any electricity previously. Hence, it should be not be levied RAC because MML-3 was not responsible for the past costs incurred.

Prayas stated that the decision to implement RAC was taken very late, i.e., 21 months after change-over was introduced. Besides, RAC is dealt with differently for the different Licensees and there is no clarity on recovery and future impact.

TPC-D's Response

The Order referred to by the Objector is the MYT Order of RInfra-D, in which the Commission had determined the RAC of Rs 0.52/kWh for FY 2014-15. However, in its subsequent MTR Order in Case No. 4 of 2015, the Commission has determined RAC of Rs 0.56/kWh, and that has been charged to TPC-D's change-over consumers.

As per TPC-D's proposal, only the RAC already determined for future years would be continued and any new Gap/Surplus would be immediately passed on totally in the next tariff so that no new Regulatory Asset is created.

Commission's Ruling

The amount of RAC yet to be recovered and the trajectory for its recovery over the 3rd Control Period are discussed in Section 6 of this Order. The recovery of RAC from change-over consumers is being approved in accordance with the Judgments of the ATE in this regard. Besides, the stand taken by MMRCL is not tenable as the electricity business is an on-going business, and any prior period Revenue Gap/(Surplus) or FAC is recovered/passed on to the present consumers irrespective of whether or not they were consumers when the incidence of Revenue Gap/(Surplus) or FAC arose.

2.15 BILLING

Shri Mahaveer Kumar Jain stated that there is no proper format for the electricity bills by Distribution Licensees like TPC-D to communicate the detailed basis of computation of bills and tariff applicable to the consumers. If full information of power consumption in terms of units and load is not provided, decision-making will not be possible. Distribution Licensees should undertake a periodic exercise of Know Your Customer (KYC) update, as the address of consumers is missing in some bills.

TPC-D's Response

TPC-D issues bills to its consumers in accordance with Regulation 15.2 of the Commission's Electricity Supply Code Regulations, 2005. As regards the suggestion to provide additional information in the bills, TPC-D will study the feasibility and incorporate it, if possible. As regards the observation regarding missing addresses in TPC-D Bills, that is not possible as otherwise the bills would not be delivered to such consumers. Further, TPC-D's collection efficiency is 100%.

Commission's Ruling

The Commission agrees with the replies of TPC-D in this regard. Further, the contents of the consumers' bill are specified in the Electricity Supply Code Regulations. However, the precise format of the bill is not specified and the Distribution Licensees have flexibility in this regard. The information clearly contains the consumption, Sanctioned Load/Contract Demand, past 12 months consumption, etc. As provided in the Supply Code, a consumer may seek any additional information over and above what is in the bill from the Distribution Licensee.

2.16 ADDITIONAL SURCHARGE

MIAL stated that the claim for Additional Surcharge made by TPC-D is based on stranded capacity, but it cannot be assumed that this stranded capacity is only due to OA consumers as there may be other reasons also. A Distribution Licensee is entitled to Additional Surcharge only if it can conclusively demonstrate that, on account of OA consumers sourcing power from other sources, the Distribution Licensee is left with stranded capacity for which it is liable to pay Fixed Charges. Whether or not there is stranded capacity for which TPC-D is liable to pay Fixed Charges under its PPAs is a question of fact and is required to be conclusively established. Among other considerations, the MW capacity and Plant Load Factor (PLF) of the Generating Stations from which the Petitioner is procuring power, and details of the total power surrendered in a day corresponding to the quantum of power drawn via OA also need to be taken into account while determining stranded capacity and calculating Additional Surcharge.

MIAL also stated that, if there is no loss due to stranded capacity to the Distribution Licensee, then there cannot be any question of compensation through Additional Surcharge. Further, TPC-D is seeking to recover its Stand-by Charges and Reliability Charges also from OA consumers as a part of Additional Surcharge, which is unjustified and illegal.

TPC-D's Response

The revised Tariff Policy, 2016 does not limit the applicability of Additional Surcharge only to stranded capacity, but also to cover an unavoidable obligation and incidence to bear fixed costs consequent to consumers entering into OA contracts.

When a consumer moves out on OA, there are three types of unavoidable costs which the Licensee continues to incur but the OA consumer does not pay. These unavoidable costs are in-built in the Energy Charges, which the OA consumer is not liable to pay but the Distribution Licensee incurs. These costs are:

a. Unrecovered Capacity Charges
b. Consumer Service Charges
c. Reliability Charges

The cumulative effect of all these charges has been proposed as Additional Surcharge of Rs 1.43/kWh for OA consumers.

Commission's Ruling

Under the DOA Regulations read with the provisions of the EA, 2003, Additional Surcharge can be approved only if the Distribution Licensee is able to justify the stranded costs as incurred on account of loss in sales due to OA. The Commission's decision on TPC-D's proposal to levy Additional Surcharge is discussed in Section 6 of this Order.

2.17 CROSS-SUBSIDY SURCHARGE

MIAL stated that, for FY 2016-17, TPC-D has proposed a CSS of Rs 1.72/unit as against the existing CSS of Rs 0.27/unit for the HT VI (B) – Others category, to which MIAL belongs. Thus, a hike of more than 500% is proposed, which is a tariff shock for OA consumers. Hence, the Commission should cap the CSS at a reasonable level, or else it would disincentivise OA consumers and in effect eliminate the choice of power supplier bestowed on consumers under the EA, 2003.

Shri N. Ponrathnam stated that there should be a provision for giving up subsidy, which almost all TPC-D consumers will be willing to do. Distribution Licensees are gaming with the concept of subsidy for their own benefits (manipulations in accounts/ in consumer numbers and consumption). The Commission should, hence, make efforts to eliminate subsidy. It should determine the tariff without the cross-subsidy component, as per the provisions of the Tariff Policy dated 28 January, 2016.

He also stated that, even though cross-subsidy is in-built in the tariff of TPC-D, further CSS for OA consumers (of RInfra-D) is also levied, which amounts to double-charging of the change-over consumers. Besides, there is no provision in law for discrimination/differentiation of consumer tariff. He questioned the basis of charging CSS and the provision of law under which it is charged.

Prayas stated that the decision to implement CSS 21 months after introduction of change-over was a delayed decision, which reflects failure to provide clarity on tariffs.

TPC-D's Response

The CSS has been proposed as per the formula in the Tariff Policy, 2016. Further, the CSS for FY 2015-16 as approved in the MTR Order using a new formula was artificially low and did not meet the intended purpose of compensating for the loss of cross-subsidy. This issue has been raised before the ATE. The CSS for FY 2013-14 and FY 2014-15 was much higher. Hence, there is no question of tariff shock if there is an aberration in one year.

The suggestion for consumers to "give up subsidy" involves subsidy that may be provided by the Government. In case of TPC-D, no subsidy against the tariffs has been provided either by the Government of India (GoI) or the Government of Maharashtra (GoM).

As regards the in-built component of cross-subsidy in the TPC-D tariff, the tariff is determined in line with the principles set for tariff determination. As per the current methodology of change-over as decided by the Commission, the consumer decides to migrate after considering the overall tariff advantage from the change-over tariff, which is a derived figure consisting of Energy Charges of the Supply Licensee and other charges of the Wires Licensee, including the CSS applicable.

Commission's Ruling

The CSS has been determined by the Commission considering the provisions of the EA, 2003, its Regulations and the Judgments of ATE for recovery of the loss of cross-subsidy amount on account of change-over of consumers from the Wires Distribution Licensee to the Supply Distribution Licensee. The detailed computation of category-wise CSS for each year of the 3rd Control Period is discussed in Section 6 of this Order.

The Commission's decisions on consumer categorisation, category-wise tariffs, and cross-subsidy reduction for the 3rd Control Period are also elaborated in Section 6. The Commission has endeavoured to gradually reduce the category-wise cross-subsidies with respect to the ACoS, while also keeping in view the VCoS submitted by TPC-D.

2.18 OPEN ACCESS

MIAL stated that the EA, 2003 promotes competition in the electricity industry, and one of the factors to promote competition is the availability of OA to consumers. In accordance with the National Electricity Policy and Tariff Policy, CSS on consumers switching to OA is to compensate the host Distribution Licensee for loss of the cross-subsidy element built into the tariff of such consumers. Additional Surcharge is to compensate loss due to stranded capacity. Hence, these charges should not be so high that competition in generation and supply is eliminated. The comparative statement of landed cost of power through OA, which shows 63.08% increase in OA cost of electricity per unit as per the proposed charges, demonstrates the significant adverse impact the proposed levies have on OA.

TPC-D's Response

The EA, 2003 never intended that OA has to be promoted at the cost of burdening other consumers with huge Regulatory Assets created due to unrecovered costs from OA consumers.

The intent of proposing the transparent applicability of costs is to have a fair arrangement where the consumers can freely exercise their choice without causing inconvenience to other consumers who cannot afford to/do not qualify for such advantage.

Commission's Ruling

The CSS has been determined by the Commission in accordance with the EA, 2003, its Regulations and the Judgments of ATE for recovery of the loss of cross-subsidy amount on account of change-over of consumers from the Wires Distribution Licensee to the Supply Distribution Licensee. The detailed computation of category-wise CSS for each year is discussed in Section 6 of this Order.

The levy of Additional Surcharge can be approved under the DOA Regulations only if the Distribution Licensee is able to justify the stranded costs incurred on account of loss in sales due to OA. The Commission's decisions on TPC-D's proposal to levy Additional Surcharge have been discussed in Section 6.

2.19 SWITCH-OVER OF CONSUMERS

RInfra-D stated that TPC-D has considered consumer and sales additions to its network through switch-over in each year of the Control Period. The Petition does not clarify whether the switch-over assumed by TPC-D is in its common area with RInfra-D or in its common area with BEST. In the common area with RInfra-D, switch-over of consumers already connected to the network of RInfra-D is not permitted as per the ATE Judgment in Appeal No. 246 of 2012 as that would amount to wastage of resources and public funds. Therefore, the existing Licensee's network should be utilized to supply through the change-over route.

However, the ATE has made an exception in case of investments already initiated by TPC-D prior to 28 November, 2014 upon directions of the Commission, which could be used to feed consumers as decided by the Commission. The proceedings with regard to finalizing such capital expenditure and the consumers that could be fed from such assets are already underway in Case No. 50 of 2015. Further, the rules by which the existing commissioned network of either Licensee will be used to supply new consumers are already in the making, with the Committee formed by the Commission under Case No. 182 of 2014 making its recommendations in this regard. The Commission will consider these recommendations and the comments of stake-holders and decide on how new consumers will be connected by either Licensee in the common area of supply. In case TPC-D has, with regard to utilization of its existing network, assumed switch-over of consumers from RInfra-D's network, that should be considered only to such extent as may be permissible, if at all, under Case No. 50 of 2015.

Shri N. Ponrathnam stated that there has to be competition in Wires. Imposing restriction on switch-over is contempt of the Supreme Court Order under which TPC-D can supply to all consumers of Mumbai. It is possible for big consumers like MIAL to switch-over from RInfra-D to TPC-D, but small consumers cannot to do so. TPC-D has been restraining switch-over in the BEST area of supply and consumers had to file Petitions. The consumers were supposed to get the benefit from TPC-D, which could not be availed as it did not give supply in time. The compensation has yet to be decided in a suo-motu proceeding of the Commission. Till then, this MYT Petition should not be entertained.

TPC-D's Response

Since the matter of network roll-out is sub-judice before the Commission, it would be inappropriate to comment on it.

As regards switch-over in the BEST area, TPC-D has never restrained switch-over of any consumer there. The question of compensation is pending before the Commission in Case No. 30 of 2011, but in any case that compensation is not payable by TPC-D.

Commission's Ruling

The Commission has disposed of the suo moto proceedings in Case No. 30 of 2011 vide its Order dated 6 June, 2016. The issue of switch-over is linked to the network roll-out of TPC-D, which is being dealt with by the Commission in separate proceedings in Case Nos. 182 of 2014 and 50 of 2015.

2.20 APPEALS BEFORE THE ATE

Prayas stated that almost every Tariff Order since 2008 has been challenged by TPC-D in the ATE. In a regulatory forum, where decisions are taken after giving all stake-holders due opportunities to present their case and where reasoned orders factoring in all objections and suggestions are issued, it is expected that there would be greater acceptance of such decisions. Such a high rate of dissatisfaction with the regulatory decisions brings into question the effectiveness of the regulatory forum in its adjudicatory role. These appeals by the Distribution Licensees also lead to significant costs for consumers, not only in terms of the legal fees (recovered from consumer tariffs), but also on account of uncertainty and reversal of many regulatory decisions. This has led to a situation where there is no finality and clarity regarding Mumbai tariffs and consumers find it difficult to understand their tariff structures and make optimum decisions regarding electricity supply.

TPC-D's Response

TPC-D submitted that the total legal expense during FY 2014-15 towards various Appeals and Cases filed by it was Rs 6.57 Crore. Considering the sale of 5968 MU, the per unit impact on tariff is Rs 0.01 per kWh.

Commission's Ruling

The Commission's Orders are reasoned, speaking Orders, passed after public consultation where required. However, Prayas will be well aware that the law provides for any aggrieved party, including Licensees, to seek legal recourse against such Orders (as in the case of decisions by other such quasi-judicial authorities also), the outcome of which may or may not satisfy one entity or another. At the same time, the Commission expects that Licensees would keep in mind the overall objective of providing quality electricity supply of the required quantum at reasonable prices and desist from unreasonable litigation merely because the law enables such recourse.

2.21 OTHER ISSUES

Shri N. Ponrathnam stated that TPC-D is getting free money especially from the change-over consumers from RInfra-D to TPC-D. In case of change-over consumers, Wheeling Charges are recovered by RInfra-D and Supply Charges by TPC-D. That being the case, there is no reason why TPC-D should levy Demand Charges, Power Factor (PF) penalty and penalty for exceeding Contract Demand.

He asked whether a person owning two industrial galas or two flats in the same premises can be supplied with a single meter, and the procedure for changing Contract Demand. He also stated that the Reliability Charge levied by TPC-D is illegal.

Larsen and Toubro Ltd. (Shri Vishal Sharma) stated that the PF incentive/penalty should also be applicable to consumers using temporary supply for construction (LT VII B and HT IV) for load above 20 kW, as such construction activity is meant for city development and uses inductive loads which, at low PF, is responsible for high Distribution Losses.

Shri Mahaveer Kumar Jain stated that there is a large difference in the data presented and considered for the ARR as between TPC-D, RInfra-D, BEST and MSEDCL. For better comparison, the Commission should direct all Distribution Licensees to furnish all data in common formats. This will ensure easier comparison of data/results for taking decisions.

He also stated that, as per Rule 3 (3) of the Maharashtra Tax on Sale of Electricity Rules, 1964, the units on which the tax liability under the Maharashtra Tax on Sale of Electricity Act, 1963 is required to be computed is the difference between the units based on meter reading between two periods for which billing is being done. Hence, the recovery in the name of Tax on Sale of Electricity (ToSE) in excess of metered units is a violation of the statute and not in the public interest. Therefore, the Commission should take action on the illegal recovery by TPC-D.

Shri Jain stated further that, as per Section 4(1) of the Bombay Electricity Duty Act, 1958, TPC-D has to recover the Electricity Duty from consumers, and Section 3(1) states that recovery of duty shall be on the consumption charges. The consumption charges as per Section 2 include Energy Charges, Maximum Demand Charges, and FAC. Therefore, recovery of Electricity Duty on RAC, CSS and Fixed Charges violates the legal provisions and is not in public interest.

MMRCL stated that, since it is a Government entity, it should be exempt from paying Electricity Duty as its energy bill constitutes 21% of its costs.

Mr Kamlakar Shenoy stated that TPC-D should not ask consumers to pay its Income Tax, Interest on Debt, and Return on Equity (RoE). This amounts to misuse of the provision of the Tariff Policy meant for investment of new power projects and not for assets which are more than 100 years old, totally depreciated and repaid many times over. Hence, these expenses should not be permitted.

He also stated that there is falsification of accounts by paying interest on loans when TPC-D is flush with funds, viz., Equity worth Rs.270 crore, Reserves of nearly Rs. 15500 crore, Investment of Rs 13250 crore, and Loans and Advances of Rs 7636 crore.

TPC-D's Response

TPC-D is not getting any free money as distribution is a regulated business. The consumers are charged a two-part tariff, i.e., Fixed/Demand Charge and Energy Charge. The components of Fixed Charge are Wheeling Charge, fixed cost toward power purchase, and fixed cost of supply, and are hence recoverable from consumers.

A person owning two industrial galas in the same premises being supplied with a single meter is not feasible unless they are legally two separate entities and premises. Similarly, a person owning two flats in the same premises cannot be supplied with a single meter as these are two separate premises which require two separate points of supply.

As per the Supply Code, the Distribution Licensee shall increase or reduce the Contract Demand/Sanctioned Load of the consumer upon receipt of an application. Once the capacity is reduced, the consumer can enhance the Contract Demand only upon a fresh application. Till then, the consumer cannot claim any right on the capacity surrendered.

The Reliability Charges proposed are equivalent to Stand-by Charges presently being levied on the consumers, and have been determined by the Commission.

Applicability of PF incentive/penalty for consumers using temporary supply for construction (LT VII B and HT IV) for loads above 20 kW would be beneficial for the overall distribution system. However, the feasibility of providing for such incentive/penalty may need to be checked from the perspective of the consumers, as all consumers may not have longer-term requirements of temporary supply or larger demand, especially in the LT VII B category. TPC-D has no objection to the suggestion that the LT VII B category may be provided with an optional PF incentive/penalty scheme. The Commission may decide certain criteria such as applicability to temporary supply above certain load requirements or period of supply.

All Distribution Licensees provide the data/information in standard formats prescribed by the Commission, and the Forms accompanying the present Petition can be referred to for all number-related data.

TPC-D is levying the applicable TOSE as per the Maharashtra Tax on Sale of Electricity Act, 1963 and the GoM notification dated 21 April, 2015, wherein the rates at which the Tax shall be levied per unit of the electricity sold by the power Utility to the consumers has been prescribed.

As regards recovery of higher Electricity Duty from change-over consumers, as per the Maharashtra Electricity Duty Act, 1958, Electricity Duty has to be levied on all consumers consuming electricity in the State. The Duty is levied on consumption charges and includes Energy Charges, Fixed Charges, CSS (only applicable to OA consumers), Maximum Demand Charges, FAC, Wheeling Charges, and RAC as determined by the Commission.

As per the existing tariff structure for TPC-D approved in the MTR Order, the Energy Charges of TPC-D are the lowest among the Distribution Licensees in Mumbai and among the lowest in country. Further, the RAC, Wheeling Charge, CSS, Additional Surcharge, ToD Charge, etc., are all legitimate charges determined by the Commission. The additional RAC, Wheeling Charge, CSS, and Additional Surcharge proposed by TPC-D are charges proposed for OA consumers. The purpose is to share the cost which is incurred on OA consumers in order to reduce the burden on consumers who continue to avail power from TPC-D as a Distribution Licensee.

Regarding alleged falsification of accounts, all proposed expenses are in line with the MYT Regulations and are approved after due scrutiny. TPC-D has submitted all relevant documents as required by the Commission for verification. TPC has many other businesses and, hence, figures from the Annual Report of TPC, which is the aggregate of all its operations in India and abroad, cannot be linked in any way with the returns of TPC-D.

Commission's Ruling

The components of the ARR have been approved in accordance with the applicable MYT Regulations.

The applicability of PF incentive/penalty for different consumer categories has been discussed in Section 6 of this Order.

As per the scheme for change-over approved by the Commission, the Wheeling Charges, RAC, and CSS, if applicable, are payable by the consumers to the Wires Licensee, whereas the Fixed/Demand Charges, Energy Charges, and all other Charges, viz., FAC, PF incentive/penalty, Excess Demand Charges, etc., are payable to the Supply Licensee.

The Commission's decisions on the Additional Surcharge, Reliability Charges, etc., proposed by TPC-D for OA consumers, have been elaborated in Section 6.

All the Distribution Licensees are required to submit information as per the common formats prescribed by the Commission, and these are available with the MYT Petitions.

The levy of Electricity Duty and TOSE is under the jurisdiction of the GoM, which is the appropriate authority to approach in case of any dispute. Further, while the Electricity Duty and TOSE are recovered through the electricity bills and impact the total amount to be paid by the consumers, they do not have any bearing on the electricity tariffs being determined by the Commission. Similarly, MMRCL's claim for exemption from Electricity Duty is within the purview of GoM and not the Commission.

Regarding the repayment of Income Tax, the applicability of such provision is not limited only to investment in new power projects. Income Tax computed on the Regulatory Profit before Tax (PBT) approach is repaid if the tariff is determined under Section 62 of the EA, 2003.

3 TRUING-UP OF AGGREGATE REVENUE REQUIREMENT FOR FY 2014-15

TPC-D has stated that it has filed its MYT Petition for final truing-up of expenditure and revenue for FY 2014-15-based on actual expenditure and revenue as per the Audited Accounts, in line with Regulation 5 of the MYT Regulations, 2015. In the MTR Order, the Commission had provisionally trued-up the ARR for FY 2014-15 under the MYT Regulations, 2011.

In this Section, the Commission has analysed all the elements of actual expenditure and revenue for FY 2014-15 and the deviations from the MTR Order, and has accordingly undertaken the truing-up of expenses and revenue after prudence check under the MYT Regulations, 2011.

3.1 SALES

TPC-D's Submission

There was a 28% increase in the total number of consumers (direct plus change-over) in FY 2014-15 over the previous year, with direct consumers (connected to its network) increasing from 54,328 to 74,946 and change-over consumers increasing from 4,30,601 to 5,43,476. The total number of LT residential consumers increased from 4,36,335 to 5,74,820, i.e., an increase of 32% (104% in 0-100 units consumption Residential Category).

The actual category-wise sales for FY 2014-15, with the comparison with sales approved in the MTR Order, are given in the Table below:

Table 3-1: Category-wise Sales for FY 2014-15 as submitted by TPC-D (MU)

Sr. No	Category	MTR Order			TPC-D Petition		
		Direct Consumers	Change-over Consumers	Total	Direct Consumers	Change-over Consumers	Total
I	HIGH TENSION CATEGORIES						
1	HT I - Industry & CPP	1346.02	10.96	1356.98	1346.02	10.96	1356.98
2	HT II - Commercial	604.86	21.66	626.52	604.86	21.66	626.53
3	HT III - Public &						

Sr. No	Category	MTR Order			TPC-D Petition		
		Direct Consumers	Change-over Consumers	Total	Direct Consumers	Change-over Consumers	Total
	Govt.						
4	**HT III Group Housing**	0.00	5.44	5.44	0.00	5.44	5.44
5	**HT IV - Temporary Supply**	8.47	0.00	8.47	8.47	0.00	8.47
6	**HT V - Railways**	**925.51**	**0.00**	**925.51**	**925.51**	**0.00**	**925.51**
	22/33 kV	297.86		295.90	297.86	0.00	297.86
	100kV	627.65		629.62	627.65	0.00	627.65
7	**HT VI Public Services**	224.14		224.14	224.14	1.92	226.06
II	**LOW TENSION CATEGORIES**						
1	**LT I - Residential (BPL)**						
2	**LT I - Residential**	**188.89**	**1484.34**	**1673.24**	**188.88**	**1499.11**	**1687.99**
	0-100 units	46.81	510.46	557.27	46.88	515.55	562.42
	101-300 units	57.00	580.49	637.49	56.99	586.27	643.26
	301-500 Units	24.29	179.76	204.05	24.28	181.54	205.82
	Above 500 units (balance units)	60.79	213.64	274.43	60.74	215.75	276.49
3	**LT II - Commercial**	**304.51**	**471.72**	**776.22**	**304.51**	**476.45**	**780.95**
	Upto 20 kW	38.60	272.28	310.88	38.60	275.01	313.61
	> 20 kW & ≤ 50kW	35.25	51.39	86.64	35.25	51.91	87.16
	> 50kW	230.65	148.05	378.70	230.65	149.53	380.18
4	**LT III - Industry ≤ 20 kW**	**24.64**	**53.73**	**78.37**	**24.64**	**54.26**	**78.91**
5	**LT IV - Industry > 20kW**	**147.29**	**81.15**	**228.44**	**147.29**	**81.96**	**229.24**
6	**LT V - Advertisement & Hoardings, incl. floodlights & neon signs**	**0.02**	**0.02**	**0.04**	**0.02**	**0.02**	**0.04**
7	**LT VI – Streetlights**	**0.18**	**0.00**	**0.18**	**0.01**	**0.00**	**0.01**
8	**LT VII – Temporary Supply**	**18.24**	**0.17**	**18.41**	**18.13**	**0.15**	**18.28**
	- TSR – Temporary Supply Religious	0.01	0.00	0.01	0.00	0.00	0.00
	- TSO – Temporary Supply Others	18.23	0.17	18.40	18.13	0.15	18.28
9	**LT VIII – Crematoriums and Burial Grounds**	-	0.31	0.31	0.00	0.31	0.31
10	**LT IX – Public**	**13.36**	**10.44**	**23.80**	**13.36**	**10.54**	**23.90**

Sr. No	Category	MTR Order			TPC-D Petition		
		Direct Consumers	Change-over Consumers	Total	Direct Consumers	Change-over Consumers	Total
	Services						
	15 day adjustments	2.99	12.84	15.83	(0.15)	(0.15)	(0.30)
	GRAND TOTAL	**3809.11**	**2152.79**	**5961.59**	**3805.70**	**2162.64**	**5968.34**

The data submitted in the MTR Order was provisional. Thus, both the Direct and Change-over sales of TPC-D are almost equal to that approved in the MTR Order for FY 2014-15.

Commission's Analysis and Ruling

The Commission has compared the change-over sales data for FY 2014-15 submitted by TPC-D and RInfra-D. TPC-D's change-over sales figure of 2162.64 MU does not tally with RInfra-D's figure of 1989.74 MU, even after grossing up RInfra-D's change-over sales on account of wheeling losses. TPC-D stated that the total sale to change-over consumers in FY 2014-15 was 2162.64 MU, while the actual grossed-up energy settled with RInfra-D is 1948.10 MU at meter periphery, i.e., 2177.20 MU at the Intra-State Transmission System (InSTS). The difference between 2162.64 MU and 2177.20 MU is due to billing cycle difference of LT consumers.

The Commission has approved the actual sales for FY 2014-15 as submitted by TPC-D, as shown in the Table below:

Table 3-2: Direct Sales and Change-over Sales in FY 2014-15 approved by Commission (MU)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
Direct Sales	3809.11	3805.70	3805.70
Change-over Sales	2152.79	2162.64	2162.64
Total	**5961.59**	**5968.34**	**5968.34**

3.2 DISTRIBUTION LOSSES AND ENERGY INPUT REQUIREMENT

TPC-D's Submission

The actual Distribution Loss of TPC-D's distribution network in FY 2014-15 was 0.59% as against 1.02% approved by the Commission. Further, the energy credited to OA consumers has been added while computing the Distribution Loss. The Distribution Loss also does not include any loss for change-over sales as such consumers take power supply from TPC-D but remain on the network of RInfra-D. The actual Distribution Loss for FY 2014-15 is as shown in the Table below:

Table 3-3: Distribution Loss for FY 2014-15 as submitted by TPC-D

Particulars	Notation	FY 2014-15	
		MTR Order	TPC-D Petition
Direct Energy Sales (MU)	A	3809.11	3805.70
Energy passed to OA consumer (MU)	B	-	47.01
Energy measured at T<> D interface (MU)	C=A+B	3848.37	3875.65
Energy considered for computing Distribution Loss (MU)	D=B+C	3809.11	3852.71
Distribution Loss (%)	**E=1-(D/C)**	**1.02%**	**0.59%**

The Transmission Losses for FY 2014-15 have been considered as 3.90%, based on the Maharashtra State Load Despatch Centre (MSLDC)'s provisional Grid Transmission Loss statement for FY 2014-15. This may be revised once the Final Balancing and Settlement Mechanism (FBSM) bills are issued by MSLDC. The actual Energy Balance for FY 2014-15 is as shown in the Table below:

Table 3-4: Summary of Energy Balance for FY 2014-15 as submitted by TPC-D (MU)

Particulars	MTR Order	TPC-D Petition
TPC-D Sales (Retail) with 15 days Adjustments	3809.11	3805.70
Bill credit given to OA consumers	-	47.01
Total Sales		**3852.71**
Distribution Losses	1.02%	0.59%
ABT Meter reading at T<>D Interface	-	3875.65
OA wind credit at T<>D Interface	-	45.96
Energy Requirement for TPC-D consumers at T<>D interface	3848.37	3829.69
Settled energy on monthly basis to change-over consumers	2152.79	2177.20
Bill credit given to OA consumers	-	1.22
Sale to Change-over consumers after adjusting for OA wind credit		**2175.99**
Wheeling Loss RInfra-D Network	0.00%	0.00%
Energy Requirement for Change-over consumers	2152.79	2175.99
Total Energy Requirement at T<>D	**6001.16**	**6005.67**
Transmission Loss	3.89%	3.90%
Total Energy Requirement at G<>T	**6234.61**	**6249.42**

Particulars	MTR Order	TPC-D Petition
Sale/ (Purchase) to Imbalance Pool		0.39
Less: Reduction in Sales DSM	0.00	0.00
Total Energy Requirement at G<>T Interface	**6234.61**	**6249.80**

The net energy input requirement works out to 6249.80 MU for FY 2014-15.

Commission's Analysis and Ruling

The Commission analysed the Energy Balance computation submitted by TPC-D in Form 1.4 and observed that it did not tally with the details given in the Petition, as the Distribution Loss works out to (0.17)%. The Commission asked TPC-D to clarify this and re-compute the Distribution Losses. TPC-D submitted the revised computations. The Commission has trued-up the Distribution Losses for FY 2014-15-based on TPC-D's submissions and data obtained from MSLDC.

To calculate the Distribution Losses, the Commission has considered Transmission Loss of 3.89% for FY 2014-15-based on MSLDC data. The Energy Input to TPC-D at T<> D interface has been taken from MSLDC submissions. Accordingly, the Distribution Loss and Energy Balance approved by the Commission for FY 2014-15 are as given in the Table below:

Table 3-5: Summary of Energy Balance for FY 2014-15 approved by Commission (MU)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
TPC-D Sales (Retail) with 15 days Adjustments	3809.11	3805.70	3805.70
Bill credit given to OA consumers	-	47.01	47.01
Total Sales	3809.11	3852.71	3852.71
Distribution Losses	1.02%	0.59%	1.08%
ABT Meter reading at T<>D Interface	-	3875.65	
OA wind credit at T<>D Interface	-	45.96	
Energy Requirement for TPC-D consumers at T<>D interface	3848.37	3829.69	3894.72
Settled energy on monthly basis to change-over consumers	2152.79	2177.20	2162.79
Bill credit given to OA consumers	-	1.22	1.22
Sale to Change-over consumers after adjusting for OA wind credit	2152.79	2175.99	2161.57
Energy Requirement for Change-over consumers	2152.79	2175.99	2161.57

Particulars	MTR Order	TPC-D Petition	Approved in this Order
Total Energy Requirement at T<>D	6001.16	6005.67	6070.52
Transmission Loss	3.89%	3.90%	3.89%
Total Energy Requirement at G<>T	6234.61	6249.42	6316.22
Surplus Sale/(Purchase)		0.39	0.39
Total Energy Requirement at G<>T Interface	**6234.61**	**6249.80**	**6316.42**

The Distribution Loss computed by the Commission for FY 2014-15, after final true-up, by considering the energy drawn by TPC-D at T<>D interface-based on the MSLDC data, works out to 1.08% as against 0.59% submitted by TPC-D and the approved loss trajectory of 1.02%.

Although TPC-D has computed the Distribution Losses for FY 2014-15 as 0.59%, it has not sought sharing of Efficiency Gains on account of the lower than normative Distribution Losses. The Commission had approved the Distribution Loss trajectory of 1.02% for FY 2014-15 considering the projected increase in the LT distribution network by TPC-D and lower HT:LT ratio. However, TPC-D has not expanded the LT distribution network as anticipated. At the same time, the total Distribution Losses of TPC-D, at 1.08%, are on the lower side. Hence, no sharing of Efficiency Losses has been considered on this count for FY 2014-15.

3.3 POWER PURCHASE QUANTUM AND COST

TPC-D's Submission

The summary of the power purchase quantum and cost for FY 2014-15 is given in the Table below:

Table 3-6: Power Purchase Quantum & Cost for FY 2014-15 as submitted by TPC-D

Particulars	MTR Order			TPC-D Petition		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
Power Purchase Expenses (TPC-G)	3,461.97	1824.11	5.27	3245.85	1559.69	4.81
Unit 6 (TPC-G)	-	-	-	215.85	285.69	13.24
Power Purchase Expenses (RPS)	310.80	164.00	6.65	311.25	163.70	5.26

Particulars	MTR Order			TPC-D Petition		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
Power Purchase Expenses (REC)		42.83			42.83	1.57
Power Purchase Expenses (Bilateral Power Purchase)	2462.21	752.32	3.06	1960.71	614.19	3.13
Energy Under Stand-by				24.60	11.19	4.55
Unscheduled Interchange				491.54	128.82	2.62
Sale to Outside Licence Area	(0.39)	(0.16)	4.15	(0.39)	(0.16)	4.15
Stand-by Charges Payable		149.67			149.67	
Transmission and MSLDC Charges		439.02			439.02	
Total Power Purchase	**6234.60**	**3371.79**	**5.41**	**6249.42**	**3394.68**	**5.43**

3.3.1 Procurement from TPC-G

TPC-D's Submission

TPC-D's main source of power purchase is from the Generating Units of TPC-G. It has a long-term PPA with TPC-G, which contributes 52% of its total energy requirement. Its power purchase from TPC-G is based on its share in the respective Units of TPC-G, i.e., 48.83% share in Units 5 to 7 and 60% share in Unit 8.

The break-up of the Unit-wise cost of power purchase from TPC-G is shown in the Table below:

Table 3-7: Quantum & Cost of Power Purchase from TPC-G for FY 2014-15 as submitted by TPC-D (Rs. crore)

Unit	Fuel Type	Quantum (MU)	Energy Charges (Rs./kWh)	Energy Charges (Rs. crore)	Fixed/ Capacity Charges (Rs. crore)	Total Power Purchase Cost (Rs. crore)
		A	b	c=a*b	D	f=c+d+e
Unit-4	Unit-4	(0.79)	0.00	0.00	689.79	1559.69
Unit-5	U5-NG	18.27	3.78	6.90		
	U5-RLNG	6.29	11.48	7.22		

Unit	Fuel Type	Quantum (MU)	Energy Charges (Rs./kWh)	Energy Charges (Rs. crore)	Fixed/ Capacity Charges (Rs. crore)	Total Power Purchase Cost (Rs. crore)
		A	b	c=a*b	D	f=c+d+e
	U5-Coal	1487.31	3.06	455.48		
	U5-Oil	1.21	13.73	1.66		
	U5-Gas	14.16	3.87	5.48		
Unit-6	U6-Oil	3.34	0.00	4.26		
	U6-RLNG	41.58	8.79	36.54		
	U6-NG	33.76	3.63	12.24		
	U6- Aux	(3.61)	0.00	0.00		
	U6-NAPM	10.94	3.73	4.08		
Unit-7	U7-NG	545.02	2.47	134.78		
	U7-RLNG	1.25	9.29	1.16		
	U7-RLNG	0.28	4.09	0.11		
Bhira		398.24	0.89	35.57		
Bhivpuri		157.42	1.30	20.53		
Khopoli		129.72	1.94	25.21		
Unit-8	Unit 8	401.48	2.89	115.99		
Total		**3245.85**	**2.67**	**867.22**	**689.79**	**1557.01**
FBSM Adjustment						2.68
Total		**3245.85**				**1559.69**
Rs./kWh						**4.81**

TPC-G Unit 4 was on Stand-by. It had not been operated for a significant time, and was unlikely to be operated due to high cost of generation. In view of this, it was mutually decided between TPC-D and TPC-G to discontinue payment of Fixed Charges of Unit 4. Accordingly, the fixed cost of Unit 4 has not been paid by TPC-D for FY 2014-15. In the MTR Order, the Commission, in the provisional Truing-up of FY 2014-15, had also not considered the Fixed Cost of Unit 4.

Commission's Analysis and Ruling

The Commission asked TPC-D for details of the Merit Order Despatch (MOD) followed for power purchase, including details of backing down of Units of TPC-G in FY 2014-15, tariff considered for MOD, technical minimum level, etc. TPC-D submitted the required details, which have been scrutinised by the Commission.

The Commission asked TPC-D for the actual Unit-wise Fixed Charges for power purchase from TPC-G, which was submitted by TPC-D as shown in the Table below:

Table 3-8: Unit-wise fixed cost of TPC-G for FY 2014-15 as submitted by TPC-D

(Rs. crore)

Source	FY 2014-15
Unit 5	196.02
Unit 6	165.53
Unit 7	84.42
Unit 8	168.70
Hydro	75.12
Total	**689.79**
Adjustment for FBSM settlement	2.68
Total	**692.47**

It is observed that TPC-D has considered two different rates for purchase from Unit 6 in FY 2014-15, viz.,

- For contractual obligation – 86 MU @ Rs. 6.64/kWh
- For meeting Mumbai System Demand – 216 MU @ Rs. 13.24/kWh

In reply to the Commission's query, TPC-D stated that it had requested TPC-G to keep Unit 6 under economic shutdown on account of its high cost of power. However, in addition to the generation of Unit 6 to meet the requirement of TPC-D, the Unit was also required to run under the direction of MSLDC to address system constraints in Mumbai. As per the arrangement arrived at in the meeting held by Principal Secretary (Energy), GoM on 24 March, 2014, the generation from Unit 6 was shared by all Mumbai Distribution Licensees in the ratio of sharing of transmission costs, at actuals.

The issue of higher rate of power purchase from Unit 6 in FY 2014-15 for meeting Mumbai System Demand has been dealt with by the Commission in its Order dated 19 March, 2015 in Case No. 172 of 2014, wherein the Commission ruled as under:

> *"19. The Commission directs all the concerned constituent Licensees to comply with the methodology, scheduling and other directions given by MSLDC from time to time for sharing of TPC-G Unit 6 generation and its subsequent commercial settlement.*
>
> *20. **As regards Energy Charges of TPC-G Unit 6, the Commission directs that the Energy Charges shall be as approved by the Commission in its Tariff Order dated 5 June, 2013 in Case No. 177 of 2011, with any change on account of revision in fuel cost recoverable through the Fuel Adjustment Cost mechanism if applicable. Bills may be revised accordingly**. **Cost implications on account of***

> ***changes, if any, in performance parameters such as Station Heat Rate, auxiliary consumption, etc. shall be considered by the Commission during the final truing-up process for TPC-G."***

Accordingly, the bills were required to be revised by TPC-G for sale of power from Unit 6 to meet the Mumbai System Demand based on actual fuel price and the normative performance parameters. However, from the power purchase cost claimed by TPC-D for FY 2014-15, it appears that the bills have not been revised.

In its recent MYT Order for TPC-G dated 8 August, 2016 in Case No. 32 of 2016, the Commission has trued-up the ARR of TPC-G for FY 2014-15, including for Unit 6 for the period operated under MSLDC directions, and has directed TPC-D to pay an amount of Rs. 1.79 crore towards power procured from TPC-G Unit 6. This, along with the Revenue Gap till FY 2015-16 and associated carrying cost, amounts to Rs. 3.53 crore payable by TPC-D to TPC-G in September to November, 2016 and has, hence, been considered separately in the power purchase cost of FY 2016-17. For truing-up, the Commission has taken the cost of power purchase paid by TPC-D to TPC-G as per its Order dated 8 August, 2016 in Case No. 32 of 2016.

3.3.2 Renewable Purchase Obligation

TPC-D's Submission

TPC-D stated that, as per the MERC (Renewable Purchase Obligation, its Compliance and Implementation of Renewable Energy Certificate Framework) Regulations ('RPO Regulations'), 2010, each Distribution Licensee was required to meet 9.00% of its requirement through RE sources in FY 2014-15, comprising 8.50% from non-Solar sources, including 0.20% from Mini/Micro Hydel sources, and 0.50% from Solar sources.

TPC-D had purchased non-Solar and Solar RE power from various sources as well as through the REC mechanism. The percentage of RE procured during FY 2014-15 is given in the Table below:

Table 3-9: Renewable Purchase Obligation for FY 2014-15 as submitted by TPC-D (MU)

Renewable Source		**% RPO for FY 2013-14**	**Requirement @ InSTS**	**Obligation**	**Previous year obligations**	**Preferential Tariff purchase**	**Met through REC**	**Total**	**Shortfall/ (Surplus)**
		1	**2**	**3 =1 * 2**	**4**	**5**	**6**	**7 =5+ 6**	**8 = 7 -3-4**
RE Other than Mini Hydro and Solar	a	8.48%		530.14		268.87	264.56	533.42	(3.29)
Mini Hydro	b	0.02%		1.06	2.38	0.00	0.00	0.00	3.44
Total Non-Solar	c = a+b	8.50%		531.20		268.87	264.56	533.42	0.15
Solar	d	0.50%		31.25	63.85	42.38	9.00	51.38	43.71
Total	e =c+d	9.00%	6249.42	562.45		311.25	273.56	584.81	(22.36)

TPC-D has purchased 268.87 MU from non-Solar sources and 264.56 MU through non-Solar RECs, thereby fulfilling the non-Solar RPO except for Mini/Micro Hydro power. The Commission had allowed it to cumulatively comply with its RPO for Mini/Micro Hydro by FY 2015-16.

TPC-D has not received any positive response, despite advertisements in the newspapers, for procurement of RE from Mini/Micro Hydro power plants. It also approached a Mini/Micro Hydro Generator, M/s. Wat-ere-source Technologies Pvt. Ltd. However, its plant is proposed to be commissioned in FY 2016-17. TPC-D has made a detailed submission to Commission with respect to its RPO compliance for FY 2014-15 in its letter dated 24 November, 2015. Despite all its efforts, it has not been able to achieve its RPO with respect to Mini/Micro Hydro power. However, it will try to do so by the end of FY 2015-16. The Commission may allow it to meet the RPO through purchase of RECs in case it is unable to fulfil it.

TPC-D has procured an excess quantum of 3.25 MU towards Non-Solar RPO, and will approach the Commission for issue of Certificate for this excess once the RPO compliance verification Order for FY 2014-15 is issued, in line with the amendment dated

30 December, 2014 to the REC Regulations of the Central Electricity Regulatory Commission (CERC) and the Order of the Commission dated 11 January, 2016 in Case No. 39 of 2015.

The energy requirement based on which the RPO is determined depends upon factors such as Energy Requirement at Distribution Level, Energy Requirement at Transmission Level, change-over sales, Transmission Loss computation and Wind Energy credit of TPC-D and OA consumers, which are ascertained by Licensees after some time. For instance, finalisation of change-over sales is lagging by 4 months. Hence, it would be difficult to exactly estimate the RPO requirement and some deviation is bound to be there. However, as per Regulation 12 of the RPO Regulations, 2010, a Regulatory Charge has to be paid on failure to comply with RPO. In its Order dated 4 August, 2015 in Case No. 190 of 2014 in the case of MSEDCL, the Commission had invoked Regulation 12. Therefore, the Commission may allow some deviation from the minimum RPO and not penalise it for procuring marginally more or less RECs. Excess RECs may be allowed either (i) in the range of +/- 2% or (ii) allowed to be carried forward to the next year.

TPC-D purchased 42.38 MU of Solar power at the preferential tariff and 9 MU through RECs. Although it has met Solar RPO requirement on stand-alone basis for FY 2014-15, it has not been able to fulfil its backlog for previous years to the tune of 43.71 MU. However, the Commission in its Order in Case No. 182 of 2013 had allowed it to cumulatively comply with the RPO by the end of FY 2015-16. TPC-D has met a considerable amount of its Solar RPO shortfall in FY 2014-15 after its long-term contract with Tata Power Renewable Energy Ltd. (TPREL) for its 25 MW Solar Power Plant became operational. The balance shortfall will be met with the Solar RPO for FY 2015-16.

The cost of RE purchase for FY 2014-15 is given in the Table below:

Table 3-10: Total Cost of RE purchase for FY 2014-15 as submitted by TPC-D

RE Purchase	Quantum (MU)	Rate (Rs./kWh)	Cost (Rs. crore)
Wind energy Purchase	268.87	4.56	122.52
Solar Purchase	42.38	9.72	41.18
Total RE Purchase	**311.25**	**5.26**	**163.70**
REC Purchase	**Quantum (MU)**	**Rate (Rs./kWh)**	**Cost (Rs. crore)**
Non Solar REC	264.56	1.50	39.68
Solar REC	9.00	3.50	3.15
Total REC Purchase	**273.56**	**1.57**	**42.83**

Commission's Analysis and Ruling

The Commission asked for the source-wise landed cost and other details of RE purchase for FY 2014-15. These have been analysed before approving the RE purchase for FY 2014-15. As regards the purchase of 42.38 MU of Solar power, the Commission asked TPC-D to justify the rate of Rs. 9.72/kWh. TPC-D was also asked to clarify the levelised tariff applicable for the 25 MW Solar Plant of TPREL, based on the year of PPA and Commercial Operation Date (COD).

TPC-D stated that it has purchased its Solar Power requirement from three sources, viz.,

i) 3 MWp Mulshi Solar plant at Rs. 17.91/unit
ii) 60.48 KWp Solar Roof Top plant at Rs. 18.41/unit and
iii) 25 MW Palaswadi Solar Plant at Rs. 8.80/unit.

The rate of Rs 9.72 per kWh is the weighted average rate of power purchase from all these three power plants for FY 2014-15. Regarding purchase from TPREL, TPC-D stated that it had signed a PPA with 25 MW Palaswadi Solar Plant in FY 2012-13, which was commissioned on 31 May, 2014. The levelised tariff applicable to it is Rs. 8.98/kWh as per the RE Tariff Orders dated 22 March, 2013 in Case No. 6 of 2013 and dated 7 July, 2014 in Case No. 100 of 2014. However, since TPREL is providing 2% discount for early payment, the rate charged to TPC-D is Rs. 8.80/kWh instead of Rs. 8.98/kWh.

The Commission has considered the non-Solar RPO for FY 2014-15 as 8.48% (the approved RPO, excluding Mini/Micro Hydro RPO) of the actual total power purchase in FY 2014-15. The rates for non-Solar RE purchase have been considered based on the preferential tariff approved by the Commission for different years. TPC-D has considered the landed rate for purchase from Visapur 4 MW as Rs. 4.36 per kWh, as against the preferential tariff of Rs. 4.25 per kWh. As the Commission allows purchase of RE power only at the preferential tariff, the Commission has considered the preferential tariff of Rs. 4.25 per kWh for the purchase from Visapur 4 MW.

TPC-D had purchased non-Solar RECs equivalent to 264.56 MUs. Considering its RPO against the total power purchased in FY 2014-15, TPC-D has purchased RECs equivalent to 3.25 MU in excess of its RPO, considering the energy requirement at InSTS as 6249.80 MU. However, the Commission has taken the actual energy input at InSTS as 6316.80 MU, based on MSLDC inputs as discussed earlier. The effective non-Solar RPO quantum works out to 535.63 MU, and the Solar RPO quantum to 31.58 MU. Thus, there is no excess purchase of non-Solar RE, and hence the entire purchase of Non-Solar and Solar RE has been allowed. In its Order dated 31 August, 2016 in Case No. 18 of 2016 regarding verification of RPO compliance by TPC-D for FY 2014-15, the Commission had taken the actual total energy purchase for computing the RPO requirement. However, this difference in approach has no material impact as there is no excess purchase.

The Commission has approved the Solar RE purchase considering the source-wise purchase and the corresponding preferential tariffs approved by the Commission. It also approves purchase of RECs equivalent to 9 MU, as submitted by TPC-D, based on actuals. TPC-D has purchased non-Solar and Solar RECs at the rates of Rs. 1.50 per kWh and Rs. 3.50 per kWh, respectively, and the Commission has approved these.

The Commission has approved the Solar and non-Solar power purchase for FY 2014-15 as shown in the Table below:

Table 3-11: Solar and Non-Solar RE power purchase for FY 2014-15 approved by Commission

Source	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)
Solar power procurement				42.38	41.18	9.72	42.18	40.94	9.71
Solar REC Procurement					3.15			3.15	
Total Solar including REC				**42.38**	**44.33**	**10.46**	**42.18**	**44.09**	**10.45**
Non-Solar RE power procurement				268.87	122.52	4.56	268.87	122.45	4.55
Non-Solar REC Purchase					39.68			39.68	
Total non-Solar including REC				**268.87**	**162.20**	**6.03**	**268.87**	**162.13**	**6.03**
Total RE Power Purchase	310.80	164.00	5.28	311.25	163.70	5.26	311.05	163.39	5.25
Total REC Purchase		42.83			42.83			42.83	
Total Renewable procurement	**310.80**	**206.83**	**6.65**	**311.25**	**206.53**	**6.64**	**311.05**	**206.22**	**6.63**

3.3.3 Power Purchase from Bilateral Sources and Imbalance Pool

TPC-D's Submission

1960.71 MU was purchased at Rs. 3.13 per kWh from bilateral sources in FY 2014-15, which was 31% of total requirement. The main reason for higher bilateral power purchase was the availability of low cost power in the market. TPC-D also purchased power from the Imbalance Pool to the extent of 491.54 MU at Rs. 2.62 kWh, considering the availability of low cost power to TPC-D under the FBSM mechanism. The Unscheduled Interchange (UI) quantum has been derived from the provisional FBSM data. TPC-D also purchased 24.60 MU of power under the Stand-by Agreement from MSEDCL at the weighted average rate of Rs. 5.33 per kWh, and there was a reduction in cost of power purchase under Stand-by due to adjustment of previous years to the extent of Rs. 1.93 crore. The break-up of power purchase from bilateral sources, Imbalance Pool, and Stand-by arrangement is given in the Table below:

Table 3-12: Power Purchase from External Sources in FY 2014-15 as submitted by TPC-D

Particulars	TPC-D Petition		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
Bilateral Sources	1960.71	614.19	3.13
Imbalance Pool	491.54	128.82	2.62
Energy purchase under Stand-by	24.60	11.19	4.55
Total	**2476.86**	**754.20**	**3.04**

Commission's Analysis and Ruling

As regards power purchase from bilateral sources, the Commission asked TPC-D to clarify whether it was procured under competitive bidding and the reasons in case it was not followed. It also asked TPC-D to clarify whether the power was purchased on round the clock (RTC) basis or for specific hours, and submit a copy of all Agreements for purchase of short-term power except for power purchased through Power Exchanges.

TPC-D stated that it has purchased its bilateral power through competitive bidding during FY 2014-15, and submitted the results of the competitive bidding. It clarified that the power was purchased on RTC basis as well as for specific hours, and submitted copies of the Agreements for short-term power. The Commission, after prudence check, has accepted TPC-D's submissions and has accordingly approved the quantum and cost of power purchase from bilateral sources.

The Commission asked TPC-D for the reasons for purchasing short-term power in view of the backing down of the long-term sources of power purchase, and for instances where short-term power purchased through competitive bidding has not been scheduled due to transmission constraints.

TPC-D stated that it procures power on short-term basis primarily for the shortfall in meeting the load demand of consumers. Further, scheduling/backing down of long-term sources is carried out by MSLDC on a day-ahead basis and on real-time basis as per the State MOD stack, which results in availability of cheaper power from the State Pool for the Distribution Licensees. There are no instances where the short-term power purchased through competitive bidding has not been scheduled due to transmission constraints.

In the MTR Order, the Commission had issued the following directions to TPC-D:

> *"The Ministry of Power (MoP), vide Resolution dated 15 May, 2012, has issued Guidelines for short-term power procurement by Distribution Licensees through tariff--based competitive bidding under S. 63 of the EA, 2003. In line with the same, the Commission directs TPC-D to procure the short-term power over and above the approved short-term power purchase for FY 2015-16, in case the need arises, through the competitive bidding route only, in accordance with the above-said Guidelines, except in case of power procured from the Power Exchange or under Banking mechanism. In accordance with the said Resolution, TPC-D shall have to submit a Petition to the Commission within two days of signing the PPA, for adoption of Tariff determined through competitive bidding, in case the quantum of power procured and tariff determined are higher than the above blanket approval granted by the Commission. Alternatively, TPC-D may also approach the Commission for prior approval of such short-term power purchase in excess of the approved quantum and cost of short-term power purchase, in case TPC-D does not procure short-term power through the competitive bidding route."*

Even though this direction was applicable for FY 2015-16, the same principle applies for FY 2014-15 also. In the MTR Order, the Commission had approved Rs. 3.06/kWh as the average power purchase rate for short-term sources. In response to the Commission's query, TPC-D has stated how it complied with the directive in FY 2015-16, but not for FY 2014-15. However, from the submissions made, it is observed that TPC-D's average rate of short-term purchase for FY 2014-15 is Rs. 3.04/kWh, which is within the ceiling of Rs. 3.06/kWh.

The quantum of purchase under the Imbalance Pool has been corrected based on the input from MSLDC. The Commission has approved the actual purchase of power under the Stand-by arrangement.

The summary of power purchase by TPC-D from bilateral sources, Imbalance Pool, and under Stand-by arrangement as approved by the Commission is given in the following Table:

Table 3-13: Power Purchase from Bilateral Sources & Imbalance Pool in FY 2014-15 approved by the Commission

Source	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)
Nivade + Supa	49.23	12.43	2.52	-	-	-	-	-	-
Bilateral Sources	1911.54	601.66	3.15	1960.71	614.19	3.13	1960.71	614.19	3.13
Imbalance Pool	476.84	140.70	2.95	491.54	128.82	2.62	558.54	128.82	2.31
Imbalance Pool adjustment for past period		(15.25)			-			-	
Energy purchase under Stand-by	24.60	12.77	4.51	24.60	11.19	4.55	24.60	11.19	4.55
Total Short-term Purchase	2462.21	752.32	3.06	2476.86	754.02	3.04	2543.86	754.20	2.96

3.3.4 Stand-by Charges, Transmission Charges and MSLDC Charges

TPC-D's Submission

The Stand-by Charges and Transmission Charges for FY 2014-15 amounted to Rs. 149.67 crore and Rs. 439.06 crore (including MSLDC charges)

The Stand-by Charges have been paid as determined in the previous MYT Order. For the first five months of FY 2014-15, Transmission Charges have been paid as determined in

Case No. 56 of 2013. For the remaining months, revised charges have been paid as determined in Case No. 123 of 2014 dated 14 August, 2014 and applicable from 1 September, 2014.

Transmission Charges and Stand-by charges paid by TPC-D in FY 2014-15 are shown in the Table below:

Table 3-14: Transmission Charges and Stand-by Charges as submitted by TPC-D (Rs. crore)

Sr. No.	Particulars	MTR Order	TPC-D Petition
1	Stand-by Charges	149.67	149.67
2	Transmission Charges (including MSLDC Charges)	439.02	439.06

Commission's Analysis and Ruling

The Commission asked for the break-up of actual Transmission Charges and MSLDC Charges for FY 2014-15. TPC-D submitted the break-up, and the Commission has approved these. The Commission has considered the actual Stand-by Charges of Rs. 149.67 crore paid to MSEDCL.

Table 3-15: Transmission Charges, Stand-by Charges, and SLDC Charges approved by the Commission (Rs. crore)

Sr. No.	Particulars	MTR Order	TPC-D Petition	Approved in this Order
1	Stand-by Charges	149.67	149.67	149.67
2	Transmission Charges	436.72	439.06	436.76
3	MSLDC Charges	2.30		2.30

3.3.5 Summary of Power Purchase Costs for FY 2014-15

Commission's Analysis and Ruling

The summary of power purchase quantum and costs, including Stand-by Charges and Transmission Charges, approved by the Commission for FY 2014-15 is given in the following Table:

Table 3-16: Summary of Power Purchase for FY 2014-15 approved by Commission

Source	**MTR Order**			**TPC-D Petition**			**Approved in this Order**		
	Quantum (MU)	**Cost (Rs. crore)**	**Rate (Rs./ kWh)**	**Quantum (MU)**	**Cost (Rs. crore)**	**Rate (Rs./ kWh)**	**Quantum (MU)**	**Cost (Rs. crore)**	**Rate (Rs./ kWh)**
TPC-G	3,461.97	1824.11	5.27	3245.85	1559.69	4.81	3245.85	1559.69	4.81
Unit 6	-	-	-	215.85	285.69	13.24	215.85	285.69	13.24
RE Purchase									
Solar power procurement				42.38	41.18	9.72	42.18	40.94	9.71
Solar REC Procurement					3.15			3.15	
Total Solar including REC				42.38	44.33	10.46	42.18	44.09	10.45
Non-Solar RE power procurement				268.87	122.52	4.56	268.87	122.45	4.55
Non-SolarREC Purchase					39.68			39.68	
Total non-Solar including REC				268.87	162.20	6.03	268.87	162.13	6.03
Total RE Power Purchase	310.80	164.00	5.28	311.25	163.70	5.26	311.05	163.39	5.25
Total REC Purchase		42.83			42.83			42.83	
Total Renewable procurement	310.80	206.83	6.65	311.25	206.53	6.64	311.05	206.22	6.63
Bilateral power purchase									
Imbalance Pool	476.84	140.70	2.95	491.54	128.82	2.62	558.54	128.82	2.31
Bilateral Purchase	1911.54	601.66	3.15	1960.71	614.19	3.13	1960.71	614.19	3.13
Energy purchase under Stand-by	24.60	12.77	4.51	24.60	11.19	4.55	24.60	11.19	4.55
Total Short term power purchase	2462.21	752.32	3.06	2452.26	743.01	3.04	2543.86	754.20	2.96
OLA Sale	(0.39)	(0.16)	4.15	(0.39)	(0.16)	4.15	(0.39)	(0.16)	4.15
Stand-by Charges Payable		149.67			149.67			149.67	
Transmission Charges Payable		436.72			436.76			436.76	
MSLDC Charges Payable		2.30			2.30			2.30	
Total power purchase in FY 2014-15	6234.60	3371.79	5.41	6249.42	3394.68	5.43	6316.22	3394.37	5.37

3.4 OPERATION AND MAINTENANCE EXPENSES

TPC-D's Submission

The actual O&M Expenses for FY 2014-15 were Rs. 193.34 crore, as shown in the Table below:

Table 3-17: Actual O&M Expense in FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Employee Expenses		38.36		37.62
Administration & General Expenses (Including Brand Equity)		29.53		67.15
Repairs and Maintenance Expenses		17.84		20.68
Total	**81.96**	**85.73**	**71.25**	**107.61**

3.4.1 Adjustments to O&M Expenses

The actual O&M Expenses for the Wires Business and Supply Business have been adjusted to the following extent:

<u>Load Control Centre (LCC) Expenditure</u>

The LCC expenditure was allocated to Generation, Transmission and Distribution Businesses of TPC in a certain ratio till FY 2013-14. However, it has not been allocated separately for FY 2014-15 but is part of the O&M expenditure.

<u>Brand Equity Expenditure</u>

The computation of Brand Equity expenditure is given in the Table below:

Table 3-18: Computation of Brand Equity expenses for FY 2014-15 as submitted by TPC-D

Particulars	Basis	FY 2014-15 (Based on revenue of FY 2013-14)
Revenue from Mumbai Licensed Area Business-based on allocation statement	a	1827.72
Add: Cash Discount pertaining to Mumbai Licensed Area	Basis	39.12
Add: Income in respect of services rendered pertaining to Mumbai Licensed Area	c	1.56

Particulars	Basis	FY 2014-15 (Based on revenue of FY 2013-14)
Add: Delayed Payment Charges pertaining to Mumbai Licensed Area	d	6.37
Total Revenue to be considered for Mumbai Licensed Area	e=a+b+c+d	1874.77
Contribution to Tata Brand Equity	**f=0.25%*e**	**4.69**
Service Tax @ 12.36%	g=Service Tax * f	0.58
Total contribution to Brand Equity including Service Tax	**h=f+g**	**5.27**

Corporate Social Responsibility (CSR) Expenditure

The Commission had disallowed the CSR expenditure for FY 2014-15, and TPC-D has accordingly excluded it from the O&M Expenses.

3.4.2 Total O&M Expenses for FY 2014-15

The O&M Expenses for FY 2014-15 for the entire Distribution Business, along with the break-up for Wires Business and Supply Business, are as follows:

Table 3-19: Actual O&M Expense for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Employee Expenses		38.86		37.62
Administration & General Expenses (Including Brand Equity)		29.53		67.15
Repairs and Maintenance Expenses		17.84		2.84
Total		**85.73**		**107.61**
Less				
Brand Equity considered in the Accounts		1.92		3.56
DSM Expenses		-		2.82
Add				
Allocation of Brand Equity Expenses to TPC-D		1.84		3.42
O&M Expenses	**81.96**	**85.66**	**71.25**	**104.65**

The normative O&M Expenses for FY 2014-15 computed based on the MYT Regulations, 2011, is as given in the Table below:

Table 3-20: Normative O&M Expenditure for Wires Business and Supply Business for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Parameter	Norm	Value	Normative (Rs. crore)	TPC-D Petition (Rs. crore)	Difference (Rs. crore)
Wires Business						
Wheeled Energy	Paise/kWh	14.46	3875.65	56.04		
R&M expenses	% of Opening GFA	2.00%	1325.12	26.50		
Total				**82.54**	**85.66**	**3.12**
Supply Business						
Sales in Supply Business	Paise/kWh	11.91	6015.35	71.64		
R&M expenses	% of Opening GFA	0.25%	87.56	0.22		
Total				**71.86**	**104.65**	**32.79**
Total O&M Expenses for FY 2014-15	Rs. crore			**154.41**	**190.31**	**35.90**

In its MTR Petition, TPC-D had made a detailed submission justifying the increase in O&M Expenditure. However, the MTR Order stated as follows:

> *"The Commission has not taken any view regarding TPC-D's submission that the actual O&M expenditure should be allowed at the time of truing-up for FY 2014-15 and FY 2015-16, as it is premature. At the time of truing-up, depending on the extent of difference between the actual and normative O&M expenditure and other factors, TPC-D may approach the Commission again."*

The MYT Regulations, 2011 defined the norms for O&M Expenditure for the Distribution Wires Business and the Retail Supply Business based on the historical trend of expenditure of the Distribution Licensees from FY 2006-07 to FY 2009-10. There were different norms for different Licensees-based on their respective trends as follows:

- For Wheeled energy / For sale in Supply Business (Paise/kWh)
- For consumers in wires business / For consumers in wires business (Rs. lakh/'000 consumers)
- Repairs and Maintenance (R&M) Expenses (% of opening GFA)

Unlike other Distribution Licensees, the O&M Expenditure norm with respect to consumer numbers (Rs. lakh/'000 consumers) was not provided for TPC-D, perhaps because its consumer base was low. However, subsequently there has been a change in consumer mix as well as consumer numbers of TPC-D on account of the following:

a) In FY 2009-10, the Commission in its Order dated 15 October, 2009 in Case No. 50 of 2009, enabled migration of consumers from RInfra-D to TPC-D. This Order laid down a detailed protocol for migration of consumers for supply from TPC-D. It stated that the Supply Distribution Licensee, i.e., TPC- D, shall be responsible for receiving applications, metering, billing, etc. for all such migrated consumers. Clause 1.10 of the protocol stated that in such cases TPC-D shall be the sole interface for the consumer and shall deal with all consumer service requirements and complaints, including those relating to billing, meter accuracy, supply quality, network, etc.

b) On account of this protocol, the movement of consumers became structured and the number of consumers moving to TPC-D increased. Further, the Commission vacated the stay on the Tariff Order of RInfra-D placed on 22 July, 2009. As this resulted in an increase in tariff of RInfra-D, the number of consumers moving to TPC-D further increased in the 0-300 Units consumption category.

c) In various proceedings, and more so in Case No. 151 of 2011, the Commission directed TPC-D to make efforts for the migration of 0-300 unit residential consumers. Accordingly, TPC-D undertook various activities like awareness of migration process, Fleet on Street team, local camps, etc., for increasing the their number.

These events have led to a manifold increase in its consumer base, i.e., a 393% increase from the time norms were set. However, after the previous MYT Order issued in August, 2013, many high-end consumers of TPC-D migrated to RInfra-D. Even though the absolute number of consumers migrating to RInfra-D was quite low, their sales were significantly higher. This led to a situation where the actual O&M expense calculated based on paise/kWh (O&M Expenditure norms for Retail Supply Business of TPC-D are primarily-based on Sales) reduced considerably, but the expenditure towards serving the high number of predominantly low-end consumers was not compensated.

TPC-D's O&M Norm is not effective as it does not factor in the expenditure associated with the number of consumers being served. Moreover, the increase in number of consumers is substantial whereas the increase in sales is comparatively quite low. Therefore, the Commission may either:

a) approve the actual O&M Expenditure for FY 2014-15 without considering the norms and applying Efficiency Gains or Losses; or
b) apply BEST's O&M Norms as requested by TPC-D in Case No. 51 of 2015

In the MYT Order dated 22 August, 2013 for RInfra-D in Case No. 9 of 2013, the Commission had recognised the increase in expenditure requirement of RInfra-D and accordingly changed the O&M Expenditure Norms. In view of the above, the Commission may approve the actual expenditure of Rs. 190.31 crore for FY 2014-15.

Commission's Analysis and Ruling

The Commission is of the view that the O&M norms specified for TPC-D are appropriate. TPC-D's contention that its O&M Norm is not effective as it does not factor in the expenditure associated with the number of consumers being served, is incorrect. The O&M norms specified in the MYT Regulations, 2011 for the Wires Business and Supply Business of the Distribution Licensees in the State of Maharashtra are shown in the Table below:

Table 3-21: O&M Norms for Wires and Supply Business for FY 2014-15 specified in MYT Regulations, 2011

O&M Charges	MSEDCL	RInfra-D	BEST	TPC-D
Wires Business				
For Wheeled Energy (Paise/kWh)	13.57	12.71	11.48	14.46
For Consumers in Wires Business (Rs. Lakh/'000 consumer)	7.00	6.78	11.37	0.00
R&M Expenses (% of Opening GFA)	4.00%	4.00%	4.00%	2.00%
Supply Business				
For Sales in Supply Business (Paise/kWh)	9.40	9.46	8.78	11.91
For Consumers in Supply Business (Rs. Lakh/'000 consumer)	4.85	5.05	8.69	0.00
R&M Expenses (% of Opening GFA)	0.50%	0.50%	0.50%	0.25%

From the Table, it will be seen that there are no norms specified for TPC-D in terms of number of consumers, primarily because its consumer base at the time of framing the norms was very low. However, TPC-D's actual expenses were allocated between the other two parameters, i.e., Wheeled energy/Sales and R&M expenses, to ensure that there is no loss to TPC-D. This is evident from the higher norms in these two parameters assigned to TPC-D in comparison with the other Distribution Licensees.

For FY 2011-12, the Commission had originally allowed O&M expenses for TPC-D in accordance with the Tariff Regulations, 2005 as it had considered that the MYT framework for TPC-D had commenced only from FY 2012-13 onwards. However, TPC-D filed an Appeal before the ATE on the ground that it had been subjected to a loss as it had been allowed lower O&M expenses, Depreciation and RoE on account of the application of the norms and principles specified in the Tariff Regulations, 2005, rather than the MYT Regulations, 2011. The ATE upheld TPC-D's contention, and the Commission allowed the higher normative O&M expenses for FY 2011-12 based on the MYT Regulations, 2011. Thus, TPC-D, which successfully contended before the ATE that the norms specified in the MYT Regulations, 2011 should be applied for FY 2011-12, is now claiming that the same norms are inadequate for the other years of the same Control Period. The MYT Regulations, 2011 cannot be applied selectively, i.e., only when the actual O&M expenses are lower than the normative, and not be applied when the actual O&M expenses are higher.

In the MTR Order, while undertaking final truing-up of FY 2012-13 and FY 2013-14, the Commission had stated that:

> *"TPC-D has requested the Commission to consider the actual O&M Expenses rather than the normative expenses as specified in the MYT Regulations. The Commission is of the view that, once the norms have been specified, these have to be considered, or else the whole purpose of linking the O&M Expenses to identified output parameters would be defeated. Hence, the Commission has considered the normative O&M Expenses for FY 2012-13."*

In keeping with the approach adopted for FY 2012-13 and FY 2013-14 at the time of MTR, the Commission has not accepted TPC-D's claim for allowing the actual O&M expenses, and has considered the normative O&M Expenses for FY 2014-15 in accordance with the MYT Regulations, 2011. The normative O&M Expenses approved by the Commission for the Wires Business and Supply Business are given in the Tables below:

Table 3-22: Normative O&M Expenses for Wires Business approved by the Commission (Rs. crore)

Particulars	Unit	MTR Order	TPC-D Petition	Approved in this Order
Norms for O&M Expenses				
For Wheeled Energy	**paise/kWh**	14.46	14.46	14.46

Particulars	Unit	MTR Order	TPC-D Petition	Approved in this Order
R&M Expenses	**% of GFA**	2.00%	2.00%	2.00%
Parameters for O&M Expenses				
Wheeled Energy	**MU**	3848.37	3,875.65	3,875.65
Opening GFA	**Rs. crore**	1315.64	1325.12	1315.64
Total normative O&M Expenses	**Rs. crore**	**81.96**	**82.54**	**82.35**

Table 3-23: Normative O&M Expenses for Supply Business approved by the Commission (Rs. crore)

Particulars	Unit	MYT Order	TPC-D Petition	Approved in this Order
Norms for O&M Expenses				
For Sales in Supply Business	**paise/kWh**	11.91	11.91	11.91
R&M Expenses	**% of GFA**	0.25%	0.25%	0.25%
Parameters for O&M Expenses				
Sales	**MU**	5961.9	6,015.35	5968.49
Opening GFA	**Rs. crore**	97.04	87.56	97.04
Total normative O&M Expenses	**Rs. crore**	**71.25**	**71.86**	**71.33**

The Commission has considered only the sales to direct consumers and change-over consumers, and has not considered the credit given to OA consumers as sales, for the purpose of allowing normative O&M expenses, as the norms are applicable only to the sales by the Licensee. The costs relating to OA transactions are recovered separately through OA charges.

The Commission has undertaken sharing between the actual O&M Expenses for FY 2014-15 as submitted by TPC-D, and the normative O&M Expenses approved above, as discussed in a subsequent sub-Section.

3.5 CAPITAL EXPENDITURE AND CAPITALISATION

TPC-D's Submission

Capital expenditure and capitalisation for FY 2014-15 for the Distribution Wires Business was Rs. 394.63 crore and Rs. 464.82 crore against the capital expenditure and capitalisation of Rs. 391.39 crore and Rs. 369.70 crore, respectively, approved in the MTR Order. For the Retail Supply Business, the actual capital expenditure and capitalisation for FY 2014-15 was Rs. 26.49 crore and Rs. 29.45 crore against the approved values of Rs. 23.50 crore and Rs. 19.69 crore, respectively.

The details of capital expenditure and capitalisation for the Wires Business and Supply Business as submitted by TPC-D are shown in the Table below:

Table 3-24: Capital Expenditure and Capitalisation for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	Capital Expenditure	Capitalisation	Capital Expenditure	Capitalisation
Non DPR Schemes	21.29	20.85	0.40	0.58
Total Carry forward Schemes	8.47	8.73	0.40	0.51
New Schemes	12.83	12.12	0.00	0.07
DPR Cases	373.34	440.48	26.08	28.64
Total Carry forward Schemes	166.46	261.74	15.69	19.70
New Schemes	206.88	172.31	10.39	8.52
SAP DPR	6.43	6.43		0.43
Total	394.63	461.33	26.49	29.22
HO & SS allocation		3.48		0.23
Total	394.63	464.82	26.49	29.45

The actual capitalisation in FY 2014-15 was higher compared to the approved capitalisation, as capitalisation of the carry-forward schemes of FY 2012-13 and FY 2013-14 was being completed in FY 2014-15 and FY 2015-16. Capitalisation in earlier years was delayed on account of delays in excavation permissions for laying cables. The break-up of Detailed Project Report (DPR) and Non-DPR capitalisation is given in the Table below:

Table 3-25: DPR & Non-DPR Capitalisation of Distribution Wires and Retail Supply for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires	Supply	Total	Ratio
DPR Schemes	440.48	28.64	469.13	
Non DPR Schemes	24.33	0.81	25.14	5%
Total Distribution	**464.82**	**29.45**	**494.27**	

Commission's Analysis and Ruling

TPC-D's Network Roll-out Plan is pending before the Commission in Case Nos. 182 of 2014 and 50 of 2015, and impacts the capitalisation to be considered in FY 2014-15 till 28 November, 2014 (the date of the ATE Judgment) and thereafter. TPC-D has claimed total capitalisation of Rs. 464.82 crore and Rs. 29.45 crore for the Wires Business and Supply Business, respectively. For the Supply Business, based on the schemes approved in principle, the capitalisation has been considered as Rs. 28.65 crore. For the Wires Business, TPC-D has claimed actual capitalisation till 28 November, 2014 of Rs. 242.52 crore, out of the total capitalisation of Rs. 464.82 crore claimed for FY 2014-15. As the decision is pending, for the purposes of the present Order, the Commission has taken capitalisation in the Wires Business equal to 50% of that claimed by TPC-D, which works out to Rs. 232.41 crore, which incidentally is close to the capitalisation claimed till 28 November, 2014. This approval is subject to the final decision of the Commission in Case Nos. 182 of 2014 and 50 of 2015, and the true-up for FY 2014-15 will be subject to revision to that extent. The capitalisation allowed by the Commission for the Wires Business and Supply Business for FY 2014-15 is shown in the Table below:

Table 3-26: Capital Expenditure and Capitalisation for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Capitalisation	369.70	464.82	232.41	19.69	29.45	28.65

3.6 DEPRECIATION

TPC-D's Submission

TPC-D has computed the Depreciation at the rates specified in the MYT Regulations, 2011. The Depreciation for FY 2014-15 works out to Rs. 87.47 crore. The average rate of Depreciation is 6.19%, as given in the Table below:

Table 3-27: Depreciation for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business		Total	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Opening GFA		1325.12		87.56		1412.68
Depreciation	75.65	78.58	5.24	8.89	80.89	87.47
% Depreciation on average of opening and closing GFA		5.93%		10.15%		6.19%

Commission's Analysis and Ruling

The Commission asked for the detailed calculation of asset-wise Depreciation in MS Excel format in accordance with the MYT Regulations, 2011. It observed that TPC-D has included assets under 'Transmission lines' under Depreciation for the Distribution Wires Business, and asked TPC-D to justify this.

TPC-D stated that, although the nomenclature is 'Transmission Lines', the assets actually belong to the Distribution Business. This label has continued historically, since TPC was an integrated business and these assets are mostly underground cables and associated accessories.

The Commission also asked TPC-D to justify the Depreciation rates of 5.93% and 10.15% put forth by TPC-D for its Wires and Supply Business, respectively, when they were considered as 5.68% and 4.92% in the original Petition submitted on 27 February, 2016. TPC-D stated that the figures in the original Petition had certain linkage errors, which had been thoroughly examined and matched with SAP figures and rectified in the revised Petition. Further, the Depreciation considered in the audit certificate is based on the rate as per the Income Tax Act, which will not match with the Depreciation rate as per the MYT Regulations, 2011.

TPC-D has considered the Depreciation rate of 5.05% on the average of opening and closing Gross Fixed Assets (GFA) for FY 2014-15 for the Wires Business, rather than 5.93% as stated originally. The Commission has considered the average Depreciation rate of 5.05% on the average of opening and closing GFA for FY 2014-15 for the Wires Business, as submitted by TPC-D and in accordance with the MYT Regulations, 2011. In case of the Supply Business, the average Depreciation rate considered by TPC-D works out to 8.69%, which is far higher than 5.28%. The Commission has considered the average Depreciation rate of 4.75% on the average of opening and closing GFA for FY 2014-15 for the Supply Business, based on the average Depreciation considered for FY 2013-14 in the MTR Order.

As per Regulation 31.5 of MYT Regulations, 2011, the Depreciation has to be calculated based on the average of opening and closing value of assets as approved by the Commission. For computation of Depreciation for FY 2014-15, the Commission has considered the opening balance of GFA for Wires Business and Supply Business as equal to the closing balance approved in the final truing-up of FY 2013-14. It has considered asset addition for FY 2014-15 in line with the approved capitalisation for that year. Asset retirement as given in the formats provided has been considered in FY 2014-15. From the approved Opening GFA, asset addition and asset retirement, the Commission has approved the closing GFA for FY 2014-15 for the Wires Business and Supply Business.

The Commission has approved Depreciation for the Wires Business and Supply Business for FY 2014-15 as shown in the Table below:

Table 3-28: Depreciation for Wires Business and Supply Business for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Opening GFA	1315.64	1325.12	1315.64	97.04	87.56	97.04
Addition	369.70	464.82	232.41	19.69	29.45	28.65
Retirement	0.00	0.86	0.86	0.00	0.00	0.00
Closing GFA	1685.34	1789.08	1547.19	116.73	117.01	125.69
Depreciation	**75.65**	**78.58**	**72.24**	**5.24**	**8.89**	**5.29**
Depreciation as a percentage of average of opening & closing GFA (%)	5.04%	5.93%	5.05%	4.90%	10.15%	4.75%

3.7 INTEREST ON LONG TERM LOAN

3.7.1 Interest on Debt

TPC-D's Submission

TPC-D has availed fresh loans in FY 2014-15 from HDFC Bank (Rs. 350 crore) and Kotak Mahindra Bank (Rs. 250 crore), and drawn amounts from the previous sanctioned loans from (i) HDFC Bank (Sanctioned amount – Rs. 300 crore, Amount drawn – Rs. 101 crore), (ii) Kotak Mahindra Bank (Sanctioned amount – Rs. 300 crore, Amount drawn – Rs. 101 crore) and (iii) BNP Paribas (Sanctioned amount – Rs. 55.10 crore, Amount drawn – Rs. 27.95 crore) for funding the expenditure of FY 2014-15. The details of new loans availed in FY 2014-15 are given in the Table below:

Table 3-29: Details of Loans utilized for FY 2014-15 as submitted by TPC-D

HDFC Loan	
Amount	Rs. 350 crore
Repayment schedule	2 years moratorium, Quarterly Repayment with 7.5% of total amount every year for the first ten years and 25% in the last year
Interest Rate	10.15% p.a. linked to Base Rate

Kotak Loan	
Loan Date	Rs. 250 crore
Loan Amount	2 years moratorium, with Repayment of 65% over the period of 10 years and 35% in the last year
Interest Rate	10.30% p.a. linked to Base Rate

The loans had been allocated to different businesses areas (Generation, Transmission and Distribution) based on their respective ratios of capitalisation in FY 2014-15. The balance loan is assumed to be financed through normative loan. The allocation of loans for various segments is given in the Table below:

Table 3-30: Loan Allocation for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	**Generation**	**Transmission**	**Distribution**	**Total GTD**	**Wires Business**	**Supply Business**
Capitalisation	210.84	481.26	494.27	**1186.37**	464.82	29.45
Debt	147.59	336.88	345.99	**830.46**	325.37	20.62
%	18%	41%	42%	**100%**	39%	2%
HDFC-Rs 300 crore	17.95	40.97	42.08	**101.00**	39.57	2.51
Kotak- Rs. 300 crore	17.95	40.97	42.08	**101.00**	39.57	2.51
BNP Paribas- Rs. 55 crore	7.90	18.04	18.53	**44.48**	17.43	1.10
HDFC- Rs. 350 crore	62.20	141.98	145.82	**350.00**	137.13	8.69
Kotak- Rs.250 crore	5.11	11.67	11.98	**28.76**	11.27	0.71
Normative	36.47	83.25	85.50	**205.22**	80.41	5.09
Balance	0.00	0.00	0.00	**0.00**	0.00	0.00

Considering the above actual loan drawal and interest rates, the weighted average interest rate for FY 2014-15 works out to 10.83% for the Wires Business and 10.58% for the Supply Business. Corresponding interest charges for FY 2014-15 work out to Rs. 74.67 crore for the Distribution Wires Business and Rs. 5.49 crore for the Retail Supply Business, as shown in the Table below:

Table 3-31: Interest Computation for Wires Business and Supply Business for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	**Wires Business**		**Supply Business**	
	MTR Order	**TPC-D Petition**	**MTR Order**	**TPC-D Petition**
Opening Balance		566.16		46.04

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Addition during the year		325.37		20.62
Repayment		78.58		8.89
Closing Balance		812.95		57.77
Interest Rate		10.83%		10.58%
Interest	**141.12**	**74.67**	**5.17**	**5.49**

Commission's Analysis and Ruling

The Commission sought the audited Allocation Statement between the Generation, Transmission and Distribution business in the Mumbai Licence area. Accordingly, TPC-D has submitted the Allocation Statement certified by its Statutory Auditor as per the Audited Accounts for FY 2014-15.

As sought by the Commission, TPC-D submitted certificates from the Banks regarding the outstanding amounts and applicable interest rates as on 1 April, 2014.

The Commission has considered the interest rate as equal to the weighted average interest rate of actual loans at the beginning of the year, as per the MYT Regulations, 2011. For computing the weighted average interest rates, the Commission has considered the opening balance and applicable interest rates of actual loans allocated to the Distribution business. The weighted average interest rate so derived for FY 2014-15 has been considered by the Commission for computation of interest for both the Wires as well as the Supply Businesses. The repayment has been considered equivalent to the Depreciation approved by the Commission, in accordance with the Regulations. Accordingly, the Commission has approved the interest expenses on loans for FY 2014-15 as given in the following Table:

Table 3-32: Interest Expenses for FY 2014-15 approved by the Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Opening Balance		566.16	566.16		46.04	46.04
Addition		325.37	162.69		20.62	20.06
Repayment		78.58	72.24		8.89	5.29
Closing Balance		812.95	656.61		57.77	60.81
Interest Rate		10.83%	10.83%		10.58%	10.58%

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Interest Expenses	**141.12**	**74.67**	**66.21**	**5.17**	**5.49**	**5.65**

3.7.2 Other Finance Charges

TPC-D's Submission

The Other Finance Charges, including Commission and Brokerage Charges, for FY 2014-15 amounted to Rs. 0.82 crore.

Commission's Analysis and Ruling

The Commission has approved the actual Other Finance Charges of Rs. 0.82 crore, as submitted by TPC-D.

3.8 INTEREST ON WORKING CAPITAL

TPC-D's Submission

The working capital requirement has been computed in accordance with the MYT Regulations, 2011. The average interest rate of 14.75% is the SBAR prevailing at the time of filing of the MTR Petition is taken for computing the IoWC. The IoWC for FY 2014-15 for Wires Business and Supply Business is given in the Table below:

Table 3-33: Interest on Working Capital for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
One-twelfth of the amount of O&M Expenses		7.14		8.72
One-twelfth of the sum of the book value of stores, materials and supplies		5.42		0.01
Two Months equivalent of expected revenue from sale of electricity at the prevailing tariff		77.75		557.84
Less:				
Amount of Security Deposit				152.21
One month equivalent of cost of power (excluding TPC-G cost)				129.11

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Total Working Capital		**90.30**		285.26
Computation of Working Capital Interest				
Rate of Interest (% p.a.)		14.75%		14.75%
Interest on Working Capital	**10.86**	**13.32**	**51.99**	**42.08**

The normative IoWC for FY 2014-15 works out to Rs. 13.32 crore and Rs. 42.08 crore for the Wires Business and Supply Business, respectively.

Commission's Analysis and Ruling

The working capital requirement has been computed in accordance with the MYT Regulations, 2011, and considering the revised approved values of the relevant parameters. The Commission has considered 14.75% as the rate of interest for computation of IoWC for FY 2014-15. The IoWC approved by the Commission is as given in the following Tables:

Table 3-34: Interest on Working Capital for Wires Business FY 2014-15 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
One-twelfth of the amount of O&M Expenses	6.83	7.14	6.86
One-twelfth of the sum of the book value of stores, materials and supplies	7.00	5.42	5.42
Two months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs	77.73	77.75	77.75
Total Working Capital	**91.56**	**90.30**	**90.03**
Rate of Interest (% p.a.)	14.75%	14.75%	14.75%
Interest on Working Capital	**13.51**	**13.32**	**13.28**

Table 3-35: Interest on Working Capital for Supply Business FY 2014-15 approved by Commission (Rs. crore)

Particulars	MYT Order	TPC-D Petition	Approved in this Order
One-twelfth of the amount of O&M Expenses	5.94	8.72	5.94
One-twelfth of the sum of the book value of stores, materials and supplies	0.01	0.01	0.01
Two months of the expected revenue from sale of electricity at the prevailing tariffs	562.96	557.84	557.84

Particulars	MYT Order	TPC-D Petition	Approved in this Order
Less:			
Amount of Security Deposit from retail supply consumers	171.67	152.21	152.21
One month equivalent of cost of power purchased other than TPC-G	128.97	129.11	129.08
Total Working Capital	**268.27**	**285.26**	**282.51**
Rate of Interest (%)	14.75%	14.75%	14.75%
Interest on Working Capital	**39.57**	**42.08**	**41.67**

3.9 INTEREST ON CONSUMERS' SECURITY DEPOSIT

TPC-D's Submission

The actual Interest on CSD paid in FY 2014-15 was Rs. 13.20 crore.

Commission's Analysis and Ruling

The Commission has accepted TPC-D's submission, and approved the actual Interest on CSD as Rs. 13.20 crore for FY 2014-15, as shown in the following Table:

Table 3-36: Interest on Consumers' Security Deposit for FY 2014-15 for Supply Business approved by the Commission (Rs. crore)

Particulars	Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order
Amount held as security deposit	171.67	152.21	152.21
Rate of Interest (%)	8.45%	8.67%	8.67%
Interest on Consumer Security Deposit	**14.51**	**13.20**	**13.20**

3.10 RETURN ON EQUITY

TPC-D's Submission

The rate of return for full recovery of RoE is linked to the Wires Availability. The effective rate of RoE for the Wires Business is given in the Table below:

Table 3-37: Rate of Return on Equity for Distribution Wires Business for FY 2014-15 as submitted by TPC-D

Rate of Return for Wires Business	Units	TPC-D Petition
No. of Consumers interruption durations	Min	1333989
No. of Consumers	Nos.	74946
SAIDI	Min	17.80
SAIDI	Hrs.	0.30
Wire Availability for FY 2014-15	%	100.00%
Wire Availability as per Norms	%	99.52%
Wire Availability for additional entitlement	%	0.48%
Additional entitlement for over achievement of Wire availability by 1%	%	0.10%
Additional entitlement for over achievement of Wire availability for FY 2012-13	%	0.05%
Normative ROE	%	15.50%
ROE for Wires Business	**%**	**15.55%**

The actual Base Load was 403.72 MW while the Peak Load was 1032.62 MW. The rate of RoE for the Supply Business is given in the Table below:

Table 3-38: Rate of Return on Equity for Supply Business for FY 2014-15 as submitted by TPC-D

Particulars	Unit	TPC-D Petition
Base Contracted Capacity	MW	452.00
Actual Base Load	MW	404.00
Base Load Supply Availability	**%**	**112.00%**
Peak Contracted Capacity	MW	1021.31
Actual Peak Load	MW	628.90
Peak Load Supply Availability	MW	162.00%
Supply Availability	**%**	**125.00%**
Target Supply Availability	%	100.00%
Difference	%	25.00%
Additional entitlement for over-achievement of Supply availability by 1.00%	0.10%	2.46%
Normative RoE	%	17.50%
RoE for Supply Business	**%**	**19.96%**

The RoE for the Wires Business and Supply Business is as given in the Table below:

Table 3-39: Return on Equity for Wires Business and Supply Business for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Regulatory Equity at the beginning of the year		399.85		29.29
Capitalised Assets during the year		464.82		29.45
Equity portion of expenditure on Capitalised Assets		139.45		8.84
Less: Equity portion of the asset De-capitalised		(0.26)		0.00
Regulatory Equity at the end of the year		539.04		38.13
Return Computation				
Return on Regulatory Equity at the beginning of the year for Wire Business (ROE rate 15.55%)		62.17		
Return on Regulatory Equity at the beginning of the year for Supply Business (ROE rate 19.96%)				5.85
Return on Equity portion of capital expenditure on Capitalised Assets - for 1/2 Year		10.82		0.88
Total including additional entitlement	**70.57**	**72.99**	**4.89**	**6.73**

Commission's Analysis and Ruling

To determine the equity eligible for returns as per the MYT Regulations, 2011, the Commission has taken the opening equity for FY 2014-15 as the same as the closing equity of FY 2013-14 as approved in the final truing-up for FY 2013-14.

TPC-D has considered the rate of RoE considering the impact of additional RoE on account of higher Wires and Supply Availability achieved by it. The Commission has considered the rate of RoE as 15.50% and 17.50% for the Wires Business and Supply Business, respectively, in accordance with the Regulations. The additional RoE on account of achievement of Wires and Supply Availability higher than the target has been approved separately in this Section.

Accordingly, the RoE approved by the Commission in the truing-up of FY 2014-15 is summarized in the Table below:

Table 3-40: Return on Equity for FY 2014-15 approved by the Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Regulatory Equity at the beginning of the year	399.85	399.85	399.85	29.29	29.29	29.29
Capitalisation during the year	369.70	464.82	232.41	19.69	29.45	28.65
Equity portion of capitalisation during the year	110.91	139.45	69.72	5.91	8.84	8.60
Reduction in Equity Capital on account of retirement / replacement of assets	0.00	(0.26)	(0.26)	0.00	0.00	0.00
Regulatory Equity at the end of the year	510.76	539.04	469.32	35.20	38.13	37.89
ROE	15.50%	15.55%	15.50%	17.50%	19.96%	17.50%
Return on Regulatory Equity at the beginning of the year	61.98	62.17	61.98	5.13	5.85	5.13
Return on Equity portion of capitalisation during the year	8.60	10.82	5..38	0.52	0.88	0.75
Total Return on Regulatory Equity	**70.57**	**72.99**	**67.36**	**5.64**	**6.73**	**5.88**

3.11 ADDITIONAL RETURN FOR HIGHER WIRES AND SUPPLY AVAILABILITY

Commission's Analysis and Ruling

In accordance with the MYT Regulations, 2011, the additional RoE on account of higher Wires Availability and Supply Availability has been approved as discussed below.

3.11.1 Additional Return for higher Wires Availability

The Commission has considered the Target Wires Availability as 99.52% in accordance with the target stipulated in the previous MYT Order for the additional RoE on account of higher Wires Availability in FY 2014-15.

For computing the additional RoE on the Wires Business, the Commission has considered the SAIDI as submitted by TPC-D. Accordingly, the Commission approves the additional RoE as given in the following Table:

Table 3-41: Additional RoE for Wires Business for FY 2014-15 approved by the Commission (Rs. crore)

Particulars	Derivation	Approved in this Order
Wires Availability	a	100.00%
Target Availability	b	99.52%
Additional Return	**c=(a-b)/10**	**0.05%**
Regulatory Equity at the beginning of the year	**d**	**399.85**
Capitalisation during the year	E	232.41
Consumer Contribution and Grants	f	
Equity portion of capitalisation during the year	g	69.72
Equity portion of asset retired during the year	h	(0.26)
Regulatory Equity at the end of the year	**i=d+g-h**	**469.32**
Additional Return on Regulatory Equity	**j = average(d,i)*c**	**0.21**

3.11.2 Additional Return for higher Supply Availability

The Commission has considered the Target Supply Availability as 100% in accordance with the target stipulated in the MYT Order, for the additional RoE on account of higher Supply Availability in FY 2014-15.

For computing the additional RoE in the Supply Business, from the data submitted by TPC-D, the Commission has considered the Base Contracted Capacity as 452.03 MW and actual Base Load as 404 MW. It has considered actual contracted Peak Load Capacity as 1021.31 MW, Peak Load at InSTS as 1294.69 MW and actual Peak Load as 628.90 MW,- based on TPC-D's submissions. Accordingly, the Commission approves the additional RoE on account of higher than target achievement of Supply Availability, as given in the following Table:

Table 3-42: Additional RoE for Supply Business for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Derivation	Approved in this Order
Actual Contracted Base Load Supply (MW)	A	452.03
Base Load (MW)	B	404.00
Base Load Supply Availability (%)	C=A/B	112%
Actual Contracted Peak Load Supply (MW)	D	1021.31
Actual Peak Load	E	628.90
Peak Load Supply Availability (%)	F=D/E	162%
Supply Availability	G=0.75*C + 0.25* F	125%

Particulars	Derivation	Approved in this Order
Target Supply Availability	H	100%
Additional Return	**I=(G-H)/10**	**2.45%**
Regulatory Equity at the beginning of the year	**J**	**29.29**
Capitalisation during the year	K	28.65
Consumer Contribution and Grants	L	0.00
Equity portion of capitalisation during the year	M	8.60
Equity portion of asset retired during the year	N	0.00
Regulatory Equity at the end of the year	**O=J+M-N**	**37.89**
Additional Return on Regulatory Equity	**P=average(J,O)*I**	**0.82**

3.12 PROVISION FOR BAD AND DOUBTFUL DEBTS

TPC-D's Submission

TPC-D has made a provision of Rs. 0.93 crore towards Bad and Doubtful Debts for the Supply Business, as shown in the Table below:

Table 3-43: Provision for Bad and Doubtful Debts for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Provision for Bad and Doubtful Debts	0.00	0.00	0.00	0.93

Commission's Analysis and Ruling

The Commission asked for details of actual opening and closing balance of provisioning for Bad and Doubtful Debts, write-offs during the year, and the justification for the claim of provisioning for bad and doubtful debts with respect to the provisions of the MYT Regulations, 2011. TPC-D submitted the details and stated that the actual provisioning for bad and doubtful debts during FY 2014-15 was Rs. 2.13 crore, and the actual write-off of bad debts was Rs. 1.19 crore, resulting in a net increase in provisioning for bad and doubtful debts by Rs. 0.93 crore for the Supply Business. It also submitted computations to justify that such provisioning was within the limit of 1.5% of receivables as per the Audited Accounts, as specified in the Regulations.

Accordingly, the Commission has approved the provision for bad and doubtful debts for FY 2014-15 as submitted by TPC-D, as shown in the following Table:

Table 3-44: Provision for Bad & Doubtful Debts for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Provisions for Bad and Doubtful Debts	0.00	0.00	0.00	0.00	0.93	0.93

3.13 INCOME TAX

TPC-D's Submission

TPC-D has computed the Income Tax for FY 2014-15 in accordance with the methodology in the MTR Order, which works out to Rs. 49.41 crore.

Commission's Analysis and Ruling

The Commission asked TPC-D to confirm the balance Minimum Alternative Tax (MAT) credit available for FY 2014-15. TPC-D stated that, based on the methodology approved in the MTR Order, the stand-alone MAT credit available for FY 2014-15 and cumulative MAT credit available up to FY 2014-15 is Rs. 17.23 crore and Rs. 62.54 crore, respectively, as shown in the Table below:

Table 3-45: MAT Credit available upto end of FY 2014-15 (Rs. crore)

Particulars	FY09	FY10	FY11	FY12	FY13	FY14	FY15
MAT Credit available	3.20	1.47	19.39	0.00	0.00	21.25	17.23
MAT Credit utilized	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Closing Balance	3.20	1.47	19.39	0.00	0.00	21.25	17.23
Cumulative Balance	3.20	4.67	24.06	24.06	24.06	45.31	62.54

TPC-D stated that it will consider the MAT credit available in the future years when it will pay Income Tax under normal tax rate. The MAT credit would lapse after 10 years, on First-in-First-Out (FIFO) basis.

The Commission has computed the regulatory PBT and Income Tax liability thereon on a stand-alone basis for, in accordance with the approach in the MTR Order.

For computing the Income Tax liability, the Commission has considered the Regulated PBT based on the income less permissible expenses and other provisions of the Income Tax Act, and considered income and expenses as approved in the True-Up for FY 2014-15.

The Commission has not considered the revenue on account of incentives and Efficiency Gains, as the proviso to Regulation 34.1 of the MYT Regulations, 2011 specifies that:

> "*no Income Tax shall be considered on the amount of Efficiency Gains and incentive earned by the Generating Companies, Transmission Licensees and Distribution Licensees.*"

The computation of Income Tax for FY 2014-15 for the Wires Business, as submitted by TPC-D and as approved by the Commission is given in the Table below:

Table 3-46: Income Tax for FY 2014-15 for Wires Business approved by Commission (Rs. crore)

Particulars	Derivation	TPC-D Petition	Approved in this Order
Computation of Income Tax at normal Tax Rate			
Total Revenue	a	474.46	474.46
Total Expenses	b	239.68	234.85
Profit Before Tax	**c=a-b**	**234.78**	**239.61**
Tax Adjustment			
Add			
Depreciation considered in Expenses	d	78.58	72.24
Other disallowance while computing IT	e	3.25	3.25
Total Tax Disallowances	f=d+e	81.84	75.49
Less			
Tax Depreciation	g	220.12	220.12
Other expenses allowed for computing Income Tax	h	1.82	1.82
Deduction - U/S 80 IA	i	-	-
Total Tax Allowances	j=g+h+i	221.94	221.94
Taxable Income for the year	**k= c+f-j**	**94.68**	**93.17**
Carry forward losses of previous years	l	-	
Total Taxable income after considering business loss for previous year	**m=k+l**	**94.68**	**93.17**
Corporate Tax %	n	33.99%	33.99%
Tax payable at Normal rate	**o=m*n**	**32.18**	**31.67**

Particulars	Derivation	TPC-D Petition	Approved in this Order
MAT Computation			
Profit Before Tax	**p=c**	234.78	239.61
Add: Disallowances under Income Tax (U/s 14 A, provision for doubtful debt)			
Disallowance U/s 14A	q		
Interest under Income Tax Act	r		
Provision for doubtful debts	s	0.97	0.97
Provision for diminution in share value	t		
Dividend from foreign subsidiary	u		
Total Disallowances under Income Tax (U/s 14 A, provision for doubtful debt)	**v=q+r+s+t+u**	**0.97**	**0.97**
Less: Deduction under Income Tax	w	-	
Book Profit	**x=p+v-w**	**235.75**	**240.58**
MAT Rate %	y	20.96%	20.96%
Tax Payable under MAT	**z**	**49.41**	**50.43**
Tax to be recovered through ARR	**aa=max(o,z)**	**49.41**	**50.43**

The computation of Income Tax for FY 2014-15 for the Supply Business, as submitted by TPC-D and as approved by the Commission is given in the Table below:

Table 3-47: Income Tax for FY 2014-15 for Supply Business approved by Commission (Rs. crore)

Particulars	Derivation	TPC-D Petition	Approved in this Order
Computation of Income Tax at normal Tax Rate			
Total Revenue	a	3,384.78	3,366.91
Total Expenses	b	3,520.30	3,533.01
Profit Before Tax	**c=a-b**	(135.52)	(166.10)
Tax Adjustment			
Add			
Depreciation considered in Expenses	d	8.89	5.29
Other disallowance while computing IT	e	28.29	28.29
Total Tax Disallowances	f=d+e	37.18	33.58
Less			
Tax Depreciation	g	6.12	6.12
Other expenses allowed for computing Income Tax	h	32.25	32.25

Particulars	Derivation	TPC-D Petition	Approved in this Order
Deduction - U/S 80 IA	i	-	-
Total Tax Allowances	j=g+h+i	38.37	38.37
Taxable Income for the year	**k= c+f-j**	(136.72)	(170.89)
Carry forward losses of previous years	l	(936.87)	(936.88)
Total Taxable income after considering business loss for previous year	**m=k+l**	(1,073.59)	(1,107.77)
Corporate Tax %	n	33.99%	33.99%
Tax payable at Normal rate	**o=m*n**	-	-
MAT Computation			
Profit Before Tax	**p=c**	(135.52)	(166.10)
Add: Disallowances under Income Tax (U/s 14 A, provision for doubtful debt)			
Disallowance U/s 14A	q	-	-
Interest under Income Tax Act	r	-	-
Provision for doubtful debts	s	(0.04)	-
Provision for diminution in share value	t	-	-
Dividend from foreign subsidiary	u	-	-
Total Disallowances under Income Tax (U/s 14 A, provision for doubtful debt)	**v=q+r+s+t+u**	(0.04)	-
Less: Deduction under Income Tax	w	-	-
Book Profit	**x=p+v-w**	(135.56)	(166.10)
MAT Rate %	y	20.96%	20.96%
Tax Payable under MAT	**z**	-	-
Tax to be recovered through ARR	**aa=max(o,z)**	0.00	0.00

As the Income Tax payable under MAT is higher than that payable at the Corporate Tax rate for the Wires Business, the Income Tax payable under MAT has been allowed. In case of Supply Business, there is no Income Tax payable. Further, TPC-D should set off the Income Tax liability in future years against the MAT credit available, when it is required to pay Income Tax at the Corporate tax rate.

3.14 CONTRIBUTION TO CONTINGENCY RESERVE

TPC-D's Submission

TPC-D has considered the appropriation towards Contingency Reserves as per the MYT Regulations, 2011, which allows between 0.25% and 0.50% of the original value of assets towards such contribution. The contribution to Contingency Reserve based on the opening GFA for Wires Business and Supply Businesses is shown in the Table below:

Table 3-48: Contribution to Contingency Reserves for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Opening GFA of FY 2014-15		1325.12		87.56
Maximum Permissible (5% of Opening GFA)		66.26		4.38
Amount of Contingency Reserve upto 31 March, 2014		27.59		1.00
Created in FY 2014-15	**3.29**	**3.31**	**0.24**	**0.22**
Amount of Contingency Reserve upto 31 March, 2015		30.90		1.22

Commission's Analysis and Ruling

The Commission has approved the contribution to Contingency Reserves for the Wires Business and Supply Business for FY 2014-15 at 0.25% of the approved value of the opening GFA for the respective Businesses, in accordance with the Regulations, as shown in the Table below:

Table 3-49: Contribution to Contingency Reserve for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Contribution to Contingency Reserves	3.29	3.31	3.29	0.24	0.22	0.24

3.15 DEMAND SIDE MANAGEMENT EXPENSES

TPC-D's Submission

In FY 2014-15, the expenses on various DSM initiatives amounted to Rs. 2.82 crore.

Commission's Analysis and Ruling

The Commission has approved the following DSM expenses, after prudence check and based on TPC-D's revised submissions:

Table 3-50: DSM Expenses for FY 2013-14 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
DSM expenses	-	2.82	1.45

3.16 NON-TARIFF INCOME

TPC-D's Submission

The Non-Tariff Income was Rs. 25.84 crore, comprising Rs. 2.74 crore and Rs. 23.10 crore of recurring and non-recurring items, respectively. The Non-Tariff Income for Distribution Wires and Retail Supply Business is as shown in the Table below:

Table 3-51: Non-Tariff Income for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Wires Business		Supply Business	
	MTR Order	TPC-D Petition	MTR Order	TPC-D Petition
Recurring		**2.64**		**0.10**
Rent		0.16		0.05
Interest from Contingency Reserves Investment		1.73		0.00
Income from services rendered		0.75		0.06
Non-Recurring		**5.34**		**17.77**
Delayed Payment Charges		0.05		7.17
Sale of Scrap		1.35		0.00
VAT Refund		2.08		0.09
Liquidated Damages		1.58		0.11
Compensation Net		0.00		7.08
Service Connection Charges		0.00		0.85
Interest on Loans & Advances - Staff		0.07		0.02
Interest on Delayed Payment Charges		0.00		1.39
Misc. Revenue		0.22		1.06
Total Non-Tariff Income	**18.65**	**7.97**	**10.49**	**17.87**

Commission's Analysis and Ruling

The Commission has accepted TPC-D's submission and accordingly approved the Non-Tariff Income for FY 2014-15 as shown in the Table below:

Table 3-52:Non-Tariff Income for FY 2014-15 approved by the Commission (Rs. crore)

Particular	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Non-Tariff Income	18.65	7.97	7.97	10.49	17.87	17.87

3.17 CARRYING COST ON CHANGE IN FUEL COST

TPC-D's Submission

TPC-D has charged FAC as per the provisions of the MYT Regulations, 2011. FAC, which reflects the change in Variable Charge, is collected / returned after a delay of two months, and hence interest is applicable. Such interest for FY 2014-15 is Rs. (9.48) crore, as negative FAC was provided to the consumers, which has been included in the ARR.

Commission's Analysis and Ruling

The Commission asked TPC-D to justify its claim for negative FAC. In reply, TPC-D stated that interest is allowed to be recovered through FAC for the inherent delay in its recovery of FAC, as per the FAC recovery formula specified in the MYT Regulations, 2011. Accordingly, the same is a part of revenue recovered by a Distribution Licensee through FAC. Such interest is a positive amount if FAC is recoverable from the consumer and a negative amount if the FAC is to be returned to the consumer. Such interest is also to be included in the power purchase cost as it is a legitimate due to the Distribution Licensee as per the FAC formula. In FY 2014-15, as the power purchase cost was lower than that approved by the Commission, TPC-D had charged a negative FAC. Accordingly, the interest computed as per the FAC formula was also negative, and has been included in the power purchase cost for FY 2014-15.

TPC-D stated that the Commission has approved such interest in the previous MYT Order in Case No. 179 of 2011. Further, if interest on FAC is not included in the cost of power purchase, it would get passed on to the consumers through Revenue (Gap) / Surplus during the Truing-up exercise. Therefore, the Commission may consider the interest on FAC in the truing-up for FY 2014-15.

The Commission is of the view that the normative IoWC allowed to TPC-D addresses the entire requirement of working capital interest, as the fuel cost and receivables are considered while computing the working capital requirement. Thus, TPC-D's legitimate claim of interest is only the IoWC. The interest on FAC allowed as per the FAC formula is a cash flow issue, and allows for interest in case of delay in recovery/pass through of under/over-recovery of fuel costs. Hence, the interest on FAC cannot be allowed in addition to the IoWC.

3.18 SHARING OF GAINS AND LOSSES FOR FY 2014-15

3.18.1 Deviation in O&M Expenses

TPC-D's Submission

While actual O&M Expenses have increased significantly, the normative O&M Expenses have increased only at a nominal rate of 1.14%. Since certain O&M expenditure is directly proportional to the number of consumers, with the increasing consumer base the expenditure towards this has been increasing significantly from FY 2011-12 to FY 2014-15. Out of the total supply cost, 33% was directly associated with the consumer base. This percentage increased to 35% in FY 2013-14 and FY 2014-15.

The Commission may either approve the actual O&M Expenses for FY 2014-15 without sharing of Gains and Losses, or compute the normative O&M Expenses as per the norms specified for BEST in the MYT Regulations, 2011.

The Gain / (Loss) computation considering BEST Norms for FY 2014-15 is shown in the Table below:

Table 3-53: Computation of Gain/(Loss) on O&M Expenses based on BEST Norms as submitted by TPC-D (Rs. crore)

Sr. No	Particulars	Wires Business	Supply Business	Total
1	Normative O&M Expenses	82.54	71.86	154.41
2	Actual O&M Expenses	85.66	104.65	190.31
3	Uncontrollable Expenditure	3.11	32.79	35.90
4	Actual O&M considered for Gain/(Loss)	82.54	71.86	154.41
5	**O&M Gain/(Loss)**	**0.00**	**0.00**	**0.00**
6	**Passed on to the Consumers**	**0.00**	**0.00**	**0.00**

Commission's Analysis & Ruling

The sharing of Efficiency Losses/ (Gains) on the difference between the actual and the normative O&M Expenses has been undertaken considering O&M Expenses as controllable under the MYT Regulations, 2011, the reasons for which have been elaborated in the paragraphs on O&M expenses, as shown in the Table below:

Table 3-54:Sharing of (Gains)/losses on account of O&M Expenses for FY 2014-15 approved by Commission (Rs. crore)

Particulars	Wires Business	Supply Business
Normative O&M Expenses	82.35	71.33
Actual O&M Expenses	85.64	104.65
Efficiency (Gain)/Loss	**3.28**	**33.32**
1/3rd Sharing with consumers	**1.09**	**11.11**

3.19 AGGREGATE REVENUE REQUIREMENT FOR FY 2014-15

TPC-D's Submission

The ARR for the Wires Business and Supply Businesses for FY 2014-15 is as follows:

Table 3-55: Aggregate Revenue Requirement for FY 2014-15 as submitted by TPC-D (Rs. crore)

Sr. No.	Particulars	MTR Order	TPC-D Petition		
			Wires Business	Supply Business	Total
1	**Power Purchase Expenses**	**2935.07**		**3385.20**	**3385.20**
1.1	Power Purchase Expenses (TPC-G) including interest on FAC			1835.90	1835.90
1.2	Power Purchase Expenses (Other External Sources, Infirm etc)			754.04	754.04
1.3	Power Purchase Expenses (RPS)			163.70	163.70
1.4	Power Purchase Expenses (REC)			42.83	42.83
1.5	Transmission Charges Payable (Including MSLDC Charges)	436.72		439.06	439.06
1.6	Stand-by Charges Payable			149.67	149.67
2	**Operation & Maintenance Expenses**	**153.21**	**85.66**	**104.65**	**190.31**
2.1	Employee Expenses		38.36	37.62	75.98
2.2	Administration & General Expenses		29.45	64.19	93.65
2.3	Repair & Maintenance Expenses		17.84	2.84	20.68
3	Depreciation	80.89	78.58	8.89	87.47
4	Interest on Long-term Loan Capital	76.56	74.67	5.49	80.17
5	Finance Charges		0.77	0.06	0.82

Sr. No.	Particulars	MTR Order	TPC-D Petition		
			Wires Business	Supply Business	Total
6	Interest on Working Capital	53.08	13.32	42.08	55.39
7	Interest on Security Deposit	14.51	0.00	13.20	13.20
8	Provision for Bad and Doubtful Debts		0.00	0.93	0.93
9	Income Tax	30.02	49.41	0.00	49.41
10	Contribution to Contingency Reserves	3.53	3.31	0.22	3.53
11	Return on Equity Capital	76.21	72.99	6.73	79.71
12	DSM Expenses	5.33		2.82	2.82
13= sum (1to12)	**Aggregate Revenue Requirement**	**3865.13**	**378.71**	**3570.26**	**3948.97**
14	Less: Non-Tariff Income	29.14	7.97	17.87	25.84
15= 13-14	**Aggregate Revenue Requirement for Wires Business**	**3835.99**	**370.74**	**3552.39**	**3923.13**

Commission's Analysis and Ruling

Based on the various components of the ARR approved in this Section, the Commission has approved the ARR for FY 2014-15 for TPC-D's Wires Business and Supply Business as given in the Tables below:

Table 3-56: ARR for Wires Business for FY 2014-15 approved by Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Operation & Maintenance Expenses	81.96	85.66	82.35
Depreciation	75.65	78.58	72.24
Interest on Long-term Loan Capital	71.12	74.67	66.21
Interest on Working Capital	13.51	13.32	13.28
Provisioning for Bad & Doubtful Debts	0.00	0.00	0.00
Contribution to Contingency Reserves	3.29	3.31	3.29
Income Tax	28.83	49.41	50.43
Finance Charges		0.77	0.77
Share of Efficiency (Gain)/loss in O&M Expenses			1.09
Total Revenue Expenditure	**274.36**	**305.73**	**289.65**
Return on Equity Capital	70.57	72.99	67.36
Additional ROE due to higher Wires availability			0.21

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Aggregate Revenue Requirement	**344.93**	**378.71**	**357.22**
Less: Non-Tariff Income	18.65	7.97	7.97
Net Aggregate Revenue Requirement	**326.28**	**370.74**	**349.25**

Table 3-57: ARR for Supply Business for FY 2014-15 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Power Purchase Expenses	2785.40	2805.94	2805.64
Stand-by Charges	149.67	149.67	149.67
O&M Expenses	71.25	104.65	71.33
Depreciation	5.24	8.89	5.29
Interest on Loan Capital	5.44	5.49	5.65
Interest on Working Capital	39.57	42.08	41.67
Interest on CSD	14.51	13.20	13.20
Provision for bad and doubtful debts		0.93	0.93
Contribution to contingency reserves	0.24	0.22	0.24
Intra-State Transmission Charges	436.72	439.06	436.76
MSLDC Fees & Charges	2.30		2.30
Income Tax	1.19	0.00	0.00
DSM Expenses	5.33	2.82	1.45
Other Finance Charges		0.06	0.06
Interest on FAC		(9.48)	0.00
Share of efficiency (gains)/losses		0.00	11.11
Total Revenue Expenditure	**3516.86**	**3563.53**	**3545.29**
Add: Return on Equity Capital	5.64	6.73	5.88
Additional RoE due to higher Supply Availability			0.82
Aggregate Revenue Requirement	**3522.50**	**3570.26**	**3551.99**
Less: Non-Tariff Income	10.49	17.87	17.87
Past recoveries	585.55	585.55	585.55
Aggregate Revenue Requirement from Retail Supply	**4097.56**	**4137.94**	**4119.67**

Table 3-58: Combined ARR approved by Commission for Wires and Supply Business for FY 2014-15 (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Power Purchase Expenses	2785.40	2805.94	2805.64
Stand-by Charges	149.67	149.67	149.67
O&M Expenses	153.21	190.31	153.68

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Depreciation	80.89	87.47	77.53
Interest on Loan Capital	76.56	80.17	71.86
Interest on Working Capital	53.08	55.39	54.95
Interest on CSD	14.51	13.20	13.20
Provision for bad and doubtful debts	0.00	0.93	0.93
Contribution to contingency reserves	3.53	3.53	3.53
Intra-State Transmission Charges	436.72	439.06	436.76
MSLDC Fees & Charges	2.30		2.30
Income Tax	30.02	49.41	50.43
DSM Expenses	5.33	2.82	1.45
Other Finance Charges	0.00	0.82	0.82
Interest on FAC	0.00	(9.48)	0.00
Share of efficiency (gains)/losses		0.00	12.20
Total Revenue Expenditure	**3791.22**	**3869.25**	**3834.95**
Add: Return on Equity Capital	76.21	79.71	73.24
Additional RoE due to higher Wires Availability & Supply Availability			1.03
Aggregate Revenue Requirement	**3867.43**	**3948.97**	**3909.22**
Less: Non-Tariff Income	29.14	25.84	25.84
Past recoveries	585.55	585.55	585.55
Aggregate Revenue Requirement from Retail Supply	**4423.84**	**4508.68**	**4468.93**

3.20 REVENUE FROM SALE OF ELECTRICITY

TPC-D's Submission

The revenue recovered by the Supply Business and Wires Business in FY 2014-15 is as shown in the Tables below:

Table 3-59: Revenue of Supply Business in FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	TPC-D Petition
Demand Charges	203.25
Energy Charge	3365.58
Power Factor Incentive/ Penalty	0.90
FAC Billed	(73.97)
15 Day provision	(58.64)
Cash Discount	(3.44)

Particulars	TPC-D Petition
Load Factor Incentive	(39.29)
Wheeling Charge credit to Change-over Consumers	(47.02)
Wheeling Charge of TPC-D	(0.34)
Total Revenue	**3347.02**

Table 3-60: Revenue of Wires Business in FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	TPC-D Petition
Revenue from Wheeling Charges	466.49

TPC-D has also received Rs. 2.02 crore as revenue from OA Consumers towards Transmission Charges.

Commission's Analysis and Ruling

The Commission has accepted TPC-D's submission regarding the actual revenue in FY 2014-15, and accordingly approves the revenue from sale of power as shown in the following Table:

Table 3-61: Revenue for FY 2014-15 as approved by the Commission (Rs. crore)

Particulars	TPC-D Petition	Approved in this Order
Revenue from Sale of Power	3347.02	3347.02
Revenue from Wheeling Charges	466.49	466.49
Revenue from Open Access Consumers	2.02	-
Total Revenue	**3815.53**	**3813.51**

The Commission has not considered the receipt from Transmission Charges of Rs. 2.02 crore as part of the revenue, as it is to be remitted by the Distribution Licensees to the State Transmission Utility (STU) and cannot be retained. **TPC-D is directed to remit this amount immediately to the STU.**

3.20.1 Wheeling Charges, Regulatory Asset Charges and Cross-subsidy Surcharge payable to RInfra-D

TPC-D's Submission

TPC-D had collected revenue against Wheeling Charges, RAC and CSS of Rs. 265.96 crore, Rs. 171.31 crore, and Rs. 219.92 crore, respectively, from change-over consumers, based on rates and losses approved by the Commission, and has remitted it to RInfra-D.

For the computation of ARR, it has not considered these charges, as they have been collected from consumers and paid to RInfra-D.

Commission's Analysis and Ruling

Since the Wheeling Charges, RAC, and CSS are collected by TPC-D and remitted to RInfra-D, the Commission has not considered such revenue against its ARR.

3.21 REVENUE GAP/(SURPLUS) FOR FY 2014-15

TPC-D's Submission

The Revenue Surplus of the Wires Business for FY 2014-15, taking into account revenue from Wheeling Charges, is given in the Table below:

Table 3-62: Revenue Surplus for Wires Business for FY 2014-15 as submitted by TPC-D (Rs. crore)

Sr. No	Particulars	TPC-D Petition
1	Net Aggregate Revenue Requirement	370.74
2	Revenue from Wheeling Charges	466.49
3	**Gap/ (Surplus)**	**(95.75)**

The Revenue Gap of the Supply Business for FY 2014-15, taking into account the revenue of the Supply Business and sharing of gains and losses, is as given in the Table below:

Table 3-63: Revenue Gap for Supply Business for FY 2014-15 as submitted by TPC-D (Rs. crore)

Sr. No	Particulars	TPC-D Petition
1	Net Aggregate Revenue Requirement (A)	4137.94
2	Revenue from Sale of power (B)	3347.02
3	Revenue from Open Access Consumers (C)	2.02
4	**Revenue Gap/(Surplus) (=A-B-C)**	**788.90**

Commission's Analysis and Ruling

Considering the approved components of ARR and revenue for FY 2014-15, the Commission has approved the Revenue Gap/(Surplus) for FY 2014-15 as shown below:

Table 3-64: Revenue Surplus for Wires Business for FY 2014-15 approved by Commission (Rs. crore)

Sr. No	Particulars	MTR Order	TPC-D Petition	Approved in the Order
1	Net Aggregate Revenue Requirement	326.28	370.74	349.25
2	Revenue from Wheeling Charges	466.39	466.49	466.49
3	**Gap/ (Surplus)**	**(140.11)**	**(95.75)**	**(117.23)**

Table 3-65: Revenue Gap for Supply Business for FY 2014-15 approved by Commission (Rs. crore)

Sr. No	Particulars	MTR Order	TPC-D Petition	Approved in the Order
1	Net Aggregate Revenue Requirement (A)	4097.56	4137.94	4119.67
2	Revenue from Sale of power (B)	3377.78	3347.02	3347.02
3	Revenue from Open Access Consumers (C)	-	2.02	-
4	**Gap/ (Surplus) (=A-B-C)**	**717.49**	**788.90**	**772.65**

The combined Revenue Gap for FY 2014-15 as approved by the Commission is shown in the Table below:

Table 3-66: Combined Revenue Gap for FY 2014-15 approved by Commission (Rs crore)

Sr. No	Particulars	MTR Order	TPC-D Petition	Approved in this Order
1	**Total ARR for Wires Business and Supply Business (A)**	4423.84	4508.68	4468.93
2	**Total Revenue**	3844.17	3815.13	3813.51
3	**Gap/ (Surplus)**	**577.38**	**693.05**	**655.42**

Hence, the Commission has approved a Revenue Surplus of Rs. 117.23 crore for the Wires Business and a Revenue Gap of Rs. 772.65 crore for the Supply Business for FY 2014-15, resulting in a total Revenue Gap of Rs. 655.42 crore.

However, in the MTR Order, the Commission has already adjusted the provisional Revenue Surplus of Rs. 140.11 crore for the Wires Business and allowed recovery of the provisional Revenue Gap of Rs. 717.49 crore for the Supply Business for FY 2014-15 along with the ARR of FY 2015-16, without carrying cost. Hence, only the incremental Revenue Gap/(Surplus) on account of final truing-up for FY 2014-15 has to be allowed/adjusted in the 3rd Control Period, as shown in the Table below:

Table 3-67: Incremental Revenue Gap/(Surplus) for Wires Business and Supply Business for FY 2014-15 approved by Commission (Rs. crore)

Sr. No	Particulars	MTR Order	Approved in the Order	Incremental Revenue Gap/(Surplus)
1	Wires Business	(140.11)	(117.23)	22.88
2	Supply Business	717.49	772.65	55.16
3	Total Wires & Supply	577.38	655.42	78.04

This incremental Revenue Gap/(Surplus) has been adjusted in the Revenue Requirement of the 3rd Control Period as elaborated in Section 6 of this Order. The carrying cost has been allowed on the originally allowed/adjusted amount and the incremental amount separately for the corresponding periods, as elaborated in Section 6.

4 PROVISIONAL TRUING-UP OF ARR FOR FY 2015-16

Under Regulation 5 of the MYT Regulations, 2015, TPC-D submitted the actuals of the first half (H1) of FY 2015-16 and the revised estimates for the second half (H2) for the provisional true-up for FY 2015-16.

The Commission has analysed the expenses and revenue under each head and has provisionally approved the expenditure for FY 2015-16. The expenditure and revenue projected by TPC-D and allowed by the Commission under each of the expense and revenue heads are discussed in the subsequent paragraphs.

4.1 SALES

TPC-D's Submission

For FY 2015-16, TPC-D has taken the category-wise number of consumers served on 31 January, 2016 instead of 30 September, 2015 for a more accurate picture of the number of consumers. Compared to 31 March, 2015, there has been an overall increase of 7% in the consumer base of TPC-D over the 10 months from April, 2015. However, it is not uniform across consumer categories. The number of consumers has increased in the Residential and HT Industrial categories, but has decreased in the LT Industrial and Commercial categories, primarily on account of reverse change-over back to RInfra-D.

There is a significant reduction in consumers as Railways has been declared a deemed Distribution Licensee post the CERC Order dated 5 November, 2015 in Petition No. 197 of 2015.

For estimating sales in FY 2015-16, the actual sales till January, 2016 have been taken, and the estimated sales for the remaining two months have been considered based on the previous year. The category-wise sales for FY 2015-16 are shown in the Table below:

Table 4-1: Estimated Category-wise Sales for FY 2015-16 as submitted by TPC-D (MU)

Sr. No	Category	MTR Order			TPC-D Petition		
		Direct Consumers	Change-over Consumers	Total	Direct Consumers	Change-over Consumers	Total
I	HIGH TENSION CATEGORIES						
1	HT I - Industry	1,524.79	11.94	1,536.73	1,146.78	10.46	1,157.24
2	HT II - Commercial	635.41	21.66	657.07	612.68	11.53	624.21
3	HT III Group Housing		5.78	5.78	0.30	3.25	3.55
4	HT IV - Temporary Supply	9.83		9.83	8.21		8.21
5	HT V - Railways	964.09		964.09	776.54		776.54
	22/33 kV	310.28		310.28	297.32		297.32
	100kV	653.81		653.81	479.22		479.22
6	HT V(B) – Railways Metro & Monorail				6.01		6.01
7	HT VI Public Services	251.76		251.76	226.91	0.05	226.96
	(A) Public service, Govt. Hosp & Edu. Inst.				41.67	0.04	41.71
	(B) Public Service Others				185.24	0.01	185.25
II	LOW TENSION CATEGORIES						
1	LT I - Residential (BPL)				0.02	0.02	0.04
2	LT I - Residential	252.86	1,719.64	1,972.50	232.02	1704.73	1,936.76
3	LT II - Commercial	328.46	478.40	806.86	324.45	361.25	685.70
	Upto 20 kW	43.64	278.00	321.64	44.53	218.43	262.96
	> 20 kW & ≤ 50kW	40.74	52.35	93.09	40.33	38.73	79.06
	> 50kW	244.08	148.05	392.13	239.59	104.09	343.68
4	LT III - Industry ≤ 20 kW	24.40	55.19	79.59	25.23	46.20	71.43
5	LT IV - Industry > 20 kW	147.36	81.15	228.51	152.24	49.96	202.20
6	LT V - Advertisement & Hoardings, incl. floodlights & neon signs	0.02	0.02	0.04	0.04	0.01	0.05

Sr. No	Category	MTR Order			TPC-D Petition		
		Direct Consumers	Change-over Consumers	Total	Direct Consumers	Change-over Consumers	Total
7	LT VI – Streetlights	-	-	-	0.55	-	0.55
8	LT VII – Temporary Supply	19.42	0.16	19.58	19.28	0.01	19.29
	- TSR – Temporary Supply Religious	0.01		0.01	0.05	-	0.05
	- TSO – Temporary Supply Others	19.41	0.16	19.57	19.23	0.01	19.24
9	LT VIII – Crematoriums and Burial Grounds		0.31	0.31	-	0.35	0.35
10	LT IX – Public Services	10.76	12.52	23.28	14.19	9.63	23.82
	(A) Public service - Govt. Hosp & Edu. Inst.				0.25	0.16	0.42
	(B) Public Service - Others				13.94	9.47	23.41
	15 day adjustments	-			3.88	8.47	12.35
	GRAND TOTAL	**4,169.16**	**2,386.77**	**6,555.93**	**3,549.30**	**2,205.96**	**5,755.27**

The total sales are expected to be lower during FY 2015-16 than the actual sales in FY 2014-15 by around 200 MU. They will also be significantly lower by about 300 MU than the sales of 6555.93 MU approved in the MTR Order. The main reasons for the lower than approved sales are:

a) Higher sales were approved in the MTR Order, as compared to the sales projected by TPC-D.
b) Due to significant reduction in CSS, Wheeling Charges and RAC, a large number of subsidising consumers have availed ofOA. As of January, 2016, around 41.4 MW load has moved to OA.
c) Subsequent to the CERC Order dated 5 November, 2015, Railways have disconnected their Chola point of supply, drawing 65 MW power annually, on 26

November, 2015. Railways have also sought disconnection at 9 points of supply from 11 February, 2016, thus reducing the sales by 950 MU annually.

d) Sales to the subsidised Residential category has increased by approximately 260 MU in FY 2015-16 over FY 2014-15, which has partly offset the loss of 460 MU in sales due to the above reasons in FY 2015-16, thereby reducing the overall sales in FY 2015-16.

The number of consumers as well as sales to the Residential category is increasing, as shown in the Tables below:

Table 4-2: Consumer Mix by Numbers as submitted by TPC-D

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (till Dec)
Residential	84%	86%	90%	93%	94%
Commercial	3%	2%	1%	1%	6%
Industry	13%	12%	9%	6%	1%

Table 4-3: Consumer Mix by Sales as submitted by TPC-D

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16 (till Dec)
Residential	15%	18%	21%	28%	33%
Commercial	40%	40%	37%	28%	27%
Industry	46%	46%	42%	43%	40%

Commission's Analysis and Ruling

Once FY 2015-16 was over, the Commission asked for the data of actual Direct Sales and Change-over sales in FY 2015-16, which were submitted by TPC-D as shown in the Table below:

Table 4-4:Category-wise actual Direct and Change-over Sales for FY 2015-16 as submitted by TPC-D (MU)

Consumer Category & Consumption Slab	Direct Sales	Change-over Sales	Total Sales
HT I: HT-Industry	1165.26	9.00	1174.27
HT II : HT- Commercial	619.92	11.09	631.01
HT III: HT-Group Housing Society	0.32	3.25	3.56
HT IV : HT - Temporary Supply	8.53	0.00	8.53
HT V - Railway	779.02	0.00	779.02
HT V(B) – Railway, Monorail & Metro	6.07	0.00	6.07
HT VI - Public Service	220.61	0.01	220.62

Consumer Category & Consumption Slab	Direct Sales	Change-over Sales	Total Sales
Sub Total - HT Sales	**2799.72**	**23.36**	**2823.08**
LT I - Below Poverty Line	0.01	0.01	0.03
LT -I Residential	234.66	1712.44	1947.10
0-100	7.86	52.77	60.63
101-300	54.73	729.40	784.13
301-500	46.20	418.97	465.17
501 and above	125.86	511.30	637.17
LT Commercial	325.80	364.22	690.03
Upto 20 kW	45.30	219.75	265.05
> 20 kW & ≤ 50kW	40.53	40.25	80.79
> 50kW	240.34	104.22	344.56
LT III - LT Industry up to 20 kW	25.68	46.35	72.03
LT IV - LT Industry above 20 kW	157.65	47.78	205.44
LT-V : LT- Advertisements and Hoardings	0.04	0.01	0.05
LT VI: LT -Street Lights	0.57	0.00	0.57
LT-VII (A): LT -Temporary Supply Religious	0.08	0.00	0.08
LT-VII (B): LT -Temporary Supply Others	18.88	0.02	18.90
LT VIII: LT - Crematorium & Burial Grounds	0.00	0.35	0.35
LT IX: LT -Public Services	13.92	8.51	22.43
Sub Total - LT Sales	**777.53**	**2179.70**	**2957.23**
15 days adjustment	2.21	(15.36)	(13.15)
Total	**3579.46**	**2187.70**	**5767.16**

The Commission observed that the sales for the 0-100 units slab are much lower in FY 2015-16 as compared to the sales in FY 2014-15, whereas the sales for 301-500 units and above 500 units slabs are much higher than in FY 2014-15, for Direct Sales as well as Change-over Sales. TPC-D explained that the actual category-wise sales data were provided without considering the telescopic impact of the sales of higher slabs due to logic change in system configuration. It submitted the revised category-wise sales data after considering the telescopic impact on the total sales to the residential category for FY 2015-16. **TPC-D should review its internal procedures to ensure that such errors do not recur. TPC-D is also directed to undertake audit of the IT systems used for its business processes to ensure that they are fully in accordance with the applicable Rules, Regulations, and Standards. The Commission also expects that the IT systems be robust and that TPC-D takes necessary care to ensure adequate data safety and integrity.**

The Commission observed differences in the actual category-wise change-over sales submitted by TPC-D and RInfra-D. The differences persisted even after grossing-up of the category-wise change-over sales submitted by RInfra-D with the approved wheeling losses for the HT and LT categories. The Commission asked TPC-D and RInfra-D to reconcile the category-wise actual change-over sales for FY 2015-16.

In response, TPC-D submitted that the difference between the sales of RInfra-D and TPC-D billed sales is because the energy billed by TPC-D is for cyclic consumption, i.e., for low-end consumers, the billing period is from the 15^{th} day of the month to the 15^{th} day of the next month; while the reconciled figure with RInfra-D is on a monthly basis, i.e., the actual energy consumption from the 1st day to the last day of that month. Besides, for FY 2015-16, the energy is settled up to November, 2016 and not for the entire year. However, TPC-D was not aware of the assumptions behind RInfra-D's figures.

In its response, RInfra-D stated that the difference between the change-over sales data of RInfra-D and TPC-D billed sales is on account of submission of metered consumption by RInfra-D whereas TPC-D has reported change-over consumption at T<>D level. The change-over sales provided by RInfra-D were based on the bill month-wise meter readings of RInfra-D for change-over consumers. There would be differences in energy units of RInfra-D and TPC-D because, in case of varying billing cycles, RInfra-D has considered consumption as per its meter reading cycle, whereas TPC-D's consumption would be as per its cycles. Since the two are not same, there would always be a difference in sales.

Considering the above replies, the Commission has approved the change-over sales figures submitted by RInfra-D and TPC-D, subject to final true-up of FY 2015-16. The category-wise sales approved by the Commission for TPC-D for FY 2015-16 are given in the Table below:

Table 4-5: Category-wise Sales for FY 2015-16 approved by the Commission (MU)

Consumer Category & Consumption Slab	MTR Order			TPC-D Petition			Approved in this Order		
	Direct	Change-over	Total	Direct	Change-over	Total	Direct	Change-over	Total
HT Category									
HT I – Industry	1524.79	11.94	1,536.73	1,146.78	10.46	1,157.24	1,165.26	9.00	1,174.27
HT II – Commercial	635.41	21.66	657.07	612.68	11.53	624.21	619.92	11.09	631.01
HT III - Group Housing Society	-	5.78	5.78	0.30	3.25	3.55	0.32	3.25	3.56
HT IV - Temporary Supply	9.83	-	9.83	8.21	-	8.21	8.53	-	8.53
HT V(A) - Railways	964.09	-	964.09	776.54	-	776.54	779.02	-	779.02
22/33 KV	310.28	-	310.28	297.32	-	297.32	298.26	-	298.26
100 KV	653.81	-	653.81	479.22	-	479.22	480.76	-	480.76
HT V(B) - Railways Metro & Monorail	-	-	-	6.01	-	6.01	6.07	-	6.07
HT VI - Public Services	251.76	-	251.76	226.91	0.05	226.96	220.61	0.01	220.62
HT VI(A) - Public Services - Govt. Hosp. & Edu. Inst.	-	-	-	41.67	0.04	41.71	37.32	0.00	37.32
HT VI(B) - Public Services Others	251.76	-	251.76	185.24	0.01	185.25	183.29	0.01	183.30
Sub-total	**3385.88**	**39.38**	**3,425.26**	**2,777.42**	**25.30**	**2,802.72**	**2,799.72**	**23.36**	**2,823.08**
LT Category									
LT I - Residential (BPL)	-	-	-	0.02	-	0.02	0.01	0.01	0.03
LT I - Residential	252.86	1,719.64	1,972.50	232.02	1,704.73	1,936.76	234.66	1,712.44	1,947.11
0-100	64.92	563.17	628.09	51.74	531.10	582.85	52.36	533.50	585.86
101-300	75.82	732.08	807.90	68.11	670.71	738.82	68.92	673.74	742.66
301-500	31.94	197.73	229.67	34.41	230.00	264.41	34.74	231.04	265.78
501 and above	80.18	226.66	306.84	77.76	272.93	350.69	78.65	274.16	352.81

Consumer Category & Consumption Slab	MTR Order			TPC-D Petition			Approved in this Order		
	Direct	Change-over	Total	Direct	Change-over	Total	Direct	Change-over	Total
LT II - Commercial	328.46	478.40	806.86	324.45	361.25	685.70	325.80	364.22	690.03
LT II(A) - Commercial upto 20 kW	43.64	278.00	321.64	44.53	218.43	262.96	45.30	219.75	265.05
LT II(B) - Commercial 20 to 50 kW	40.74	52.35	93.09	40.33	38.73	79.06	40.53	40.25	80.79
LT II(C) - Commercial > 50 kW	244.08	148.05	392.13	239.59	104.09	343.68	240.34	104.22	344.56
LT III - Industrial upto 20 kW	24.4	55.19	79.59	25.23	46.20	71.43	25.68	46.35	72.03
LT IV - Industrial > 20 kW	147.36	81.15	228.51	152.24	49.96	202.20	157.65	47.78	205.44
LT V - Advertisement & Hoardings	0.02	0.02	0.04	0.04	0.01	0.05	0.04	0.01	0.05
LT VI - Streetlights	-	-	-	0.55	-	0.55	0.57	-	0.57
LT VII – Temporary Supply	19.42		19.42	19.28	-	19.28	19.19	0.02	19.21
LT VII(A) - Temporary Religious	0.01	-	0.01	0.05	-	0.05	0.08	-	0.08
LT VII(B) - Temporary Others	19.41	0.16	19.57	19.23	0.01	19.24	18.88	0.02	18.90
LT VIII - Crematoriums & Burial Grounds	-	0.31	0.31	-	0.35	0.35	-	0.35	0.35
LT IX - Public Services	10.76		10.76	14.19	-	14.19	13.92	8.51	22.43
LT IX(A) - Public Services - Govt Hosp. & Edu. Inst.	-	-	-	0.25	0.16	0.42	0.33	0.23	0.56
LT IX(B) - Public Services Others	10.76	12.52	23.28	13.94	9.47	23.41	13.59	8.27	21.86
Sub-total	**783.28**	**2,347.39**	**3,130.67**	**768.00**	**2,172.17**	**2,940.17**	**777.53**	**2,179.70**	**2,957.23**
15 day adjustment	-	-	-	3.86	8.48	12.33	2.21	(15.36)	(13.15)
Total	**4,169.16**	**2,386.77**	**6,555.93**	**3,549.30**	**2,205.96**	**5,755.27**	**3,579.46**	**2,187.70**	**5,767.16**

4.2 DISTRIBUTION LOSES AND ENERGY INPUT REQUIREMENT

TPC-D's Submission

TPC-D has taken the actual Distribution Losses up to January, 2016 and the approved Distribution Losses for February and March, 2016. Accordingly, the Distribution Losses for H1 of FY 2015-16 were 0.38% while those for H2 work out to 0.46%. The average Distribution Losses percentage for FY 2015-16 as considered by TPC-D is 0.41%. TPC-D has taken the Transmission Loss equivalent to the actual weighted average Transmission Loss as per the MSLDC website for the period April to December, 2015, which works out to 3.96%.

Table 4-6: Energy Input requirement for FY 2015-16 as submitted by TPC-D (MU)

Particulars	MTR Order	TPC-D Petition
TPC-D Sales (Retail) with 15 days Adjustments	4169.14	3549.30
Bill credit given to OA consumers		120.38
Total Sales		**3669.38**
Distribution Losses	1.02%	0.41%
ABT Meter reading at T<>D Interface		3684.97
OA wind credit at T<>D Interface		125.31
Energy Requirement for TPC-D consumers at T<>D interface	4212.11	3559.66
Sales to Change-over consumers	2386.79	2205.96
Bill credit given to OA consumers		1.45
Sale to Change-over consumers after adjusting for OA wind credit		2204.50
Total Energy Requirement at T<>D	**6598.90**	**5764.16**
Transmission Loss	3.89%	3.96%
Total Energy Requirement at G<>T Interface	**6865.98**	**6001.93**

Commission's Analysis and Ruling

The Commission has considered the actual Transmission Losses of 3.92% and the T<>D input of 3778 MU for direct sales in FY 2015-16-based on the MSLDC input. The quantum of power purchased by TPC-D from various sources has been taken based on the actual data provided for FY 2015-16. The energy purchased under the Imbalance Pool has been adjusted to match the input at T<>D, based on MSLDC information. The Commission has considered the actual OA sales for FY 2015-16 as submitted by TPC-D. For computation of Energy Balance and energy requirement of FY 2015-16, the

Commission has taken the actual direct sales and change-over sales submitted by TPC-D and approved by the Commission in this Order. Considering the above, the Distribution Losses and Energy Balance as approved by the Commission for FY 2015-16 are given in the Table below.

The Distribution Loss of TPC-D for FY 2015-16 works out to be negative. Hence, it appears that there is some discrepancy in the data, which could be on account of the provisional data provided by MSLDC. For provisional truing-up of FY 2015-16, the Commission has considered the provisional MSLDC numbers. The Distribution Loss of TPC-D will be revised at the time of final truing-up for FY 2015-16 once the MSLDC figures are finalised.

In view of the above, the Distribution Losses and Energy Balance as provisionally approved by the Commission for FY 2015-16 are given in the Table below:

Table 4-7: Energy Balance for FY 2015-16 approved by Commission (MU)

Particulars	**FY 2015-16**		
	MTR Order	**TPC-D Petition**	**Approved in this Order**
Direct Sales	4169.14	3549.30	3577.33
Bill credit given to OA consumers		120.38	193.91
Total Direct Sales		3669.68	3771.24
Distribution Loss (%)	1.02%	0.41%	(0.37%)
Energy Required for Direct Sales at T<>D Interface	4212.11	3559.66	3757.45
Change-over Sales (after adjusting for wind credit)	2386.79	2204.50	2187.70
Total Energy Required at T<> D Interface	6598.90	5764.16	5937.16
Transmission Loss (%)	3.89%	3.96%	3.92%
Net Energy Requirement at G<>T interface	6865.98	6001.93	6179.39

4.3 POWER PURCHASE QUANTUM AND COST

TPC-D's Submission

TPC-D’s total power procurement in FY 2015-16 is based on the estimated energy requirement, which is met from TPC-G, RE sources and short-term bilateral sources. For H1 of FY 2015-16, it has considered the actual power purchase cost based on the provisional FBSM Bills.

4.3.1 Procurement from TPC-G

TPC-D's Submission

TPC-D has long-term contracts with TPC-G and a major portion of the power purchase requirement is met through this arrangement. The allocation of capacity from various Generating Units is the same as in FY 2014-15.

Unit 4 had been in stand-by mode for the past two years and had not been operated. Due to its high cost of power generation, it seems unlikely that it would be used. Accordingly, TPC-D has not paid the Fixed Charges of Unit 4 in FY 2015-16.

Due to its higher cost of power, Unit 6 is also on stand-by mode and operates only based on the system requirement as directed by MSLDC or to meet the requirement of TPC-D in case of outages of other Units.

The total cost of power purchase from TPC-G, after considering actual purchase in H1 and the generation and cost estimation provided by TPC-G for H2, is as given in the Table below:

Table 4-8: Estimated Power Purchase from TPC-G in FY 2015-16 as submitted by TPC-D

Source	Quantum (MU)	Cost (Rs. crore)
TPC-G	3639.73	1581.52
Unit 6	8.67	6.83
Total	**3648.41**	**1588.34**

Commission's Analysis and Ruling

After FY 2015-16 was over, the Commission asked for the actual source-wise quantum and cost of power purchase for FY 2015-16, which was submitted by TPC-D. The Unit-wise and fuel-wise actual purchase from TPC-G in FY 2015-16, as submitted by TPC-D, is given in the Table below:

Table 4-9: Power Purchase from TPC-G for FY 2015-16 as submitted by TPC-D

Unit	Fuel Type	Quantum (MU)	Fixed Charges (Rs. crore)	Energy Charges (Rs./kWh)	Energy Charges (Rs. crore)
Unit-4	Auxiliary	(0.71)	-	-	-

Unit	Fuel Type	Quantum (MU)	Fixed Charges (Rs. crore)	Energy Charges (Rs./kWh)	Energy Charges (Rs. crore)
Unit-5	U5-APM	0.26	199.63	3.54	0.09
	U5-RLNG	8.32		7.55	6.28
	U5-Coal	1,593.14		2.83	451.53
	U5-Oil	0.28		12.97	0.36
	U5-NAPM	8.24		3.89	3.21
Unit-6	U6-Net Gen	(10.88)	87.62		-
	U6-Oil	1.43		12.77	1.83
	U6-RLNG	3.83		7.21	2.76
Unit-7	U7-APM	370.87	95.78	2.49	92.24
	U7-RLNG	10.66		5.89	6.28
	U7-NAPM	142.70		2.46	35.06
	U7- OC APM	14.48		3.80	5.51
	U7- OC NAPM	22.22		3.87	8.60
Bhira		301.51	80.44	0.86	26.06
Bhivpuri		109.66		1.70	18.62
Khopoli		108.73		2.44	26.56
Total		2,684.76		2.55	684.99
Unit-8		1,059.98	158.31	2.81	297.64
Hydro Incentive			0.23		
Total TPC-G		3,744.74	622.01	2.62	982.63
Unit 6 Actuals as per MSLDC Directions		8.67		7.87	6.83
Total incl. Unit 6		**3,753.41**	**622.01**	**2.64**	**989.46**

The Commission has considered the actual cost of power purchase from TPC-G as reported by TPC-D. Accordingly, it has approved the cost of power purchase from TPC-G for FY 2015-16 as shown in the Table below:

Table 4-10: Quantum & Cost of Power Purchase from TPC-G for FY 2015-16 approved by Commission

TPC-G	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
FY 2015-16	3958.67	1652.21	4.17	3648.41	1588.34	4.35	3753.41	1611.47	4.29

4.3.2 Renewable Purchase Obligation

TPC-D's Submission

In line with the RPO Regulations, 2010, TPC-D has purchased the quantum of power that is required to meet its RPO. The RPO requirement for FY 2015-16 and purchase against it is given in the Table below:

Table 4-11: Renewable Energy Requirement for FY 2015-16 as submitted by TPC-D (MU)

Renewable Source		% RPO for FY 2013-14	Requirement @ InSTS	Obligation	Previous year obligations	Preferential Tariff purchase	Met through REC	Total	Shortfall/ (Surplus)
		1	2	3 =1 * 2	4	5	6	7 =5+ 6	8 = 7 -3-4
RE Other than Mini Hydro and Solar	a	8.48%		509.14	0.00	297.45	211.69	509.14	0.00
Mini Hydro	b	0.02%		1.02	3.44			0.00	4.46
Total Non-Solar	c = a+b	8.50%		510.16	3.44	297.45	211.69	509.14	4.46
Solar	d	0.50%		30.01	43.71	51.98	21.74	73.72	0.00
Total	e =c+d	9.00%	6001.93	540.17	47.15	349.43	233.44	582.87	4.46

TPC-D proposed to meet its requirement of Non-Solar RE power through long-term tied-up generating sources and the balance through REC purchase, as shown in the Table below:

Table 4-12: Non-Solar RPO for FY 2015-16 as submitted by TPC-D (MU)

Particulars	FY 2015-16
Brahmanvel	18.21
Khandke	99.13
Sadawaghapur	25.36
Visapur - 8 MW	9.90
Agaswadi	97.64
Visapur – 6 MW	10.85
Visapur – 4 MW	6.42
Visapur – 24 MW	29.94
Total	**297.45**
Requirement of TPC-D	509.14
Shortfall to be meet through REC	**211.69**

Similarly, the estimated requirement of Solar RE is proposed to be met through long-term tied-up generating sources and the balance through REC purchase, as shown in the Table below:

Table 4-13: Solar RPO for FY 2015-16 as submitted by TPC-D (MU)

Particulars	FY 2015-16
Mulshi Solar	4.32
Solar Rooftop	0.06
Palaswadi Solar	47.59
Total	**51.97**
Requirement for FY 2015-16 including previous year obligations	73.72
Shortfall to be met through REC	**21.74**

TPC-D would be meeting its Solar and Non-Solar RPO, except for Mini/Micro Hydro. As stated earlier, TPC-D has been unable to fulfil the RPO even after significant efforts. However, as per the Commission's Order in Case No. 192 of 2014, TPC-D has to cumulatively comply with the entire requirement, including the previous years' obligations, by the end of FY 2015-16. TPC-G is making efforts to establish Mini / Micro Hydro Plants at its existing Hydro Generating Stations. In view of this, either: (i) TPC-D should be allowed to meet its Mini / Micro Hydro RPO through purchase of RECs, or (ii) the compliance period may be extended by another year, i.e. till the end of FY 2016-17. For the provisional true-up for FY 2015-16, it has considered purchase of RECs to meet the Mini/Micro Hydro RPO.

TPC-D has projected the cost of purchase from RE sources at the tariffs approved by the Commission in its various RE Tariff Orders and the quantum as projected above for FY 2015-16. The summary of cost of power purchase from RE sources is given in the Table below:

Table 4-14: Power Purchase Cost from Non Solar / Solar sources for FY 2015-16 as submitted by TPC-D

Particulars	FY 2015-16		
	Quantum (MU)	Rate (Rs./kWh)	Cost (Rs. crore)
Wind			
Brahmanvel	18.21	4.70	8.54
Khandke	99.13	4.70	46.57
Sadawaghapur	25.36	4.40	11.14
Visapur – 8 MW	9.90	5.70	5.63

Particulars	FY 2015-16		
	Quantum (MU)	**Rate (Rs./kWh)**	**Cost (Rs. crore)**
Agaswadi	97.64	4.56	44.51
Visapur – 6 MW	10.85	4.29	4.65
Visapur – 4 MW	6.42	4.40	2.82
Visapur – 24 MW	29.94	5.81	17.39
Sub-total	**297.45**	**4.75**	**141.26**
Solar			
Mulshi Solar	4.32	17.91	7.73
Solar Rooftop	0.06	18.41	0.11
Palaswadi Solar	47.59	8.8	41.87
Sub-total	**51.98**	**9.56**	**49.71**
REC			
Non-Solar REC	211.69	1.50	31.75
Solar REC	21.74	3.50	7.61
Sub-total	**233.44**	**1.69**	**39.36**
Total RE Power Purchase Cost	**349.43**	**6.59**	**230.34**

Commission's Analysis and Ruling

The Commission asked for the actual source-wise quantum of RE purchase, landed cost and other details of RE purchase in FY 2015-16. TPC-D was also asked to submit the details and documentary support for actual Solar and Non-Solar REC purchase, quantum of purchase of RECs and corresponding cost of RECs for FY 2015-16, which TPC-D provided.

The Commission has considered the non-Solar RPO for FY 2015-16 as 8.48% (the approved RPO, excluding Mini/Micro Hydro RPO) of the actual total power purchase in FY 2015-16. The rates for non-Solar RE purchase have been considered at the preferential tariff approved by the Commission for different years. TPC-D has considered the landed rate for purchase from Visapur 4 MW as Rs. 4.51 per kWh, as compared to the preferential tariff of Rs. 4.40 per kWh. As the Commission allows purchase of RE power only at the preferential tariff, it has taken the preferential tariff of Rs. 4.40 per kWh for the purchase from Visapur 4 MW.

TPC-D has purchased non-Solar RECs equivalent to 212.44 MU of power, at the floor rate of Rs. 1.50 per kWh, amounting to Rs. 31.87 crore. The Commission will be assessing the compliance with the RPO targets for FY 2015-16 separately. For the provisional true-up for FY 2015-16, it has considered the actual cost of non-Solar RECs purchased by TPC-D.

The Commission has approved the Solar RE purchase considering the source-wise purchase and corresponding source-wise preferential rates approved by the Commission. The Commission approves purchase of RECs equivalent to 21 MU at the floor rate of Rs. 3.50 per kWh, as submitted by TPC-D, based on actuals.

The Commission has approved the Solar and non-Solar power purchase for FY 2015-16 as shown in the Table below:

Table 4-15: Power Purchase from Solar and Non-Solar sources for FY 2015-16 approved by Commission (MU)

Particulars	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
Solar power procurement	47.40	46.50	9.81	51.98	49.71	9.56	51.98	49.74	9.57
Solar REC Procurement		11.30			7.61			7.35	
Total Solar including REC	**47.40**	**57.80**		**51.98**	**56.32**		**51.98**	**57.09**	
Non-Solar RE power procurement	402.21	192.97	4.80	297.45	141.26	4.75	297.45	141.35	4.75
Non-Solar REC Purchase		27.73			31.75			31.87	
Total non-Solar including REC	**402.21**	**220.70**	**5.49**	**297.45**	**173.01**		**297.45**	**173.21**	
Total RE Power Purchase	449.61	239.47	5.33	349.43	190.97	5.46	349.43	191.09	5.47
Total REC Purchase		39.03			39.36			39.22	
Total RE procurement	**449.61**	**278.50**	**6.19**	**349.43**	**230.33**	**6.59**	**349.43**	**230.30**	**6.59**

4.3.3 Power Purchase from Bilateral Sources

TPC-D's Submission

The remaining quantum of energy required after considering the purchase from TPC-G and RE sources has been taken as the quantum of power purchase from bilateral sources, as shown in the Table below:

Table 4-16: Bilateral Power Purchase quantum for FY 2015-16 as submitted by TPC-D (MU)

Particulars	**FY 2015-16**
Requirement @ InSTS	**6001.93**
Met through	
TPC-G	3648.41
Solar + Non Solar RPO	349.43
OLA Sale	(1.77)
Bilateral + Stand-by Purchase + UI	2005.87
Total	**6001.93**

The bilateral power purchase cost in H1 of FY 2015-16 is considered as per the actual values, and for H2 the same as approved in the MTR Order, as shown in the Table below.

Table 4-17: Bilateral Power Purchase Quantum & Cost for FY 2015-16 as submitted by TPC-D

	FY 2015-16 (H1)		**FY 2015-16 (H2)**		**FY 2015-16**	
Particulars	**Quantum (MU)**	**Cost (Rs. crore)**	**Quantum (MU)**	**Cost (Rs. crore)**	**Quantum (MU)**	**Cost (Rs. crore)**
Bilateral Power Purchase	939.33	301.75	435.01	132.32	1374.35	434.08
UI	144.91	42.58	486.61	128.02	631.52	170.60
Total Cost	**1084.25**	**344.34**	**921.62**	**260.34**	**2005.87**	**604.68**

Commission's Analysis and Ruling

The Commission asked TPC-D to clarify whether the power from bilateral sources was procured through competitive bidding and, if not, the reasons, and also to clarify whether it was purchased on RTC basis or for specific hours.

TPC-D stated that it has purchased power from bilateral sources through competitive bidding in FY 2015-16 and submitted the results of the competitive bidding. TPC-D clarified that the power was purchased on RTC basis as well as for specific hours and submitted the copies of agreements for the short-term power purchased. The Commission after prudence check, has accepted TPC-D's submission in this regard, and accordingly approved the quantum and cost of power purchase from bilateral sources

The Commission asked for the reasons for purchasing short-term power, if any, in view of the backing down of the long-term sources of power purchase, and for instances where short-term power purchased through competitive bidding had not been scheduled due to transmission constraints.

TPC-D stated that it procures power on short-term basis primarily for the shortfall in meeting the demand of consumers. Scheduling/backing down of long-term sources is carried out by MSLDC on a day-ahead and real-time basis as per the State MOD stack, which results in cheaper power from the State Pool for the Distribution Licensees. There have been no instances where the short-term power purchased through competitive bidding has not been scheduled due to transmission constraints.

As set out at para. 3.3.3 above, the Commission had issued following directions to TPC-D in its MTR Order:

> *"The Ministry of Power (MoP), vide Resolution dated 15 May, 2012, has issued Guidelines for short-term power procurement by Distribution Licensees through tariff--based competitive bidding under S. 63 of the EA, 2003. In line with the same, the Commission directs TPC-D to procure the short-term power over and above the approved short-term power purchase for FY 2015-16, in case the need arises, through the competitive bidding route only, in accordance with the above-said Guidelines, except in case of power procured from the Power Exchange or under Banking mechanism. In accordance with the said Resolution, TPC-D shall have to submit a Petition to the Commission within two days of signing the PPA, for adoption of Tariff determined through competitive bidding, in case the quantum of power procured and tariff determined are higher than the above blanket approval granted by the Commission. Alternatively, TPC-D may also approach the Commission for prior approval of such short-term power purchase in excess of the approved quantum and cost of short-term power purchase, in case TPC-D does not procure short-term power through the competitive bidding route."*

TPC-D also stated that the Commission had approved the rate for bilateral power purchase as Rs. 3.13/kWh and quantum of 2457.70 MU for FY 2015-16 in the MTR Order. As against this, 1979.02 MU of power has been procured from different sources and the weighted average rate of short-term power purchase from all sources is Rs. 3.09/kWh. As both the quantum of power procured and the weighted average rate of power purchase were within the approved limits for power purchase from bilateral sources, separate approval from the Commission was not required. The Commission has analysed the details of actual short-term power purchase in FY 2015-16, and notes that 1399.81 MU were procured at the average rate of Rs. 3.13 per kWh, which is within the stipulated ceiling.

The purchase quantum under the Imbalance Pool has been corrected based on the input from MSLDC. However, as stated earlier, since the MSLDC input is provisional, this is subject to review at the time of final truing-up for FY 2015-16.

In view of the above, the Commission has approved the power purchase from bilateral sources for FY 2015-16, as shown in the Table below:

Table 4-18: Bilateral Power Purchase Quantum & Cost for FY 2015-16 approved by Commission

Source	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)
Nivade + Supa	56.68	14.31	2.52						
Bilateral Purchase	2401.02	755.73	3.15	1374.35	434.08	3.16	1399.81	438.40	3.13
UI				631.52	170.60	2.70	746.21	172.96	2.32
Total Short-term Purchase	**2457.70**	**770.04**	**3.13**	**2005.87**	**604.68**	**3.09**	**2146.02**	**611.36**	**2.85**

4.3.4 Transmission Charges and MSLDC Charges

TPC-D's Submission

TPC-D is paying Transmission Charges as determined in the InSTS Tariff Orders. For the first two months of FY 2015-16, TPC-D it paid the Transmission Charges as per the Order in Case No. 123 of 2014. From June, 2015 onwards, it has been paying as per the Order in Case No. 57 of 2015. The summary of estimated Transmission Charges for FY 2015-16 is given in the Table below:

Table 4-19: Estimated Transmission Charges for FY 2015-16 as submitted by TPC-D

Particulars	No. of months	Rate (Rs. crore/ month)	Cost (Rs. crore)
Transmission Charges as per Order in Case No. 123 of 2014	2	40.65	81.30
Transmission Charges as per Order in Case No. 57 of 2015	10	18.12	181.20
Total			**262.50**

The MSLDC Charges applicable to TPC-D are as per the rates approved in the MSLDC Tariff Order dated 28 June, 2013 for the months of April and May [*to be read as April to September]*, and at the rates approved in the MSLDC MTR Order dated 26 June, 2015 [*to be read as Budget Approval Order dated 20 October, 2015]* for the remaining period of the year, as shown in the Table below:

Table 4-20: MSLDC Charges for FY 2015-16 as submitted by TPC-D

Particulars	No. of months	Rate (Rs. crore/ month)	Cost (Rs. crore)
MERC Order in Case No. 178 of 2013	6	0.19	1.15
MERC Order in Case No. 218 of 2014	6	0.08	0.47
Total	**12**		**1.63**

Commission's Analysis and Ruling

The Commission has taken the actual Transmission and MSLDC Charges paid by TPC-D for FY 2015-16, which are as per the applicable InSTS Tariff Orders and MSLDC Budget Orders, as shown in the Table below:

Table 4-21: Transmission Charges & MSLDC Charges for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
Transmission Charges	217.44	262.50	262.50
MSLDC Charges	2.30	1.63	1.63
Total	**219.74**	**264.13**	**264.13**

4.3.5 Stand-by Charges

TPC-D's Submission

TPC-D has paid Stand-by Charges of Rs. 122.59 crore to MSEDCL as determined in the relevant Order pertaining to MSEDCL.

Commission's Analysis and Ruling

The Stand-by Charges payable by TPC-D for FY 2015-16 are Rs. 122.59 crore, as considered by the Commission, and shown in the Table below:

Table 4-22: Stand-by Charges for FY 2015-16 approved by Commission (Rs. crore)

Particular	**FY 2015-16**		
	No. of months	**Rate (Rs. crore/ month)**	**Cost (Rs. crore)**
Stand-by Charges as per MYT Order dated 28 June, 2013	2	12.47	24.95
Stand-by Charges as per MTR Order dated 26 June, 2015	10	9.76	97.64
Total	**12**		**122.59**

4.3.6 Total Power Purchase Cost

TPC-D's Submission

The summary of power purchase quantum and cost is given in the Table below:

Table 4-23:Total Power Purchase Cost for FY 2015-16 as submitted by TPC-D

Particulars	**H1 of FY 2015-16**		**H2 of FY 2015-16**		**Fixed Charges (Rs. crore)**	**FY 2015-16**	
	Quantum (MU)	**(Rs. crore)**	**Quantum (MU)**	**(Rs. crore)**		**Quantum (MU)**	**(Rs. crore)**
TPC-G	1960.84	543.74	1678.9	413.92	623.85	3639.73	1581.52
TPC-G Unit 6	8.67	6.83	0	0		8.67	6.83
Bilateral Power Purchase	939.33	301.75	435.01	132.32		1374.35	434.08
Renewable Energy	241.63	126.51	107.8	64.46		349.43	190.97
REC	0	12.61	0	26.75		0	39.36
Energy from S/B	0	0	0	0		0	0
OLA Sale	1.77	-0.71	0	0		-1.77	-0.71
UI	144.91	42.58	486.61	128.02		631.52	170.6
UI Adjustment	0	0	0	0		0	0
Transmission Charges							122.59
Stand-by Charges							262.5
MSLDC Charges							1.63
Total	**3293.61**	**1033.62**	**2708.32**	**765.66**	**623.85**	**6001.93**	**2809.36**

Commission's Analysis and Ruling

The summary of power purchase quantum and cost, including Stand-by Charges and Transmission Charges approved by the Commission for FY 2015-16, is given in the following Table:

Table 4-24: Summary of Power Purchase approved by the Commission for FY 2015-16

Source	MTR Order			TPC-D Petition			Approved in this Order		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./kWh)
TPC-G	3958.67	1652.21	4.17	3648.41	1588.34	4.35	3753.41	1611.47	4.29
Total Renewable procurement	449.61	278.50	6.19	349.43	230.34	6.59	349.43	231.09	6.61
Total Short-term power purchase, including UI	2457.70	770.04	3.13	2005.87	604.68	3.01	2146.02	611.36	2.85
OLA Sale				(1.77)	(0.71)	3.99	(69.47)	(31.15)	4.48
Total Power Purchase	**6865.98**	**2700.75**	**3.93**	**6001.93**	**2422.65**	**4.04**	**6179.39**	**2422.77**	**3.92**
Stand-by Charges		117.17			122.59			122.59	
Transmission Charges		217.44			262.50			262.50	
MSLDC Charges		2.30			1.63			1.63	
Total power Purchase	**6865.98**	**3037.66**	**4.42**	**6001.93**	**2809.36**	**4.68**	**6179.39**	**2809.48**	**4.55**

The sale Outside Licence Area (OLA) has been provisionally accepted as submitted by TPC-D. The Commission's analysis and directions with regard to this transaction are elaborated in Section 5 of this Order.

4.4 OPERATION AND MAINTENANCE EXPENSES

TPC-D's Submission

Regulation 78.4 of the MYT Regulations, 2011 specify the allowance of O&M expenditure on normative basis. The normative O&M expenditure for the Distribution Wires Business for FY 2015-16 is shown in the Table below:

Table 4-25: Estimated O&M Expenses for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	Units	FY 2015-16	
		MTR Order	TPC-D Petition
Norms			
A&G and Employee	Paise/Unit		15.28
R&M Expenses	% of Opening GFA		2.00%
Operating Parameters			
Sales	MU		3707.49
Opening GFA	Rs. crore		1789.08
O&M Expenses			
A&G and Employee	Rs. crore		56.65
R&M Expenses	Rs. crore		35.78
Total O&M Expenses	**Rs. crore**	**98.07**	**92.43**

TPC-D has significantly increased its distribution network in Mumbai as per the directives of the Commission. Consequently, O&M expenditure relating to the network has also increased on employees, statutory expenditure like rent towards cable laid in the Public Works Department (PWD) area and payable to PWD (Rs. 6.84 crore), and levy of access charges for cables, which is around Rs. 2.50 crore, etc. The norms specified for TPC-D are lower than those of other Licensees in Mumbai.

TPC-D has projected the O&M Expenses for the Supply Business for FY 2015-16 as per Regulation 92.7, as shown in the Table below:

Table 4-26: Estimated O&M Expenses for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	Unit	FY 2015-16	
		MTR Order	TPC-D Petition
Norms			
A&G and Employee expenses	Paise/Unit		12.59
R&M expenses	% of opening GFA		0.25%
Operating Parameters			
Sales	MU		5755.23
Opening GFA	Rs. crore		117.02
O&M Expenses			
A&G and Employee expenses	Rs. crore		72.46
R&M expenses	Rs. crore		0.29
Total O&M Expenses	**Rs. crore**	**82.83**	**72.75**

As explained earlier, the impact of reduced sales is visible in the reduced normative O&M expenditure for FY 2015-16. However, the number of consumers and consequently the service cost associated with the same has gone up significantly. However, the O&M expenditure norms do not reflect the increase, conversely showing a reduction. The Commission may revise the O&M requirements considering the changed operating conditions as compared to the previous period and allow the actual O&M expenditure for FY 2015-16 or, alternatively, apply the BEST norms for FY 2015-16, as elaborated in TPC-D's Petition in Case No. 51 of 2015. The estimated O&M expenses for the Supply Business for FY 2015-16 are Rs 96.51 crore.

Commission's Analysis and Ruling

As explained in Section 3, the Commission is of the view that the O&M norms specified for TPC-D are appropriate, and that TPC-D's contention that this is not so as it does not factor in the expenditure associated with the number of consumers being served is incorrect. While deriving the O&M norms, TPC-D's actual expenses were allocated between Wheeled energy/Sales and R&M expenses to ensure that there is no loss to TPC-D, and this is evident from the higher norms in these two parameters assigned to TPC-D compared to other Distribution Licensees. Further, TPC-D, which successfully argued before the ATE that the norms specified in the MYT Regulations, 2011 should be applied for FY 2011-12, is now claiming that these very norms are inadequate for other years of the same Control Period. The MYT Regulations, 2011 cannot be made applicable selectively, i.e., only when the actual O&M expenses are lower than the normative, and not be applied when the actual O&M expenses are higher.

Hence, the Commission has not accepted TPC-D's proposal to allow the actual O&M expenses, and has applied the normative O&M Expenses for FY 2015-16 in accordance with the MYT Regulations, 2011 for the Wires Business and Supply Business, as shown in the following Tables:

Table 4-27:O&M Expenses for Wires Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	Unit	FY 2015-16		
		MTR Order	TPC-D Petition	Approved in this Order
Norms for O&M				
For Wheeled Energy	**paise/kWh**	15.28	15.28	15.28
R&M Expenses	**% of GFA**	2.00%	2.00%	2.00%
Parameters for O&M Expenses				

Particulars	Unit	FY 2015-16		
		MTR Order	TPC-D Petition	Approved in this Order
Wheeled Energy	MU	4212.11	3707.49	3757.45
Opening GFA	Rs crore	1685.34	1789.08	1547.19
Total O&M Expenses	**Rs crore**	**98.07**	**92.43**	**88.36**

Table 4-28:O&M Expenses for Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	Unit	FY 2015-16		
		MTR Order	TPC-D Petition	Approved in this Order
Norms for O&M				
For Sales in Supply Business	paise/kWh	12.59	12.59	12.59
R&M Expenses	% of GFA	0.25%	0.25%	0.25%
Parameters for O&M Expenses				
Sales	MU	6555.93	5755.23	5765.03
Opening GFA	Rs crore	116.73	117.02	125.69
Normative O&M Expenses	**Rs crore**	**82.83**	**72.75**	**72.90**

4.5 CAPITAL EXPENDITURE AND CAPITALISATION

TPC-D's Submission

In the MTR Order, the Commission had approved the capital expenditure and capitalisation of Rs. 250.12 crore and Rs. 244.31 crore, respectively, for the Wires Business for FY 2015-16.As against this, the estimated capital expenditure and capitalisation for FY 2015-16 is Rs. 238.60 crore and Rs. 236.69 crore, respectively, as shown in the Table below:

Table 4-29: Estimated Capital Expenditure & Capitalisation for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Capital Expenditure	250.12	238.60
Capitalisation	244.31	236.69

The estimated capital expenditure and capitalisation for the Supply Business are given in the Table below:

Table 4-30: Estimated Capital Expenditure & Capitalisation for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Capital Expenditure	11.10	21.32
Capitalisation	11.70	17.92

Commission's Analysis and Ruling

As stated in the true-up for FY 2014-15, as the decision on TPC-D's Network Rollout Plan is pending, the Commission has considered capitalisation in the Wires Business to the extent of 50% of the capitalisation claimed by TPC-D for FY 2014-15, which works out to Rs. 232.41 crore. For FY 2015-16, TPC-D has claimed capitalisation of Rs. 236.69 crore and Rs. 17.92 crore for the Wires Business and Supply Business, respectively. As in the approach adopted for FY 2014-15, for FY 2015-16 the Commission has taken the average capitalisation approved by it for the three-year period from FY 2012-13 to FY 2014-15, for the Wires Business. This is subject to the Commission's final decision in the pending Cases referred to above. For the Supply Business, the capitalisation has been considered in accordance with the schemes separately approved by the Commission in-principle. The capitalisation considered by the Commission for the Wires Business and Supply Business for FY 2015-16 is as shown in the Table below:

Table 4-31: Capitalisation for Wires Business & Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
Wires Business	244.31	236.69	117.87
Supply Business	11.70	17.92	3.14

4.6 DEPRECIATION

TPC-D's Submission

TPC-D has computed the Depreciation in accordance with the MYT Regulations, 2011. The Depreciation for FY 2015-16 has been estimated on the basis of the capitalisation up to FY 2014-15 and capitalisation during the year. The estimated Depreciation for FY 2015-16 for the Wires and Supply Business, as submitted by TPC-D, is given in the Tables below:

Table 4-32: Estimated Depreciation for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	**TPC-D Petition**
Depreciation on accounts of assets at the end of FY 2014-15		91.00
Depreciation on accounts of assets added in FY 2015-16 (@ 5.28%)		6.25
Total Depreciation	**90.03**	**97.25**

Table 4-33: Estimated Depreciation for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	**TPC-D Petition**
Depreciation on accounts of assets at the end of FY 2014-15		5.55
Depreciation on accounts of assets added in FY 2015-16 (@ 5.28%)		0.47
Total Depreciation	**6.26**	**6.02**

Commission's Analysis and Ruling

As per Regulation 31.5 of the MYT Regulations, 2011, Depreciation has to be calculated based on the average of opening and closing value of assets as approved by the Commission. For computation of Depreciation for FY 2015-16, the Commission has taken the opening balance of GFA for Wires Business and Supply Business as equal to the closing balance approved after the final truing-up of FY 2014-15. It has considered asset addition for FY 2015-16 as per the capitalisation approved for that year. No asset retirement has been considered based on TPC-D's submission for the provisional true-up of FY 2015-16. It would be considered as per actuals at the time of final true-up. From the approved Opening GFA and asset addition, the Commission has considered the closing GFA for FY 2015-16 for the Wires Business and Supply Business.

The average Depreciation rate for FY 2015-16 for the Wires Business has been taken as equal to the actual Depreciation rate of 5.05% for FY 2014-15 as submitted by TPC-D in its Petition. For the Supply Business, the actual Depreciation rate claimed by TPC-D for FY 2014-15 in its Petition is 8.69%, which is much higher than the average Depreciation rate of 4.78% claimed by TPC-D in its Petition for FY 2015-16. Hence, the Commission has considered the average Depreciation rate of 4.78% for the Supply Business.

In view of the above, the Commission has approved Depreciation for the Wires Business and Supply Business on the average GFA for FY 2015-16, as shown in the Table below:

Table 4-34: Depreciation for Wires & Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Opening GFA	1685.34	1789.08	1547.19	116.73	117.01	125.69
Addition	244.31	236.69	117.87	11.70	17.92	3.14
Retirement	0.00	0.00	0.00	0.00	0.00	0.00
Closing GFA	1929.65	2025.76	1665.06	128.43	134.94	128.83
Depreciation	**90.03**	**97.25**	**81.06**	**6.26**	**6.02**	**6.02**
Depreciation (as % of GFA)	4.98%	5.28%	5.05%	5.11%	5.28%	4.78%

4.7 INTEREST ON LONG-TERM LOAN

TPC-D's Submission

TPC-D has considered the closing balance of loan for FY 2014-15 as the opening balance of loan for FY 2015-16. The repayment during the year has been considered as equal to the Depreciation, as per the MYT Regulations, 2011.

TPC-D has considered the average interest rate for the Wires Business and Supply Business as 10.83% and 10.58%, based on the actual loans taken for capitalisation and arrived at for FY 2014-15.

TPC-D has projected the Interest on Long-Term Loan for the Wires Business and Supply Business for FY 2015-16 as shown in the Tables below:

Table 4-35: Estimated Interest on Long-Term Loan for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Opening Balance		812.95
Addition to Loans		165.68
Repayment		97.25
Closing Balance		881.38
Effective Interest Rate		10.83%
Interest on Loan	**85.40**	**91.74**

Table 4-36: Estimated Interest on Long-Term Loan for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Opening Balance		57.77
Addition to Loans		12.54
Repayment		6.02
Closing Balance		64.29
Effective Interest Rate		10.58%
Interest on Loan	**6.01**	**6.46**

Commission's Analysis and Ruling

As sought by the Commission, TPC-D submitted certificates from the Banks whose loans are outstanding, showing the outstanding amounts and applicable interest rates as on 1 April, 2015.

For computation of interest on long-term loans for FY 2015-16, the Commission has considered the opening balance of loans for the Wires Business and Supply Business as equal to the closing balance approved in the final truing-up of FY 2014-15, as discussed in the previous Section. The repayment has been considered as equal to the Depreciation for the year, in accordance with the Regulations.

The Commission has taken the weighted average interest rate of actual loans at the beginning of the year, as per the Regulations. For computation of the weighted average interest rates, it has considered the opening balance and applicable interest rates of the portion of actual loans allocated to the Distribution Business. The weighted average interest rate for FY 2015-16 has accordingly been taken as 10.83% and 10.58% for the Wires Business and Supply Business, respectively, as submitted by TPC-D.

Accordingly, the Commission has approved the interest on long-term loans for FY 2015-16 for the Wires Business and Supply Business, as given in the following Table:

Table 4-37: Interest on Long-Term Loans for Wires & Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
Opening Balance of Loan	749.30	812.95	656.61	54.58	57.77	60.81
Drawals during	171.02	165.68	82.51	8.19	12.54	2.20

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D Petition	Approved in this Order	MTR Order	TPC-D Petition	Approved in this Order
the Year						
Loan Repayment during the year	90.03	97.25	81.06	6.26	6.02	6.02
Closing Balance of Loan	830.28	881.38	658.06	56.51	64.29	56.98
Interest Rate (%)	10.81%	10.83%	10.83%	10.81%	10.58%	10.58%
Interest Expenses	**85.40**	**91.74**	**71.18**	**6.01**	**6.46**	**6.23**

4.8 INTEREST ON WORKING CAPITAL

TPC-D's Submission

TPC-D has computed the IoWC by applying the SBAR to the normative Working Capital requirement, as specified in the MYT Regulations, 2011. It has taken the SBAR of 14.75%, which was the prevailing rate at the time of filing the Petition. The average book value of stores and spares from April to December, 2015 has been considered.

Table 4-38: Estimated IoWC for Wires Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
One-twelfth of the amount of O&M Expenses		7.70
One-twelfth of the sum of the book value of stores, materials and supplies		6.52
Two Months equivalent of expected revenue at the prevailing tariff		34.54
Total Working Capital		**49.16**
Interest Rate		14.75%
Interest on Working Capital	**11.61**	**7.25**

TPC-D has computed the IoWC for the Supply Business as per the Regulations. The power purchase from TPC-G has not been subtracted to arrive at the normative working capital requirement. The CSD has been considered equivalent to that of FY 2014-15. The prevailing SBAR of 14.75% has been applied. The computation of IoWC for FY 2015-16 is given in the Table below:

Table 4-39: Estimated Interest on Working Capital for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	**TPC-D Petition**
One-twelfth of the amount of O&M Expenses		6.06
One-twelfth of the sum of the book value of stores, materials and supplies		0.01
Two months equivalent of expected revenue from sale of electricity at the prevailing tariff		650.97
Less:		
Power Purchase		101.75
Security Deposit		152.21
Total Working Capital		**403.09**
Rate of Interest (% p.a.)		14.75%
Interest on Working Capital	**37.01**	**59.46**

Commission's Analysis and Ruling

The Commission has approved the IoWC for TPC-D's Wires Business and Supply Business for FY 2015-16 in accordance with Regulations 35.3 and 35.4 of the MYT Regulations, 2011. The SBAR of 14.75% at the time of filing the Petition has been taken for calculating IoWC.

Accordingly, the Commission has approved the IoWC for FY 2015-16 for the Wires Business and Supply Business, as given in the following Tables:

Table 4-40: Interest on Working Capital for Wires Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	**TPC-D Petition**	**Approved in this Order**
One-twelfth of the amount of Operations and Maintenance Expenses	8.17	7.70	7.36
One-twelfth of the sum of the book value of stores, materials and supplies	7.00	6.52	6.52
Two months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs	63.56	34.94	35.52
Total Working Capital	**78.74**	**49.16**	**49.40**
Rate of Interest (% p.a.)	14.75%	14.75%	14.75%
Interest on Working Capital	**11.61**	**7.25**	**7.29**

Table 4-41: Interest on Working Capital for Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
One-twelfth of the amount of Operations and Maintenance Expenses	6.90	6.06	6.07
One-twelfth of the sum of the book value of stores, materials and supplies	0.01	0.01	0.01
Two months of the expected revenue from sale of electricity at the prevailing tariffs	531.12	650.97	653.54
Less:			
Amount of Security Deposit from retail supply consumers	171.67	152.21	152.21
One month equivalent of cost of power purchased other than TPC-G	115.45	101.75	99.83
Total Working Capital	**250.92**	**403.09**	**407.58**
Rate of Interest (%)	14.75%	14.75%	14.75%
Interest on Working Capital	**37.01**	**59.46**	**60.12**

4.9 INTEREST ON CONSUMER SECURITY DEPOSIT

TPC-D's Submission

The Interest on CSD has been considered equal to that of FY 2014-15, i.e., Rs. 13.20 crore.

Commission's Analysis and Ruling

The Commission has approved the interest on CSD as Rs. 13.20 crore, as submitted by TPC-D for FY 2015-16, as shown in the following Table:

Table 4-42: Interest on CSD for Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	TPC-D petition	Approved in this Order
Interest on Consumer Security Deposit	15.02	13.20	13.20

4.10 RETURN ON EQUITY

TPC-D's Submission

The closing regulated equity for FY 2014-15 has been considered as the opening regulated equity for FY 2015-16. RoE for FY 2015-16 has been computed as per the MYT Regulations, 2011, as shown in the Tables below:

Table 4-43: Estimated Return on Equity for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Opening Equity		539.04
Addition to Equity		71.01
Closing Equity		610.04
Return on Opening Equity (15.50%)		83.55
Return on Additional Equity (7.75%)		5.50
Total Return on Equity	**84.85**	**89.05**

Table 4-44: Estimated Return on Equity for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Opening Equity		38.13
Addition to Equity		5.38
Closing Equity		43.50
Return on Opening Equity(17.5% of full year + Return on Additional Equity (17.50% of half year))	**6.47**	**7.14**

Commission's Analysis and Ruling

To determine the equity eligible for returns as per the Regulations, the Commission has considered the opening equity for FY 2015-16 as the same as the closing equity of FY 2014-15 as approved in this Order. The equity added during the year has been considered as equal to 30% of the approved capitalisation during FY 2015-16.

The Commission has applied the rate of RoE of 15.50% and 17.50% for Wires Business and Supply Business, respectively, in accordance with the Regulations. In view of the above, the RoE approved by the Commission for FY 2015-16 is as summarized in the Tables below:

Table 4-45:Return on Equity for Wires & Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	Wires Business			Supply Business		
	MTR Order	TPC-D petition	Approved in this Order	MTR Order	TPC-D petition	Approved in this Order
Regulatory Equity at the beginning of the year	510.76	539.04	469.32	539.04	38.13	37.89
Capitalisation during the year	244.31	236.69	117.87	236.69	17.92	3.14
Equity portion of capitalisation during the year	73.29	71.01	35.36	71.01	5.38	0.94
Reduction in Equity Capital on account of retirement / replacement of assets	0.00	0.00	0.00	0.00	0.00	0.00
Regulatory Equity at the end of the year	584.06	610.04	504.67	610.04	43.50	38.83
Rate of ROE	15.50%	15.50%	15.50%	17.50%	17.50%	17.50%
Return on Regulatory Equity at the beginning of the year	79.17	83.55	72.74	6.16	6.67	6.63
Return on Equity portion of capitalisation during the year	5.68	5.50	2.74	0.31	0.47	0.08
Total Return on Regulatory Equity	**84.85**	**89.05**	**75.48**	**6.47**	**7.14**	**6.71**

4.11 PROVISION FOR BAD AND DOUBTFUL DEBT

TPC-D's Submission

TPC-D has not considered any provision towards Bad and Doubtful Debts, in accordance with the MTR Order.

Commission's Analysis and Ruling

The Commission has not considered any provision for Bad and Doubtful Debts, as approved in the MTR Order and as now submitted by TPC-D.

4.12 CONTRIBUTION TO CONTINGENCY RESERVE

TPC-D's Submission

TPC-D has computed the Contribution to Contingency Reserves for the Wires Business and Supply Business as per the MYT Regulations, 2011, as shown in the Tables below:

Table 4-46: Estimated Contribution to Contingency Reserve for Wires Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	**FY 2015-16**	
	MTR Order	**TPC-D Petition**
GFA		1789.08
% Contingency Reserve		0.25%
Opening Balance of CR		30.90
Maximum Permissible Reserves		89.45
Contingency Reserve	**4.21**	**4.47**
Amount of Contingency Reserves as on 31 March, 2016		**35.38**

Table 4-47: Estimated Contribution to Contingency Reserve for Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	**FY 2015-16**	
	MTR Order	**TPC-D Petition**
GFA		117.02
% Contingency Reserves		0.25%
Opening Balance		1.22
Maximum Permissible Reserves		5.85
Contingency Reserves	**0.29**	**0.29**
Amount of Contingency Reserves as on 31 March, 2016		**1.51**

Commission's Analysis and Ruling

The Commission has approved the Contribution to Contingency Reserves for the Wires Business and Supply Business for FY 2015-16 at 0.25% of the approved value of the opening GFA for the respective Businesses, in accordance with the Regulations, as shown in the Tables below:

Table 4-48: Contribution to Contingency Reserve for FY 2015-16 approved by the Commission (Rs. crore)

Particular	**FY 2015-16**		
	MTR Order	**TPC-D Petition**	**Approved in this Order**
Contribution to Contingency Reserve – Wires Business	4.21	4.47	3.87
Contribution to Contingency Reserve – Supply Business	0.29	0.29	0.31

4.13 INCOME TAX

TPC-D's Submission

The Income Tax amount has been considered at the same level as in the MTR Order, as shown in the Tables below:

Table 4-49: Estimated Income Tax for Wires and Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Income Tax – Wire Business	28.85	1.65
Income Tax – Supply Business	1.17	19.60

Commission's Analysis and Ruling

The Commission asked TPC-D to clarify why Income Tax for the Supply Business has been considered as Rs. 19.60 crore in FY 2015-16 when it was nil in FY 2014-15. Similarly, for the Wires Business, Income Tax has been taken as Rs. 1.65 crore in FY 2015-16 while it was Rs. 49.91 crore in FY 2014-15.

TPC-D responded that, for FY 2014-15, it has computed the Income Tax on the methodology adopted by the Commission for previous years. For FY 2015-16, it has considered Income Tax as per the latest approved values approved for FY 2013-14 in the MTR Order.

For the Wires Business and Supply Business, the Income Tax has been considered equal to the Income Tax approved for FY 2014-15, in accordance with the MYT Regulations, 2011.

Accordingly, the Commission has approved the Income Tax for the Wires and the Supply Business for FY 2015-16 as shown in the Table below:

Table 4-50: Income Tax for FY 2015-16 for Wires and Supply Business as approved by Commission (Rs. crore)

Particulars	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
Income Tax – Wire Business	28.85	1.65	50.43
Income Tax – Supply Business	1.17	19.60	0.00

4.14 NON-TARIFF INCOME

TPC-D's Submission

TPC-D has estimated the Non-Tariff Income for FY 2015-16 for Wires and Supply Business at the same level as approved in the MTR Order, as shown in the Tables below:

Table 4-51: Estimated Non-Tariff Income for Wires and Supply Business during FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Non-Tariff Income –Wire Business	21.65	21.65
Non-Tariff Income –Retail Business	11.56	11.56

Commission's Analysis and Ruling

The Commission considers TPC-D's projection of Non-Tariff Income for the Wires Business to be reasonable and has accepted it, as shown in the Table below:

Table 4-52:Non-Tariff Income for Wires Business for FY 2015-16 approved by Commission (Rs. crore)

Particular	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
Non-Tariff Income	21.65	21.65	21.65

As regards the Supply Business, the Commission has considered a 10% increase in the recurring items over the approved Non-Tariff Income for FY 2014-15, based on past trends. The Commission has approved the Non-Tariff Income for the Supply Business for FY 2015-16 as shown in the Table below:

Table 4-53:Non-Tariff Income for Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particular	FY 2015-16		
	MTR Order	TPC-D Petition	Approved in this Order
Non-Tariff Income	11.56	11.56	19.57

4.15 DEMAND SIDE MANAGEMENT EXPENSES

TPC-D's Submission

TPC-D has considered the DSM Expenditure for the Supply Business at the same level as approved in the MTR Order, i.e., Rs. 5.56 crore.

Commission's Analysis and Ruling

The Commission has taken the actual DSM expenses in FY 2015-16, as subsequently submitted by TPC-D, as shown in the Table below:

Table 4-54: DSM Expenses for FY 2015-16 approved by Commission (Rs. crore)

Particular	MTR Order	TPC-D Petition	Approved in this Order
DSM expenses	5.56	5.56	2.23

4.16 WHEELING CHARGES, REGULATORY ASSET CHARGES AND CROSS-SUBSIDY SURCHARGE PAYABLE TO RINFRA-D

TPC-D's Submission

TPC-D is collecting and paying Wheeling Charges, RAC and CSS to RInfra-D for supply to change-over consumers based on rates and losses approved in the MTR Order. These have not been considered in the computation of ARR as they are only being collected by TPC-D from change-over consumers and paid to RInfra-D.

Commission's Analysis

The Commission has accepted TPC-D's submission, and has not considered the Wheeling Charges, RAC, and CSS payable to RInfra-D as part of the ARR.

4.17 AGGREGATE REVENUE REQUIREMENT FOR FY 2015-16

TPC-D's Submission

The summary of the ARR for the Wires and the Supply Business for FY 2015-16 is given in the Tables below:

Table 4-55: Estimated ARR for Wires Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Return on Equity	84.85	89.05
Depreciation	90.03	97.25
O&M Expenses	98.07	92.43
Interest on Long Term Loans	85.40	91.74
Interest on Working Capital	11.61	7.25
Contingency Reserve	4.21	4.47
Income Tax	28.85	1.65
Total Annual Fixed Charges	**403.02**	**383.85**
Less: Non-Tariff Income	21.65	21.65
Total Wires ARR	**381.37**	**362.20**

Table 4-56: Estimated ARR for Supply Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	FY 2015-16	
	MTR Order	TPC-D Petition
Power Purchase Cost (incl. Transmission + SLDC + Stand-by Charges)	3037.66	2805.10
Return on Equity	6.47	7.14
Depreciation	6.26	6.02
O&M Expenses	82.83	72.75
DSM Cost	5.56	5.56
Interest on Long Term Loans	6.01	6.46
Interest on Working Capital	37.01	59.46
Interest on Security Deposit	15.02	13.20
Contingency Reserve	0.29	0.29
Income Tax	1.17	19.60
Less: Non-Tariff Income	11.56	11.56
TPC-D Supply ARR	**3186.72**	**2984.02**

The combined ARR for the Wire and Supply Businesses for FY 2015-16 is given in the Table below:

Table 4-57: Estimated ARR for Wires Business and Supply Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	MTR Order	TPC-D Petition		
		Wires Business	Supply Business	Total
Power Purchase Expenses (including inter-State Transmission Charges)	2820.22		2540.97	2540.97

Particulars	MTR Order	TPC-D Petition		
		Wires Business	Supply Business	Total
Operation & Maintenance Expenses	180.90	92.43	72.75	165.18
Depreciation	96.30	97.25	6.02	103.27
Interest on Long-term Loan Capital	91.41	91.74	6.46	98.2
Interest on Working Capital	48.62	7.25	59.46	66.71
Interest on Security Deposit	15.02	-	13.20	13.20
Provisioning for Bad & Doubtful Debts	0.00	-	-	0.00
DSM Expenses	5.56	-	5.56	5.56
Income Tax	30.02	1.65	19.6	21.25
Intra-State Transmission Charges	217.44	-	264.13	264.13
Contribution to Contingency Reserves	4.51	4.47	0.29	4.77
Total Revenue Expenditure	3510.00	294.80	2988.43	3283.23
Return on Equity Capital	91.31	89.05	7.14	96.2
Aggregate Revenue Requirement	3601.31	383.85	2995.58	3379.43
Less: Non-Tariff Income	33.20	21.65	11.56	33.21
Net Aggregate Revenue Requirement	**3568.11**	**362.20**	**2984.02**	**3346.22**
Past Recoveries allowed for recovery	515.34		515.34	515.34
Net ARR incl. past recovery	**4083.45**	**362.20**	**3499.36**	**3861.56**

Commission's Analysis and Ruling

Based on the components of the ARR approved in earlier paragraphs, the Commission approves the ARR for FY 2015-16 for the Wires Business and Supply Business, after provisional true-up, as given in the Tables below:

Table 4-58: ARR for Wires Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
Operation & Maintenance Expenses	98.07	92.43	88.36
Depreciation	90.03	97.25	81.06
Interest on Long-term Loan Capital	85.40	91.74	71.18
Interest on Working Capital	11.61	7.25	7.29
Provisioning for Bad & Doubtful Debts	0.00	0.00	0.00
Contribution to Contingency Reserves	4.21	4.47	3.87
Income Tax	28.85	1.65	50.43
Total Revenue Expenditure	**318.17**	**294.80**	**302.18**
Return on Equity Capital	84.85	89.05	75.48
Aggregate Revenue Requirement	**403.02**	**383.85**	**377.66**

Particulars	MTR Order	TPC-D Petition	Approved in this Order
Less: Non-Tariff Income	21.65	21.65	21.65
Add: Revenue Gap/(Surplus) of previous years	(199.71)		(199.71)
Net Aggregate Revenue Requirement	**181.66**	**362.20**	**156.30**

The Commission has taken the amount of Revenue Surplus of Rs. 199.71 crore considered in the ARR of FY 2015-16 in the MTR Order for consistency with the amounts approved in that Order, as otherwise a distorted picture would be given. The tariff for FY 2015-16 was approved after considering this amount, and hence it has to be considered at the stage of true-up also.

Table 4-59: ARR for Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in this Order
Power Purchase Expenses	2703.05	2422.65	2422.77
Stand-by Charges	117.17	122.59	122.59
O&M Expenses	82.83	72.75	72.90
Depreciation	6.26	6.02	6.02
Interest on Loan Capital	6.01	6.46	6.23
Interest on Working Capital	37.01	59.46	60.12
Interest on CSD	15.02	13.20	13.20
Provision for bad and doubtful debts	0.00	0.00	0.00
Contribution to contingency reserves	0.29	0.29	0.31
Intra-State Transmission Charges	215.14	262.50	262.50
MSLDC Fees & Charges	2.30	1.63	1.63
Income Tax	1.17	19.60	0.00
Others (DSM)	5.56	5.56	2.23
Interest on FAC	-	(4.26)	0.00
Total Revenue Expenditure	**3191.81**	**2988.43**	**2970.49**
Add: Return on Equity Capital	6.47	7.14	6.71
Aggregate Revenue Requirement	**3198.28**	**2995.58**	**2977.20**
Less: Non-Tariff Income	11.56	11.56	19.57
Less: Income from CSS			4.75
Past recoveries	515.34	515.34	515.34
Revenue Gap/(Surplus) of previous years	1738.04		1738.04
Aggregate Revenue Requirement from Retail Supply	**5440.10**	**3499.36**	**5206.26**

Similarly, the Commission has taken the amount of Revenue Gap of Rs. 1738.04 crore considered in the ARR of FY 2015-16 in the MTR Order, in order to ensure consistency with that Order. The tariff for FY 2015-16 was approved after considering this amount, and hence it has to be considered at the stage of true-up also.

Table 4-60: Combined ARR for Wires Business and Supply Business in FY 2015-16 approved by Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Power Purchase Expenses	2703.05	2422.65	2422.77
Stand-by Charges	117.17	122.59	122.59
O&M Expenses	180.90	165.18	161.25
Depreciation	96.29	103.27	87.07
Interest on Loan Capital	91.41	98.20	77.42
Interest on Working Capital	48.62	66.71	67.41
Interest on CSD	15.02	13.20	13.20
Provision for bad and doubtful debts	0.00	0.00	0.00
Contribution to contingency reserves	4.50	4.77	4.18
Intra-State Transmission Charges	215.14	262.50	262.50
MSLDC Fees & Charges	2.30	1.63	1.63
Income Tax	30.02	21.25	50.43
Others (DSM)	5.56	5.56	2.23
Interest on FAC	0.00	(4.26)	0.00
Total Revenue Expenditure	**3509.98**	**3283.23**	**3272.66**
Add: Return on Equity Capital	91.32	96.20	82.20
Aggregate Revenue Requirement	**3601.30**	**3379.43**	**3354.86**
Less: Non-Tariff Income	33.21	33.21	41.22
Past recoveries	515.34	515.34	515.34
Revenue Gap/(Surplus) of previous years	1538.33		1538.33
Aggregate Revenue Requirement from Retail Supply	**5621.76**	**3861.56**	**5362.56**

4.18 REVENUE GAP/(SURPLUS) FOR FY 2015-16

TPC-D's Submission

Based on the ARR and Revenue for FY 2015-16, TPC-D has estimated the Revenue Gap/(Surplus) for the Wires and the Supply Business as shown in the Tables below:

Table 4-61: Revenue Gap for Wires Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	MTR Order	TPC-D Petition
Revenue	**474.92**	**231.29**
Revenue from Wheeling Charges	453.27	209.64
Non-Tariff Income	21.65	21.65
Expenditure		
Operation and Maintenance	98.07	92.43
Depreciation	90.03	97.25
Interest on Long-term Loan Capital	85.4	91.74
Interest on Working Capital	11.61	7.25
Contingency Reserves	4.21	4.47
Return on Equity	84.85	89.05
Income Tax	28.85	1.65
Total Expenditure	**403.03**	**383.85**
Estimated Gap/(Surplus)	**(71.89)**	**152.56**

Table 4-62: Revenue Surplus for Supply Business for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	MTR Order	TPC-D Petition
Revenue	**4420.20**	**3917.40**
Revenue from sale of power	4408.64	3905.84
Non-Tariff Income	11.56	11.56
Expenditure		
Power Purchase Expenses including interest on FAC	2703.05	2418.39
Transmission Charges & MSLDC Charges	217.44	264.13
Stand-by Charges	117.17	122.59
Operation and Maintenance	82.83	72.75
Depreciation	6.26	6.02
Interest on Long-term Loan Capital	6.01	6.46
Interest on Working Capital	37.01	59.46
Interest on Security Deposit	15.02	13.20
Contribution to Contingency Reserves	0.29	0.29
Return on Equity	6.47	7.14
Income Tax	1.17	19.60
DSM Expenses	5.56	5.56
Past Recoveries allowed to be recovered as per MYT T.O. dated 28 June 2013 Case No. 179 of 2011	515.34	515.34
Total Expenditure	**3713.62**	**3510.92**
Estimated Gap/(Surplus)	**(706.58)**	**(406.48)**

Commission's Analysis and Ruling

After the close of FY 2015-16, the Commission asked for the actual revenue in FY 2015-16, which was submitted by TPC-D, as shown in the Table below:

Table 4-63: Actual Revenue in FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	Total
Revenue from Wheeling Charges	213.11
Revenue from sale of power	3916.47
Total Revenue	**4129.58**

Based on the ARR approved in earlier paragraphs and the actual revenue in FY 2015-16, the Commission approves the Revenue Gap/(Surplus) for FY 2015-16 for the Wires Business and Supply Business, after provisional true-up, as given in the Tables below:

Table 4-64: Revenue Surplus for the Wires Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Net ARR	181.66	362.20	156.30
Revenue	181.66	209.64	213.11
Revenue Gap/(Surplus)	0.00	152.56	(56.81)

Table 4-65: Revenue Gap for the Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Net ARR	5440.10	3499.36	5206.26
Revenue	4870.21	3905.84	3916.47
Revenue Gap/(Surplus)	569.89	(406.48)	1289.79

Table 4-66: Combined Revenue Gap for the Supply Business for FY 2015-16 approved by Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Net ARR	5621.76	3861.56	5362.56
Revenue	5051.88	4115.48	4129.58
Revenue Gap/(Surplus)	569.89	(253.92)	1232.98

As will be seen from the above Tables, the net Revenue Gap approved by the Commission after revision of tariffs for FY 2015-16 was Rs. 569.89 crore, which has now increased to Rs. 1232.98 crore after provisional true-up.

4.19 RECOVERY OF REGULATORY ASSET DURING FY 2015-16

During FY 2015-16, the revenue earned by TPC-D from the RAC amounted to Rs. 140.87 crore as against the recovery of Rs. 189.97 crore allowed in the MTR Order. Hence, there is under-recovery of Rs. 49.10 crore towards the Regulatory Asset. This Revenue of Rs. 140.87 crore is included in the above revenue from sale of power of Rs. 3916.47 crore.

The treatment of this under-recovery of RA is discussed, along with the treatment of the Cumulative Revenue Gap/(Surplus), in Section 6 of this Order.

5 AGGREGATE REVENUE REQUIREMENT FOR FY 2016-17 TO FY 2019-20

In accordance with Regulation 5 of the MYT Regulations, 2015, TPC-D submitted the estimated ARR for each year of the 3rd Control Period. It submitted details of its projected expenses over the Control Period for the Wires Business and Supply Business separately under various heads, viz., O&M expenses, Depreciation, interest on loans, IoWC, etc., as per the data formats prescribed by the Commission. The Commission has discussed the expenditure allowed on each of the expense heads and the total expenses approved by it for the 3rd Control Period in the subsequent paragraphs.

5.1 SALES

TPC-D's Submission

According to the Distribution Licence granted on 14 August, 2014, the Licence area of TPC-D spreads across the MCGM (except for a few Wards) and the Mira-Bhayander Municipal Corporation (MBMC) areas. Its energy sales comprise Direct Sales (on the wires of TPC-D) and Change-over Sales (on the wires of the other Distribution Licensee, RInfra-D). The methodology for projection of sales for the 3rd Control Period is set out below:

5.1.1 Direct Sales Projection

TPC-D has taken the actual sales of the previous 2nd Control Period, i.e., FY 2011-12 to FY 2015-16, to project the estimated Direct Sales for the 3rd Control Period. There was a deviation in sales during FY 2015-16 on account of outflow of consumers on OA and Railways ceasing to be a consumer as it was given Distribution Licensee status. TPC-D has estimated the sales for FY 2015-16 as follows:

a) The actual sales of 3140 MU have been taken till January, 2016.

b) The sales for February and March, 2016 have been estimated based on the previous year’s sales in these months; less the loss of sales on account of OA and Railways, and the figure thus arrived has been added to the sales till January, 2016 to arrive at the estimated sales in FY 2015-16.

c) After arriving at the estimated sales for FY 2015-16, TPC-D has computed the CAGR in sales for the period FY 2011-12 to FY 2015-16 as shown in the Table below:

Table 5-1: Category-wise CAGR of Direct Sales as submitted by TPC-D

Category-wise Sales	**FY 2011-12**	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**	**CAGR**
HT Category	**2439**	**2633**	**2706**	**3109**	**2771**	**3%**
HT I - Industry	1003	1072	1139	1346	1147	3%
HT II – Commercial	600	698	665	605	613	1%
HT III Group Housing	0	0	0	0	0	0%
HT IV - Temporary Supply	5	10	8	8	8	13%
HT V - Railways	831	853	894	926	773	-2%
HT VI - Public Services	-	-	-	224	227	0%
LT Category	**572**	**624**	**640**	**687**	**773**	**8%**
LT I - Residential	118	139	153	189	232	19%
0-100	*28*	*32*	*36*	*47*	*52*	*17%*
101-300	*36*	*42*	*47*	*57*	*68*	*17%*
301-500	*15*	*18*	*20*	*24*	*34*	*23%*
501 and above	*38*	*46*	*50*	*61*	*78*	*19%*
LT II – Commercial	264	290	295	305	324	5%
LT II A: Up to 20 kW	*27*	*33*	*35*	*39*	*45*	*13%*
LT II B: > 20 kW & ≤ 50kW	*23*	*29*	*31*	*35*	*40*	*15%*
LT II C > 50kW	*214*	*227*	*229*	*231*	*240*	*3%*
LT III - Industry ≤ 20 kW	25	26	26	25	25	0%
LT IV - Industry > 20kW	161	159	152	147	152	-1%
LT VII – Temporary	15	16	18	18	19	6%
LT IX – Public Services	-	-	-	-	14	0%
Grand Total	**3011**	**3257**	**3346**	**3796**	**3544**	**4%**

d) The projected sales for FY 2016-17 are estimated by subtracting the total annual loss expected in FY 2016-17 on account of OA and Railways from the estimated sales of FY 2015-16.

e) <u>Open Access –</u>Several consumers opted for OA in FY 2015-16 due to high tariff differential. Of these, some consumers opted for OA through the captive route. TPC-D estimates a further loss of 337 MU through OA in FY 2016-17. However, it is also expected that a few customers will opt out of OA and return to TPC-D from FY 2017-18 due to the proposed tariff advantage and change in power market scenario.

f) Railways- Railways was one of the largest consumers, connected to its network at 22/33 kV and 100 kV. The consumption of Railways over the last five years has been as follows:

Table 5-2: Year-wise consumption of Railways as submitted by TPC-D

Voltage Level	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
22/33 kV	441.96	291.34	296.36	297.86	296.00
100 kV	388.81	561.58	598.04	627.65	476.54
Total	**830.77**	**852.92**	**894.40**	**925.51**	**772.54**

The MoP had clarified in May, 2014 that Railways has the status of deemed Licensee as per the EA, 2003. In its Order dated 5 November, 2015 in Petition No. 197/MP/2015 regarding Railways' entitlement to OA for the power to be procured from two Generators, Gujarat Urja Vikas Nigam Ltd. (GUVNL) and Ratnagiri Gas and Power Pvt. Ltd. (RGPPL), the CERC ruled as follows:

"44. ...Therefore, administration of the Electricity Act, 2003 is the responsibility of Ministry of Power. Being the nodal Ministry, Ministry of Power has examined the proposal of the Ministry of Railways with regard to its deemed status as a licensee under the Electricity Act in consultation with Ministry of Law and Justice which has been vested with the power to render "advice to Ministries on legal matters including interpretation of the Constitution and the laws". Moreover, the clarification has been issued with the approval of the Hon'ble Minister of Power (Independent Charge). Therefore, we are of the view that the clarification issued by Ministry of Power with regard to the deemed licensee status of the Indian Railways meets the requirement of Law. There is no requirement for a declaration to that effect to be issued by an Appropriate Commission....

47. In view of the above discussion, the petitioner is a deemed licensee under 3rd proviso to Section 14 of the Electricity Act and there is no requirement for declaration to that effect by the Appropriate Commission"

The above Order was challenged before the ATE in Appeal No. 276 of 2015. In its Interim Judgment dated 16 December, 2015, the ATE has made a prima facie observation supporting the CERC Order as below:

"At this interim stage, these considerations outweigh the Appellant's possible loss of revenue as a Distribution Licensee, if Respondent No.2

moves away from it. The application for interim stay will have to be, therefore, rejected and is rejected accordingly.

20. We, however, makes it clear that all observations made by us in this order which may touch the merits of the case of either side are prima facie observations made for the purpose of disposal of this application."

Hence, as per the above Judgment, Railways has a Deemed Licensee status and is free to procure its own power. This provision was effectively used by the Railways on 26 November, 2015, when it started procuring 300 MW power from RGPPL. The power consumption of Railways from TPC-D has reduced by 17% in FY 2015-16. It is estimated to further decrease in the coming period owing to aggressive pursuit of OA by the Railways. Besides, Railways has also targeted setting up of generation capacity of 1150 MW for captive use. Therefore, the sale of power from FY 2016-17 onwards to the Railways is expected to reduce by 805 MU.

g) Although the CAGR of sales is around 4%, a conservative escalation factor of only 2% has been considered for FY 2016-17, considering that critical factors impacting sales like principles regarding Network Roll-out and OA are yet to be finalised. The projected Direct Sales for FY 2016-17 are shown in the following Table:

Table 5-3: Projected Direct Sales for FY 2016-17 as submitted by TPC-D (MU)

Particulars		FY 2016-17
Annual Net Direct Sales of FY 2015-16	a	3545
Add: Loss of Sales due to OA & Railways during part period of FY 2015-16	b	342
Annual Base Direct sales for FY 2015-16	**c**	**3888**
Less: Estimated Sale on Open Access during FY 2016-17	d	(599)
Less: Estimated Loss on Sale on account of Railways	e	(809)
Total Estimated Loss in Sale during FY 2016-17	(f=d+e)	**(1408)**
Estimated Sales in FY 2016-17 without considering Growth	(g=c+f)	2480
Average CAGR	h	2%
Add: Estimated Growth in Sales	(i=g*h)	49
Projected Direct Sales for FY 2016-17	(j=g+i)	**2529**

h) TPC-D has laid a substantial network in accordance with the directions of the Commission in Case No. 151 of 2011. It has considered the availability of this network as well as network development as proposed in the Network Roll-out

Plan for providing connections to new consumers and consumers who wish to migrate (switch-over) as per the Commission's Orders, and has estimated the new acquisition of consumers in the Mumbai Suburban area. Similarly, the existing network as well as development proposed in the Network Roll-out Plan has been considered to estimate the addition of consumers through migration (switch-over) as well as acquisition of new consumers in the Mumbai City area during the 3rd Control Period to utilise the network optimally. The estimated sales due to such addition of consumers in FY 2016-17 is shown in the Table below:

Table 5-4: Expected Sales due to Migration and Acquisition of new consumers in FY 2016-17, as submitted by TPC-D (MU)

Particulars	No.	FY 2016-17
Acquisition of New Consumers and through Migration		
Mumbai City	18,000	49
Mumbai Suburban	30,000	66
Total sales addition during FY 2016-17	**48,000**	**115**

i) TPC-D has assumed that there will be clarity in network development and OA by FY 2017-18. Hence, it has considered the already experienced CAGR of 4% on the sales of FY 2016-17 to estimate the sales growth for FY 2017-18 and beyond. Similarly, the addition of sales in each year of the 3rd Control Period due to migration and new consumers is also projected based on the estimation of FY 2016-17. The projected Direct Sales for the 3rd Control Period are as shown in the Table below:

Table 5-5: Projected Direct Sales for 3rd Control Period as submitted by TPC-D (MU)

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	Nos.	MU	Nos.	MU	Nos.	MU	Nos.	MU
Direct Sales								
Annual Net Direct Sales of previous year		2480		2644		2892		3197
CAGR		2%		4%		4%		4%
Add: Growth of Sales		49		93		112		128
Projected Sales on TPC-D Network including CAGR		**2529**		**2737**		**3004**		**3324**
Acquisition of New Consumers and through Migration								
Mumbai City	18,000	49	21,000	68	24,000	86	25,000	97
Mumbai Suburban	30,000	66	30,300	87	29,000	107	31,000	110

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
Total sales addition	**48,000**	**115**	**51,300**	**155**	**53,000**	**193**	**56,000**	**207**
Projected Direct sales		**2644**		**2892**		**3197**		**3531**

5.1.2 Change-over Sales

The methodology for arriving at the projected sales of change-over consumers is as follows:

a) TPC-D has taken the actual change-over sales of 1912 MU till January, 2016.

b) Based on the current trend of change-over in the Mumbai Suburban Area, additional sales of 285 MU are expected in the remaining months of FY 2015-16. The total change-over sales in FY 2015-16 are estimated at 2197 MU.

c) At present, there are change-over consumers only in the low-end residential category. A moderate CAGR of around 1% has been taken for estimating the change-over sales for the first two years of the Control Period. As certain sales are expected through migration of consumers from the network of RInfra-D to the network of TPC-D (switch-over), such migration is also expected from change-over consumers of TPC-D. In view of this, there would be a reduction in change-over sales of consumers on account of switch-over to TPC-D network. As such sales have already been considered under direct sales, they need to be deducted from the change-over sales. The projected change-over sales for FY 2016-17 are as shown in the following Table:

Table 5-6: Projected Change-over Sales for FY 2016-17 as submitted by TPC-D (MU)

Particulars		FY 2016-17
Annual Change-over sales of FY 2015-16	a	2197
Migration of sales – switch-over from Change-over	b	(7)
Net sales including impact of Switch-over	(c=a+b)	2190
CAGR	d	1%
Add: Growth of sales	e=d*c	26
Projected Change-over Sales including CAGR	f=e+c	2216

d) TPC-D has assumed that addition of new change-over consumers during FY 2016-17 would be around 5500 consumers, based on the current trend, and shall continue predominantly in the residential category.

e) TPC-D has further assumed that, in the 3rd MYT Control Period, there would be uniformity in the tariff of 0-300 residential category across Mumbai, and hence the rate of change-over in this category will reduce substantially. Considering this scenario, TPC-D has considered a 2% year-on-year inherent growth in its change-over sales for FY 2018-19 and a lower addition of change-over sales.

f) The projected change-over sales are shown in the Table below:

Table 5-7: Projected Change-over sales for 3rd Control Period as submitted by TPC-D

Particulars	**FY 2016-17**		**FY 2017-18**		**FY 2018-19**		**FY 2019-20**	
	No.	**MU**	**No.**	**MU**	**No.**	**MU**	**No.**	**MU**
Annual Change-over sales of previous year		2197		2224		2252		2279
Migration of sales – Switch-over from Change-over		(7)		(9)		(10)		(14)
Net Change-over Sales including impact of Switch-over		**2190**		**2215**		**2242**		**2265**
CAGR		1%		1%		2%		2%
Add: Growth of Sales		26		31		26		41
Projected Change-over sales including CAGR		**2216**		**2246**		**2277**		**2305**
Add sales on account of new change-over consumers	5500	7	4500	6		1		1
Projected Change-over Sales		**2224**		**2252**		**2279**		**2307**

5.1.3 Total Projected Sales for 3rd Control Period

Based on the projected Direct Sales and Change-over Sales, the projected total sales for the 3rd Control Period are shown in the table below:

Table 5-8: Projected Sales for 3rd Control Period as submitted by TPC-D (MU)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Direct Sales	2644	2892	3197	3531
Change-over Sales	2224	2252	2279	2307
Overall Sales	**4867**	**5143**	**5475**	**5838**

The category-wise sales considered in the Tariff Orders for arriving at the tariffs were different from the category-wise sales projected by TPC-D. However, the actual sales mix has been significantly different from that approved in the Orders as the impact of tariff design was not considered in the sales projections, resulting in higher movements towards lower tariffs as compared to approved sales.

In the 3 years of the 2nd MYT Control Period, viz., FY 2013-14 to FY 2015-16, the actual residential sales have consistently exceeded the approved sales level by 8% in FY 2013-14, and 11% in FY 2014-15 and FY 2015-16. Finally, the sales approved for FY 2015-16 in the MTR Order were adjusted closer to the provisional sales.

On the other hand, the subsidising consumers have moved out of TPC-D at even higher levels than considered in the MYT Order. For example, in certain categories like HT Industry, LT industry and LT Commercial, the actual sales have declined by 10%, 14% and 14%, respectively, over the approved sales for FY 2013-14. In FY 2014-15, the actual sales for HT Industry, LT Industry and LT Commercial have declined by 17%, 49% and 48%, respectively, over the approved sales.

In FY 2015-16, if the sales approved in the previous MYT Order are compared with the provisional sales expected, it will be seen that there is a decline of 36%, 54% and 60% for HT Industry, LT Industry and LT Commercial, respectively. Though the sales approved for these categories were adjusted closer to the provisional sales in the MTR Order, the provisional sales in FY 2015-16 were still lower by 30%, 11% and 17% for HT Industry, LT Industry and LT Commercial, respectively, when compared with the sales approved in the MTR Order, as the impact of reduction in CSS was not factored in the expected sales.

TPC-D has analysed the changes between sales for key categories, namely Residential, LT Commercial and HT Industry, for itself and RInfra-D. In the residential category, as its tariff was lower than that of RInfra-D, there was a migration of consumers from RInfra-D to TPC-D due to which the actual sales were greater than the approved sales. However, as TPC-D’s tariff was higher for LT Commercial and LT III and LT IV Industrial categories, the actual sales were less than the approved sales. In fact, the actual sales declined at a CAGR of 20% from FY 2013-14 to FY 2015-16.

As the actual overall sales turned out to be lower than the approved sales, there was a significant increase in ACoS as compared to the approved ACoS. The difference between the sales projected by TPC-D and the actual sales is 0.5% for FY 2013-14, 14.2% for FY 2014-15, and 1.5% for FY 2015-16. However, the difference between the approved and the actual sales was 5.6% for FY 2013-14, 21.6% for FY 2014-15, and 12.1% for FY 2015-16.

In FY 2014-15, there was a significant difference of 14.2% due to the reverse change-over of consumers and outward movement of 252 MU in sales (around 7533 consumers in total), which was envisaged neither by TPC-D nor by the Commission. In spite of this, the sales projected by TPC-D were closer to the actual sales as compared to the sales approved by the Commission.

Since the actual ACoS has increased, some of the approved subsidising categories, such as LT Commercial and LT Industrial (categories with ABR greater than ACoS) which were designed to provide subsidy, became subsidised categories in fact. Also, the subsidy collected from the remaining subsidising category consumers was reduced, and finally the subsidy required for subsidised consumers increased due to the ACoS movement.

Therefore, the sales projection made by TPC-D may be given due cognizance while approving the sales.

Commission's Analysis and Ruling

In the MTR Order, a holistic approach had been taken for projection of energy sales for TPC-D for FY 2015-16. The Commission projected the total category-wise sales as the summation of the sales of TPC-D, sales of RInfra-D and the change-over sales. From this consolidated sales projection, the projected category-wise direct sales of TPC-D and change-over sales were deducted to arrive at RInfra-D's own sales. The Direct Sales of TPC-D were projected based on past trends as these are not affected by migration or reverse migration and are sales on TPC-D's own distribution network. The change-over sales of TPC-D were grossed down considering HT and LT losses of 1.94% and 9.0% and were then projected based on past trends. The Commission had adopted this holistic approach as it is difficult to establish any trend in the growth rates for specific consumer categories due to the migration and reverse migration of consumers in some categories from RInfra-D to TPC-D and back to RInfra-D over the past 2-3 years.

Before projecting the energy sales for the 3rd Control Period, it is important to review the methodology adopted by the Commission. The Commission approved direct sales of 4169.16 MU for FY 2015-16 in the MTR Order as against direct sales of 4102.45 MU projected by TPC-D. The actual sales in FY 2015-16 were 3579.53 MU. The difference between the approved and the actual sales in FY 2015-16 was (-)16.47%. This difference was on account of OA opted for by Indian Railways and other consumers, which was not envisaged earlier. Out of the total difference of 589.63 MU between the approved and actual sales for FY 2015-16, 342 MU was only on account of OA. Apart from the HT Railways and HT Industry category, the difference between the approved and actual energy sales is only (-) 2.75%, which is within a reasonable and acceptable range of less than 5%.

As regards TPC-D's contention that its sales projection has been closer to the actual sales than that approved by the Commission and that, therefore, its sales projection ought to be be given due cognizance, the Commission observes as follows:

a) The sales projected by the Distribution Licensees are given due consideration by the Commission.

b) By its very nature, projection of future sales may or may not be close to the actual sales depending on the movement of several other variables.

c) In the case of TPC-D, the likelihood of differences between the projected and the actual sales is greater because of the scope for change-over from TPC-D to RInfra-D and vice-versa.

d) TPC-D has stated that the actual sales in FY 2013-14 and FY 2014-15 were significantly different from the levels approved in the previous MYT Order primarily because the Commission did not factor in the impact of change-over due to the tariff differential between TPC-D and RInfra-D. It should be noted that the previous MYT Order for TPC-D was issued on 28 June, 2013, whereas the MYT Order for RInfra-D was issued subsequently, on 22 August, 2013. Thus, the Commission could not have accurately foreseen the impact of change-over due to the tariff differential between TPC-D and RInfra-D when issuing TPC-D’s MYT Order. Further, the category-wise sales projections for FY 2013-14 and FY 2014-15 were based on data and assumptions that were available at that point in time, including certain directions given by the Commission to TPC-D regarding network roll-out and restrictions in changing-over consumers.

e) As regards FY 2015-16, the Commission revised the sales projection in the MTR Order considering the developments over the previous 2-3 years, which is the objective and purpose of the MTR. Hence, once the sales projections for FY 2015-16 were revised in the MTR Order considering the latest available data, there is no point in comparing the actual sales with the sales approved in the previous MYT Order. Moreover, in the MTR Order, the Commission adopted a holistic approach for sales projection, as elaborated earlier. As mentioned above, the deviation has been mainly on account of OA in the HT Industrial category and loss of Railways as a consumer, which had not been envisaged by either TPC-D or the Commission. Also, the overall sales projection by the Commission in the MTR Order (4169 MU) was close to the projection of TPC-D (4102 MU). However, analysis of the difference in category-wise sales shows that TPC-D's projections were further from the actual sales than those approved by the Commission, as shown in the Table below:

Table 5-9: Variation in Category-wise Sales for FY 2015-16 (MU)

Consumer Category & Consumption Slab	**TPC-D MTR Petition**	**MTR Order**	**Actual**	**Variation w.r.t. MTR Order**	**Variation fw.r.t. TPC-D's Projections**
HT Category					
HT I – Industry	1,478.56	1,524.79	1,165.26	-30.85%	-26.89%
HT II – Commercial	630.78	635.41	619.92	-2.50%	-1.75%
HT V(A) - Railways	927.24	964.09	779.02	-23.76%	-19.03%
HT VI - Public Services	251.76	251.76	220.61	-14.12%	-14.12%
Sub-total	**3,298.17**	**3,385.88**	**2,799.72**	-20.94%	-17.80%
LT Category					
LT I - Residential	*268.71*	*252.86*	*234.66*	*-7.76%*	*-14.51%*
0-100	14.88	64.92	58.71	-10.58%	74.66%
101-300	55.13	75.82	70.10	-8.16%	21.35%
301-500	50.38	31.94	30.20	-5.76%	-66.83%
501 and above	148.31	80.18	75.65	-5.99%	-96.05%
LT II(A) - Commercial upto 20 kW	43.15	43.64	45.30	3.67%	4.76%
LT II(B) - Commercial 20 to 50 kW	40.76	40.74	40.53	-0.51%	-0.57%
LT II(C) - Commercial > 50 kW	252.47	244.08	240.34	-1.56%	-5.05%
LT III - Industrial upto 20 kW	24.14	24.40	25.68	4.99%	5.99%
LT IV - Industrial > 20 kW	145.76	147.36	157.65	6.53%	7.55%
LT VII – Temporary Supply	18.51	19.42	18.88	-2.86%	1.94%
LT IX - Public Services	10.76	10.76	13.92	22.73%	22.70%
Sub-total	**1,091.50**	**1,055.56**	**1,031.14**	-2.37%	-5.85%
15 day adjustment			2.21	100.00%	100.00%
Total	**4,102.45**	**4,169.16**	**3,579.53**	**-16.47%**	**-14.61%**

f) As will be seen from the above Table, the difference between the sales projected by TPC-D and the actual sales of LT categories is much larger than the sales that had been projected by the Commission.

g) Both RInfra-D and TPC-D submit their projections of direct sales and change-over sales based on their own assumptions, which are often different. Since the change-over sales approved have to be the same for RInfra-D and TPC-D, accepting the differing projections of both TPC-D or RInfra-D would result in a mismatch, and accepting one or the other in toto without an assessment and informed assumptions regarding the underlying variables cannot be the approach of any regulator. Moreover, both Licensees project sales considering their proposed ARRs and tariffs, which may be quite different from those ultimately approved by the Commission which may or may not correspond to the sales projected by the Licensees.

h) Projecting change-over sales involves anticipating consumer behaviour vis-a-vis change-over economics and other factors influencing factors, and is fraught with uncertainties. It may be noted that, after its MTR Order was issued, TPC-D filed a Review Petition (Case No. 110 of 2015) in which it had projected a reduction in sales to the extent of 1500 - 2000 MU in FY 2015-16 on account of OA and change-over from TPC-D to RInfra-D, as follows:

> *"11. ...Accordingly, the entire Regulatory Asset should be recovered through RAC so that the burden of the unrecovered Regulatory Asset is not borne by the remaining retail consumers in the event of migration of consumers to other licensee/suppliers/Generators through Open Access. ...Consequently, the migration of consumers on account of tariff differential is expected to cause contraction of demand to the extent of 1,500 to 2,000 MUs...."*

Although TPC-D had anticipated that sales would reduce by 1500 - 2000 MU in FY 2015-16 on account of OA and change-over from TPC-D to RInfra-D, there has been no change-over from TPC-D to RInfra-D using TPC-D's wires and the reduction in sales due to OA has been around 550 MU, which is far lower than that anticipated by TPC-D.

Hence, the methodology adopted by the Commission for sales projections is quite credible and appropriate given the difficulties in assessing the category-wise trend of sales of RInfra-D and TPC-D on stand-alone basis. Hence, the Commission has continued with the same approach for projecting the category-wise sales for the 3rd Control Period.

For a realistic estimate of energy sales, the Commission has projected TPC-D's sales in three segments, viz., sales in the area of supply overlapping RInfra-D's area, sales in the area of supply overlapping BEST's area, and addition of new Direct Consumers in BEST's area of supply, separately. Since change-over is allowed in the area of supply overlapping with RInfra-D, it has adopted the holistic approach described earlier. In the area overlapping with BEST, only switch-over is allowed, and hence the projections have been made based on the past trend.

For realistic projection of sales in the 3rd Control Period, the Commission asked TPC-D for the break-up of category-wise direct sales for FY 2012-13 to FY 2015-16 in the area of supply overlapping with RInfra-D and with BEST's areas. Such data has been submitted for the first time, and is shown in the Table below:

Table 5-10: Segregation of Energy Sales in FY 2012-13 to FY 2015-16 as submitted by TPC-D (MU)

Particulars	**FY 2012-13**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
Direct Sales in area overlapping with RInfra-D				
HT Sales	1,619.76	1,762.50	2,013.19	1,846.75
LT Sales	569.76	590.18	635.51	710.48
Sub-total (A)	**2,189.52**	**2,352.69**	**2,648.70**	**2,557.23**
Direct sales in area overlapping with BEST				
HT Sales	1,013.27	1,067.58	1,095.82	952.97
LT Sales	60.57	59.84	61.33	66.86
Sub-total (B)	**1,073.85**	**1,127.42**	**1,157.15**	**1,019.83**
15 days adjustment (C)	**(6.23)**	**(4.63)**	**(0.15)**	**0.00**
Grand Total (A+B+C)	**3,257.13**	**3,475.47**	**3,805.70**	**3,577.06**

As regards the projection of energy sales for HT Industry, the Commission asked TPC-D to clarify the basis for assuming a reduction of 337 MU in FY 2016-17 due to OA. It also asked TPC-D for the category-wise details of consumers with Contract Demand of 1 MW and above as on 31 March, 2016 along with the actual sales to them in FY 2015-16. TPC-D replied that the reduction in sales on account of OA has been considered based on the consumption of consumers who opted for OA during FY 2015-16. TPC-D also submitted the category-wise loss of sales during FY 2015-16 on account of OA as shown in the following Table:

Table 5-11:Category-wise loss in sales because of Open Access in FY 2015-16 as submitted by TPC-D (MU)

Categories	FY 2015-16
HT Industry	110
HT Commercial	8
HT Public Services others	36
HT Railways (Deemed Licensee)	187
Total sales on Open Access	**342**

The Commission has adopted the following approach for projecting sales for the 3rd Control Period:

a) TPC-D's overall direct sales have been projected in three segments, namely, sales in RInfra-D's area of supply, sales in BEST's area of supply, and sales because of addition of new Direct Consumers in BEST's area.

b) The change-over sales approved by the Commission for TPC-D for past years has been considered after grossing down by HT and LT losses of 1.94% and 9.0%, respectively.

c) The overall trend of growth in consolidated sales gives a realistic picture of category-wise trends, which have been used to project the overall category-wise sales for TPC-D and RInfra-D combined for the area of supply overlapping with RInfra-D.

d) CAGR of actual consolidated sales for different periods in the past five years, FY 2010-11 to FY 2015-16, has been analysed and an appropriate CAGR has been considered. The consolidated sales consist of RInfra-D own sales, TPC-D direct sales in the area of supply overlapping with RInfra-D, and change-over sales approved for TPC-D after grossing down with HT and LT Losses.

e) Different CAGRs have been considered for TPC-D for the areas overlapping with RInfra-D and BEST's areas.

f) The sales growth projected by TPC-D for HT Railways and HT Metro/Monorail has been accepted.

g) OA consumption has been higher in FY 2015-16 for TPC-D. For computing the CAGR of sales for HT Industry, the Commission has added back the OA consumption to the energy sales in FY 2015-16 to normalise the trend, since it is included in the past energy sales. While projecting the energy sales for the 3rd Control Period, the Commission has considered the actual OA sales in FY 2015-16 and the additional OA quantum as projected by TPC-D.

h) For LT Public Service and HT Public Service categories, the Commission has computed the CAGR considering the combined energy sales for Public Services and Commercial categories, as the Public Service categories were carved out of the respective Commercial categories in the MTR Order.

i) Comparison of the revised tariffs approved by the Commission shows that there may be a marginal benefit to RInfra-D consumers in the 0-300 units slab in case they change-over to TPC-D. However, the Commission has not considered any additional change-over sales on account of change-over of residential category consumers in the 0-300 units slab since it is difficult to anticipate the extent of consumers shifting considering the marginal difference in tariffs. The impact, if any, on this account shall be addressed at the time of the MTR.

j) The category-wise CAGR considered for projecting the energy sales for the 3rd Control Period is shown in the following Table:

Table 5-12: Category-wise CAGR considered for projection of Energy Sales

Consumer Category	CAGR Considered for Consolidated Sales Projections	TPC-D Direct Sales CAGR in RInfra-D area	TPC-D Direct Sales CAGR in BEST area
LT I- Below Poverty Line	0.00%	0.00%	0.00%
LT-I Residential	4.37%	6.29%	6.29%
LT II (A)- 0-20 kW	2.94%	12.08%	1.02%
LT II (B) - >20-50 kW	2.71%	13.47%	2.36%
LT II (C) - above 50 kW	0.0%	2.96%	0.00%
LT III - LT Industry up to 20 kW	2.07%	4.19%	15.03%
LT IV - LT Industry above 20 kW	0.00%	1.59%	17.80%
LT-V- LT- Advertisements and Hoardings	3.54%	0%	0.00%
LT VI- LT -Street Lights	3.51%	0%	0.00%
LT-VII (A)- LT -Temporary Supply Religious	6.82%	5.09%	10.40%
LT-VII (B)- LT -Temporary Supply Others	0.00%	5.09%	10.40%

Consumer Category	CAGR Considered for Consolidated Sales Projections	TPC-D Direct Sales CAGR in RInfra-D area	TPC-D Direct Sales CAGR in BEST area
LT VIII- LT - Crematorium and Burial Grounds	4.14%	0.00%	0.00%
LT X- LT -Public Service	3.03%	6.80%	
HT I-HT-Industry	6.78%	2.81%	0.00%
HTII - HT- Commercial	0.00%	0.00%	0.00%
HT III- HT-Group Housing Society	6.52%	0.00%	0.00%
HTIV- HT - Temporary Supply	6.54%	0.00%	18.60%
HT VI - Public Service (A)	2.59%	4.11%	0.00%

k) For estimating addition of new TPC-D direct consumers in BEST's area, the Commission has accepted the sales estimation submitted by BEST, in view of the pendency of decisions on TPC-D’s Network Roll-out Plan in Case No. 182 of 2014.

l) The change-over sales have been projected, considering the past trend and only for the Residential category, at the CAGR of 4.37% assumed for consolidated energy sales.

m) For grossing up of change-over sales, the wheeling losses as approved for RInfra-D in its MYT Order dated 21 October, 2016 in Case No. 34 of 2016 have been considered.

The category-wise direct sales approved for the 3rd Control Period are given in the Table below:

Table 5-13: Category-wise Direct Sales for 3rd Control Period as approved by Commission (MU)

Consumer Category	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
LT I- Below Poverty Line	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01
LT-I Residential	**297.23**	**251.18**	**367.78**	**268.81**	**443.39**	**294.01**	**443.41**	**321.62**
0-100	79.41	63.08	109.39	67.73	141.52	75.07	172.02	83.18
101-300	104.53	75.10	143.99	80.44	186.28	88.27	226.52	96.86
301-500	34.75	32.28	35.09	34.50	35.45	37.55	35.81	40.87
500 and above	78.54	80.71	79.32	86.14	80.13	93.12	80.94	100.70
LT II (A) - 0-20 kW	60.63	52.07	80.76	59.47	107.60	69.37	141.46	82.54
LT II (B) - >20-50 kW	56.69	45.83	77.44	51.76	105.39	58.86	141.08	67.38
LT II (C) - above 50 kW	259.77	247.32	286.76	254.46	321.75	262.62	361.41	272.10
LT III - LT Industry up to 20 kW	25.48	26.76	26.25	27.89	27.04	29.07	27.85	30.29
LT IV - LT Industry above 20 kW	153.76	160.39	158.35	163.21	163.15	166.12	168.05	169.14
LT-V : LT- Advertisements and Hoardings	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
LT VI: LT -Street Lights	0.56	0.57	0.56	0.57	0.57	0.57	0.57	0.57
LT-VII (A): LT -Temporary Supply Religious	0.07	0.08	0.10	0.08	0.13	0.09	0.18	0.09
LT-VII (B): LT -Temporary Supply Others	20.43	19.92	21.71	21.03	23.08	22.20	24.53	23.44

Consumer Category	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
LT VIII: LT - Crematorium and Burial Grounds	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT IX: LT -Public Service (A)	0.25	0.14	0.25	0.09	0.25	0.06	0.25	0.05
LT IX: LT -Public Service (B)	25.89	14.69	43.23	15.71	67.63	16.77	93.91	17.88
Sub-total- LT	**900.83**	**819.02**	**1063.25**	**863.13**	**1260.05**	**919.80**	**1474.65**	**985.16**
HT I: HT-Industry	738.29	850.44	763.30	873.25	793.69	896.69	825.86	920.80
HTII : HT- Commercial	615.65	619.92	651.01	619.92	697.23	619.92	748.64	619.92
HT III: HT-Group Housing Society	0.30	0.32	0.30	0.32	0.30	0.32	0.30	0.32
HTIV : HT - Temporary Supply	8.45	9.28	8.70	10.18	8.97	11.25	9.24	12.51
HT V(A) – Railways	156.55	156.55	158.10	158.10	159.72	159.72	161.33	161.33
HT V(B) –Metro Railways & Monorail	6.19	6.19	6.38	6.38	6.57	6.57	6.77	6.77
HT VI - Public Service (A)	42.92	45.32	44.20	43.94	45.54	41.89	46.91	39.88
HT VI - Public Service (B)	174.60	184.36	196.32	195.18	225.12	207.07	257.99	219.33
Sub-total - HT	**1,742.94**	**1,872.39**	**1,828.30**	**1,907.27**	**1,937.13**	**1,943.44**	**2,057.03**	**1,980.84**
Grand Total	**2643.77**	**2691.40**	**2891.55**	**2770.40**	**3197.18**	**2863.24**	**3531.69**	**2966.01**

The category-wise change-over sales approved for the 3rd Control Period are given in the Table below:

Table 5-14: Category-wise Change-over Sales for 3rd Control Period as approved by Commission (MU)

Consumer Category	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
LT I- Below Poverty Line	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01
LT I Residential	1,729.26	1,779.42	1,756.38	1,853.38	1,783.06	1,930.42	1,813.53	2,010.45
0-100	539.12	672.99	547.72	700.96	555.55	730.10	564.42	760.37
101-300	680.91	716.78	691.79	746.57	701.59	777.61	712.67	809.85
301-500	232.88	193.61	236.38	201.65	240.51	210.03	245.32	218.74
500 and above	276.35	196.04	280.49	204.19	285.40	212.68	291.11	221.49
LT II (A)- 0-20 kW	219.96	216.23	221.33	215.78	222.60	215.34	223.29	214.87
LT II (B) - >20-50 kW	38.45	38.68	38.00	38.60	37.44	38.52	36.28	38.43
LT II (C) - above 50 kW	104.14	109.22	103.94	109.00	103.56	108.77	102.29	108.53
LT III - LT Industry up to 20 kW	46.67	42.69	47.13	42.60	47.60	42.52	48.08	42.42
LT IV - LT Industry above 20 kW	50.46	46.92	50.97	46.83	51.48	46.73	51.99	46.63
LT V : LT- Advertisements and Hoardings	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
LT VI: LT -Street Lights	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT VII (A): LT -Temporary Supply Religious	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LT VII (B): LT -Temporary Supply Others	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02

Consumer Category	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
LT VIII: LT - Crematorium and Burial Grounds	0.36	0.33	0.36	0.33	0.36	0.33	0.37	0.34
LT IX: LT -Public Service(A)	0.16	0.00	0.17	0.00	0.17	0.00	0.17	0.00
LT IX: LT -Public Service(B)	8.56	0.08	7.41	0.08	6.06	0.08	3.82	0.08
Sub-total- LT	**2198.06**	**2233.62**	**2225.73**	**2306.63**	**2252.37**	**2382.74**	**2279.86**	**2461.79**
HT I: HT-Industry	10.52	8.94	10.63	8.94	10.73	8.94	10.84	8.94
HT II : HT- Commercial	11.60	13.00	11.72	13.00	11.84	13.00	11.96	13.00
HT III: HT-Group Housing Society	3.28	3.24	3.32	3.24	3.35	3.24	3.38	3.24
HT IV : HT - Temporary Supply	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT V(A) – Railways	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT V(B) –Metro Railways & Monorail	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HT VI - Public Service (A)	0.40	0.00	0.40	0.00	0.40	0.00	0.40	0.00
HT VI - Public Service (B)	0.10	0.00	0.10	0.00	0.10	0.00	0.10	0.00
Sub-total - HT	**25.46**	**25.18**	**25.72**	**25.18**	**25.97**	**25.18**	**26.23**	**25.18**
Grand Total	**2223.52**	**2258.80**	**2251.44**	**2331.81**	**2278.35**	**2407.92**	**2306.09**	**2486.97**

5.2 DISTRIBUTION LOSSES AND ENERGY BALANCE

TPC-D's Submission

For estimating Distribution Loss, TPC-D has considered its entire Licence Area as a single entity. The Distribution Loss has increased due to reduction in sales to Railways. The LT network of TPC-D is also expected to increase during the 3rd Control Period. Considering this, TPC-D has projected an increase of 0.10% annually in the Distribution Loss over the approved level of 1.02% for FY 2015-16. The estimated Distribution Loss for the 3rd Control Period is shown in the Table below:

Table 5-15: Estimated Change-over Sales for FY 2015-16 as submitted by TPC-D

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2019-20**	**FY 2020-21**
Distribution Loss	1.12%	1.22%	1.32%	1.42%

TPC-D's Network Roll-out Plan is under approval and the Distribution Loss for the 3rd Control Period will also depend on the approved Plan. TPC-D has considered the Transmission Loss as per the InSTS Tariff Order dated 26 June, 2015 in Case No. 57 of 2015. TPC-D has estimated the energy input requirement as shown in the following Table:

Table 5-16: Energy Input requirement for 3rd Control Period as submitted by TPC-D (MU)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
TPC-D Retail Sales	2643.77	2891.55	3197.18	3531.69
Distribution Loss (%)	1.12%	1.22%	1.32%	1.42%
Energy requirement for TPC-D consumers at T<>D interface	2673.71	2927.26	3239.94	3582.56
Energy requirement for Change-over consumers	2223.52	2251.44	2278.35	2306.09
Wheeling loss (RInfra-D Network) (%)	0%	0%	0%	0%
Energy requirement for Change-over consumers	2223.52	2251.44	2278.35	2306.09
Energy requirement at T<>D	**4897.24**	**5178.71**	**5518.29**	**5888.65**
Transmission Loss (%)	3.89%	3.89%	3.89%	3.89%
Energy requirement at G<>T	**5095.45**	**5388.31**	**5741.64**	**6126.99**
Sale/(Purchase) to Imbalance Pool	0.00	0.00	0.00	0.00
Sale Outside Licence Area	464.93	464.93	0.00	0.00

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Energy requirement at InSTS	5560.38	5853.24	5741.64	6126.99

Commission's Analysis and Ruling

While analysing the Energy Balance submitted by TPC-D, the Commission observed that TPC-D has considered a significant quantum of 'Sale Outside Licence Area' for FY 2016-17 and FY 2017-18. The Commission asked TPC-D to clarify the consumer/entity to whom such sale is envisaged and the reasons for not considering it after the first two years of the Control Period. TPC-D replied that it has entered into an Agreement with Railways on 2 February, 2016 for supply of power for one year till February, 2017, which is extendable by another 6 months till August, 2017. Hence, this sale has been considered as Sale Outside Licence Area only for the first two years of the Control Period. For the purpose of the Energy Balance and Energy Requirement for the 3rd Control Period, the Commission has not considered the Sale Outside Licence area for the reasons elaborated in subsequent paragraphs.

With regard to TPC-D's projection of higher Distribution Loss in the 3rd Control Period because of loss of Indian Railways as a consumer, the Commission asked for the month-wise Distribution Losses in FY 2015-16. TPC-D clarified that 128 MU (considering only 4.5 months sales) of Indian Railways had moved out from TPC-D from November, 2015 and an additional 65 MU (considering only 1.5 months of sales) from February, 2016. Therefore, the impact of loss of sale will be more visible in FY 2016-17. TPC-D also provided the information as shown in the Table below:

Table 5-17: Month-wise Distribution Losses as submitted by TPC-D

Month	TPC-D input @ T<>D Periphery (MU)	Billed Energy with 15 day adjustment (MU)	Open Access (MU)	Total including Open Access (MU)	Loss (%)
	a	b	c	d=b+c	e=1-d/a
Apr-15	324.42	312.89	2.84	315.73	2.68%
May-15	335.87	339.52	3.12	342.64	-2.02%
Jun-15	320.64	314.23	2.53	316.76	1.21%
Jul-15	348.86	344.86	4.05	348.91	-0.02%
Aug-15	342.13	338.35	3.98	342.32	-0.06%
Sep-15	332.99	324.61	6.02	330.62	0.71%
Oct-15	367.64	356.23	7.68	363.91	1.02%

Month	TPC-D input @ T<>D Periphery (MU)	Billed Energy with 15 day adjustment (MU)	Open Access (MU)	Total including Open Access (MU)	Loss (%)
	a	b	c	d=b+c	e=1-d/a
Nov-15*	325.98	306.32	12.78	319.11	2.11%
Dec-15	295.79	268.09	34.54	302.64	-2.31%
Jan-16	280.59	239.02	33.79	272.81	2.77%
Feb-16*	248.62	224.76	39.1	263.86	-6.13%
Mar-16	273.76	210.58	43.47	254.05	7.20%
FY 2015-16	**3797.28**	**3579.46**	**193.91**	**3773.37**	**0.63%**

**Month from which Railways ceased to be consumer*

The Commission notes that the increase of 0.10% annually in the Distribution Loss over the approved level of 1.02% projected by TPC-D is based on the loss of Railways as a consumer and expected increase in the LT Network of TPC-D during the 3rd Control Period.

The Commission is of the view that, at present, it would not be appropriate to approve the increase in Distribution Loss proposed by TPC-D based on the assumptions made by it. TPC-D's Network Roll-out Plan and related issues are pending decision in Case Nos. 182 of 2014 and 50 of 2015. Further, TPC-D has not been able to justify the projected increase in Distribution Loss due to disconnection of Railways. Moreover, while the actual Distribution Loss in FY 2015-16 has been stated by TPC-D as 0.63%, it has been provisionally worked out by the Commission as -0.40% based on MSLDC data. Even if TPC-D's submission of 0.63% with a projected annual increase of 0.10% is accepted, the Distribution Loss would increase to 1.03% in FY 2019-20. Considering the extent of uncertainty surrounding various factors impacting the Distribution Loss, the Commission has approved it for the 3rd Control Period at the same level as approved for FY 2015-16, i.e., 1.02%. The Commission may revisit this at the time of MTR considering the facts available at that time.

Table 5-18: Distribution Loss for 3rd Control Period as approved by Commission

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Distribution Loss (%)	1.02%	1.02%	1.02%	1.02%

For computation of the Energy Balance, the Commission has taken the approved change-over sales. It has considered the intra-State Transmission Loss of 3.92% as approved in the InSTS Tariff Order dated 22 July, 2016 in Case No. 91 of 2016.

Accordingly, the Commission has computed the Energy Balance for the 3rd Control Period as shown in the Table below:

Table 5-19: Energy Balance for 3rd Control Period as approved by Commission (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
TPC-D Retail sales (excluding sales at 110/132kV level)	2,379.08	2,449.61	2,541.77	2,644.43
Distribution Loss (%)	1.02%	1.02%	1.02%	1.02%
Energy requirement for TPC-D consumers at T<>D interface	2,403.60	2,474.86	2,567.96	2,671.68
Energy requirement for Change-over consumers	2258.80	2331.81	2407.92	2486.97
Energy Sales at 110/132 kV level	312.32	320.79	321.47	321.58
Total Energy requirement at T<>D	4,974.72	5,127.46	5,297.35	5,480.23
Transmission Loss (%)	3.92%	3.92%	3.92%	3.92%
Total Energy requirement at G<>T	5,177.68	5,336.66	5,513.48	5,703.82

5.3 POWER PURCHASE QUANTUM AND COST

TPC-D's Submission

TPC-D’s total power procurement projection for the 3rd Control Period is based on the estimated energy input requirement to be met from different sources, namely, TPC-G, RE sources, and short-term bilateral purchase.

5.3.1 Procurement from TPC-G

TPC-D has a long-term PPA with TPC-G for a major portion of its power requirement. (The capacity allocation from various TPC-G Generating Units has been discussed earlier in this Order.) The PPA between TPC-D and TPC-G is valid up to 31 March, 2018. However, TPC-D intends to continue procurement of power from TPC-G Units 5, 7 and 8 and its Hydro Generating Stations in the same ratio of the generating capacity for the following reasons:

a) Embedded generation capacity near the load centre with well-developed transmission facility;
b) Cheapest source of power at present as compared to other sources;
c) A good combination of base load and peaking capacity;

d) Generating capacity with multiple fuel firing capability, hence not completely dependent on a single fuel;

e) Tariff determined by the Commission with due scrutiny, hence in the best interest of consumers.

TPC-D would like to increase the capacity tied up with Hydro generation, if available, and has indicated accordingly to TPC-G. It has not projected any PPA with Unit 6 from FY 2018-19 onwards. The proposed PPA position is as shown in the Table below:

Table 5-20: Power Purchase Arrangement with TPC-G as submitted by TPC-D

Unit	**Capacity (MW)**	**TPC-D Share (MW)**	**Existing % share**	**Proposed % share**
Unit 5	500	244	48.83%	48.83%
Unit 7	180	88	48.83%	48.83%
Hydro	447	218	48.83%	48.83%
Unit 8	250	150	60.00%	60.00%
Total	**1377**	**700**		

TPC-D would approach the Commission with a separate Petition for the approval of the PPA with TPC-G. However, for determining tariff for the 3rd Control Period, the Commission may consider the above for FY 2018-19 and FY 2019-20.

Considering the existing PPA for FY 2016-17 and FY 2017-18, the proposed PPA for the remaining period, and the cost estimation provided by TPC-G for FY 2016-17 to FY 2019-20, the estimated Energy Charge is as shown in the Table below:

Table 5-21: Estimated Energy Charge for TPC-D from TPC-G for 3rd Control Period as submitted by TPC-D

Unit	**Fuel**	**FY 2016-17**			**FY 2017-18**		
		Net Generation (MU)	**Rate (Rs./ kWh)**	**Cost (Rs. crore)**	**Net Generation (MU)**	**Rate (Rs./ kWh)**	**Cost (Rs. crore)**
Unit 5	APM	6.27	3.31	2.07	6.28	3.69	2.32
Unit 5	Oil	1.94	12.12	2.35	1.94	12.09	2.34
Unit 5	Coal	1707.19	2.65	452.55	1707.07	2.72	463.91
Unit 6	RLNG	0.00	5.40	0.00	0.00	6.16	0.00
Unit 6	Oil	0.00	12.47	0.00	0.00	12.42	0.00
Unit 6	Auxiliary	(11.58)	0.00	0.00	(11.58)	0.00	0.00
Unit 7	Gas	416.60	2.57	106.96	416.60	2.86	119.31
Unit 8		1044.88	2.66	277.99	1046.23	2.72	284.39

Unit	Fuel	FY 2016-17			FY 2017-18		
		Net Generation (MU)	Rate (Rs./ kWh)	Cost (Rs. crore)	Net Generation (MU)	Rate (Rs./ kWh)	Cost (Rs. crore)
Hydro		678.96	1.20	81.44	701.18	1.20	84.18
Total		**3844.24**	**2.40**	**923.36**	**3867.71**	**2.47**	**956.46**

Unit	Fuel	FY 2018-19			FY 2019-20		
		Net Generation (MU)	Rate (Rs./ kWh)	Cost (Rs.crore)	Net Generation (MU)	Rate (Rs./ kWh)	Cost (Rs.crore)
Unit 5	APM	48.2	3.95	19.03	6.79	4.22	2.86
Unit 5	Oil	1.94	12.16	2.36	1.94	12.33	2.39
Unit 5	Coal	1666.92	2.83	471.58	1710.46	2.90	496.09
Unit 6	RLNG	0.00	0.00	0.00	0.00	0.00	0.00
Unit 6	Oil	0.00	0.00	0.00	0.00	0.00	0.00
Unit 6	Auxiliary	0.00	0.00	0.00	0.00	0.00	0.00
Unit 7	Gas	367.94	3.06	112.51	416.60	3.26	135.88
Unit 8		1046.76	2.82	295.19	1046.74	2.88	301.65
Hydro		701.16	1.22	85.34	701.26	1.23	86.28
Total		**3832.93**	**2.57**	**986.01**	**3883.78**	**2.64**	**1025.15**

The estimated Fixed Cost for the 3rd Control Period is shown in the following Table:

Table 5-22: Estimated Fixed Cost of TPC-G for 3rd Control Period as submitted by TPC-D (Rs. crore)

Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Unit 5	229.94	238.98	243.67	245.60
Unit 6	77.14	77.29	0.00	0.00
Unit 7	93.15	93.88	98.99	104.62
Unit 8	189.50	188.72	187.74	185.07
Hydro	76.25	76.45	77.79	78.60
Total	**665.98**	**675.32**	**608.19**	**613.89**

The total cost of power purchase from TPC-G for the 3rd Control Period is shown in the Table below:

Table 5-23: Total Cost of Power Purchase from TPC-G for 3rd Control Period as submitted by TPC-D (Rs. crore)

Unit	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Variable Charges	923.36	956.46	986.01	1025.15
Fixed Charges	665.98	675.32	608.19	613.89
Total Cost	1589.34	1631.78	1594.20	1639.04
Net Generation (MU)	3844.24	3867.71	3832.93	3883.78
Rs./kWh	**4.13**	**4.22**	**4.16**	**4.22**

Commission's Analysis and Ruling

The existing PPA of TPC-D with TPC-G will expire on 31 March, 2018. TPC-D has stated that it intends to extend it beyond 31 March, 2018 for the reasons cited above.

The Commission asked TPC-D to submit an alternate Power Procurement Plan for a scenario in which the PPA with TPC-G is not approved by the Commission beyond 31 March, 2018. It also asked TPC-D for the basis of its contention that TPC-G power is the cheapest source at present as compared to others, and to submit a comparison with other sources.

TPC-D replied that Mumbai peak demand has been historically increasing at a CAGR of 3% per annum. Assuming growth at the same rate, Mumbai peak demand in FY 2019-20 will increase to 4108 MW from 3760 MW in FY 2016-17. However, the transmission capacity available over the 3rd Control Period is expected to increase from 1830 MW in FY 2016-17 to 2130 MW in FY 2019-20. As the Available Transfer Capability (ATC) of the transmission corridor is not sufficient to meet the overall Mumbai peak demand, utilisation of embedded generation of the Mumbai system is essential to meet the overall Mumbai peak demand.

TPC-D further stated that booking of the transmission corridor for long-term access has already been made for VIPL-G (600 MW), MSEDCL's suburban Mumbai demand (250 MW), and RE power to meet the RPO targets of Mumbai Distribution Licensees (approximately 200 MW in FY 2016-17, which will keep increasing up to FY 2019-20). Besides, Railways, which was drawing power from the embedded power generation capacity of Mumbai, is now using this corridor to import power (approximately 65 MW) from RGPPL. This import by Railways will increase to 100 MW by 2018. Therefore, the capacity available for all three Mumbai Distribution Licensees over the 3rd Control Period is 680 MW, 805 MW, 665 MW, and 625 MW in FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20, respectively. TPC-D also stated that the price of any power brought from outside Maharashtra to Mumbai will be further increased due to the POC charges for inter-State transmission of power (approximately Rs. 0.40 - 0.45/kWh) and due to inter-State transmission system losses (approximately between 3–4%). The addition of these charges will reduce the price competitiveness of any power brought from outside Maharashtra. Hence, it would be beneficial to continue the current PPA after its expiry on 31 March, 2018. TPC-D stated that there are also certain other advantages of tying up power with the embedded generation capacity, which include:

a) Continued reliability and power supply, which ensures islanding in case of any failure outside the Mumbai power system.
b) Cheap Hydro-based power which, combined with thermal power from the Trombay Plant, provides power at competitive rates.
c) Hydro power, which helps in providing peaking power management solution.
d) Power from multiple fuel sources, which reduces the price and availability risks associated with sourcing power from single-fuel based suppliers.
e) Supply of reactive power for ensuring system stability. TPC-G's Trombay Generating Units provide about 350 MVAr reactive power support to Mumbai, thus maintaining peak time voltages, and also absorb about 150 MVAr reactive power during night and light load periods, thus providing voltage stability to the Mumbai system. In the absence of any contract and non-availability of embedded generation, equivalent reactive compensation will need to be provided locally at all Receiving Stations of Mumbai.

While TPC-D has set out the advantages of continued recourse to embedded generation, the Commission notes that it has not furnished a comparison with prices of power from other sources to justify its statement that TPC-G power is the cheapest source at present.

The Commission observes that, in the past, TPC-D has preferred to enter into arrangements for supply of power with its own Group Companies rather than actively explore alternative sources that may be cheaper through competitive bidding. The Commission is concerned that this should not become a fait accompli for future requirements and the other options or combination of alternatives foreclosed merely due to paucity of time, notwithstanding the significance of the islanding arrangement for Mumbai and subject to certain remaining transmission constraints. These options may include medium and/or long-term arrangements through competitive bidding also. Considering these concerns, TPC-D would have to approach the Commission well before the expiry of its PPA for its extension or otherwise. Hence, **the Commission directs TPC-D to approach the Commission for approval of its plans for future power**

procurement, in accordance with Regulation 20 of the MYT Regulations, 2015, within three months of this Order.

At this stage, however, for the purpose of this Order, the Commission has considered the power purchase from TPC-G as approved in TPC-G's MYT Order dated 8 August, 2016 in Case No. 32 of 2016. However, this shall in no way be construed as amounting to implicit approval of the PPA with TPC-G beyond 31 March, 2018. The fixed cost of purchase from TPC-G as approved by the Commission is shown in the Table below:

Table 5-24: Estimated Fixed Cost of Purchase from TPC-G for 3rd Control Period as approved by Commission (Rs. crore)

Unit	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
Unit 5	229.94	224.11	238.98	232.91	243.67	235.18	245.60	233.34
Unit 6	77.14	75.42	77.29	76.02	0.00	0.00	0.00	0.00
Unit 7	93.15	89.54	93.88	89.91	98.99	93.07	104.62	94.89
Unit 8	189.50	134.05	188.72	131.96	187.74	129.86	185.07	127.02
Hydro	76.25	73.92	76.45	74.09	77.79	74.75	78.60	73.98
Total	**665.98**	**597.03**	**675.32**	**604.89**	**608.19**	**532.86**	**613.89**	**529.23**

TPC-D has not considered any purchase from TPC-G Unit-6 during the 3rd Control Period. The Commission accepts the submission of TPC-D, and has accordingly not considered any purchase from TPC-G Unit 6 either. The estimated variable cost of purchase from TPC-G approved by the Commission is shown in the Table below:

Table 5-25: Estimated Variable Cost of Purchase from TPC-G for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Net Generation (MU)	3644.80	3,666.70	3,618.63	3,668.31
Rate of Purchase (Rs./kWh)	2.55	2.55	2.55	2.55
Variable Cost (Rs. crore)	928.76	934.64	923.32	936.19

The total cost of power purchase from TPC-G approved by the Commission is shown in the following Table:

Table 5-26: Total Cost of Power Purchase from TPC-G for 3rd Control Period as approved by Commission (Rs. crore)

Unit	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
Variable Cost	923.36	928.76	956.46	934.64	986.01	923.32	1025.15	936.19

Unit	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
Fixed Cost	665.98	597.03	675.32	604.89	608.19	532.96	613.89	529.23
Total Cost	1589.34	1525.80	1631.78	1539.52	1594.20	1456.18	1639.04	1465.42
Net Generation (MU)	3844.24	3644.80	3867.71	3666.70	3832.93	3618.74	3883.78	3668.31
Per Unit cost (Rs./kWh)	4.13	4.19	4.22	4.20	4.16	4.02	4.22	3.99

5.3.2 Renewable Purchase Obligation

TPC-D's Submission

TPC-D has considered the quantum of power purchase from renewable sources in accordance with the Draft RPO Regulations, 2015. The RPO requirement for the 3rd Control Period is given in the Table below:

Table 5-27: Renewable Energy Requirement for 3rd Control Period as submitted by TPC-D (MU)

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
RPO Solar	%	1.00%	2.00%	2.75%	3.50%
RPO Non-Solar	%	9.98%	10.48%	10.98%	11.48%
Mini/MicroHydro	%	0.02%	0.02%	0.02%	0.02%
Total	%	11.00%	12.50%	13.75%	15.00%
TPC-D requirement at InSTS	MU	5095.45	5388.31	5741.64	6126.99
RPO – Solar Requirement	MU	50.95	107.77	157.90	214.44
RPO – Non-Solar Requirement	MU	508.53	564.64	630.32	703.20
Mini/Micro Hydro Requirement	MU	1.02	1.13	1.26	1.41

TPC-D proposes to meet the above requirement of Non-Solar RE through its own generating sources and by additional tie-ups, with the balance being met through REC purchase. TPC-D has assumed that around 80% of its RPO would be met through long-term RE sources and the balance through RECs, as shown in the Table below:

Table 5-28: Non-Solar Power Procurement for 3rd Control Period as submitted by TPC-D (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Future Additional tie-ups	84.61	129.50	182.05	240.35
Brahmanvel	18.25	18.25	18.25	18.25
Khandke	101.00	101.00	101.00	101.00

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Sadawaghapur	26.00	26.00	26.00	26.00
Visapur – 6 MW	12.97	12.97	12.97	12.97
Visapur – 4 MW	7.33	7.33	7.33	7.33
Visapur (GSW) – 24 MW	33.90	33.90	33.90	33.90
Visapur – (GSW) 8 MW	16.91	16.91	16.91	16.91
Agaswadi	105.85	105.85	105.85	105.85
Total	**406.82**	**451.71**	**504.26**	**562.56**
Requirement of TPC-D	508.53	564.64	630.32	703.20
Shortfall to be meet through REC	**101.71**	**112.93**	**126.06**	**140.64**

Estimation of Solar Power requirement

The Solar RE requirement increases considerably by the end of the 3rd Control Period compared to the tied-up capacity. TPC-D has proposed to tie-up additional capacities during the Control Period through long-term PPAs, and meet the deficit in Solar RPO by purchase of RECs. Since the additional tie-ups are not known at present, TPC-D has considered the entire balance requirement as to be met through REC purchase for the purpose of tariff determination, as shown in the Table below:

Table 5-29: Solar Power Procurement for 3rd Control Period as submitted by TPC-D (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Future Additional tie-ups	0.00	38.81	78.92	124.16
Mulshi Solar	4.33	4.33	4.33	4.33
Solar Rooftop	0.07	0.07	0.07	0.07
Palaswadi Solar	43.00	43.00	43.00	43.00
Total	**47.40**	**86.21**	**126.32**	**171.56**
Requirement	50.95	107.77	157.90	214.44
Shortfall to be met through REC	**3.55**	**21.55**	**31.58**	**42.89**

Estimation of Mini/Micro Hydro Power requirement

TPC-D has been making efforts to procure power from Mini/ Micro Hydro Generating Stations in the State. For the purpose of tariff determination, TPC-D has considered such purchase as shown in the Table below:

Table 5-30: Mini/Micro Hydro Procurement for 3rd Control Period as submitted by TPC-D (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Mini/Micro Hydro	1.02	1.13	1.26	1.41

TPC-D has projected the cost of power purchase from RE Sources based on the rates approved in the RE Tariff Orders and the quantum projected above for FY 2016-17 to FY 2019-20. For Mini / Micro Hydro, it has taken the current rate and escalated it by 2.28% considering the CAGR of FY 2012-13 to FY 2015-16, for the 3rd Control Period.

The summary of cost of power purchase from RE sources is given in the Table below:

Table 5-31: Cost of Power Purchase Cost from RE sources for 3rd Control Period as submitted by TPC-D

Particulars	FY 2016-17			FY 2017-18			FY 2018-19			FY 2019-20		
	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore
Non-Solar Purchase												
Future Additional tie-ups	84.61	5.55	46.96	129.50	5.55	71.88	182.05	5.55	101.04	240.35	5.55	133.39
Brahmanvel	18.25	4.85	8.85	18.25	5.00	9.13	18.25	5.15	9.40	18.25	5.30	9.67
Khandke	101	4.85	48.99	101	5.00	50.5	101	5.15	52.02	101	5.30	53.53
Sadawaghapur	26	4.55	11.83	26	4.70	12.22	26	4.85	12.61	26	5.00	13
Visapur – 6 MW	12.97	4.29	5.56	12.97	4.29	5.56	12.97	4.29	5.56	12.97	4.29	5.56
Visapur – 4 MW	7.33	4.55	3.34	7.33	4.70	3.45	7.33	4.85	3.56	7.33	5	3.67
Visapur (GSW) – 24 MW	33.9	5.81	19.7	33.90	5.81	19.7	33.90	5.81	19.70	33.90	5.81	19.70
Visapur – (GSW) 8 MW	16.91	5.67	9.59	16.91	5.67	9.59	16.91	5.67	9.59	16.91	5.67	9.59
Agaswadi	105.85	4.56	48.27	105.85	4.56	48.27	105.85	4.56	48.27	105.85	4.56	48.27
Total	406.82	4.99	203.08	451.71	5.1	230.28	504.26	5.19	261.73	562.56	5.27	296.38
Solar Purchase												
Future Additional tie-ups	0	6.74	0	38.80	6.74	26.2	78.9	6.74	53.20	124.20	6.74	83.70
Mulshi Solar	4.30	17.90	7.80	4.30	17.90	7.80	4.30	17.90	7.80	4.30	17.90	7.80
Solar Rooftop	0.10	18.40	0.10	0.10	18.40	0.10	0.10	18.40	0.10	0.10	18.40	0.10
Palaswadi Solar	43	9	38.6	43	9	38.60	43	9	38.60	43	9	38.60
Total	47.40	9.81	46.5	86.21	8.43	72.66	126.32	7.89	99.69	171.56	7.59	130.18
Mini/Micro Hydro	1.02	5.75	0.58	1.13	5.88	0.66	1.26	6.01	0.76	1.41	6.15	0.87
REC Purchase												
Non-Solar REC	101.70	1.50	15.30	112.90	1.50	16.90	126.10	1.50	18.90	140.60	1.50	21.10

Particulars	**FY 2016-17**			**FY 2017-18**			**FY 2018-19**			**FY 2019-20**		
	MU	**Rs./ kWh**	**Rs. crore**	**MU**	**Rs./ kWh**	**Rs. crore**	**MU**	**Rs./ kWh**	**Rs. crore**	**MU**	**Rs./ kWh**	**Rs. crore**
Solar REC	3.60	3.50	1.20	21.60	3.50	7.50	31.60	3.50	11.10	42.90	3.50	15
Total	105.26	1.57	16.50	134.48	1.82	24.48	157.64	1.90	29.96	183.53	1.97	36.11
Total RE Power Purchase Cost												
Non-Solar Purchase	406.82	4.99	203.08	451.71	5.1	230.28	504.26	5.19	261.73	562.56	5.27	296.38
Solar Purchase	47.4	9.81	46.5	86.21	8.43	72.66	126.32	7.89	99.69	171.56	7.59	130.18
Mini Micro RPO	1.02	5.75	0.58	1.13	5.88	0.66	1.26	6.01	0.76	1.41	6.15	0.87
REC Certificate			16.5			24.48			29.96			36.11
Total	**455.24**	**5.86**	**266.66**	**539.06**	**6.09**	**328.09**	**631.83**	**6.21**	**392.14**	**735.52**	**6.3**	**463.53**

Commission's Analysis and Ruling

The Commission has taken the Solar and Non-Solar RPO requirements for the 3rd Control Period as specified in the RPO Regulations, 2016

The Commission has considered the purchase from the existing long-term Solar and Non-Solar RE sources at the preferential tariff applicable to such sources. It has considered the balance requirement of Solar and Non-Solar RPO target to be met through REC procurement. The actual cost incurred on future tie-ups for meeting the incremental increase in RPO requirements shall be considered at the time of MTR subject to prudence check.

Accordingly, the Commission has approved the cost of purchase from Solar and Non-Solar sources for the 3rd Control Period as shown in the Table below:

Table 5-32: Cost of Power Purchase Cost from RE sources for 3rd Control Period as approved by Commission

Particulars	FY 2016-17			FY 2017-18			FY 2018-19			FY 2019-20		
	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore	MU	Rs./ kWh	Rs. crore
Non-Solar Purchase (A)												
Brahmanvel	18.25	4.85	8.85	18.25	5.00	9.13	18.25	5.15	9.40	18.25	5.30	9.67
Khandke	101.00	4.85	48.99	101.00	5.00	50.50	101.00	5.15	52.02	101.00	5.30	53.53
Sadawaghapur	26.00	4.55	11.83	26.00	4.70	12.22	26.00	4.85	12.61	26.00	5.00	13.00
Visapur – 6 MW	12.97	4.29	5.56	12.97	4.29	5.56	12.97	4.29	5.56	12.97	4.29	5.56
Visapur – 4 MW	7.33	4.55	3.34	7.33	4.70	3.45	7.33	4.85	3.56	7.33	5.00	3.67
Visapur (GSW) – 24 MW	33.90	5.81	19.70	33.90	5.81	19.70	33.90	5.81	19.70	33.90	5.81	19.70
Visapur – (GSW) 8 MW	16.91	5.67	9.59	16.91	5.67	9.59	16.91	5.67	9.59	16.91	5.67	9.59
Agaswadi	105.85	4.56	48.27	105.85	4.56	48.27	105.85	4.56	48.27	105.85	4.56	48.27
Total	**322.21**	**4.85**	**156.12**	**322.21**	**4.92**	**158.41**	**322.21**	**4.99**	**160.69**	**322.21**	**5.06**	**162.98**
Solar Purchase (B)												
Mulshi Solar	4.33	17.90	7.75	4.33	17.90	7.75	4.33	17.90	7.75	4.33	17.90	7.75
Palaswadi Solar	43.00	9.00	38.70	43.00	9.00	38.70	43.00	9.00	38.70	43.00	9.00	38.70
Solar Rooftop	0.07	18.40	0.13	0.07	18.40	0.13	0.07	18.40	0.13	0.07	18.40	0.13
Total	**47.40**	**9.83**	**46.58**	**47.40**	**9.83**	**46.58**	**47.40**	**9.83**	**46.58**	**47.40**	**9.83**	**46.58**
REC Purchase (C)												
Non-Solar REC	-	-	29.33	-	-	35.72	-	-	42.64	-	-	50.06
Solar REC	-	-	1.53	-	-	20.77	-	-	36.48	-	-	53.28
Total	**-**	**-**	**30.86**	**-**	**-**	**56.49**	**-**	**-**	**79.12**	**-**	**-**	**103.34**
Total RE Power Purchase Cost (A+B+C)	**369.61**	**6.32**	**233.56**	**369.61**	**7.07**	**261.47**	**369.61**	**7.75**	**286.38**	**369.61**	**8.47**	**312.89**

5.3.3 Power Purchase from Bilateral Sources

TPC-D's Submission

After considering the generation availability from TPC-G and RE sources, the balance is proposed to be met through procurement from bilateral sources, as given in the Table below:

Table 5-33: Bilateral Power Purchase quantum for 3rd Control Period as submitted by TPC-D (MU)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Requirement @ InSTS	5560.38	5853.24	5741.64	6126.99
Met through				
TPC-G	3844.24	3867.71	3832.93	3883.78
Non-Solar RPO	407.84	452.84	505.52	563.96
Solar RPO	47.40	86.21	126.32	171.56
Bilateral + Stand-by Purchase + UI	1260.90	1446.47	1276.88	1507.69
Total	**5560.38**	**5853.24**	**5741.64**	**6126.99**

TPC-D has considered the rate of bilateral power purchase as Rs.3.20/kWh, based on the actual average cost of such purchase in FY 2015-16 up to January, 2016, and has escalated it by 2.50% every year. It would explore additional tie-up of around 140 MW of mid-term power from competitive domestic coal-based power plants, and that has been considered for the projections from FY 2017-18 onwards at Rs 3.99/kWh for FY 2017-18, escalated by 2.2% for subsequent years. Based on this, the cost of power purchase from bilateral sources as submitted is given in the Table below:

Table 5-34: Bilateral Power Purchase Quantum & Cost for 3rd Control Period as submitted by TPC-D

Particulars	FY 2016-17			FY 2017-18		
	MU	**Rs/ kWh**	**Rs. crore**	**MU**	**Rs/ kWh**	**Rs. crore**
Bilateral Power Purchase + UI	1260.90	3.20	403.16	1446.48	3.77	545.11
Medium-Term				996	3.99	
Short-Term				451	3.28	

Particulars	FY 2018-19			FY 2019-20		
	MU	**Rs/ kWh**	**Rs. crore**	**MU**	**Rs/ kWh**	**Rs. crore**
Bilateral Power Purchase + UI	1276.88	3.92	500.59	1507.69	3.92	591.61

Particulars	FY 2018-19			FY 2019-20		
	MU	Rs/ kWh	Rs. crore	MU	Rs/ kWh	Rs. crore
Medium-Term	996	4.08		998	4.17	
Short-Term	281	3.36		509	3.44	

Commission's Analysis and Ruling

The Commission asked TPC-D to justify the escalation rate of 2.50% for procurement from bilateral sources. TPC-D replied that it is based on the difference between the actual bilateral power purchase in FY 2014-15, i.e., Rs. 3.13/kWh, and during FY 2015-16, i.e., Rs. 3.30/kWh, which is around 2.07%. Considering that the present projection is for 4 years, escalation of 2.50% had been considered.

As regards the proposed medium and/or short-term purchase of power from coal-based plants through competitive bidding, the Commission asked TPC-D to clarify the bidding process proposed, the time-lines, and the basis for considering only 140 MW capacity for procurement through competitive bidding. TPC-D replied that the bidding process will be decided after the present MYT Order is issued. The basis for considering only 140 MW through competitive bidding is as shown in the Table below:

Table 5-35: Computation of 140 MW for Medium-Term tie-ups as submitted by TPC-D

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Demand InSTS (MU)	5853	5742	6127
Base Load (MW)	363	356	380
Peak Load (MW)	565	554	592
Total (MW)	**928**	**910**	**971**
Supply Availability (MW)#			
TPC-G Unit 5	230	230	230
TPC-G Unit 7	85	85	85
TPC-G Unit 8	137	137	137
TPC-G Unit 6	0.00*	NA	NA
TPC-G Hydro	214	214	214
Wind	74	83	90
Solar	6	9	13
Supa Plus	9	9	9
Total Shortfall	**172**	**143**	**193**
Minimum Tie-up	**140**	**140**	**140**

*#MW Availability with Utilisation Factor; * economic shutdown*

The Commission has considered the power purchase requirement of TPC-D from TPC-G and RE sources as detailed in the earlier paragraphs, and the remaining requirement has been considered from short-term sources. The Commission has taken procurement from short-term sources at Rs. 3.13/kWh, as approved in the provisional truing-up of FY 2015-16.

Vide Resolution dated 30 March, 2016, the MoP has issued Guidelines for short-term power procurement (beyond the stipulated minimum period) by Distribution Licensees through tariff-based bidding under S. 63 of the EA, 2003. In accordance with the Guidelines, TPC-D should procure all future short-term power only through the e-bidding portal. In accordance with the Guidelines, if the power procured and the tariff determined are within the above blanket approval given by the Commission in the ARR of the respective years, it will be considered to have been adopted by the Commission. In all other cases, TPC-D shall submit a Petition to the Commission for adoption of tariff as required under the Guidelines.

The summary of estimated quantum and cost of purchase from short-term sources as approved by the Commission is given in the Table below:

Table 5-36: Bilateral Power Purchase Quantum & Cost for 3rd Control Period as approved by Commission

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Bilateral Power Purchase (MU)	1,163.27	1,300.34	1,525.24	1,665.90
Rate of Purchase (Rs./kWh)	3.13	3.13	3.13	3.13
Cost of Bilateral Power Purchase (Rs. crore)	364.32	407.25	477.68	521.74

The Commission notes that TPC-D has proposed medium-term procurement of only 140 MW from domestic coal-based power plants through competitive bidding. The quantum of short-term power purchase is projected to be in the range of 22% to 29% of the total power purchase during the 3rd Control Period, which appears to be high for a Distribution Licensee which has to ensure 100% Supply Availability at a reasonable price. In earlier paragraphs, the Commission has directed TPC-D to approach the Commission for approval of power procurement on long/medium-term basis well before the expiry of its PPA with TPC-G considering all options, including competitive bidding. **While doing so, TPC-D may also review and address whether additional long/medium-term procurement would be advisable so that the quantum and cost of power purchase are optimised.**

5.3.4 Sale outside Licence Area

TPC-D's Submission

The Outside Licence Area Sale, reducing the corresponding revenue from the power purchase cost, is as shown in the following Table:

Table 5-37: Outside Licence Area Sale for 3rd Control Period as submitted by TPC-D

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Outside Licence Area Sale (MU)	(464.93)	(464.93)	0.00	0.00
Rate of Purchase (Rs./kWh)	4.17	4.17	0.00	0.00
Cost of Bilateral Power Purchase (Rs. crore)	(193.88)	(193.88)	0.00	0.00

Commission's Analysis and Ruling

As TPC-D has considered significant quantum of 'Sale outside Licence Area' for FY 2016-17 and FY 2017-18, the Commission asked TPC-D to clarify the consumer/entity to whom such sale outside licence area is envisaged and the reasons for not considering such sale after two years of the Control Period. TPC-D replied that it has entered into an Agreement with Railways on 2 February, 2016 for supply of power for one year till February 2017, which is extendable by another 6 months till August 2017, and sale of power to Railways under this Agreement has been considered as sale outside licence area for the first two years of the 3rd MYT Control Period. Besides, such sale is not envisaged beyond two years of the Control Period as the Agreement with Railways would expire in August 2017.

The Commission asked for a copy of the Agreement dated 2 February, 2016 between TPC-D and Railways for supply of 80 MW power under OA; and to clarify the provisions of law under which it has entered into the Agreement, the basis for the agreed rate of Rs. 4.17/kWh, and whether it is levying Wheeling Charges or other charges to Railways for this transaction. TPC-D submitted a copy of the Agreement. It stated that, pursuant to the CERC Order declaring Railways as a Distribution Licensee, Railways approached TPC-D for permanent disconnection of supply of 140.25 MVA contracted demand to 9 Traction Sub-station Points of Railways as a consumer within TPC-D's Licence area. In lieu of this loss of sales, TPC-D entered into an arrangement for sale of a contracted capacity of 80 MW of power to Railways for 12 months in accordance with the 9th proviso to Section 14 of the EA, 2003, which stipulates that:

> *"Provided also that a Distribution Licensee shall not require a licence to undertake trading in electricity."*

TPC-D further stated that Clause 6.7 of the Conditions of Distribution Licence No. 1 of 2014 granted by the Commission on 14 August, 2014 entitles it to sell electricity as a trader within its area of supply::

> *"6.7. The Distribution Licensee shall be entitled to:*
>
> *...b) Undertake trading in electricity within the Area of Supply without obtaining a Licence to undertake trading in electricity.*
>
> *Provided that the Distribution Licensee shall, on seeking prior approval of the Commission, sell, to others outside the Area of Supply but within the State, electricity or energy capacity contracted for such period and to the extent that such electricity or capacity is not required by the Distribution Licensee for the discharge of his obligations to supply electricity in the Area of Supply.*
>
> *Provided further that trading of electricity shall be undertaken within the trading margin as may be fixed by the Commission for the intra-State trading of electricity."*

TPC-D stated that the objective of entering into the Agreement with Indian Railways was to protect its consumers from any unwarranted increase in the tariff due to the Railways moving out, as it would help to reduce the total power purchase cost of TPC-D. The rate of Rs. 4.17 /kWh has been derived from the cost of power purchase from TPC-G approved in the MTR Order. TPC-D clarified that it is not levying any Wheeling Charges to Railways, but the following charges are being recovered, as approved in its MTR order, in addition to the power purchase cost:

a) Transmission Charges of Rs 0.33/kWh
b) MSLDC Charges of Rs 0.01/kWh
c) Transmission Losses of 3.89% as per InSTS Tariff Order dated 26 June, 2015 in Case No. 57 of 2015.

Therefore, the total power purchase cost for Railways works out to Rs 4.68 per kWh.

The Commission asked TPC-D to quantify the financial implications to its Distribution Business considering the actual/estimated power purchase cost from TPC-G, including FAC, in 2 scenarios, viz., a) had this Railways transaction not been entered into, and b) with this Railways transaction. TPC-D stated that, due to the Agreement with Railways, it the total power purchase cost would be reduced by Rs 82.30 crore in FY 2016-17 and Rs 78.90 crore in FY 2017-18, as shown in the Table below:

Table 5-38: Reduction in power purchase cost due to Railways' OLA Sale transaction as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17			FY 2017-18		
	MU	Energy Charge (Rs/kWh)	Rs. crore	MU	Energy Charge (Rs/kWh)	Rs. crore
Scenario I: Without Sale to Railways						
TPC-G Energy Charge (considering loss due to Railways)	3379	2.40	812	3403	2.47	841
TPC-G Fixed Cost			666			675
Total	**3379**	**4.37**	**1478**	**3403**	**4.46**	**1517**
Scenario I: With Sale to Railways						
TPC-G Energy Charge	3844	2.40	923	3868	2.47	956
TPC-G Fixed Cost			666			675
OLA Sale to Railways	(465)	4.17	(194)	(465)	4.17	(194)
Total	**3379**	**4.13**	**1395**	**3403**	**4.23**	**1438**
Net benefit to consumers due to Sale to Railways (difference between Scenario I and II)			**82.20**			**78.90**

TPC-D added that, had it not signed the Agreement with Railways, its consumers would have had to procure power at the average rate of Rs. 4.80/kWh and Rs. 5.10/kWh in FY 2016-17 and FY 2017-18, respectively, instead of Rs. 4.64/kWh and Rs. 4.95/kWh as now proposed.

The Commission asked TPC-D to indicate the source (Unit 5/Unit 6/Unit 7/Unit 8/Hydro) from which the power is being supplied to Railways. TPC-D replied that it has tied up its surplus capacity resulting from Railways moving as a Deemed Distribution Licensee. Hence, the power sold to Railways cannot be specifically linked to any particular Generation Unit.

TPC-D was also asked to justify the ceiling rate of Rs. 4.70/kWh for sale to Railways, after including all other charges, viz., Transmission Charges, Transmission Losses, MSLDC Charges, etc., considering the actual cost of power purchase from TPC-G during FY 2015-16, as well as the cost of power purchase from TPC-G projected by TPC-D in its

Petition; and to clarify whether any trading margin has been factored into this transaction, with details. TPC-D stated that, at the time of negotiations with Railways, the rate of Rs. 4.70/kWh was available, as approved by the Commission in the MTR Order. That rate has been applied, so that consumers of TPC-D will be protected by way of reduction in power purchase cost and, at the same time, Railways would get power at a rate approved by the Commission. This rate was also competitive for Railways. The ceiling rate of Rs 4.70/kWh was also benchmarked with the existing highest rate of power purchase of Railways from RGPPL. TPC-D stated that is not charging any trading margin as the intention of the sale is utilization of surplus power available due to moving out of Indian Railways as a consumer and reduction in the power purchase cost for TPC-D's consumers.

The Commission asked TPC-D regarding the date of permanent disconnection of Railways as a consumer and the effective date of the Agreement. TPC-D stated that the connection at the Chola TSS point of supply was disconnected on 26 November, 2015 for supply from RGPPL. The remaining 9 points of supply, viz., Thane, Sion, Chinchpokli, Mahalaxmi, Bandra, Jogeshwari, Borivali, Wadala, and Mankhurd TSS were disconnected on 11 February, 2016; and the effective date of the Agreement between TPC-D and Railways is 2 February, 2016.

The Commission asked TPC-D to clarify whether the rates of Rs. 4.17/kWh and Rs. 0.34/kWh are fixed or are subject to change based on the Commission's Tariff Orders. This was necessary as Clauses 4 and 6 of the Agreement appeared to be in contradiction to each other. As per Clause 4, the tariff shall be the rate approved in the MTR Order and any revision in the Tariff Orders or any subsequent Orders of the Commission. However, Clause 6.6 stipulates that the bills shall be raised considering Energy Charges of Rs. 4.17/kWh and Transmission Charges of Rs. 0.34/kWh. TPC-D clarified that the rates are liable to revision as per Clause 4, and the tariff for the sale of Contracted Capacity shall be the same as the rate of power procurement as approved for TPC-D in the MTR Order, and as per any revision of Tariff Orders or truing-up in any subsequent Orders of the Commission, subject to mutual agreement with the Railways.

The Commission observed that the Agreement stipulates that the total kWh consumed by the Railways in a month shall be equivalent to the current average monthly consumption of 44 MU. However, Clause 6.3 provides for compensation for default in scheduling/supply of power less than 80% of 44 MU, i.e., 35.2 MU. The Commission asked TPC-D to clarify the following:

a) Treatment in case Railways draws less than 44 MU but above 35.2 MU in a month
b) Treatment in case Railways draws more than 44 MU in a month

c) Actual energy drawn by Railways between February to June, 2016 under the Agreement.

TPC-D replied that, if the Railways draws less than 44 MU but above 35.2 MU in a month, penalty is not applicable, and hence TPC-D will bill at the rate of Rs 4.68/kWh. If Railways draws more than 44 MU, the applicable rate would be the same, i.e., Rs 4.68/kWh. TPC-D submitted the details of actual energy drawn by Railways from February to June, 2016, as shown in the Table below:

Table 5-39: Sale to Railways from February to June, 2016 as submitted by TPC-D (MU)

Particulars	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Total
Sale to Railways from February to June 2016	26.38	41.32	41.95	48.79	47.22	205.66

As regards the total number of points of supply at each voltage level and total number of points of supply, TPC-D submitted the following details:

Table 5-40: Voltage-wise Points of Supply as submitted by TPC-D

Particulars	6.6 kV	22 kV	33 kV	110 kV	Total
At present	2	8	1	10	21
Prior to CERC Order dated 5 November, 2015	2	9	1	10	22
As a Distribution Licensee	0	0	0	10	10
As TPC-D consumer	2	8	1	0	11

As regards the justification for considering some points of supply as 'sale to Licensee' and some points of supply as 'consumer', TPC-D stated that it is supplying power to Railways as a consumer at 11 supply points on 6.6 kV, 22 kV and 33 kV, while Railways is purchasing power as a 'Deemed Distribution Licensee' on 10 supply points. Hence, it has considered some points of supply as 'sale to Licensee' and some as a 'consumer'.

As regards TPC-D's submission that it has tied up the surplus capacity from TPC-G resulting from Railways moving out as a Deemed Distribution Licensee and that, hence, the power sold to Railways cannot be specifically linked to any particular Generation Unit, the Commission is of the view that this is subject to the MOD criteria. Any surplus power with TPC-D will be available at the marginal rate of power purchase as the cheaper sources will have to be utilised first to supply to TPC-D's consumers, who are bearing the entire fixed cost of power purchase. Hence, this transaction of sale of 'surplus' power to Railways would make economic sense to TPC-D and its consumers only if the rate of sale to Railways is higher than the marginal cost of power purchase of such 'surplus' power. Thus, the 'surplus' power has to be genuinely surplus, rather than an artificially created surplus, and would logically be available at the marginal rate of power purchase.

While approving the power purchase from TPC-G, the Commission has taken the generation approved in TPC-G's Order. Even after considering the entire purchase from TPC-G, the quantum of short-term power purchase is as high as 22-29%, as stated earlier. This is so when the Commission has not included the sale to Railways in the Energy Balance. As TPC-D has premised the Railways transaction on power from TPC-G, it is likely to be procured from the more expensive Units such as Unit 6 or Unit 5, which have approved Energy Charges of Rs. 13.01/kWh and Rs. 13.25/kWh, respectively, on Oil-LSHS. In these circumstances, selling power to Railways at a contractual rate of Rs. 4.17/kWh may not be beneficial to the consumers of TPC-D. In case TPC-D has to resort to purchase of costly power, it has to be done on Merit Order principles, and the cheaper power must first be used to meet its obligations as a Distribution Licensee.

For the purpose of this Order, the Commission has not considered the Outside Licence Area sale for the 3rd Control Period. TPC-D is free to continue with this transaction as long as it able to justify its economic viability for its consumers keeping the above considerations in view. TPC-D shall furnish the month-wise details of energy sold to the Railways under the Agreement, along with billing details, with its next MTR Petition. The sale to Railways may be considered at the time of MTR if TPC-D is able to justify, with full data and computations, that there is no negative impact on its consumers.

5.3.5 Transmission Charges

TPC-D's Submission

TPC-D’s share of the intra-State Transmission Charges for FY 2015-16 as per the latest InSTS Tariff Order in Case No. 57 of 2015, based on the average of coincident and non -coincident peak demand (CPD, NCPD) is given in the Table below:

Table 5-41: Share of TPC-D in Transmission Charges for FY 2015-16 as submitted by TPC-D

Particulars	Average of CPD & NCPD (MW)	% share of avg. of CPD & NCPD (%)	% share of TTSC for FY 2015-16 (Rs. crore)
MSEDCL	15404.00	83.05%	3600.62
TPC-D	930.00	5.01%	217.39
RInfra-D	1366.00	7.36%	319.27
BEST	847.00	4.57%	198.00

Particulars	Average of CPD & NCPD (MW)	% share of avg. of CPD & NCPD (%)	% share of TTSC for FY 2015-16 (Rs. crore)
Total	18547.00	100.00%	4335.28

TPC-D's earlier peak demand included the demand of Railways, which was the major contributor to its sales. Since Railways has been granted the status of deemed Distribution Licensee, TPC-D has recomputed the demand and its share, excluding the demand of Railways embedded in its total demand, as shown in the Table below:

Table 5-42: Estimated Demand of TPC-D for 3rd Control Period as submitted by TPC-D

Particulars	Sales (MU)	Ratio (%)	Maximum Demand (MW)	% share of avg. of CPD & NCPD (%)
TPC-D	5968.34	16%	930.00	5.01%
Railways	790.00	23%	178.90	0.96%
TPC-D w/o Railways	5178.34		751.10	4.05%

The average increase in the Total Transmission System Cost (TTSC) from FY 2016-17 to FY 2019-20 is around 21%. However, for computing Transmission Charges for the 3rd Control Period, TPC-D has considered a growth rate of 20% based on the estimated TTSC for the Control Period, its revised share excluding the share of Railways and revised sales. The Transmission Charges estimated accordingly are given in the Table below:

Table 5-43: Estimated Transmission Charges for 3rd Control Period as submitted by TPC-D (Rs. crore)

Year	Projected TTSC	Ratio	Share of TPC-D
FY 2016-17	5453.07	3.81%	207.57
FY 2017-18	6543.68	4.02%	263.20
FY 2018-19	7852.42	4.28%	336.26
FY 2019-20	9422.90	4.57%	430.21

Commission's Analysis and Ruling

The Commission has taken the Transmission Charges for TPC-D for the 3rd Control Period as approved in the InSTS Tariff Order dated 22 July, 2016, in Case No. 91 of 2016. The Transmission Charges approved by the Commission are as shown in the following Table:

Table 5-44: Approved Transmission Charges for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Transmission Charges	217.40	280.07	325.00	339.93

5.3.6 MSLDC Charges

TPC-D's Submission

TPC-D has taken the average MSLDC Charges payable for the 2nd Control Period and increased them by 10% for the 3rd Control Period, as shown in the Table below:

Table 5-45: MSLDC Charges for 3rd Control Period as submitted by TPC-D (Rs. crore)

Year	Total MSLDC Charges	% share of TPC-D	Annual MSLDC fees and charges
FY 2016-17	24.17	4%	0.92
FY 2017-18	26.68	4%	1.07
FY 2018-19	29.46	4%	1.26
FY 2019-20	32.52	5%	1.48

Commission's Analysis and Ruling

The Commission has taken the MSLDC Charges for TPC-D for the 3rd Control Period as approved in the MSLDC Order dated 22 July, 2016 in Case No. 20 of 2016, as shown in the following Table:

Table 5-46: MSLDC Charges for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
SLDC Charges	0.69	0.91	0.96	1.00

5.3.7 Stand-by Charges

TPC-D's Submission

TPC-D pays the Stand-by Charges based on its percentage share of Average CPD and NCPD of the Mumbai Utilities. Based on its percentage share and the revised estimate of sales for the 3rd Control Period, the projected Stand-by Charges are as shown in the Table below:

Table 5-47: Stand-by Charges for 3rd Control Period as submitted by TPC-D (Rs. crore)

Year	% Share	Total Stand-by charges	% share of TPC-D
FY 2016-17	22%	396.00	88.95
FY 2017-18	24%	396.00	93.99
FY 2018-19	25%	396.00	100.07
FY 2019-20	27%	396.00	106.69

Commission's Analysis and Ruling

The Commission has determined the Stand-by Charges for TPC-D taking the ratio of CPD and NCPD for the three Mumbai Distribution Licensees, viz., RInfra-D, TPC-D and BEST, as per its last InSTS Tariff Order dated 22 July 2016 in Case No. 91 of 2016. Accordingly, it has provisionally approved the Stand-by Charges for TPC-D as shown in the following Table. The Commission will take a final decision on the Stand-by Charges payable by the Mumbai Distribution Licensees in its forthcoming MYT Order for MSEDCL for the 3rd Control Period.

Table 5-48: Stand-by Charges for 3rd Control Period as provisionally approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Stand-by Charges	113.93	119.21	124.63	130.18

5.3.8 Past Period Recovery

In its MYT Order dated 8 August, 2016 in Case No. 32 of 2016 for TPC-G, the Commission has approved the past period recovery of Rs. 3.53 crore payable by TPC-D in FY 2016-17. Accordingly, this amount is taken as part of the power purchase cost of TPC-D for FY 2016-17.

5.3.9 Total Power Purchase Cost

TPC-D's Submission

The summary of power purchase quantum and cost for the 3rd Control Period is shown in the Table below:

Table 5-49: Total Power Purchase Cost for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
TPC-G Energy Charge	923	956	986	1025
Non-Solar RE purchase	203	230	262	296
Solar RE purchase	46	73	100	130

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Mini Micro Hydro RE purchase	1	1	1	1
REC	16	24	30	36
Bilateral Power Purchase + UI	403	545	501	592
OLA sale	(194)	(194)	0.00	0.00
TPC-D Variable Charges	**1399**	**1636**	**1879**	**2080**
TPC-G Fixed Charge	666	675	608	614
MSLDC Charges	1	1	1	1
Stand-by Charges	89	94	100	107
Transmission Charges	208	263	336	430
Total Power Purchase Cost	**2363**	**2669**	**2925**	**3233**
Power Purchase Quantum (MU)	**5095**	**5388**	**5742**	**6127**
Average Power Purchase Cost (Rs./kWh)	**4.64**	**4.95**	**5.09**	**5.28**

Commission's Analysis and Ruling

The approved power purchase cost for H1 and H2 for each year of the Control Period is given in **Annexure V.**

The summary of power purchase quantum, cost and rate approved by the Commission for the 3rd Control Period is as shown in the Tables below:

Table 5-50:Total Power Purchase Cost for FY 2016-17 and FY 2017-18 as approved by Commission

Particulars	FY 2016-17						FY 2017-18					
	TPC-D's Petition			Approved			TPC-D's Petition			Approved		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)
TPC-G	3,844.24	1,589.34	4.13	3644.80	1525.80	4.19	3,867.71	1,631.78	4.22	3666.70	1539.52	4.20
TPC-G past period recovery					3.53							
Non-Solar RE purchase	455.24	250.16	5.50	322.21	156.12	4.85	539.06	303.60	5.63	322.21	158.41	4.92
Solar RE Purchase				47.40	46.58	9.83				47.40	46.58	9.83
REC Procurement		16.50			30.87			24.48			56.49	
Bilateral Power Purchase	1,260.90	403.16	3.20	1163.27	364.32	3.13	1,446.48	545.11	3.77	1,300.34	407.25	3.13
Outside Licence Area sale	(464.93)	(193.88)	4.17	-	-	-	(464.93)	(193.88)	4.17	-	-	-
Total Power Purchase	**5,095.45**	**2,065.29**	**4.05**	**5,177.68**	**2,127.21**	**4.11**	**5,388.31**	**2,311.09**	**4.29**	**5,336.66**	**2,208.25**	**4.14**
Transmission Charges	-	207.57	-	-	217.44	-	-	263.20	-	-	280.07	-
MSLDC Charges	-	0.92	-	-	1.09	-	-	1.07	-	-	0.91	-
Stand-by Charges	-	88.95	-	-	113.93	-	-	93.99	-	-	119.21	-
Total Power Purchase Cost	**5,095.45**	**2,362.73**	**4.64**	**5,177.68**	**2,459.67**	**4.75**	**5,388.31**	**2,669.36**	**4.95**	**5,336.66**	**2,608.44**	**4.89**

Table 5-51: Total Power Purchase Cost for FY 2018-19 and FY 2019-20 as approved by Commission

Particulars	FY 2018-19						FY 2019-20					
	TPC-D's Petition			Approved			TPC-D's Petition			Approved		
	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)	Quantum (MU)	Cost (Rs. crore)	Rate (Rs./ kWh)
TPC-G	3,832.93	1,594.20	4.16	3618.63	1456.18	4.02	3,883.78	1,639.04	4.22	3668.31	1465.42	3.99
Non-Solar RE purchase	631.83	362.18	5.73	322.21	160.69	4.99	735.52	427.42	5.81	322.21	162.98	5.06
Solar RE Purchase				47.40	46.58	9.83				47.40	46.58	9.83
REC Procurement	-	29.96	-	-	79.12	-	-	36.11	-	-	103.34	-
Bilateral Power Purchase	1,276.88	500.59	3.92	1,525.24	477.68	3.13	1,507.69	591.68	3.92	1,665.90	521.74	3.13
Total Power Purchase	**5,741.64**	**2,486.93**	**4.33**	**5,513.48**	**2,220.26**	**4.03**	**6,126.99**	**2,694.25**	**4.40**	**5,703.82**	**2,300.06**	**4.03**
Transmission Charges	-	336.26	-	-	325.00	-	-	430.21	-	-	339.93	-
MSLDC Charges	-	1.26	-	-	0.96	-	-	1.48	-	-	1.00	-
Stand-by Charges	-	100.07	-	-	124.63	-	-	106.69	-	-	130.18	-
Total Power Purchase Cost	**5,741.64**	**2,924.51**	**5.09**	**5,513.48**	**2,670.85**	**4.84**	**6,126.99**	**3,232.63**	**5.28**	**5,703.82**	**2,771.17**	**4.86**

5.4 OPERATION AND MAINTENANCE EXPENSES

TPC-D's Submission

The O&M Expenses for the Distribution Wires Business based on the norms specified in Regulation 72 of the MYT Regulations, 2015 are grossly insufficient. TPC-D's network has increased significantly in the last few years, owing to which the associated employee and administration costs and all the costs associated with the network like taxes and reinstatement charges have increased. The O&M norms may address the escalation of costs in a stable scenario, but not the increases on account of significant network development. Further, there are certain expenses which are beyond the control of the Distribution Licensee, such as Taxes and Reinstatement Charges, which are increasing exponentially.

The CAGR of the actual O&M expenses for Distribution Wires Business in FY 2012-13 to FY 2014-15 is 21.26%, which is very high. This is because of the anomalous growth in network on account of certain directives of the Commission. Considering this growth, the average of three years may not truly reflect the O&M expenses required. Hence, it is very difficult to estimate an O&M expenses norm for TPC-D. It is expected that the network layout will be as per the Network Roll-out Plan to be approved by the Commission, following which some stability in the distribution operations can be expected.

In view of the above, TPC-D has proposed O&M expenses corresponding to the CAGR of GFA over the six years from FY 2014-15. Once the Network Roll-out Plan is approved and the Distribution Wires Business network reaches a particular level, a more prudent approach could be adopted for arriving at the norms. TPC-D has considered the growth rate of 14.83% on the actual Opening GFA of FY 2014-15, i.e., Rs. 1325.12 crore, to estimate the Opening GFA up to FY 2019-20. The O&M expenses estimate is shown in the Table below:

Table 5-52: O&M Expenses for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	2025.76	2221.08	2423.97	2645.37
Escalated O&M costs	112.94	129.69	148.92	171.00

Similarly, for the Supply Business, the normative O&M expenses are grossly insufficient. The Supply O&M expenditure is primarily related to providing services to the consumers and hence directly dependent on their number. The significant increase in consumer base has led to increased O&M expenses. In view of this, the O&M expenses have been going beyond the norms specified for the previous Control Period as the norms were not linked to the consumer base. Hence, a norm based on the O&M entitlement of previous years may not meet the entire requirement of O&M expenses for the 3rd Control Period.

Till the Network Roll-out Plan is approved and stability is reached, O&M expenses norm for the Supply Business should be corresponding to the CAGR of consumer numbers over the period of six years starting from FY 2014-15. Once the consumer base reaches a particular level, a more prudent approach could be adopted for arriving at the norms. TPC-D has considered the growth rate of 7% over the actual consumer figures for FY 2014-15, i.e., 6,18,422 consumers, for projecting the number of consumers up to FY 2019-20. The O&M expenses projected by TPC-D are shown in the Table below:

Table 5-53: O&M expenses for Supply Business for 3rd Control Period as submitted by TPC-D

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Consumers (Nos.)	718115	768833	818541	872541
Escalated O&M Expenses (Rs. crore)	117.70	125.94	134.75	144.19

The Commission may apply the above norms for O&M expenses for the 3rd Control Period and accordingly approve the O&M expenses for the Wires Business and Supply Business, under Regulation 102 (power to remove difficulties) of the MYT Regulations, 2015.

MCGM has issued a Circular for levy of access charges on various external Utility agencies of Rs. 100/RMT. However, as yet no demand notice has been received from MCGM regarding payment of these charges as MCGM is currently in the process of compiling the data regarding the existing network from all Utilities. If such a demand notice is received during the Control Period, there would be a significant increase in the O&M expenditure to by around Rs. 40 crore. TPC-D would approach the Commission if such access charges are levied for appropriate revision in the O & M expenditure.

Commission's Analysis and Ruling

The Commission asked TPC-D for the projected O&M expenses for the 3rd Control Period applying the escalation rate in the MYT Regulations, 2015, including the efficiency factor of 1%.

TPC-D replied that, based on the existing Wholesale Price Index (WPI) and Consumer Price Index (CPI), the escalation rate as per the norms specified in the Regulations works out to 1.11%. After reduction by the efficiency factor of 1%, the rate works out to 1.10%, applying which the O&M expenses for the Wires Business and Supply Business would be as shown in the Table below:

Table 5-54: O&M Expenses for Wires & Supply Business for 3rd Control Period based on norms, as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Wires Business	80.27	81.15	82.05	82.95
Supply Business	96.27	97.33	98.40	99.48

Regulation 72 of the MYT Regulations, 2015 specifies as follows:

"72. Operation and Maintenance Expenses

72.1 The Operation and Maintenance expenses for the Distribution Wires Business shall be computed in accordance with this Regulation.

72.2 The Operation and Maintenance expenses shall be derived on the basis of the average of the Trued-up Operation and Maintenance expenses after adding/deducting the share of Efficiency Gains/losses, for the three years ending March 31, 2015, excluding abnormal Operation and Maintenance expenses, if any, subject to prudence check by the Commission.

72.3 The average of such Operation and Maintenance expenses shall be considered as Operation and Maintenance expenses for the year ended March 31, 2014, and shall be escalated at the escalation rate of 5.72% to arrive at the Operation and Maintenance expenses for the base year commencing April 1,2015.

72.4 The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for FY 2015-16, at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1%, to arrive at permissible O&M expenses for each year of the Control Period:

Provided that a different efficiency factor may be stipulated by the Commission from time to time:

Provided further that at the time of Truing-up the O&M expenses for the different years during the Control Period, the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the concerned Year and 40% weightage for the actual Consumer Price Index for

> *Industrial Workers (all India) as per Labour Bureau, Government of India in the concerned year, as reduced by an efficiency factor of 1% or any other value as may be stipulated by the Commission from time to time, shall be considered.*
>
> *72.5 In case of a Deemed Distribution Licensee whose tariff is yet to be determined by the Commission till the date of coming into effect of these Regulations, the Commission may determine the O&M expenses on case to case basis."*

Regulation 81 of the MYT Regulations, 2015 specifies the allowable O&M expenses for the Supply Business similarly. The Commission has computed the normative O&M expenses for the Control Period as per the MYT Regulations, 2015 as discussed below:

Base O&M Expenses

The Commission has taken the O&M expenses after sharing of Efficiency Gains and Losses for FY 2012-13 and FY 2013-14 as approved in the MTR Order, and for FY 2014-15 as approved in this Order. The average of the above O&M expenses has been taken as the O&M expenses for FY 2013-14 in accordance with the MYT Regulations, 2015, and escalated at 5.72% twice to arrive at the O&M expenses for FY 2015-16, which has been considered as the Base O&M expense.

Escalation Factor

Regulations 72.4 and 81.4 of MYT Regulations, 2015 specify as follows:

> *"The O&M expenses for each subsequent year shall be determined by escalating the base expenses determined above for FY 2015-16, at the inflation factor considering 60% weightage for the actual point to point inflation over Wholesale Price Index numbers as per Office of Economic Advisor of Government of India in the previous year and 40% weightage for the actual Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1%, to arrive at permissible O and M expenses for each year of the Control Period."*

As per the Regulations, the escalation factor for O&M Expenses from FY 2016-17 is to be worked out taking the inflation factor considering 60% and 40% weightage for actual point to point WPI and CPI, respectively, in the previous year, reduced by an efficiency factor of 1%.

As regards the interpretation of efficiency factor, the Commission notes that TPC-D has reduced the inflation factor by 1% of the inflation factor (i.e., effective rate computed as

99% of inflation factor). However, Regulation 72.4 specifies that the inflation factor computed shall be reduced by 1%, being the efficiency factor, to arrive at the escalation factor. Since, the inflation factor is itself in percentage terms, it has to be reduced by 1%.

The Commission analysed the WPI and CPI data for the previous year FY 2015-16. Giving 60% weightage to WPI and 40% weightage to CPI for FY 2015-16, the inflation factor is 0.74%. When the efficiency factor of 1% is included, the escalation factor to be applied for projecting O&M expenses from FY 2016-17 works out to (-) 0.26% (negative).

The Commission recognises that the inflation rates based on actual WPI and CPI have reduced significantly during the last 2 years as compared to previous years. It is of the view that it may not be appropriate to apply a negative escalation factor for projecting the O&M expenses from FY 2016-17 onwards as some part of O&M expenses are likely to increase from year to year.

The Commission examined the approach adopted by the CERC for O&M expenses in its Tariff Regulations, 2014. The CERC has taken the Escalation Rate based on 5-year average WPI and CPI Indices from FY 2008-09 to FY 2012-13 with 60% and 40% weightage to WPI and CPI and compared it with the actual increase in O&M expenses.

The inflation factor based on the MYT Regulations, 2015 works out to be negative due to the decline in WPI in FY 2015-16 over FY 2014-15. The Commission is of the view that, at this stage, it would be more appropriate to consider the WPI and CPI variation over a period longer than a year so that wide fluctuations in a particular year are smoothened while arriving at the inflation factor. Hence, the Commission has considered the three-year average variation in WPI and CPI for determining the inflation factor for projecting O&M Expenses from FY 2016-17 onwards. With this approach, the inflation factor considering 60% and 40% weightage to WPI and CPI, respectively, works out to 3.97%. After applying the efficiency factor of 1%, the escalation factor for projecting O&M expenses from FY 2016-17 to FY 2019-20 works out to 2.97%.

In view of the above, and in exercise of its powers under Regulation 102 to remove difficulties, the Commission has computed the O&M Expenses for FY 2016-17 to FY 2019-20 taking an escalation factor of 2.97% considering the 3-year average variation in WPI and CPI instead of one year.

Accordingly, the Commission has approved the O&M Expenses for the Control Period as shown in the following Table:

Table 5-55: Approved O&M Expenses for the Control Period from FY 2016-17 to FY 2019-20 (Rs. crore)

Particulars	FY 2016-17		FY 2017-18		FY 2018-19		FY 2019-20	
	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved	TPC-D Petition	Approved
Wires Business	112.94	80.90	129.69	83.30	148.92	85.77	171.00	88.32
Supply Business	117.70	89.53	125.94	92.18	134.75	94.92	144.19	97.73
Total	**230.64**	**170.43**	**255.63**	**175.48**	**283.67**	**180.69**	**315.19**	**186.05**

As regards TPC-D's submission regarding the levy of access charges by MCGM, it is premature to comment as no demand notice has been received. If and when such notice is received and TPC-D approaches the Commission at the time of MTR, the Commission may consider it subject to prudence check.

5.5 CAPITAL EXPENDITURE AND CAPITALISATION

TPC-D's Submission

The Commission had directed TPC-D to submit a revised Network Roll-out Plan for approval separately after granting the Distribution Licence vide its Order in Case No. 90 of 2014. TPC-D submitted a revised Network Roll-out Plan through its Petition on 10 October, 2014 and subsequent revised submission for approval on 12 February, 2015 in Case No. 182 of 2014. The Commission issued an interim Order on 9 November, 2015 which stated as follows:

> *"68. The Commission proposes to undertake the following process before passing its final Order in this Case:*
>
> *a. The Committee shall submit its recommendations to the Commission within 90 days of its constitution;*
>
> *b. The Commission shall consider the recommendation of the Committee for approval and if it considers necessary, direct TPC-D to revise its Roll-out Plan in terms of the approved recommendations of the Committee;*
>
> *c. The revised Roll-out Plan and the Committee's recommendations shall be made available in the public domain for comments, suggestions and objections, and the Commission shall also hold a Public Hearing.*
>
> *69. The Commission in its final Order will decide on continuation or re-constitution of the Committee for scrutinizing the future capital investment schemes submitted by the parallel Licensees in accordance with the Capital Investment Guidelines in their common area of supply."*

For the Wires Business, in view of the pending approval for the Network Roll-out Plan, TPC-D has considered the Capital Expenditure and Capitalisation as proposed in its Petition for the Network Roll-out Plan, as shown in the following Table:

Table 5-56: Capital Expenditure & Capitalisation for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capital Expenditure				
DPR	231.06	219.07	246.26	263.58
Non-DPR	25.96	42.97	15.23	5.92
Total	**257.02**	**262.05**	**261.49**	**269.50**
Capitalisation				
DPR	164.77	169.81	196.25	196.58
Non-DPR	30.54	33.08	25.15	5.72
Total	**195.31**	**202.89**	**221.40**	**202.30**

As regards the Supply Business, the capital expenditure is primarily towards consumer service-related activities. The major capital expenditure schemes for the 3rd Control Period are towards meter procurement and Automatic Meter Reading (AMR) System. The AMR System acquires meter data remotely from consumer meters automatically. The meter data are uploaded electronically in the billing system, thus avoiding any human intervention in the meter reading and billing process. TPC-D has covered around 5,000 Commercial and Industrial consumers and around 8,000 residential consumer meters under AMR till date. It has proposed to cover an additional 50,000 consumer meters during the 3rd Control Period. The meters would be procured considering the addition of consumers, and Radio Frequency (RF) meters will be procured for the purpose of AMR. The estimated Capital Expenditure and Capitalisation for the Supply Business are given in the Table below:

Table 5-57: Capital Expenditure & Capitalisation for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capital Expenditure				
DPR	10.37	15.84	12.10	13.29
Non-DPR	1.00	0.74	0.34	0.56
Total	**11.37**	**16.58**	**12.44**	**13.85**
Capitalisation				
DPR	10.91	17.54	13.21	14.49
Non-DPR	1.00	0.74	0.34	0.56
Total	**11.91**	**18.28**	**13.55**	**15.05**

Commission's Analysis and Ruling

As stated earlier, TPC-D's Network Roll-out Plan in Case No. 182 of 2014 and capitalisation of on-going schemes in Case No. 50 of 2015 are pending for approval before the Commission. In keeping with the approach adopted for FY 2015-16, for the 3rd Control Period the Commission has taken the average capitalisation approved by it for the three-year period from FY 2012-13 to FY 2014-15, for the Wires Business. This is subject to the Commission's final decision in the pending Cases referred to above. For the Supply Business, the capitalisation has been considered in accordance with the schemes approved by the Commission in-principle, and a further 20% has been allowed against DPR schemes that are yet to be submitted, in accordance with Regulation 23.5 of the MYT Regulations, 2015. The capitalisation against non-DPR Schemes has been considered for each year of the 3rd Control Period as the lower of the capitalisation claimed and 20% of the DPR capitalisation allowed. The capitalisation considered by the Commission for the Wires Business and Supply Business for FY 2015-16 is shown in the Table below:

Table 5-58: Capitalisation for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	Capitalisation (including IDC)			
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Wires Business				
DPR schemes				
Non-DPR schemes	**117.87**	**117.87**	**117.87**	**117.87**
Total				
Supply Business				
DPR schemes	7.46	7.45	5.41	5.41
Non-DPR schemes	1.00	0.74	0.34	0.56
Total	**8.46**	**8.19**	**5.75**	**5.97**

5.6 FUNDING OF CAPITALISATION

TPC-D's Submission

The funding of capitalisation is in the normative debt:equity ratio of 70:30 in line with the MYT Regulations, 2015.

Commission's Analysis and Ruling

The Commission has also considered the normative debt:equity ratio of 70:30, in line with Regulation 26. The Commission has not considered any consumer contribution as TPC-D submits the capitalisation net of consumer contribution. Since no capitalisation has been considered for the Wires Business, no funding has been considered for it. The funding of capitalisation approved by the Commission for the Wires Business and Supply Business for the 3rd Control Period is shown in the following Table:

Table 5-59: Funding of Capitalisation for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Wires Business				
Consumer Contribution	0.00	0.00	0.00	0.00
Debt	82.51	82.51	82.51	82.51
Equity	35.36	35.36	35.36	35.36
Total	**117.87**	**117.87**	**117.87**	**117.87**
Supply Business				
Consumer Contribution	0.00	0.00	0.00	0.00
Debt	5.92	5.73	4.03	4.18
Equity	2.54	2.46	1.73	1.79
Total	**8.46**	**8.19**	**5.75**	**5.97**

5.7 DEPRECIATION

TPC-D's Submission

The Depreciation is proposed in accordance with the MYT Regulations, 2015 and on the basis of the capitalisation projected for each year of the Control Period, in addition to the Depreciation upto that year. The estimated Depreciation for the 3rd Control Period for the Wires and the Business is given in the Table below:

Table 5-60: Depreciation for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capitalisation during the year	195.31	202.89	221.40	202.30
Depreciation for the assets capitalised upto FY 2014-15	89.14	87.11	84.57	79.85
Depreciation for the assets capitalised in FY 2015-16	12.50	12.50	12.50	12.50
Depreciation for the assets capitalised during FY 2016-17	5.16	10.31	10.31	10.31
Depreciation for the assets capitalised during FY 2017-18		5.36	10.71	10.71
Depreciation for the assets capitalised during FY 2018-19			5.84	11.69
Depreciation for the assets capitalised during FY 2019-20				5.34
Total	**106.80**	**115.28**	**123.94**	**130.40**

Table 5-61: Depreciation for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capitalisation during the year	11.91	18.28	13.55	15.05
Depreciation for the assets capitalised upto FY 2014-15	5.32	5.17	4.87	4.49
Depreciation for the assets capitalised in FY 2015-16	0.95	0.95	0.95	0.95
Depreciation for the assets capitalised during FY 2016-17	0.31	0.63	0.63	0.63
Depreciation for the assets capitalised during FY 2017-18		0.48	0.97	0.97
Depreciation for the assets capitalised during FY 2018-19			0.36	0.72
Depreciation for the assets capitalised during FY 2019-20				0.40
Total	**6.58**	**7.23**	**7.76**	**8.15**

Commission's Analysis and Ruling

The Commission has computed the Depreciation for the 3rd Control Period in accordance with Regulation 27 of the MYT Regulations, 2015. It has taken the closing GFA for FY 2015-16 as approved in this Order, as the opening GFA for FY 2016-17, and the addition of GFA equivalent to the capitalisation approved. The Commission has not considered the Depreciation on assets created out of consumer contribution. It has computed the Depreciation on the average GFA for the year by applying the weighted average Depreciation rate as approved for FY 2015-16 in this Order. The Commission has applied the weighted average Depreciation rate of 5.05% for the Wires Business and 4.78% for the Supply Business.

The Depreciation approved by the Commission for the Wires and the Business as shown in the Table below:

Table 5-62: Depreciation for Wires Business for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	1665.06	1782.92	1900.79	2018.65
Addition	117.87	117.87	117.87	117.87
Closing GFA	1782.92	1900.79	2018.65	2136.52
Depreciation	87.00	92.95	98.90	104.85
Depreciation as % of Average GFA	5.05%	5.05%	5.05%	5.05%

Table 5-63: Depreciation for Supply Business for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening GFA	128.83	137.29	145.49	151.24
Addition	8.46	8.19	5.75	5.97
Closing GFA	137.29	145.49	151.24	157.21
Depreciation	6.36	6.75	7.09	7.37
Depreciation as % of Average GFA	4.78%	4.78%	4.78%	4.78%

5.8 INTEREST ON LONG TERM LOAN

TPC-D's Submission

TPC-D has submitted the interest on loans-based on the closing balance of loan for FY 2015-16, the proposed capitalisation during the Control Period, and the weighted average rate of interest of the actual loan portfolio for FY 2014-15, in accordance with MYT Regulations, 2015.

The Regulations specify a reduction in loan (i.e. negative loan) to the extent of 70% of the value of the GFA replaced or retired. TPC-D has not considered any impact of reduction in loans in the projections, in accordance with the rationale detailed earlier for not considering such reduction. The Commission may not consider any reduction in loans due to retirement/replacement of assets.

The interest on long-term loans for the Wires and the Supply Business is shown in the Table below:

Table 5-64: Estimated Interest on Long-Term Loan for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening Balance	881.38	911.30	938.05	969.09
Addition to Loans	136.72	142.02	154.98	141.61
Repayment	106.80	115.28	123.94	130.40
Closing Balance	911.30	938.05	969.09	980.29
Effective Interest Rate	10.83%	10.83%	10.83%	10.83%
Interest on Loan	**97.07**	**100.14**	**103.26**	**105.55**

Table 5-65: Estimated Interest on Long-Term Loan for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Opening Balance	64.29	66.04	71.61	73.33
Addition to Loans	8.33	12.80	9.49	10.53

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Repayment	6.58	7.23	7.76	8.15
Closing Balance	66.04	71.61	73.33	75.72
Effective Interest Rate	10.58%	10.58%	10.58%	10.58%
Interest on Loan	**6.90**	**7.28**	**7.67**	**7.89**

Commission's Analysis and Ruling

The Commission has computed the interest on long-term loan capital for the 3rd Control Period in accordance with Regulation 29. It has taken the closing net normative loan balance for FY 2015-16, as approved in this Order, as the opening balance for FY 2016-17. Loan addition during each year of the Control Period has been considered based on the approved funding of capitalisation. The Commission has taken the repayment as equivalent to Depreciation approved for each year. It has accepted the computation of weighted average interest rate for each year as submitted by TPC-D.

As regards the retirement/replacement of assets, Regulations 26.2 and 29.1 specify as under:

> *"26.2 ...Provided that in case of retirement or replacement or de-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component-based on documentary evidence, if it is lower than 30%) of the original cost of such assets;*
>
> *Provided further that in case of retirement or replacement or de-capitalisation of the assets, the debt capital approved as mentioned above, **shall be reduced to the extent of outstanding debt component-based on documentary evidence**, or the normative loan component, as the case may be, of the original cost of such assets....*
>
> *29.1 ...Provided that in case of retirement or replacement or de-capitalisation of assets, the loan capital approved as mentioned above, **shall be reduced to the extent of outstanding loan component of the original cost of such assets-based on documentary evidence**."*

The Commission has examined the contentions made by TPC-D vide letter dated 10 June, 2010 in these proceedings as regards the reduction of loans against retirement/ replacement of assets. TPC-D has referred to the provisions of MYT Regulations, 2011. However, as regards the treatment of loan on account of retirement/replacement/de-capitalisation of assets, Regulations 26.2 and 29.1 of the MYT Regulations, 2015 specify the reduction of debt capital approved to the extent of the outstanding debt component based on documentary evidence. In case of retirement/replacement/de-capitalisation of assets, TPC-D has to substantiate its contention with documentary evidence of the actual outstanding debt amount against assets at the time of MTR for the 3rd Control Period. The Commission shall take a view on this at that time. However, for the purpose of this Order, it has not considered any impact on account of retirement/replacement/de-capitalisation of assets in the absence of any supporting material as required.

The interest on long-term loan capital approved for the 3rd Control Period is shown in the Table below:

Table 5-66: Interest Expenses for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Wires Business				
Opening Balance of net Normative loan	658.06	653.56	643.11	626.72
Addition of new normative loan	82.51	82.51	82.51	82.51
Repayment during the year	87.00	92.95	98.90	104.85
Closing Balance of net normative loan	653.56	643.11	626.72	604.37
Average of opening & closing balance	655.81	648.33	634.91	615.54
Interest rate (%)	10.83%	10.83%	10.83%	10.83%
Interest Expenses	**71.02**	**70.21**	**68.76**	**66.66**
Supply Business				
Opening Balance of net Normative loan	56.98	56.55	55.53	52.47
Addition of new normative loan	5.92	5.73	4.03	4.18
Repayment during the year	6.36	6.75	7.09	7.37
Closing Balance of net normative loan	56.55	55.53	52.47	49.28
Average of opening & closing balance	56.77	56.04	54.00	50.88
Interest rate (%)	10.58%	10.58%	10.58%	10.58%
Interest Expenses	**6.01**	**5.93**	**5.71**	**5.38**

5.9 RETURN ON EQUITY

TPC-D's Submission

TPC-D has projected RoE in accordance with the MYT Regulations, 2015. The closing regulated equity for FY 2015-16 as submitted for provisional truing-up has been taken as the opening regulated equity for FY 2016-17. For the subsequent years, the closing regulated equity of the previous year has been considered as the Opening Regulated

Equity for that year. The rate of RoE is taken as 15.5% for the Wires Business and 17.5% for the Supply Business, and the RoE has been computed on the opening equity and 50% of the equity contribution for the capitalisation proposed during each year of the Control Period. The RoE projected for the Wires and the Supply Business is shown in the Tables below:

Table 5-67: Return on Equity for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year	610.04	668.64	729.50	795.92
Capitalisation during the year	195.31	202.89	221.40	202.30
Equity portion of capitalisation during the year	58.59	60.87	66.42	60.69
Reduction in Equity Capital on account of retirement /replacement of assets	0.00	0.00	0.00	0.00
Regulatory Equity at the beginning of the year	688.64	729.50	795.92	856.61
Return on Regulatory Equity at the beginning of the year (15.50%)	94.56	103.64	113.07	123.37
Return on Equity portion of capitalisation during the year (7.75%)	4.54	4.72	5.15	4.70
Total Return on Regulated Equity	**99.10**	**108.36**	**118.22**	**128.07**

Table 5-68: Return on Equity for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Regulatory Equity at the beginning of the year	43.50	47.07	52.56	56.62
Capitalisation during the year	11.91	18.28	13.55	15.05
Equity portion of capitalisation during the year	3.57	5.48	4.07	4.51
Regulated Equity at the end of the year	47.07	52.56	56.62	61.14
Return on Regulatory Equity at the beginning of the year (17.50%)	7.61	8.24	9.20	9.91
Return on Equity portion of capitalisation during the year (8.75%)	0.31	0.48	0.36	0.40
Total Return on Regulated Equity	**7.93**	**8.72**	**9.55**	**10.30**

Commission's Analysis and Ruling

The Commission has computed the RoE in accordance with Regulation 28 of the MYT Regulations, 2015. It has taken the closing regulatory equity as approved for FY 2015-16 in this Order as the opening equity for FY 2016-17. As no asset addition has been approved during the Control Period for the Wires Business, no corresponding equity addition has been considered. Since asset retirement has not been projected, no reduction in equity has been considered because of reduction of assets. However, the Commission shall take a view after considering the actual asset retirement at time of truing-up for each year. Rate of return has been taken as 15.5% for the Wires Business and 17.5% for the Supply Business in accordance with Regulation 26. The RoE approved by the Commission for the Wires Business and Supply Business is shown in the Tables below:

Table 5-69: Approved RoE for Wires Business for 3rd Control Period (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Regulatory Equity at the beginning of the year	504.67	540.03	575.39	610.75
Capitalisation during the year	117.87	117.87	117.87	117.87
Consumer Contribution and Grants	0.00	0.00	0.00	0.00
Equity portion of capitalisation during the year	35.36	35.36	35.36	35.36
Regulatory Equity at the end of the year	540.03	575.39	610.75	646.11
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%
Return on Equity	**80.96**	**86.45**	**91.93**	**97.41**

Table 5-70: Approved RoE for Supply Business for 3rd Control Period (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Regulatory Equity at the beginning of the year	38.83	41.37	43.82	45.55
Capitalisation during the year	8.46	8.19	5.75	5.97
Consumer Contribution and Grants	0.00	0.00	0.00	0.00
Equity portion of capitalisation during the year	2.54	2.46	1.73	1.79
Regulatory Equity at the end of the year	41.37	43.82	45.55	47.34
Rate of Return (%)	17.50%	17.50%	17.50%	17.50%
Return on Equity	**7.02**	**7.45**	**7.82**	**8.13**

5.10 INTEREST ON WORKING CAPITAL

TPC-D's Submission

TPC-D has computed the IoWC by applying the interest rate of 10.80% to the normative Working Capital requirement, as specified in the MYT Regulations, 2015. It has taken the Base Rate of 9.30%, which was the prevailing rate at the time of filing the Petition.

The IoWC for the Wires and the Supply Business is as shown in the following Tables:

Table 5-71: Interest on Working Capital for Wires Business as submitted by TPC-D (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
O&M Expenditure for one month	9.41	10.81	12.41	14.25
Book value of stores, materials and supplies	20.26	22.21	24.24	26.45
One and half month equivalent of expected revenue at the prevailing tariff	53.78	58.97	64.61	70.24
Less: Amount held as security deposits in cash from Distribution System Users	0.00	0.00	0.00	0.00
Total Working Capital	**83.45**	**91.99**	**101.26**	**110.95**
Interest Rate	10.80%	10.80%	10.80%	10.80%
Interest on Working Capital	**9.01**	**9.93**	**10.94**	**11.98**

Table 5-72: Interest on Working Capital for Supply Business as submitted by TPC-D (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
One-twelfth of the amount of O&M Expenses	9.81	10.49	11.23	12.02
Maintenance spares at 1% of opening GFA of the year	1.35	1.47	1.65	1.79
One and half month equivalent of expected revenue at the prevailing tariff	316.00	356.37	390.10	430.28
Less: Amount of security deposits from Retail System consumers	115.01	129.70	141.98	156.60
Less: One month equivalent of cost of power purchase	64.45	86.46	110.86	132.80
Total Working Capital	**147.70**	**152.17**	**150.15**	**154.68**
Interest Rate	10.80%	10.80%	10.80%	10.80%
Interest on Working Capital	**15.95**	**16.43**	**16.22**	**16.71**

Commission's Analysis and Ruling

The Commission has computed the IoWC for the Wires Business and Supply Business in accordance with Regulations 31.3 and 31.4, respectively, of the MYT Regulations, 2015. The State Bank of India (SBI) Base Rate as on the date of filing of Petition was 9.30%. Hence, the Commission has applied an interest rate of 10.80% (Base Rate plus 150 basis points) in accordance with the Regulations. It has accepted the submission of TPC-D regarding the amount of CSD for Retail Supply consumers. The IoWC as approved by the Commission for the Wires and the Business is shown in the Tables below:

Table 5-73: Interest on Working Capital for Wires Business for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
O&M Expenses for one month	6.74	6.94	7.15	7.36
Maintenance spares at 1% of Opening GFA	16.65	17.83	19.01	20.19
One and half months of the expected Revenue from charges for use of Distribution Wires at prevailing Tariffs	45.04	46.75	48.38	49.94
Less: Amount of Security Deposit from Distribution System Users	0.00	0.00	0.00	0.00
Total Working Capital requirement	68.44	71.52	74.54	77.49
Rate of Interest	10.80%	10.80%	10.80%	10.80%
Interest on Working Capital	**7.39**	**7.72**	**8.05**	**8.37**

Table 5-74: Interest on Working Capital for Supply Business for 3rd Control Period approved by Commission (Rs. crore)

Particulars	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
One Twelfth of O&M Expenses	7.46	7.68	7.91	8.14
Maintenance spares at 1% of Opening GFA	1.29	1.37	1.45	1.4851
One and half months of the expected Revenue from sale of electricity at prevailing tariffs	323.21	342.09	350.15	363.05
Less: Amount of Security Deposit from Retail Supply Consumers	115.01	129.70	141.98	156.60
Less: One month Equivalent of cost of power purchased	77.79	89.08	101.22	108.81
Total Working Capital	139.17	132.37	116.31	107.25
Rate of Interest	10.80%	10.80%	10.80%	10.80%
Interest on Working Capital	**15.03**	**14.30**	**12.56**	**11.58**

5.11 INTEREST ON CONSUMER SECURITY DEPOSIT

TPC-D's Submission

TPC-D has submitted the interest on CSD based on the average CSD as a percentage of the revenue for the period FY 2011-12 to FY 2014-15, i.e., 4.55%. The projected interest on CSD is shown in the Table below:

Table 5-75: Interest on CSD for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Total Revenue	2527.97	2850.93	3120.82	3442.20
CSD (4.55%)	115.01	129.70	141.98	156.60
Interest Rate	10.80%	10.80%	10.80%	10.80%
Interest on CSD	**12.42**	**14.01**	**15.33**	**16.91**

Commission's Analysis and Ruling

For approving the Interest on CSD, the Commission has taken the rate of 10.80% (SBI Base Rate plus 150 basis points) as specified in the MYT Regulations, 2015. It has accepted the amount of CSD as projected by TPC-D. Accordingly, the Interest on CSD approved by the Commission is shown in the Table below:

Table 5-76: Interest on CSD for the Supply Business for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Interest on CSD	12.42	14.01	15.33	16.91

5.12 PROVISION FOR BAD AND DOUBTFUL DEBT

TPC-D's Submission

TPC-D has not considered any provision towards Bad and Doubtful Debts in the 3rd Control Period.

Commission's Analysis and Ruling

As TPC-D has not projected any provisioning for Bad and Doubtful Debts, the Commission has also not considered any.

5.13 CONTRIBUTION TO CONTINGENCY RESERVE

TPC-D's Submission

TPC-D has computed the Contribution to Contingency Reserves for the 3rd Control Period at 0.25% of the opening GFA for the year, as per the MYT Regulations, 2015, as shown in the Tables below:

Table 5-77: Contribution to Contingency Reserve for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
GFA	2025.76	2221.08	2423.97	2645.37
% Contingency Reserve	0.25%	0.25%	0.25%	0.25%
Opening Balance	35.38	40.44	45.99	52.05
Maximum Permissible Reserves	101.29	111.05	121.20	132.27
Contingency Reserve	**5.06**	**5.55**	**6.06**	**6.61**
Amount of Contingency Reserves as on 31 March, 2016	**40.44**	**45.99**	**52.05**	**58.67**

Table 5-78: Contribution to Contingency Reserve for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
GFA	134.94	146.84	165.13	178.68
% Contingency Reserve	0.25%	0.25%	0.25%	0.25%
Opening Balance	1.51	1.85	2.22	2.63
Maximum Permissible Reserves	6.75	7.34	8.26	8.93
Contingency Reserve	**0.34**	**0.37**	**0.41**	**0.45**
Amount of Contingency Reserves as on 31 March, 2016	**1.85**	**2.22**	**2.63**	**3.08**

Commission's Analysis and Ruling

Regulation 34 of the MYT Regulation, 2015 specifies as follows:

> *"34. Contribution to Contingency Reserves*
>
> *34.1 Where the Licensee has made a contribution to the Contingency Reserve, a sum not less than 0.25 per cent and not more than 0.5 per cent of the original cost of fixed assets shall be allowed annually towards such contribution in the calculation of Aggregate Revenue Requirement:*

Provided that where the amount of such Contingency Reserves exceeds five (5) per cent of the original cost of fixed assets, no further contribution shall be allowed;

Provided further that such contribution shall be invested in securities authorised under the Indian Trusts Act, 1882 within a period of six months of the close of the Year…"

Accordingly, the Commission has taken the contribution to contingency reserves for the Wires Business and Supply Business as 0.25% of the opening GFA for each year. It has verified that the amount of Contingency Reserve does not exceed 5% of the Opening GFA. The Contribution to Contingency Reserves approved by the Commission is shown in the Table below:

Table 5-79: Contribution to Contingency Reserve for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Contribution to Contingency Reserves- Wires Business	4.16	4.46	4.75	5.05
Contribution to Contingency Reserves - Supply Business	0.32	0.34	0.36	0.38

5.14 INCOME TAX

TPC-D's Submission

The Income Tax for the Wires Business for the 3rd Control Period has been projected in accordance with the MYT Regulations, 2015, as shown in the Table below:

Table 5-80: Income Tax for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Total Revenue	A	430.21	471.77	516.91	561.95
Less: Incentive and Efficiency Gains	B				
Total Expenses	C	325.82	355.04	387.06	418.94
Profit before Tax	D =A-B-C	**104.39**	**116.72**	**129.85**	**143.01**
Tax adjustment					
Add					
Depreciation considered in Expenses	E	106.80	115.28	123.94	130.40

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Other disallowance while computing Income Tax	F				
Total Tax disallowances	G=E+F	**106.80**	**115.28**	**123.94**	**130.40**
Less					
Tax Depreciation	H	179.35	177.88	188.74	185.84
Other expenses Income Tax	I				
Deduction - U/s 80 IA	J				
Total Tax allowances	K=H+I+J	**179.35**	**177.88**	**188.74**	**185.84**
Total Taxable Income	L=D+G-K	31.84	54.12	65.05	87.57
Carry forward losses of previous years	M				
Total taxable income after considering business loss of previous year	N=L+M	31.84	54.12	65.05	87.57
Corporate Tax Rate	O	33.99%	33.99%	33.99%	33.99%
Tax Payable at Normal Rate	P=N*O	10.82	18.40	22.11	29.77
MAT Computation					
Profit before Tax	Q	104.39	116.72	129.85	143.01
Add: Disallowances under Income Tax (U/14 A, provision for doubtful debt)					
Disallowance U/s 14A	R				
Interest under Income Tax Act	S				
Provision for doubtful debts	T				
Provision for diminution in share value	U				
Dividend from foreign subsidiary	V				
Total Disallowances under Income Tax (U/14 A, provision for doubtful debt)	W=R+S+T+U+V	0	0	0	0
Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	X	0	0	0	0
Book Profit	Y=Q+W-X	104.39	116.72	129.85	143.01
MAT Rate	Z	20.96%	20.96%	20.96%	20.96%
Tax payable under MAT	AA=Y*Z	21.88	24.47	27.22	29.98

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Tax applicable	**AB=max (P,AA)**	**21.88**	**24.47**	**27.22**	**29.98**

The Income Tax for the Supply Business is projected as shown in the following Table:

Table 5-81: Income Tax for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Total Revenue	A	2527.97	2850.93	3120.82	3442.20
Less: Incentive and Efficiency Gains	B				
Total Expenses	C	2522.29	2840.25	3106.25	3426.46
Profit before Tax	D =A-B-C	**5.68**	**10.68**	**14.57**	**15.74**
Tax adjustment					
Add					
Depreciation considered in Expenses	E	6.58	7.23	7.76	8.15
Other disallowance while computing Income Tax	F				
Total Tax disallowances	G=E+F	**6.58**	**7.23**	**7.76**	**8.15**
Less					
Tax Depreciation	H	10.93	16.03	11.55	13.83
Other expenses Income Tax	I				
Deduction - U/s 80 IA	J				
Total Tax allowances	K=H+I+J	**10.93**	**16.03**	**11.55**	**13.83**
Total Taxable Income	L=D+G-K	1.34	1.89	10.78	10.06
Carry forward losses of previous years	M				
Total taxable income after considering business loss of previous year	N=L+M	1.34	1.89	10.78	10.06
Corporate Tax Rate	O	33.99%	33.99%	33.99%	33.99%
Tax Payable at Normal Rate	P=N*O	**0.45**	**0.64**	**3.67**	**3.42**
MAT Computation					
Profit before Tax	Q	5.68	10.68	14.57	15.74
Add: Disallowances under Income Tax (U/14 A, provision for doubtful debt)					

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Disallowance U/s 14A	R				
Interest under Income Tax Act	S				
Provision for doubtful debts	T				
Provision for diminution in share value	U				
Dividend from foreign subsidiary	V				
Total Disallowances under Income Tax (U/14 A, provision for doubtful debt)	W=R+S +T+U+V	0	0	0	0
Less: Deduction under Income Tax (Exempt Income, FBT, Wealth Tax, Withdrawal from Income)	X	0	0	0	0
Book Profit	Y=Q+W -X	5.68	10.68	14.57	15.74
MAT Rate	Z	20.96%	20.96%	20.96%	20.96%
Tax payable under MAT	AA=Y* Z	**1.19**	**2.24**	**3.05**	**3.30**
Tax applicable	**AB=max (P,AA)**	**1.19**	**2.24**	**3.67**	**3.42**

Commission's Analysis and Ruling

Regulation 33.1 of the MYT Regulations, 2015 specifies as under:

> *"33. Income Tax*
>
> *33.1 The Commission, in its MYT Order, shall provisionally approve Income Tax payable for each year of the Control Period-based on the actual Income Tax paid by the Generating Company or Licensee or MSLDC, in case the Generating Company or Licensee or MSLDC has not engaged in any other regulated or unregulated Business or Other Business, as allowed by the Commission relating to the electricity Business regulated by the Commission, as per latest available Audited Accounts, subject to prudence check:*
>
> *Provided that in case the Generating Company or Licensee or MSLDC has engaged in any other regulated or unregulated Business or Other Business, and the actual Income Tax paid by the Generating Company or Licensee or MSLDC has to be allocated to the different Businesses, **then the Income Tax shall be provisionally allowed-based on the Income Tax on the regulatory Profit Before Tax, as allowed by the Commission relating to the electricity Business regulated by the Commission, subject to prudence check;***

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

Provided also that no Income Tax shall be considered on the amount of Efficiency Gains and incentive approved by the Commission, irrespective of whether or not the amount of such Efficiency Gains and incentive are billed separately;

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

Hence, as TPC-D is engaged in other regulated or unregulated businesses or other business, the Income Tax for the Control Period has been provisionally allowed based on the Income Tax on the Regulatory PBT allowed for FY 2014-15 in this Order, after final truing-up.

Any difference between the actual Income Tax paid and that approved in this Order shall be reviewed at the time of the MTR, in accordance with Regulation 33.

The Income Tax approved by the Commission is shown in the Table below:

Table 5-82: Income Tax for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Income Tax - Wires Business	50.43	50.43	50.43	50.43
Income Tax - Supply Business	0.00	0.00	0.00	0.00

5.15 NON-TARIFF INCOME

TPC-D's Submission

For the 3rd Control Period, the Non-Tariff Income as approved for FY 2015-16 for Wires Business and Supply Business has been taken, as shown in the shown in the following Tables:

Table 5-83: Non-Tariff Income for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Non-Tariff Income- Wires Business	21.65	21.65	21.65	21.65
Non-Tariff Income- Supply Business	11.56	11.56	11.56	11.56

Commission's Analysis and Ruling

For Non-Tariff Income projection for the Wires Business, the Commission has taken the income from various heads such as investments, income from Schedule of Charges, interest on investments, liabilities written back, insurance claim received, etc., except for Delayed Payment Charges, equivalent to the income approved for FY 2015-16 in this Order. The Commission has not considered any income towards Delayed Payment Charges in accordance with the MYT Regulations, 2015.

For the Non-Tariff Income for the Supply Business, based on past trends and previous practice, the Commission has applied an escalation of 10% on the income from various heads such as investment, income from Schedule of Charges, income for recovery against theft, other miscellaneous receipts, interest on staff loan advances, prompt payment rebate on power purchase, liabilities written off, burnt meter recovery and bad debt recovery, etc., except for Delayed Payment Charges, approved for FY 2015-16 in this Order. The Commission has not considered any income towards Delayed Payment Charges, in accordance with the MYT Regulations, 2015.

The Non-Tariff Income approved by the Commission is shown in the Table below:

Table 5-84: Non Tariff Income for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Non-Tariff Income- Wires Business	21.53	21.53	21.53	21.53
Non-Tariff Income- Supply Business	12.85	14.14	15.55	17.10

5.16 DEMAND SIDE MANAGEMENT EXPENSES

TPC-D's Submission

The expenses on implementation of various DSM measures during the 3rd Control Period are as shown in the following Table:

Table 5-85: DSM Cost for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
DSM schemes approved	4.19	3.97	4.60	4.98
DSM schemes planned	1.00	4.20	4.90	4.90
Market research, Load survey,	1.00	1.00	1.00	1.00

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capacity Building, etc.				
Salary and Staff Cost	1.60	1.75	2.00	2.25
DSM Cost	**7.79**	**10.92**	**12.50**	**13.13**

Commission's Analysis and Ruling

The Commission has examined the activities underlying the proposed DSM cost submitted by TPC-D. The Commission has considered the cost of approved DSM schemes depending on the present status of their implementation.

Any further DSM schemes undertaken by TPC-D during the Control Period with the Commission's prior approval shall be considered at the time of the MTR.

While certain DSM-specific expenses are allowed separately under the Commission's DSM Regulations, at the time of the MTR the Commission shall approve the DSM costs based on actual details, and after prudence check that would include whether there are any common expenses that would already be covered under the regular O&M and other heads of expenses.

TPC-D may also consider targeting the construction industry for installation of energy-efficient appliances in under-construction residential, industrial, commercial premises, to give impetus to DSM measures.

The DSM cost approved for the 3rd Control Period is as shown in the following table:

Table 5-86: DSM Cost for 3rd Control Period as approved by Commission (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
DSM schemes approved	2.60	1.44	2.10	2.48

5.17 AGGREGATE REVENUE REQUIREMENT FOR 3RD CONTROL PERIOD

TPC-D's Submission

The summary of the ARR for the Wires and the Supply Business for the 3rd Control Period is given in the Tables below:

Table 5-87: ARR for Wires Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
O&M Expenses	112.94	129.69	148.92	171.00

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Depreciation	106.80	115.28	123.94	130.40
Interest on Long Term Loans	97.07	100.14	103.26	105.55
Interest on Working Capital	9.01	9.93	10.94	11.98
Provision for Bad and Doubtful Debts	0.00	0.00	0.00	0.00
Contribution to Contingency Reserve	5.06	5.55	6.06	6.61
Return on Equity	99.10	108.36	118.22	128.07
Income Tax	21.88	24.47	27.22	29.98
Less:				
Non-Tariff Income	21.65	21.65	21.65	21.65
Aggregate Revenue Requirement	**430.21**	**471.77**	**516.91**	**561.95**

Table 5-88: ARR for Supply Business for 3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase expenses	2065.29	2311.09	2486.93	2694.25
Intra-State Transmission Charges	207.57	263.20	336.26	430.21
Stand-by Charges	88.95	93.99	100.07	106.69
MSLDC Fees & Charges	0.92	1.07	1.26	1.48
O&M Expenses	117.70	125.94	134.75	144.19
Depreciation	6.58	7.23	7.76	8.15
Interest on Long Term Loans	6.90	7.28	7.67	7.89
Interest on Working Capital	15.95	16.43	16.22	16.71
Interest on Security Deposit	12.42	14.01	15.33	16.91
Provision for Bad and Doubtful Debts	0.00	0.00	0.00	0.00
Contribution to Contingency Reserves	0.34	0.37	0.41	0.45
Return on Equity	7.93	8.72	9.55	10.30
Income Tax	1.19	2.24	3.67	3.42
DSM Cost	7.79	10.92	12.50	13.13
Less				
Non-Tariff Income	11.56	11.56	11.56	11.56
Aggregate Revenue Requirement	**2527.97**	**2850.93**	**3120.82**	**3442.20**

The combined ARR for the Wires Business and Supply Business is given in the Table below:

Table 5-89: Combined ARR for3rd Control Period as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Cost				
Cost of power Purchase from TPC-G	1589.34	1631.78	1594.20	1639.04
Cost of RE Power Purchase	266.66	328.09	392.14	463.53
Short term Power Purchase / OLA Sale	209.29	351.23	500.59	591.68
Intra-State Transmission Charges	207.57	263.20	336.26	430.21
Intra-State Stand-by Charges	88.95	93.99	100.07	106.69
MSLDC Fees & Charges	0.92	1.07	1.26	1.48
Supply Fixed Cost				
O&M	117.70	125.94	134.75	144.19
Depreciation	6.58	7.23	7.76	8.15
Interest on Long Term Loans	6.90	7.28	7.67	7.89
Interest on Working Capital	15.95	16.43	16.22	16.71
Interest on Security Deposit	12.42	14.01	15.33	16.91
Provision for Bad and Doubtful Debts	0.00	0.00	0.00	0.00
Contingency Reserve	0.34	0.37	0.41	0.45
Return on Equity	7.93	8.72	9.55	10.30
Income Tax	1.19	2.24	3.67	3.42
DSM Cost	7.79	10.92	12.50	13.13
Less				
Non-Tariff Income	(11.56)	(11.56)	(11.56)	(11.56)
Total Supply ARR	**2527.97**	**2850.93**	**3120.82**	**3442.20**
Wires ARR				
O&M	112.94	129.69	148.92	171.00
Depreciation	106.80	115.28	123.94	130.40
Interest on LT Loans	97.07	100.14	103.26	105.55
Interest on Working Capital	9.01	9.93	10.94	11.98
Provision for Bad and Doubtful Debts	0.00	0.00	0.00	0.00
Contingency Reserve	5.06	5.55	6.06	6.61
Return on Equity	99.10	108.36	118.22	128.07
Income Tax	21.88	24.47	27.22	29.98
Less:				
Non-Tariff Income	(21.65)	(21.65)	(21.65)	(21.65)
Wire ARR	430.21	471.77	516.91	561.95
Total Annual Revenue Requirement	2958.18	3322.70	3637.73	4004.15
Sales- MU	4867.29	5142.99	5475.52	5837.78

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ACoS (Rs/kWh)	**6.08**	**6.46**	**6.64**	**6.86**

Commission's Analysis and Ruling

Based on the components of the ARR approved in the above paragraphs, the Commission has approved the ARR for the Wires and the Supply Business for the 3rd Control Period as shown in the Tables below:

Table 5-90: Approved ARR for Wires Business for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Operation & Maintenance Expenses	80.90	83.30	85.77	88.32
Depreciation	87.00	92.95	98.90	104.85
Interest on Loan Capital	71.02	70.21	68.76	66.66
Interest on Working Capital	7.39	7.72	8.05	8.37
Interest on deposit from Consumers and Distribution System Users	0.00	0.00	0.00	0.00
Provision for bad and doubtful debts	0.00	0.00	0.00	0.00
Contribution to contingency reserves	4.16	4.46	4.75	5.05
Income Tax	50.43	50.43	50.43	50.43
Total Revenue Expenditure	**300.90**	**309.07**	**316.66**	**323.67**
Add: Return on Equity	80.96	86.45	91.93	97.41
Aggregate Revenue Requirement	**381.87**	**395.52**	**408.58**	**421.07**
Less: Non-Tariff Income	21.53	21.53	21.53	21.53
Less: Income from Other Business	-	-	-	-
Aggregate Revenue Requirement from Distribution Wires	**360.34**	**373.99**	**387.06**	**399.55**

Table 5-91: Approved ARR for Supply Business for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses	2,127.21	2,208.25	2,220.26	2,300.06
Stand-by Charges	113.93	119.21	124.63	130.18
Operation & Maintenance Expenses	89.53	92.18	94.92	97.73
Depreciation	6.36	6.75	7.09	7.37
Interest on Loan Capital	6.01	5.93	5.71	5.38
Interest on Working Capital	15.03	14.30	12.56	11.58
Interest on Consumer Security Deposit	12.42	14.01	15.33	16.91

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Provision for bad and doubtful debts	-	-	-	-
Contribution to contingency reserves	0.32	0.34	0.36	0.38
Intra-State Transmission Charges	217.44	280.07	325.00	339.93
MSLDC Fees & Charges	0.69	0.91	0.96	1.00
Income Tax	0.00	0.00	0.00	0.00
DSM Cost	2.60	1.44	2.10	2.48
Total Revenue Expenditure	**2,591.53**	**2,743.39**	**2,808.93**	**2,913.01**
Add: Return on Equity Capital	7.02	7.45	7.82	8.13
Aggregate Revenue Requirement	**2,598.55**	**2,750.84**	**2,816.75**	**2,921.14**
Less: Non-Tariff Income	12.85	14.14	15.55	17.10
Less: Income from Other Business	0.00	0.00	0.00	0.00
Aggregate Revenue Requirement from Retail Supply	**2,585.70**	**2,736.71**	**2,801.20**	**2,904.03**

The summary of the approved ARR for the combined Wires Business and Supply Business for each year of the Control Period is shown in the Table below:

Table 5-92: Approved ARR for Combined Wires Business and Supply Business for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Power Purchase Expenses	2,127.21	2,208.25	2,220.26	2,300.06
Stand-by Charges	113.93	119.21	124.63	130.18
Operation & Maintenance Expenses	170.43	175.48	180.69	186.05
Depreciation	93.36	99.71	105.99	112.22
Interest on Loan Capital	77.03	76.14	74.47	72.04
Interest on Working Capital	22.42	22.02	20.61	19.95
Interest on Consumer Security Deposit	12.42	14.01	15.33	16.91
Provision for bad and doubtful debts	-	-	-	-
Contribution to contingency reserves	4.48	4.80	5.12	5.42
Intra-State Transmission Charges	217.44	280.07	325.00	339.93
MSLDC Fees & Charges	0.69	0.91	0.96	1.00
Income Tax	50.43	50.43	50.43	50.43
Others (DSM)	2.60	1.44	2.10	2.48
Total Revenue Expenditure	**2,892.43**	**3,052.46**	**3,125.58**	**3,236.68**
Add: Return on Equity Capital	87.98	93.90	99.75	105.54
Aggregate Revenue Requirement	**2,980.42**	**3,146.36**	**3,225.33**	**3,342.21**
Less: Non-Tariff Income	34.38	35.66	37.07	38.63
Aggregate Revenue Requirement from Retail Supply	**2,946.04**	**3,110.70**	**3,188.26**	**3,303.58**

6 CUMULATIVE REVENUE GAP, TARIFF PHILOSOPHY AND CATEGORY-WISE TARIFFS FOR 3RD CONTROL PERIOD FY 2016-17 TO FY 2019-20

6.1 PAST RECOVERIES

TPC-D's Submission

The Commission had approved recovery of Rs. 1055.04 crore pertaining to the past period in the previous MYT Order for the 2nd Control Period. Since FY 2012-13 was already over, the Commission had also considered the amount of Rs. 385.68 crore pertaining to the Gap of FY 2012-13 as part of the past recovery in that MYT Order. This total recovery of Rs. 1440.72 crore was allowed to be recovered during FY 2013-14 to FY 2015-16, as shown in the Table below:

Table 6-1: Amount approved in previous MYT Order for recovery in 2ndControl Period as submitted by TPC-D (Rs. crore)

Particulars	Formula	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Regulatory Asset recovery					
Opening balance	1		1440.72	960.48	477.62
Recovery	2		480.24	480.24	480.24
Closing Balance	3=1-2	1440.72	960.48	477.62	0.00
Average Balance	4=Average (1and 3)		1200.60	719.05	238.81
Interest Rate	5		14.62%	14.62%	14.62%
Carrying Cost	6=4*5		175.53	105.12	34.91
Recovery including carrying cost	7=2+6		**655.77**	**585.36**	**515.15**

The Commission had thus approved a total recovery of Rs. 1756.28 crore including Carrying Cost over the 3 years of the 2nd Control Period. The above Table from the previous MYT Order was considered by the Commission for computing the past recoveries in the subsequent MTR Order.

However, the actual recovery allowed by the Commission in the MYT Order was not the same as set out in the MTR Petition. Instead of considering the actual revenue recovery, recovery of Rs 655.77 crore, Rs 585.55 crore, and Rs 515.34 crore, respectively, were considered for FY 2013-14 to FY 2015-16 in the MTR Order. In its MTR Petition, TPC-D had reduced the impact of the additional Rs. 166 crore allowed while computing the Gap/(Surplus) for the future tariff. However, that was not reduced in the past recovery allowed in the MTR Order. Considering the above, TPC-D has computed the past recoveries based on the principles adopted by the Commission.

The MTR Order had approved a cumulative Revenue Surplus of Rs. 271.60 crore for the Wires Business and a cumulative Revenue Gap of Rs. 1031.48 crore for the Supply Business for FY 2015-16. However, considering the final truing up of FY 2014-15 and provisional truing up of FY 2015-16, the revised Gap/Surplus to be recovered in the tariff of FY 2016-17 works out as follows:

Table 6-2: Revised Revenue Gap/(Surplus) for FY 2014-15 as submitted by TPC-D (Rs. crore)

Particulars	Form-ula	As per MTR Order			Actuals as submitted in this Petition		
		Wires	Supply	Total	Wires	Supply	Total
Net ARR	1	326.28	4095.27	4421.55	370.74	4137.94	4508.68
Revenue	2	466.39	3377.78	3844.17	466.49	3349.04	3815.53
Revenue Gap/ (Surplus)	**3=1-2**	**(140.11)**	**717.49**	**577.38**	**(95.75)**	**788.90**	**693.15**

The revised Revenue Gap/(Surplus) for FY 2015-16 based on the revised estimated ARR and Revenue is as shown in the Table below:

Table 6-3: Revised Revenue Gap/(Surplus) for FY 2015-16 as submitted by TPC-D (Rs. crore)

Particulars	Form-ula	As per MTR Order			Revised Estimate		
		Wires	Supply	Total	Wires	Supply	Total
Net ARR	1	381.38	3702.07	4083.45	362.20	3499.36	3861.56
Revenue	2	453.27	4408.64	4861.91	209.64	3905.84	4115.48
Revenue Gap/ (Surplus)	**3=1-2**	**(71.89)**	**(706.57)**	**(778.46)**	**152.56**	**(406.48)**	**(253.92)**

Commission's Analysis and Ruling

In Section 3 of this Order, the Commission has approved the incremental Revenue Gap for FY 2014-15 as shown in the Table below:

Table 6-4: Incremental Revenue Gap for Wires Business and Supply Business for FY 2014-15 approved by Commission (Rs. crore)

Sr. No	Particulars	MTR Order	Approved in the Order	Incremental Revenue Gap/(Surplus)
1	Wires Business	(140.11)	(117.23)	22.88
2	Supply Business	717.49	772.65	55.16
3	Total Wires & Supply	577.38	655.42	78.04

The carrying cost on the above Revenue Gap for FY 2014-15 has been shown subsequently, along with TPC-D's computations of carrying cost. The Commission has considered the carrying cost for FY 2016-17 along with the carrying cost for the entire Control Period, based on the recovery of the cumulative Revenue Gap/(Surplus) over the Period.

In Section 4 of this Order, the Commission has approved the Revenue Gap for FY 2015-16 after provisional true-up, as shown in the Table below:

Table 6-5: Combined Revenue Gap for the Supply Business for FY 2015-16 approved by the Commission (Rs. crore)

Particulars	MTR Order	TPC-D Petition	Approved in the Order
Net ARR	5621.76	3861.56	5362.56
Revenue	5051.88	4115.48	4129.58
Revenue Gap/(Surplus)	569.89	(253.92)	1232.98

However, as the previous years' Revenue Gap/(Surplus) has already been included in the above amount, only the incremental Revenue Gap/(Surplus) vis-a-vis the amounts already considered has to be added for further pass through/adjustment, while at the same time considering any approved amount that was under-recovered as per the tariff design, i.e., the amount of Rs. 569.89 crore that was considered as a Regulatory Asset to be recovered over the first three years of the 3rd Control Period. This has been elaborated subsequently while discussing the cumulative Revenue Gap/(Surplus).

No carrying cost has been computed on the Revenue Gap for FY 2015-16, as only provisional true-up has been done.

6.2 REGULATORY ASSET ALLOWED TO BE RECOVERED FROM FY 2015-16 TO FY 2018-19

TPC-D's Submission

The Commission had allowed the provisional Gap of Rs 759.87 crore to be recovered in four years from FY 2015-16 to FY 2018-19. TPC-D proposed to continue its recovery as a separate RAC charge as approved for FY 2016-17 to FY 2018-19, and has hence taken only the amount pertaining to FY 2016-17 along with carrying cost for computing the cumulative revenue requirement for FY 2016-17.

Commission's Analysis and Ruling

In the MTR Order, the Commission had determined the total RA of Rs. 759.87 crore, based on the final true-up for FY 2012-13 and FY 2013-14, the provisional true-up for FY 2014-15, and the estimated Revenue Gap/(Surplus) for FY 2015-16 based on the existing tariff. The Commission had allowed recovery of Rs. 189.97 crore in FY 2015-16, and the balance amount of Rs. 569.90 crore was to be recovered over the first three years of the 3rd Control Period.

As stated in Section 4 of this Order, during FY 2015-16 the revenue earned by TPC-D towards the RAC was Rs. 140.87 crore as against recovery of Rs. 189.97 crore allowed by the Commission in the MTR Order. Hence, there is under-recovery of Rs. 49.10 crore towards the RA in FY 2015-16, which has to be recovered in the 3rd Control Period. Thus, the total balance RA at the end of FY 2015-16 works out to Rs. 619 crore (759.87 - 140.87), if the original numbers approved in the MTR Order are taken.

However, this RA amount of Rs. 759.87 crore was not a firm and final amount, as stated earlier. Hence, based on the final true-up for FY 2014-15 and provisional true-up for FY 2015-16, the revised cumulative Revenue Gap/(Surplus) for the Supply Business at the end of FY 2015-16, including carrying cost, works out to Rs. 1246.91 crore, as shown subsequently in Table 6-12 of this Order. Hence, the recovery of this revised RA of Rs. 1246.91 crore has been spread over the first three years of the 3rd Control Period in line with the approach to RA recovery in the MTR Order, and so that the recovery is spread over the same period as approved for RInfra-D vide Order dated 21 October, 2016 in Case No. 34 of 2016, in accordance with the ATE Judgment in this regard.

6.3 CUMULATIVE REVENUE GAP/(SURPLUS) UP TO FY 2016-17

TPC-D's Submission

Based on the revised Revenue Gap/(Surplus) for FY 2014-15 and FY 2015-16, along with the past amounts allowed to be recovered in FY 2015-16 and RAC allowed to be recovered separately, the cumulative revenue requirement for FY 2016-17 and future Gap at the existing tariff and recovery is as follows:

Table 6-6: Cumulative Revenue Gap/(Surplus) at existing tariff for FY 2016-17 to FY 2019-20, including past recoveries allowed in MTR Order, as submitted by TPC-D (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Wires & Supply Stand-alone ARR	2958.18	3322.70	3637.73	4004.15
Past Gap Recovery	962.59	220.74	200.22	0.00
Total Recoverable ARR	3920.77	3543.44	3837.96	4004.15
Less: Revenue from RAC	37.53	28.21	23.86	0.00
Less: Revenue from Wheeling Charges	34.23	21.00	21.00	21.00
Less: Revenue from CSS, Additional Surcharge and transmission charges	234.08	93.34	87.90	87.36
Net Recoverable ARR	3614.93	3400.88	3705.19	3895.79
Revenue at Existing Tariff from own consumers	3467.81	3670.51	3921.81	4201.49
Revenue Gap/(Surplus)	**147.11**	**(269.63)**	**(216.62)**	**(305.70)**

Table 6-7: Cumulative Revenue Gap/(Surplus) for FY 2016-17 as submitted by TPC-D (Rs. crore)

Sr. No.	Particulars	As per MTR Order			TPC-D MYT Petition		
		Wires	Supply	Total	Wires	Supply	Total
1	Past recovery pertaining to FY 2012-13	-	23	23	-	23	22.86
2	Carrying Cost	-	10	10	-	10	10.06
3	Revenue Gap/(Surplus) for FY 2013-14	(46)	687	641	(46)	687	640
4	Carrying Cost	(14)	202	188	(14)	202	188.43
5	Impact of Review Petition in Case No 99 of 2013	-	78	78	-	78	78.18
6	Carrying Cost	-	23	23	-	23	23.00
7	Impact of ATE Judgment	-	42	42	-	42	41.60
8	Carrying Cost on ATE	-	1	1	-	1	0.74
9 = 1 to 8	**Total Past Recovery prior to FY 2014-15 – I**	**(60)**	**1,065**	**1,005**	**(60)**	**1,065**	**1,005.42**
10	Past Gap inadvertently considered twice in the MYT T.O. pertaining to FY Prior to MYT Period	-	-	-	-	(214)	(214.16)
11=10	**Adjustment in Past Recovery considered twice – II**	**-**	**-**	**-**	**-**	**(214)**	**(214.16)**
12	Gap/(Surplus) for FY 2014-15	(140)	717	577	(96)	789	693.15
13	Gap/(Surplus) for FY 2015-16	(72)	(707)	(778)	153	(406)	(253.92)
14	Gap/(Surplus) for TPC-G pertaining to Past Period		(44)	(44)		10	10.21
15=12 to 14	**Revised Total Past Recoveries – III**	**(212)**	**(34)**	**(246)**	**57**	**393**	**449.44**
16	Total Gap/(Surplus) prior to FY 2016-17	(272)	1,031	760	(3)	1,244	1,240.70
17	RAC allowed to be recovered separately for FY 2016-17, FY 2017-18 & FY 2018-19			570		570	569.90
18=16-17	**Gap/(Surplus) to be recovered upto FY 2016-17 excluding RAC for FY 2016-17, 2017-18 & FY 2018-19**	**(272)**	**1,031**	**190**	**(3)**	**674**	**670.80**

Sr. No.	Particulars	As per MTR Order			TPC-D MYT Petition		
		Wires	Supply	Total	Wires	Supply	Total
19	Carrying cost excluding RAC recovery given separately in the MTR T.O					102	101.81
20	Past Recovery to be recovered in FY 2016-17 separately as RAC			190		190	189.97
21=18 to 20	**Gap/(Surplus) to be recovered upto FY 2016-17 along with the carrying cost**	**(272)**	**1,031**	**380**	**(3)**	**965**	**962.58**
22	Pure ARR for FY 2016-17				430	2,528	2,958.18
23=21+22	**Total ARR Requirement for FY 2016-17 including past recoveries/adjustment**				**427**	**3,493**	**3,920.77**
24	Revenue at existing tariff				132	3,677	3,809.02
25	Revenue from OA Consumers				22	91	112.41
26=23-(25+24)	**Cumulative Revenue Gap/(Surplus) for FY 2016-17**				**274**	**(274)**	**(0.67)**
27	Average tariff increase required in FY 2016-17 for full recovery of ARR				178%	(-)7%	0.00
28	Total Sales (MU)						4,867.29
29=23/28*10	**Average Cost of Supply (Rs/kWh)**						**8.06**

The cumulative Revenue Gap upto FY 2015-16 works out to Rs. 1240.70 crore, as against Rs 760 crore approved in the MTR Order. TPC-D proposes to recover the RAC of Rs 190 crore as a separate charge, as approved in the MTR Order.

Considering the above past recoveries and pure ARR for FY 2016-17 of Rs 2958 crore, the revenue to be recovered in FY 2016-17 works out to Rs 3921 crore. Based on the estimated ARR of Rs. 3921 crore and sales of 4867.29 MU, the ACoS works out to Rs.8.06 per kWh, requiring no increase in the average tariff. The main reason for lower recovery of revenue is the change in sales mix of TPC-D as compared to the sales estimated by the Commission.

Commission's Analysis and Ruling

The actual tariff increase sought by TPC-D was not clear from the manner in which the figures were presented in the Petition. Hence, the Commission asked for details of the Revenue Gap/(Surplus) and tariff increase in the format provided by it. This was submitted, and later revised by TPC-D. The revised submission of TPC-D is as shown in the Tables below:

Table 6-8: Cumulative Revenue Gap of Wires Business and Supply Business as submitted by TPC-D (Rs. crore)

Sr. No.	Particulars	UoM	Wires Business		Supply Business		Total	
			MTR Order	Amount claimed	MTR Order	Amount claimed	MTR Order	Amount claimed
1	**Impact of ATE Judgment**							
	Impact of ATE Judgment 1		0.00	0.00	41.60	41.60	41.60	41.60
	Carrying cost till the end of FY 2015-16		0.00	0.00	0.74	0.74	0.74	0.74
	Sub-total		**0.00**	**0.00**	**42.34**	**42.34**	**42.34**	**42.34**
1 a)	Impact of Review petition FY 2011-12 Case No 99 of 2013		0.00	0.00	78.18	78.18	78.18	78.18
	Carrying Cost for FY 2013-14		0.00	0.00	5.70	5.70	5.70	5.70
	Carrying Cost for FY 2014-15		0.00	0.00	11.53	11.53	11.53	11.53
	Carrying Cost for FY 2015-16		0.00	0.00	5.77	5.77	5.77	5.77
	Sub-total		**0.00**	**0.00**	**101.18**	**101.18**	**101.18**	**101.18**
1 b)	**Past Gap inadvertently considered twice in the MYT T.O.**		**0.00**	**0.00**	**0.00**	**-214.16**	**0.00**	**-214.16**
2	**Truing up for FY 2012-13**							
	Stand-alone Revenue Gap/(Surplus) for FY 2012-13		0.00	0.00	22.86	22.86	22.86	22.86
	Carrying Cost for FY 2012-13		0.00	0.00	1.67	1.67	1.67	1.67
	Carrying Cost for FY 2013-14		0.00	0.00	3.33	3.33	3.33	3.33
	Carrying Cost for FY 2014-15		0.00	0.00	3.37	3.37	3.37	3.37
	Carrying Cost for FY 2015-16		0.00	0.00	1.69	1.69	1.69	1.69
	Sub-total		**0.00**	**0.00**	**32.92**	**32.92**	**32.92**	**32.92**
3	**Truing up for FY 2013-14**							
	Stand-alone Revenue Gap/(Surplus) for FY 2013-14		-46.06	-46.06	686.61	686.61	640.55	640.55
	Carrying Cost for FY 2013-14		0.00	0.00	46.70	46.70	46.70	46.70
	Carrying Cost for FY 2014-15		0.00	0.00	94.48	94.48	94.48	94.48

Sr. No.	Particulars	UoM	Wires Business		Supply Business		Total	
			MTR Order	Amount claimed	MTR Order	Amount claimed	MTR Order	Amount claimed
	Carrying Cost for FY 2015-16		0.00	0.00	47.24	47.24	47.24	47.24
	Sub-total		**-46.06**	-46.06	**875.04**	875.04	**828.98**	**828.98**
4	**Truing up for FY 2014-15**							
	Stand-alone Revenue Gap/(Surplus) for FY 2014-15		-140.11	-95.75	717.49	788.90	577.38	693.15
	Carrying Cost for FY 2014-15	14.75%		-7.06		58.18	0.00	51.12
	Carrying Cost for FY 2015-16	14.29%		-13.68		112.70	0.00	99.02
	Carrying Cost for FY 2016-17	10.80%		-5.17		42.60	0.00	37.43
	Sub-total		-140.11	-121.65	717.49	1002.38	577.38	880.72
5	**Provisional Truing up for FY 2015-16**							
	Stand-alone Revenue Gap/(Surplus) for FY 2015-16		-71.89	149.09	-706.57	-276.02	-778.46	-126.93
	Carrying Cost for FY 2015-16	14.29%		10.65		-19.72	0.00	-9.07
	Carrying Cost for FY 2016-17	10.80%		8.05		-14.91	0.00	-6.85
	Sub-total		**-71.89**	**167.79**	**-706.57**	**-310.64**	**-778.46**	**-142.85**
6	**Any other past adjustments, if any**							
	(Gap)/ Surplus for Tata Power-G pertaining to Past Period		**0.00**	**0.00**	**-44.46**	**-10.21**	**-44.46**	**-10.21**
7	**Cumulative Revenue Gap/(Surplus) till FY 2015-16 (1 to 6)**		**-258.06**	**0.07**	**1017.94**	**1518.85**	**759.88**	**1518.92**
8	**Regulatory Asset recovery allowed in FY 2015-16**						**189.97**	**140.87**
9	**Balance till FY 2015-16**						**569.91**	**1378.05**
10	**RAC allowed to be recovered separately in FY 2016-17, FY 2017-18 and FY 2018-19**							**(569.90)**
11	**Net Gap/(Surplus) proposed to be recovered in FY 2016-17 excluding Approved RAC for FY 2016-17, FY 2017-18 and FY 2018-19**							**808.15**

Table 6-9: Recovery of Cumulative Revenue Gap of Wires Business and Supply Business as proposed by TPC-D (Rs. crore)

Sr. No.	Particulars	Wires Business				Supply Business				Total			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Opening Balance$	0.07	0.00	0.00	0.00	808.00	0.00	0.00	0.00	808.15	0.00	0.00	0.00
2	Addition of Revenue Gap/(Surplus) during the year#	276.56	310.86	336.93	361.13	-1030.71	-876.86	-858.27	-628.97	-754.15	-566.00	-521.34	-267.84
3	RAC allowed to be recovered during the year					189.97	189.97	189.97					
4	Recovery/(refund) during the year	276.63	310.86	336.93	361.13	-32.66	-686.89	-668.30	-628.97	243.97	-376.04	-331.37	-267.84
5	Closing Balance	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	Average Balance	0.04	0.00	0.00	0.00	404.00	0.00	0.00	0.00	404.00	0.00	0.00	0.00
7	Interest Rate (%)	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%
8	Carrying /(holding) cost	0.00	0.00	0.00	0.00	43.64	0.00	0.00	0.00	43.64	0.00	0.00	0.00
9	**Total recovery/(refund) during the year (3+7)**	**276.63**	**310.86**	**336.93**	**361.13**	**10.97**	**-686.89**	**-668.30**	**-628.97**	**287.61**	**-376.04**	**-331.37**	**-267.84**

Table 6-10: Proposed Tariff increase and ACoS as submitted by TPC-D (Rs. crore)

Sr. No.	Particulars	UoM	Wire Business (including OA Sale)				Supply Business				Total			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Energy Sales	MU	3242.30	3258.75	3564.38	3898.89	4867.29	5142.99	5475.52	5837.78	4867.29	5142.99	5475.52	5837.78
	ARR and Revenue Gap													
2	Stand-alone ARR	Rs crore	430.21	471.77	516.91	561.95	2527.97	2850.93	3120.82	3442.20	2958.18	3322.70	3637.73	4004.15
	Revenue at Existing Tariff	Rs crore												
3	Revenue from Sale of Power	Rs crore					3467.81	3670.51	3921.81	4013.89	3467.81	3670.51	3921.81	4013.89
4	Revenue from Wheeling Charges	Rs crore	153.66	160.91	179.98	200.82					153.66	160.91	179.98	200.82
5	Revenue from CSS	Rs crore					46.07	29.74	29.74	29.74	46.07	29.74	29.74	29.74
6	Revenue from Recovery of approved RAC	Rs crore					29.24	17.99	17.99	17.99	29.24	17.99	17.99	17.99
	Revenue from Recovery of approved Transmission Charge	Rs crore					15.56	9.55	9.55	9.55	15.56	9.55	9.55	9.55
7	**Total**	Rs crore	**153.66**	**160.91**	**179.98**	**200.82**	**3558.68**	**3727.79**	**3979.09**	**4071.17**	**3712.34**	**3888.70**	**4159.07**	**4271.99**
8	Average Revenue Realisation	Rs. /kWh	0.47	0.49	0.50	0.52	7.31	7.25	7.27	6.97	7.63	7.56	7.60	7.32
9	Stand-alone		276.56	310.86	336.93	361.13	-1030.71	-876.86	-858.27	-628.97	-754.15	-566.00	-521.34	-267.84

Sr. No.	Particulars	UoM	Wire Business (including OA Sale)				Supply Business				Total			
			FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	Revenue Gap/ (Surplus) at existing tariff (2-7)													
10	Proposed Revenue Gap/(Surplus) to be recovered/ passed on, including the past Revenue Gap, during the year		276.63	310.86	336.93	361.13	10.97	-686.89	-668.30	-628.97	287.61	-376.04	-331.37	-267.84
11	Proposed ARR for recovery of through tariff during the year (7+10)		430.29	471.77	516.91	561.95	3569.65	3040.90	3310.79	3442.20	3999.94	3512.67	3827.70	4004.15
12	**Proposed Average Cost of Supply**	**Rs. /kWh**	**1.33**	**1.45**	**1.45**	**1.44**	**7.33**	**5.91**	**6.05**	**5.90**	**8.22**	**6.83**	**6.99**	**6.86**
13	**Proposed increase in tariff w.r.t. tariff of previous year**	**%**		**9%**	**0%**	**-1%**		**-19%**	**2%**	**-2%**		**-17%**	**2%**	**2%**

While submitting the above format, TPC-D stated that, in its MYT Petition, it had not considered the revenue from the existing tariff to arrive at the ACoS. This was done to rationalize the ACoS increase such that the overall tariff for the 3rd Control Period is reduced as compared to that approved in the MTR Order for FY 2015-16. TPC-D added that this had also enabled recovery of the entire Gap/(Surplus) of the previous years in FY 2016-17 without any significant tariff increase, and the Tariff Philosophy and the category-wise tariffs proposed by TPC-D have been built on the above concept.

TPC-D stated that, although it has presented the figures as per the format required by the Commission, the ACoS arrived at by this method is very different and would result in significant deviations in the Tariff Philosophy and category-wise tariffs proposed by TPC-D. Hence, the Commission may consider the ACoS and methodology proposed by TPC-D in its MYT Petition.

The Commission's observations and rulings are as follows:

a) The past Revenue Gap/(Surplus) of previous years have been considered as a component of the ARR in the truing up of the respective years, i.e., FY 2014-15 and FY 2015-16, and have hence not been considered separately again, as proposed by TPC-D, in order to avoid double-counting of these amounts.

b) On the true-up amount of FY 2014-15, TPC-D has taken the carrying cost for the half-year of FY 2014-15, full year of FY 2015-16 and half-year of FY 2016-17. The Commission has considered the carrying cost for half-year of FY 2014-15 and full year of FY 2015-16. As the cumulative Revenue Gap/(Surplus) is being recovered over the Control Period, the carrying cost has been calculated for that Period, as applicable based on the period of recovery, rather than for FY 2016-17 only.

c) On the provisional true-up amount of FY 2015-16, TPC-D has applied the carrying cost for half-year of FY 2015-16 and half-year of FY 2016-17. The Commission has not considered any carrying cost on the provisional true-up amount for FY 2015-16, in accordance with established principles.

d) TPC-D has considered the absolute amount of Revenue Gap/(Surplus) after final true-up for FY 2014-15 and provisional true-up for FY 2015-16. However, since part of this Revenue Gap/(Surplus) has already been passed through to consumers in FY 2015-16 in the MTR Order, the Commission is of the view that only the incremental Revenue Gap/(Surplus) should be considered for pass-through at this stage. The amount passed through in FY 2015-16 in the MTR Order has been considered in the provisional true-up for FY 2015-16 on the expense side, while the revenue earned has been considered on the revenue side, for correct representation.

e) The carrying cost on the above incremental Revenue Gap/(Surplus) has been computed on an incremental basis since it has to be computed for the period for which the recovery of the respective amounts has been delayed. In the MTR Order, the Commission had undertaken the provisional true-up for FY 2014-15. It had adjusted the Revenue Surplus of Rs. 140.11 crore for the Wires Business, and allowed a Revenue Gap of Rs. 717.49 crore for the Supply Business, along with the ARR of the Wires Business and Supply Business, respectively, for FY 2015-16. However, as the amount was only provisional, no carrying cost was considered at that time. As these amounts were allowed to be recovered in FY 2015-16, carrying/holding cost on the amounts of provisional Revenue Gap/(Surplus) has to be allowed for the half-year of FY 2014-15 and FY 2015-16.

f) The incremental Revenue Gap/(Surplus) for the Wires Business and Supply Business for FY 2014-15, as approved by the Commission after final true-up, is Rs. 22.88 crore and Rs. 55.16 crore, respectively, resulting in a total Revenue Surplus of Rs. 117.23 crore for the Wires Business and total Revenue Gap of Rs. 772.65 crore for the Supply Business. As this incremental Revenue Gap of FY 2014-15 will be recovered in the 3rd Control Period, in accordance with the ATE Judgment, the carrying cost on the incremental Revenue Gap/(surplus) of FY 2014-15 has to be allowed for the half-year of FY 2014-15, full period of FY 2015-16, and half-year of FY 2016-17, in case the amount is being recovered in FY 2016-17. The carrying cost for the half-year of FY 2016-17 has been computed subsequently in this Section, while deciding on the recovery of the Revenue Gap/(surplus) over the Control Period.

g) TPC-D has taken the RA amount of Rs. 569.90 crore as separately recoverable in equal instalments of Rs. 189.97 crore in the first three years of the 3rd Control Period, in accordance with the MTR Order. As stated in the earlier paragraphs, the amount of Rs. 759.87 crore was not a fixed and final amount, and has been restated in this Order based on the final true-up for FY 2014-15 and provisional true-up for FY 2015-16, to determine the cumulative Revenue Gap/(Surplus) at the end of FY 2015-16. The recovery of this amount has been spread over the first three years of the 3rd Control Period in such a manner that the tariff trajectory is smooth rather than alternating between increases and decreases in subsequent years. For presenting the actual effective tariff hike sought by TPC-D, the Commission has retained TPC-D's approach for representing the numbers. However, while approving the Revenue

Gap/(Surplus) and tariff increase, the Commission has not considered the RA recovery as a separate line entry over and above the tariff increase, for reasons stated earlier.

h) In the revenue from sale of power for the Supply Business, TPC-D has double-counted the revenue from Wheeling Charges for FY 2016-17 to FY 2018-19, which has also been considered separately as revenue for the Wires Business. This has resulted in under-stating the Revenue Gap, and hence the tariff increase required, by the amount of revenue from Wheeling Charges, i.e., Rs. 153.66 crore, Rs. 160.91 crore, and Rs. 179.98 crore for FY 2016-17, FY 2017-18, and FY 2018-19, respectively. For FY 2019-20, while TPC-D has not double-counted the revenue from Wheeling Charges, there is an error in the amount: although this revenue is estimated as Rs. 200.82 crore, the revenue from sale of power has been estimated by reducing Rs. 185 crore towards revenue from Wheeling Charges. For presenting the actual effective tariff increase sought by TPC-D, the Commission has retained the numbers presented by TPC-D.

i) TPC-D has projected revenue from Transmission Charges levied on OA consumers to the extent of Rs. 15.56 crore for FY 2016-17 and Rs. 9.55 crore for each year from FY 2017-18 onwards. As stated earlier, the Transmission Charges collected by a Distribution Licensee from the OA consumers have to be remitted to the STU within the specified time-frame and cannot be considered as the Licensee's revenue. Accordingly, the Commission has not taken this amount as part of the revenue.

j) TPC-D has not entered the value of proposed tariff increase in FY 2016-17 for the Wires Business and the Supply Business. The tariff increase proposed by TPC-D in FY 2016-17, considering the numbers as presented by it, works out to 205% and 3% for the Wires Business and Supply Business, respectively, as against 'nil' indicated by TPC-D in its Petition.

k) The tariff trajectory proposed by TPC-D is of a zig-zag nature: it has proposed an increase of 3% for the Supply Business in FY 2016-17, followed by a steep reduction of 19% in FY 2017-18, followed by an increase of 2% in FY 2018-19 and a reduction of 2% in FY 2019-20. The Commission has approved a smoother tariff trajectory, as discussed subsequently.

Thus, the ACoS projected by TPC-D for the 3rd Control Period reduces from Rs. 8.22 per kWh in FY 2016-17 to Rs. 6.83 per kWh in FY 2017-18, and is then projected to increase to Rs. 6.99 per kWh in FY 2018-19 and reduced to Rs. 6.86 per kWh in FY 2019-20.

The Commission is of the view that the cumulative Revenue Gap should be recovered in the minimum number of years so as to minimise the burden of carrying cost while at the same time ensuring that there is no tariff shock to consumers and that the tariff trajectory is smooth. In the Commission's view, these considerations would be met by recovery of the cumulative Revenue Gap in three years from FY 2016-17 to FY 2018-19. The cumulative Revenue Gap and resultant average increase in tariff approved by the Commission for the 3rd Control Period is as shown in the Tables below:

Table 6-11: Cumulative Revenue Gap as approved by Commission (Rs. crore)

Particulars	Wires Business	Supply Business	Total
Past Gap/(Surplus) inadvertently considered twice in MYT Order for period prior to MYT period		(214.16)	(214.16)
Incremental Revenue Gap/(Surplus) FY 2014-15	22.88	55.16	78.04
Carrying Cost on Gap/(Surplus) of FY 2014-15	(15.39)	116.11	100.73
Incremental Revenue Gap/(Surplus) of FY 2015-16	(56.81)	719.90	663.09
Cumulative Revenue Gap/(Surplus) till FY 2015-16	(49.32)	677.02	627.70
Balance RA recovery		569.89	569.89
Total	**(49.32)**	**1246.91**	**1197.59**

The resultant average increase in tariff approved by the Commission for the 3rd Control Period is as shown in the Tables below:

Table 6-12: Recovery of Cumulative Revenue Gap of Wires Business and Supply Business as approved by Commission (Rs. crore)

Sr. No.	Particulars	Wire Business				Supply Business				Total			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Opening Balance	(49.32)	(32.88)	(16.44)	-	1,246.91	926.27	553.14	-	1,197.59	893.39	536.70	-
2	Recovery/(refund) during the year	(16.44)	(16.44)	(16.44)	-	320.64	373.14	553.14	-	304.20	356.70	536.70	-
3	Closing Balance	(32.88)	(16.44)	-	-	926.27	553.14	-	-	893.39	536.70	-	-
4	Average Balance	(41.10)	(24.66)	(8.22)	-	1,086.59	739.70	276.57	-	1,045.49	715.05	268.35	-
5	Interest Rate (%)	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%	10.80%
6	Carrying /(holding) cost	(4.44)	(2.66)	(0.89)	-	117.35	79.89	29.87	-	112.91	77.22	28.98	-
7	**Total recovery/(refund) during the year (2+67)**	**(20.88)**	**(19.10)**	**(17.33)**	**-**	**437.99**	**453.02**	**583.01**	**-**	**417.11**	**433.92**	**565.68**	**-**

Table 6-13: Tariff increase and ACoS approved by Commission (Rs. crore)

Sr. No.	Particulars	Wire Business (including OA Sale)				Supply Business				Total			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
1	Energy Sales (MU)	3,235.40	3,137.40	3,230.24	3,333.01	4,950.20	5,102.22	5,271.16	5,452.98	4,950.20	5,102.22	5,271.16	5,452.98
	ARR and Revenue Gap												
2	Stand-alone Aggregate Revenue Requirement	360.34	373.99	387.06	399.55	2,585.70	2,736.71	2,801.20	2,904.39	2,946.04	3,110.70	3,188.26	3,303.58
	Revenue at Existing Tariff												

Sr. No.	Particulars	Wire Business (including OA Sale)				Supply Business				Total			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
3	Revenue from Sale of Power	-	-	-	-	3,081.85	3,174.95	3,277.88	3,390.84	3,081.85	3,174.95	3,277.88	3,390.84
4	Revenue from Wheeling Charges	150.05	148.33	154.00	160.38	-	-	-	-	150.05	148.33	154.00	160.38
5	Revenue from CSS	-	-	-	-	70.08	35.42	48.23	42.30	70.08	35.42	48.23	42.30
6	Revenue from Recovery of approved RAC	-	-	-	-					-	-	-	-
	Revenue from Recovery of approved Transmission Charge	-	-	-	-	-	-	-	-	-	-	-	-
7	**Total**	**150.05**	**148.33**	**154.00**	**160.38**	**3,151.93**	**3,210.37**	**3,326.11**	**3,433.14**	**3,301.98**	**3,358.71**	**3,480.11**	**3,593.52**
8	**Average Revenue Realisation (Rs/kWh)**	0.46	0.47	0.48	0.48	6.37	6.29	6.31	6.30	6.67	6.58	6.60	6.59
9	Stand-alone Revenue Gap/(Surplus) at existing tariff	210.29	225.66	233.06	239.17	(556.23)	(473.67)	(524.92)	(529.11)	(355.94)	(248.01)	(291.86)	(289.94)
10	Proposed Revenue Gap/(Surplus) to be recovered/passed on, including the past Revenue Gap, during the year	(20.88)	(19.10)	(17.33)	-	437.99	453.02	583.01	-	417.11	433.92	565.68	-
11	Proposed ARR for recovery of through tariff during the year	339.46	354.89	369.73	399.55	3,023.69	3,189.73	3,384.20	2,904.03	3,363.15	3,544.62	3,753.93	3,303.58

Sr. No.	Particulars	Wire Business (including OA Sale)				Supply Business				Total			
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
12	**Proposed Average Cost of Supply (Rs/kWh)**	**1.05**	**1.13**	**1.14**	**1.20**	**6.11**	**6.25**	**6.42**	**5.33**	**6.79**	**6.95**	**7.12**	**6.06**
13	**Proposed increase in tariff w.r.t. tariff of previous year (%)**	**126.23%**	**7.81%**	**1.19%**	**4.73%**	**-4.07%**	**2.35%**	**2.70%**	**-17.05%**	**1.85%**	**2.26%**	**2.51%**	**-14.93%**

As will be seen from the above Tables, the Commission has spread the recovery of the cumulative Revenue Gap so that there is only a small tariff increase in the first three years of the Control Period, and a significant reduction in the last year. The MTR will be undertaken next year, including the true-up of FY 2015-16 and FY 2017-18. The revised tariffs will be determined for the last two years of the Control Period considering the approved cumulative Revenue Gap/(Surplus), and there would be some Revenue Gap on account of the delayed implementation of the present tariff revision, apart from other possible factors.

6.4 TPC-D'S TARIFF PHILOSOPHY

TPC-D's Submission

TPC-D has analysed the important issues listed below so that its Tariff Philosophy helps in development of a stable, sustainable and competitive environment benefitting all its consumers, be they Direct Consumers, Change-over Consumers or OA Consumers:

a) Learning from the past Control Period;
b) Developments in the market place;
c) Capacity to pay;
d) Prevalent regulatory practices and developments;
e) Need for uniformity in tariff for residential consumers with consumption of 0-300 units per month; and
f) Emphasis on the 'Make in India' initiative.

6.4.1 Learnings from past Control Period

a) Increasing Divergence in Category-wise Tariffs

Contrary to the intent of the Tariff Policy that tariffs progressively reflect the cost of supply, the trend has been of divergence between the ABRs of subsidised and subsidising consumers as compared to the ACoS. The overall weighted average ABR for subsidising categories increased from Rs. 7.18 per unit in FY 2013-14 to Rs. 9.21 per unit in FY 2015-16, while for the subsidised categories, the overall weighted average ABR decreased from Rs. 4.18 per unit in FY 2013-14 to Rs. 3.63 per unit in FY 2015-16, in spite of increasing ACoS.

b) Sales Projection

As elaborated in Section 5, the category-wise sales considered in earlier Tariff Orders for determining the tariffs were different from the sales projected by TPC-D. The actual sales mix has been significantly different from that approved in the Orders as the impact of tariff design was not considered in the sales projections, resulting in higher movements towards lower Tariffs as compared to approved sales.

c) Sales Impact on Average Cost of Supply

As elaborated in Section 5 of this Order, according to TPC-D, since the actual overall sales turned out to be lower than approved, there was a significant increase in ACoS over the approved ACoS. Since the actual ACoS has increased, some of the approved subsidising categories, such as LT Commercial and LT Industrial (categories with ABR greater than ACoS), which were designed to provide subsidy, became subsidised categories in reality. Also, the subsidy collected from the remaining subsidising category consumers got reduced, and the subsidy required for subsidised consumers increased due to the ACoS movement.

Tariff changes may not be the most effective and efficient way to bring about a balance of consumers between Distribution Licensees as the results are unpredictable, and may be detrimental to a Licensee's economic viability.

d) Under-recoveries from Direct vs. Change-over consumers

The tariff has been framed in such a manner that TPC-D's direct consumers are designed to subsidise the change-over consumers. The change-over consumers using the wires of RInfra-D are paying only the Energy Charge to TPC-D; since the Energy Charge is lower than its ACoS, the change-over consumers would always fall in the subsidised category. This requires the direct consumers of TPC-D to subsidise the change-over consumers. As per the approved Gap/(Surplus), the direct consumers form a small share of the subsidised category and a larger share of the subsidising category, leading to a surplus cushion which has been used to subsidise the change-over consumers which have a smaller subsidising category.

e) Creating level playing field for competing Licensees

The ATE has directed the Commission to use the same methodology for calculating various charges for competing Distribution Licensees for maintaining a level playing field. The tariff design philosophy intended to create such level playing field led to unusual subsidy levels for low-end consumer categories of TPC-D. These low levels of recoveries from the low-end consumers is clear from comparison of the percentage recoveries from the same category for other Distribution Licensees, which are much higher than that of TPC-D. The cost recovery levels for residential consumers in 0-100 and 101-300 units slab in TPC-D is very low, at 19% and 49%, respectively, whereas it is 72% and 129% for MSDECL and 62% and 88% for RInfra-D.

Deriving energy cost recovery by reducing Wheeling Charges from the direct consumers' ABR has led to significantly low energy cost recovery, especially from change-over consumers. Further, TPC-D's percentage recovery of Supply charges is inordinately low and needs to be increased to rational levels. Also, the majority of 100-300 unit residential consumers in the rest of Maharashtra are subsidising consumers, with their ABR being higher than the LT ACoS of MSEDCL. If consumers in the hinterlands and smaller towns in the State with similar consumption can afford to pay higher tariffs and be classified as subsidising consumers, it is questionable whether consumers with similar consumption in Mumbai, where city residents have higher levels of per capita income, need to be subsidised.

The salient learnings impacting the Tariff Philosophy for the 3rd Control Period are:

i. ACoS of the Wires Business and Supply Business should be considered separately in order to maintain transparency in the system;

ii. Energy Charge should truly reflect the energy costs and efficiency of the Supply Licensee; therefore, the mechanism of recovery of all relevant components of ACoS of the Supply Business must be considered from all consumers – Direct, Change-over and OA;

iii. Cross-subsidy structure should appropriately consider the Energy Charge recoveries from Change-over and Direct consumers, and should be set so that it ensures recovery of RA rather than further creation;

iv. Subsidy to residential customers should be in line with the Tariff Policy, 2016; and

v. Cost recovery levels of residential consumers should be raised to a level comparable with other Distribution Licensees across the country.

6.4.2 Market Developments

Some of the market developments impacting the Tariff Philosophy are:

i. Consumers in Mumbai have experienced the benefits of a choice between the Distribution Licensees, as demonstrated by migration and reverse migration;

ii. The demand-supply situation in the country has changed dramatically, as some markets are experiencing surplus of power and stranded capacities leading to very low short-term power tariffs - both bilateral and through Power Exchanges. This provides an opportunity for eligible consumers to source cheaper power through short-term bilateral sources as well as Power Exchanges;

iii. While eligible consumers benefit from the situation, it should not be at the cost of other consumers who are not in a position to benefit from the depressed short-term cost of power; and

iv. This situation is going to be more widespread and impacting since the DOA Regulations, 2016 enable OA consumers to procure power also through Power Exchanges and have allowed a combination of long-term/medium-term/short-term as well as day/week-ahead sources. This will provide much more flexibility and ease of power sourcing to such consumers. At the same time, the Commission needs to protect the interests of the direct consumers of TPC-D so that they are not unnecessarily burdened with the unrecovered costs of OA consumers.

TPC-D has considered various recent developments in the policy and regulatory framework while finalizing its Tariff Philosophy for the 3rd Control Period. The provisions of the Tariff Policy, 2016 on various issues such as CSS determination and creation and recovery of RAs have been incorporated while developing the tariffs for the Control Period. Similarly, the impact of DOA Regulations, 2016 and RPO Regulations, 2016 has also been considered.

6.4.3 Capacity to Pay

The salient observations from analysis of the subsidised and subsidising sub-categories among the residential category as under:

i. There is uniformity in the approach for both public as well as private Licensees, as followed by the Regulatory Commissions in several States, with respect to creation of subsidised and subsidising sub-categories within the residential category.

ii. Various Distribution Licensees, public as well as private, have identified the residential consumers with a consumption of less than 200 units as subsidised consumers, while those with consumption above 200 units are identified as subsidising consumers.

An internal study has also identified the need to subsidise consumers with less than 200 units consumption per month, which corroborates the prevalent regulatory practice on the issue.

6.4.4 Need for uniformity in tariff for residential consumers with consumption of 0-300 units per month

TPC-D has proposed uniformity in tariff for residential consumers with consumption of 0-300 units per month to bring about equity and rationalized cross-subsidy among consumers across Distribution Licensees. The recovery from tariff of this category is already less than the costs, and hence a competitive environment based on tariff is not sustainable. Instead, an environment of competition should be fostered for this category based on customer service and care. This philosophy is in line with the positive steps of the Central and State Governments who are trying to optimize subsidies while ensuring that they are not diluted and reach the targeted customers. The electricity sector should be treated similarly to food-grains distribution and LPG, and hence the uniform tariff concept should be limited to the residential consumers with consumption of 0-300 units per month.

Since 89% of the residential consumers of TPC-D are change-over consumers, it is imperative to consider the tariff of change-over consumers for illustrating the Uniform Tariff concept. However, the change-over tariff of TPC-D is a derived number which includes elements of tariff of TPC-D as well as other Licensees.

TPC-D proposes to bring about uniformity in tariff for the change-over consumers in the 0-100 units and 101-300 units slabs of the residential category, as the majority of Mumbai's approximately 40 lakh consumers fall within these 2 sub-categories.

Mumbai consumers are being served by 4 different Licensees, viz., RInfra-D, BEST, MSEDCL, and TPC-D. While consumers with similar consumption may typically have a similar paying capability, the ABRs charged by the Licensees to residential consumers in these consumption slabs are very different, as shown in the Table below:

Table 6-14:Tariff Comparison as submitted by TPC-D (Rs./kWh)

Category-wise ABR (FY 2015-16)	TPC-D (Change-over)	BEST (with TDLR)	RInfra-D	MSEDCL
0-100	3.74	4.13	5.05	4.33
101-300	6.25	8.69	7.14	7.75
Total no. of consumers (in Lakhs)	~5.31	~6.31	~15.60	~154.50

These diverse tariffs have led to situations where consumers within a same building/neighbourhood having similar electricity consumption are paying different tariffs, thus leading to discontent. Further, the 101-300 units slab has been defined as subsidising for MSEDCL, which has nearly 41 Lakh consumers across Maharashtra.

This has also led to a situation where the subsidy burden on other consumers varies widely between Licensees, which results in uncontrolled migrations through change-over or OA routes. The differential per unit subsidy burden on subsidising sales is shown in the Table below:

Table 6-15: Differential Subsidy Burden as submitted by TPC-D (Rs./kWh)

Particulars	RInfra-D	BEST	TPC-D	Total Mumbai
Net Subsidy to 0-300 slab (Rs. crore)	713	700	711	2123
Subsidy burden on subsidising consumers	1.54	1.73	2.30	1.80

TPC-D has proposed to bring about uniformity in tariff for change-over consumers in the first 2 slabs of the residential category. There can be several approaches to ensure uniformity in tariff:

i. Approach 1: Matching with the highest ABR among the Licensees for the 0-100 units and 101-300 units slabs.

ii. Approach 2: Matching with the lowest ABR among the Licensees for the 0-100 units and 101-300 units slabs.

iii. Approach 3: Matching with the lowest ABR between MSEDCL and RInfra-D as these Licensees cover over 2/3rd of consumers of 0-100 units and 101-300 units slabs within Mumbai. Further, including the MSEDCL tariff would ensure uniform tariff across Maharashtra for that particular category.

Based on Approach 3, TPC-D has proposed to match the change-over ABR for 0-100 units slab with Rs 4.33/kWh, i.e., the ABR for MSEDCL for this slab, and for 100-300 units slab with Rs 7.14/kWh, i.e., the ABR for RInfra-D for this slab. This approach would also be in line with Clause 8.3 of the Tariff Policy dated 28 January, 2016:

> *"1. Consumers below poverty line who consume below a specified level, as prescribed in the National Electricity Policy may receive a special support through cross-subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply.*
>
> *2. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within ±20% of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross-subsidy."*

6.4.5 Emphasis of Government of India on 'Make in India'

The availability of reliable power supply at competitive tariffs is identified as an important factor for success of the 'Make in India' programme. Accordingly, TPC-D has proposed a gradual reduction in the cross-subsidy level for industrial consumers to ensure power supply to industries at competitive tariffs.

Commission's Analysis and Ruling

TPC-D has made several observations based on its 'learnings' from the past Control Period. The Commission's views on some of these are as follows:

a) TPC-D has contended that, contrary to the Tariff Policy, the cross-subsidy has been increased for TPC-D in the previous Control Period. The Commission is of the view that such analysis done in hindsight is not meaningful. It also has no relevance to the 'overall weighted average ABR' for subsidising and subsidised categories, as the consumption mix, ACoS and existing cross-subsidy have a bearing on the extent of cross-subsidy reduction approved by the Commission. The Commission had reduced the cross-subsidy between tariff categories in the previous MYT Order as well as in the MTR Order.

b) The issue of appropriateness of sales projections made by TPC-D vis-a-vis the sales approved in the Commission's Orders has been addressed in Section 5 of this Order.

c) TPC-D has contended that there was a significant increase in the ACoS over that approved, on account of lower actual sales and that as a result, some of the subsidising categories became subsidised categories. The Commission is of the view that such analysis done in hindsight is not meaningful. The ACoS is a function of the ARR and sales. If the ARR remains the same or increases and the sales reduce, then the ACoS will increase as the fixed cost component of the ARR will be spread over a lower quantum of units. The Commission has reduced the cross-subsidy between tariff categories in the previous MYT Order as well as the MTR Order, and if subsidising categories became subsidised categories ex post cannot be a basis for questioning the cross-subsidy reduction approved on an ex ante basis in the Commission's Order.

d) As regards TPC-D's contention that tariff changes may not be the most efficient way to bring about a balance of consumers between Distribution Licensees, the Commission notes that TPC-D has itself proposed category-wise tariffs in its earlier Petitions as well as in the present MYT Petition with a view to addressing the consumer and consumption mix.

e) TPC-D's contention that its direct consumers are subsidising its change-over consumers is based on the fact that change-over consumers are only paying the Energy Charge to TPC-D, which is lower than the ACoS. Change-over consumers are not using TPC-D's wires and are hence not liable to pay Wheeling Charges to TPC-D. However, this aspect of the Change-over Protocol cannot be relied upon to contend that TPC-D's direct consumers are subsidising its change-over consumers. This is also impacted by the consumer mix for direct sales, as TPC-D has mainly connected the subsidising category on its wires, while the subsidised category consists mainly of change-over consumers. This was already addressed in the MTR Order as follows:

"Cross-subsidisation of Change-over Consumers by Direct Consumers of TPC-D-

The Commission does not agree with TPC-D's contention that the tariff structure was designed such that its direct consumers cross-subsidised change-over consumers. The subsidising consumers, irrespective of whether they are direct or change-over consumers, remain so irrespective of whether they are direct or change-over consumers. For instance, for around two years or so after the change-over process first started, only the subsidising consumers changed over to TPC-D, and were thus subsidising the direct consumers of certain categories of TPC-D, as they were doing earlier for certain categories of RInfra-D consumers. Thus, whether change-over consumers are subsidising the direct consumers of TPC-D or vice-versa depends on the mix of direct and change-over consumers, and this phenomenon cannot be used to arrive at any erroneous conclusions."

f) As regards TPC-D's contention that its cost recovery from the first 2 slabs in the residential category is very low as compared to that of other Licensees, the Commission has not verified the comparative analysis submitted by TPC-D. TPC-D has based its analysis on the slab-wise cross-subsidy as per its own calculations. The Commission does not provide the slab-wise cross-subsidy in the Tariff Orders as it is liable to incorrect conclusions on account of the telescopic nature of the tariffs for the residential category. The consumption and revenue shown against the lower consumption slabs includes the consumption of consumers consuming in higher slabs as well and not only the consumption of only 0-100 units and 101-300 units slab consumers. Hence, the Commission calculates the cross-subsidy over the category as a whole and endeavours to reduce it in its Tariff Orders, which it considers to be the appropriate approach.

g) As regards TPC-D's proposal to consider the ACoS of the Wires Business and Supply Business separately, the Commission is of the view that this approach is not necessarily incorrect, but would entail a change in approach for all Licensees. Further, as per TPC-D's own submission of revised cross-subsidy considering ACoS separately for the Wires Business and Supply Business, as reproduced in Table 6-24, there is no significant variation in cross-subsidy in either methodology, perhaps because the Wheeling Charges are the same for all categories within any given voltage level. As there appears to be no significant benefit to such separation when the increase in complexity is taken into account, the Commission has continued to determine the cross-subsidy taking the combined ACoS.

h) As regards the contention that residential consumers with consumption above 200 units per month should be subsidising rather than subsidised consumers, the Commission is of the view that no such categorical conclusion can be drawn a priori as the cross-subsidies are a function of the consumption mix, prevailing level of cross-subsidies, tariff increase required, etc.

i) The Commission has endeavoured to gradually reduce cross-subsidy in its previous Orders as well as the present MYT Order, as elaborated subsequently.

j) As regards TPC-D's proposal for uniform tariff across Distribution Licensees for residential consumers with consumption of 0-300 units per month, the Commission is of the view that there is no legal basis for this. Neither the EA, 2003 nor the MYT Regulations nor the Tariff Policy mandate a uniform tariff for the same category of consumers supplied by different Distribution Licensees, for reasons that should be evident in terms of differences in consumer mix, generation sources and costs, nature and extent of network and other factors. In its Judgment dated 2 September, 2014 in Appeal No. 29 of 2009, the ATE has also stated that:

> *"31. Following conclusions are arrived at out of the above discussion:*
>
> ***…(ii) The benefit of relative efficiency of a distribution company in terms of distribution loss and other controllable expenditure has to be passed on to the consumers and to that extent there has to be a difference in the retail supply tariffs amongst the various distribution companies.***
>
> ***(iv) In the impugned order, the State Commission has determined the differential BSP with a view to equalize the RST and has not accounted for relative efficiency of the distribution companies in terms of distribution loss and other expenditure. The effect of higher efficiency of a distribution company should be passed on its consumers, in terms of the Tariff Policy...."***

k) The Commission had also elaborated its views in this regard in its Report to the GoM on issues raised on RInfra-D's tariffs, as follows:

> *"The cost of supply depends upon various factors such as cost of power procured, distribution losses, operational and administrative expenses, capital related expenditure such as depreciation and interest, etc., which is bound to vary between different licensees, due to inherent differences in power purchase mix, availability*

and cost of own generation, operational efficiency in controlling distribution losses, and, therefore, it is practically not possible to determine uniform Retail Supply Tariff in the State across all licensees. The Commission has to determine the category-wise tariffs for different licensees on the basis of the respective cost of supply and consumption mix. Further, Section 62(3) of the EA, 2003 permits the Commission to differentiate between consumers even within the same licence area on certain grounds, which is obviously applicable to consumers residing in different licence areas…

The above analysis shows that any comparison of tariffs between different licence areas has to be seen in the context of the cost of supply, the consumer mix, consumption mix, current level of cross-subsidy, and other factors…

From the above, it is clear that if uniform tariff has to be introduced and cross-subsidy has to be retained at the existing levels or increased further, then the EA, 2003 and the Tariff Policy may have to be amended, or the State Government may have to provide subsidy to the concerned distribution licensees to compensate for the loss of revenue, since the tariffs for any category would then have to be retained at the lowest level applicable amongst the distribution licensees."

l) At the same time, the Commission is of the view that large disparities in tariffs of the same category of consumer being supplied by different Distribution Licensees ought to be progressively reduced to the extent possible. However, the comparison has to be on a like-to-like basis, i.e., the comparison between RInfra-D and TPC-D tariffs has to be between RInfra-D direct tariffs and TPC-D change-over tariffs since the majority of TPC-D's consumers are being supplied through RInfra-D's network, and the charges applicable in such cases are by their very nature different. In the case of TPC-D and BEST, the direct tariffs have to be compared, as change-over using BEST's wires is not permitted under the law, and BEST consumers wanting supply from TPC-D also have to shift to TPC-D’s network. This is a tight-rope walk, and the Commission has endeavoured to determine the category-wise tariffs of the three Distribution Licensees supplying to most of Mumbai city are not widely different, particularly for lower-end consumers, within these constraints. However, as a result, the tariff of TPC-D's direct consumers in the 0-100 consumption slab (around 52,000 consumers), which was much lower (around 50% lower, in fact) than the prevalent tariffs of the other Licensees, has had to be increased significantly, by around 41% (as against TPC-D's proposal for a 71% increase). Even so the tariff now determined for this 0-100 consumption slab of TPC-D is still lower than the tariff of the other Licensees, although their tariff advantage vis-a-vis similar consumers of these Licensees is now much less.

6.5 TPC-D’S TARIFF DESIGN PRINCIPLES

TPC-D's Submission

TPC-D has proposed a revised mechanism for ARR apportionment for clear and transparent separation of Wires Business and Supply Business recoveries. As per the existing mechanism, the ARR for Wires Business and Supply Businesses is calculated separately. However, while calculating the ACoS, tariff structure and ABRs, both the ARRs are merged together. While calculating the ABR, the cross-subsidy percentages are applied on the merged ACoS, which are then further segregated into components of tariff. Such a combined top-down approach leads to fluctuating energy cost recovery, which further leads to under-recoveries particularly when the consumers of the Supply Business (change-over and direct consumers) and Wires Business (only direct consumers) are different. In this background, the mechanism proposed is as follows:

a) The average costs should be calculated separately for the Wires and Supply Businesses.

b) After determining the average costs separately, individual charges like Supply Charges, Wheeling Charges, and RAC should be determined separately, which will be cumulated to arrive at the category-wise ABRs.

Accordingly, TPC-D has proposed the computation of tariff in 3 broad categories:

i. <u>Wheeling Charge</u> - apportioned across consumer categories as per the voltage categories – HT/LT

ii. <u>Supply Charges</u> (which is a composite of Fixed / Demand Charge, Energy Charge, Incentives, etc.) - apportioned across consumer categories as per the cross-subsidy structure

iii. <u>Regulatory Asset Charge</u> - apportioned across consumer categories as per the cross-subsidy structure.

Commission's Analysis and Ruling

As elaborated earlier, the Commission has not accepted TPC-D's proposal for considering the ACoS separately for the Wires Business and Supply Business for determining the cross-subsidy levels. It has determined the Wheeling Charges for HT and LT voltages, and the

Fixed/Demand Charges, Energy Charges and RAC for different consumer categories, keeping in view the existing and targeted level of cross-subsidy reduction.

6.6 WHEELING CHARGES FOR FY 2016-17 TO FY 2019-20

TPC-D's Submission

In its MTR Petition, TPC-D had submitted separate Revenue Gap/(Surplus) analysis for FY 2012-13 for the Wires Business and Supply Business, but the Commission approved the combined Revenue Gap/(Surplus) without bifurcating it separately between the Wires Business and Supply Business. However, for the subsequent years (FY 2013-14 to FY 2015-16), the Commission approved the Revenue Gap/(Surplus) for the Wires Business and Supply Business separately. While incorporating this change and computing the cumulative Revenue Gap/(Surplus) separately for the Wires Business and the Supply Business for FY 2015-16, the Commission apportioned the entire combined Revenue Gap/(Surplus) of FY 2012-13 to the Supply Business by suppressing the Wires Business ARR and increasing the projected sales.

This led to reduced Revenue Gap/(Surplus) and decreased the Wheeling Charges abnormally in FY 2015-16. The Wheeling Charges have been inconsistent over the years, instead of a more desirable linear trend. The Wheeling Charges increased suddenly from Rs. 0.19 per kWh in FY 2012-13 to Rs. 1.87 per kWh in FY 2013-14, and decreased drastically to Rs. 0.77 per kWh in FY 2015-16 from Rs. 2.08 per kWh in FY 2014-15. On the other hand, the Wheeling Charges for RInfra-D have been consistent and gradually increasing over the years. If the Wires Business ARR as assessed by TPC-D had been considered, the Wheeling Charges would have been Rs. 1.72 per kWh. If the same trend of Wheeling Charges for TPC-D continues in the future, there might be occasions when the Wheeling Charges would suddenly increase, leading to tariff shock for consumers.

TPC-D’s current Wheeling Charge is Rs.0.77 per kWh and that of RInfra-D is Rs. 1.80 per kWh. This adversely affects TPC-D, since a consumer who wants to move from TPC-D to RInfra-D has to pay Wheeling Charges of only Rs. 0.77 per kWh, while a consumer who wants to move from RInfra-D to TPC-D will have to pay Rs. 1.80 per kWh. From the perspective of competition, the difference in Wheeling Charges for either set of change-over consumers should be minimal in order to promote level competition. Currently, the entry barrier for consumers changing over to TPC-D is markedly higher than for consumers changing over to RInfra-D.

The opposing trends of Energy Charge and Wheeling Charges seems to indicate that, in the process of tariff determination, the tariff has been finalised first and then Wheeling Charges have been used for balancing the Energy Charges, instead of calculating both separately. Therefore as stated above, TPC-D has computed stand-alone Wheeling Charges.

The network cost for LT and HT consumers has been derived by apportioning the total network cost between these categories in the ratio of their respective GFA. Further, as power wheeled to the LT consumers is also wheeled through the HT network, the network cost of the HT Category has been considered for the LT categories also.

Since the Wheeling costs are incurred based on the contracted demand/sanctioned load and do not depend on the energy drawal by the consumer, the Wheeling Charges should be apportioned based on the cumulative demand of each category, instead of the energy drawal as is the existing practice. This is in line with the Tariff Policy, 2016:

> *"8.5.5 Wheeling charges should be determined on the basis of same principles as laid down for intra-State transmission charges and in addition would include average loss compensation of the relevant voltage level."*

Accordingly, the Wheeling Charges should be calculated and recovered based on demand for those categories for which Demand Charges are applicable, as it would incentivize consumers to use the network at higher Load Factor. For the other LT categories for whom Fixed Charges are applicable, the Wheeling Charges are proposed to be continued to be recovered on the basis of total units consumed during the 3rd Control Period.

The cumulative ARR for the Wires Business for the Control Period is as shown in the Table below:

Table 6-16: Cumulative ARR for Wires Business as submitted by TPC-D (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ARR	430	471.77	516.91	561.95
Less: Gap/(Surplus) to be recovered upto FY 2016-17with carrying cost	(3)			
Total ARR	427			

The Wheeling Charges per unit for HT/LT voltage levels is as shown in the Table below:

Table 6-17: Wheeling Charges on per unit basis for 3rd Control Period as submitted by TPC-D (Rs/kWh)

Year			Sales (MU)	% of Sales	% of GFA	Network Cost (Rs. Cr.)	Wheeling Cost (Rs. Cr.)	Wheeling Charges (Rs/ kWh)
			1	2	3	4=c4*#3	5=2*4	6=5/1
FY 2016-17	HT	a	2341	72%	77%	328	237	**1.01**
	LT	b	901	28%	23%	99	185	**2.05**
	Total	c=a+b	3242			427	427	**1.32**
FY 2017-18	HT	a	2195	67%	76%	357	240	**1.09**
	LT	b	1063	33%	24%	115	226	**2.13**
	Total	c=a+b	3259			472	472	**1.45**
FY 2018-19	HT	a	2304	65%	75%	388	251	**1.09**
	LT	b	1260	35%	25%	129	258	**2.05**
	Total	c=a+b	3564			517	517	**1.45**
FY 2019-20	HT	a	2424	62%	71%	398	247	**1.02**
	LT	b	1475	38%	29%	164	289	**1.96**
	Total	c=a+b	3899			562	562	**1.44**

Wheeling Charges for HT Consumers

For HT Consumers, TPC-D has proposed Wheeling Charges as Rs./kVA/month instead of Rs./kWh as per the guidelines in the Tariff Policy, 2016. The year-wise Wheeling Charges proposed for HT voltage level are shown in the Table below:

Table 6-18: Wheeling Charges for HT Category for 3rd Control Period as proposed by TPC-D

Year	Demand including Open Access (in MVA)	Network Cost (Rs. Cr.)	Wheeling Cost (Rs./kVA/Month)
FY 2016-17	603	237	340
FY 2017-18	585	240	350
FY 2018-19	616	251	350
FY 2019-20	650	271	350

Wheeling Charges for LT Consumers

TPC-D has proposed to continue the recovery of Wheeling Charges in Rs. per kWh from LT consumers during the 3rd Control Period. The year-wise Wheeling Charges proposed for the LT voltage level are shown in the Table below:

Table 6-19: Wheeling Charges for LT Category for 3rd Control Period proposed by TPC-D

Year	Sales	% of Sales	% of GFA	Network Cost (Rs. Cr.)	Wheeling Cost (Rs. Cr.)	Wheeling Charges (Rs/kWh)
FY 2016-17	901	28%	23%	99	185	**2.05**
FY 2017-18	1063	33%	24%	115	226	**2.13**
FY 2018-19	1260	35%	25%	129	258	**2.05**
FY 2019-20	1475	38%	29%	164	289	**1.96**

Commission's Analysis and Ruling

TPC-D's contention that the Commission suppressed the Wires Business ARR and apportioned the entire combined Revenue Gap/(Surplus) of FY 2012-13 in the MTR Order is incorrect. The Commission elaborated its rationale for undertaking a combined true-up for FY 2012-13 and separate true-up for the Wires Business and Supply Business from FY 2013-14 onwards in the MTR Order:

> *"TPC-D's MYT Order was issued on 28 June, 2013, i.e., after FY 2012-13 was over. In the MYT Order, the Commission approved separate ARR for the Wires Business and Supply Business for each year from FY 2012-13 to FY 2015-16. However, since, FY 2012-13 was already over, the Commission determined separate Wheeling Charges for the Wires Business from FY 2013-14 onwards.*
>
> *Hence, the Commission has undertaken separate truing up and provisional truing up for the Wires Business and Supply Business for FY 2013-14 and FY 2014-15, respectively. However,* ***for FY 2012-13, separate truing up of Wires Business and Supply Business could not be done since the MYT Order came into effect after FY 2012-13 was over, and the actual revenue from Wheeling Charges for that year is not separately available. Accordingly, the Commission has approved the combined Revenue Gap/(Surplus) for FY 2012-13 for the Wires Business and Supply Business, although truing up for all the components of expenses has been done separately for each. Further, the combined Revenue Gap for FY 2012-13 has been considered as the Revenue Gap for the Supply Business for FY 2012-13 for computation of the cumulative Revenue Gap****."*

As regards TPC-D's contention that this approach resulted in decreasing the Wheeling Charges abnormally, and that TPC-D's Wheeling Charges have been inconsistent over the years whereas those of RInfra-D have been consistent and gradually increasing, the Wheeling Charges are a function of the ARR of the Wires Business and the units wheeled on the distribution network. As long as TPC-D's sales on its own network remain low, the Wheeling Charges are bound to remain relatively high. On the other hand, as RInfra-D's network is established, the asset size as well as ARR of the Wires Business is considerably higher than that of TPC-D and it also wheels more units, its Wheeling Charges are somewhat lower than TPC-D's, especially at LT voltage. Also, TPC-D has itself proposed Wheeling Charges of around Rs. 2 per kWh for the 3rd Control Period. Further, TPC-D is neutral to whether the Wheeling Charges are high or low and whether they are higher or lower than RInfra-D's Wheeling Charges, as long as the ARR of its Wires Business is recovered through its Wheeling Charges. Hence, the contention that differential in Wheeling Charges of RInfra-D adversely affects TPC-D has no merit.

For LT consumers, TPC-D has proposed Wheeling Charges in terms of Rs/kWh, in line with the Commission's approach in earlier Orders, whereas for HT consumers it has proposed Wheeling Charges in terms of Rs/kVA/month instead of Rs/kWh citing the provisions of the Tariff Policy, which stipulates that the Wheeling Charges should be determined on the basis of the same principles as for intra-State Transmission Charges.

The first proviso to Regulation 70.2 of the MYT Regulations, 2015 specifies that

> *"70.2 ...Provided that the Wheeling Charges may be denominated in terms of Rupees/kWh or Rupees/kW/month, for the purpose of recovery from the Distribution System User, or any such denomination, as may be stipulated by the Commission;..."*

Thus, the Wheeling Charges may be determined in terms of Rs/kWh, Rs/kW/month or Rs/kVA/month as proposed by TPC-D. As regards the adoption of similar approach for Transmission Charges and Wheeling Charges, Transmission Charges for short-term OA are stipulated in terms of Rs/kWh, while medium/long-term OA Transmission Charges are stipulated in terms of Rs/kW/month. Hence, the Wheeling Charge for HT level short-term OA has been determined in terms of Rs/kWh.

The Commission determined the Wheeling Charges in terms of Rs/kWh for facilitating the Change-over Protocol, under which the change-over consumer pays Wheeling Charges to the Wires Licensee and the Fixed/Demand/Energy Charges to the Supply Licensee. The change-over economics are also easier to assess and understand under the present framework. If the Wheeling Charges are determined in terms of Rs/kVA/month for change-over transactions, the complexity will increase. Hence, the Wheeling Charge for change-over consumers at HT level, which is part of the consumer tariff, has been determined in terms of Rs/kWh. As change-over is essentially supply to consumers through OA, as ruled by the ATE, and there cannot be any discrimination between direct consumers and OA consumers, the Wheeling Charges for OA have also been denominated in Rs/kWh terms.

The Commission has approved the ARR for the Wires Business for the 3rd Control Period as elaborated in Section 5 of this Order, and the recovery of its cumulative Revenue Gap has been set out in the preceding paragraphs.

The HT and LT Wheeling Charges for the 3rd Control Period have been determined on the same basis as in the MTR Order, i.e., the ratio of GFA has been taken as 77:23, and the HT: LT sales ratio has been considered as approved in this Order.

The Commission has not excluded the EHT Sales from the HT sales while calculating the Wheeling Charges, in line with the past practice with which no issue has been taken. Further, due to the lower sales on its wires, the LT Wheeling Charges of TPC-D are already on the higher side, and excluding the EHT sales will further increase the Wheeling Charges at HT and LT levels.

Accordingly, the Commission has approved the Wheeling Charges and the revenue from the Wheeling Charges from OA consumers as shown in the Table below:

Table 6-20: Wheeling Charges and Revenue as approved by Commission for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Direct				
HT Sale with 15 days adjustment (MU)	1872	1907	1943	1981
Open Access (MU)	544	367	367	367
LT Sale with 15 days adjustment (MU)	819	863	920	985
Total Sale (MU)	3235	3137	3230	3333
Direct Sales %				
HT Sale	75%	72%	72%	70%
LT Sale	25%	28%	28%	30%
GFA %				
HT GFA	77%	77%	77%	77%
LT GFA	23%	23%	23%	23%
Wires ARR	339	355	370	400
Network Cost - HT	260	272	284	307
Network Cost - LT	79	83	86	93
Wheeling Cost -HT	194	197	203	216
Wheeling Cost -LT	145	158	167	184
HT Wheeling Charges (Rs/kWh)	0.80	0.87	0.88	0.92
LT Wheeling Charges (Rs/kWh)	1.77	1.83	1.81	1.86
Revenue from Open Access consumers	44	32	32	34

6.7 AVERAGE COST OF SUPPLY

TPC-D's Submission

TPC-D has submitted the ARR of the Supply Business for the 3rd Control Period as shown in the Table below, including the past recoveries proposed to be recovered in FY 2016-17 and the RAs allowed in the MTR Order:

Table 6-21: ARR of Supply Business proposed by TPC-D for 3rd Control Period (Rs. crore)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Supply ARR	2527.97	2850.93	3120.82	3442.20
Past Recovery proposed to be recovered	775.41	30.77	10.25	0.00
Total ARR (incl. OA consumers)	**3308.38**	**2881.70**	**3131.08**	**3442.20**

The ACoS for the Supply Business has been computed by reducing the revenue from OA consumers, as shown in the Table below:

Table 6-22: ACoS proposed by TPC-D for 3rd Control Period

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Total ARR (incl. OA Consumers)	Rs. crore	**3303.39**	**2881.70**	**3131.08**	**3442.20**
Less- Revenue from OA consumers	Rs. crore				
Income from Transmission Charges	Rs. crore	24.38	17.94	21.51	25.78
Receipts on account of CSS	Rs. crore	124.15	27.94	27.69	27.07
Receipts on account of Additional Surcharge	Rs. crore	85.55	47.47	38.70	34.51
Total		**234.08**	**93.34**	**87.90**	**87.36**
Total ARR (excluding OA Consumers)	Rs. crore	3069.30	2788.36	3043.18	3354.84
Estimated Sales	MU	4867.29	5142.99	5475.52	5837.78
Average Cost of Supply for Supply Business	**Rs/kWh**	**6.31**	**5.42**	**5.56**	**5.75**

Commission's Analysis and Ruling

In the light of the ATE Judgment dated 30 May, 2011 in Appeal No. 102 of 2010, the Commission asked TPC-D for the VCoS for FY 2014-15, FY 2015-16 and for the 3rd Control Period. TPC-D submitted the details as shown in the Table below:

Table 6-23:* VCoS *submitted by TPC-D for FY 2014-15, FY 2015-16 and 3rd Control Period

Particulars	**Units**		**FY 2014-15**	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
			Actual	**Provisional**	**Estimated**	**Estimated**	**Estimated**	**Estimated**
Energy @ InSTS	MU	*1*	6249	6002	5095	5388	5742	6127
Transmission Loss	%	2	3.90%	3.96%	3.89%	3.89%	3.89%	3.89%
Energy @ T <> D interface	MU	3=*1**(1-2)	6006	5764	4897	5179	5518	5889
Direct Sale @ HT	MU	4	3109	2781	1743	1828	1937	2057
Loss @ HT	%	5	0.53%	0.37%	0.90%	0.90%	0.90%	0.90%
Direct Sale HT @ T <>D	MU	6=4/(1-4)	3125	2791	1759	1845	1955	2076
Total Direct Sale @ T <> D interface	MU	7	3830	3560	2673.71	2927	3240	3583
LT Sale @ T <>D interface	MU	8=7-6	704	768	915	1082	1285	1507
LT Direct Sale	MU	9	697	768	901	1063	1260	1475
Loss @ LT	%	10=(8-9)/8	1.07%	0.0%	1.54%	1.77%	1.96%	2.14%
Change-over HT Sale	MU	11	40	25	25	26	26	26
Change-over LT Sale	MU	12	2123	2181	2198	2226	2252	2280
Power Purchase Cost including Stand-by Charges	Rs. crore	13	2956	2545	2154	2405	2587	2801
Power Purchase Cost - LT	Rs./ kWh	14=13/*1*/(1-2)/(1-10)	5.00	4.43	4.51	4.77	4.83	4.90
Power Purchase Cost - HT	Rs./ kWh	15=13/1/(1-2)/(1-5)	4.95	4.43	4.44	4.69	4.73	4.80
Transmission Charges, MSLDC Charges, etc.	Rs. crore	16	439	264	208	264	338	432
Transmission Charges, MSLDC Charges, etc.	Rs./ kWh	17=16/(4+9+11+12)	0.74	0.46	0.43	0.51	0.62	0.74
Retail Cost	Rs. crore	18	158	175	165	182	196	210
Retail Cost	Rs./ kWh	19=18/(4+9+11+12)	0.26	0.30	0.34	0.35	0.36	0.36
Past Recoveries	Rs. crore	20	585.55	515.34				
Past Recoveries	Rs./ kWh	21=20/(4+9+11+12)	0.98	0.90				
Wheeling Charge - LT	Rs./ kWh	22	1.98	1.86	2.12	2.18	2.11	2.13

Particulars	**Units**		**FY 2014-15**	**FY 2015-16**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
			Actual	**Provisional**	**Estimated**	**Estimated**	**Estimated**	**Estimated**
Wheeling Charge - HT	Rs./ kWh	23	0.74	0.76	1.01	1.09	1.09	1.02
Supply VCoS								
VCoS - LT	Rs./ kWh	24=14+17+ 19+21	6.98	6.09	5.28	5.64	5.80	6.00
VCoS - HT	Rs./ kWh	25=15+17+ 19+21	6.93	6.09	5.21	5.55	5.71	5.90
VCoS including Wheeling Charges		26						
VCoS – LT	Rs./ kWh	27=22+24	8.96	7.95	7.39	7.81	7.91	8.14
VCoS - HT	Rs./ kWh	28=23+25	7.67	6.85	6.22	6.65	6.79	6.92

TPC-D stated that the difference between HT and LT loss is very low, and hence the differential cost is not significant. Further, Railways, which was a major HT consumer, has become a separate Distribution Licensee from FY 2015-16, and hence there is likely to be a change in HT losses from FY 2016-17 onwards, and TPC-D has estimated HT losses for the future period considering this.

The Commission has adopted the same approach for computing the VCoS for each year, based on the values approved in this Order, as shown in the Table below:

Table 6-24:* VCoS *computed by Commission for FY 2016-17 to FY 2019-20

Particulars	**Units**		**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Energy @ InSTS	MU	*1*	5178	5337	5513	5704
Transmission Loss	%	2	3.92%	3.92%	3.92%	3.92%
Energy @ T <> D interface	MU	3=*1**(1-2)	4975	5127	5297	5480
Direct Sale @ HT	MU	4	1560	1586	1622	1659
Loss @ HT	%	5	0.90%	0.90%	0.90%	0.90%
Direct Sale HT @ T <>D	MU	6=4/(1-4)	1574	1601	1637	1674
Total Direct Sale @ T <> D T <>D interface	MU	7	2404	2475	2568	2672
LT Sale @ T <>D interface	MU	8=7-6	829	874	931	997

Particulars	**Units**		**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
LT Direct Sale	MU	9	819	863	920	985
Loss @ LT	%	10=(8-9)/8	1.25%	1.24%	1.23%	1.22%
Change-over HT Sale	MU	11	25	25	25	25
Change-over LT Sale	MU	12	2040	2111	2185	2263
Power Purchase Cost Including Stand-by Charges	Rs. crore	13	2241	2327	2345	2430
Power Purchase Cost - LT	Rs./kWh	14=13/*1*/(1-2)/(1-10)	4.60	4.64	4.52	4.53
Power Purchase Cost - HT	Rs./kWh	15=13/1/(1-2)/(1-5)	4.55	4.58	4.47	4.47
Transmission Charges, MSLDC Charges etc.	Rs. crore	16	218	281	326	341
Transmission Charges, MSLDC Charges etc.	Rs./kWh	17=16/(4+9+11+12)	0.49	0.61	0.69	0.69
Retail Cost	Rs. crore	18	126	128	130	133
Retail Cost	Rs./kWh	19=18/(4+9+11+12)	0.28	0.28	0.27	0.27
Wheeling Charge - LT	Rs./kWh	22	1.77	1.83	1.81	1.86
Wheeling Charge - HT	Rs./kWh	23	0.80	0.87	0.88	0.92
Supply VCoS						
VCoS - LT	Rs./kWh	24=14+17+19+21	5.38	5.53	5.48	5.49
VCoS - HT	Rs./kWh	25=15+17+19+21	5.32	5.47	5.43	5.44
VCoS including Wheeling Charges		26				
VCoS - LT	Rs./kWh	27=22+24	7.15	7.36	7.30	7.36
VCoS - HT	Rs./kWh	28=23+25	6.13	6.34	6.31	6.36

The computations of the Commission show that the VCoS of HT supply is lower by around Rs. 1.00 per kWh than the VCoS of LT supply. The MYT Regulations, 2015 specify as follows in this context:

> *"88. Determination of Retail Supply Tariff –*
>
> *88.1 The Commission may categorize consumers on the basis of their load factor, Power Factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.*
>
> *88.2 The retail supply tariff for different consumer categories shall be determined on the basis of the Average Cost of Supply, computed as the ratio of the Aggregate Revenue Requirement of the Distribution Licensee for the Year determined in accordance with Regulation 78, and including unrecovered Revenue Gaps of previous years to the extent proposed to be recovered, to the total sales of the Distribution Licensee for the respective Year.*
>
> *88.3 The Commission shall endeavour to gradually reduce the cross-subsidy between consumer categories with respect to the Average Cost of Supply in accordance with the provisions of the Act.*
>
> *88.4 While determining the tariff, the Commission shall also keep in view the cost of supply at different voltage levels and the need to minimise tariff shock to consumers."*

Thus, the Commission is required to determine the category-wise tariffs in accordance with the ACoS and endeavour to reduce cross-subsidies with respect to it, while also keeping in view the VCoS.

Hence, the Commission has determined the category-wise tariffs in accordance with the ACoS, one consideration being that the tariffs for HT supply should be lower than for LT supply. However, this has not been possible for many categories on account of historical tariff differences and other objectives of tariff determination, i.e., reduction of cross-subsidies, avoidance of tariff shock, etc.

The ACoS approved by the Commission for the 3rd Control Period is given in Table 6-13 above, and is reproduced below:

Table 6-25: ACoS approved by Commission for FY 2016-17 to FY 2019-20 (Rs/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
ACoS	**6.79**	**6.95**	**7.12**	**6.06**

6.8 CROSS-SUBSIDY STRUCTURE

TPC-D's Submission

Since it has two distinct sets of consumers, viz., change-over consumers who constitute a significant portion of the total consumer base, and direct consumers, TPC-D's philosophy is that the cross-subsidy structure be applied to both sets of consumers equitably, based on the following principles:

i. The cross-subsidy structure should be applied only on the Supply Business charges.
ii. It should not be applied on the Wheeling Charges, which is apportioned on the basis of voltage categories (HT/LT).
iii. It should be determined taking the sales and revenue from both direct and change-over consumers into consideration.

TPC-D has computed the cross-subsidy structure for FY 2015-16 on the above principles, taking that approved in the MTR Order as the base, applying the following methodology:

i. To arrive at the Supply Business ABRs for each category, TPC-D has deducted the approved RAC and Wheeling Charges from the approved ABRs.
ii. To compute the Supply Business ACoS, TPC-D has deducted the approved Cumulative Revenue Gap of FY 2015-16 (Rs. 759.87 crore) from the approved Supply Business ARR (Rs. 5440.11 crore). This has then been divided by the approved sales (6555.93 MU).
iii. The cross-subsidy structure has been arrived at by dividing the respective Supply Business ABRs for each category by the Supply Business ACoS as computed above.

Accordingly, the cross-subsidy structure proposed by TPC-D for the 3rd Control Period is as shown in the Table below:

Table 6-26: Cross-subsidy Structure for 3rd Control Period proposed by TPC-D

Consumer Categories	FY 2015-16		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	Overall cross-subsidy approved in MTR Order	Cross-subsidy for Supply Business approved in MTR Order				
HT Category						
HT I – Industry	120%	118%	119%	117%	116%	115%

Consumer Categories	**FY 2015-16**		**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
	Overall cross-subsidy approved in MTR Order	**Cross-subsidy for Supply Business approved in MTR Order**				
HT II - Commercial	126% (125%)	124%	130%	123%	121%	117%
HT III - Group Housing Society	124%	133%	125%	124%	122%	116%
HT IV - Temporary Supply	164% (167%)	167%	169%	167%	165%	165%
HT V (A) - Railways 22/33 kV	119%	117%	120%	117%	116%	110%
HT V(B) - Railways Metro & Monorail	118%	118%	120%	117%	116%	110%
HT VI - Public Services						
a) Govt. Edu. Inst. & Hospitals	110%	113%	109%	104%	102%	100%
b) Others	111%	108%	113%	106%	104%	102%
LT Category						
LT I - Residential (BPL)	18%	18%	7%	2%	3%	5.4%
LT I - Residential						
0-100 units	31%*	20%	30%	37%	43%	50%
101-300 units	58%*	51%	71%	86%	91%	99%
301-500 Units	112%*	104%	107%	103%	100%	100%
Above 500 units (balance units)	139%*	132%	129%	124%	119%	111%
LT II - Commercial						
Upto 20 kW	120% (121%)	110%	110%	105%	102%	101%
> 20 kW &< 50kW	125% (126%)	113%	114%	108%	106%	102%
> 50kW	130%	123%	118%	111%	110%	104%
LT III - Industry < 20 kW	109% (107%)	99%	103%	100%	100%	100%
LT IV - Industry > 20kW	121% (120%)	116%	108%	105%	104%	103%
LT V - Advertisement & Hoardings, incl. floodlights & neon signs	0% (223%)	489%	237%	220%	218%	218%
LT VI – Streetlights	86%	86%	90%	89%	86%	86%
LT VII – Temporary Supply						
TSR – Temporary Supply Religious	63% (66%)	63%	67%	63%	63%	63%
TSO – Temporary Supply Others	195% (191%)	192%	187%	183%	178%	175%
LT VIII – Crematoriums and Burial Grounds	57%	50%	55%	52%	50%	48%

Consumer Categories	**FY 2015-16**		**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
	Overall cross-subsidy approved in MTR Order	**Cross-subsidy for Supply Business approved in MTR Order**				
LT IX - Public Services						
a) Govt. Edu. Inst. & Hospitals	107%	107%	107%	99%	99%	99%
b) Others	107% (110%)	102%	105%	101%	101%	100%
ACoS (Rs/kWh)	**7.16**	**7.16**	**6.31**	**5.42**	**5.56**	**5.75**

Note: Figures in brackets in 2nd column are the correct cross-subsidy levels approved by the Commission in the MTR Order
** These values have not been given in the MTR Order, though TPC-D has purported that these are approved values*

In the proposed cross-subsidy structure, TPC-D has proposed that the ABRs for the respective categories and ACoS converge during the Control Period, in line with the past learnings and as per the Tariff Policy, 2016. This proposed structure will help in realising the following improvements:

i. Convergence of subsidising and subsidised ABRs towards ACoS, thereby reducing the overall subsidy quantum, which is in line with the Tariff Policy, 2016.
ii. Even after bringing in uniformity in the subsidised residential tariff, the overall subsidised ABR decreases as compared to FY 2013-14.
iii. Stability in the tariffs of subsidised as well as subsidising categories from FY 2017-18 onwards, which benefits all the consumers.

TPC-D has applied the proposed cross-subsidy structure for apportionment of the Supply Business ACoS as well as the RAC related to the Retail Supply Business.

Commission's Analysis and Ruling

The Commission has considered the ACoS and cross-subsidy for the combined Wires and Supply Business rather than separately for each as this is a tried and tested approach that is consistently adopted across Distribution Licensees. Further, as stated earlier, TPC-D's approach of computing the slab-wise cross-subsidy level is incorrect on account of the telescopic tariff applicable to the residential category. The Commission has accepted TPC-D's proposal for determining the cross-subsidy by taking into account the sales and revenue from both direct and change-over consumers.

The Commission has continued to determine the tariffs with an in-built incentive to consumers to reduce their consumption. The billing impact is designed to increase as the consumption increases on account of the higher telescopic tariffs applicable to higher consumption slabs, while at the same time ensuring that even consumers in the higher consumption slabs are charged at a lower rate to the extent of their consumption corresponding to lower slabs.

The Commission has significantly reduced the tariff applicable for Temporary category (HT & LT) and LT Advertisements & Hoardings categories, since a very steep tariff may lead to use of polluting Diesel Generator sets. The ABR of the Temporary category (except for religious and other such functions) has been matched with the ABR of the Commercial category, although the impact on individual consumers may vary depending on their consumption pattern.

The Tariff for the "Public Service - Others" category has been fixed at a level such that the ABR for this category is between the ABR of the Industrial and Commercial categories, in accordance with the philosophy of the earlier Tariff Orders.

The revised ABR and the category-wise tariff increase/(reduction) approved by the Commission for the Control Period are given in the Table below:

Table 6-27: Category-wise ABR and Tariff Increase/Reduction approved by Commission for 3rd Control Period

Category	ABR (Rs/kWh)					% Tariff Increase/(Reduction)			
	Existing	Approved				Approved			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT CUSTOMERS									
HT I - Industry	9.28	8.74	8.55	8.76	7.04	-6%	-2%	3%	-20%
HT II - Commercial	9.67	9.59	9.51	9.73	7.74	-1%	-1%	2%	-20%
HT III - Group Housing Society		6.11	6.17	6.63	5.87	-32%	1%	7%	-12%
HT VII -PWW		7.76	7.75	7.84	5.95	-20%	0%	1%	-24%
HT V - Railways, Metro & Monorail	9.18	7.95	7.88	8.11	6.63	-13%	-1%	3%	-18%
HT VI - Public Services									
A) Govt. Edu. Inst. & Hospitals	8.50	7.69	7.77	7.91	6.70	-10%	1%	2%	-15%
B) Others	8.68	9.03	9.03	9.23	7.38	4%	0%	2%	-20%
HT IV - Temporary Supply	12.84	9.65	9.55	9.73	7.75	-25%	-1%	2%	-20%
LT CUSTOMERS									
LT I (A) - Residential (BPL)		2.04	2.07	2.06	1.95		2%	-1%	-5%
LT I (B) - Residential	6.43	3.77	4.30	4.70	4.54	-41%	14%	9%	-3%
LT II - Commercial									
(A) Upto 20 kW	9.29	7.59	7.68	7.98	6.85	-18%	1%	4%	-14%
(B) > 20 kW & < 50kW	9.69	8.30	8.25	8.14	6.66	-14%	-1%	-1%	-18%

Category	ABR (Rs/kWh)					% Tariff Increase/(Reduction)			
	Existing	Approved				Approved			
	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
(C) > 50kW	9.99	9.31	9.49	9.02	7.39	-7%	2%	-5%	-18%
LT III (A) Industry < 20 kW	8.22	7.11	7.27	7.17	5.80	-13%	2%	-1%	-19%
LT III (B) - Industry > 20kW	9.28	8.49	8.78	8.29	6.39	-9%	4%	-6%	-23%
LT V - Advertisement & Hoardings, incl.floodlights & neon signs	17.15	13.42	13.23	12.01	9.99	-22%	-1%	-9%	-17%
LT VI – Streetlights		7.81	7.83	7.46	6.31		0%	-5%	-15%
LT VII – Temporary Supply									
- TSR – Temporary Supply Religious	5.11	5.61	5.77	5.97	5.23	10%	3%	3%	-12%
- TSO – Temporary Supply Others	14.71	9.90	9.79	9.21	7.39	-33%	-1%	-6%	-20%
LT VIII – Crematoriums and Burial Grounds		3.64	4.14	4.39	4.40		14%	6%	0%
LT IX - Public Services									
A) Govt. Edu. Inst. & Hospitals		7.86	7.89	7.60	6.43		0%	-4%	-15%
B) Others	8.45	9.27	9.26	9.16	6.79	10%	0%	-1%	-26%

Note: 1. The ABR approved in the MTR Order were computed considering only the Direct Sales, whereas the ABR approved in this Order for the 3rd MYT Control Period are computed considering the Direct Sales as well as Change-over sales and are, therefore, not strictly comparable.

2. * Existing ABR includes prevailing FAC, which has thereafter been merged with the Energy Charges

3. For LT IV PWW & LT XAgriculture, there is no consumption, and hence, ABR has not been shown.

The reduction in the category-wise cross-subsidy over the 3rd Control Period approved in this Order is given in the Table below:

Table 6-28: Cross-subsidy reduction approved by Commission for 3rd Control Period

Category	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	MTR Order	Approved	Approved	Approved	Approved
HT CUSTOMERS					
HT I - Industry	120%	129%	123%	123%	116%
HT II - Commercial	125%	141%	137%	137%	128%
HT III - Group Housing Society (Residential)		90%	89%	93%	97%
HT IV -PWW		114%	112%	110%	98%
HT V - Railways, Metro, Monorail	119%	117%	113%	114%	109%
HT VI - Public Services					
A) Govt. Edu. Inst. & Hospitals	110%	113%	112%	111%	111%
B) Others	113%	133%	130%	130%	122%
HT VII - Temporary Supply	167%	142%	137%	137%	128%
LT CONSUMERS					
LT I (A) - Residential (BPL)		30%	30%	29%	32%
LT I (B) - Residential	83%	55%	62%	66%	75%
LT II - Commercial					
A) Upto 20 kW	121%	112%	111%	112%	113%
B) > 20 kW &< 50kW	126%	122%	119%	114%	110%
C) > 50kW	130%	137%	137%	127%	122%
LT III (A) Industry < 20 kW	107%	105%	105%	101%	96%
LT III (B) - Industry > 20 kW	120%	125%	126%	116%	106%
LT V - Advertisement & Hoardings, incl. floodlights & neon signs	223%	198%	190%	169%	165%
LT VI – Streetlights		115%	113%	105%	104%
LT VII – Temporary Supply					

Category	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	MTR Order	Approved	Approved	Approved	Approved
A) TSR – Temporary Supply Religious	66%	83%	83%	84%	86%
B) TSO – Temporary Supply Others	191%	146%	141%	129%	122%
LT VIII – Crematoriums and Burial Grounds		54%	60%	62%	73%
LT IX - Public Services					
A) Govt. Edu. Inst. & Hospitals		116%	114%	107%	106%
B) Others	110%	136%	133%	129%	112%

Note: The ABR and cross-subsidy approved in the MTR Order were computed considering only the Direct Sales, whereas the ABR and cross-subsidy approved in this Order for the 3rd MYT Control Period are computed considering the Direct Sales as well as Change-over sales and are, therefore, not strictly comparable.

As will be seen from the above Table, the tariffs of most of the categories are within ±20% of the ACoS and the cross-subsidies have been reduced over the Control Period. Because of the change in methodology explained above, it appears as if the cross-subsidy has increased in FY 2016-17 over FY 2015-16, which is not the case. The ACoS approved for FY 2015-16 in the MTR Order was Rs. 7.71 per kWh, while the ACoS approved for FY 2016-17 in this Order is Rs. 6.80 per kWh, thereby enabling a reduction in the ABR.

6.9 SUPPLY BUSINESS CHARGES

TPC-D's Submission

The Supply Business ABRs for each category have been computed based on the cross-subsidy structure proposed as above. The Supply Business ABR for each category has been further segregated into the following components of charges:

1. Fixed/Demand Charges
2. Energy Charges
    a. Power Procurement Charge
    b. Consumer Service Charge
    c. Reliability Charge
3. Incentives – Power Factor/Load Factor/ToD

1. Fixed/Demand Charges

In the MTR Order, the Commission had advised an upward trajectory for Fixed/Demand Charges to ensure equitable recovery of Capacity Charges towards power procurement:

> *"The Commission observes that the recovery of Fixed Costs through Fixed/Demand Charges is quite low. The approved Fixed Costs of TPC-D in FY 2015-16 account for 48% of its ARR, but the revenue from Fixed/Demand Charges enable it to recover only 29% of the Fixed Costs, which is quite low. The recovery of Fixed Costs through Fixed/Demand Charges needs to be increased gradually."*

Although, in the MTR order, the Commission had approved recovery of up to 46% of fixed cost components of the Supply Business through Fixed/Demand Charges, the actual recovery has been to the tune of 23%, because of lower actual sales than approved in the MTR Order due to OA/Railways/reverse change-over.

Considering the revised sales projections, and in line with the above approach of the Commission, TPC-D has proposed an increasing trajectory of recovery of fixed costs of Supply Business through Fixed/Demand Charges during the 3rd Control Period, as shown in the Table below:

Table 6-29: Fixed Cost Trajectory for 3rd Control Period proposed by TPC-D

Particulars	Units	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
TPC-G Fixed Charge	Rs. Cr.	602	666	675	608	614
MSLDC Charges	Rs. Cr.	2	1	1	1	1
Stand-by Charges	Rs. Cr.	117	89	94	100	107
Transmission Charges	Rs. Cr.	217	208	263	336	430
Supply Fixed Cost	Rs. Cr.	149	165	182	196	210
Total Fixed Cost	Rs. Cr.	**1088**	**1129**	**1215**	**1242**	**1362**
Sales	**MU**	**6556**	**4867**	**5143**	**5476**	**5838**
Approved Recovery through Fixed Charges	Rs. Cr.	68				
Approved Recovery through Demand Charges	Rs. Cr.	427				
Total Approved Recovery of Fixed Cost through Tariff	Rs. Cr.	496				
% Recovery of Fixed Cost through Tariff	**%**	**46%**				
Proposed Recovery through Fixed Charges	Rs. Cr.		95	132	174	222
Proposed Recovery through Demand Charges	Rs. Cr.		286	383	495	624
Total Proposed Recovery of	Rs. Cr.		380	515	669	846

Particulars	Units	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Fixed Cost through Tariff						
% Recovery of Fixed Cost through Tariff	%		**34%**	**42%**	**54%**	**62%**

TPC-D has proposed the category-wise Fixed Charges and Demand Charges accordingly, and the balance fixed costs of the Supply Business are proposed to be recovered through the Energy Charge.

The category-wise Fixed/Demand Charges proposed by TPC-D are shown in the Table below:

Table 6-30: Fixed/Demand Charges proposed by TPC-D for 3rd Control Period

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT Category					
HT I-Industry	Rs./kVA/ month	300	380	460	650
HT II-Commercial	Rs./kVA/ month	300	380	460	650
HT III-Group Housing	Rs./kVA/ month	300	380	460	650
HT IV-Temp Supply	Rs/conn/ month	500	550	600	650
HT V(A) – Railways					
-22/33 kV	Rs./kVA/ month	300	380	460	650
-100 kV	Rs./kVA/ month	300	380	460	650
HT V(B)-Metro & Monorail	Rs./kVA/ month	300	380	460	650
HT VI - Public Services					
(A)- Govt Edu.Inst. & Hospitals	Rs./kVA/ month	300	380	460	650
(B)- Others	Rs./kVA/ month	300	380	460	650
LT Category					
LT I – BPL	Rs/conn/ month	30	50	70	70
LT -I Residential					
0-100	Rs/conn/ month	75	100	125	150
101-300	Rs/conn/ month	100	125	150	175
301-500	Rs/conn/	100	125	150	175

Particulars	Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
	month				
> 500	Rs/conn/ month	150	200	250	300
LT II - Commercial					
(a) 0-20 kW	Rs/conn/ month	325	375	425	475
(b) 20-50 kW	Rs./kVA/ month	300	380	460	650
(c) >50kW	Rs./kVA/ month	300	380	460	650
LT III-Industry (0-20kW)	Rs/conn/ month	325	375	425	475
LT IV-Industry (>20kW)	Rs./kVA/ month	300	380	460	650
LT V-Advertising & Hoarding	Rs/conn/ month	500	550	600	650
LT VI-Street Light	Rs./kVA/ month	300	380	460	650
LT VII -Temporary Supply					
(A)-Temporary Supply Religious	Rs/conn/ month	275	325	375	425
(B)-Temporary Supply Others	Rs/conn/ month	500	550	600	650
LT VIII – Crematorium	Rs/conn/ month	275	325	375	425
LT IX -Public Service					
(A) - Govt Edu.Inst. & Hospitals	Rs/conn/ month	300	325	350	375
(B)- Others	Rs/conn/ month	300	325	350	375

Commission's Analysis and Ruling

The Fixed/Demand Charges are intended to recover a significant part of the overall fixed costs, and not only fixed cost of power purchase, as contended by TPC-D. The fixed costs of the Supply Business of a Distribution Licensee are all expenses, except the variable cost of power purchase, IoWC and provision for bad and doubtful debts. Although Transmission Charges and MSLDC Charges might also be classified as Fixed Charges, for the purpose of analysis the Commission has considered them as Variable Charges as their incidence is linked to the share of CPD and NCPD, which are linked to sales which are variable in nature.

Of the total ARR of the Supply Business, around 31% is fixed in nature, while 69% is variable. However, the recovery of the fixed cost through Fixed/Demand Charges is only

34%. Moreover, the Fixed/Demand Charges have remained constant over the 2nd Control Period although the fixed cost has been increasing. Hence, the Commission has decided to gradually increase the Fixed/Demand Charges for all consumer categories by around 10-12% over the Control Period. The higher revenue from this increase has been used to cushion the Energy Charges. The category-wise Fixed/Demand Charges approved for each year of the 3rd Control Period are summarised subsequently in this Section, along with other Charges.

2. Energy Charge

TPC-D's Submission

TPC-D has proposed that the Energy Charge comprise the following components:

<u>Power Procurement Charge</u>

The Power Procurement Charge should cover the variable cost of power procurement and the balance amount of fixed costs of the Supply Business as well as the Transmission Charges. Further, the Energy Charges are to be computed on the basis of the cross-subsidy structure for the Supply Business.

<u>Consumer Service Charge (Fixed Cost of Retail Supply Business)</u>

TPC-D proposed determination of the Consumer Service Charge, i.e., the fixed cost of the Supply Business, which includes charges towards all services to consumers like metering, meter reading, billing, bill distribution and collection, consumer care, etc. The proposed Consumer Service Charge would also include Schedule management, Load management and monitoring services for OA consumers. These charges are proposed to be clubbed as a common Consumer Service Charge levied on all consumers as per their consumption.

TPC-D has computed the Consumer Service Charge taking the fixed cost components of the Supply Business. The overall per unit Consumer Service Charge has been calculated by dividing the total Consumer Service Charge by the sales (in MU). The category wise Consumer Service Charge has been calculated by applying the proposed cross-subsidy structure.

<u>Reliability Charge</u>

TPC-D has defined Reliability Charge as Stand-by Charges and fixed cost sharing of Unit 6 of TPC-G across all users of Unit 6. The benefit of this reliability is enjoyed by all consumers, including OA consumers and deemed Licensees. However, the Capacity Charges for Unit 6 are recovered from TPC-D and BEST under the existing PPA, and variable charges are recovered from all three Licensees (TPC-D, BEST and RInfra-D) as and when the Unit is run. In this context, TPC-D proposes the following method of recovery of fixed costs:

- The capacity cost per unit of generation of Unit 6 would, along with unavoidable cost of Capacity Charges of all power tie-ups, be computed separately as a part of the Additional Surcharge and charged to all the OA consumers and Group Captive consumers who avail the benefit of reliable services of Unit 6 generation as and when operated as per the direction of MSLDC.

- During the tenure of the existing PPA, the fixed cost per unit of generation of Unit 6 would be computed separately and charged to all the Licensees and deemed Licensees who avail the benefit of reliable services of Unit 6 generation as and when operated as per the direction of MSLDC. The additional recovery towards such costs will be adjusted against the Capacity Charges towards Unit 6 borne by TPC-D and BEST as per the PPA terms.

- Post-expiry of the existing PPA, an appropriate mechanism needs to be devised towards recovery of Unit 6 fixed costs from all entities who are beneficiaries of such reliability services. One option could be to have PPAs executed for Unit 6 between TPC-G and the Licensees and deemed Licensees within Mumbai.

Hence, the fixed cost of Unit 6 should be shared with all consumers across all Licensees, deemed Licenses and OA consumers.

The category-wise Energy Charges proposed are shown in the Table below:

Table 6-31: Energy Charges proposed by TPC-D for 3rd Control Period (Rs/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT Category				
HT I-Industry	7.50	6.09	5.94	5.84
HT II-Commercial	7.63	5.74	5.43	5.11
HT III-Group Housing	6.98	5.38	5.00	4.45
HT IV-Temp Supply	10.75	9.13	9.25	9.56
HT V(A) - Railways				
-22/33 kV	6.57	5.05	4.86	4.42
-100 kV				
HT V(B)-Metro & Monorail	6.60	4.95	4.62	4.02
HT VI - Public Services				
(A)- Govt Edu. Inst. & Hospitals	6.39	4.71	4.33	3.96

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
(B)- Others	6.98	5.39	5.22	5.09
LT Category				
LT I – BPL	0.44	0.11	0.17	0.17
LT -I Residential				
0-100	1.63	1.63	1.89	2.27
101-300	3.91	3.99	4.23	4.70
301-500	6.55	5.30	5.25	5.41
> 500	8.07	6.61	6.46	6.21
LT II - Commercial				
(a) 0-20 kW	6.34	4.75	4.45	4.24
(b) 20-50 kW	5.30	3.45	3.01	2.43
(c) >50kW	6.33	4.54	4.29	3.84
LT III-Industry (0-20kW)	6.43	5.25	5.36	5.56
LT IV-Industry (>20kW)	5.87	4.42	4.18	4.02
LT V-Advertising & Hoarding	14.95	9.40	9.39	12.53
LT VI-Street Light	5.68	3.37	4.78	4.94
LT VII -Temporary Supply				
(A)-Temporary Supply Religious	4.13	3.34	3.43	3.56
(B)-Temporary Supply Others	11.70	9.83	9.80	9.96
LT VIII – Crematorium	3.47	2.82	2.78	2.76
LT IX -Public Service				
(A) - Govt Edu.Inst. & Hospitals	6.58	5.20	5.30	5.50
(B)- Others	6.59	5.46	5.55	5.72

Commission's Analysis and Ruling

TPC-D's proposal to include Schedule management, load management and monitoring services for OA consumers as part of the Consumer Service Charge to be levied on all consumers as per the units consumed, is not acceptable. The various charges that can be levied on OA consumers are specified in the MERC (Transmission Open Access (TOA)) Regulations and the DOA Regulations, and no other charges can be levied on OA consumers. Moreover, these costs are subsumed under the O&M expenses and other charges allowed to be levied on OA consumers. The Commission has also not accepted TPC-D's proposal to share the fixed cost of TPC-G Unit 6 across all Licensees, deemed Licensees and OA consumers as only TPC-D and BEST have PPAs with TPC-G for Unit 6 and are accordingly liable to pay its Fixed Charge as they have a share in its capacity. Other Licensees, deemed Licensees and OA consumers cannot be asked to bear the fixed cost of Unit 6.

The Commission has determined the category-wise Energy Charges such that the cross-subsidies with respect to the ACoS are reduced from the present levels, and the tariff of most categories is within ±20% of the ACoS as suggested by the Tariff Policy. For categories such as HT and LT Temporary, and Advertisements and Hoardings, where the cross-subsidy was very high, the Commission has undertaken a steeper reduction in tariffs so as to reduce the cross-subsidy levels (and also to encourage these users to avail regular power supply rather than resort to more environmentally unfriendly alternatives for their electricity requirements).

The category-wise Energy Charges approved by the Commission for each year are summarised subsequently in this Section, along with other Charges.

3. Incentives - Load Factor / Power Factor / Time-of-Day

a. Load Factor

TPC-D's Submission

TPC-D proposes the following mechanism for computation of the Load Factor Incentive based on the consumers' Load Factor:
Consumers with a Load Factor over 75% and upto 85% shall be entitled to a rebate of 0.75% on the Wheeling Charges, Energy Charges and RAC for every percentage point increase in Load Factor from 75% to 85%. Consumers with Load Factor above 85 % shall be entitled to rebate of 1% on the Wheeling Charges, Energy Charges and RAC for every percentage point increase in Load Factor above 85%. The total rebate will be subject to a ceiling of 15% of the Wheeling Charges, Energy Charges and RAC.

Consumers with a Load Factor from 50% upto 75% shall not be entitled to any incentive. However, consumers with a Load from 40% upto 50%% and below 40% shall be charged a negative incentive of 0.75% and 1%, respectively, on the Wheeling Charges, Energy Charges and RAC only, for every percentage point decrease in Load Factor. The total charge under this head shall be subject to a floor of 15% of the Wheeling Charges, Energy Charges and RAC for such consumer.

This incentive / negative incentive would be limited to HT I: Industry, HT II: Commercial and HT VI: Public Services categories - HT VI (A) and HT VI (B) categories.

The Load Factor Incentive will be available only if the consumer has no arrears with TPC-D, and payment is made within seven days from the date of the bill. It would also be applicable to consumers in respect of whom payment of arrears in instalments has been granted by TPC-D and is being made as scheduled. TPC-D has to take a commercial decision on how to determine the time frame for which the payments should have been made as scheduled, in order to be eligible for the Load Factor incentive. However, the negative Load Factor incentive proposed would be applicable irrespective of payment performance or arrears.

The Load Factor has been defined as below:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hrs during the month less planned load shedding hours*)

** - Interruption/non-supply to the extent of 60 hours in a 30 day month has been built into the scheme.*

If the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e., 22:00 hrs to 06:00 hrs and, therefore, even if the maximum demand exceeds the Contract Demand in that duration, Load Factor Incentive would be applicable. However, the consumer would be subject to the penal charges for exceeding the Contract Demand.)

Commission's Analysis and Ruling

The Load Factor incentive for consumers with Load Factor over 75% proposed by TPC-D is in accordance with the prevailing structure approved in the MTR Order. However, TPC-D’s proposal to levy a 'negative incentive', i.e., a Load Factor penalty, for consumers with Load Factor below 50% is inappropriate. The Load Factor incentive is designed to encourage consumers to utilise their load more efficiently, thereby reducing the load on the system. However, consumers with a lower Load Factor are already paying higher per unit Fixed Charges since these are spread over the lower base of units consumed, and there is no merit in further penalising them for low Load Factor. Hence, the Commission rejects TPC-D's proposal to levy a 'negative incentive' for consumers with Load Factor below 50%.

The Load Factor incentive has been made applicable only on the Energy Charges, and exclude the Wheeling Charges and RAC, as Wheeling Charges are designed to recover the Wires ARR and higher Load Factor will not reduce the Wheeling Charges. Similarly, the RAC is designed to recover certain unrecovered past dues, and higher Load Factor will not reduce the RAC. Wheeling Charges and RAC have no nexus with Load Factor.

b. <u>ToD Charges</u>

TPC-D's Submission

The purpose of TOD tariff is to shift the load from peak to off-peak hours and avoid spikes in the demand pattern. TPC-D's peak demand, including direct and change-over consumers, is around 12 noon. Therefore, in order to incentivize consumers to shift the demand pattern, it is necessary to relook at the TOD tariffs. The highest TOD rate is presently charged in the time slot from 1800 hours to 2200 hours, whereas the actual peak is recorded at around 1200 hrs. Ideally, the slots should be modified. However, considering the administrative cost involved in reprogramming meters, it may not be advisable to modify the time slots. In order to incentivise consumer to shift their demand pattern, TPC-D has proposed the following TOD tariffs:

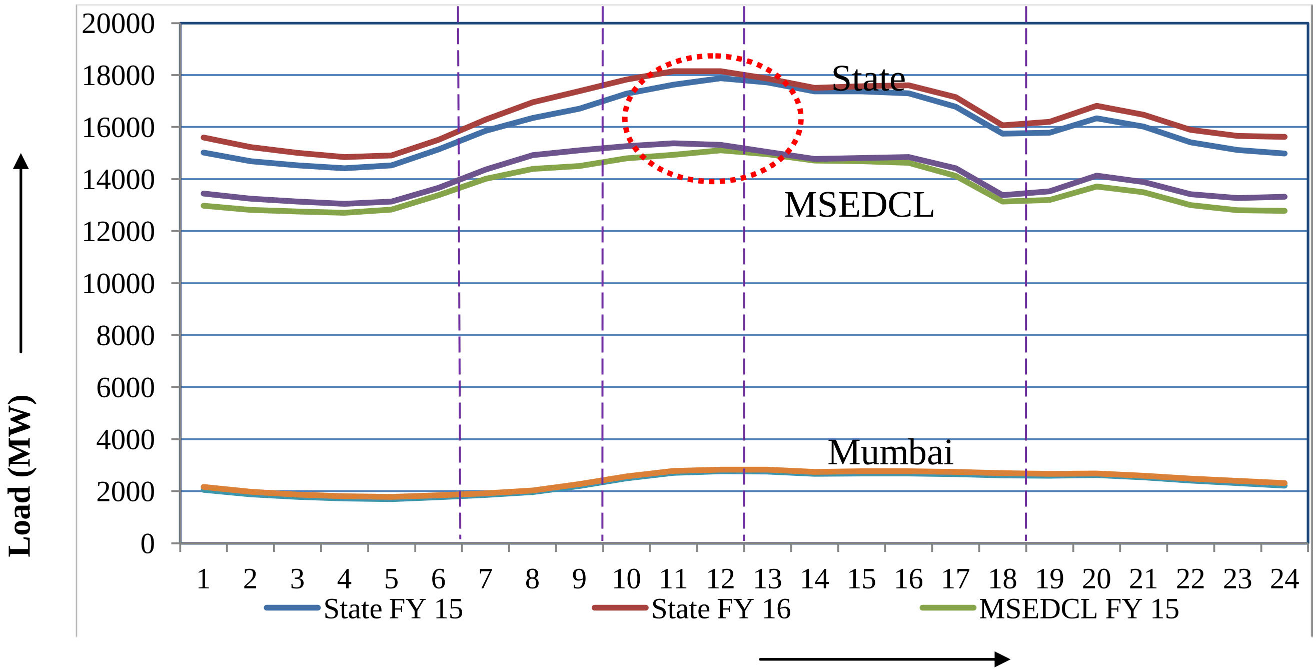
Table 6-32: Proposed ToD Tariffs during 3rd Control Period as submitted by TPC-D

Time Slots	Existing ToD Tariff (Rs./kWh)	Proposed ToD Tariff (Rs./kWh)
0600 hrs. to 0900 hrs.	0.00	0.00
0900 hrs. to 1200 hrs.	0.50	0.50
1200 hrs. to 1800 hrs.	0.00	1.00
1800 hrs. to 2200 hrs.	1.00	0.75
2200 hrs. to 0600 hrs.	(0.75)	(1.00)

Commission's Analysis and Ruling

The Commission had conducted a Load Curve Analysis of system demand in Maharashtra. The hourly load curve analysis of FY 2014-15 and FY 2015-16 shows that the peak load of the system demand has shifted to the afternoon from the evening hours.

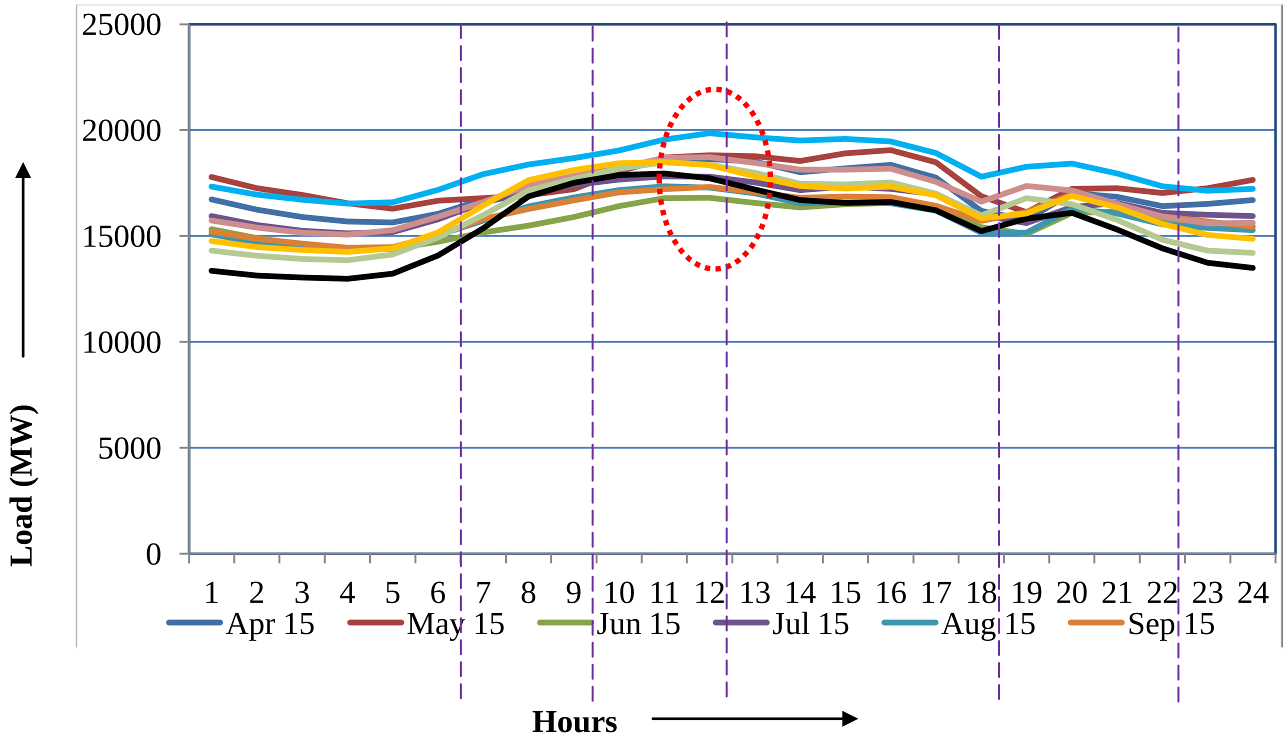
Figure 1: Hourly Load Curve for Maharashtra for FY 2014-15 and FY 2015-16



Source: MSLDC

The Seasonal variation in the load curve in FY 2015-16 also suggests that the peak load of the system has shifted to the afternoon.

Figure 2: Seasonal Variation in Load Curve of Maharashtra in FY 2015-16



Source: MSLDC

The Commission's analysis also suggests that the major reason behind this shift in system demand is due to a change in the method of recording demand of MSEDCL. However, when compared to the All-India Load Curve, it is seen that the peak load of the national system demand is in the evening, in contrast to Maharashtra's peak load in the afternoon hours.

Figure 3: National Load Curve

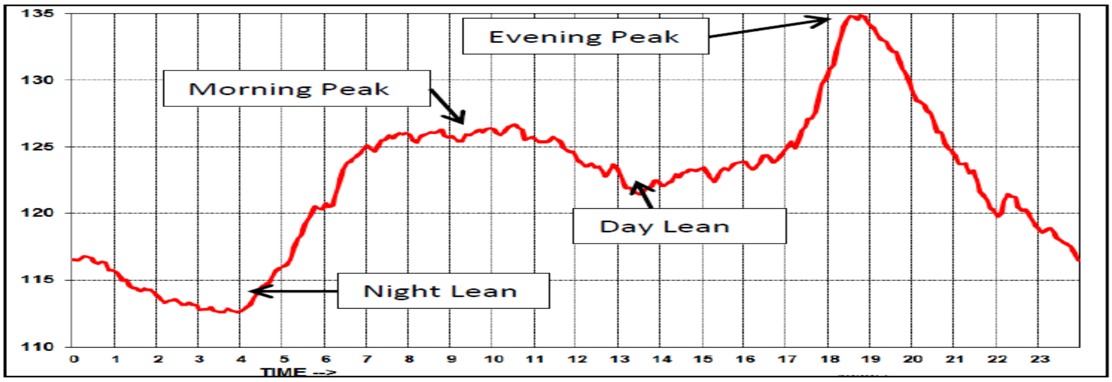


Figure 2: Typical All India Load Curve

Source: CEA

The objective of ToD tariffs is to incentivise shifting of consumption from peak to off-peak hours primarily in order to optimise the power purchase costs. The present structure of ToD tariffs is intended to shift the load from the morning peak (0900 hrs - 1200 hrs) and evening peak (1800 hrs - 2200 hrs) to night off-peak (2200 hrs – 0600 hrs) and afternoon hours. As shown above, the present ToD tariff structure has indeed contributed to shifting the peak load from the evening hours. However, instead of the load curve shifting to the night off-peak hours (2200 hrs – 0600 hrs), it has shifted to the afternoon time-slot. Hence, there is a demand to change the ToD tariff structure.

However, the Commission is of the view that, in the absence of a substantive study setting out the likely outcome of a revised TOD tariff structure and taking into account the impact of this shift in the load curve, it would not be prudent and might not even be beneficial to change the ToD tariff structure. Further, a load curve weighted towards the afternoon hours might well be helpful for the Distribution Licensees in optimising their power purchase costs, as power available at that time in the markets will be cheaper as the Figure above indicates that the all-India system still has an evening peak load.

Hence, for the time being, the Commission has not changed the existing ToD tariff structure. However, TPC-D and other Distribution Licensees should submit their detailed analysis indicating the benefits due to shift in peak load and other considerations at the time of the next MTR. They should also present in detail the implications in terms of cost as well as time required for installation of ToD meters and smart meters for other consumer categories considering the Tariff Policy provisions, and an analysis of their comparative benefits. The Commission may revisit the issue after public consultation on this aspect of the MTR Petitions.

c. PF Incentive

TPC-D's Submission

TPC-D has proposed the Power Factor Incentive as approved in the MTR Order.

Commission's Analysis and Ruling

The Commission has continued the dispensation of Power Factor incentive/penalty as approved in the MTR Order, without any modification.

It is clarified that the PF incentive/penalty is also applicable to the LT Public Service category (both LT IX (A) and LT IX (B)). The Commission has extended the PF incentive/penalty to the HT Temporary category also.

4. Regulatory Asset Charge

TPC-D's Submission

Due to excessive migration of consumers between the Licensees, there is a possibility of under-recovery/over-recovery of RAs by a Licensee, leading to distortions in tariff for future years. Besides, the principles and mechanisms for ensuring recovery of Regulatory Assets need to be determined in accordance with the Tariff Policy, 2016, as reproduced below:

> *"8.2.2 The facility of a regulatory asset has been adopted by some Regulatory Commissions in the past to limit tariff impact in a particular year. This should be done only as a very rare exception in case of natural calamity or force majeure conditions and subject to the following:*
>
> *a. Under business as usual conditions, no creation of Regulatory Assets shall be allowed;*
>
> *b. Recovery of outstanding Regulatory Assets along with carrying cost of Regulatory Assets should be time bound and within a period not exceeding seven years. The State Commission may specify the trajectory for the same."*

Therefore, the Commission may limit the creation of RAs in the ensuing years of the 3rd Control Period. Consumers with a particular Licensee at the time of determination of tariff by the Commission should continue to pay the RAC to the same Licensee, even if he has in the meantime migrated to another Licensee, till the Commission reviews the tariff. This will ensure that the RA created with a Licensee is recovered from those consumers who have consumed electricity at the time of creation of such RA.

TPC-D has also proposed a lock-in period (say two years) for migration of consumers between Licensees, which will enable consistent and sustainable operations of the Licensees and also ensure healthy competition between them, benefiting all stake-holders.

The category-wise RAC proposed by TPC-D is shown in the Table below:

Table 6-33: RAC proposed by TPC-D for 3rd Control Period (Rs/kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT Category				
HT I-Industry	0.63	0.77	0.65	0.00
HT II-Commercial	0.64	0.72	0.59	0.00
HT III-Group Housing	0.59	0.68	0.55	0.00
HT IV-Temp Supply	0.91	1.16	1.02	0.00
HT V(A) - Railways				
-22/33 kV	0.56	0.64	0.53	0.00
-100 kV				
HT V(B)-Metro & Monorail	0.55	0.62	0.50	0.00
HT VI - Public Services				
(A)- Govt Edu.Inst. & Hospitals	0.54	0.59	0.47	0.00
(B)- Others	0.59	0.68	0.57	0.00
LT Category				
LT I – BPL	0.03	0.00	0.01	0.00
LT -I Residential				
0-100	0.13	0.20	0.20	0.00
101-300	0.32	0.50	0.46	0.00
301-500	0.55	0.67	0.57	0.00
> 500	0.68	0.83	0.71	0.00
LT II - Commercial				
(a) 0-20 kW	0.53	0.60	0.48	0.00
(b) 20-50 kW	0.44	0.43	0.32	0.00
(c) >50kW	0.53	0.57	0.47	0.00
LT III-Industry (0-20kW)	0.54	0.66	0.59	0.00
LT IV-Industry (>20kW)	0.49	0.55	0.45	0.00
LT V-Advertising & Hoarding	0.00	1.19	1.03	0.00

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
LT VI-Street Light	0.47	0.42	0.52	0.00
LT VII -Temporary Supply				
(A)-Temporary Supply Religious	0.34	0.42	0.37	0.00
(B)-Temporary Supply Others	0.99	1.25	1.08	0.00
LT VIII – Crematorium	0.00	0.00	0.00	0.00
LT IX -Public Service				
(A) - Govt Edu.Inst. & Hospitals	0.55	0.65	0.58	0.00
(B)- Others	0.55	0.69	0.61	0.00

Commission's Analysis and Ruling

In the absence of a target for change-over of consumers, any actual migration cannot be termed as 'excessive' as suggested by TPC-D.

TPC-D has proposed that the consumers 'belonging' to a Licensee at the time of tariff determination should continue to pay the RAC to the same Licensee till the next tariff revision. However, consumers do not 'belong' to any Licensee, and are free to opt for supply from any Licensee. Further, this concept of consumers paying RAC only to the Wire Licensee has already been discussed in the MTR Order as follows:

> *"b) Creation and recovery of RAC -*
>
> *Earlier in this Order, the Commission has discussed the creation of the Regulatory Asset and its recovery in four years. The Commission does not agree with TPC-D's contention that both direct and change-over consumers are responsible for the creation of the Regulatory Assets. Accepting that contention would imply that the change-over consumer, irrespective of whether he remains a change-over consumer or opts for reverse change-over, would end up paying the RAC of RInfra-D as well as of TPC-D, which cannot be permitted. If the change-over consumer is asked to bear the RAC of TPC-D also, it would mean that, with every migration and reverse migration, the change-over consumer would become liable to pay the RAC of both Licensees. In accordance with the settled position, which has also been upheld by ATE, the change-over consumer has to pay the RAC of only the Wire Licensee to whom he is physically connected."*

The Commission has also not accepted TPC-D's proposal for a lock-in period (say two years) for migration of consumers between Licensees, as that would stifle competition and choice. In practice, the consumer will exercise his option to change-over only after considering the incidence of tariff revision, which is designed to take place once in 2 years in the 3rd Control Period as per the MYT Regulations, 2015.

The Commission has accepted the method proposed by TPC-D for spreading the recovery of the total RA amount across different consumer categories, i.e., in proportion to the ratio of Energy Charges of the respective categories to the overall weighted average Energy Charge of TPC-D for a particular year, considering sales to both direct and change-over consumers. The category-wise RAC approved by the Commission for each year of the Control Period is summarised subsequently in this Section, along with other Charges.

5. Charges Applicable to Open Access Consumers

TPC-D's Submission

The Charges applicable to OA consumers to ensure prudent recovery of costs are as follows:

i. Wheeling Charge
ii. Regulatory Asset Charges
iii. Additional Surcharge
iv. Cross Subsidy Surcharge (CSS) – not applicable to Captive/Group Captive consumers.

With respect to the Additional Surcharge and CSS, TPC-D has proposed as under:

Additional Surcharge

In order to avoid undue burden on direct consumers, it is necessary to determine an Additional Surcharge to ensure recovery of all the components other than the cross-subsidy, which would become an unavoidable obligation and incidence to bear fixed costs consequent to consumers migrating on OA. Section 42(4) of the EA, 2003, Clause 8.5.4 of Tariff Policy, 2016, and Regulation 14.8 of the DOA Regulations, 2016 provide for the recovery of Additional Surcharge. The Additional Surcharge would comprise the following components:

i. Capacity Charge of Power Procurement

When a consumer moves out on OA, there may be a saving of the variable cost of power procurement. However, the Capacity Charge component is an unavoidable obligation of TPC-D as per the PPA with its power suppliers. The Capacity Charges are currently recovered partly through the Fixed/Demand charges for each category and partly through the Energy Charges (EC). Once the consumers migrate out on OA, the portion of Capacity Charges recovered through Energy Charges would not be paid by such consumers. Since it is also not recovered through CSS, it would remain unrecovered, and would either burden direct consumers in truing-up or would result in creation of RAs, which would again burden other consumers in future. Hence, the Capacity Charges of power procurement per unit should be allowed to be recovered separately from OA consumers.

Since, as per the DOA Regulations, 2016, the consumer has an option to retain his Contract Demand with the Licensee, TPC-D has not proposed to include the proportion of Capacity Charge recovered through the Contract Demand. The recovery of Capacity Charge has been proposed only towards the proportion of Capacity Charge which is to be recovered through the Energy Charge for the units transferred to OA. The calculation of Capacity Charge is shown in the Table below:

Table 6-34: Proposed Capacity Charge to be recovered through Energy Charge in 3rd Control Period as submitted by TPC-D

Particulars		Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
TPC-G Fixed Cost	a	Rs. Cr.	666	675	608	614
Estimated Sales	b	MU	4867	5143	5476	5838
Capacity Charges	c=a*10/b	Rs./kWh	1.37	1.31	1.11	1.05
Proposed % recovery of Capacity Charge through Fixed/Demand charges	d	%	34%	42%	54%	62%
Proposed % recovery of Capacity Charge through Energy Charges	e	%	66%	58%	46%	38%
Proposed portion of Capacity Charge to be recovered through the Energy Charge	**f=c*e**	**Rs./kWh**	**0.91**	**0.76**	**0.51**	**0.40**

ii. Consumer Service Charge

Even after a consumer moves out on OA, the Distribution Licensee continues to bear costs towards maintaining the metering infrastructure, Call Centre, Consumer Care Centres, O&M activities of metering, meter reading, billing, bill despatch, collection, vigilance, disconnection, etc., which are calculated under the Fixed Cost of Supply Business. Since all these activities are also carried out for OA consumers, the related costs should also be levied to such consumers, else, it would cause creation of RAs, which would burden the other direct consumers in future. The Consumer Service Charges proposed by TPC-D is shown in the Table below:

Table 6-35: Consumer Service Charge Proposed by TPC-D for Open Access consumers during the Control Period

Particulars		Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Supply Business Fixed Cost	a	Rs. Cr.	165	182	197	210
Estimated Sales	b	MU	4867	5143	5476	5838
Consumer Service Charges	**c=a*10/b**	**Rs./kWh**	**0.34**	**0.35**	**0.36**	**0.36**

iii. Reliability Charges

The Reliability Charges proposed by TPC-D are shown in the Table below:

Table 6-36: Reliability Charge Proposed by TPC-D for Open Access consumers during the Control Period

Particulars		Units	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Stand-by Charges	a	Rs. Cr.	89	94	100	107
Estimated Sales	b	MU	4867	5143	5476	5838
Reliability Charges	**c=a*10/b**	**Rs./kWh**	**0.18**	**0.18**	**0.18**	**0.18**

Therefore, the Additional Surcharge proposed by TPC-D to be levied on OA consumers is shown in the Table below:

Table 6-37: Additional Surcharge proposed by TPC-D for Open Access consumers in 3rd Control Period (Rs/kWh)

Particulars		FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Capacity Charges	c	0.91	0.76	0.51	0.40
Consumer Service Charges	a	0.34	0.35	0.36	0.36
Reliability Charges	b	0.18	0.18	0.18	0.18
Additional Surcharge	**d=a+b+c**	**1.43**	**1.29**	**1.05**	**0.94**

Commission's Analysis and Ruling

The following is the legal framework for determination of Additional Surcharge for OA transactions:

Section 42 (4) of the EA, 2003 stipulates that:

"(4) Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply."

Regulation 14.8 of the DOA Regulations, 2016 specifies as follows:

"14.8. Additional Surcharge

a. An Open Access consumer receiving supply of electricity from a person other than the Distribution Licensee of his area of supply shall pay to the Distribution Licensee an Additional Surcharge on the charges of wheeling and Cross-Subsidy Surcharge to meet the fixed cost of such Distribution Licensee arising out of its obligation to supply, as provided in sub-section (4) of Section 42 of the Act.

*b. The Additional Surcharge shall become applicable only when, due to the Open Access being granted or having been granted, **the obligation of the Distribution Licensee in terms of power purchase commitments has been and continues to be stranded,** or there is an unavoidable obligation and incidence to bear fixed costs consequent to such commitments...*

c. The Commission shall determine the category-wise Additional Surcharge to be recovered by the Distribution Licensee from an Open Access consumer, based on the following principles:

i. The cost must have been incurred by or be expected, with reasonable certainty, to be incurred by the Distribution Licensee on account of such Consumer; and

*ii. **The cost has not been or cannot be recovered** from such Consumer, or **from other consumers who have been given supply from the same assets or facilities, through Wheeling Charges, stand-by charges or other charges approved by the Commission**:*

Provided that such Additional Surcharge shall be applicable to all Consumers who have availed Open Access to receive supply from a source other than the Distribution Licensee to which they are connected..."

Clause 8.5.4 of the Tariff Policy dated 28 January, 2016 stipulates that:

*"8.5.4 The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable **only if it is conclusively demonstrated that** the **obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded**, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges."*

Thus, for levy of Additional Surcharge, the following conditions have to be fulfilled:

a) It needs to be conclusively demonstrated that the obligation of TPC-D in terms of existing power purchase commitments has been and continues to be stranded;

b) The cost has not been or cannot be recovered from such consumer, or from other consumers who have been given supply from the same assets or facilities, through Wheeling Charges, Stand-by charges or other charges approved by the Commission.

In the present case, neither of the above conditions are fulfilled, as explained below:

a) The per-unit Capacity Charge of power procurement of TPC-D is not a stranded cost, as the capacity itself is not a stranded capacity. The Stand-by Charges and fixed cost of Unit 6 cannot be considered as stranded costs and recovered from OA consumers. The fact that Unit 6 generation capacity is called upon only during system emergencies at the instructions of MSLDC on account of its high generation cost cannot be a reason to consider its fixed cost as a stranded cost. The OA consumers are not responsible for the incidence of the fixed cost of Unit 6 and Stand-by Charges.
b) Further, the third component of the Additional Surcharge proposed by TPC-D, i.e., Consumer Service Charge, for recovery of costs towards maintaining the metering infrastructure, Call Centre, Consumer Care Centres, O&M activities of metering, meter reading, billing, bill despatch, collection, vigilance, disconnection, etc., from the OA consumers is also not mandated under the DOA Regulations, 2016, which specifies the various charges that can be levied on OA consumers. Moreover, as explained earlier, these costs are subsumed under O&M expenses or other charges allowed to be levied on OA consumers.

In view of the above, the Commission has rejected TPC-D's request for approval of Additional Surcharge to be levied on OA consumers.

Cross-Subsidy Surcharge

TPC-D's Submission

In the previous MYT Order, the Commission had determined the CSS applicable to different consumer categories for the earlier MYT Period (FY 2013-14 to FY 2015-16) based on the methodology suggested in the Tariff Policy dated 6 January, 2006. However, in the MTR Order, the Commission re-determined CSS using a modified formula by which the category-wise CSS for FY 2015-16 was computed as the difference between the ABR of the respective categories as approved in the Order, and the ACoS of TPC-D for FY 2015-16. The Commission had also capped the CSS applicable to 75%.

TPC-D has raised the following issues arising from the above CSS formula adopted by the Commission in the MTR Order:

i. It increased the cross-subsidy contributed by subsidising categories and decreased the tariff contribution made by subsidised categories, thereby burdening the existing direct consumers.

ii. TPC-D did not get the opportunity to redesign its MTR tariff proposal by incorporating the change in CSS adopted by the Commission.

iii. Loss in revenue of upto 2% of ARR for FY 2015-16 due to increased OA.

iv. The additional burden due to loss of revenue will be loaded on existing consumers and force them to move to the other parallel Licensees. This disturbs the level playing field in the market and violates the principles underlying Sections 66 and 60 of the EA, 2003.

v. As a result of the under-recovery, an additional burden would be put on consumers and will also result in a huge Revenue Gap for TPC-D. In case the tariff is not increased, the RA of TPC-D will increase substantially, thereby burdening the consumers with a higher Revenue Gap as well as carrying cost on it.

If the Revenue Gap is to be recovered from consumers, it would result in a tariff shock (tariff impact as high as Rs. 0.18/kWh). In turn, more and more consumers will opt for OA or other suppliers, thereby making the Distribution Business unviable.

Therefore, for the 3rd Control Period, TPC-D has proposed CSS in line with the Tariff Policy, 2016. While calculating the CSS as per the formula in the Tariff Policy, 2016, it has considered the following:

T = ABR – RAC

Distribution Charge = Fixed Cost of Supply Business (FCSB) + Stand-by Cost (SC)
Therefore, D = per unit Transmission Charge (TC) + per unit FCSB + per unit SC + per unit Wheeling Charge (WC)

C consists of weighted average of fixed components of Capacity Charges of various generation sources as well as variable components of power procurement from various sources

L = Transmission Loss + Distribution Loss

R = carrying cost on past recoveries for each year of the 3rd Control Period, as shown in the Table below:

Table 6-38: Carrying Cost of Regulatory Assets as submitted by TPC-D

Particulars		**Units**	**FY 2016-17**	**FY 2017-18**	**FY 2018-19**	**FY 2019-20**
Carrying Cost of RA	a	Rs. Cr.	102	31	10	0
Estimated Sales	b	MU	4867	5143	5476	5838
Per Unit Carrying Cost of RA	**c=a*10/b**	**Rs./kWh**	**0.21**	**0.06**	**0.02**	**0.00**

Based on the above,

T = C/(1-L/100) + SC + TC + FCSB + WC + cross-subsidy (CS) for the respective consumer categories.

The CSS formula prescribed in the Tariff Policy, 2016 is:

> *"S= T – [C/ (1-L/100) + D + R]*
>
> *Where,*
>
> *S is the surcharge*
> *T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation*
> *C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation**
> *D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level*
> *L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level*
> *R is the per unit cost of carrying regulatory assets."*

* Since the tariffs of subsidising categories are two-part tariffs, T is actually equal to the ABR minus the RAC, which is additionally allowed over and above the determined tariffs. T is computed as the total expected Revenue from the respective categories less Revenue from RAC, divided by the total sales of that category.

Substituting the above values in the Formula, the equation arrived at is:

S = [C/ (1-L/100) + SC + TC + FCSB + WC] + CS – [C/ (1-L/100) +SC + TC + FCSB + WC +R]

Thus, the CSS formula is designed in such a manner that all the components of costs other than the cross-subsidy amount cancel out and are not recovered through the CSS.

As per the 2nd proviso of Section 42 (2) of the EA, 2003, the CSS has to be commensurate with the current level of cross-subsidy in the area of supply. The CSS is not intended to subsume costs relating to any of the services provided by the Licensee to the consumer even when he avails of OA.

Based on the above considerations, the category-wise CSS proposed by TPC-D is shown in the Table below:

Table 6-39: Cross-Subsidy Surcharge proposed by TPC-D for 3rd Control Period (Rs./kWh)

Consumer Categories	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT I - Industry	2.09	0.76	0.75	0.74
HT II - Commercial	2.79	1.08	1.00	0.84
HT III - Group Housing Society	2.48	1.12	1.07	0.78
HT IV - Temporary Supply	5.25	3.45	3.46	3.59
HT V - Railways				
22/33 kV	2.16	0.75	0.73	0.42
100kV				
HT V(B) - Railways Metro & Monorail	2.17	0.76	0.75	0.42
HT VI - Public Services				
a) Govt. Edu. Inst. & Hospitals	1.47	0.03	0.00	0.00
b) Others	1.72	0.14	0.06	0.00
LT CONSUMERS				
LT I - Residential (BPL)	0.00	0.00	0.00	0.00
LT I - Residential				
0-100 units	0.00	0.00	0.00	0.00
101-300 units	0.00	0.00	0.00	0.00
301-500 Units	1.34	0.00	0.00	0.00
Above 500 units (balance units)	2.73	1.12	0.90	0.52
LT II - Commercial				

Consumer Categories	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
- Upto 20 kW	1.53	0.06	0.00	0.00
- > 20 kW &< 50kW	1.78	0.25	0.20	0.00
- > 50kW	2.02	0.42	0.40	0.12
LT III - Industry < 20 kW	1.11	0.00	0.00	0.00
LT IV - Industry > 20kW	1.40	0.09	0.06	0.05
LT V - Advertisement & Hoardings, incl. floodlights & neon signs	9.54	6.32	6.40	6.64
LT VI – Streetlights	0.27	0.00	0.00	0.00
LT VII – Temporary Supply				
TSR – Temporary Supply Religious	0.00	0.00	0.00	0.00
TSO – Temporary Supply Others	6.39	4.32	4.18	4.17
LT VIII – Crematoriums and Burial Grounds	0.00	0.00	0.00	0.00
LT IX - Public Services				
a) Govt. Edu. Inst. & Hospitals	1.34	0.00	0.00	0.00
b) Others	1.22	0.00	0.00	0.00

Commission's Analysis and Ruling

The DOA Regulations, 2016 do not specify any Formula for computation of the CSS, and only state that the CSS shall be as determined by the Commission in its relevant Orders:

> *"14.7. Cross Subsidy Surcharge*
>
> *...d. The Cross-Subsidy Surcharge payable to the Distribution Licensee by a Consumer shall be as determined by the Commission in the Tariff Order in respect of the Distribution Licensee or any other applicable Order:..."*

The Commission has adopted the formula stipulated in the new Tariff Policy, 2016 for determining the CSS, with some modifications. The components of the CSS formula considered by the Commission for the 3rd Control Period are as below:

"T" is the revised ABR of the respective consumer categories, excluding the category-wise RAC approved subsequently in this Order, as per the approach adopted by the Commission in the past, and which has been upheld by the ATE.

"C" is the weighted average cost of power purchase for each year, including RPO but excluding Transmission Charges, Stand-by Charges, and MSLDC Charges.

"L" is the aggregate of Transmission and Distribution Losses, expressed as a percentage applicable to the relevant voltage level. The Distribution Losses considered at HT and LT levels, as elaborated in the calculation of VCoS, are shown in the Table below. The Commission has not considered the Commercial Losses, in line with its past approach as well as the DOA Regulations, which specify that only Technical Losses shall be levied on OA transactions.

Table 6-40: Distribution Loss for HT & LT in FY 2016-17 to FY 2019-20 as approved by Commission

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT Loss	0.90%	0.90%	0.90%	0.90%
LT Loss	1.25%	1.24%	1.23%	1.22%

The Transmission Loss considered by the Commission for both HT and LT levels is shown in the Table below:

Table 6-41: Transmission Loss for FY 2016-17 to FY 2019-20 as approved by Commission

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Transmission Loss	3.92%	3.92%	3.92%	3.92%

"D" is the aggregate of Transmission and Wheeling Charges applicable to the relevant voltage level. The Commission has not accepted TPC-D's submission that "D" should include the Stand-by Charges as these are part of the Supply ARR rather than the Wires ARR. The Transmission Charge and Wheeling Charge approved by the Commission for the 3rd Control Period is as shown in the Table below:

Table 6-42: Aggregate Transmission and Wheeling Charges for HT & LT for FY 2016-17 to FY 2019-20 as approved by Commission (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT				
Wheeling Charge	0.80	0.87	0.88	0.92
Transmission Charge (Transmission Charges in Rs. crore*10/sales in MU)	0.44	0.55	0.62	0.62
Total	**1.24**	**1.42**	**1.49**	**1.54**
LT				
Wheeling Charge	1.77	1.83	1.81	1.86

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Transmission Charge (Transmission Charges in Rs. crore*10/sales in MU)	0.44	0.55	0.62	0.62
Total	**2.21**	**2.37**	**2.43**	**2.49**

"R" is the per unit carrying cost. The per unit carrying cost for each year shown in the Table below is computed by separating the past Revenue Gap being recovered each year into principal and interest components.

Table 6-43: Per Unit Carrying Cost for FY 2016-17 to FY 2019-20 as approved by Commission (Rs./kWh)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Per unit Carrying Cost	0.24	0.16	0.06	-

In its Petition, although TPC-D has ostensibly purportedly proposed the CSS in accordance with the Tariff Policy formula, it has not capped it at 20% of the tariff as envisaged in the Policy. The CSS proposed by TPC-D ranges from 3% to 56% of the proposed tariff. The Commission has ensured that the category-wise CSS does not exceed 20% of the tariff (ABR without RAC) applicable to the respective categories. The category-wise CSS approved for each year of the Control Period is as shown in the Table below:

Table 6-44: Approved CSS for FY 2016-17 to FY 2019-20 (Rs./kWh)

Consumer Categories	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
HT Category				
HT I - Industry	1.28	1.05	1.43	1.26
HT II - Commercial	1.57	1.57	1.62	1.54
HT III - Group Housing Society (Residential)	1.11	1.11	1.50	1.13
HT IV - Public Water Works	0.54	0.44	0.71	0.17
HT V - Railways, Metro & Monorail	0.84	0.70	1.08	0.85
HT VI - Public Services				
a) Govt. Edu. Inst. & Hospitals	0.50	0.49	0.80	0.92
b) Others	1.46	1.47	1.52	1.48
HT VII - Temporary Supply	1.56	1.56	1.60	1.55
LT Category				
LT I (A) - Residential (BPL)	0.00	0.00	0.00	0.00
LT I (B) - Residential				
- S1 (0-100 units)	0.00	0.00	0.00	0.00
- S2 (101-300 units)	0.00	0.00	0.00	0.19
- S3 (> 301-500 Units)	1.36	1.74	1.77	1.78
- S4 (Above 500 units (balance units)	1.95	2.10	2.14	2.07

Consumer Categories	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
LT II - Commercial				
(A) - Upto 20 kW	1.93	2.09	2.22	2.14
(B) - > 20 kW &≤ 50kW	1.72	1.50	1.41	0.51
(C) - > 50kW	1.72	1.76	1.66	1.02
LT III (A) Industry ≤ 20 kW	0.80	0.84	0.89	0.09
LT III (B) - Industry > 20kW	0.78	0.94	0.71	0.00
LT IV - Public Water Works	0.00	0.00	0.00	0.00
LT V - Advertisement & Hoardings, incl. floodlights & neon signs	2.17	2.14	1.94	1.80
LT VI – Streetlights	0.66	0.63	0.57	0.55
LT VII – Temporary Supply				
- TSR – Temporary Supply Religious	0.00	0.00	0.00	0.00
- TSO – Temporary Supply Others	1.47	1.31	1.06	0.65
LT VIII – Crematoriums and Burial Grounds	0.00	0.00	0.00	0.00
LT IX - Public Services				
(A) Govt. Edu. Inst. & Hospitals	0.00	0.00	0.00	0.00
(B) Others	0.91	0.84	0.98	0.04

The Commission is of the view that, with the rationalisation of the Distribution OA Regulations in 2016, adoption of the CSS Formula broadly in accordance with the Tariff Policy (which also provides for a cap of 20% of the applicable tariff), and the preferential tariff approved for purchase from RE sources, no further concession needs to be provided to the RE sector in terms of a discounted CSS levy. Hence, the Commission has decided that, from 1 April, 2017 (FY 2017-18) onwards, in case an OA consumer purchases power from a RE source, the full CSS as determined above shall be payable. However, for FY 2016-17 (till 31 March, 2017), only 25% (as at present) of the above CSS shall be payable, in order to provide a sufficient transition period to OA consumers taking power from RE sources to make future purchase decisions in an informed manner.

The CSS approved as above shall be applicable on the energy actually consumed by the change-over/OA consumer, i.e., on the metered consumption.

6.10 RATIONALISATION OF TARIFF CATEGORIES

The Commission has undertaken the following rationalisation of the Tariff Schedule and harmonisation of the definitions and applicability of each tariff category across the Distribution Licensees in Maharashtra, including TPC-D:

a) The Commission has created a separate category for Public Water Works (PWW), as has been the case in MSEDCL for long, under the HT and LT categories, with tariff close to the ACOS.
b) The HT - Bulk Supply Residential has been renamed as HT Group Housing Society (Residential). The applicability of HT Group Housing Society (Residential) has been approved by the Commission in accordance with the Removal of Difficulties (Eighth) Order, 2005 issued under the EA, 2003.
c) The Commission has applied the LT Residential category tariff to all those eligible irrespective of whether supply is taken at LT or HT.
d) The applicability of the Below Poverty Line (BPL) tariff category has been extended to Residential consumers who have a Sanctioned Load upto 0.25 kW from the existing level of 0.1 kW, in line with the revised dispensation under the Deen Dayal Upadhyay Grameen Jyoti Yojana, without change in the consumption limit.
e) Considering the emerging transport models in Maharashtra, the Commission has brought together the tariffs for all HT Railways, Metro and Monorail operations, under the HT V category. The difference in ABR between RInfra-D and TPC-D for this category has been reduced, so that there is some parity between the two.
f) The LT III and LT IV Industrial categories have been merged by creating 2 sub-categories, viz., LT III (A) for Sanctioned Load 0-20 kW and LT III (B) for Sanctioned Load above 20 kW.
g) The newly created PWW category has been numbered as LT IV and HT IV.
h) The HT IV Temporary category has been re-numbered as HT VII.
i) The Agricultural category has been created, with two sub-categories, viz., LT X (A) for Agriculture Pumpsets, and LT X (B) Agriculture Others for pre-cooling plants and cold storage units for agricultural products, Poultries, High-technology Agriculture, Floriculture, Horticulture, Aquaculture, etc.
j) Telecommunications Towers shall be covered under the Commercial category, unless specifically included in the IT & ITeS Policy of the Government of Maharashtra for coverage under the Industrial category.
k) Start-up power requirement for Power Plants may be taken from the Distribution Licensee where the Power Plant is located, either through a separate connection or through the existing evacuation infrastructure. In case a separate connection is taken, all the terms and conditions applicable to any consumer shall be applicable. In case a separate connection is not taken, the Power Plant shall have to enter into an agreement with the Distribution Licensee for contracting the demand. In either case, the Demand Charge shall be at the rate of 25% of the rates approved for HT Industry category to the extent of the start-up demand contracted by the Power Plant for Black Start, or start-up after Forced or Planned Outage of the Power Plant. However, this dispensation shall not be applicable to Power Plants having PPAs with the

Distribution Licensees under Section 62 of the EA, 2003, which provide for netting off the energy drawn by the Generator with the energy injected into the grid.

l) In case a consumer exceeds the Contract Demand, the penal provisions stipulated in the Tariff Schedule apply, i e., the consumer has to pay Demand Charges at 2.5 times the normal Demand Charge on the excess quantum. It is clarified that, consequently, the consumer shall not be liable for any other action under Section 126 of the EA, 2003 since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. Wheeling Charges and RAC have no nexus with Load Factor.

It may also be noted that all previous clarifications given by the Commission through its various Orders continue to be applicable, unless they are specifically contrary to anything that has been stated in this Order, in which case the clarifications given in this Order shall prevail.

6.11 REVISED TARIFFS EFFECTIVE FROM 1 OCTOBER, 2016 (FY 2016-17)

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
	LOW TENSION CATEGORIES				
1	**LT I (A) - Residential (BPL)**	Rs. 10	1.77	0.60	0.15
	LT I (B) – Residential				
	0-100 units	Rs. 50 $$	1.77	0.90	0.23
	101-300 units	Rs. 80 $$	1.77	2.70	0.70
	301 to 500 units		1.77	6.20	1.60
	Above 500 units (balance units)	Rs. 105 $$	1.77	8.00	2.07
2	**LT II - LT Commercial**				
(A)	≤ 20 kW	Rs. 280	1.77	6.40	1.65
(B)	> 20 kW and ≤ 50 kW	Rs. 230 per kVA	1.77	5.00	1.29
(C)	> 50 kW		1.77	6.20	1.60
3	**LT III - LT Industry**				
(A)	Upto 20 kW load	Rs. 280	1.77	5.80	1.50
(B)	Above 20 kW	Rs. 230 per kVA	1.77	5.40	1.39
4	**LT IV – Public Water Works**	Rs. 230 per kVA	1.77	4.00	1.00
5	**LT V - Advertisements & Hoardings**	Rs. 460	1.77	8.40	2.17
6	**LT VI – Streetlights**	Rs. 230 per kVA #	1.77	4.80	1.24
7	**LT VII – Temporary Supply**				
(A)	TSR – Temporary Supply - Religious	Rs 230	1.77	3.00	0.77
(B)	TSO – Temporary Supply -	Rs 460 $$$	1.77	6.40	1.65

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
	Others				
8	**LT VIII – Crematoriums and Burial Grounds**	Rs 230	1.77	3.60	0.93
9	**LT IX – Public Services**				
(A)	Government Hospitals & Educational Institutions	Rs 280	1.77	4.50	1.16
(B)	Others	Rs 280	1.77	6.10	1.57
10	**LT X - Agriculture**				
(A)	Pumpsets	Rs 30 per HP	1.77	2.40	0.50
(B)	Others	Rs. 75 per kW	1.77	3.90	0.70
	TOD Tariffs (in addition to above base tariffs) – compulsory for LT II (B) and (C), LT III (B), LT IV and LT IX (A) and (B) categories, and optional for LT II (A) and LT III (A) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	
	HIGH TENSION CATEGORIES				
11	**HT I – Industry**	Rs 230 per kVA	0.80	6.50	1.68
12	**HT II – Commercial**	Rs 230 per kVA	0.80	6.80	1.76
13	**HT III – Group Housing Society (Residential)**	Rs 230 per kVA	0.80	5.40	1.39
14	**HT IV - Public Water Works**	Rs 230 per kVA	0.80	5.50	1.42
15	**HT V - Railways, Metro & Monorail**	Rs 230 per kVA	0.80	5.10	1.32
16	**HT VI – Public Services**		0.80		
(A)	Government Hospitals & Educational Institutions	Rs 230 per kVA	0.80	5.40	1.39
(B)	Others	Rs 230 per kVA	0.80	6.65	1.72
17	**HT VII – Temporary Supply**	Rs 460 per connection$$$	0.80	7.10	1.83
	TOD Tariffs (in addition to above base tariffs) for HT I, HT II, HT IV, and HT VI (A) and (B) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	

Notes:

1. Fuel Adjustment Cost will be applicable to all consumers and will be charged over the above tariffs, on the basis of the FAC formula specified by the Commission, and computed on a monthly basis. The FAC for the month of October, 2016 shall be levied after prior approval of the Commission, in accordance with the first proviso to Regulation 10.2 of the MYT Regulations, 2015.
2. $$: Fixed Charge of Rs. 105 per month will be levied on residential consumers availing 3 phase supply. Additional Fixed Charge of Rs. 105 per 10 kW load or part thereof above 10 kW load shall also be payable.
3. $$$: Additional Fixed Charge of Rs. 230 per 10 kW load or part thereof above 10 kW load shall also be payable.
4. #: Street lighting having 'automatic timers' for switching 'on/off' would be levied Demand Charges on the lower of the following:
   a) 50% of the Contract Demand
   b) Actual Recorded Demand

The detailed computation of category-wise revenue with revised tariffs for FY 2016-17 is set out at **Annexure I** of this Order.

The approved Tariff Schedule for FY 2016-17 is given at **Annexure VI**.

6.12 REVISED TARIFFS EFFECTIVE FROM 1 APRIL, 2017 (FY 2017-18)

S. No..	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
	LOW TENSION CATEGORIES				
1	**LT I (A) - Residential (BPL)**	Rs. 10	1.83	0.60	0.15
	LT I (B) – Residential				
	0-100 units	Rs. 50 $$	1.83	1.20	0.30
	101-300 units	Rs. 80 $$	1.83	3.30	0.83
	301 to 500 units		1.83	6.70	1.69
	Above 500 units (balance units)	Rs. 105 $$	1.83	8.70	2.19
2	**LT II - LT Commercial**				

S. No..	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
(A)	≤ 20 kW	Rs. 290	1.83	6.20	1.56
(B)	> 20 kW and ≤ 50 kW	Rs. 240 per kVA	1.83	4.90	1.23
(C)	> 50 kW		1.83	6.30	1.59
3	**LT III - LT Industry**				
(A)	Upto 20 kW load	Rs. 290	1.83	5.90	1.49
(B)	Above 20 kW	Rs. 240 per kVA	1.83	5.60	1.41
4	**LT IV – Public Water Works**	Rs. 240 per kVA	1.83	3.70	0.95
5	**LT V - Advertisements & Hoardings**	Rs. 470	1.83	8.20	2.07
6	**LT VI – Streetlights**	Rs. 240 per kVA #	1.83	4.80	1.21
7	**LT VII – Temporary Supply**				
(A)	**TSR – Temporary Supply - Religious**	Rs 240	1.83	3.10	0.78
(B)	**TSO – Temporary Supply - Others**	Rs 470$$$	1.83	6.30	1.59
8	**LT VIII – Crematoriums and Burial Grounds**	Rs 240	1.83	4.10	1.03
9	**LT IX – Public Services**				
(A)	Government Hospitals & Educational Institutions	Rs 290	1.83	4.30	1.08
(B)	Others	Rs 290	1.83	6.05	1.52
10	**LT X - Agriculture**				
(A)	Pumpsets	Rs 30 per HP	1.83	2.50	0.50
(B)	Others	Rs. 75 per kW	1.83	3.90	0.80
	TOD Tariffs (in addition to above base tariffs) – compulsory for LT II (B) and (C), LT III (B), LT IV and LT IX (A) and (B) categories, and optional for LT II (A) and LT III (A) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	
	HIGH TENSION CATEGORIES				
11	**HT I – Industry**	Rs 240 per kVA	0.87	6.30	1.59
12	**HT II – Commercial**	Rs 240 per kVA	0.87	6.70	1.69
13	**HT III – Group Housing Society (Residential)**	Rs 240 per kVA	0.87	5.40	1.36

S. No..	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
14	**HT IV - Public Water Works**	Rs 240 per kVA	0.87	5.50	1.39
15	**HT V - Railways, Metro & Monorail**	Rs 240 per kVA	0.87	5.00	1.26
16	**HT VI – Public Services**				
(A)	Government Hospitals & Educational Institutions	Rs 240 per kVA	0.87	5.40	1.36
(B)	Others	Rs 240 per kVA	0.87	6.50	1.64
17	**HT VII – Temporary Supply**	Rs 470 per connection$$$	0.87	7.00	1.76
	TOD Tariffs (in addition to above base tariffs) for HT I, HT II, HT IV, and HT VI (A) and (B) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	

Notes:

1. FAC will be applicable to all consumers and will be charged over the above tariffs, on the basis of the FAC formula specified by the Commission, and computed on a monthly basis.
2. $$: Fixed Charge of Rs. 105 per month will be levied on residential consumers availing 3 phase supply. Additional Fixed Charge of Rs. 105 per 10 kW load or part thereof above 10 kW load shall also be payable.
3. $$$: Additional Fixed Charge of Rs. 240 per 10 kW load or part thereof above 10 kW load shall also be payable.
4. #: Street lighting having 'automatic timers' for switching 'on/off' would be levied Demand Charges on the lower of the following:

    a) 50% of the Contract Demand
    b) Actual Recorded Demand

The detailed computation of category-wise revenue with revised tariffs for FY 2017-18 is set out at **Annexure II of** this Order.

The approved Tariff Schedule for FY 2017-18 is given at **Annexure VII**.

6.13 REVISED TARIFFS EFFECTIVE FROM 1 APRIL, 2018 (FY 2018-19)

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)	Regulatory Asset Charge (Rs/kWh)
	LOW TENSION CATEGORIES				
1	**LT I (A) - Residential (BPL)**	Rs. 10	1.81	0.60	0.14
	LT I (B) – Residential				
	0-100 units	Rs. 55 $$	1.81	1.50	0.36
	101-300 units	Rs. 85 $$	1.81	3.80	0.91
	301 to 500 units		1.81	6.90	1.66
	Above 500 units (balance units)	Rs. 110 $$	1.81	8.90	2.14
2	**LT II - LT Commercial**				
(A)	≤ 20 kW	Rs. 300	1.81	6.20	1.49
(B)	> 20 kW and ≤ 50 kW	Rs. 250 per kVA	1.81	4.80	1.15
(C)	> 50 kW		1.81	5.90	1.42
3	**LT III - LT Industry**				
(A)	Upto 20 kW load	Rs. 300	1.81	5.80	1.39
(B)	Above 20 kW	Rs. 250 per kVA	1.81	5.20	1.25
4	**LT IV – Public Water Works**	Rs. 250 per kVA	1.81	3.50	0.85
5	**LT V - Advertisements & Hoardings**	Rs. 480	1.81	7.20	1.73
6	**LT VI – Streetlights**	Rs. 250 per kVA #	1.81	4.55	1.09
7	**LT VII – Temporary Supply**				
(A)	TSR – Temporary Supply - Religious	Rs 250	1.81	3.30	0.79
(B)	TSO – Temporary Supply - Others	Rs 480 $$$	1.81	5.90	1.42
8	**LT VIII – Crematoriums and Burial Grounds**	Rs 250	1.81	4.35	1.04
9	**LT IX – Public Services**				
(A)	Government Hospitals & Educational Institutions	Rs 300	1.81	3.85	0.92
(B)	Others	Rs 300	1.81	6.00	1.44
10	**LT X - Agriculture**				
(A)	Pumpsets	Rs 30 per HP	1.81	2.70	0.50
(B)	Others	Rs. 75 per kW	1.81	4.10	0.70
	TOD Tariffs (in addition to above base tariffs) – compulsory for LT II (B) and (C), LT III (B), LT IV and LT IX (A) and (B)				

S. No.	**Consumer Category & Consumption Slab**	**Fixed/ Demand Charge per month**	**Wheeling Charges (Rs/kWh)**	**Energy Charge (Rs/kWh)**	**Regulatory Asset Charge (Rs/kWh)**
	categories, and optional for LT II (A) and LT III (A) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	
	HIGH TENSION CATEGORIES				
11	**HT I – Industry**	Rs 250 per kVA	0.88	6.50	1.56
12	**HT II – Commercial**	Rs 250 per kVA	0.88	6.90	1.66
13	**HT III – Group Housing Society (Residential)**	Rs 250 per kVA	0.88	5.80	1.39
14	**HT IV - Public Water Works**	Rs 250 per kVA	0.88	5.60	1.34
15	**HT V - Railways, Metro & Monorail**	Rs 250 per kVA	0.88	5.20	1.25
16	**HT VI – Public Services**				
(A)	Government Hospitals & Educational Institutions	Rs 250 per kVA	0.88	5.50	1.32
(B)	Others	Rs 250 per kVA	0.88	6.70	1.61
14	**HT VII – Temporary Supply**	Rs 480 per connection$$$	0.88	7.20	1.73
	TOD Tariffs (in addition to above base tariffs) for HT I, HT II, HT IV, and HT VI (A) and (B) categories				
	0600 hours to 0900 hours			0.00	
	0900 hours to 1200 hours			0.50	
	1200 hours to 1800 hours			0.00	
	1800 hours to 2200 hours			1.00	
	2200 hours to 0600 hours			-0.75	

Notes:

1. FAC will be applicable to all consumers and will be charged over the above tariffs, on the basis of the FAC formula specified by the Commission, and computed on a monthly basis.
2. $$: Fixed Charge of Rs. 110 per month will be levied on residential consumers availing 3 phase supply. Additional Fixed Charge of Rs. 110 per 10 kW load or part thereof above 10 kW load shall also be payable.
3. $$$: Additional Fixed Charge of Rs. 250 per 10 kW load or part thereof above 10 kW load shall also be payable.

4. #: Street lighting having 'automatic timers' for switching 'on/off' would be levied Demand Charges on the lower of the following:

   a) 50% of the Contract Demand
   b) Actual Recorded Demand

The detailed computation of category-wise revenue with revised tariffs for FY 2018-19 is set out at **Annexure III** of this Order.

The approved Tariff Schedule for FY 2018-19 is given at **Annexure VIII**.

6.14 REVISED TARIFFS EFFECTIVE FROM 1 APRIL, 2019 (FY 2019-20)

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)
	LOW TENSION CATEGORIES			
1	**LT I (A) - Residential (BPL)**	Rs. 10	1.86	0.55
	LT I (B) – Residential			
	0-100 units	Rs. 55 $$	1.86	1.50
	101-300 units	Rs. 85 $$	1.86	3.90
	301 to 500 units		1.86	6.90
	Above 500 units (balance units)	Rs. 110 $$	1.86	8.50
2	**LT II - LT Commercial**			
(A)	≤ 20 kW	Rs. 310	1.86	5.10
(B)	> 20 kW and ≤ 50 kW	Rs. 260 per kVA	1.86	4.00
(C)	> 50 kW		1.86	5.20
3	**LT III - LT Industry**			
(A)	Upto 20 kW load	Rs. 310	1.86	4.95
(B)	Above 20 kW	Rs. 260 per kVA	1.86	4.20
4	**LT IV – Public Water Works**	Rs. 260 per kVA	1.86	3.00
5	**LT V - Advertisements & Hoardings**	Rs. 490	1.86	6.45
6	**LT VI – Streetlights**	Rs. 260 per kVA #	1.86	4.45
7	**LT VII – Temporary Supply**			
(A)	**TSR – Temporary Supply - Religious**	Rs 260	1.86	3.30
(B)	**TSO – Temporary Supply - Others**	Rs 490$$$	1.86	5.45
8	**LT VIII – Crematoriums**	Rs 260	1.86	4.35

S. No.	Consumer Category & Consumption Slab	Fixed/ Demand Charge per month	Wheeling Charges (Rs/kWh)	Energy Charge (Rs/kWh)
	and Burial Grounds			
9	**LT IX – Public Services**			
(A)	Government Hospitals & Educational Institutions	Rs 310	1.86	3.25
(B)	Others	Rs 310	1.86	5.00
10	**LT X - Agriculture**			
(A)	Pumpsets	Rs 30 per HP	1.86	2.50
(B)	Others	Rs. 75 per kW	1.86	3.90
	TOD Tariffs (in addition to above base tariffs) – compulsory for LT II (B) and (C), LT III (B), LT IV and LT IX (A) and (B) categories, and optional for LT II (A) and LT III (A) categories			
	0600 hours to 0900 hours			0.00
	0900 hours to 1200 hours			0.50
	1200 hours to 1800 hours			0.00
	1800 hours to 2200 hours			1.00
	2200 hours to 0600 hours			-0.75
	HIGH TENSION CATEGORIES			
11	**HT I – Industry**	Rs 260 per kVA	0.92	6.25
12	**HT II – Commercial**	Rs 260 per kVA	0.92	6.45
13	**HT III – Group Housing Society (Residential)**	Rs 260 per kVA	0.92	5.10
14	**HT IV - Public Water Works**	Rs 260 per kVA	0.92	5.00
15	**HT V - Railways, Metro & Monorail**	Rs 260 per kVA	0.92	4.90
16	**HT VI – Public Services**			
(A)	Government Hospitals & Educational Institutions	Rs 260 per kVA	0.92	5.50
(B)	Others	Rs 260 per kVA	0.92	6.40
17	**HT VII – Temporary Supply**	Rs 490 per connection$^{\$\$\$}$	0.92	6.90
	TOD Tariffs (in addition to above base tariffs) for HT I, HT II, HT IV, and HT VI (A) and (B) categories			
	0600 hours to 0900 hours			0.00
	0900 hours to 1200 hours			0.50
	1200 hours to 1800 hours			0.00
	1800 hours to 2200 hours			1.00
	2200 hours to 0600 hours			-0.75

Notes:

1. FAC will be applicable to all consumers and will be charged over the above tariffs, on the basis of the FAC formula specified by the Commission, and computed on a monthly basis.
2. $$: Fixed Charge of Rs. 110 per month will be levied on residential consumers availing 3 phase supply. Additional Fixed Charge of Rs. 110 per 10 kW load or part thereof above 10 kW load shall also be payable.
3. $$$: Additional Fixed Charge of Rs. 260 per 10 kW load or part thereof above 10 kW load shall also be payable.
4. #: Street lighting having 'automatic timers' for switching 'on/off' would be levied Demand Charges on the lower of the following:

    a) 50% of the Contract Demand
    b) Actual Recorded Demand

The detailed computation of category-wise revenue with revised tariffs for FY 2019-20 is set out at **Annexure IV** to this Order.

The approved Tariff Schedule for FY 2019-20 is given at **Annexure IX**.

6.15 SCHEDULE OF CHARGES

TPC-D's Submission

TPC-D has not proposed any change in the present Schedule of Charges.

Commission's Analysis and Ruling

As TPC-D has not proposed any revision, the Schedule of Charges approved earlier vide Order dated 28 December, 2012 in Case No. 47 of 2012 will apply for the 3rd Control Period also.

6.16 APPLICABILITY OF REVISED TARIFFS

The revised tariffs approved in this Order will be applicable from 1 October, 2016.

Where there is a billing cycle difference for a consumer with respect to the date of applicability of the revised tariff, the revised tariff should be applied to the consumption on a pro-rata basis. The bills for the respective periods as per the existing and revised tariffs shall be computed based on the pro-rata consumption (units consumed during the respective periods, arrived at on the basis of average unit consumption per day multiplied by the number of days in the respective periods falling under the billing cycle).

The Petition of M/s The Tata Power Company Ltd. (Distribution Business) in Case No. 47 of 2016 stands disposed of accordingly.

Sd/-	Sd/-
(Deepak Lad)	**(Azeez M Khan)**
Member	**Member**

(Ashwani Kumar Sinha)
Secretary

APPENDIX 1

List of Individuals who attended Technical Validation Session held on 21 March, 2016

Sr. No.	Name of Individuals	Institution/Individual
1.	Shri Bhaskar Sarkar	TPC-D
2.	Shri V.R. Shrikhande	TPC-D
3.	Shri. Ashok Sethi	TPC-D
4.	Shri Chintamani Chitnis	TPC-D
5.	Shri Viddesh Raje	TPC-D
6.	Shri Subhadeo Ghosh	TPC-D
7.	Shri Gauarav Lodha	TPC-D
8.	Dr Ashok Pendse	TBIA
9.	Ms Ashwini Chitnis	Prayas
10.	Ms Saumya Vaishnava	Prayas
11.	Shri Santosh Kamath	KPMG
12.	Shri Ravi Chandarkar	KPMG
13.	Shri R. Pillai	TPC-D
14.	Shri. Ganesh	TPC-D
15.	Shri Kartik Kadle	TPC-D
16.	Ms. Ambica gupta	TPC-D
17.	Ms Manasvi Sharma	TPC-D
18.	Ms Swati Mehendale	TPC-D
19.	Ms Shital Khairaya	TPC-D
20.	Shri A.S. Mhapsekar	TPC-D
21.	Shri Rahul Ranade	TPC-D
22.	Shri T.E Shaikh	TPC-D
23.	Shri Kiran Desai	TPC-D
24.	Shri T. Bhaskaran	TPC-D
25.	Shri Manoj Kapse	TPC-D

APPENDIX 2

Attendance List for Public Hearing held on 24 May, 2016

Sr. No.	Name of Individuals	Institution/Individual
1.	Shri. Ashok Sethi	TPC-D
2.	Smt. Ashwini Chitnis	Prayas Energy Group
3.	Shri. N. Ponrathnam	Individual
4.	Shri. Guruprasad Shetty	AHAR
5.	Shri. R.K. Sharma	Mumbai Metro Rail Corporation
6.	Smt. Sonia Shukla	MP Ensystems Advisory Limited
7.	Shri. Randhir Narendra Paralkar	Nationalist Congress Party
8.	Shri. Milind S. Rane	Maharashtra Navnirman Sena
9.	Shri. Kamlesh Ganglani	Individual
10.	Shri. Willie Shirsat	Borivali Dahisar Jagruk Nagarik Manch
11.	Shri. Kamlakar R. Shenoy	Individual
12.	Shri. Pravnd Kumar	MIAL
13.	Shri. Mahaveer Jain	Individual
14.	Shri. Anil B. Chaskar	Parvatibai Pratishthan
15.	Shri. Sachin Kumbhar	Mumbai Metro Rail Corporation
16.	Shri. Manish Dusane	Mumbai Metro Rail Corporation
17.	Shri. K.B. Sharma	Mumbai Metro Rail Corporation
18.	Shri. Anupam Patra	Reliance Infrastructure Limited
19.	Shri. Herois Kambata	Individual
20.	Shri. Harman Preet Singh	MP Ensystems Advisory Limited
21.	Shri. Swathi T.	MP Ensystems Advisory Limited
22.	Shri. Anand K.	NGO
23.	Shri. Moti R.	Individual
24.	Shri. Abhijit Dhamdhere	IPPAI
25.	Shri. Ulhas Chaudhari	Individual
26.	Shri. R. Balakrishnan	Individual
27.	Shri. Anup Shah	Indus Law
28.	Shri. Lalit Venu	Individual
29.	Shri. Swapnil Kolwadkar	MERC
30.	Shri. Sumit Rastogi	MERC
31.	Shri. G.M. Bhagat	BEST
32.	Shri. V.M. Kamat	BEST
33.	Shri. S.S. Jadhav	BEST
34.	Shri. Bilal Shaikh	BEST

Sr. No.	Name of Individuals	Institution/Individual
35.	Shri. Satish A. Jadhav	BEST
36.	Shri. A. Hegdekar	AHAR
37.	Shri. Saumya Vaishnava	Prayas Energy Group
38.	Shri. A.V. Shenoy	Urja Prabodhan
39.	Shri. Sufyan	AHAR
40.	Shri. Farhan	AHAR
41.	Shri. P.P. Karhade	UPK
42.	Smt. Priya Shetty	BSN News
43.	Shri. Kiran Karande	Sakal
44.	Shri. Hemant Apte	MIAL
45.	Shri. Abhijeet Jadhav	MIAL
46.	Shri. Sanjay Bhagwat	BEST
47.	Shri. Ninad Siddhaye	Edelman
48.	Shri. Jaison Rebello	Edelman
49.	Shri. Nikhil Dalal	Individual
50.	Shri. Bhaskar Shetty	AHAR
51.	Shri. S. Fernandes	Efficient Services
52.	Shri. F.V. Fernandes	Efficient Services
53.	Shri. R.J. Naidu	AAP
54.	Shri. Darnji Palan	RDLA
55.	Shri. Bhavesh H. Salimbhai	AAP
56.	Shri. Salim Bhai	AAP
57.	Shri. Shashank Rao	Mid Day
58.	Shri. Mahendra karkera	AHAR
59.	Shri. Bharati Bhandak	Individual
60.	Shri. Vasant Patil	Individual
61.	Smt. Jayshree Patil	Individual
62.	Shri. Rajendra J. Thaekar	Society for Fast Justice
63.	Shri. Salim Matadar	Individual
64.	Shri. J.J. Fadnavis	AAP
65.	Shri. Stanley D'Souza	Individual
66.	Shri. Surindra	CHRI
67.	Shri. Hakim Dasi	AAP
68.	Shri. J.K. Mehta	VIT
69.	Shri. Salil R.	PRW
70.	Shri. Uday Shenoy	AHAR

Sr. No.	Name of Individuals	Institution/Individual
71.	Shri. S.G. Joshi	TPC-D
72.	Shri. Gaurav Lodha	TPC-D
73.	Shri. Pillai Ramachandran	TPC-D
74.	Smt. Yashika Kapoor	TPC-D
75.	Shri. Sunil Joglekar	TPC-D
76.	Shri. V.R. Shrikhande	TPC-D
77.	Shri. T.K. Bhaskaran	TPC-D
78.	Shri. Kiran Desale	TPC-D
79.	Shri. S.A. Vaidya	TPC-D
80.	Shri. J.S. Wadhwa	TPC-D
81.	Shri. S.B. Kundargi	TPC-D
82.	Shri. Ganesh Srinivasan	TPC-D
83.	Shri. Firoz Havaldar	TPC-D
84.	Shri. T.E. Sheltre	TPC-D
85.	Shri. M.D. Salvi	TPC-D
86.	Shri. Arun Puranik	TPC-D
87.	Shri. Gaurav Gautam	TPC-D
88.	Shri. V.T. Narayanan	TPC-D
89.	Shri. Milind Kulkarni	TPC-D
90.	Shri. Abhishek Ramkrishna	TPC-D
91.	Shri. Bhaskar Sarkar	TPC-D
92.	Shri. Amey Mhapsekar	TPC-D
93.	Shri. Kartik Kadle	TPC-D
94.	Shri. Hawa Inamdar	TPC-D
95.	Smt. Swati Mahendale	TPC-D
96.	Smt. Ambika Gupta	TPC-D
97.	Shri. Manas Dharma	TPC-D
98.	Shri. R. Ranade	TPC-D
99.	Shri. A. Bhowmick	TPC-D
100.	Shri. Ranjit Ganguly	TPC-D
101.	Smt. Prajakta Wadke	TPC-D
102.	Shri. Sanjeev Gupta	TPC-D
103.	Shri. Gaurav Manjrekar	TPC-D
104.	Shri. S.H. Dalu	TPC-D
105.	Shri. K.R. Cooper	TPC-D
106.	Shri. V. Raje	TPC-D

Sr. No.	Name of Individuals	Institution/Individual
107.	Shri. Rakesh Inala	TPC-D
108.	Shri. Dhruv Prakash	TPC-D
109.	Shri. Deepak Bhise	TPC-D
110.	Shri. Amol	TPC-D
111.	Smt. Shweta Chidanand	TPC-D
112.	Smt. Madhavi Jimkal	TPC-D
113.	Shri. Deepak Chaudhary	TPC-D
114.	Shri. Chintamani Chitnis	TPC-D
115.	Shri. Abhijeet Sathe	TPC-D
116.	Shri. Ravindra Gawale	TPC-D
117.	Shri. J. K. Nair	TPC-D
118.	Shri. J. Sangwan	TPC-D
119.	Shri. Neeraj Nair	TPC-D
120.	Shri. I. Bakre	TPC-D
121.	Shri. G.S. Kale	TPC-D
122.	Shri. Sagar Gawde	Idam Infrastructure Advisory Pvt. Ltd.

Annexure I: Category-wise Revenue with revised Tariffs for FY 2016-17

Category	No. of consumers			Components of tariff					Sales			Full year revenue excluding Government subsidy (Rs. Crore)						Full year revenue (including subsidy) (Rs. Crore)	Average Billing Rate (Rs/kWh)
	Direct	CO	Total	Fixed Charges (specify part name and unit)	Demand Charges (specify part name and unit)	Energy Charges (specify part name and unit)	RAC	Wheeling Charge	Direct	CO	Total	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Revenue from RAC	Revenue from wheeling charge (Direct)	Total Revenue		
	Nos	Nos	Nos	Rs/Connection /month	Rs/KVA/Month	Rs/kWh	Rs/kWh	Rs/kWh	MU	MU	MU	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs		
HT CUSTOMERS																			
HT I - Industry	**86**	**11**	97	-	230.00	6.50	1.68	0.80	850.44	8.94	859.39		55.53	558.60	142.70	68.45	751.13	751.13	8.74
HT II - Commercial	**143**	**13**	156	-	230.00	6.80	1.76	0.80	597.52	13.00	610.51		61.24	415.15	104.88	48.09	585.76	585.76	9.59
HT III - Group Housing Society (Residentia	**1**	**1**	2	-	230.00	5.40	1.39	0.80	0.32	3.24	3.56		0.45	1.92	0.04	0.03	2.18	2.18	6.11
HT VII - Temporary Supply	**9**	**-**	9	460.00	-	7.10	1.83	0.80	9.28	-	9.28	0.00		6.59	1.70	0.75	8.96	8.96	9.65
HT V - Railways, Metro & Monorail																			
Railways	**2**	**-**	2	-	230.00	5.10	1.32	0.80	156.55	-	156.55		13.05	79.84	20.61	12.60	124.54	124.54	7.96
Metro & Monorail	**2**	**-**	2	-	230.00	5.10	1.32	0.80	6.19	-	6.19		0.78	3.16	0.82	0.50	4.84	4.84	7.81
HT VI - Public Services				-	-	-					-								
a) Govt. Edu. Inst. & Hospitals	**6**	**-**	6	-	230.00	5.40	1.39	0.80	45.32	-	45.32		5.32	24.47	6.32	3.65	34.85	34.85	7.69
b) Others	**23**	**-**	23	-	230.00	6.65	1.72	0.80	139.00	-	139.00		6.53	92.44	23.86	11.19	125.57	125.57	9.03
HT IV - PWW	**6**		6		230.00	5.50	1.42	0.80	67.76		67.76		3.56	37.27	9.62	5.45	52.56	52.56	7.76
LT CUSTOMERS						-					-								
LT I (A) - Residential (BPL)	**14**	**25**	39	10.00	-	0.60	0.15	1.77	0.01	0.01	0.02	0.00		0.00	0.00	0.00	0.00	0.00	2.04
LT I (B) - Residential				-	-	-					-								**3.77**
- S1 (0-100 units)	**52,549**	**150,564**	203,113	50.00	-	0.90	0.23	1.77	63.08	672.99	736.07	12.19		66.25	1.47	11.17	90.47	90.47	1.23
- S2 (101-300 units)	**42,632**	**336,395**	379,027	80.00	-	2.70	0.70	1.77	75.10	716.78	791.89	36.39		213.81	5.23	13.29	266.75	266.75	3.37
- S3 (> 301-500 Units)	**7,574**	**46,038**	53,612	80.00	-	6.20	1.60	1.77	32.28	193.61	225.89	5.15		140.05	5.17	5.71	154.72	154.72	6.85
- S4 (Above 500 units (balance units)	**4,534**	**19,795**	24,330	105.00	-	8.00	2.07	1.77	80.71	196.04	276.75	3.07		221.40	16.67	14.29	253.14	253.14	9.15
LT II - Commercial																			
(A) - Upto 20 kW	**23,872**	**23,283**	47,155	280.00	-	6.40	1.65	1.77	52.07	216.23	268.31	15.84		171.72	8.60	9.22	203.55	203.55	7.59
(B) - > 20 kW & < 50kW	**3,269**	**661**	3,930	-	230.00	5.00	1.29	1.77	45.83	38.68	84.51		13.60	42.26	5.92	8.11	70.12	70.12	8.30
(C) - > 50kW	**3,134**	**575**	3,709	-	230.00	6.20	1.60	1.77	247.32	109.22	356.54		39.15	221.06	39.58	43.78	331.93	331.93	9.31
LT III (A) - Industry < 20 kW	**1,195**	**2,847**	4,042	280.00	-	5.80	1.50	1.77	26.76	42.69	69.46	1.36		40.28	4.01	4.74	49.39	49.39	7.11
LT III (B) - Industry > 20kW	**597**	**591**	1,188	-	230.00	5.40	1.39	1.77	160.39	46.92	207.31		19.71	111.95	22.36	28.39	175.92	175.92	8.49
LT V - Advertisement & Hoardings, incl.flo	**5**	**14**	19	460.00	-	8.40	2.17	1.77	0.04	0.01	0.05	0.01	-	0.04	0.01	0.01	0.07	0.07	13.42
LT VI - Streetlights	**5**	**-**	5	-	230.00	4.80	1.24	1.77	0.57	-	0.57			0.27	0.07	0.10	0.44	0.44	7.81
LT VII – Temporary Supply											-								
- TSR – Temporary Supply Religious	**2**	**-**	2	230.00	-	3.00	0.77	1.77	0.08	-	0.08	0.00		0.02	0.01	0.01	0.05	0.05	5.61
- TSO – Temporary Supply Others	**300**	**8**	308	460.00	-	6.40	1.65	1.77	19.92	0.02	19.94	0.17		12.76	3.29	3.53	19.75	19.75	9.90
LT VIII – Crematoriums and Burial Groun	**-**	**5**	5	230.00	-	3.60	0.93	1.77	-	0.33	0.33	0.00		0.12	-	-	0.12	0.12	3.64
LT IX - Public Services				-	-	-					-								
a) Govt. Edu. Inst. & Hospitals	**15**	**5**	20	280.00	-	4.50	1.16	1.77	0.14	0.00	0.15	0.01		0.07	0.02	0.03	0.11	0.11	7.86
b) Others	**198**	**111**	308	280.00	-	6.10	1.57	1.77	14.69	0.08	14.76	0.10		9.01	2.31	2.60	13.68	13.68	9.27
LT IV - PWW					230.00	4.00	1.00	1.77											
Total	**140,174**	**580,941**	**721,115**			**4.99**			**2,691.40**	**2,258.80**	**4950.20**	**74.29**	**218.93**	**2,470.50**	**425.26**	**295.68**	**3,320.61**	**3,320.61**	**6.71**

Annexure II: Category-wise Revenue with revised Tariffs for FY 2017-18

Category	No. of consumers			Components of tariff					Sales			Full year revenue excluding Government subsidy (Rs. Crore)						Full year revenue (including subsidy) (Rs. Crore)	Average Billing Rate (Rs/kWh)
	Direct	CO	Total	Fixed Charges (specify part name and unit)	Demand Charges (specify part name and unit)	Energy Charges (specify part name and unit)	RAC	Wheeling Charge	Direct	CO	Total	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Revenue from RAC	Revenue from wheeling charge (Direct)	Total Revenue		
	Nos	Nos	Nos	Rs/Connection /month	Rs/KVA/Month	Rs/kWh	Rs/kWh	Rs/kWh	MU	MU	MU	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs		
HT CUSTOMERS																			
HT I - Industry	**86**	**11**	**97**	-	240.00	6.30	1.59	0.87	873.25	8.94	882.19		57.95	555.78	138.59	75.78	753.95	753.95	8.55
HT II - Commercial	**144**	**13**	**157**	-	240.00	6.70	1.69	0.87	597.52	13.00	610.51		63.91	409.04	100.85	51.85	580.42	580.42	9.51
HT III - Group Housing Society (Residentia	**1**	**1**	**2**	-	240.00	5.40	1.36	0.87	0.32	3.24	3.56		0.47	1.92	0.04	0.03	2.20	2.20	6.17
HT VII - Temporary Supply	**9**	**-**	**9**	470.00	-	7.00	1.76	0.87	10.18	-	10.18	0.01		7.13	1.80	0.88	9.72	9.72	9.55
HT V - Railways, Metro & Monorail	**-**	**-**	**-**	-	-	-	-		-	-									
Railways	**2**	**-**	**2**	-	240.00	5.00	1.26	0.87	158.10	-	158.10		13.62	79.05	19.91	13.72	124.74	124.74	7.89
Metro & Monorail	**2**	**-**	**2**	-	240.00	5.00	1.26	0.87	6.38	-	6.38		0.81	3.19	0.80	0.55	4.95	4.95	7.75
HT VI - Public Services	**-**	**-**	**-**	-	-	-			-	-	-								
a) Govt. Edu. Inst. & Hospitals	**6**	**-**	**6**	-	240.00	5.40	1.36	0.87	43.94	-	43.94		5.55	23.73	5.98	3.81	34.17	34.17	7.77
b) Others	**23**	**-**	**23**	-	240.00	6.50	1.64	0.87	153.62	-	153.62		7.56	99.85	25.16	13.33	138.72	138.72	9.03
HT IV - PWW	**6**		**6**		240.00	5.50	1.39	0.87	63.97		63.97		2.97	35.18	8.86	5.55	49.57	49.57	7.75
LT CUSTOMERS																			
LT I (A) - Residential (BPL)	**14**	**25**	**39**	10.00	-	0.60	0.15	1.83	0.01	0.01	0.02	0.00		0.00	0.00	0.00	0.00	0.00	2.07
LT I (B) - Residential	**-**	**-**	**-**	-	-	-					-								**4.30**
- S1 (0-100 units)	**70,222**	**150,951**	**221,173**	50.00	-	1.20	0.30	1.83	67.73	700.96	768.69	13.27		92.24	2.05	12.36	119.33	119.33	1.55
- S2 (101-300 units)	**66,059**	**336,908**	**402,967**	80.00	-	3.30	0.83	1.83	80.44	746.57	827.01	38.68		272.91	6.69	14.68	330.99	330.99	4.00
- S3 (> 301-500 Units)	**7,574**	**46,038**	**53,612**	80.00	-	6.70	1.69	1.83	34.50	201.65	236.16	5.15		158.22	5.82	6.30	174.14	174.14	7.37
- S4 (Above 500 units (balance units)	**4,534**	**19,795**	**24,330**	105.00	-	8.70	2.19	1.83	86.14	204.19	290.32	3.07		252.58	18.88	15.72	287.97	287.97	9.92
LT II - Commercial	**-**	**-**	**-**	-	-	-					-								
(A) - Upto 20 kW	**42,437**	**22,177**	**64,614**	290.00	-	6.20	1.56	1.83	59.47	215.78	275.25	22.49		170.66	9.29	10.85	211.46	211.46	7.68
(B) - > 20 kW & < 50kW	**5,717**	**515**	**6,233**	-	240.00	4.90	1.23	1.83	51.76	38.60	90.36		14.19	44.28	6.39	9.45	74.54	74.54	8.25
(C) - > 50kW	**5,486**	**435**	**5,921**	-	240.00	6.30	1.59	1.83	254.46	109.00	363.45		40.85	228.97	40.39	46.44	345.02	345.02	9.49
LT III (A) - Industry < 20 kW	**1,195**	**2,847**	**4,042**	290.00	-	5.90	1.49	1.83	27.89	42.60	70.50	1.41		41.59	4.15	5.09	51.24	51.24	7.27
LT III (B) - Industry > 20kW	**597**	**591**	**1,188**	-	240.00	5.60	1.41	1.83	163.21	46.83	210.04		20.57	117.62	23.03	29.79	184.52	184.52	8.78
LT V - Advertisement & Hoardings, incl.flc	**5**	**14**	**19**	470.00	-	8.20	2.07	1.83	0.04	0.01	0.05	0.01	-	0.04	0.01	0.01	0.07	0.07	13.23
LT VI – Streetlights	**5**	**-**	**5**	-	240.00	4.80	1.21	1.83	0.57	-	0.57			0.27	0.07	0.10	0.44	0.44	7.83
LT VII – Temporary Supply	**-**	**-**	**-**	-	-	-					-								
- TSR – Temporary Supply Religious	**2**	**-**	**2**	240.00	-	3.10	0.78	1.83	0.08	-	0.08	0.00		0.03	0.01	0.02	0.05	0.05	5.77
- TSO – Temporary Supply Others	**300**	**8**	**308**	470.00	-	6.30	1.59	1.83	21.03	0.02	21.05	0.17		13.26	3.34	3.84	20.61	20.61	9.79
LT VIII – Crematoriums and Burial Ground	**-**	**5**	**5**	240.00	-	4.10	1.03	1.83	-	0.33	0.33	0.00		0.14	-	-	0.14	0.14	4.14
LT IX - Public Services	**-**	**-**	**-**	-	-	-			-	-	-								
a) Govt. Edu. Inst. & Hospitals	**15**	**5**	**20**	290.00	-	4.30	1.08	1.83	0.09	0.00	0.09	0.01		0.04	0.01	0.02	0.07	0.07	7.89
b) Others	**344**	**102**	**446**	290.00	-	6.05	1.52	1.83	15.71	0.08	15.78	0.16		9.55	2.39	2.87	14.62	14.62	9.26
LT IV - PWW					240.00	3.70	0.95	1.83											
Total	**204,786**	**580,441**	**785,227**			**5.13**			**2,770.40**	**2,331.81**	**5102.22**	**84.41**	**228.44**	**2,617.29**	**424.50**	**323.04**	**3,513.65**	**3,513.65**	**6.89**

Annexure III: Category-wise Revenue with revised Tariffs for FY 2018-19

Category	No. of consumers			Components of tariff					Sales			Full year revenue excluding Government subsidy (Rs. Crore)						Full year revenue (including subsidy) (Rs. Crore)	Average Billing Rate (Rs/kWh)
	Direct	CO	Total	Fixed Charges (specify part name and unit)	Demand Charges (specify part name and unit)	Energy Charges (specify part name and unit)	RAC	Wheeling Charge	Direct	CO	Total	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Revenue from RAC	Revenue from wheeling charge (Direct)	Total Revenue		
	Nos	Nos	Nos	Rs/Connection /month	Rs/KVA/Month	Rs/kWh	Rs/kWh	Rs/kWh	MU	MU	MU	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs		
HT CUSTOMERS																			
HT I - Industry	**86**	**11**	**97**	-	250.00	6.50	1.56	0.88	896.69	8.94	905.64		60.36	588.66	139.83	78.74	793.44	793.44	8.76
HT II - Commercial	**144**	**13**	**157**	-	250.00	6.90	1.66	0.88	597.52	13.00	610.51		66.57	421.25	98.91	52.47	593.97	593.97	9.73
HT III - Group Housing Society (Residentia	**1**	**1**	**2**	-	250.00	5.80	1.39	0.88	0.32	3.24	3.56		0.49	2.06	0.04	0.03	2.36	2.36	6.63
HT VII - Temporary Supply	**9**	**-**	**9**	480.00	-	7.20	1.73	0.88	11.25	-	11.25	0.01		8.10	1.94	0.99	10.95	10.95	9.73
HT V - Railways, Metro & Monorail																			
Railways	**2**	**-**	**2**	-	250.00	5.20	1.25	0.88	159.72	-	159.72		14.19	83.06	19.93	14.03	129.64	129.64	8.12
Metro & Monorail	**2**	**-**	**2**	-	250.00	5.20	1.25	0.88	6.57	-	6.57		0.85	3.42	0.82	0.58	5.25	5.25	7.99
HT VI - Public Services	**-**	**-**	**-**	-	-	-	-		-	-	-								
a) Govt. Edu. Inst. & Hospitals	**6**	**-**	**6**	-	250.00	5.50	1.32	0.88	41.89	-	41.89		5.78	23.04	5.53	3.68	33.12	33.12	7.91
b) Others	**23**	**-**	**23**	-	250.00	6.70	1.61	0.88	168.60	-	168.60		8.17	112.96	27.10	14.80	155.58	155.58	9.23
HT IV - PWW	**6**		**6**		250.00	5.60	1.34	0.88	60.88		60.88		2.79	34.09	8.18	5.35	47.70	47.70	7.84
LT CUSTOMERS	**-**	**-**	**-**	-	-	-			-	-	-								
LT I (A) - Residential (BPL)	**14**	**25**	**39**	10.00	-	0.60	0.14	1.81	0.01	0.01	0.02	0.00		0.00	0.00	0.00	0.00	0.00	2.06
LT I (B) - Residential																			**4.70**
- S1 (0-100 units)	**87,895**	**150,349**	**238,244**	55.00	-	1.50	0.36	1.81	75.07	730.10	805.17	15.72		120.78	2.70	13.62	152.23	152.23	1.89
- S2 (101-300 units)	**89,486**	**336,110**	**425,596**	85.00	-	3.80	0.91	1.81	88.27	777.61	865.88	43.41		329.03	8.05	16.01	394.53	394.53	4.56
- S3 (> 301-500 Units)	**7,574**	**46,038**	**53,612**	85.00	-	6.90	1.66	1.81	37.55	210.03	247.58	5.47		170.83	6.22	6.81	187.97	187.97	7.59
- S4 (Above 500 units (balance units)	**4,534**	**19,795**	**24,330**	110.00	-	8.90	2.14	1.81	93.12	212.68	305.80	3.21		272.16	19.88	16.89	309.87	309.87	10.13
LT II - Commercial	**-**	**-**	**-**	-	-	-			-	-	-								
(A) - Upto 20 kW	**61,002**	**20,913**	**81,915**	300.00	-	6.20	1.49	1.81	69.37	215.34	284.71	29.49		176.52	10.32	12.58	227.08	227.08	7.98
(B) - > 20 kW & < 50kW	**8,166**	**348**	**8,514**	-	250.00	4.80	1.15	1.81	58.86	38.52	97.38		14.78	46.74	6.78	10.68	79.22	79.22	8.14
(C) - > 50kW	**7,837**	**275**	**8,112**	-	250.00	5.90	1.42	1.81	262.62	108.77	371.39		42.55	219.12	37.17	47.64	334.86	334.86	9.02
LT III (A) - Industry < 20 kW	**1,195**	**2,847**	**4,042**	300.00	-	5.80	1.39	1.81	29.07	42.52	71.58	1.46		41.52	4.04	5.27	51.30	51.30	7.17
LT III (B) - Industry > 20kW	**597**	**591**	**1,188**	-	250.00	5.20	1.25	1.81	166.12	46.73	212.85		21.42	110.68	20.72	30.14	176.48	176.48	8.29
LT V - Advertisement & Hoardings, incl.flo	**5**	**14**	**19**	480.00	-	7.20	1.73	1.81	0.04	0.01	0.05	0.01	-	0.04	0.01	0.01	0.06	0.06	12.01
LT VI – Streetlights	**5**	**-**	**5**	-	250.00	4.55	1.09	1.81	0.57	-	0.57			0.26	0.06	0.10	0.42	0.42	7.46
LT VII – Temporary Supply	**-**	**-**	**-**	-	-	-			-	-	-								
- TSR – Temporary Supply Religious	**2**	**-**	**2**	250.00	-	3.30	0.79	1.81	0.09	-	0.09	0.00		0.03	0.01	0.02	0.05	0.05	5.97
- TSO – Temporary Supply Others	**300**	**8**	**308**	480.00	-	5.90	1.42	1.81	22.20	0.02	22.22	0.18		13.11	3.14	4.03	20.45	20.45	9.21
LT VIII – Crematoriums and Burial Groun	**-**	**5**	**5**	250.00	-	4.35	1.04	1.81	-	0.33	0.33	0.00		0.15	-	-	0.15	0.15	4.39
LT IX - Public Services	**-**	**-**	**-**	-	-	-			-	-	-								
a) Govt. Edu. Inst. & Hospitals	**15**	**5**	**20**	300.00	-	3.85	0.92	1.81	0.06	0.00	0.07	0.01		0.03	0.01	0.01	0.05	0.05	7.60
b) Others	**490**	**92**	**582**	300.00	-	6.00	1.44	1.81	16.77	0.08	16.84	0.21		10.11	2.41	3.04	15.43	15.43	9.16
LT IV - PWW					250.00	3.50	0.85	1.81											
Total	**269,397**	**577,440**	**846,837**			**5.29**			**2,863.24**	**2,407.92**	**5271.16**	**99.17**	**237.96**	**2,787.74**	**423.81**	**337.51**	**3,722.16**	**3,722.16**	**7.06**

Annexure IV: Category-wise Revenue with revised Tariffs for FY 2019-20

Category	No. of consumers			Components of tariff					Sales			Full year revenue excluding Government subsidy (Rs. Crore)						Full year revenue (including subsidy) (Rs. Crore)	Average Billing Rate (Rs/kWh)
	Direct	CO	Total	Fixed Charges (specify part name and unit)	Demand Charges (specify part name and unit)	Energy Charges (specify part name and unit)	RAC	Wheeling Charge	Direct	CO	Total	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Revenue from RAC	Revenue from wheeling charge (Direct)	Total Revenue		
	Nos	Nos	Nos	Rs/Connection /month	Rs/KVA/Month	Rs/kWh	Rs/kWh	Rs/kWh	MU	MU	MU	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs	Rs Crs		
HT CUSTOMERS																			
HT I - Industry	**86**	**11**	**97**	-	260.00	6.25	-	0.92	920.80	8.94	929.74		62.77	581.09	-	84.68	654.39	654.39	7.04
HT II - Commercial	**144**	**13**	**157**	-	260.00	6.45	-	0.92	597.52	13.00	610.51		69.23	393.78	-	54.95	472.73	472.73	7.74
HT III - Group Housing Society (Residentia	**1**	**1**	**2**	-	260.00	5.10	-	0.92	0.32	3.24	3.56		0.51	1.82	-	0.03	2.09	2.09	5.87
HT VII - Temporary Supply	**9**	**-**	**9**	490.00	-	6.90	-	0.92	12.51	-	12.51	0.01		8.63	-	1.15	9.70	9.70	7.75
HT V - Railways, Metro & Monorail																			
Railways	**2**	**-**	**2**	-	260.00	4.90	-	0.92	161.33	-	161.33		14.75	79.05	-	14.84	107.08	107.08	6.64
Metro & Monorail	**2**	**-**	**2**	-	260.00	4.90	-	0.92	6.77	-	6.77		0.88	3.32	-	0.62	4.41	4.41	6.51
HT VI - Public Services																			
a) Govt. Edu. Inst. & Hospitals	**6**	**-**	**6**	-	260.00	5.50	-	0.92	39.88	-	39.88		6.02	21.93	-	3.67	26.71	26.71	6.70
b) Others	**23**	**-**	**23**	-	260.00	6.40	-	0.92	183.54	-	183.54		8.77	117.47	-	16.88	135.40	135.40	7.38
HT IV - PWW	**6**		**6**		260.00	5.00	-	0.92	58.18		58.18		2.63	29.09		5.35	34.62	34.62	5.95
LT CUSTOMERS																			
LT I (A) - Residential (BPL)	**14**	**25**	**39**	10.00	-	0.55	-	1.86	0.01	0.01	0.02	0.00		0.00	-	0.00	0.00	0.00	1.95
LT I (B) - Residential																			**4.54**
- S1 (0-100 units)	**105,568**	**150,349**	**255,917**	55.00	-	1.50	-	1.86	83.18	760.37	843.55	16.89		126.53	-	15.51	158.33	158.33	1.88
- S2 (101-300 units)	**112,913**	**336,110**	**449,023**	85.00	-	3.90	-	1.86	96.86	809.85	906.71	45.80		353.62	-	18.06	415.50	415.50	4.58
- S3 (> 301-500 Units)	**7,574**	**46,038**	**53,612**	85.00	-	6.90	-	1.86	40.87	218.74	259.61	5.47		179.13	-	7.62	190.86	190.86	7.35
- S4 (Above 500 units (balance units)	**4,534**	**19,795**	**24,330**	110.00	-	8.50	-	1.86	100.70	221.49	322.20	3.21		273.87	-	18.77	293.57	293.57	9.11
LT II - Commercial																			
(A) - Upto 20 kW	**84,182**	**19,013**	**103,195**	310.00	-	5.10	-	1.86	82.54	214.87	297.41	38.39		151.68	-	15.39	203.63	203.63	6.85
(B) - > 20 kW & < 50kW	**8,898**	**288**	**9,186**	-	260.00	4.00	-	1.86	67.38	38.43	105.82		15.37	42.33	-	12.56	70.50	70.50	6.66
(C) - > 50kW	**8,325**	**235**	**8,560**	-	260.00	5.20	-	1.86	272.10	108.53	380.63		44.25	197.93	-	50.72	281.27	281.27	7.39
LT III (A) - Industry < 20 kW	**1,195**	**2,847**	**4,042**	310.00	-	4.95	-	1.86	30.29	42.42	72.72	1.50		36.00	-	5.65	42.15	42.15	5.80
LT III (B) - Industry > 20kW	**597**	**591**	**1,188**	-	260.00	4.20	-	1.86	169.14	46.63	215.77		22.28	90.62	-	31.53	137.95	137.95	6.39
LT V - Advertisement & Hoardings, incl.flo	**5**	**14**	**19**	490.00	-	6.45	-	1.86	0.04	0.01	0.05	0.01	-	0.03	-	0.01	0.05	0.05	9.99
LT VI - Streetlights	**5**	**-**	**5**	-	260.00	4.45	-	1.86	0.57	-	0.57			0.25	-	0.11	0.36	0.36	6.31
LT VII – Temporary Supply																			
- TSR – Temporary Supply Religious	**2**	**-**	**2**	260.00	-	3.30	-	1.86	0.09	-	0.09	0.00		0.03	-	0.02	0.05	0.05	5.23
- TSO – Temporary Supply Others	**300**	**8**	**308**	490.00	-	5.45	-	1.86	23.44	0.02	23.46	0.18		12.78	-	4.37	17.33	17.33	7.39
LT VIII – Crematoriums and Burial Ground	**-**	**5**	**5**	260.00	-	4.35	-	1.86	-	0.34	0.34	0.00		0.15	-	-	0.15	0.15	4.40
LT IX - Public Services																			
a) Govt. Edu. Inst. & Hospitals	**15**	**5**	**20**	310.00	-	3.25	-	1.86	0.05	0.00	0.05	0.01		0.02	-	0.01	0.03	0.03	6.43
b) Others	**490**	**92**	**582**	310.00	-	5.00	-	1.86	17.88	0.08	17.96	0.22		8.98	-	3.33	12.19	12.19	6.79
LT IV - PWW					260.00	3.00		1.86											
Total	**334,897**	**575,440**	**910,337**			**4.97**			**2,966.01**	**2,486.97**	**5452.98**	**111.69**	**247.48**	**2,710.12**	**-**	**365.80**	**3,271.05**	**3,271.05**	**6.00**

Annexure V: Approved Power Purchase Quantum and Cost for H1 and H2 of each Year of the Control Period

Particulars	FY 2016-17			FY 2017-18		
	H1	H2	Total	H1	H2	Total
PP Requirement (MU)	2,740.01	2,437.67	5,177.68	2,824.14	2,512.52	5,336.66
Power Purchase Cost (Rs. Crore)	1,125.71	1,001.50	2,127.21	1,168.59	1,039.65	2,208.25

Particulars	FY 2018-19			FY 2019-20		
	H1	H2	Total	H1	H2	Total
PP Requirement (MU)	2,917.71	2,595.77	5,513.48	3,018.44	2,685.38	5,703.82
Power Purchase Cost (Rs. Crore)	1,174.95	1,045.31	2,220.26	1,217.18	1,082.88	2,300.06

ANNEXURE - VI

THE TATA POWER COMPANY LIMITED
SCHEDULE OF ELECTRICITY TARIFFS
(With effect from 1 October, 2016)

The Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **21 October, 2016** in Case No.47 of 2016, the tariff for supply of electricity by the Distribution Licensee, The Tata Power Company Limited – Distribution Business (TPC-D) to various classes of consumers as applicable from **1 October, 2016**.

General

1. These tariffs supersede all tariffs so far in force.

2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.

3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.

4. The tariffs are applicable for supply at one point only.

5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.

6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.

7. Unless specifically stated to the contrary, the figures of Energy Charge, Wheeling Charge and Regulatory Asset Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.

8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

LOW TENSION (LT) TARIFF

LT I (A): LT – Residential (BPL)

Applicability:

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
BPL Category	10	1.77	0.60	0.15

LT I (B): LT – Residential

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

a) Private residential premises, Government/semi-Government residential quarters;

b) Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

c) All Students Hostels affiliated to Educational Institutions;

d) All other Students' or Working Men/Women's Hostels;

e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;

f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;

g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;

h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;

i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;

j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;

k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

Note:

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case consumption has exceeded 3600 units in the previous financial year, the consumer will

thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

(i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

(ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
0-100 units	Rs. 50 per month $$	1.77	0.90	0.23
101 – 300 units	Rs. 80 per month$$	1.77	2.70	0.70
301 – 500 units		1.77	6.20	1.60
Above 500 units (balance units)	Rs. 105 per month$$	1.77	8.00	2.07

Note:

a) $$:The above Fixed Charges are for single-phase connections. A Fixed Charge of Rs. _105 per month will be levied on Residential consumers availing 3-phase supply. An Additional Fixed Charge of Rs._105per 10 kW load or part thereof above 10 kW load shall also be payable.

b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

LT II: LT – Non-Residential or Commercial

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

   Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

l) Milk Collection Centres;

m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge 7	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
(A) 0-20 kW	Rs. 280 per month	1.77	6.40	1.65
(B) > 20 kW and ≤ 50 kW	Rs. 230 per kVA per month	1.77	5.00	1.29
(C) > 50 kW		1.77	6.20	1.60
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

LT III: LT- Industry:

LT III (A): LT - Industry upto 20 kW load
LT III (B): LT - Industry, above 20 kW load

Applicability:

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT III tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units; and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units;
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B) – Agriculture (Others);
l) Food (including seafood) Processing units.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs. /kWh)	Regulatory Asset Charge (Rs./kWh)
LT III (A): 0-20 kW	Rs. 280 per month	1.77	5.80	1.50
LT III (B): Above 20 kW	Rs. 230 per kVA per month	1.77	5.40	1.39
TOD Tariffs (Optional – in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

a) The ToD Tariff is compulsorily applicable to LT III (B) (i.e., above 20 kW), and optionally available to LT- III (A) (i.e., up to 20 kW) having ToD meter installed.

LT IV: LT-Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT III category tariff, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	1.77	4.00	1.00
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT V: LT - Advertisements and Hoardings

Applicability

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 460 per month	1.77	8.40	2.17

Note:

a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.

b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.

c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

LT VI: LT- Street Lights

Applicability

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);

b) Traffic Signals and Traffic Islands;

c) Public Sanitary Conveniences;

d) Public Water Fountains; and

e) Such other public places open to the general public free of charge.

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	1.77	4.80	1.24

Note:

The above street and other lighting facilities having 'Automatic Timers' for switching On/Off would be levied Demand Charges on the lower of the following–

i) 50 percent of 'Contract Demand' or
ii) Actual 'Recorded Demand'.

LT VII: LT - Temporary Supply

LT VII (A): LT - Temporary Supply - Religious (TSR)

Applicability

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

LT VII (B): LT - Temporary Supply - Others (TSO)

Applicability

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

d) Any other activity not covered under LT VII (A).

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
LT VII (A) – All Units	Rs. 230 per connection per month	1.77	3.00	0.77
LT VII (B) – All Units	Rs. 460 per connection month	1.77	6.40	1.65

Note:

(a) Additional Fixed Charges of Rs. 225 per 10 kW load or part thereof above 10 kW load shall be payable.

(b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

LT VIII: LT- Crematoriums and Burial Grounds

Applicability

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per connection per month	1.77	3.60	0.93

LT IX: Public Services

LT IX (A): LT - Government Educational Institutions and Hospitals

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 280 per month	1.77	4.50	1.16
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT IX (B): LT - Public Services - Others

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.

-- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, ZillaParishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts;

f) Airports;

g) Ports and Jetties;

h) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 280 per month	1.77	6.10	1.57
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>LT X (A): LT - Agriculture - Pumpsets</u>

<u>Applicability:</u>

This tariff category is applicable for motive power supplied for agricultural metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 30 per HP per month	1.77	2.40	0.50

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

LT X (B): LT – Agriculture– Others

Applicability

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;

b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;

c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 75 per kW per month	1.77	3.90	0.70

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

HIGH TENSION (HT) TARIFF

HT I: HT – Industry

Applicability:

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units, and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B)– Agriculture (Others);
l) Food (including Seafood) Processing units.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	6.50	1.68
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

Demand Charge shall be applicable at the rate of 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee

HT II: HT- Commercial

Applicability

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

l) Milk Collection Centres;

m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT – PWW category or HT I - Industry

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	6.80	1.76
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

HT III: HT - Group Housing Society (Residential)

Applicability:

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

a) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

b) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	5.40	1.39

HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	5.50	1.42
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

HT V- Railways/Metro/Monorail

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	5.10	1.32

<u>HT VI - Public Services</u>

HT VI – (A): HT - Government Educational Institutions and Hospitals

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	5.40	1.39
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VI - (B): Public Service - Others</u>

This tariff category is applicable for electricity supply at High Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.

- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts.

f) Airports

g) Ports and Jetties

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 230 per kVA per month	0.80	6.65	1.72
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VII- HT - Temporary Supply</u>

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 460 per connection per month	0.80	7.10	1.83

Note:

Additional Fixed Charges of Rs. 230 per 10 kW load or part thereof above 10 kW load shall be payable.

MISCELLANEOUS AND GENERAL CHARGES

Fuel Adjustment Charge (FAC) Component of Z-factor Charge

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable Z_{FAC} for each month shall be available on the Distribution Licensee's website www.tatapower.com.

Electricity Duty and Tax on Sale of Electricity

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website www.tatapower.com.

Power Factor Computation

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{Total(kWH)}{Total(kVAh)}$$

$$\text{Wherein the kVAh is} = \sqrt{\sum(kWh)^2 + \sum(RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh)

Power Factor Incentive

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV- PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%

Sl.	Range of Power Factor	Power Factor Level	Incentive
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Power Factor Penalty

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV : PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Prompt Payment Discount

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

Delayed Payment Charges

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

Rate of Interest on Arrears

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

Load Factor Incentive

Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85 % will be entitled to a rebate of 1% on the Wheeling Charges, Energy Charges, and Regulatory Asset Charge for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.

This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT VI: Public Services - HT VI (A) and HT VI (B) only.

The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. the Distribution Licensee shall take a commercial decision on the schedule for such payments.

The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor
x (Total no. of hours during the month, less planned load shedding hours*)

** - Interruption/non-supply to the extent of 60 hours in a 30-day month.*

In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e. 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.

Penalty for exceeding Contract Demand

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract Demand. In case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

Additional Demand Charges for Consumers having Captive Power Plant

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

EHV Rebate

In the event that power is supplied at 66 kV and above, the consumer shall be provided a rebate of 2% of the monthly Energy Charges specifically approved in the Tariff Schedule.

Consumers' Security Deposit

1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).

2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered

3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.

4) TPC-D shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.

5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.

6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;

7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.

8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.

10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.

11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.

12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

<u>Definitions</u>

Maximum Demand

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

Contract Demand

Contract Demand means the demand in kilo-Watt (kW) or kilo–Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

Sanctioned Load

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

Billing Demand - LT tariff categories

Monthly Billing Demand will be the higher of the following:

a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
b) 40% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

Billing Demand - HT tariff categories

Monthly Billing Demand will be the higher of the following:

a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;
c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

ANNEXURE - VII

THE TATA POWER COMPANY LIMITED
SCHEDULE OF ELECTRICITY TARIFFS
(With effect from 1 April, 2017)

The Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **21 October, 2016** in Case No.47 of 2016, the tariff for supply of electricity by the Distribution Licensee, The Tata Power Company Limited – Distribution Business (TPC-D) to various classes of consumers as applicable from **1 April, 2017**.

General

1. These tariffs supersede all tariffs so far in force.

2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.

3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.

4. The tariffs are applicable for supply at one point only.

5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.

6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.

7. Unless specifically stated to the contrary, the figures of Energy Charge, Wheeling Charge and Regulatory Asset Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.

8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

LOW TENSION (LT) TARIFF

LT I (A): LT – Residential (BPL)

Applicability:

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
BPL Category	10	1.83	0.60	0.15

LT I (B): LT – Residential

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

a) Private residential premises, Government/semi-Government residential quarters;

b) Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

c) All Students Hostels affiliated to Educational Institutions;

d) All other Students' or Working Men/Women's Hostels;

e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;

f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;

g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;

h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;

i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;

j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;

k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

   <u>Note:</u>

   This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case consumption has exceeded 3600 units in the previous financial year, the consumer will

thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

(i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

(ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
0-100 units	Rs. 50 per month $$	1.83	1.20	0.30
101 – 300 units	Rs. 80 per month$$	1.83	3.30	0.83
301 – 500 units		1.83	6.70	1.69
Above 500 units (balance units)	Rs. 105 per month$$	1.83	8.70	2.19

<u>Note:</u>

a) $$:The above Fixed Charges are for single-phase connections. A Fixed Charge of Rs. 105 per month will be levied on Residential consumers availing 3-phase supply. An Additional Fixed Charge of Rs.105 per 10 kW load or part thereof above 10 kW load shall also be payable.

b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

<u>LT II: LT – Non-Residential or Commercial</u>

<u>Applicability:</u>

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

   Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

l) Milk Collection Centres;

m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge 8	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
(A) 0-20 kW	Rs. 290 per month	1.83	6.20	1.56
(B) > 20 kW and ≤ 50 kW	Rs. 240 per kVA per month	1.83	4.90	1.23
(C) > 50 kW		1.83	6.30	1.59
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

LT III: LT- Industry:

LT III (A): LT - Industry upto 20 kW load
LT III (B): LT - Industry, above 20 kW load

Applicability:

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT III tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units; and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units;
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B) – Agriculture (Others);
l) Food (including seafood) Processing units.

Consumption Slab (kWh)	**Fixed/Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs. /kWh)**	**Regulatory Asset Charge (Rs./kWh)**
LT III (A): 0-20 kW	Rs. 290 per month	1.83	5.90	1.49
LT III (B): Above 20 kW	Rs. 240 per kVA per month	1.83	5.60	1.41
TOD Tariffs (Optional – in addition to above base Tariffs)				
0600 to 0900 hours			0.00	

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs. /kWh)	Regulatory Asset Charge (Rs./kWh)
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note*:*

a) The ToD Tariff is compulsorily applicable to LT III (B) (i.e., above 20 kW), and optionally available to LT- III (A) (i.e., up to 20 kW) having ToD meter installed.

LT IV: LT-Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT III category tariff, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	1.83	3.70	0.95
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT V: LT - Advertisements and Hoardings

Applicability

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 470 per month	1.83	8.20	2.07

Note:

a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.

b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.

c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

LT VI: LT- Street Lights

Applicability

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);

b) Traffic Signals and Traffic Islands;

c) Public Sanitary Conveniences;

d) Public Water Fountains; and

e) Such other public places open to the general public free of charge.

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	1.83	4.80	1.21

Note:

The above street and other lighting facilities having 'Automatic Timers' for switching On/Off would be levied Demand Charges on the lower of the following–

i) 50 percent of 'Contract Demand' or
ii) Actual 'Recorded Demand'.

LT VII: LT - Temporary Supply

LT VII (A): LT - Temporary Supply - Religious (TSR)

Applicability

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

LT VII (B): LT - Temporary Supply - Others (TSO)

Applicability

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

d) Any other activity not covered under LT VII (A).

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
LT VII (A) – All Units	Rs. 240 per connection per month	1.83	3.10	0.78
LT VII (B) – All Units	Rs. 470 per connection month	1.83	6.30	1.59

Note:

(a) Additional Fixed Charges of Rs. 225 per 10 kW load or part thereof above 10 kW load shall be payable.

(b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

LT VIII: LT- Crematoriums and Burial Grounds

Applicability

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

Consumption Slab (kWh)	**Fixed/Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 240 per connection per month	1.83	4.10	1.03

<u>LT IX: Public Services</u>

LT IX (A): LT - Government Educational Institutions and Hospitals

<u>Applicability</u>

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 290 per month	1.83	4.30	1.08
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT IX (B): LT - Public Services - Others

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.

   -- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, ZillaParishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts;

f) Airports;

g) Ports and Jetties;

h) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 290 per month	1.83	6.05	1.52
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT X (A): LT - Agriculture - Pumpsets

Applicability:

This tariff category is applicable for motive power supplied for agricultural metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 30 per HP per month	1.83	2.50	0.50

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

LT X (B): LT – Agriculture– Others

Applicability

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise;

b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;

c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 75 per kW per month	1.83	3.90	0.80

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

HIGH TENSION (HT) TARIFF

HT I: HT – Industry

Applicability:

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units, and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B)– Agriculture (Others);
l) Food (including Seafood) Processing units.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	6.30	1.59
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>Note:</u>

Demand Charge shall be applicable at the rate of 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.

HT II: HT- Commercial

Applicability

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

l) Milk Collection Centres;

m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT – PWW category or HT I - Industry

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	6.70	1.69
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

<u>HT III: HT - Group Housing Society (Residential)</u>

<u>Applicability:</u>

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

a) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

b) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	5.40	1.36

HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants

<u>Applicability:</u>

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	5.50	1.39
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

HT V- Railways/Metro/Monorail

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	5.00	1.26

<u>HT VI - Public Services</u>

HT VI – (A): HT - Government Educational Institutions and Hospitals

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	5.40	1.36
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VI - (B): Public Service - Others</u>

This tariff category is applicable for electricity supply at High Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.

- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts.

f) Airports

g) Ports and Jetties

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 240 per kVA per month	0.87	6.50	1.64
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VII- HT - Temporary Supply</u>

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 470 per connection per month	0.87	7.00	1.76

Note:

Additional Fixed Charges of Rs. 240 per 10 kW load or part thereof above 10 kW load shall be payable.

MISCELLANEOUS AND GENERAL CHARGES

Fuel Adjustment Charge (FAC) Component of Z-factor Charge

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable Z_{FAC} for each month shall be available on the Distribution Licensee's website www.tatapower.com.

Electricity Duty and Tax on Sale of Electricity

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website www.tatapower.com.

Power Factor Computation

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{Total(kWH)}{Total(kVAh)}$$

$$\text{Wherein the kVAh is} = \sqrt{\sum(kWh)^2 + \sum(RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh)

Power Factor Incentive

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV- PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Power Factor Penalty

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV : PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Prompt Payment Discount

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

Delayed Payment Charges

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

Rate of Interest on Arrears

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

Load Factor Incentive

Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85 % will be entitled to a rebate of 1% on the Wheeling Charges, Energy Charges, and Regulatory Asset Charge for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.

This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT VI: Public Services - HT VI (A) and HT VI (B) only.

The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. the Distribution Licensee shall take a commercial decision on the schedule for such payments.

The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours*)

** - Interruption/non-supply to the extent of 60 hours in a 30-day month.*

In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e. 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.

Penalty for exceeding Contract Demand

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract DemandIn case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

Additional Demand Charges for Consumers having Captive Power Plant

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer’s demand exceeds his Contract Demand.

EHV Rebate

In the event that power is supplied at 66 kV and above, the consumer shall be provided a rebate of 2% of the monthly Energy Charges specifically approved in the Tariff Schedule.

Consumers’ Security Deposit

1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been

sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).

2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered

3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.

4) TPC-D shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.

5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.

6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;

7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.

8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.

10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.

11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.

12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

Definitions

Maximum Demand

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

Contract Demand

Contract Demand means the demand in kilo-Watt (kW) or kilo–Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

Sanctioned Load

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

Billing Demand - LT tariff categories

Monthly Billing Demand will be the higher of the following:

a) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
b) 40% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

Billing Demand - HT tariff categories

Monthly Billing Demand will be the higher of the following:

a) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
b) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;
c) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

ANNEXURE - VIII

THE TATA POWER COMPANY LIMITED
SCHEDULE OF ELECTRICITY TARIFFS
(With effect from 1 April, 2018)

The Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **21 October, 2016** in Case No.47 of 2016, the tariff for supply of electricity by the Distribution Licensee, The Tata Power Company Limited – Distribution Business (TPC-D)) to various classes of consumers as applicable from **1 April, 2018**.

General

1. These tariffs supersede all tariffs so far in force.

2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.

3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.

4. The tariffs are applicable for supply at one point only.

5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.

6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.

7. Unless specifically stated to the contrary, the figures of Energy Charge, Wheeling Charge and Regulatory Asset Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.

8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

LOW TENSION (LT) TARIFF

LT I (A): LT – Residential (BPL)

Applicability:

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
BPL Category	10	1.81	0.60	0.14

LT I (B): LT – Residential

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

a) Private residential premises, Government/semi-Government residential quarters;

b) Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

c) All Students Hostels affiliated to Educational Institutions;

d) All other Students' or Working Men/Women's Hostels;

e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;

f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;

g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;

h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;

i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;

j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;

k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

<u>Note:</u>

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case consumption has exceeded 3600 units in the previous financial year, the consumer will

thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

(i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

(ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
0-100 units	Rs. 55 per month $^{\$\$}$	1.81	1.50	0.36
101 – 300 units	Rs. 85 per month$^{\$\$}$	1.81	3.80	0.91
301 – 500 units		1.81	6.90	1.66
Above 500 units (balance units)	Rs. 110 per month$^{\$\$}$	1.81	8.90	2.14

Note:

a) $^{\$\$}$:The above Fixed Charges are for single-phase connections. A Fixed Charge of Rs. 110 per month will be levied on Residential consumers availing 3-phase supply. An Additional Fixed Charge of Rs.110 per 10 kW load or part thereof above 10 kW load shall also be payable.

b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

LT II: LT – Non-Residential or Commercial

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

   Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

l) Milk Collection Centres;

m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
(A) 0-20 kW	Rs. 300 per month	1.81	6.20	1.49
(B) > 20 kW and ≤ 50 kW	Rs. 250 per kVA per month	1.81	4.80	1.15
(C) > 50 kW		1.81	5.90	1.42
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>Note:</u>

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

<u>LT III: LT- Industry:</u>

LT III (A): LT - Industry upto 20 kW load

LT III (B): LT - Industry, above 20 kW load

<u>Applicability:</u>

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT III tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units; and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units;
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B) – Agriculture (Others);
l) Food (including seafood) Processing units.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs. /kWh)	Regulatory Asset Charge (Rs./kWh)
LT III (A): 0-20 kW	Rs. 300 per month	1.81	5.80	1.39
LT III (B): Above 20 kW	Rs. 250 per kVA per month	1.81	5.20	1.25
TOD Tariffs (Optional – in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs. /kWh)	Regulatory Asset Charge (Rs./kWh)
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note*:*

a) The ToD Tariff is compulsorily applicable to LT III (B) (i.e., above 20 kW), and optionally available to LT- III (A) (i.e., up to 20 kW) having ToD meter installed.

LT IV: LT-Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT III category tariff, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	1.81	3.50	0.85
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT V: LT - Advertisements and Hoardings

Applicability

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 480 per month	1.81	7.20	1.73

<u>Note:</u>

a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.

b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.

c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

<u>LT VI: LT- Street Lights</u>

<u>Applicability</u>

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);

b) Traffic Signals and Traffic Islands;

c) Public Sanitary Conveniences;

d) Public Water Fountains; and

e) Such other public places open to the general public free of charge.

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	1.81	4.55	1.09

Note:

The above street and other lighting facilities having ‘Automatic Timers’ for switching On/Off would be levied Demand Charges on the lower of the following–

i) 50 percent of ‘Contract Demand’ or
ii) Actual ‘Recorded Demand’.

LT VII: LT - Temporary Supply

LT VII (A): LT - Temporary Supply - Religious (TSR)

Applicability

This tariff category is applicable for electricity supply at Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

LT VII (B): LT - Temporary Supply - Others (TSO)

Applicability

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

d) Any other activity not covered under LT VII (A).

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
LT VII (A) – All Units	Rs. 250 per connection per month	1.81	3.30	0.79
LT VII (B) – All Units	Rs. 480 per connection month	1.81	5.90	1.42

Note:

(a) Additional Fixed Charges of Rs. 225 per 10 kW load or part thereof above 10 kW load shall be payable.

(b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

LT VIII: LT- Crematoriums and Burial Grounds

Applicability

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per connection per month	1.81	4.35	1.04

LT IX: Public Services

LT IX (A): LT - Government Educational Institutions and Hospitals

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 300 per month	1.81	3.85	0.92
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

LT IX (B): LT - Public Services - Others

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.

-- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, ZillaParishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts;

f) Airports;

g) Ports and Jetties;

h) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**	**Regulatory Asset Charge (Rs./kWh)**
All Units	Rs. 300 per month	1.81	6.00	1.44
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>LT X (A): LT - Agriculture - Pumpsets</u>

<u>Applicability:</u>

This tariff category is applicable for motive power supplied for agricultural metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 30 per HP per month	1.81	2.70	0.50

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

LT X (B): LT – Agriculture– Others

Applicability

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise**;**

b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;

c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 75 per kW per month	1.81	4.10	0.70

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

HIGH TENSION (HT) TARIFF

HT I: HT – Industry

Applicability:

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units, and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B)– Agriculture (Others);

l) Food (including Seafood) Processing units.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	6.50	1.56
TOD Tariffs (in addition to above base Tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

Demand Charge shall be applicable at the rate of 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.

HT II: HT- Commercial

Applicability

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

l) Milk Collection Centres;

m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT – PWW category or HT I - Industry

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per	0.88	6.90	1.66

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
	month			
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

Note:

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

HT III: HT - Group Housing Society (Residential)

Applicability:

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

a) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

b) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	5.80	1.39

HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants

<u>Applicability:</u>

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	5.60	1.34
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

HT V- Railways/Metro/Monorail

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	5.20	1.25

<u>HT VI - Public Services</u>

HT VI – (A): HT - Government Educational Institutions and Hospitals

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	5.50	1.32
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VI - (B): Public Service - Others</u>

This tariff category is applicable for electricity supply at High Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.

- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts.

f) Airports

g) Ports and Jetties

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 250 per kVA per month	0.88	6.70	1.61
TOD Tariffs (in addition to above base tariffs)				
0600 to 0900 hours			0.00	
0900 to 1200 hours			0.50	
1200 to 1800 hours			0.00	
1800 to 2200 hours			1.00	
2200 to 0600 hours			-0.75	

<u>HT VII- HT - Temporary Supply</u>

<u>Applicability</u>

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

d) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;

e) Any construction or renovation activity in existing premises;

f) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)	Regulatory Asset Charge (Rs./kWh)
All Units	Rs. 480 per connection per month	0.88	7.20	1.73

Note:

Additional Fixed Charges of Rs. 250 per 10 kW load or part thereof above 10 kW load shall be payable.

MISCELLANEOUS AND GENERAL CHARGES

Fuel Adjustment Charge (FAC) Component of Z-factor Charge

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable Z_{FAC} for each month shall be available on the Distribution Licensee’s website www.tatapower.com.

Electricity Duty and Tax on Sale of Electricity

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website www.tatapower.com.

Power Factor Computation

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{Total(kWH)}{Total(kVAh)}$$

$$\text{Wherein the kVAh is} = \sqrt{\sum (kWh)^2 + \sum (RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh)

Power Factor Incentive

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV- PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%

Sl.	Range of Power Factor	Power Factor Level	Incentive
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Power Factor Penalty

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV : PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Prompt Payment Discount

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

Delayed Payment Charges

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

Rate of Interest on Arrears

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

Load Factor Incentive

Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85 % will be entitled to a rebate of 1% on the Wheeling Charges, Energy Charges, and Regulatory Asset Charge for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.

This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT VI: Public Services - HT VI (A) and HT VI (B) only.

The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. the Distribution Licensee shall take a commercial decision on the schedule for such payments.

The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours*)

** - Interruption/non-supply to the extent of 60 hours in a 30-day month.*

In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e. 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.

Penalty for exceeding Contract Demand

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract DemandIn case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

Additional Demand Charges for Consumers having Captive Power Plant

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer's demand exceeds his Contract Demand.

EHV Rebate

In the event that power is supplied at 66 kV and above, the consumer shall be provided a rebate of 2% of the monthly Energy Charges specifically approved in the Tariff Schedule.

Consumers' Security Deposit

1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).

2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered

3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.

4) TPC-D shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.

5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.

6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at

the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;

7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.

8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.

10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.

11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.

12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

<u>Definitions</u>

Maximum Demand

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

Contract Demand

Contract Demand means the demand in kilo-Watt (kW) or kilo–Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

Sanctioned Load

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

Billing Demand - LT tariff categories

Monthly Billing Demand will be the higher of the following:

c) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
d) 40% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

Billing Demand - HT tariff categories

Monthly Billing Demand will be the higher of the following:

d) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
e) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;
f) 50% of the Contract Demand.

Note:

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.

ANNEXURE - IX

THE TATA POWER COMPANY LIMITED
SCHEDULE OF ELECTRICITY TARIFFS
(With effect from 1 April, 2019)

The Maharashtra Electricity Regulatory Commission, in exercise of the powers vested in it under Sections 61 and 62 of the Electricity Act, 2003 and all other powers enabling it in this behalf, has determined, by its Multi Year Tariff Order dated **21 October, 2016** in Case No.47 of 2016, the tariff for supply of electricity by the Distribution Licensee, The Tata Power Company Limited – Distribution Business (TPC-D) to various classes of consumers as applicable from **1 April, 2019**.

General

1. These tariffs supersede all tariffs so far in force.

2. The Tariffs are subject to revision and/or surcharge that may be levied by the Distribution Licensee from time to time as per the directives of the Commission.

3. The tariffs are exclusive of the separate Electricity Duty, Tax on Sale of Electricity and other levies by the Government or other competent authorities, which will be payable by consumers over and above the tariffs.

4. The tariffs are applicable for supply at one point only.

5. The Distribution Licensee may measure the Maximum Demand for any period shorter than 30 minutes of maximum use, subject to conformity with the Commission's Electricity Supply Code Regulations, where it considers that there are considerable load fluctuations in operation.

6. The tariffs are subject to the provisions of the applicable Regulations and any directions that may be issued by the Commission from time to time.

7. Unless specifically stated to the contrary, the figures of Energy Charge, Wheeling Charge and Regulatory Asset Charge are denominated in Rupees per unit (kWh) for the energy consumed during the month.

8. Fuel Adjustment Charge (FAC) as may be approved by the Commission from time to time shall be applicable to all categories of consumers and be in addition to the base tariffs, on the basis of the FAC formula specified by the Commission and computed on a monthly basis.

LOW TENSION (LT) TARIFF

LT I (A): LT – Residential (BPL)

Applicability:

This Below Poverty Line (BPL) tariff category is applicable to Residential consumers who have a Sanctioned Load upto 0.25 kW and who have consumed upto 360 units per annum in the previous financial year. The eligibility of such consumers will be reassessed at the end of each financial year. If more than 360 units have been consumed in the previous financial year, the LTI (B) - Residential tariff shall thereafter be applicable, and such consumer cannot revert thereafter to the BPL category irrespective of his future consumption level.

The categorisation of BPL consumers will be reassessed at the end of the financial year on a pro rata basis if there has been consumption for only a part of the year The categorisation of BPL consumers who have been added during the previous year would be assessed on a pro rata basis, i.e., 30 units per month.

This BPL category will also be applicable to all new consumers subsequently added in any month with a Sanctioned Load of upto 0.25 kW and consumption between 1 to 30 units (on pro rata basis of 1 unit/day) in the first billing month.

The BPL tariff is applicable only to individuals and not to institutions.

Consumption Slab (kWh)	Fixed /Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
BPL Category	10	1.86	0.55

LT I (B): LT – Residential

This tariff category is applicable for electricity used at Low/Medium Voltage for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/leisure, water pumping in the following premises:

a) Private residential premises, Government/semi-Government residential quarters;

b) Premises used exclusively for worship, such as temples, gurudwaras, churches, mosques, etc.; provided that halls, gardens or any other part of such premises that may be let out for a consideration or used for commercial activities would be charged at the applicable LT-II tariff;

c) All Students Hostels affiliated to Educational Institutions;

d) All other Students' or Working Men/Women's Hostels;

e) Other types of Homes/Hostels, such as (i) Homes/Hostels for Destitutes, Disabled Persons (physically or mentally handicapped persons, etc.) and mentally ill persons (ii) Remand Homes (iii) Dharamshalas, (iv) Rescue Homes, (v) Orphanages - subject to verification and confirmation by the Distribution Licensee's concerned Zonal Chief Engineer or equivalent;

f) Government / Private / Co-operative Housing Colonies/complexes (where electricity is used exclusively for domestic purposes) only for common facilities such as Water Pumping / Street and other common area Lighting / Lifts /Parking Lots/ Fire-fighting Pumps and other equipment, etc.;

g) Sports Clubs or facilities / Health Clubs or facilities / Gymnasium / Swimming Pool / Community Hall of Government / Private / Co-operative Housing Colonies/complexes - provided that they are situated in the same premises, and are for the exclusive use of the members and employees of such Housing Colonies/complexes;

h) Telephone booths owned/operated by Persons with Disabilities/Handicapped persons;

i) Residential premises used by professionals like Lawyers, Doctors, Engineers, Chartered Accountants, etc., in furtherance of their professional activities, but not including Nursing Homes and Surgical Wards or Hospitals;

j) Single-phase household Flour Mills (Ghar-ghanti) used only for captive purposes;

k) A residential LT consumer with consumption upto 500 units per month (current month of supply) who undertakes construction or renovation activity in his existing premises: such consumer shall not require a separate temporary connection, and would be billed at this Residential tariff rate;

<u>Note:</u>

This tariff category shall also be applicable to consumers who are supplied power at High Voltage for any of the purposes (a) to (k) above.

l) Consumers undertaking business or commercial / industrial / non-residential activities from a part of their residence, whose monthly consumption is upto 300 units a month and annual consumption in the previous financial year was upto 3600 units. The applicability of this tariff to such consumers will be assessed at the end of each financial year. In case consumption has exceeded 3600 units in the previous financial year, the consumer will thereafter not be eligible for the tariff under this category but be charged at the tariff otherwise applicable for such consumption, with prior intimation to him.

m) Entities supplied electricity at a single point at Low/Medium Voltage for residential purposes, in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

(i) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

(ii) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
0-100 units	Rs. 55 per month $$	1.86	1.50
101 – 300 units	Rs. 85 per month$$	1.86	3.90
301 – 500 units		1.86	6.90
Above 500 units (balance units)	Rs. 110 per month$$	1.86	8.50

Note:

a) $$:The above Fixed Charges are for single-phase connections. A Fixed Charge of Rs. 110 per month will be levied on Residential consumers availing 3-phase supply. An Additional Fixed Charge of Rs. 110 per 10 kW load or part thereof above 10 kW load shall also be payable.

b) Professionals like Lawyers, Doctors, Professional Engineers, Chartered Accountants, etc., occupying premises exclusively for conducting their profession, shall not be eligible for this tariff, and will be charged at the tariff applicable to the respective categories.

LT II: LT – Non-Residential or Commercial

Applicability:

This tariff category is applicable for electricity used at Low/Medium voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power supply for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths not covered under the LT I category, and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps and Service Stations, including Garages;

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Microwave Stations, Radio Stations, Telecommunications Towers;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/ heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the Temporary tariff category;

   Note: Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection, and shall be billed at the LT-II Commercial Tariff rate;

l) Milk Collection Centres;

m) Sewage Treatment Plants/ Common Effluent Treatment Plants for Commercial Complexes not covered under the LT – Public Water Works or LT – Industry categories;

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff applicable shall be as per the category of such premises.

Consumption Slab (kWh)	Fixed/ Demand Charge 9	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
(A) 0-20 kW	Rs. 310 per month	1.86	5.10
(B) > 20 kW and ≤ 50 kW	Rs. 260 per kVA per month	1.86	4.00
(C) > 50 kW		1.86	5.20
TOD Tariffs (in addition to above base Tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

Note:

The ToD tariff is applicable to the LT-II (B) and (C) categories, and optionally available to LT- II (A) category consumers having ToD meter installed.

LT III: LT- Industry:

LT III (A): LT - Industry upto 20 kW load

LT III (B): LT - Industry, above 20 kW load

Applicability:

This tariff category is applicable for electricity for Industrial use, at Low/Medium Voltage, for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteens, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply;

This tariff category shall also be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITeS Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the LT II category, and the LT III tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mill, Dal Mill, Rice Mill, Poha Mill, Masala Mill, Saw Mill;
b) Ice Factory, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods Manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units; and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units;
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the LT – Public Water Works category
h) Start-up power for Generating Plants, i.e. the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B) – Agriculture (Others);
l) Food (including seafood) Processing units.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs. /kWh)
LT III (A): 0-20 kW	Rs. 310 per month	1.86	4.95
LT III (B): Above 20 kW	Rs. 260 per kVA per month	1.86	4.20
TOD Tariffs (Optional – in addition to above base Tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

Note:

a) The ToD Tariff is compulsorily applicable to LT III (B) (i.e., above 20 kW), and optionally available to LT- III (A) (i.e., up to 20 kW) having ToD meter installed.

LT IV: LT-Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at Low / Medium Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall be billed under the LT II or LT III category tariff, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	1.86	3.00
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

LT V: LT - Advertisements and Hoardings

Applicability

This tariff category is applicable for use of electricity at Low/ Medium Voltage for advertisements, hoardings (including hoardings fixed on lamp posts/installed along roadsides), and other commercial illumination such as external flood-lights, displays, neon signs at departmental stores, malls, multiplexes, theatres, clubs, hotels and other such establishments;

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 490 per month	1.86	6.45

Note:

a) Consumers availing power supply at High Voltage for any of the above purposes shall be billed as per the tariff of this LT category.

b) This category is not applicable to use of electricity specifically covered under the LT-II category; or to electricity used for the external illumination of monuments and historical/heritage buildings approved by MTDC or the concerned Local Authority, which shall be covered under the LT-II category depending upon the Sanctioned Load.

c) The electricity used for indicating/ displaying the name and other details of the premises shall be covered under the category of such premises, and not under this tariff category.

LT VI: LT- Street Lights

Applicability

This tariff category is applicable for the electricity used for lighting of public streets/ thoroughfares which are open for use by the general public, at Low / Medium Voltage, and also at High Voltage.

Street lights in residential complexes, commercial complexes, industrial premises, etc. will be billed at the tariff of the respective applicable categories.

This category is also applicable for use of electricity / power supply at Low / Medium Voltage or at High Voltage for (but not limited to) the following purposes, irrespective of who owns, operates or maintains these facilities:

a) Lighting in Public Gardens (i.e. which are open to the general public free of charge);

b) Traffic Signals and Traffic Islands;

c) Public Sanitary Conveniences;

d) Public Water Fountains; and

e) Such other public places open to the general public free of charge.

Consumption Slab (kWh)	Fixed / Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	1.86	4.45

Note:

The above street and other lighting facilities having 'Automatic Timers' for switching On/Off would be levied Demand Charges on the lower of the following–

i) 50 percent of 'Contract Demand' or
ii) Actual 'Recorded Demand'.

LT VII: LT - Temporary Supply

LT VII (A): LT - Temporary Supply - Religious (TSR)

Applicability

This tariff category is applicable for electricity supplyat Low/Medium voltage for temporary purposes for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc., and for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

LT VII (B): LT - Temporary Supply - Others (TSO)

Applicability

This tariff category is applicable for electricity used at Low/Medium voltage for Temporary use for a period not exceeding one year, other than for the religious or commemorative purposes covered under LT VII (A), for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

d) Any other activity not covered under LT VII (A).

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
LT VII (A) – All Units	Rs. 260 per connection	1.86	3.30

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
	per month		
LT VII (B) – All Units	Rs. 490 per connection month	1.86	5.45

Note:

(a) Additional Fixed Charges of Rs. 225 per 10 kW load or part thereof above 10 kW load shall be payable.

(b) Electricity used at Low / Medium Voltage for operating Fire-Fighting pumps and equipment in residential or other premises shall be charged as per the tariff category applicable to such premises.

LT VIII: LT- Crematoriums and Burial Grounds

Applicability

This tariff category is applicable for electricity used at Low/Medium Voltage in Crematoriums and Burial Grounds for all purposes, including lighting.

However, it will be applicable only to the portion of the premises catering to such activities. In case a part of the area is being used for other purposes, a separate meter will have to be provided for such purposes and the consumption charged at the applicable tariff.

Consumption Slab (kWh)	Fixed/Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per connection per month	1.86	4.35

LT IX: Public Services

LT IX (A): LT - Government Educational Institutions and Hospitals

Applicability

This tariff category is applicable for electricity supply at Low/Medium Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and

Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Hospitals, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 310 per month	1.86	3.25
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

LT IX (B): LT - Public Services - Others

<u>Applicability</u>

This tariff category is applicable for electricity supply at Low/Medium Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government or Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc.

   -- Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions /Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, ZillaParishads, Panchayat Samitis, Gram Panchayats; Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts;

f) Airports;

g) Ports and Jetties;

h) Railway/Metro/Monorail Stations, including Shops, Workshops, Yards, etc, if the supply is at Low/ Medium Voltage.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs.310 per month	1.86	5.00
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

LT X (A): LT - Agriculture - Pumpsets

Applicability:

This tariff category is applicable for motive power supplied for agricultural metered pumping loads, and for one lamp of wattage up to 40 to be connected to the motive power circuit for use in pump-houses at Low/Medium Voltage.

It is also applicable for power supply for cane crushers and/or fodder cutters for self-use for agricultural processing operations, but not for operating a flour mill, oil mill or expeller in the same premises, either operated by a separate motor or a change of belt drive.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 30 per HP per month	1.86	2.50

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

LT X (B): LT – Agriculture– Others

Applicability

This tariff category is applicable for use of electricity / power supply at Low / Medium Voltage for:

a) Pre-cooling plants and cold storage units for Agricultural Products – processed or otherwise**;**

b) Poultries exclusively undertaking layer and broiler activities, including Hatcheries;

c) High-Technology Agriculture (i.e. Tissue Culture, Green House, Mushroom cultivation activities), provided the power supply is exclusively utilized for purposes directly concerned with the crop cultivation process, and not for any engineering or industrial process;

d) Floriculture, Horticulture, Nurseries, Plantations, Aquaculture, Sericulture, Cattle Breeding Farms, etc;

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 75 per KW per month	1.86	3.90

Note:

Consumers who avail power supply at High Voltage for the above purposes shall also be billed as per this tariff category.

HIGH TENSION (HT) TARIFF

HT I: HT – Industry

Applicability:

This tariff category is applicable for electricity for Industrial use at High Voltage for purposes of manufacturing and processing, including electricity used within such premises for general lighting, heating/cooling, etc.

It is also applicable for use of electricity / power supply for Administrative Offices / Canteen, Recreation Hall / Sports Club or facilities / Health Club or facilities/ Gymnasium / Swimming Pool exclusively meant for employees of the industry; lifts, water pumps, fire-fighting pumps and equipment, street and common area lighting; Research and Development units, etc. -

Provided that all such facilities are situated within the same industrial premises and supplied power from the same point of supply.

This tariff category shall be applicable for use of electricity / power supply by an Information Technology (IT) or IT-enabled Services (ITeS) Unit as defined in the applicable IT/ITes Policy of Government of Maharashtra. Where such Unit does not hold the relevant permanent registration Certificate, the tariff shall be as per the HT II category, and the HT I tariff shall apply to it after receipt of such permanent registration Certificate and till it is valid.

It shall also be applicable for use of electricity / power supply for (but not limited to) the following purposes:

a) Flour Mills, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills;
b) Ice Factories, Ice-cream manufacturing units, Milk Processing / Chilling Plants (Dairy);
c) Engineering Workshops, Engineering Goods manufacturing units; Printing Presses; Transformer Repair Workshops; Tyre Retreading units, and Vulcanizing units;
d) Mining, Quarrying and Stone Crushing units;
e) Garment Manufacturing units
f) LPG/CNG bottling plants, etc.;
g) Sewage Treatment Plant/ Common Effluent Treatment Plant for industries, and not covered under the HT – PWW category
h) Start-up power for Generating Plants, i.e., the power required for trial run of a Power Plant during commissioning of the Unit and its Auxiliaries, and for its start-up after planned or forced outage (but not for construction);
i) Brick Kiln (Bhatti);
j) Biotechnology Industries covered under the Biotechnology Policy of Government of Maharashtra;
k) Cold Storages not covered under LT X (B)– Agriculture (Others);

l) Food (including Seafood) Processing units.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	0.92	6.25
TOD Tariffs (in addition to above base Tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

Note:

Demand Charge shall be applicable at the rate of 25% of the above rates on the start-up demand contracted by the Power Plant (as referred to at (h) above) with the Distribution Licensee.

HT II: HT- Commercial

Applicability

This tariff category is applicable for electricity used at High Voltage in non-residential, non-industrial and/or commercial premises for commercial consumption meant for operating various appliances used for purposes such as lighting, heating, cooling, cooking, washing/cleaning, entertainment/ leisure and water pumping in, but not limited to, the following premises:

a) Non-Residential, Commercial and Business premises, including Shopping Malls and Showrooms;

b) Combined lighting and power services for facilities relating to Entertainment, including film studios, cinemas and theatres (including multiplexes), Hospitality, Leisure, Meeting/Town Halls, and places of Recreation and Public Entertainment;

c) Offices, including Commercial Establishments;

d) Marriage Halls, Hotels / Restaurants, Ice-cream parlours, Coffee Shops, Guest Houses, Internet / Cyber Cafes, Telephone Booths and Fax / Photocopy shops;

e) Automobile and all other types of repairs, servicing and maintenance centres (unless specifically covered under another tariff category); Retail Gas Filling Stations, Petrol Pumps & Service Stations, including Garages; -

f) Tailoring Shops, Computer Training Institutes, Typing Institutes, Photo Laboratories, Laundries, Beauty Parlours and Saloons;

g) Banks and ATM centres, Telephone Exchanges, TV Stations, Micro Wave Stations, Radio Stations, Telecommunications Tower;

h) Common facilities, like Water Pumping / Lifts / Fire-Fighting Pumps and other equipment / Street and other common area Lighting, etc., in Commercial Complexes;

i) Sports Clubs/facilities, Health Clubs/facilities, Gymnasiums, Swimming Pools not covered under any other category;

j) External illumination of monuments/ historical/heritage buildings approved by Maharashtra Tourism Development Corporation (MTDC) or the concerned Local Authority;

k) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes, and which is not covered under the HT - Temporary category;

Note:

Residential LT consumers with consumption above 500 units per month (current month of supply) and who undertake construction or renovation activity in their existing premises shall not require a separate Temporary category connection but be billed at the LT-II Commercial tariff;

l) Milk Collection Centres;

m) Sewage Treatment Plant/ Common Effluent Treatment Plant for Commercial Complexes , not covered under the HT – PWW category or HT I - Industry

n) Stand-alone Research and Development units not covered under any other category;

o) Electrical Charging Centres for Vehicles; provided that, in case the consumer uses the electricity for charging his own vehicle at his premises, the tariff shall be as per the category applicable to such premises.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**
All Units	Rs. 260 per kVA per month	0.92	6.45
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
2200 to 0600 hours			-0.75

Note:

A consumer in the HT II category requiring single-point supply for the purpose of downstream consumption by separately identifiable entities shall have to operate as a Franchisee authorised as such by the Distribution Licensee; or such downstream entities shall be required to take separate individual connections and be charged under the tariff category applicable to them.

HT III: HT - Group Housing Society (Residential)

Applicability:

Entities supplied electricity at a single point at High Voltage for residential purposes in accordance with the Electricity (Removal of Difficulties) Eighth Order, 2005, in the following cases:

a) a Co-operative Group Housing Society which owns the premises, for making electricity available to the members of such Society residing in the same premises for residential purposes; and

b) a person, for making electricity available to its employees residing in the same premises for residential purposes.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	0.92	5.10

HT IV: HT - Public Water Works (PWW) and Sewage Treatment Plants

Applicability:

This tariff category is applicable for electricity / power supply at High Voltage for pumping of water, purification of water and allied activities relating to Public Water Supply Schemes and Sewage Treatment Plants, provided they are owned or operated or managed by Local Self-Government Bodies (Gram Panchayats, Panchayat Samitis, ZillaParishads, Municipal Councils and Corporations, etc.), or by Maharashtra Jeevan Pradhikaran (MJP), Maharashtra Industries Development Corporation (MIDC), Cantonment Boards and Housing Societies/complexes.

All other Public Water Supply Schemes and Sewage Treatment Plants (including allied activities) shall not be eligible under this tariff category, but be billed at the tariff applicable to the HT I or HT II categories, as the case may be.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	0.92	5.00
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

HT V- Railways/Metro/Monorail

This tariff category is applicable to power supply at High Voltage for Railways, Metro and Monorail, including Stations and Shops, Workshops, Yards, etc.

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	0.92	4.90

HT VI - Public Services

HT VI – (A): HT - Government Educational Institutions and Hospitals

Applicability

This tariff category is applicable for electricity supply at High Voltage for Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats, etc;

It shall also be applicable for electricity used for Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for the students / faculty/ employees/ patients of such Educational Institutions and Hospitals.

Consumption Slab (kWh)	**Fixed/ Demand Charge**	**Wheeling Charge (Rs/kWh)**	**Energy Charge (Rs./kWh)**
All Units	Rs. 260 per kVA per month	0.92	5.50
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

<u>HT VI - (B): Public Service - Others</u>

This tariff category is applicable for electricity supply at High Voltage for

a) -- Educational Institutions, such as Schools and Colleges; Health Care facilities, such as Hospitals, Dispensaries, Clinics, Primary Health Care Centres, Diagnostic Centres and Pathology Laboratories; Libraries and public reading rooms - other than those of the State or Central Government, Local Self-Government bodies such as Municipalities, Zilla Parishads, Panchayat Samities, Gram Panchayats, etc.

   - Sports Clubs and facilities / Health Clubs and facilities / Gymnasium / Swimming Pools attached to such Educational Institutions / Health Care facilities, provided that they are situated in the same premises and are meant primarily for their students / faculty/ employees/ patients;

b) all offices of Government and Municipal/ Local Authorities/ Local Self-Government bodies, such as Municipalities, Zilla Parishads, Panchayat Samitis, Gram Panchayats;

Police Stations and Police Chowkies; Post Offices; Armed Forces/Defence and Para-Military establishments;

c) Service-oriented Spiritual Organisations;

d) State or Municipal/Local Authority Transport establishments, including their Workshops;

e) Fire Service Stations; Jails, Prisons; Courts.

f) Airports

g) Ports and Jetties

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 260 per kVA per month	0.92	6.40
TOD Tariffs (in addition to above base tariffs)			
0600 to 0900 hours			0.00
0900 to 1200 hours			0.50
1200 to 1800 hours			0.00
1800 to 2200 hours			1.00
2200 to 0600 hours			-0.75

HT VII- HT - Temporary Supply

Applicability

This tariff category is applicable for electricity supply at High Voltage, for temporary use for a period not exceeding one year, for public religious functions like Ganesh Utsav, Navaratri, Eid, Moharrum, Ram Lila, Diwali, Christmas, Guru Nanak Jayanti, etc. or for areas where community prayers are held; and for functions to commemorate anniversaries of personalities and National or State events for which Public Holidays have been declared, such as Gandhi Jayanti, Ambedkar Jayanti, Chhatrapati Shivaji Jayanti, Republic Day, Independence Day, etc.

This tariff category is also applicable for electricity supplied at High Voltage for Temporary use for a period not exceeding one year for

a) Construction of all types of structures/ infrastructure such as buildings, bridges, fly-overs, dams, Power Stations, roads, Aerodromes, tunnels for laying of pipelines for all purposes;

b) Any construction or renovation activity in existing premises;

c) Decorative lighting for exhibitions, circuses, film shootings, marriages, etc.,

Consumption Slab (kWh)	Fixed/ Demand Charge	Wheeling Charge (Rs/kWh)	Energy Charge (Rs./kWh)
All Units	Rs. 490 per connection per month	0.92	6.90

Note:

Additional Fixed Charges of Rs. 260 per 10 kW load or part thereof above 10 kW load shall be payable.

MISCELLANEOUS AND GENERAL CHARGES

Fuel Adjustment Charge (FAC) Component of Z-factor Charge

The Fuel Adjustment Charge (FAC) component of the Z-factor Charge will be determined in accordance with the formula specified in the relevant Multi Year Tariff Regulations and any directions that may be given by the Commission from time to time, and will be applicable to all consumer categories for their entire consumption.

In case of any variation in the fuel prices and power purchase prices, the Distribution Licensee shall pass on the adjustments through the FAC component of the Z-factor Charge accordingly.

The details of the applicable Z_{FAC} for each month shall be available on the Distribution Licensee's website www.tatapower.com.

Electricity Duty and Tax on Sale of Electricity

Electricity Duty and Tax on Sale of Electricity shall be levied in addition to the tariffs approved by the Commission, and in accordance with the Government of Maharashtra stipulations from time to time. The rate and the reference number of the Government Resolution/ Order under which the Electricity Duty and Tax on Sale of Electricity are applied shall be stated in the consumers' energy bills. A copy of such Resolution / Order shall be provided on the Distribution Licensee's website www.tatapower.com.

Power Factor Computation

Where the average Power Factor measurement is not possible through the installed meter, the following formula for calculating the average Power Factor during the billing period shall be applied:

$$\text{Average Power Factor} = \frac{Total(kWH)}{Total(kVAh)}$$

$$\text{Wherein the kVAh is} = \sqrt{\sum(kWh)^2 + \sum(RkVAh)^2}$$

(i.e., Square Root of the summation of the squares of kWh and RkVAh)

Power Factor Incentive

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV- PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average Power Factor is more than 0.95, an incentive shall be given at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Incentive
1	0.951 to 0.954	0.95	0%
2	0.955 to 0.964	0.96	1%
3	0.965 to 0.974	0.97	2%
4	0.975 to 0.984	0.98	3%
5	0.985 to 0.994	0.99	5%
6	0.995 to 1.000	1.00	7%

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Power Factor Penalty

Applicable for HT-I :Industry, HT II - Commercial, HT-IV : PWW, HT V- Railways, Metro & Monorail, HT-VI: Public Services [HT VI (A) and HT VI (B)], HT VII - Temporary Supply, LT II: Non-Residential/Commercial [LT II (B), LT II (C)] (for Contract Demand/Sanctioned Load above 20 kW), LT III (B): Industry above 20 kW, LT IV : PWW, LT VII (B) – Temporary Supply (Others) , and LT IX : Public Service [LT IX (A) and LT IX (B)].

Whenever the average PF is less than 0.9, penal charges shall be levied at the rate of the following percentages of the amount of the monthly electricity bill, excluding Taxes and Duties:

Sl.	Range of Power Factor	Power Factor Level	Penalty
1	0.895 to 0.900	0.90	0%
2	0.885 to 0.894	0.89	2%
3	0.875 to 0.884	0.88	3%
4	0.865 to 0.874	0.87	4%
5	0.855 to 0.864	0.86	5%
6	0.845 to 0.854	0.85	6%
7	0.835 to 0.844	0.84	7%
8	0.825 to 0.834	0.83	8%
9	0.815 to 0.824	0.82	9%
10	0.805 to 0.814	0.81	10%
...	...	...	...

Note: Power Factor shall be measured/computed upto 3 decimals, after universal rounding off.

Prompt Payment Discount

A prompt payment discount of one percent of the monthly bill (excluding Taxes and Duties) shall be provided to consumers for payment of electricity bills within 7 days from the date of their issue.

Delayed Payment Charges

In case the electricity bill is not paid within the due date mentioned on the bill, delayed payment charges of 1.25 percent shall be levied on the total amount of the electricity bill (including Taxes and Duties).

Rate of Interest on Arrears

The rate of interest chargeable on the arrears of payment of billed dues shall be as given below:

Sr. No.	Delay in Payment (months)	Interest Rate per annum (%)
1	Payment made after 60 days and before 90 days from the date of billing	12%
2	Payment made after 90 days and up to 180 days from the date of billing	15%
3	Payment made after 180 days from the date of billing	18%

Load Factor Incentive

Consumers having Load Factor above 75% and upto 85% will be entitled to an incentive in the form of a rebate of 0.75% on the Energy Charges for every percentage point increase in Load Factor from 75% to 85%. Consumers having a Load Factor above 85 % will be entitled to a rebate of 1% on the Wheeling Charges, Energy Charges, and Regulatory Asset Charge for every percentage point increase in Load Factor from 85%. The total rebate will be subject to a ceiling of 15% of the Energy Charges applicable to the consumer.

This incentive is applicable only to consumers in the tariff categories HT I: Industry, HT II: Commercial and HT VI: Public Services - HT VI (A) and HT VI (B) only.

The Load Factor incentive will be available only if the consumer has no arrears with the Distribution Licensee, and payment is made within seven days from the date of the electricity bill. However, it will be available to consumers in whose case payment of arrears in instalments has been allowed by the Distribution Licensee, and such payment is being made as scheduled. the Distribution Licensee shall take a commercial decision on the schedule for such payments.

The Load Factor is to be computed as follows:

$$\text{Load Factor} = \frac{\text{Consumption during the month in MU}}{\text{Maximum Consumption possible during the month in MU}}$$

Maximum consumption possible = Contract Demand (kVA) x Actual Power Factor x (Total no. of hours during the month, less planned load shedding hours*)

** - Interruption/non-supply to the extent of 60 hours in a 30-day month.*

In case the Billing Demand exceeds the Contract Demand in any particular month, the Load Factor Incentive will not be payable in that month. (The Billing Demand definition excludes the demand recorded during the non-peak hours, i.e. 22:00 hrs to 06:00 hrs and, therefore, even if the Maximum Demand exceeds the Contract Demand in that period, Load Factor Incentive would be applicable. However, the consumer would be subject to and shall have to pay the penal charges applicable for exceeding such Contract Demand.

Penalty for exceeding Contract Demand

In case a consumer (availing Demand-based Tariff) exceeds his Contract Demand, he will be billed at the applicable Demand Charge rate for the Demand actually recorded, and also be charged an additional amount at the rate of 150% of the applicable Demand Charge (only for the Demand in excess of the Contract Demand).

Under these circumstances, the consumer shall not be liable for any other action under Section 126 of the EA, 2003, since the penal additional Demand Charge provides for the penalty that the consumer is liable to pay for exceeding his Contract DemandIn case a consumer exceeds his Contract Demand on more than three occasions in a calendar year, the action to be taken would be governed by the provisions of the Supply Code Regulations.

Additional Demand Charges for Consumers having Captive Power Plant

For consumers having a Captive Power Plant, additional Demand Charges at the rate of Rs. 20/kVA/month shall be payable only on the extent of the Stand-by demand component and not on the entire Contract Demand. The additional Demand Charges will be levied on the Stand-by component only if the consumer’s demand exceeds his Contract Demand.

EHV Rebate

In the event that power is supplied at 66 kV and above, the consumer shall be provided a rebate of 2% of the monthly Energy Charges specifically approved in the Tariff Schedule.

Consumers' Security Deposit

1) Subject to the provisions of Section 47(5) of the Electricity Act, 2003, the Distribution Licensee shall require any person to whom supply of electricity has been sanctioned to deposit an amount as security in accordance with the provisions of Section 47(1) (a).

2) The amount of the Security Deposit shall be equal to the average of three months' of billing or the billing cycle period, whichever is lesser. For determining the average billing, the average of the billing to the consumer for the last twelve months or, where supply has been provided for a shorter period, the average of the billing of such shorter period, shall be considered

3) Where the Distribution Licensee requires security from a consumer at the time of commencement of service, the amount of such security shall be estimated based on the tariff category and Contract Demand/Sanctioned Load, Load Factor, diversity factor and number of working shifts of the consumer.

4) TPC-D shall re-calculate the amount of Security Deposit payable, based on the actual billing of the consumer, once in each financial year.

5) Where the amount of Security Deposit maintained by the consumer is higher than the security required to be maintained under the Supply Code Regulations, the Distribution Licensee shall refund the excess amount to the consumer in a single instalment.

6) Such refund shall be made upon a request of the person who gave the security, and with intimation to the consumer if different from such person; and shall be made, at the option of such person, by way of adjustment in the next bill or by way of a separate cheque payment within 30 days from the receipt of such request;

7) No refund shall be required to be made where the amount of refund does not exceed 10% of the amount of the Security Deposit required to be maintained by the consumer or Rs 300/-, whichever is higher.

8) Where the amount of security re-assessed as above is higher than the Security Deposit of the consumer, the Distribution Licensee shall be entitled to raise a demand for additional security deposit. The consumer shall be given not less than 30 days to deposit the additional security pursuant to such demand.

9) Upon termination of supply, the Distribution Licensee shall, after recovery of all amounts due, refund the remaining amount of security to the person who deposited it, with intimation to the consumer if different from such person.

10) A consumer - (i) with a consumption of electricity of not less than one lakh kilo-Watt hours per month; and (ii) with no undisputed sums payable to the Distribution Licensee under Section 56 of the Electricity Act, 2003 may, at the option of such consumer, deposit security by way of cash, irrevocable letter of credit or unconditional Bank Guarantee issued by a scheduled commercial Bank.

11) The Distribution Licensee shall pay interest on the amount of Security Deposit in cash (including by cheque or demand draft) at the Base Rate of State Bank of India as on 1st April of the financial year for which the interest is payable, plus 150 basis points, provided that the amount of such cash Deposit maintained by the consumer is at least Rs. 50/-.

12) Interest on the Security Deposit made in cash shall be payable from the date of its deposit by the consumer till the date of dispatch of the refund by the Distribution Licensee.

<u>Definitions</u>

Maximum Demand

Maximum Demand in kilo-Watts or kilo-Volt Amperes, in relation to any period shall, unless otherwise provided in any general or specific Order of the Commission, mean twice the highest number of kilo-watt-hours or kilo-Volt Ampere hours supplied and taken during any consecutive thirty minute blocks in that period.

Contract Demand

Contract Demand means the demand in kilo-Watt (kW) or kilo–Volt Amperes (kVA), mutually agreed between the Distribution Licensee and the consumer as entered into in the agreement or agreed through other written communication. (For conversion of kW into kVA, the Power Factor of 0.80 shall be applied.)

Sanctioned Load

Sanctioned Load means the load in kW mutually agreed between the Distribution Licensee and the consumer.

Billing Demand - LT tariff categories

Monthly Billing Demand will be the higher of the following:

e) 65% of the actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
f) 40% of the Contract Demand.

<u>Note:</u>

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change in Contract Demand is effected.

Billing Demand - HT tariff categories

Monthly Billing Demand will be the higher of the following:

g) Actual Maximum Demand recorded in the month during 0600 hours to 2200 hours;
h) 75% of the highest Billing Demand recorded during the preceding eleven months, subject to the limit of Contract Demand;
i) 50% of the Contract Demand.

<u>Note:</u>

- Only the Demand registered during the period 0600 to 2200 Hrs. will be considered for determination of the Billing Demand.

- In case of a change in Contract Demand, the above period will be reckoned from the month following the month in which the change of Contract Demand is effected.