TARIFF ORDER

True-up for FY 2017-18 and FY 2018-19, Annual Performance Review for FY 2019-20 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2020-21

Petition No. 20/2019

For

Electricity Department, Government of Puducherry (PED)

18th May 2020

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
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List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
AMR	Automatic Meter Reading
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CC	Current Consumption
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojana
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
DT	Distribution Transformer
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
KSEB	Kerala State Electricity Board Limited
LT	Low Tension
MCLR	Marginal Cost of funds based Lending Rate
MU	Million Units
MYT	Multi-Year Tariff
NFA	Net Fixed Assets
NTI	Non-Tariff Income

Abbreviation	Full Form
NTPC	NTPC Ltd.
OHOB	One Hut One Bulb
O&M	Operation and Maintenance
PLF	Plant Load Factor
PLR	Prime Lending Rate
PSDF	Power System Development Fund
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Sh. M. K. Goel, Chairperson

Petition No. 20/2019

In the matter of

Approval for the True-up of the FY 2017-18 and FY 2018-19, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2020-21.

And in the matter of

Electricity Department, Government of Puducherry (PED)..Petitioner

ORDER

Dated: 18th May 2020

1) This Order is passed in respect of the Petition filed by the Electricity Department, Government of Puducherry (PED) (herein after referred to as "The Petitioner" or "PED" or "The Licensee") for approval of True-up of the FY 2017-18 and FY 2018-19, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2020-21 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 12th December 2019. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/ comments/ views and objections were invited from the Stakeholders and Electricity Consumers. A Public Hearing was also held on 07th and 08th January 2020, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) Ministry of Home Affairs (MHA), Govt. of India has imposed nationwide lockdown with certain exceptions in the entire country from 24th March 2020 onwards to contain Covid-19. The Commission acknowledges that the prevailing situation due to outbreak of Covid-19 has led to complete shutdown of a number of commercial, industrial and Institutional establishments. COVID-19 (Corona Virus) outbreak has posed an unprecedented and unconceivable situation which is causing wide spread concern and economic hardship for communities, businesses and consumers across the country. The delay in issuance of this Order is due to the above uncontrollable factor i.e. nationwide lockdown with effect from March 24, 2020 due to the pandemic COVID 19.

4) The Commission also recognises the fact that the lockdown announced in the country will certainly have impact on sales of Industrial and Commercial consumers, thereby impacting the computation of ARR. Even after the lockdown restrictions are lifted in entirety, it is going to take some time before the economic situation stabilises. Therefore, at this point of time it will not be possible to factor the impact of lockdown on sales and components of ARR for FY 2020-21 with desired accuracy and efficacy.

5) The Commission, vide its Order dated April 10, 2020 in SUO MOTU PETITION NO. JERC/LEGAL/SMP/27/2020 issued certain Directions to mitigate the hardship of Electricity consumers

and DISCOMS/EDs in view of nationwide lockdown due to COVID-19. The Commission, in the said Order, ruled that the additional expenses that are likely to be incurred by the Distribution Licensees on compliance with the directions issued in the said Order, will be taken into account while evaluating the APR of FY 2020-21.

6) The Commission is issuing this Order considering the "Business as Usual" scenario on the basis of the Petition submitted by the Electricity Department, Government of Puducherry after detailed analysis of submissions made by the Petitioner for FY 2020-21 and without factoring the impact of lockdown. The Commission will duly consider the impact of lockdown on sales and ARR of the Petitioner for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.

7) The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the True-up of FY 2017-18 and FY 2018-19, APR of FY 2019-20 and ARR along with Retail Tariff for the FY 2020-21.

8) A Summary has been provided as follows:

(a) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2017-18:

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2017-18 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1,341.52	1,308.12
2	Revenue from Retail Sales at Existing Tariff	1,311.97	1,311.97
	Net Gap /(Surplus)	**29.56**	**(3.85)**

(b) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2018-19:

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2018-19 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1,516.03	1,483.17
2	Revenue from Retail Sales at Existing Tariff	1,443.18	1,443.18
	Net Gap /(Surplus)	**72.86**	**39.99**

(c) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the APR of FY 2019-20:

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1590.50	1,523.62
2	Revenue from Retail Sales at Existing Tariff	1538.75	1,546.95
3	**Gap / (Surplus) without Regulatory Surcharge**	**51.75**	**(23.33)**
4	Regulatory Surcharge (@4%)	61.37	61.88

S. No	Particulars	Petitioner's Submission	Approved by Commission
5	Total Revenue (2+4)	1600.24	1,608.83
	Net Gap /(Surplus) (1-5)	**(9.74)**	**(85.21)**

(d) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff (excluding Regulatory Surcharge) as submitted by the Petitioner and approved by the Commission for the FY 2020-21:

Table 4: Standalone Revenue Gap/ (Surplus) at existing tariff without regulatory surcharge for the FY 2020-21 (INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	**Annual Revenue Requirement**	1,653.42	1,653.21
2	**Revenue from sale of power at existing tariff**	1,610.05	1,591.27
	Standalone Revenue Gap/ (Surplus)	**43.37**	**61.93**

(e) To meet the revenue gap, the Commission has approved an average tariff hike of 3.12% while retaining the regulatory surcharge of 4% for the FY 2020-21.

Table 5: Standalone Revenue Gap/ (Surplus) at approved tariff without regulatory surcharge for the FY 2020-21 (INR Cr)

Particulars	Petitioner's Submission	Now Approved
Net Revenue Requirement (a)	1,653.42	1,653.21
Revenue from Retail Sales at Approved Tariff (b)	1,610.05	1,640.92
Standalone Gap /(Surplus) for the year (c=b-a)	**43.37**	**12.28**

(f) Accordingly, the cumulative revenue gap/ (surplus) at approved tariff by the end of the FY 2020-21, as approved by the Commission is given in the following table:

Table 6: Revised Revenue Gap/ Surplus with Regulatory Surcharge approved by Commission (INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap /(Surplus) (a)	94.05	97.57	146.96	71.72
Add: Gap/(Surplus) (b)	(3.85)	39.99	(23.33)	61.93
Less: Additional Revenue on account of tariff increase (c)				49.65
Less: Regulatory Surcharge (d)			61.88	65.64
Closing Gap /(Surplus) (e=a+b-c-d)	90.20	137.55	61.75	18.36
Average Gap/ (Surplus) (f=(a+e)/2)	92.12	117.56	104.35	45.04
Percentage of Carrying Cost (g)	8.00%	8.00%	9.55%	8.85%
Carrying Cost (h=f*g)	7.37	9.40	9.97	3.99
Final Closing Gap/ (Surplus) (i=e+h)	**97.57**	**146.96**	**71.72**	**22.35**

(g) The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost to service a category of consumer in accordance with the provisions of the Act. Accordingly, the Commission has approved relatively higher percentage increase in tariff for the cross-subsidized categories than the cross-subsidizing categories.

(h) The Commission has approved the Average Billing Rate (ABR) for FY 2020-21 as INR 5.85/kWh as against the approved Average Cost of Supply of INR 5.89/kWh.

(i) The Commission has discontinued the OHOB tariff category and has introduced a new category of Lifeline Connection for the consumers, hitherto under OHOB tariff category, in order to provide benefit of lower tariffs to this section of the society having consumption upto 50 units per month. Lifeline connections will be metered connections where consumption will be charged upto 50 units at INR 1/kWh without any Fixed Charges. If the consumption exceeds 50 units per month then Domestic tariff shall be applicable for the total consumption.

(j) In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for E.V. Charging Stations where the Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of Average Power Purchase Cost (APPC).

(k) This Order shall come into force with effect from 1st June, 2020 and shall, unless amended or revoked, continue to be in force till further orders of the Commission. As the tariff is being implemented with effect from 1st June, 2020 instead of 1st April, 2020, the Commission will duly consider the impact of under recovery of ARR for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.

9) The licensee shall publish the Tariff Schedule and salient features of Tariff as determined by the Commission in this Order within one week of receipt of the Order in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply and also upload the Tariff Order on its website.

10) Ordered accordingly, the attached documents giving detailed reasons, grounds and conditions are the Integral part of this Order.

Sd/-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 18th May 2020

(Certified Copy)

RKumar

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

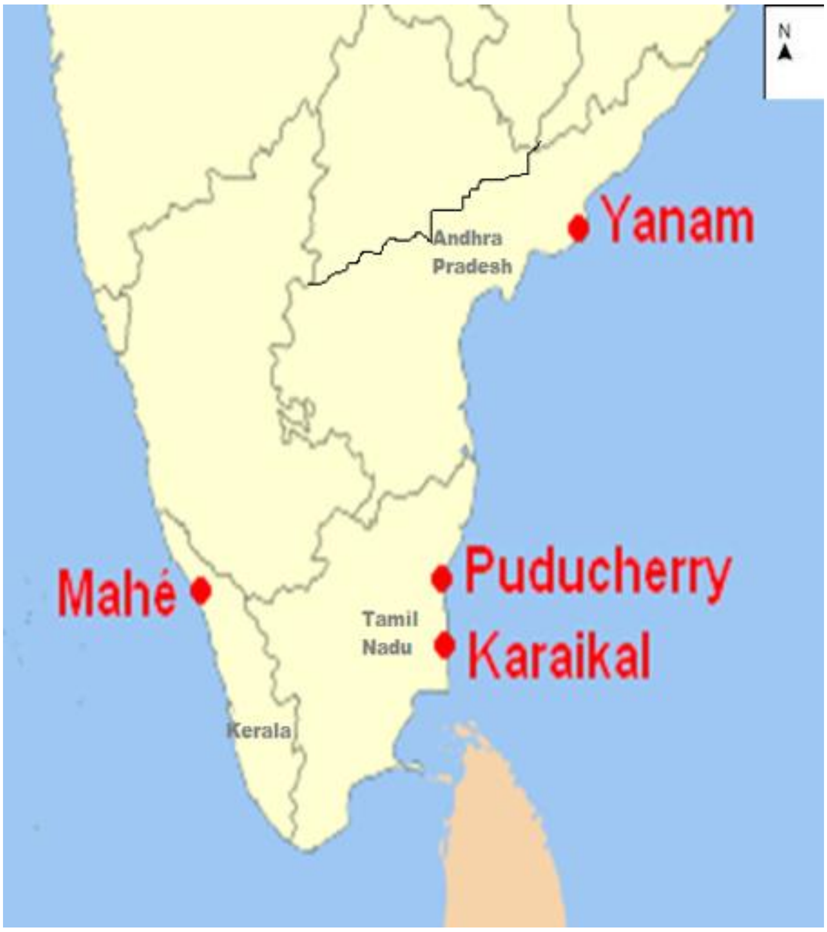
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as “the Joint Electricity Regulatory Commission for the Union Territories” vide notification no. 23/52/2003-R&R dated 2nd May 2005. Later with the joining of the State of Goa, the Commission came to be known as “Joint Electricity Regulatory Commission for the State of Goa and Union Territories” (hereinafter referred to as “the JERC” or “the Commission”) vide notification no. 23/52/2003-R&R (Vol. II) dated 30th May 2008.

JERC is a statutory body responsible for regulation of the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting the interest of consumers and ensuring the supply of electricity to all areas.

1.2. About Puducherry

The Union Territory of Puducherry comprises of four regions namely Puducherry, Karaikal, Mahe and Yanam, which are not geographically contiguous and is spread over an area of 492 Sq. km with the total population of 12.45 Lakhs as per provisional results of Census 2011. The basic profiles of four regions are as follows:

- Puducherry is the largest among the four regions and consists of 12 scattered areas interspersed with enclaves of Villupuram and Cuddalore Districts of Tamil Nadu.
- Karaikal is about 150 kms South of Puducherry and is bounded by Nagapattinam and Thiruvarur Districts of Tamil Nadu State.
- Mahe lies almost parallel to Puducherry 653 kms away on the west coast near Kannur District of Kerala State.
- Yanam is located about 840 kms north-east of Puducherry and it is located in the East Godhavari District of Andhra Pradesh State.



1.3. About Electricity Department, Govt. of Puducherry

The Electricity Department of the UT Administration of Puducherry (hereinafter referred to as PED), is a deemed licensee under Section 14 of the Electricity Act 2003 and is carrying out the business of transmission, distribution and retail supply of electricity in Puducherry, Karaikal, Yanam and Mahe regions of the Union Territory of Puducherry. PED is divided into three circles, each headed by a Superintending Engineer. There are ten Technical Divisions across the three circles, each headed by an Executive Engineer.

The region wise profile (as on FY 2018-19) of the regions served by ED Puducherry is given below:

Table 7: Region wise profile (as on FY 2018-19) of the regions served by ED Puducherry

S. No.	Puducherry Region	Karaikal Region	Mahe Region	Yanam Region	Total UT of Puducherry
Consumers Nos. Dispersion	74%	18%	4%	4%	100%
Connected Load (kW)	75%	15%	5%	5%	100%
Energy Sales (MU)	79%	16%	2%	2%	100%
Area (Sq. Km)	60%	32%	2%	6%	100%
T&D Losses (%)	13%	13%	10%	10%	12.52%

The key duties being discharged by ED Puducherry are:

- To develop and maintain an efficient, coordinated and economical transmission and distribution system;
- To supply electricity on an application of the consumer in accordance with the provisions specified in the Electricity Act 2003;
- To provide non-discriminatory open access to the consumers;
- To establish a forum for redressal of grievances of the consumers.

PED does not have its own generation and procures power from various Central Generating Stations (CGS), neighbouring state utilities and the state-owned Puducherry Power Corporation Limited (PPCL), which runs a 32.5 MW gas-based combined cycle power plant in the Karaikal region. The entire power generated from PPCL is consumed within the Karaikal region.

PED operates a transmission network of 230 kV & 110 kV and distribution network at 33 kV, 22 kV, 11 kV and at LT levels. It supplies power to consumers through its 18 EHV substations, 489 km of EHT line, 2294 km of HT line, 2877 distribution transformers and 3845 km of LT line. PED also has 90 km of HT and 535 km of LT underground cabling for certain urban areas.

State Load Dispatch Center (SLDC), which is under the control of the ED (Puducherry), interacts with Regional Load Dispatch Centre (RLDC) for optimum scheduling and dispatch of electricity. It monitors grid operation on real time basis and passes on necessary instructions to field staff to control the flow of energy.

1.4. Multi Year Distribution Tariff Regulations, 2014

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as MYT Regulations, 2014) on 30th June 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10th August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi Year Tariff Regulations, 2018

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (hereinafter referred to as MYT Regulations, 2018) on 10th August 2018. These Regulations are applicable in the 2nd MYT Control Period comprising of three financial years from FY 2019- 20 to FY 2021-22. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.6. Filing and Admission of the Present Petition

The present Petition was admitted on 12.12.2019 and marked as Petition No. 20/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.7. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, discrepancy notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalization, tariff proposal etc. The Petitioner submitted its response to the issues through various letters/emails.

The Commission conducted the Technical Validation Session (TVS) with the Petitioner at the Commission's office in Gurugram, during which the discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in this session and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner along with the dates:

Table 8 List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of First Discrepancy Note	13.12.2020
2	Public hearing	07.01.2020, 08.01.2020
3	Petitioner's reply to the Stakeholders' comments sought by the Commission	12.02.2020
4	Technical Validation Session	10.01.2020
5	Replies received from the Petitioner with regard to Discrepancy Notes	29.01.2020

1.8. Notice for Public Hearing

The Petitioner published the Public Notices for inviting suggestions/ comments from stakeholders on the Tariff Petition as given below:

Table 9: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of circulation
1	04.12.2019	New Indian Express	English	Puducherry, Karaikal, Mahe & Yanam
2	04.12.2019	The Hindu	English	Puducherry, Karaikal, Mahe & Yanam
3	04.12.2019	The Daily Thanthi	Tamil	Puducherry, Karaikal
4	04.12.2019	Dinakaran	Tamil	Puducherry, Karaikal
5	18.12.2019	Kerala Kaumudi	Malayalam	Mahe

S. No.	Date	Name of Newspaper	Language	Place of circulation
6	18.12.2019	Janamitra	Telugu	Yanam

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearings.

Table 10: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Place of Circulation
1	13.12.2019	The New Indian Express	All Tamil Nadu
2	13.12.2019	Daily Thanthi	Puducherry
3	13.12.2019	Dinakaran	Puducherry
4	13.12.2019	Hindu	Visakhapatnam, Vijayawada
5	04.01.2020	The New Indian Express	All Tamil Nadu
6	04.01.2020	Daily Thanthi	Puducherry
7	04.01.2020	Dinakaran	Puducherry
8	04.01.2020	Hindu	Visakhapatnam, Vijayawada

1.9. Public Hearings

The Public Hearings were held on 07th January 2020 at Puducherry State Co-operative Union Building, Suffren Street, Puducherry, and 08th January 2020 at Danal K.A. Thangavelu Kalayarangam, Theitta Street, Near Municipality Marriage Hall, Karaikal to discuss the issues related to the Petition filed by the Petitioner. The list of the Stakeholders is attached as Annexure 1 to this Order. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

2. Chapter 2: Summary of Suggestions/ Comments received, Response from the Petitioner and the Commission's Views

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting suggestions/ comments from the public as per the provisions of the MYT Regulations, 2014 and MYT Regulations, 2018.

The Public Hearings were held on 07th January 2020 at Puducherry State Co-operative Union Building, Suffren Street, Puducherry, and 08th January 2020 at Danal K.A. Thangavelu Kalayarangam, Theitta Street, Near Municipality Marriage Hall, Karaikal on the Petition for the True-up of the FY 2017-18, FY 2018-19, APR of the FY 2019-20, Aggregate Revenue Requirement (ARR Tariff for the FY 2020-21). During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written suggestions/ comments earlier, were also given an equal opportunity to present their views/ suggestions in respect to the Petition.

The list of the Stakeholders is attached as **Annexure 1** to this Order.

2.2. Suggestions/ Comments of the Stakeholders, Petitioner's Response and Commission's Views

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/ comments/ observations to make the Electricity Distribution Sector responsive and efficient. The Commission has noted the concerns of all the stakeholders and has tried to address them to the extent possible in the Chapters on tariff design and Directives. The Commission while finalizing the Tariff Order has suitably considered relevant observations. The submissions of the stakeholders, Petitioner's response and views of the Commission are summarized below:

2.2.1. Reduction in Regulatory Surcharge

Stakeholders' Comments:

Proposal for retention of surcharge at 4% will severely affect existing businesses, including closure of large industries and MSME units. The Commission should not consider this proposal.

Petitioner's Response:

Surcharge is levied for not only the gap of the current year but also the unrecovered gap of previous years, carried forward until the current year. Hence, regulatory surcharge is to ensure faster recovery of previous years' and current year gap, so that it does not carry forward in the future years.

Commission's View:

After examining the submissions of the Petitioner, the Commission has taken a prudent view to retain the 4% Regulatory Surcharge for the FY 2020-21 in order to recover the revenue gap carried over from the preceding years. However, the Commission has marginally increased the average retail tariff for the FY 2020-21 in order to recover the standalone revenue gap for the FY 2020-21. The Commission has detailed its reasoning for the same in Chapter 7 of this Order.

2.2.2. Minimum Demand Charge

Stakeholders' Comments:

Considering the signs of economic recession, industries require minimum demand charge of 75% of contracted demand as against 85% finalized by the Commission. This will help them during times of lower orders and bad market conditions.

Petitioner's Response:

The minimum demand charges were increased from FY 2018-19 onwards and the increase in charges was made to ensure the optimum utilization of electricity.

Commission's View:

The Commission notes the Stakeholders' concern. However, the minimum demand charge of 85% of the contracted demand for the FY 2020-21 has been retained to ensure adequate recovery of fixed charges. Further, the industries that currently have very high contract demand can get it reduced as per the latest Supply Code Regulations notified by JERC.

2.2.3. Time of Day Tariff Rates

Stakeholders' Comments:

As per the Time of Day tariff proposal by the PED, the Peak rate is proposed as 120% of normal rate. Similarly, the off-peak rate should be 80% of the normal rate instead of the proposed 90% of normal rate to encourage industries to plan their electricity usage accordingly.

Petitioner's Response:

The request of the consumers to fix the off-peak rate at 80% of normal rate is not reasonable.

Commission's View:

The off-peak energy charges as 90% of normal rate of energy charges has been retained, as the Commission is of the opinion that the current off-peak energy charges provide adequate incentive to the consumers to shift their consumption pattern.

2.2.4. Infrastructure and Connectivity

Stakeholders' Comments:

Numerous T&D lines are in a dilapidated condition, many transformers need replacement and the connectivity is poor in rural areas. Line losses to be controlled and utilize the O&M budget towards the same. The stakeholders also indicated that the Petitioner's R&M expenses were lower than approved and questioned the department's commitment towards ensuring reliability of the distribution network.

Petitioner's Response:

Regarding R&M expenses, the department generally carries out all the required maintenance works based on the fund allocation made by the Government and ensures the 24x7 availability of power to all the consumers including agriculture consumers. Further, Department will take necessary action to increase the budget allocation of the R & M expenses, so as to carry out adequate maintenance works as required.

Commission's View:

The Petitioner is directed to ensure that the service levels to the consumers are maintained in line with the JERC (Standards of Performance) Regulations applicable from time to time. With regard to the current infrastructure, the Commission would like to point out that considerable capital expenditure investments for the ensuing MYT Control Period (~INR 635 Cr) have been approved in the MYT Order to improve the existing infrastructure.

2.2.5. Frequency of CGRF meetings

Stakeholders' Comments:

The number of CGRF meetings held are not sufficient to address all the consumer grievances and request for an increase in the frequency of the same.

Petitioner's Response:

The Public Grievance meetings are being conducted by the Department across UT and the same has also been acknowledged by some of the stake holders. However, as suggested by some of the stake holders, the frequency of conducting Public Grievance meeting will be increased in the years to come.

Commission's View:

The Stakeholders are advised to bring their grievances to the notice of PED and if the same are not addressed, the Stakeholders may approach the CGRF. The CGRF is expected to conduct the hearings at various geographic locations based on the locations of the consumers. It is also expected to adequately publicize the meetings so that the public is sufficiently aware of the details of the meetings. The redressal of grievances is monitored by the Commission on a quarterly basis to ensure that they are being addressed in a timely manner.

2.2.6. Use of subsidized energy to OHOB/Agricultural Consumers

Stakeholders' Comments:

The subsidized energy supplied to OHOB/ Agricultural consumers is being used for purposes other than intended use of the connections. Agricultural consumers are using their subsidized energy for commercial activities, which is not justified.

Petitioner's Response:

The Department has already initiated action to inspect all the services for updating the connected load, the status of the meters and to identify the misuse of the services. These inspections would also facilitate the Department to curb the misuse of power by consumers. The Department has also initiated action to upgrade the existing billing software incorporating the regulatory requirement.

Commission's View:

The Petitioner's efforts to curb the unauthorized use of power are noted. The Petitioner is directed to inspect the relevant premises as per the provisions of the Act, the prevalent Supply Code Regulations notified by the JERC and this Order.

2.2.7. Collection of Arrears

Stakeholders' Comments:

The arrears due from bill defaulters need to be collected at the earliest to ensure efficient recovery of the revenue gap.

Petitioner's Response:

The Department is conducting a special disconnection drive after making prior announcement in the public media to recover dues. Even the Govt. departments/ local bodies are being pursued to make the payments towards the arrears.

Commission's View:

The Petitioner's efforts are noted. The Petitioner is directed to act proactively and in accordance with Section 56 of the Act and the JERC (Electricity Supply Code) Regulations, 2018 applicable from time to time, to address such issues of default.

2.2.8. Manpower deployment

Stakeholders' Comments:

The various substations owned by the PED are poorly staffed and do not have adequate manpower to meet the demands of the region. This results in inefficiency in the distribution network.

Petitioner's Response:

The requirement of additional manpower for the new sub-stations/new works will be considered in the project report for the JICA.

Commission's View:

The Petitioner is directed to ensure that the service levels are maintained in line with the JERC (Standards of Performance) Regulations applicable from time to time. Accordingly, the Petitioner is expected to have adequate manpower for maintenance of the existing transmission and distribution network. In light of the above, the Commission in Chapter 10 of this Order has directed the Petitioner to submit the employee cost/manpower study along with a detailed proposal indicating the requisite manpower required at each level while filing the tariff petition for the FY 2020-21.

2.2.9. Consideration of Hotels under Industrial Category

Stakeholders' Comments:

Presently the hotel sector are categorized under HT- Commercial. The Hotel association of Puducherry has submitted their evidence of treating the hotel sector under Industrial category as the norms followed for setting up of an Industries are being followed in Puducherry.

Petitioner's Response:

The Hon'ble Commission may take appropriate decision based on the overall tariff realization and approved revenue gap.

Commission's View:

The Commissions has considered the Stakeholders' submission and shall take this matter into consideration while dealing with the tariff in the appropriate chapters of this Order.

2.2.10. Lack of energy saving efforts

Stakeholders' Comments:

PED lacks in its efforts to promote power savings and energy efficiency. Only 2 LED bulbs were provided to the consumers and the PED itself is using conventional and inefficient lighting.

Petitioner's Response:

The Department is already in the process of procuring the energy efficient/ star rated electrical equipment as per the guidelines of BEE and all the Government Departments have also been requested to use LED bulbs and star rated fans as per the guidelines issued by MOP.

Commission's View:

The Petitioner's efforts are noted. The Petitioner is directed to expedite the procurement and distribution of energy efficient/ star rated electrical equipment.

2.2.11. Connectivity and Power Supply to Karaikal

Stakeholders' Comments:

PED should ensure proper connectivity and power supply to Karaikal.

Petitioner's Response:

The Power supply to Karaikal was previously fed from the TANGEDCO but consequent to the commissioning of 230 KV SS at Karaikal, the Karaikal region has been connected with the Central Generating Station and the power supply has been under the Regional Accounting.

The conversion of Overhead Lines into underground cables has been envisaged in the JICA plan and will be taken up after obtaining approval of the Government.

Commission's View:

The Petitioner's efforts are noted. The Petitioner is directed to expedite plan to lay the UG cables.

2.2.12. Maintenance of Street lights

Stakeholders' Comments:

PED should ensure timely maintenance of street in Karaikal. The timers are also not set according to daylight.

Petitioner's Response:

Priority shall be given for streetlight maintenance. The timers will be checked. Frequent streetlight inspection shall be made by the Assistant Engineer / Junior Engineer O&M concerned and the non-burning streetlights shall be attended in time.

Commission's View:

The Petitioner's efforts are noted. The Petitioner is directed to submit a report within two months regarding the action taken.

3. Chapter 3: True-up of FY 2017-18

3.1. Background

Under the MYT regime, Order on Aggregate Revenue Requirement (ARR) for the 1st MYT Control Period (FY 2016-17 to FY 2018-19) and Wheeling & Retail Supply Tariff for the FY 2017-18 was issued on 24th May 2016 (hereinafter referred to as the "MYT Order"). Subsequently, the Commission issued the Tariff Order for FY 2018-19, determining the Aggregate Revenue Requirement (ARR) and the tariff for FY 2018-19, Annual Performance Review (APR) of FY 2017-18 and True-up of FY 2017-18 on 28th March 2018 (hereinafter referred to as the "APR Order").

The True up for the FY 2017-18 has to be carried out in accordance to Regulation 8(2) of the MYT Regulations, 2014, stated as following:

"(2) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures or the provisional actual accounts as available as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.

The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.

(3) The revenue gap/surplus, if any, of the ensuing year shall be adjusted as a result of review and truing up exercises.

(4) While approving such expenses/revenue to be adjusted in the future years as arising out of the Review and/or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenue. Carrying costs shall be limited to the interest rate approved for working capital borrowings.

(5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is due to conditions beyond its control.

(6) In case additional supply is required to be made to any particular category, the licensee may, any time during the year make an application to the Commission for its approval. The application will demonstrate the need for such additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such additional supply of power."

The True-up for FY 2017-18 was not carried out in the MYT Order for the 2nd Control Period (FY 2019-20 to FY 2021-22) since the Petitioner had not submitted audited final accounts for the same. However, the Petitioner has submitted its Audited Annual Accounts for FY 2017-18 along the Petition for Tariff for FY 2020-21. According to the Regulation 8(2) of the MYT Regulations, 2014 cited above the Truing Up for any year is not ordinarily considered after more than one year of 'Review'; However, considering the difficulty faced by ED Puducherry and request made to the Commission in this regard the Commission has considered Truing-up for FY 2017-18 so that the Tariff reflects a true picture in the subsequent years.

3.1. Approach for the True-Up of FY 2017-18

The Petitioner has submitted audited accounts based on audit conducted by statutory auditors. The Commission in this Chapter now carries out the True-up of FY 2017-18, the second year of the first Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

3.2. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2017-18 as 2548.76 MU as against an approved energy sales quantum of 2535.58 MU in the APR Order.

Commission's analysis

The MYT Regulations, 2014 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 9.1 of the MYT Regulations, 2014 in this regard stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(a) *Force Majeure events, such as acts of war, fire, natural calamities, etc.*
(b) *Change in law;*
(c) *Taxes and Duties;*
(d) *Variation in sales; and*
(e) *Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"*

The table below provides the energy sales approved by the Commission in the APR of FY 2017-18, the Petitioner's Submission and quantum of energy sales now trued-up by the Commission.

Table 11: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	744.75	723.28	723.28
2	OHOB	10.22	10.24	10.24
3	Commercial	233.57	216.41	216.41
4	Agriculture	57.28	57.61	57.61
5	Public lighting	27.52	24.48	24.48
6	LT Industrial & Water Tank	184.79	185.61	185.61
7	Temporary supply - LT&HT	8	7.66	7.66
8	HT 1 Industrial	930.18	933.43	933.43
9	HT 2 - Government & water tank	65.53	63.14	63.14
10	HT 3 - EHT	273.75	326.90	326.90
	Total	**2,535.58**	**2,548.76**	**2,548.76**

The Commission approves 2,548.76 MU as energy sales in the True-up of the FY 2017-18.

3.3. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted the total Open Access Sales for the FY 2017-18 as 39.00 MU against an approved sales quantum of 35.59 MU in the APR Order. The Petitioner has submitted the actual Open Access Purchase of 39.58 MU against approved quantum of 36.13 MU.

Commission's analysis

The following table provides the Open Access Sales and Purchase approved by the Commission in the APR Order, the Petitioner's Submission and sales now trued-up by the Commission based on the information submitted by the Petitioner.

Table 12: Open Access Sales (MU) and Purchase trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Sales	35.59	39.00	39.00
2	Open Access Purchase	36.13	39.58	39.58

The Commission approves Open Access Sales of 39 MU and Purchase of 39.58 MU in the True-up of the FY 2017-18.

3.4. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the APR Order due to non-availability of requisite loss percentage figures.
- For Central Generating Stations (CGS), the actual losses are now working out to be 2.92% against an approved figure of 2.15% in the APR Order.

Commission's analysis

The Commission has verified the Inter-State losses from the supporting documentary evidence submitted by the Petitioner. The Commission accordingly approves the Inter-State Losses as shown in the following table:

Table 13: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Government Stations	2.15%	2.92%	2.92%

The Commission approves the Inter-State Transmission Loss as 2.92% for CGS stations and 4.00% for TANGEDCO in the True-up of the FY 2017-18.

3.5. Intra- State Transmission & Distribution (T&D) loss

Petitioner's Submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 13.75% in the FY 2017-18 against target of 11.25% in FY 2017-18.

Commission's analysis

The Commission has verified the Intra-State T&D loss levels based on the information available of energy drawal of the UT on the Southern Region Power Committee (SRPC) website and the energy sales as approved above. The Commission is constrained to consider Intra-State T&D loss of 13.75% in the FY 2017-18 for the purpose of determination of Energy Balance against an approved T&D loss of 11.25% in the APR Order.

Since, the Petitioner has not been able to achieve the Intra-State T&D loss target for the year, the disincentive for the same has to be borne by the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in section 3.19 of this Order.

The table below provides the Intra-State T&D loss approved in the APR of FY 2017-18, Petitioner's submission and as approved by the Commission now.

Table 14: Intra-State distribution loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.25%	13.75%	13.75%

The Commission, while Trueing UP for FY 2017-18, has considered the actual Intra-State T&D loss of 13.75% for the FY 2017-18.

3.6. Power Purchase Quantum & Cost

Petitioner's Submission

The Petitioner submitted that it meets its total energy requirement from its allocation of the Central Generating Stations (CGS) and the State utilities like TANGEDCO, KSEB and PPCL. PPCL is a generating company within the UT of Puducherry catering to the requirement of the Karaikal region. KSEB supplies energy for the Mahe region under the UT of Puducherry. The power purchase quantum and cost for FY 2017-18, as submitted by the Petitioner has been shown in the table below:

Table 15: Power Purchase cost submitted by the Petitioner (in INR Cr)

S. No.	Particulars	Approved (FY 2017-18)			Actuals (FY 2017-18)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
1	NTPC	1,232.61	351.87	2.85	1,212.91	320.20	2.64
2	NLC and NTPL	855.14	346.04	4.05	800.87	336.26	4.20
3	NPCIL	571.10	185.31	3.24	604.43	215.77	3.57
4	KSEB	30.13	22.37	7.42	30.13	19.34	6.42
5	TANGEDCO	177.37	67.83	3.82	181.44	75.61	4.17
6	PPCL	215.56	68.63	3.18	214.80	78.86	3.67
7	NTECL- Vallur	113.17	56.18	4.96	102.89	54.04	5.25
8	Over drawal	(47.23)	(4.55)	0.96	(85.06)		0.00
9	Open market	(224.17)	(71.06)	3.17			
10	OA Power purchase				39.58		
11	Transmission Charges		62.11			57.35	
12	Rebate					(15.10)	
13	RPO Obligations & others		50.19			20.16	
14	Debit/ Credit Notes					13.97	
15	**Total**	**2,923.68**	**1,134.92**	**3.88**	**3,101.99**	**1,176.47**	**3.79**

Revised power purchase cost submission as additional data.

Commission's analysis

The MYT Regulations, 2014 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor. Regulation 9.1 of the MYT Regulations stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(a) Force Majeure events, such as acts of war, fire, natural calamities, etc.
(b) Change in law;
(c) Taxes and Duties;
(d) Variation in sales; and
(e) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, KSEB and TANGEDCO. No power has been purchased through IEX/ Bilateral Purchase etc. The Petitioner submitted the overall Power Purchase cost as INR 1176.47 Cr inclusive of transmission charges.

The Commission has verified the power purchase quantum and the cost as per the monthly station-wise bills submitted by the Petitioner for each source of power purchase. The cost has further been reconciled with the audited annual accounts of the FY 2017-18. As per the submissions of the Petitioner, the Commission has also considered the rebate on account of early payments made for the power purchase bills as part of the power purchase cost. The Central transmission charges along with the POSOCO charges have been considered as per actuals incurred by the Petitioner.

The revenue and quantum on account of surplus power sale/UI Underdrawal has been reduced by the Commission from the Gross Power Purchase to arrive at the Net Power Purchase quantum and cost. The Commission has also approved the cost on account of UI Over-drawal post verification of any penal UI along with the Power Purchase Cost.

The Petitioner has submitted that INR 20.16 Cr have been incurred towards the compliance of Renewable Purchase Obligation (RPO) during the FY 2017-18. The compliance status of RPO has been discussed in detail in the subsequent section. The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2017-18.

Table 16: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

S. No.	Particulars	Approved (FY 2017-18)			Approved in True-up (FY 2017-18)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
1	NTPC	1,232.61	351.87	2.85	1,212.91	320.20	2.64
2	NLC and NTPL	855.14	346.04	4.05	800.87	336.26	4.20
3	NPCIL	571.10	185.31	3.24	604.43	215.77	3.57
4	KSEB	30.13	22.37	7.42	30.13	19.34	6.42
5	TANGEDCO	177.37	67.83	3.82	181.44	75.61	4.17
6	PPCL	215.56	68.63	3.18	214.80	78.86	3.67
7	NTECL- Vallur	113.17	56.18	4.96	102.89	54.04	5.25
8	Over drawal	(47.23)	(4.55)	0.96	(85.06)		0.00
9	Open market	(224.17)	(71.06)	3.17			
10	OA Power purchase				39.58		

S. No.	Particulars	Approved (FY 2017-18)			Approved in True-up (FY 2017-18)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
11	Transmission Charges		62.11			57.35	
12	Rebate					(15.10)	
13	RPO Obligations & others		50.19			20.16	
14	Debit/ Credit Notes					13.97	
15	**Total**	**2,923.68**	**1,134.92**	**3.88**	**3,101.99**	**1,176.47**	**3.79**

The Commission approves power purchase quantum of 3101.99 MU and cost of INR 1,176.47 Cr in the True-up of the FY 2017-18.

3.7. Renewable Purchase Obligation (RPO)

Petitioner's Submission

Petitioner submits that INR 14.59 Cr of Non-Solar RECs were purchased corresponding to 97.26 MU in FY 2017-18. The Petitioner has also received 0.62 MUs of physical solar power on account of net metering in Puducherry.

Commission's analysis

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 4.85% of its total consumption (including 1.65% from Solar) from renewable sources for the FY 2017-18.

In the Tariff Order of FY 2017-18, while undertaking the True-up of FY 2015-16, it was observed that the Petitioner was successful in achieving the cumulative Solar RPO target till FY 2015-16, however, there was a pending cumulative backlog of 45.64 MU against the Non-Solar RPO till FY 2015-16.

For the FY 2017-18, the Petitioner had a standalone target of 119.61 MU comprising of 40.69 MU Solar and 78.92 MU Non-Solar. Against the compliance target, the Petitioner has only been able to procure 0.50 MU of power that has been injected into the Discom Grid via Solar Rooftop Net Metering. The Petitioner has evidently failed to clear the backlog till FY 2015-16 and comply with the standalone RPO target for FY 2017-18.

Based on the above, the Commission has computed the cumulative RPO compliance and the pending backlog at the end of the FY 2017-18 as shown in the following table:

Table 17 Summary of Renewable Purchase Obligation (RPO) (MU)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%
2	Non Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%
	Total Target	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**
3	Sales Within UT	2,182.48	2,321.29	2,474.98	2,365.72	2,366.31	2,398.00	2,466.27	2,548.76
	RPO Target								
5	Solar	5.46	6.96	9.90	9.46	14.20	20.38	40.69	63.72
6	Non Solar	16.37	39.46	64.35	61.51	63.89	64.75	78.92	107.05
	Total RPO Target	**21.82**	**46.43**	**74.25**	**70.97**	**78.09**	**85.13**	**119.61**	**170.77**
	RPO Compliance (Actual Purchase)								
7	Solar	-	-	-	-	-	-	0.50	0.62
8	Non Solar	-	-	-	-	-	-	-	-
	Total RPO Compliance (Actual Purchase)	-	-	-	-	-	-	**0.50**	**0.62**

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18
	RPO Compliance (REC Certificate Purchase)								
9	Solar	-	-	-	-	-	69.00	-	-
10	Non Solar	-	-	48.00	112.00	90.69	14.00	-	97.26
	Total RPO Compliance (REC Certificate)	-	-	**48.00**	**112.00**	**90.69**	**83.00**	-	**97.26**
	RPO Compliance (REC+ Actual)								
11	Solar	-	-	-	-	-	69.00	0.50	0.62
12	Non Solar	-	-	48.00	112.00	90.69	14.00	-	97.26
	Total RPO Compliance	-	-	**48.00**	**112.00**	**90.69**	**83.00**	**0.50**	**97.88**
	Cumulative Requirement till current year								
13	Solar	5.46	12.42	22.32	31.78	45.98	66.36	107.06	170.78
14	Non Solar	16.37	55.83	120.18	181.69	245.58	310.33	389.25	496.29
	Total	**21.82**	**68.25**	**142.50**	**213.47**	**291.56**	**376.69**	**496.30**	**667.07**
	Cumulative Compliance till current year								
15	Solar	-	-	-	-	-	69.00	69.50	70.12
16	Non Solar	-	-	48.00	160.00	250.69	264.69	264.69	361.95
	Total	-	-	**48.00**	**160.00**	**250.69**	**333.69**	**334.19**	**432.07**
	Net Shortfall in RPO Compliance till current year								
17	Solar	5.46	12.42	22.32	31.78	45.98	-2.64	40.19	103.29
18	Non Solar	16.37	55.83	72.18	21.69	-5.11	45.64	124.56	134.34
	Total	**21.82**	**68.25**	**94.50**	**53.47**	**40.87**	**43.00**	**164.75**	**237.64**

The Commission notes that there is a net shortfall in RPO compliance till the FY 2017-18 of 237.64 MU (103.29 MU – Solar and 134.34 MU – Non-Solar).

3.8. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the following table.

Table 18: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Energy Sales within the UT (MUs)-A1	2,548.76
2	Energy Drawal by TANGEDCO (MUs)-A2	17.46
3	Sale to Open Access Consumer (MUs)-A3	39
4	Total Sales (MUs) (A1+A2+A3)	2,605.22
5	T&D Losses (%)	13.75%
8	**Total Energy Requirement**	**3,011.54**
B	**Energy Availability**	
1	Net Power Purchase (ex Bus)- B1	2,932.17
2	Own Generation (PPCL+Renewable)- B2	215.31
3	Power purchase from Common Pool / UI / Others (MUs)- B3	29.14
4	UI Underdrawal- B4	114.2
5	Open access power at the periphery (MUs)- B5	39.58
6	Total Power Purchase (MUs) (B1+B2+B3-B4+B5)	3,101.99
7	Transmission Losses (MUs)	90.45
8	Transmission Losses (%)	2.92%
9	**Net Energy Availability (MUs)**	**3,011.54**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for the FY 2017-18 is derived. The following table provides the energy balance now trued-up by the Commission.

Table 19: Energy Balance (MU) approved by Commission

S. No.	Particulars	Trued-up by Commission
A	**Energy Requirement**	
1	Energy Sales within the UT (MUs)-A1	2,548.76
2	Energy Drawal by TANGEDCO (MUs)-A2	17.46
3	Sale to Open Access Consumer (MUs)-A3	39
4	Total Sales (MUs) (A1+A2+A3)	2,605.22
5	T&D Losses (%)	13.75%
8	**Total Energy Requirement**	3,011.54
B	**Energy Availability**	
1	Net Power Purchase (ex Bus)- B1	2,932.17
2	Own Generation (PPCL+Renewable)- B2	215.31

S. No.	Particulars	Trued-up by Commission
3	Power purchase from Common Pool / UI / Others (MUs)- B3	29.14
4	UI Underdrawal- B4	114.2
5	Open access power at the periphery (MUs)- B5	39.58
6	Total Power Purchase (MUs) (B1+B2+B3-B4+B5)	3,101.99
7	Transmission Losses (MUs)	90.45
8	Transmission Losses (%)	2.92%
9	**Net Energy Availability (MUs)**	**3,011.54**

3.9. Operation & Maintenance (O&M) Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The MYT Regulations, 2014 considers the variation of O&M Expenses to be controllable. Regulation 9.2 of the MYT Regulation, 2014 states the following:

"9.2 Some illustrative variations or expected variations in the performance of the applicant, which may be attributed by the Commission to controllable factors include, but are not limited to the following:

(a)Variations in capital expenditure on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;

(b)Variations in Transmission and Distribution Losses (T&D) losses in case of bundled utilities and Distribution losses in case of unbundled utilities which shall be measured as the difference between the units input into the distribution system and the units supplied and billed;

(c)Depreciation and working capital requirements;

(d)Failure to meet the standards specified in the Joint Electricity Regulatory Commission (Standards of Performance) Regulations, 2009 except where exempted;

(e)Variation in operation & maintenance expenses, except those attributable to directions of the Commission;

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

Therefore, any variation in O&M Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any expense which is beyond the control of the Petitioner.

3.9.1. Employee Expenses

Petitioner's Submission

The Petitioner has incurred actual employee expenses of INR 96.90 Cr against the approved expenses of INR 97.22 Cr in the APR of FY 2017-18. The following table provides the employee expenses as submitted by the Petitioner:

Table 20: Employee Expenses submitted by the Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
	Salaries & Allowances	
1	Salary	111.17
2	Wages	0.78
3	Stipend	0.78
4	Transport Allowance	0
5	Overtime allowance	1.04

S. No.	Particulars	Petitioner's Submission
6	Total	113.77
7	Less: Add/Deduct share of others	0.49
8	Total	113.28
9	Less: Amount capitalized	16.37
	Total Employee Expenses	**96.90**

Commission's analysis

The Commission, in accordance with the MYT Regulations does not allow any deviation in the employee expenses against those approved in the APR Order and maintains the same Employee Expenses as approved in the APR Order for FY 2017-18.

However, the increase in salaries and wages on account of recommendations of the 7th Pay Commission is an uncontrollable expenditure, hence, any increase on account of 7th Pay Commission recommendation should be a pass through. The Commission, in the APR of FY 2017-18 had approved an additional expenditure towards the 7th Pay Commission of INR 15.48 Cr The Petitioner further submitted that the actual employee expenses as submitted in the Petition consist of the impact of the 7th Pay Commission. The Petitioner was asked to furnish the detailed working of the impact of the 7th Pay Commission separately for the FY 2017-18. The Petitioner provided that the seventh pay Commission pay was implemented only from September 2017. For FY 2017-18, the Cost impact of 7th pay commission during the year 2017-18 is INR 1.28 Crores per month from the month of September 2017. The Commission approves the amount as submitted and hence approves INR 8.96 Cr (INR 1.28 Cr x 7 months) as additional expenditure towards the implementation of recommendations of the 7th Pay Commission.

The table below provides the employee expenses approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 21: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	81.74	87.94	81.74
2	Impact of 7th Pay Commission	15.48	8.96	8.96
3	**Total Employee Expenses**	**97.22**	**96.90**	**90.7**

The Commission approves Employee Expenses of INR 90.7 Cr in the True-up of the FY 2017-18.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has incurred A&G expenses of INR 9.66 Cr against the approved expenses of INR 9.41 Cr in the APR Order. The following table provides the A&G expenses as submitted by the Petitioner:

Table 22: A&G Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Rent, rates & taxes	8.37
2	Other Professional charges including Regulatory Expenses (License + Petition Fees)	
3	Office Expenses including Legal, Professional & Special Service Charges	
4	Advertisement & Publicity	
5	Other A&G Charges	
6	Others	
7	Other material related expenses	

S. No.	Particulars	Petitioner's Submission
8	EESL Charges (DELP)	1.29
	Total	**9.66**

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits.

The Petitioner has submitted that the A&G expenses also include an expense of INR 3.85Cr towards DSM based Efficient Lighting Programme (DELP) scheme for LED Bulbs, implemented in the Union Territory of Puducherry. The Commission while undertaking the APR of FY 2017-18 had made a provision of INR 3.85 Cr against this head. The Commission, now in the True-up of FY 2017-18, approves the actual expenditure as incurred by the Petitioner.

As variation in O&M expenses is controllable, the Commission approves the same A&G expenses as approved in the APR Order along with an additional expenditure towards DELP as shown in the table below:

Table 23: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	5.56	8.37	5.56
2	EESL annual payout towards DELP Charges	3.85	1.29	1.29
	Total A&G Expenses	**9.41**	**9.66**	**6.85**

The Commission approves the Administrative & General (A&G) expenses of INR 6.85 Cr in the True-up of FY 2017-18.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has incurred R&M expenses of INR 9.9 Cr against the approved expenses of INR 22.02 Cr in the APR Order. R&M expenses are incurred towards day to day maintenance of the distribution network of the PED and form an integral part of the Petitioner's efforts towards reliable and quality power supply as also in the reduction of T&D losses in the system.

Commission's analysis

The expenditure trends of the Petitioner towards R&M expenses have been considerably lower than the approved amounts. In the instant case the Commission had approved INR 22.02 Cr towards R&M expenses in the APR Order for FY 2017-18, whereas the actual expenditure has been just INR 9.90 Cr as per the Annual Accounts.

As the Petitioner has been incurring lower R&M expenses as against the approved Expenses the Commission takes cognisance of the fact and to avoid burden on the consumer w.r.t. actual and approved expenditure the Commission approves the actual R&M Expenses as per the information available from the Annual Accounts and approves INR 9.90 Cr towards R&M expense in the True-up for FY 2017-18.

However, the Commission has noted with serious concern that the Petitioner is not incurring adequate expenditure towards the maintenance of its network despite the fact the Commission has already allowed higher R&M to be recovered in Tariff. The Commission directs the Petitioner take up with the Government to get higher funds sanctioned in this account and also incur adequate expenditure for the upkeep of its network.

Table 24: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Repair & Maintenance Expenses (R&M)**	**22.02**	**9.90**	**9.90**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.9 Cr in the True-up of FY 2017-18.

3.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 25: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	97.22	96.90	90.70
2	Administrative & General Expenses (A&G)	9.41	9.66	6.85
3	Repair & Maintenance Expenses	22.02	9.90	9.90
	Total Operation & Maintenance Expenses	**128.65**	**116.46**	**107.45**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 107.45 Cr in the True-up of FY 2017-18.

3.10. Capitalisation

Petitioner's Submission

The Petitioner submitted the actual capitalisation for the FY 2017-18 as INR 14.1 Cr against an approved capitalization of INR 64.49 Cr in the APR of FY 2017-18.

Commission's analysis:

The Commission observed that the capital expenditure and capitalisation achieved by the Petitioner is much lower, almost one- fifth of the amount approved by the Commission in the APR of FY 2017-18. The Petitioner from the last three financial years has been continuously achieving lower capitalisation than approved.

Lower capital expenditure signifies that enough efforts have not been undertaken in enhancing the reliability and quality of supply to the consumers. In addition, lower capital expenditure may also signify that sufficient measures aren't being taken to provide electricity supply to the un-electrified areas and setting up of sufficient distribution infrastructure with the growing demand. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for improving the service quality and targeting 24x7 supply to all consumers.

The table below provides the capitalisation approved in the APR Order, the Petitioner's Submission and the capitalisation approved by the Commission now:

Table 26: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	64.49	14.1	14.1

The Commission approves the Capitalisation of INR 14.1 Cr in the True-up of FY 2017-18.

3.11. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the majority of capital assets have been created out of equity contribution from the Government of Puducherry and the actual borrowing of loan is only to the extent of the R-APDRP schemes.

Commission's analysis

The MYT Regulations 2014, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as the normative loan. Regulation 24 of the MYT Regulations, states the following:

(a) The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans

(b) If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.

The Commission sought details of assets created out of consumer contribution/ grants from the Petitioner, on which the Petitioner has responded that no assets have been created out of consumer contribution/ grants.

In accordance with the MYT Regulations, 2014, and the submissions made by the Petitioner, the Commission has determined the Capital Structure for FY 2017-18 as follows:

Table 27: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	676.17	676.17	676 .17
2	Addition During the FY	64.49	14.10	14.10
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	740.66	690.27	690.27

Table 28: Normative Loan addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	112.45	112.45	112.45
2	Add: Normative Loan During the year	45.14	9.87	9.87
3	Less: Normative Repayment equivalent to Depreciation	40.04	27.30	35.91*
4	Closing Normative Loan	117.55	95.02	86.41

**Depreciation has been calculated in the next section*

Table 29: Normative Equity addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	202.85	202.85	202.85
2	Additions on account of new capitalisation	19.35	4.23	4.23
3	Closing Equity	222.20	207.08	207.08

3.12. Depreciation

Petitioner's Submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2017-18.

The depreciation as claimed by the Petitioner has been tabulated below:

Table 30: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	676.17
2	Addition During the FY	14.10
3	Adjustment/Retirement During the FY	-
4	Closing Gross Fixed Assets	690.27
5	Average Gross Fixed Assets	683.22
6	Weighted Average Depreciation rate (%)	4.00%
	Depreciation	**27.30**

Commission's analysis

Regulation 23 of the MYT Regulations 2014, states the following:

(a) *Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year.*

(b) *Depreciation shall not be allowed on assets funded by capital subsidies, consumer contributions or grants.*

(c) *Depreciation shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation. The same shall be as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. (The same may vary as notified by CERC from time to time.)*

(d) *The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset.*
Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

(e) *Depreciation shall be charged from the first year of operation of the asset.*
Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.

(f) *A provision of replacement of assets shall be made in the capital investment plan."*

As per the norms specified in the MYT Regulations, 2014 the Commission has verified the asset wise capitalisation of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2014, provided in the table below:

Table 31: Depreciation Rate (%)

Description	Rate
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	15.00%
Land	0.00%

Based on the above depreciation rates and the actual asset addition during the year the weighted average depreciation rate is computed as 5.26% against a rate of 5.65% approved in the APR of FY 2017-18.

The Commission has calculated the depreciation on average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the opening GFA approved in the APR of FY 2017-18.

The following table provides the calculation of depreciation during the FY 2017-18:

Table 32: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	676.17	676.17	676.17
2	Addition During the FY	64.49	14.10	14.10
3	Adjustment/Retirement during the FY	-	-	-
4	Closing Gross Fixed Assets	740.66	690.27	690.27
5	Average Gross Fixed Assets	708.42	683.22	683.22
6	Weighted Avg. rate of Depreciation (%)	5.65%	4.00%	5.26%
	Depreciation	**40.04**	**27.30**	**35.91**

The Commission approves depreciation of INR 35.91 Cr in the True-up of FY 2017-18

3.13. Interest and Finance Charges

Petitioner's Submission

The Petitioner has calculated the Interest on Loan on normative basis. The opening balance of loans for FY 2017-18 is considered same as approved by the Commission in the APR Order. The normative loan addition in FY 2017-18 has been computed as 70% of the actual capitalisation for FY 2017-18. Further, the Petitioner has also claimed certain expenses pertaining to the bank charges, finance costs etc. in addition to the Interest on Loan.

The repayment of loans has been considered equal to the depreciation during the FY 2017-18.

Further, the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 13.85% (rate as on 1st April 2016).

Commission's analysis:

The MYT Regulations, 2014 stipulate that the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. Regulation 24 of the MYT Regulations, states the following:

(a) The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans

(b) *If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.

(c) *Actual loan or normative loan, if any, shall be referred as gross normative loan in this Regulation.*

(d) *The normative loan outstanding as of 1st April of control period shall be computed by deducting the cumulative repayment as approved by the Commission (basis as mentioned below) up to 31st March of current period (a year before control period) from the gross normative loan.*

(e) *The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year.*

(f) *Notwithstanding any moratorium period availed by the Distribution Licensee, the repayment of the loan shall be considered from the first year of the control period as per annual depreciation allowed.*

(g) *The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the control period, in accordance with terms and conditions of relevant loan agreements, or bonds or non-convertible debentures.*

Provided that if no actual loan is outstanding but normative loan is still outstanding, the last available weighted average rate of interest shall be applicable.

Provided further that the interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

Provided also that exception shall be made for the existing loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.

(h) *The Distribution Licensee shall make every effort to refinance the loan as long as it results in net benefit to the consumers.*

Provided that the cost associated with such refinancing shall be eligible to be passed through in tariffs and the benefit on account of refinancing of loan and interest on loan shall be shared in the ratio of 50:50 between the Distribution Licensee and the consumers.

Provided further that the Distribution Licensee shall submit the calculation of such benefit to the Commission for its approval.

(i) *(The Distribution Licensee shall enable tracking of the loans converted into grants under schemes, like APDRP by providing information and data regularly to the Commission and for ensuring that the interest on these loans which has been passed on to the consumers inappropriately in the earlier years shall be recovered from the Distribution Licensee."*

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt-equity ratio of 70:30. Repayment has been considered equivalent to depreciation allowed during the year.

The Commission for the purpose of calculation of Interest on Loan has considered interest rate equivalent to SBI PLR @ 13.85%, as on 1st April 2017. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average loan during the year with the opening loan considered equivalent to the opening loan approved in the APR of FY 2017-18. The addition of loan has been considered as explained above and the repayment is considered same as per accrued depreciation during the year. Additionally, the Commission also allows expenditure towards financing charges as per actuals as reflected in the annual accounts.

The following table provides the Interest and Finance charges as approved by the Commission:

Table 33: Interest and Finance charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	112.45	112.45	112.45
2	Add: Normative Loan During the year	45.14	9.87	9.87
3	Less: Normative Repayment= Depreciation	40.04	27.30	35.91
4	Closing Normative Loan	117.55	95.02	86.41
5	Average Normative Loan	115.00	103.74	99.43
6	Rate of Interest (%)	13.85%	13.85%	13.85%
7	**Interest on Loan**	15.93	14.37	13.77
8	Financing Charges	2.54	2.38	2.38
	Interest and Finance Charges	**18.46**	**16.75**	**16.15**

The Commission approves the Interest and Finance Charges of INR 16.15 Cr in the True-up of the FY 2017-18

3.14. Return on Equity (RoE)

Petitioner's Submission

RoE is calculated in accordance with the MYT Regulations 2014 on 30% of the capital base. Equity to the tune of 30% has been considered based on the assets capitalized during the year. Accordingly, the Return on Equity has been computed at 16% on post-tax basis.

Commission's analysis:

According to the Regulation 27 of the MYT Regulations, 2014,

(a) *the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower: Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.*

(b) *The return on the equity invested in working capital shall be allowed from the date of start of commercial operation.*

(c) *16% post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR petition"*

As mentioned above, the total asset capitalisation other than the Central Government schemes during the year has been funded by equity. The Commission for the purpose of equity addition during the year, has limited it to 30% of total capitalisation as prescribed in the MYT Regulations, 2014. The RoE has been calculated on the average of opening and closing of equity during the year @ 16% post-tax basis with opening equity considered the same as approved in the APR Order. The following table provides the RoE approved by the Commission now:

Table 34: RoE approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	202.85	202.85	202.85
2	Additions on account of new capitalisation	19.35	4.23	4.23
3	Closing Equity	222.20	207.08	207.08
4	Average Equity	212.53	204.97	204.97
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**34.00**	**32.79**	**32.79**

The Commission approves a Return on Equity of INR 32.79 Cr in the True-up of FY 2017-18

3.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner submitted that Interest on the Consumer Security Deposits on normative basis is calculated as INR 11.73 Cr, however, only INR 3.50 Cr has been paid to the consumers and the balance is proposed to be paid during the subsequent years. The Petitioner has considered the amount actually paid to the consumer in the True-up of FY 2017-18.

Commission's analysis:

As per Regulation 6.10 (8) of the JERC Electricity Supply Code Regulations, 2010:

"The distribution licensee shall pay interest, at the bank rate notified by the Reserve Bank of India from time to time on such security deposits taken from the consumer. In this regard it shall be the responsibility of the licensee to keep a watch on the bank rate from time to time. The interest amount of previous financial year shall be adjusted in the energy bill issued in May / June of each financial year depending on billing cycle."

The Commission approves the actual interest on security deposit disbursed to the consumers in their bills, as submitted by the Petitioner. The Interest amount has also been reconciled with the audited annual accounts of FY 2017-18. The Petitioner also provided documentary evidence in support of the budgetary provision made by the Government for payment of Interest on Consumer Security Deposits to consumers. The rate of interest has been considered as RBI Bank Rate applicable as on 1st April 2017.

The following table provides the interest on security deposit as approved in the APR of FY 2017-18, the Petitioner's Submission and the interest now approved by the Commission:

Table 35: Interest on Consumer Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	152.80	177.70	152.80
2	Add: Deposits During the year	16.13	19.95	19.95
3	Less: Deposits refunded			
4	Closing Security Deposit	168.93	197.65	172.75
5	Average Security Deposit	160.87	187.68	162.78
6	Rate of Interest (%)	6.50%	6.25%	6.75%
7	**Interest on Security Deposit on normative basis**	**10.46**	**11.73**	**10.99**
	Interest on Security Deposit paid to consumers	**10.46**	**3.50**	**3.50**

The Commission approves interest on security deposit as INR 3.50 Cr in the True-up of FY 2017-18

3.16. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner hasn't claimed any amount towards bad and doubtful debts for the year.

Commission's analysis:

As per Regulation 29 of the MYT Regulations, 2014:

"Bad and Doubtful Debts shall be limited to 1% of receivables in the true up, subject to the condition that amount of bad and doubtful debts have actually been written off in the licensee books of accounts."

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2017-18. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts.

3.17. Interest on Working Capital

Petitioner's Submission

Interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) Regulations, 2014.

The Working Capital requirement for the Control Period has been computed considering the following parameters:

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

(c) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit

(d) Inventory for two months based on the annual requirement for the previous year

The Petitioner has not claimed any Interest on Working Capital as the Working Capital requirement for the year is coming out to be negative.

Table 36: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	223.59
2	Less: Power Purchase Cost for one month	98.04
3	Inventory Based on Annual Requirement for Previous FY for 2 months	7.77
4	Total Working Capital Requirement	133.32
5	Less: Security Deposit excluding BG/FDR	177.70
6	Net Working Capital	(44.38)
7	Rate of Interest (%)	9.10%
	Interest on Working Capital	**0.00**

Commission’s analysis:

The computation of the working capital requirements and the rate of interest to be considered as stipulated in the MYT Regulations. Regulation 25 of the MYT Regulations states the following:

“Working capital for retail supply activity of the licensee shall consist of:
- *(i) Receivables of two months of billing*
- *(ii) Less power purchase cost of one month*
- *(iii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt*
- *(iv) Inventory for two months based on annual requirement for previous year.*

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures.

The Commission for determination of Working Capital requirements of the Petitioner during the year has considered the receivables as proportionate ARR for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit and the inventory for two months as per the audited annual accounts of FY 2017-18.

With regards to the interest rate, the Commission has considered the SBI Base rate as on 1st April 2017, as stipulated in the MYT Regulations, 2014. Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 37: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	226.97	223.59	218.02
2	Less: Power Purchase Cost for one month	94.58	98.04	96.56
3	Inventory Based on Annual Requirement for Previous FY for 2 months	6.78	7.77	6.78
4	Total Working Capital Requirement	139.17	133.32	128.24
5	Less: Security Deposit excluding BG/FDR	160.86	177.70	162.78
6	Net Working Capital	-21.69	-44.38	-34.53
7	Rate of Interest (%)	9.30%	9.10%	9.10%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

The Commission approves the Interest on Working Capital as nil in the True- up of FY 2017-18.

3.18. Non-Tariff Income (NTI)

Petitioner’s Submission

According to the Petitioner, Non-Tariff Income comprises of Meter Rent, late payment charges, interest on staff loans, income from trading of power, reconnection fee, UI sales/ Sales to Exchanges and miscellaneous income among others. The Petitioner has claimed a Non-Tariff Income of INR 31.75 Cr against the approved NTI of INR 4.51 Cr by the Commission inclusive of Open Access charges. The Non –Tariff Income as submitted by the Petitioner has been shown in the table below:

Table 38: Non- Tariff Income as submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Open Access Income	9.05
2	Income from Trading of materials	0.002
3	Misc./Other Receipts	22.70
	Total	**31.75**

Commission's analysis:

The Commission has verified the submission of the Petitioner from the audited accounts and found the same to be correct. The NTI approved in the APR Order, the Petitioner's Submission and now trued-up by the Commission is shown in the following table:

Table 39: Non- Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Income		9.05	9.05
2	Income from Trading of materials		0.00	0.00
3	Misc./Other Receipts		22.70	4.91[1]
	Total	**4.51**	**31.75**	**13.96**

The Commission approves Non-Tariff Income of INR 13.96 Cr in the True-up of FY 2017-18.

3.19. Incentive/Disincentive towards over/under-achievement of norms of distribution losses

Petitioner's Submission:

No submission has been made in this regard.

Commission's analysis:

In the APR of the FY 2017-18, the Commission had approved the distribution loss level of 11.25%. As discussed earlier, the Petitioner has only been able to achieve an Intra-State T&D Loss of 13.75%. Thus, there is an underachievement of the loss target. The Commission, in accordance with Regulations 10 & 11 of the MYT Regulations, 2014 (reproduced below) therefore has determined the disincentive towards underachievement of the target of Intra-State distribution loss for FY 2017-18.

"10. Mechanism for Sharing of Gains with Respect to Norms and Targets Mechanism for pass through of gains or losses:

10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.

10.2 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations.

10.3 The Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.

[1] The income (INR 17.79 Cr) from RRAS,URS, and UI has been reduced from the Power Purchase Cost for purpose of computation of Net Revenue Requirement.

10.4 Nothing contained in this Regulation 10 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.

11. Mechanism for Sharing of Losses with Respect to Norms and Targets

(1) the licensee shall bear the entire loss on account of its failure to achieve the norms laid down by the Commission or targets set by the Commission from time to time."

The disincentive has been derived by calculating the additional cost of power procured due to under achievement of the stipulated Intra-State T&D loss target of 11.25% by the Petitioner, at the Average Power Purchase cost (APPC) of INR 3.89/kWh. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up above and the Energy at State/UT Periphery computed after grossing up the retail energy sales (2548.76 MU) and sales to TANGEDCO (17.46 MU) with the approved Intra-State T&D Loss (13.75%).

The assessment of disincentive for higher Intra-State T&D Loss is shown in the following table:

Table 40: Disincentive towards underachievement of Intra-State distribution loss (In INR Cr)

S. No	Particulars		Petitioner's Submission	Trued-up by Commission
1	Retail Sales	A	2,548.76	2,548.76
2	T&D Loss (%)	B	11.25%	13.75%
3	Power Purchase at State/UT Periphery	C	2,871.84	2,955.08
4	Gain/(Loss) (MU) (2871.84 – 2955.08)	D		(83.24)
5	Average Power Purchase Cost (APPC)	E		3.89
6	Gain/ (Loss) (INR Cr)	F=DxE/10		(32.42)
	Sharing (30% to PED in case of gain and 100% in case of loss) (INR Cr)			(32.42)

The Commission determines and approves INR 32.42 Cr as a disincentive for underachieving the Intra-State Distribution Loss target in the True-up of FY 2017-18.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1237.78 Cr is submitted for approval in the True-up of FY 2017-18.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2017-18 as given in the following table:

Table 41: Aggregate Revenue Requirement approved by Commission for FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	Reference
1	Power Purchase Cost	1,134.92	1,176.47	1,158.68[2]	Table 16
2	Operation & Maintenance Expenses	128.65	116.46	107.45	Table 25
3	Depreciation	40.04	27.30	35.91	Table 32
4	Interest and Finance charges	18.47	16.75	16.15	Table 33
5	Return on Equity	34.00	32.79	32.79	Table 34
6	Interest on Security Deposit	10.46	3.50	3.50	Table 35
7	Interest on Working Capital	0.00	0.00	0.00	Table 37
8	Provision for Bad and Doubtful Debts	0.00	0.00	0.00	-
9	Incentive/ (Disincentive) on achievement of norms	0.00	0.00	(32.42)	Table 40
10	**Total Revenue Requirement**	**1,366.54**	**1,373.28**	**1,322.08**	
11	Less: Non-Tariff Income	4.51	31.75	13.96	Table 39
	Net Revenue Requirement	**1,362.03**	**1,341.53**	**1,308.12**	

The Commission approves net Aggregate Revenue Requirement of INR 1,308.12 Cr in the True-up of the FY 2017-18.

[2] The income (INR 17.79 Cr) from RRAS,URS, and UI has been reduced from the Power Purchase Cost for purpose of computation of Net Revenue Requirement.

3.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has submitted the net actual revenue for the FY 2017-18 as INR 1272.33 Cr against revenue of 1211.84 Cr (excluding revenue from regulatory surcharge) approved by the Commission in the APR Order. The Petitioner submitted, that the INR 1288.60 Cr is the Gross Revenue from sale of power to consumers from which an amount of INR 16.27 Cr has been deducted on account of power factor rebate to consumers. The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 42: Revenue at existing tariff submitted by the Petitioner for FY 2017-18 (In INR Cr)

S. No	Category	Revenue from Demand Charges (INR Cr)	Revenue from Energy Charges (INR Cr)	Surcharge at 4%	Total Revenue (INR Cr)
1	**Domestic**	**16.79**	**164.30**	**7.24**	**188.34**
	0 - 100 units	6.14	33.39	1.58	41.11
	101 - 200 units	4.57	31.71	1.45	37.73
	201 - 300 units	2.44	33.50	1.44	37.38
	Above 300 units	2.48	65.71	2.73	70.92
	OHOB	1.15	-	0.05	1.20
2	**Commercial**	**6.48**	**123.25**	**5.19**	**134.91**
	0 - 100 units	2.63	26.85	1.18	30.66
	101 - 250 units	1.07	27.17	1.13	29.37
	Above 250 units	2.77	69.23	2.88	74.88
3	**Agriculture**	**1.94**	**-**	**0.08**	**2.02**
	Small farmers	0.07	-	0.00	0.07
	Other farmers	1.88	-	0.08	1.95
4	**Public lighting**	**4.54**	**16.52**	**0.84**	**21.91**
5	**LT Industrial & Water Tank**	**0.69**	**97.67**	**3.93**	**102.29**
	LT Industrial	0.67	75.49	3.05	79.21
	Water tank	0.02	22.18	0.89	23.08
6	**Temporary supply - LT&HT**	**-**	**7.47**	**-**	**7.47**
7	**HT 1 Industrial**	**77.14**	**490.05**	**22.69**	**589.88**
	HT I(a) for contract demand upto 5000 kVA	69.51	449.53	20.76	539.80
	HT I(b) for contract demand upto 5000 kVA	7.63	40.52	1.93	50.08
8	**HT 2 – Govt. & Water Tank**	**6.77**	**42.62**	**1.98**	**51.37**
9	**HT 3 - EHT**	**16.38**	**166.72**	**7.32**	**190.42**
10	**Less: Incentives to consumers**				**16.27**
	Total				**1272.33**
	Add: Revenue from TNEB for drawl of power				**39.64**
	Grand Total				**1,311.97**

Commission's analysis

The Commission analysed the sales and revenue figures for each consumer category and sub-category by applying various levels of checks. Further, while verifying the consumer category wise revenue it was observed that the total revenue was reflected as INR 1311.97 Cr in the annual accounts. The category/ slab wise revenue Trued-up by the Commission is shown in the following table:

Table 43: Revenue at existing tariff approved by Commission for FY 2017-18 (In INR Cr)

S. No	Category	Revenue from Demand Charges (INR Cr)	Revenue from Energy Charges (INR Cr)	Surcharge at 4%	Total Revenue (INR Cr)
1	**Domestic**	**16.79**	**164.30**	**7.24**	**188.34**
	0 - 100 units	6.14	33.39	1.58	41.11
	101 - 200 units	4.57	31.71	1.45	37.73
	201 - 300 units	2.44	33.50	1.44	37.38
	Above 300 units	2.48	65.71	2.73	70.92
	OHOB	1.15	-	0.05	1.20
2	**Commercial**	**6.48**	**123.25**	**5.19**	**134.91**
	0 - 100 units	2.63	26.85	1.18	30.66
	101 - 250 units	1.07	27.17	1.13	29.37
	Above 250 units	2.77	69.23	2.88	74.88
3	**Agriculture**	**1.94**	**-**	**0.08**	**2.02**
	Small farmers	0.07	-	0.00	0.07
	Other farmers	1.88	-	0.08	1.95
4	**Public lighting**	**4.54**	**16.52**	**0.84**	**21.91**
5	**LT Industrial & Water Tank**	**0.69**	**97.67**	**3.93**	**102.29**
	LT Industrial	0.67	75.49	3.05	79.21
	Water tank	0.02	22.18	0.89	23.08
6	**Temporary supply - LT&HT**	**-**	**7.47**	**-**	**7.47**
7	**HT 1 Industrial**	**77.14**	**490.05**	**22.69**	**589.88**
	HT I(a) for contract demand upto 5000 kVA	69.51	449.53	20.76	539.80
	HT I(b) for contract demand upto 5000 kVA	7.63	40.52	1.93	50.08
8	**HT 2 – Govt. & Water Tank**	**6.77**	**42.62**	**1.98**	**51.37**
9	**HT 3 - EHT**	**16.38**	**166.72**	**7.32**	**190.42**
10	**Less: Incentives to consumers**				**16.27**
	Total				**1,272.33**
	Add: Revenue from TNEB for drawl of power				**39.64**
	Grand Total				**1,311.97**

The Commission approves the revenue from the sale of power as INR 1,311.97 Cr in the True-up of the FY 2017-18.

3.22. Standalone Revenue Gap/ Surplus

Petitioner's Submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 29.55 Cr is arrived at in the True-up of FY 2017-18.

Commission's analysis

The Commission based on the approved ARR and retail tariff has arrived at the Revenue Gap/Surplus as follows:

Table 44: Standalone Revenue Gap/ Surplus for FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1,362.03	1,341.52	1,308.12
2	Total Revenue	1,268.50	1,311.97	1,311.97
	Net Gap / (Surplus)	**93.53**	**29.56**	**(3.85)**

The Commission, in the True-up of FY 2017-18 approves a standalone surplus of INR 3.85 Cr. The treatment of the standalone surplus has been discussed in Chapter 7 Tariff Principles and Design.

4. Chapter 4: True-up of FY 2018-19

4.1. Background

Under the MYT regime, Order on Aggregate Revenue Requirement (ARR) for the 1st MYT Control Period (FY 2016-17 to FY 2018-19) and Wheeling & Retail Supply Tariff for the FY 2017-18 was issued on 24th May 2016 (hereinafter referred to as the "MYT Order"). Subsequently, the Commission issued the Tariff Order for FY 2018-19, determining the Aggregate Revenue Requirement (ARR) and the tariff for FY 2018-19, Annual Performance Review (APR) of FY 2017-18 and True-up of FY 2017-18 on 28th March 2018 (hereinafter referred to as the "Tariff Order").

The True up for the FY 2018-19 has to be carried out in accordance to Regulation 8(2) of the MYT Regulations, 2014, which states as following:

"(2) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures or the provisional actual accounts as available as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'."

4.2. Approach for the True-Up of FY 2018-19

The Petitioner has submitted audited accounts based on audit conducted by statutory auditors. The Commission in this Chapter now carries out the True-up of FY 2018-19, the third year of the first Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2018-19 as 2,644.54 MU as against an approved energy sales quantum of 2,606.31 MU in the Tariff Order.

Commission's analysis

The MYT Regulations, 2014 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 9.1 of the MYT Regulations, 2014 in this regard stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(f) Force Majeure events, such as acts of war, fire, natural calamities, etc.
(g) Change in law;
(h) Taxes and Duties;
(i) Variation in sales; and
(j) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

The table below provides the energy sales approved by the Commission in the Tariff Order of FY 2018-19, the Petitioner's Submission and quantum of energy sales now trued-up by the Commission.

Table 45: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	785.14	711.56	711.56
2	OHOB	10.22	10.24	10.24
3	Commercial	245.79	212.85	212.85
4	Agriculture	57.43	59.9	59.9
5	Public lighting	27.58	27.60	27.60
6	LT Industrial & Water Tank	184.79	159.59	159.59
7	Temporary supply - LT&HT	8	8.12	8.12
8	HT 1 Industrial	930.18	972.13	972.13
9	HT 2 - Government & water tank	69.98	66.06	66.06
10	HT 3 - EHT	288.2	416.55	416.55
	Total	**2,606.31**	**2,644.54**	**2,644.54**

The Commission approves 2,644.54 MU as energy sales in the True-up of the FY 2018-19.

4.4. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted the NIL Open Access Sales for the FY 2018-19 against an approved sales quantum of 35.59 MU in the Tariff Order. The Petitioner has submitted the NIL Open Access Purchase against approved quantum of 36.13 MU.

Commission's analysis

The following table provides the Open Access Sales and Purchase approved by the Commission in the APR Order, the Petitioner's Submission and sales now trued-up by the Commission based on the information submitted by the Petitioner.

Table 46: Open Access Sales (MU) and Purchase trued-up by the Commission

S. No	Category	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Sales	35.59	0	0
2	Open Access Purchase	36.13	0	0

The Commission approves NIL Open Access Sales and Purchase in the True-up of the FY 2018-19.

4.5. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the APR Order due to non-availability of requisite loss percentage figures.
- For Central Generating Stations (CGS), the actual losses are now working out to be 2.66% against an approved figure of 2.15% in the APR Order.

Commission's analysis

The Commission has verified the Inter-State losses from the supporting documentary evidence submitted by the Petitioner. The Commission accordingly approves the Inter-State Losses as shown in the following table:

Table 47: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Government Stations	2.15%	2.66%	2.65%

The Commission approves the Inter-State Transmission Loss as 2.65% for CGS stations and 4.00% for TANGEDCO in the True-up of the FY 2018-19.

4.6. Intra- State Transmission & Distribution (T&D) loss

Petitioner's Submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 13.27% in the FY 2018-19 against target of 11.00% in FY 2018-19.

Commission's analysis

The Commission has verified the Intra-State T&D loss levels based on the information available of energy drawal of the UT on the Southern Region Power Committee (SRPC) website and the energy sales as approved above. The Commission is constrained to consider Intra-State T&D loss of 13.27% in the FY 2018-19 for the purpose of determination of Energy Balance against an approved T&D loss of 11.00% in the Tariff Order.

Since, the Petitioner has not been able to achieve the Intra-State T&D loss target for the year, the disincentive for the same has to be borne by the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in section 4.20 of this Order.

The table below provides the Intra-State T&D loss approved in the Tariff Order of FY 2018-19, Petitioner's Submission and as approved by the Commission now.

Table 48: Intra-State distribution loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.00%	13.27%	13.27%

The Commission, while Trueing UP for FY 2018-19, has considered the actual Intra-State T&D loss of 13.27% for the FY 2018-19.

4.7. Power Purchase Quantum & Cost

Petitioner's Submission

The Petitioner submitted that it meets its total energy requirement from its allocation of the Central Generating Stations (CGS) and the State utilities like TANGEDCO and PPCL. PPCL is a generating company within the UT of Puducherry catering to the requirement of the Karaikal region. Hence, the power purchase quantum and cost for FY 2018-19, as submitted by the Petitioner in the Petition has been shown in the table below:

Table 49: Power Purchase cost submitted by the Petitioner (in INR Cr)

S. No.	Particulars	Approved (FY 2018-19)			Actuals (FY 2018-19)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
1	NTPC	1,204.41	360.48	2.99	1,257.94	384.00	3.05
2	NLC and NTPL	959.23	377.30	3.93	921.30	351.98	3.82
3	NPCIL	554.92	180.74	3.26	473.71	183.87	3.88

S. No.	Particulars	Approved (FY 2018-19)			Actuals (FY 2018-19)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
4	KSEB	0.00	0.00		0.00	0.00	
5	TANGEDCO	0.00	0.00		139.66	76.40	5.47
6	PPCL	215.56	86.85	4.03	214.17	119.20	5.57
7	NTECL- Vallur	121.02	58.09	4.80	135.04	77.52	5.74
8	Over drawal						
9	Open market	(126.71)	(40.17)	3.17			
10	OA Power purchase				0.00		
11	Transmission Charges		67.17			55.09	
12	Rebate					(5.65)	
13	RPO Obligations & Others		35.19			16.56	
14	Debit/Credit Notes					53.37	
15	**Total**	**2,928.43**	**1,125.65**	**3.84**	**3,141.82**	**1,312.34**	**4.18**

Revised power purchase cost submission as additional data.

Commission's analysis

The MYT Regulations, 2014 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor. Regulation 9.1 of the MYT Regulations stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(f) Force Majeure events, such as acts of war, fire, natural calamities, etc.
(g) Change in law;
(h) Taxes and Duties;
(i) Variation in sales; and
(j) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, and TANGEDCO. No power has been purchased through IEX/ Bilateral Purchase etc. The Petitioner submitted the overall Power Purchase cost as INR 1,312.34 Cr inclusive of transmission charges.

The Commission has verified the power purchase quantum and the cost as per the monthly station-wise bills submitted by the Petitioner for each source of power purchase. The cost has further been reconciled with the audited annual accounts of the FY 2018-19. As per the submissions of the Petitioner, the Commission has also considered the rebate on account of early payments made for the power purchase bills as part of the power purchase cost. The Central transmission charges along with the POSOCO charges have been considered as per actuals incurred by the Petitioner.

The Petitioner had submitted that no cost has been incurred towards the compliance of Renewable Purchase Obligation (RPO) during the FY 2018-19. In reply to Commission's queries the Petitioner submitted revised Power Purchase Cost which includes the cost of INR 16.56 Cr towards RPO compliance. The compliance status of RPO has been discussed in detail in the subsequent section. The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2018-19.

Table 50: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

S. No.	Particulars	Approved (FY 2018-19)			Actuals (FY 2018-19)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)
1	NTPC	1,204.41	360.48	2.99	1,257.94	384.00	3.05
2	NLC and NTPL	959.23	377.30	3.93	921.30	351.98	3.82
3	NPCIL	554.92	180.74	3.26	473.71	183.87	3.88
4	KSEB	0.00	0.00		0.00	0.00	
5	TANGEDCO	0.00	0.00		139.66	76.40	5.47
6	PPCL	215.56	86.85	4.03	214.17	119.20	5.57
7	NTECL- Vallur	121.02	58.09	4.80	135.04	77.52	5.74
8	Over drawal						
9	Open market	(126.71)	(40.17)	3.17			
10	OA Power purchase				0.00		
11	Transmission Charges		67.17			55.09	
12	Rebate					(5.65)	
13	RPO Obligations & Others		35.19			16.56	
14	Debit/Credit Notes					53.37	
15	**Total**	**2,928.43**	**1,125.65**	**3.84**	**3,141.82**	**1,312.34**	**4.18**

The Commission approves power purchase quantum of 3,141.82 MU and cost of INR 1,312.34 Cr in the True-up of the FY 2018-19.

4.8. Renewable Purchase Obligation (RPO)

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 6.70% of its total consumption (including 2.50% from Solar) from renewable sources for the FY 2018-19.

Based on the above, the Commission has computed the cumulative RPO compliance and the pending backlog at the end of the FY 2018-19 as shown in the following table:

Table 51 Summary of Renewable Purchase Obligation (RPO) (MU)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%	3.60%
2	Non Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	**4.20%**	**5.40%**
	Total Target	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**	**9.00%**
3	Sales Within UT	2,182.48	2,321.29	2,474.98	2,365.72	2,366.31	2,398.00	2,466.27	2,548.76	2,644.54
	RPO Target									
5	Solar	5.46	6.96	9.90	9.46	14.20	20.38	40.69	63.72	95.20

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19
6	Non Solar	16.37	39.46	64.35	61.51	63.89	64.75	78.92	107.05	142.81
	Total RPO Target	**21.82**	**46.43**	**74.25**	**70.97**	**78.09**	**85.13**	**119.61**	**170.77**	**238.01**
	RPO Compliance (Actual Purchase)									
7	Solar	-	-	-	-	-	-	0.50	0.62	2.40
8	Non Solar	-	-	-	-	-	-	-	-	-
	Total RPO Compliance (Actual Purchase)	**-**	**-**	**-**	**-**	**-**	**-**	**0.50**	**0.62**	**2.40**
	RPO Compliance (REC Certificate Purchase)									
9	Solar	-	-	-	-	-	69.00	-	-	-
10	Non Solar	-	-	48.00	112.00	90.69	14.00	-	97.26	-
	Total RPO Compliance (REC Certificate)	**-**	**-**	**48.00**	**112.00**	**90.69**	**83.00**	**-**	**97.26**	**-**
	RPO Compliance (REC+ Actual)									
11	Solar	-	-	-	-	-	69.00	0.50	0.62	2.40
12	Non Solar	-	-	48.00	112.00	90.69	14.00	-	97.26	-
	Total RPO Compliance	**-**	**-**	**48.00**	**112.00**	**90.69**	**83.00**	**0.50**	**97.88**	**2.40**
	Cumulative Requirement till current year									
13	Solar	5.46	12.42	22.32	31.78	45.98	66.36	107.06	170.78	265.98
14	Non Solar	16.37	55.83	120.18	181.69	245.58	310.33	389.25	496.29	639.10
	Total	**21.82**	**68.25**	**142.50**	**213.47**	**291.56**	**376.69**	**496.30**	**667.07**	**905.08**
	Cumulative Compliance till current year									
15	Solar	-	-	-	-	-	69.00	69.50	70.12	72.52
16	Non Solar	-	-	48.00	160.00	250.69	264.69	264.69	361.95	361.95
	Total	**-**	**-**	**48.00**	**160.00**	**250.69**	**333.69**	**334.19**	**432.07**	**434.47**
	Net Shortfall in RPO Compliance till current year									
17	Solar	5.46	12.42	22.32	31.78	45.98	(2.64)	40.19	103.29	196.10
18	Non Solar	16.37	55.83	72.18	21.69	(5.11)	45.64	124.56	134.34	277.15
	Total	**21.82**	**68.25**	**94.50**	**53.47**	**40.87**	**43.00**	**164.75**	**237.64**	**473.24**

The Commission notes that there is a net shortfall in RPO compliance till the FY 2018-19 of 473.24 MU (196.10 MU – Solar and 277.15 MU Non-solar).

4.9. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the following table.

Table 52: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Energy Sales within the UT (MUs)-A1	2,644.54
2	Energy Drawal by TANGEDCO (MUs)-A2	0.00
3	Sale to Open Access Consumer (MUs)-A3	0.00
4	Sale to Traders/Exchanges	9.07
5	Total Sales (MUs) (A1+A2+A3)	2,644.54
6	T&D Losses (%)	13.27%
7	**Total Energy Requirement**	**3,049.16**
B	**Energy Availability**	
1	Net Power Purchase (ex Bus)- B1	2,932.32
2	Own Generation (PPCL+Renewable)- B2	214.17
3	Power purchase from Common Pool / UI / Others (MUs)- B3	62.33
4	UI Underdrawal- B4	67.23
5	Open access power at the periphery (MUs)- B5	-
6	Total Power Purchase (MUs) (B1+B2+B3-B4+B5)	3,141.59
7	Transmission Losses (MUs)	83.53
8	Transmission Losses (%)	2.66%
9	**Net Energy Availability (MUs)**	**3,058.06**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for the FY 2018-19 is derived. The following table provides the energy balance approved in the APR of the FY 2018-19, the Petitioner's Submission and now trued-up by the Commission.

Table 53: Energy Balance (MU) approved by Commission

S. No.	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
A	**Energy Requirement**			
1	Sales Within Territory	2606.31	2644.54	2644.54
2	Sales to TANGEDCO	0.00	0.00	0.00
3	Sale to Open access consumer	0.00	0.00	0.00
4	Sale to Traders/Exchanges	0.00	9.07	9.07
5	Total Sales	2606.31	2653.61	2653.61
6	Distribution losses (%)	11.00%	13.27%	13.27%
7	**Energy required at the State/UT Periphery (MU)**	**2,928.44**	**3,049.16**	**3,049.16**
B	**Energy Availability**			

S. No.	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Total Power purchase quantum at Ex-bus	2,928.44	3146.49	3,146.49
2	Power Purchase from UI Over-drawal / Traders / Exchange	0.00	62.33	62.33
3	Sales to common pool consumers / UI	0.00	67.23	67.23
4	**Total Power Purchase by PED at Ex-bus (1+2-3)**	2,928.44	3,141.59	3,141.59
	Open access purchase	-	0.00	0.00
6	**Net Power Purchased at State/UT Periphery (6-7)**	**3,083.47**	**3,141.59**	**3,141.59**
7	Transmission Losses	0	83.53[3]	83.35
8	Transmission Loss (%)	-	2.66%	2.65%
9	**Energy required at the State/UT Periphery (MU) + A2 +A3 +A4**	**3,055.15**	**3,058.23**	**3,058.23**
10	**Gap / (Surplus)**	**(126.71)**	**-**	**-**

4.10. Operation & Maintenance (O&M) Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The MYT Regulations, 2014 considers the variation of O&M Expenses to be controllable. Regulation 9.2 of the MYT Regulation, 2014 states the following:

"9.2 Some illustrative variations or expected variations in the performance of the applicant, which may be attributed by the Commission to controllable factors include, but are not limited to the following:

(a)Variations in capital expenditure on account of time and/or cost overruns/ efficiencies in the implementation of a capital expenditure project not attributable to an approved change in scope of such project, change in statutory levies or force majeure events;

(b)Variations in Transmission and Distribution Losses (T&D) losses in case of bundled utilities and Distribution losses in case of unbundled utilities which shall be measured as the difference between the units input into the distribution system and the units supplied and billed;

(c)Depreciation and working capital requirements;

(d)Failure to meet the standards specified in the Joint Electricity Regulatory Commission (Standards of Performance) Regulations, 2009 except where exempted;

(e)Variation in operation & maintenance expenses, except those attributable to directions of the Commission;

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

Therefore, any variation in O&M Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any expense which is beyond the control of the Petitioner.

[3] Value has been incorrectly placed by the Petitioner in the calculations; correct value should have been 83.35

4.10.1. Employee Expenses

Petitioner's Submission

The Petitioner has incurred actual employee expenses of INR 110.32 Cr against the approved expenses of INR 104.42 Cr in the Tariff Order of FY 2018-19. The following table provides the employee expenses as submitted by the Petitioner:

Table 54: Employee Expenses submitted by the Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
	Salaries & Allowances	
1	Salary	127.40
2	Wages	0.79
3	Stipend	0.55
4	Transport Allowance	0
5	Overtime allowance	0.08
6	Total	128.82
7	Less: Add/Deduct share of others	0.54
8	Less: Amount capitalized	17.95
	Total Employee Expenses	**110.32**

Commission's analysis

The Commission, in accordance with the MYT Regulations doesn't allow any deviation in the employee expenses against those approved in the APR Order and maintains the same Employee Expenses as approved in the APR Order for FY 2018-19.

However, the increase in salaries and wages on account of recommendations of the 7th Pay Commission is an uncontrollable expenditure, hence, any increase on account of 7th Pay Commission recommendation should be a pass through. The Commission, in the Tariff Order of FY 2018-19 had approved an additional expenditure towards the 7th Pay Commission of INR 15.48 Cr. The Petitioner further submitted that the actual employee expenses as submitted in the Petition consist of the impact of the 7th Pay Commission. The Petitioner was asked to furnish the detailed working of the impact of the 7th Pay Commission separately for the FY 2018-19. The Petitioner provided that during the FY 2018-19 the 7th pay commission cost impact for the first four months is INR 1.28 Crores per month and subsequently it is INR 1.80 Crores per month due to implementation of new HRA from the month of August 2018 totalling to INR 19.52 Cr (INR 1.28 Cr x 4 months + INR 1.80 Cr x 8 months) . The Commission approves the amount of INR 19.52 Cr as additional expenditure towards the implementation of recommendations of the 7th Pay Commission.

The table below provides the employee expenses approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 55: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	88.94	90.80	88.94
2	Impact of 7th Pay Commission	15.48	19.52	19.52
3	**Total Employee Expenses**	**104.42**	**110.32**	**108.46**

The Commission approves Employee Expenses of INR 108.46 Cr in the True-up of the FY 2018-19.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has incurred A&G expenses of INR 11.85 Cr against the approved expenses of INR 13.45 Cr in the Tariff Order. The following table provides the A&G expenses as submitted by the Petitioner:

Table 56: A&G Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Rent, rates & taxes	9.29
2	Other Professional charges including Regulatory Expenses (License + Petition Fees)	
3	Office Expenses including Legal, Professional & Special Service Charges	
4	Advertisement & Publicity	
5	Other A&G Charges	
6	Others	
7	Other material related expenses	
8	EESL Charges (DELP)	2.56
9	Smart Grid Expenses	0.00
	Total	**11.85**

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits.

The Petitioner has submitted that the A&G expenses also include an expense of INR 2.56Cr towards DSM based Efficient Lighting Programme (DELP) scheme for LED Bulbs, implemented in the Union Territory of Puducherry. The Commission while issuing the Tariff Order of FY 2018-19 had made a provision of INR 5.00 Cr against this head. The Commission, now in the True-up of FY 2018-19, approves the expenditure as approved in the tariff Order for FY 2018-19.

As variation in O&M expenses is controllable, the Commission approves the same A&G expenses as approved in the APR Order along with an additional expenditure towards DELP as shown in the table below:

Table 57: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	6.05	9.29	6.05
2	EESL annual payout towards DELP Charges	5.00	2.56	2.56
3	Expenses towards Smart Grid Project	2.40	-	-
	Total A&G Expenses	**13.45**	**11.85**	**8.61**

The Commission approves the Administrative & General (A&G) expenses of INR 8.61 Cr in the True-up of FY 2018-19.

4.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has incurred R&M expenses of INR 4.47 Cr against the approved expenses of INR 26.51 Cr in the APR Order. R&M expenses are incurred towards day to day maintenance of the distribution network of the PED and form an integral part of the Petitioner's efforts towards reliable and quality power supply as also in the reduction of T&D losses in the system.

Commission's analysis

The expenditure trends of the Petitioner towards R&M expenses have been considerably lower than the approved amounts. In the instant case the Commission had approved INR 26.51 Cr towards R&M expenses in the Tariff Order for FY 2018-19, whereas the actual expenditure has been just INR 4.47 Cr as per the Annual Accounts, which less than 20% of the allocated funds.

As the Petitioner has been incurring lower R&M expenses as against the approved Expenses the Commission takes cognisance of the fact and to avoid burden on the consumer w.r.t. actual and approved expenditure the Commission approves the actual R&M Expenses as per the information available from the Annual Accounts and approves INR 4.47 Cr towards R&M expense in the True-up for FY 2018-19.

However, the Commission has noted with serious concern that the Petitioner is not incurring adequate expenditure towards the maintenance of its network despite the fact the Commission has already allowed higher R&M to be recovered in Tariff. The Commission directs the Petitioner take up with the Government to get higher funds sanctioned in this account and also incur adequate expenditure for the upkeep of its network.

Table 58: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	**Repair & Maintenance Expenses (R&M)**	**26.51**	**4.47**	**4.47**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 4.47 Cr in the True-up of FY 2018-19.

4.10.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 59: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	104.42	110.32	108.46
2	Administrative & General Expenses (A&G)	13.45	11.85	8.61
3	Repair & Maintenance Expenses	26.51	4.47	4.47
	Total Operation & Maintenance Expenses	**144.38**	**126.64**	**121.54**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 121.54 Cr in the True-up of FY 2018-19.

4.11. Capitalisation

Petitioner's Submission

The Petitioner submitted the actual capitalisation for the FY 2018-19 as INR 109.20 Cr against an approved capitalization of INR 54.31 Cr in the Tariff Order of FY 2018-19.

Commission's analysis:

The Commission approves the Capitalisation as per the submission in the Final Accounts by the Petitioner.

The table below provides the capitalisation approved in the APR Order, the Petitioner's Submission and the capitalisation approved by the Commission now:

Table 60: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	54.31	109.20	109.20

The Commission approves the Capitalisation of INR 109.20 Cr in the True-up of FY 2018-19.

4.12. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the majority of capital assets have been created out of equity contribution from the Government of Puducherry and the actual borrowing of loan is only to the extent of the R-APDRP schemes.

Commission's analysis

The MYT Regulations 2014, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as the normative loan. Regulation 24 of the MYT Regulations, states the following:

(c) The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans

(d) If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.

The Commission sought details of assets created out of consumer contribution/ grants from the Petitioner, on which the Petitioner has responded that no assets have been created out of consumer contribution/ grants.

In accordance with the MYT Regulations, 2014, and the submissions made by the Petitioner, the Commission has determined the Capital Structure for FY 2018-19 as follows:

Table 61: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	740.66	690.27	690.27
2	Addition During the FY	54.31	109.25	109.25
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	794.97	799.52	799.52

Table 62: Normative Loan addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	117.56	95.02	86.41
2	Add: Normative Loan During the year	38.02	76.48	76.48
3	Less: Normative Repayment equivalent to Depreciation	43.39	31.93	39.18*
4	Closing Normative Loan	112.19	139.57	123.70

**Depreciation has been calculated in the next section*

Table 63: Normative Equity addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	222.20	207.08	207.08
2	Additions on account of new capitalisation	16.29	32.78	32.78
3	Closing Equity	238.49	239.86	239.86

4.13. Depreciation

Petitioner's Submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2018-19.

The depreciation as claimed by the Petitioner has been tabulated below:

Table 64: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	690.27
2	Addition During the FY	109.25
3	Adjustment/Retirement During the FY	-
4	Closing Gross Fixed Assets	799.52
5	Average Gross Fixed Assets	744.90
6	Weighted Average Depreciation rate (%)	4.29%
	Depreciation	**31.93**

Commission's analysis

Regulation 23 of the MYT Regulations 2014, states the following:

(g) *Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year.*

(h) *Depreciation shall not be allowed on assets funded by capital subsidies, consumer contributions or grants.*

(i) *Depreciation shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation. The same shall be as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. (The same may vary as notified by CERC from time to time.)*

(j) *The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset.*
Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

(k) *Depreciation shall be charged from the first year of operation of the asset.*
Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.

(l) *A provision of replacement of assets shall be made in the capital investment plan."*

As per the norms specified in the MYT Regulations, 2014 the Commission has verified the asset wise capitalisation of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2014, provided in the table below:

Table 65: Depreciation Rate (%)

Description	Rate
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	15.00%
Land	0.00%

Based on the above depreciation rates and the actual asset addition during the year the weighted average depreciation rate is computed as 5.26% against a rate of 5.65% approved in the Tariff Order of FY 2018-19.

The Commission has calculated the depreciation on average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the opening GFA approved in the Tariff Order of FY 2018-19.

The following table provides the calculation of depreciation during the FY 2018-19:

Table 66: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	740.66	690.27	690.27
2	Addition During the FY	54.31	109.25	109.25
3	Adjustment/Retirement during the FY	-	-	-
4	Closing Gross Fixed Assets	794.97	799.52	799.52
5	Average Gross Fixed Assets	767.82	744.90	744.90
6	Weighted Avg. rate of Depreciation (%)	5.65%	4.29%	5.26%
	Depreciation	**43.39**	**31.93**	**39.18**

The Commission approves depreciation of INR 39.18 Cr in the True-up of FY 2018-19

4.14. Interest and Finance Charges

Petitioner's Submission

The Petitioner has calculated the Interest on Loan on normative basis. The opening balance of loans for FY 2018-19 is considered same as approved by the Commission in the APR Order. The normative loan addition in FY 2018-19 has been computed as 70% of the actual capitalisation for FY 2018-19. Further, the Petitioner has also claimed certain expenses pertaining to the bank charges, finance costs etc. in addition to the Interest on Loan.

The repayment of loans has been considered equal to the depreciation during the FY 2018-19.

Further, the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 13.45% (rate as on 1st April 2018).

Commission's analysis:

The MYT Regulations, 2014 stipulate that the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. Regulation 24 of the MYT Regulations, states the following:

(j) *The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans*

(k) *If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.

(l) *Actual loan or normative loan, if any, shall be referred as gross normative loan in this Regulation.*

(m) *The normative loan outstanding as of 1st April of control period shall be computed by deducting the cumulative repayment as approved by the Commission (basis as mentioned below) up to 31st March of current period (a year before control period) from the gross normative loan.*

(n) *The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year.*

(o) *Notwithstanding any moratorium period availed by the Distribution Licensee, the repayment of the loan shall be considered from the first year of the control period as per annual depreciation allowed.*

(p) *The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the control period, in accordance with terms and conditions of relevant loan agreements, or bonds or non-convertible debentures.*

Provided that if no actual loan is outstanding but normative loan is still outstanding, the last available weighted average rate of interest shall be applicable.

Provided further that the interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

Provided also that exception shall be made for the existing loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.

(q) *The Distribution Licensee shall make every effort to refinance the loan as long as it results in net benefit to the consumers.*

Provided that the cost associated with such refinancing shall be eligible to be passed through in tariffs and the benefit on account of refinancing of loan and interest on loan shall be shared in the ratio of 50:50 between the Distribution Licensee and the consumers.

Provided further that the Distribution Licensee shall submit the calculation of such benefit to the Commission for its approval. •

(r) *(The Distribution Licensee shall enable tracking of the loans converted into grants under schemes, like APDRP by providing information and data regularly to the Commission and for ensuring that the interest on these loans which has been passed on to the consumers inappropriately in the earlier years shall be recovered from the Distribution Licensee."*

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt-equity ratio of 70:30. Repayment has been considered equivalent to depreciation allowed during the year.

The Commission for the purpose of calculation of Interest on Loan has considered interest rate equivalent to SBI PLR @ 13.45%, as on 1st April 2018. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average loan during the year with the opening loan considered equivalent to the opening loan approved in the Tariff Order of FY 2018-19. The addition of loan has been considered as explained above and the repayment is considered same as per accrued depreciation during the year. Additionally, the Commission also allows expenditure towards financing charges as per actuals as reflected in the annual accounts.

The following table provides the Interest and Finance charges as approved by the Commission:

Table 67: Interest and Finance charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	117.56	95.02	86.41
2	Add: Normative Loan During the year	38.02	76.48	76.48
3	Less: Normative Repayment= Depreciation	43.39	31.93	39.18
4	Closing Normative Loan	112.19	139.57	123.70
5	Average Normative Loan	114.87	117.29	105.05
6	Rate of Interest (%)	13.40%	13.45%	13.45%
7	**Interest on Loan**	**15.39**	**15.78**	**14.13**
8	Financing Charges	2.54	2.50	2.50
	Interest and Finance Charges	**17.93**	**18.28**	**16.63**

The Commission approves the Interest and Finance Charges of INR 16.63 Cr in the True-up of the FY 2018-19

4.15. Return on Equity (RoE)

Petitioner's Submission

RoE is calculated in accordance with the MYT Regulations 2014 on 30% of the capital base. Equity to the tune of 30% has been considered based on the assets capitalized during the year. Accordingly, the Return on Equity has been computed at 16% on post-tax basis.

Commission's analysis:

According to the Regulation 27 of the MYT Regulations, 2014,

(a) *the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower: Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.*

(b) *The return on the equity invested in working capital shall be allowed from the date of start of commercial operation.*

(c) *16% post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR petition"*

As mentioned above, the total asset capitalisation other than the Central Government schemes during the year has been funded by equity. The Commission for the purpose of equity addition during the year, has limited it to 30% of total capitalisation as prescribed in the MYT Regulations, 2014. The RoE has been calculated on the average of opening and closing of equity during the year @ 16% post-tax basis. The following table provides the RoE approved by the Commission:

Table 68: RoE approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	222.20	207.08	207.08
2	Additions on account of new capitalisation	16.29	32.78	32.78
3	Closing Equity	238.49	239.86	239.86
4	Average Equity	230.35	223.47	223.47
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**36.86**	**35.75**	**35.75**

The Commission approves a Return on Equity of INR 35.75 Cr in the True-up of FY 2018-19

4.16. Interest on Security Deposits

Petitioner's Submission

The Petitioner submitted that Interest on the Consumer Security Deposits on normative basis is calculated as INR 11.73Cr, however, only INR 3.50 Cr has been paid to the consumers and the balance is proposed to be paid during the subsequent years. The Petitioner has considered the amount actually paid to the consumer in the True-up of FY 2018-19.

Commission's analysis:

As per Regulation 6.10 (8) of the JERC Electricity Supply Code Regulations, 2010

"The distribution licensee shall pay interest, at the bank rate notified by the Reserve Bank of India from time to time on such security deposits taken from the consumer. In this regard it shall be the responsibility of the licensee to keep a watch on the bank rate from time to time. The interest amount of previous financial year shall be adjusted in the energy bill issued in May / June of each financial year depending on billing cycle."

The Commission approves the actual interest on security deposit disbursed to the consumers in their bills, as submitted by the Petitioner. The Interest amount has also been reconciled with the audited annual accounts of FY 2018-19. The Petitioner also provided documentary evidence in support of the budgetary provision made by the Government for payment of Interest on Consumer Security Deposits to consumers. The rate of interest is considered as SBI bank rate as on 1st April 2018.

The following table provides the interest on security deposit as approved in the Tariff Order of FY 2018-19, the Petitioner's Submission and the interest now approved by the Commission:

Table 69: Interest on Consumer Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	168.92	197.65	172.75
2	Add: Deposits During the year	16.13	20.71	20.71
3	Less: Deposits refunded			
4	Closing Security Deposit	185.05	218.36	193.46
5	Average Security Deposit	176.99	208.01	183.11
6	Rate of Interest (%)	6.25%	6.00%	6.25%
7	**Interest on Security Deposit on normative basis**	**11.06**	**12.48**	**11.44**
	Interest on Security Deposit paid to consumers	**11.06**	**4.20**	**4.20**

The Commission approves interest on security deposit as INR 4.20 Cr in the True-up of FY 2018-19

4.17. Interest on Working Capital

Petitioner's Submission

Interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) Regulations, 2014.

The Working Capital requirement for the Control Period has been computed considering the following parameters:

(e) Receivables of two months of billing

(f) Less power purchase cost of one month

(g) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit

(h) Inventory for two months based on the annual requirement for the previous year

The Petitioner has not claimed any Interest on Working Capital as the Working Capital requirement for the year is coming out to be negative.

Table 70: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	223.59
2	Less: Power Purchase Cost for one month	98.04
3	Inventory Based on Annual Requirement for Previous FY for 2 months	7.77
4	Total Working Capital Requirement	133.32
5	Less: Security Deposit excluding BG/FDR	177.70
6	Net Working Capital	(44.38)
7	Rate of Interest (%)	9.10%
	Interest on Working Capital	**0.00**

Commission's analysis:

The computation of the working capital requirements and the rate of interest to be considered as stipulated in the MYT Regulations. Regulation 25 of the MYT Regulations states the following:

"Working capital for retail supply activity of the licensee shall consist of:

(v) Receivables of two months of billing

(vi) Less power purchase cost of one month

(vii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

(viii) Inventory for two months based on annual requirement for previous year.

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures.

The Commission for determination of Working Capital requirements of the Petitioner during the year has considered the receivables as proportionate ARR for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit and the inventory for two months as per the audited annual accounts of FY 2018-19.

With regards to the interest rate, the Commission has considered the SBI Base rate as on 1st April 2018, as stipulated in the MYT Regulations, 2014. Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 71: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	229.12	252.67	247.19
2	Less: Power Purchase Cost for one month	93.80	109.36	109.02
3	Inventory Based on Annual Requirement for Previous FY for 2 months	6.78	7.77	6.78
4	Total Working Capital Requirement	142.10	151.08	144.96
5	Less: Security Deposit excluding BG/FDR	176.99	197.65	183.11
6	Net Working Capital	(34.89)	(46.57)	(38.15)
7	Rate of Interest (%)	8.65%	9.10%	8.70%
	Interest on Working Capital	0.00	0.00	0.00

The Commission approves the Interest on Working Capital as NIL in the True-up of FY 2018-19.

4.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not claimed any amount towards bad and doubtful debts for the year.

Commission's analysis:

As per Regulation 29 of the MYT Regulations, 2014:

"Bad and Doubtful Debts shall be limited to 1% of receivables in the true up, subject to the condition that amount of bad and doubtful debts have actually been written off in the licensee books of accounts."

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2018-19. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts in the True-up of FY 2018-19.

4.19. Non-Tariff Income (NTI)

Petitioner's Submission

According to the Petitioner, Non-Tariff Income comprises of Meter Rent, late payment charges, interest on staff loans, income from trading of power, reconnection fee, UI sales/ Sales to Exchanges and miscellaneous income among others. The Petitioner has claimed a Non-Tariff Income of INR 13.12 Cr against the approved NTI of INR 4.51 Cr by the Commission inclusive of Open Access income. The Non –Tariff Income as submitted by the Petitioner has been shown in the table below:

Table 72: Non- Tariff Income as submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Open Access Income	0.01
2	Income from Trading of materials	0.01
3	Misc./Other Receipts	13.10
	Total	**13.12**

Commission's analysis:

The Commission has verified the submission of the Petitioner from the audited accounts and found the same to be correct. The NTI approved in the APR Order, the Petitioner's Submission and now trued-up by the Commission is shown in the following table:

Table 73: Non- Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Income	0.06	0.01	0.01
2	Income from Trading of materials		0.01	0.01
3	Misc./Other Receipts	4.44	13.10	8.94 [4]
	Total	**4.51**	**13.12**	**8.96**

The Commission approves Non-Tariff Income of INR 8.96 Cr in the True-up of FY 2018-19.

4.20. Incentive/Disincentive towards over/under-achievement of norms of distribution losses

Petitioner's Submission:

No submission has been made in this regard.

Commission's analysis:

In the Tariff Order for the FY 2018-19, the Commission had approved the distribution loss level of 11.00%. As discussed earlier, the Petitioner has only been able to achieve an Intra-State T&D Loss of 13.27%. Thus, there is an underachievement of the loss target. The Commission, in accordance with Regulations 10 & 11 of the MYT Regulations, 2014 (reproduced below) therefore has determined the disincentive towards underachievement of the target of Intra-State distribution loss for FY 2018-19.

"10. Mechanism for Sharing of Gains with Respect to Norms and Targets Mechanism for pass through of gains or losses:

10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.

10.2 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations.

10.3 The Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.

[4] The income from RRAS,URS, and UI totalling to INR 4.16 Cr has been reduced from the Power Purchase Cost for the computation of Net Revenue Requirement.

10.4 Nothing contained in this Regulation 10 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.

11. Mechanism for Sharing of Losses with Respect to Norms and Targets

(1) the licensee shall bear the entire loss on account of its failure to achieve the norms laid down by the Commission or targets set by the Commission from time to time."

The disincentive has been derived by calculating the additional cost of power procured due to under achievement of the stipulated Intra-State T&D loss target of 11.00% by the Petitioner, at the Average Power Purchase cost (APPC) of INR 4.29/kWh. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up above and the Energy at State/UT Periphery computed after grossing up the retail energy sales (2644.54 MU) with the approved Intra-State T&D Loss (13.27%).

The assessment of disincentive for higher Intra-State T&D Loss is shown in the following table:

Table 74: Disincentive towards underachievement of Intra-State distribution loss (In INR Cr)

S. No	Particulars		Petitioner's Submission	Trued-up by Commission
1	Retail Sales	A	2,644.54	2,644.54
2	T&D Loss (%)	B	11.00%	13.27%
3	Power Purchase at State/UT Periphery	C	2,971.39	3,049.16
4	Gain/(Loss) (MU) (2971.39 – 3049.16)	D		(77.77)
5	Average Power Purchase Cost (APPC)	E		4.29
6	Gain/ (Loss) (INR Cr)	F=DxE/10		(33.37)
	Sharing (30% to PED in case of gain and 100% in case of loss) (INR Cr)			(33.37)

The Commission determines and approves INR 33.37 Cr as a disincentive for underachieving the Intra-State Distribution Loss target in the True-up of FY 2018-19.

4.21. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,516.03 Cr is submitted for approval in the True-up of FY 2018-19.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2018-19 as given in the following table:

Table 75: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission	Reference
1	Power Purchase Cost	1,125.64	1,312.35	1,308.19[5]	Table 50
2	Operation & Maintenance Expenses	144.38	126.64	121.54	Table 59
3	Depreciation	43.39	31.93	39.18	Table 66
4	Interest and Finance charges	17.93	18.28	16.63	Table 67
5	Return on Equity	36.86	35.75	35.75	Table 68
6	Interest on Security Deposit	11.06	4.20	4.20	Table 69
7	Interest on Working Capital	0.00	0.00	-	Table 71
8	Provision for Bad and Doubtful Debts	0.00	0.00	-	-
9	Incentive/ (Disincentive) on achievement of norms	0.00	0.00	(33.37)	Table 74
10	**Total Revenue Requirement**	**1,379.26**	**1,529.15**	**1,492.12**	
11	Less: Non-Tariff Income	4.51	13.12	8.96	Table 73
12	**Net Revenue Requirement**	**1,374.75**	**1,516.03**	**1,483.17**	

The Commission approves net Aggregate Revenue Requirement of INR 1,483.17 Cr in the True-up of the FY 2018-19.

[5] The income from RRAS,URS, and UI totalling to INR 4.16 Cr has been reduced from the Power Purchase Cost for the computation of Net Revenue Requirement.

4.22. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has submitted the net actual revenue for the FY 2018-19 as INR 1443.18 Cr (including revenue from regulatory surcharge) against revenue of 1434.64 Cr (excluding revenue from regulatory surcharge) approved by the Commission in the APR Order. The Petitioner submitted, that the 1464.33 Cr is the Gross Revenue from sale of power to consumers from which an amount of INR 21.15 Cr has been deducted on account of power factor rebate to consumers and the Gross Revenue also includes INR 2.65 Cr from TNEB for drawl of power from PED. The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 76: Revenue at existing tariff submitted by the Petitioner for FY 2018-19 (In INR Cr)

S. No	Category	Revenue from Demand Charges (INR Cr)	Revenue from Energy Charges (INR Cr)	Surcharge at 4%	Total Revenue (INR Cr)
1	**Domestic**	**17.62**	**189.84**	**8.30**	**215.69**
	0 - 100 units	6.33	38.06	1.78	46.17
	101 - 200 units	4.72	40.10	1.79	46.61
	201 - 300 units	2.52	37.79	1.61	41.93
	Above 300 units	2.56	73.88	3.06	79.50
	OHOB	1.49		0.06	1.49
2	**Commercial**	**7.94**	**132.91**	**5.63**	**146.49**
	0 - 100 units	3.23	28.93	1.29	33.45
	101 - 250 units	1.32	29.35	1.23	31.89
	Above 250 units	3.40	74.63	3.12	81.15
3	**Agriculture**	**2.98**	**-**	**0.12**	**3.10**
	Small farmers	0.07	0.00	0.00	0.08
	Other farmers	2.90	0.00	0.12	3.02
4	**Public lighting**	**6.08**	**18.62**	**0.99**	**25.68**
5	**LT Industrial & Water Tank**	**0.81**	**92.17**	**3.72**	**96.70**
	LT Industrial	0.79	69.77	2.82	73.38
	Water tank	0.02	22.40	0.90	23.32
6	**Temporary supply - LT&HT**		8.12		8.12
7	**HT 1 Industrial**				
	HT I(a) for contract demand upto 5000 kVA	99.23	471.21	22.82	593.26
	HT I(b) for contract demand upto 5000 kVA	12.69	44.85	2.30	59.84
8	**HT 2 – Govt. & Water Tank**	13.52	42.94	2.26	58.71
9	**HT 3 - EHT**	35.86	208.28	9.77	253.90
10	**Less: Incentives to consumers**				**21.15**
	Total from Tariff				**1,440.3**
	Revenue from TNEB				**2.65**
	Total Revenue				**1,443.18**

Commission's analysis

The Commission analysed the sales and revenue figures for each consumer category and sub-category by applying various levels of checks. Further, while verifying the consumer category wise revenue it was observed that the total revenue was reflected as INR 1311.98 Cr in the annual accounts. The category/ slab wise revenue as approved in the Tariff Order of FY 2018-19, Petitioner's Submission and now Trued-up by the Commission is shown in the following table:

Table 77: Revenue at existing tariff approved by Commission for FY 2018-19 (In INR Cr)

S. No	Category	Revenue from Demand Charges (INR Cr)	Revenue from Energy Charges (INR Cr)	Surcharge at 4%	Total Revenue (INR Cr)
1	**Domestic**	**17.62**	**189.84**	**8.30**	**215.69**
	0 - 100 units	6.33	38.06	1.78	46.17
	101 - 200 units	4.72	40.10	1.79	46.61
	201 - 300 units	2.52	37.79	1.61	41.93
	Above 300 units	2.56	73.88	3.06	79.50
	OHOB	1.49		0.06	1.49
2	**Commercial**	**7.94**	**132.91**	**5.63**	**146.49**
	0 - 100 units	3.23	28.93	1.29	33.45
	101 - 250 units	1.32	29.35	1.23	31.89
	Above 250 units	3.40	74.63	3.12	81.15
3	**Agriculture**	**2.98**	**-**	**0.12**	**3.10**
	Small farmers	0.07	0.00	0.00	0.08
	Other farmers	2.90	0.00	0.12	3.02
4	**Public lighting**	**6.08**	**18.62**	**0.99**	**25.68**
5	**LT Industrial & Water Tank**	**0.81**	**92.17**	**3.72**	**96.70**
	LT Industrial	0.79	69.77	2.82	73.38
	Water tank	0.02	22.40	0.90	23.32
6	**Temporary supply - LT&HT**		8.12		8.12
7	**HT 1 Industrial**				
	HT I(a) for contract demand upto 5000 kVA	99.23	471.21	22.82	593.26
	HT I(b) for contract demand upto 5000 kVA	12.69	44.85	2.30	59.84
8	**HT 2 – Govt. & Water Tank**	13.52	42.94	2.26	58.71
9	**HT 3 - EHT**	35.86	208.28	9.77	253.90
10	**Less: Incentives to consumers**				**21.15**
	Total from Tariff				**1,440.3**
	Revenue from TNEB				**2.65**
	Total Revenue				**1,443.18**

The Commission approves the revenue from the sale of power as INR 1,443.18 Cr in the True-up of the FY 2018-19.

4.23. Standalone Revenue Gap/ Surplus

Petitioner's Submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 72.85 Cr is arrived at in the True-up of FY 2018-19.

Commission's analysis

The Commission based on the approved ARR and retail tariff has arrived at the Revenue Gap/Surplus as follows:

Table 78: Standalone Revenue Gap/ Surplus for FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1,374.74	1,516.03	1,483.17
2	Total Revenue	1,434.64	1,443.18	1,443.18
	Net Gap / (Surplus)	**(59.90)**	**72.86**	**39.99**

The Commission, in the True-up of FY 2018-19 approves a standalone gap of INR 39.99 Cr. The treatment of the standalone gap has been discussed in Chapter 7 Tariff Principles and Design.

5. Chapter 5: Annual Performance Review of FY 2019-20

5.1. Background

The Tariff Order for the FY 2019 was issued by the Commission on 25th May 2019 approving the ARR for the 2nd MYT Control Period and Retail Tariff for the FY 2019-20. This Chapter covers the Annual Performance Review (APR) of the FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the Tariff Order the 2nd MYT Control Period. The Annual Performance Review for the FY 2019-20 is to be carried out as per the provisions of Regulation 11 of the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018.

5.2. Approach for the Review for the FY 2019-20

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M Expenses, interest on long-term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2019-20 has been done based on the 6 months' actual data as provided by the Petitioner for the FY 2019-20 of the Power Purchase Quantum and the Cost, Energy Sales, Capitalisation etc. Based on such data the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the MYT Regulations, 2018 and on the basis of the norms approved in the MYT Order dated 25th May 2019 and Tariff Order of FY 2019-20.

5.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted a revised estimate of energy sales as 2830.21 MU for the FY 2019-20, based on the actual energy sales for the first 6 months (H1) of the financial year. The basis of projecting the energy sales for H2 of the financial year has not been provided in the petition.

Commission's analysis

The audited figures for FY 2018-19 and provisional information provided by the Petitioner for the first 6 months of the FY 2019-20 have been examined by the Commission. The Commission, for identifying the trend in energy sales for various categories could not rely on the month-wise data for FY 2017-18 or FY 2018-19 since, as submitted in the reply to the deficiency note, the Petitioner was not able to generate and submit the month-wise sales data pertaining to issue with adoption of a new software. Hence, the Commission has extrapolated the sales data from the Total Sales figure for FY 2018-19 using the CAGR for each category of sales.

The table below provides the energy sales approved by the Commission in the ARR Order, the Petitioner's submission and as now approved by the Commission.

Table 79: Energy Sales (MU) approved by the Commission

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Sales approved in FY 2018-19	Growth rate		Now Approved by Commission
1	Domestic	774.95	848.34	711.56	5 year	3.47%	736.25
2	OHOB	10.49	7.39	10.24	Subjective Rate	0.00%	10.24
3	Commercial	236.55	230.11	212.85	5 year	3.29%	219.86
4	Agriculture	57.92	57.92	59.86	5 year	0.98%	60.45
5	Public lighting	24.48	24.48	27.58	3 year	1.99%	28.13
6	Industrial	185.61	154.82	124.59	Subjective Rate	2.00%	127.08
7	Water tanks		37.43	35.00	Subjective Rate	2.00%	35.70
8	Temporary supply	10.27	8.08	8.12	3 year	5.07%	8.53
9	**Total LT**	**1300.27**	**1,368.56**	**1,189.80**			**1,226.24**
10	HT 1-Industrial	902.73	893.23	972.13	3 year	2.91%	1000.41
11	HT 1-Commercial		90.95				
12	HT-2	119.08	72.04	66.06	4 year	4.23%	68.86
	HT-3 Industrial EHT	327.03	405.42	416.55	Subjective Rate	2.91%	428.67
	Total HT	**1348.84**	**1,461.65**	**1,454.74**			**1,497.93**
	Grand Total	**2649.10**	**2,830.21**	**2,644.54**			**2,724.18**

The Commission approves energy sales of 2,724.18 MU in the APR of FY 2019-20.

5.4. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has not projected or scheduled any energy sales/purchase under Open Access in the FY 2019-20.

Commission's analysis

The Commission in this regard considers the Petitioner's submission and approves the Open Access Sale and Purchase accordingly.

The Commission now approves NIL open access sales of and purchase in the APR of FY 2019-20.

5.5. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the ARR of FY 2019-20 due to non-availability of requisite loss figure.

- For Central Generating Stations such as NTPC and NPCIL etc., the transmission loss has been considered as per the weekly data published on the Southern Regional Power Committee (SRPC) website.

Commission's analysis

The Commission in the APR of FY 2019-20 considers the transmission loss levels in line with latest submission by the Petitioner.

The table below provides the Inter-State Transmission Losses submitted and now approved by the Commission.

Table 80: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Government Stations	2.92%	2.77%	2.77%

The Commission approves the Inter-State Transmission Loss as 2.77% for CGS stations and 4.00% for TANGEDCO in the APR of FY 2019-20.

5.6. Intra-State Transmission and Distribution (T&D) loss

Petitioner's Submission

The Petitioner has proposed Intra-State T&D loss level at 12.24% against an approved loss of 12.50% in the MYT Order. The Petitioner further submitted that it has been achieving significant reduction in distribution losses and is having one of the lower T&D losses in India. These efforts shall be continued and will be enhanced. However, the loss reduction is a slow process after reaching at certain level and can happen after deployment of latest technological and advanced infrastructure developments are in place. Therefore, the Petitioner has submitted reduced Intra-State T&D loss level at 12.24% from 12.50%.

Commission's analysis

The Commission had approved loss level of 12.50% for FY 2019-20 in the MYT Order dated 25th May 2019 while determining ARR for the FY 2019-20. The Commission, in the Business Plan Order, had set the loss trajectory for the 2nd Control Period considering the actual loss of 13.75% in FY 2017-18, as the Petitioner had already been penalized in the 1st Control Period for failing to meet the loss targets. However, the Commission decided to set a steeper loss trajectory than the proposed one, as the proposed trajectory is not commensurate with the capital expenditure plan and capitalization plan approved by the Commission. The Commission in the APR of FY 2019-20 considers the loss level of 12.50% as approved in the MYT Order for the FY 2019-20.The following table provides the Intra-State distribution loss approved in the MYT Order, the Petitioners submission and now approved by the Commission.

Table 81: Intra-State distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	12.50%	12.24%	12.50%

The Commission approves Intra-State T&D loss of 12.50% in the APR of FY 2019-20.

5.6.1. Power Purchase Quantum & Cost

Petitioner's Submission:

The Petitioner meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and PPCL. PPCL is a generating company within the UT of Puducherry catering to the partial requirement of Karaikal region of PED. PED also has an additional allocation of power from New Neyveli Thermal Power Station to meet the demand of the Union Territory from the year 2019-20. The New Neyveli Thermal Power Station is expected to supply power to PED from December 2019. The quantum and cost of power purchase for FY 2019-20 have been estimated in the following manner:

The Petitioner has projected the quantum of power purchase by considering the actual power purchase for the 1st half of the year FY 2019-20 and for the purpose of the estimation of purchase quantum for H2 for FY 2019-20, the Petitioner has considered the revised estimates of power purchase quantum in line with the Variable and Fixed Costs approved in MYT Tariff order dated 20.05.2019. The key assumptions for estimating the power purchase quantum and costs are as under:

1. **Power Purchase Quantum**

   The Petitioner has considered the revised estimates of power purchase quantum in line with the Variable and Fixed Costs approved in Business Plan order dated 31.10.2018 and Tariff order dated 20.05.2019

2. **Power Purchase Cost**

   The Power purchase cost under MOD has been arrived at as follows:

   - Fixed Charges have been considered as approved in Business Plan order dated 31.10.2018 and tariff order for FY 2019-20.
   - The petitioner has considered the per unit variable costs of FY 2019-20, as approved in Business Plan order dated 31.10.2018 and tariff order for FY 2019-20 and has calculated the revised projections of base year FY 2019-20 w.r.t to power purchase projections for respective Central Generating Stations.
   - The Transmission Charges for FY 2017-18 are considered as per POC computation and actually incurred in H1. However, for H2 calculation, the similar amount as charged in H1 of FY 2017-18 has been considered.

The Petitioner has a Renewable Purchase Obligation of 11.50% (inclusive of 4.70% Solar RPO) in FY 2019-20. The overall RPO target for FY 2019-20 comes out to be 133.02 MU from Solar and 192.45 MU from Non-Solar to a total of 325.47 MU. The Petitioner plans to procure RECs (126.27 MUs Solar & 192.45 MUs Non-Solar) and 6.75 MUs from Solar Rooftop Net-metering. The quantum and cost towards RPO compliance have been shown in the table below. The same has been included in the overall power purchase cost estimated for FY 2019-20.

Table 82: RPO Compliance cost as submitted by Petitioner

Particulars	Total	Solar obligation	Non- Solar obligation
Sales (MU)	**2566.58**		
RPO Obligation (%)	**11.50%**	4.70%	6.80%
RPO Requirement (MU)	**325.47**	133.02	192.45
RPO met through purchase of physical power/RECs (MU)	**325.47**	133.02	192.45
Cost of RPO compliance thru RECs (INR Cr)	**318.72**	126.27	192.45
Outstanding RPO @ the end of previous year (MUs)	**473.25**	196.09	277.15

Particulars	Total	Solar obligation	Non- Solar obligation
RPO pending at the end of the year (MUs	**473.25**	196.09	277.15

As outlined in the above table, the estimated cost towards RPO compliance is considered as INR 62.51 Cr at a rate of INR 1.12/kWh (IEX Average Clearing Price).

The Power Purchase Cost for the FY 2019-20 has been tabulated below:

Table 83: Power Purchase cost submitted by Petitioner for FY 2019-20 (In INR Cr)

S. No.	Source	Energy Units Purchased (MU)	Energy Units at Periphery (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Generating Stations**						
I	**NTPC**	**1,230.33**	**1,194.41**	**102.97**	**301.66**	**0.64**	**405.27**
	RSTPS Stage I & II	556.04	539.81	40.41	147.06	0.00	187.47
	RSTPS Stage -III	152.45	148.00	10.88	40.07	0.29	51.24
	Talcher Stage- II	414.94	402.82	31.28	80.98	0.19	112.44
	Simhadri Stage- II	106.90	103.78	20.40	33.56	0.16	54.12
II	**NLC and NTPL**	**990.90**	**961.96**	**103.94**	**277.48**	**0.46**	**381.88**
	NLC TPS II Stage I	497.36	482.83	37.41	135.77	2.62	175.79
	NLC TPS II Stage II	181.13	175.84	15.55	49.53	0.87	65.94
	NLC TPS I (Expn)	101.34	98.38	11.09	25.45	0.56	37.10
	NLC TPS II (Expn)	50.45	48.98	7.95	12.82	0.39	21.17
	NTPL	160.62	155.93	31.94	53.92	(3.98)	81.88
III	**NPCIL**	**666.14**	**646.69**	**-**	**243.58**	**8.92**	**252.50**
	MAPS	37.73	36.62	-	9.59	0.22	9.81
	KAPS	290.55	282.06	-	106.22	2.60	108.82
	Kudankulam U1	181.69	176.38	-	68.85	2.45	71.30
	Kudankulam U2	156.19	151.63	-	58.93	3.65	62.57
IV	**Others**	**217.58**	**211.23**	**44.27**	**74.10**	**0.83**	**119.20**
	Vallur Thermal Project	160.75	156.05	35.75	58.52	0.83	95.11
	New NLC TS-I	56.83	55.17	8.52	15.57	-	24.09
V	**Over/ Under Drawal**						
B	**State Generating Station**	**216.96**	**216.96**	**30.64**	**63.72**	**1.89**	**96.25**
	PPCL	216.96	216.96	30.64	63.72	1.89	96.25
							-
C	**Other Charges**				**51.99**		**51.99**
	PGCIL Transmission Charges, Wheeling & Other Charges				51.99		51.99

S. No.	Source	Energy Units Purchased (MU)	Energy Units at Periphery (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Total Charges (INR Cr)
D	**RPO Compliance Cost**					**62.51**	**62.51**
	Total	**3,321.92**	**3,231.26**	**281.82**	**1,012.52**	**12.75**	**1369.61**

Commission's analysis:

The Commission while estimating the power purchase quantum and cost for FY 2019-20 has considered the actual quantum and cost of power till September 2019, as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 6 months of the FY 2019-20. The methodology followed for projecting the quantum and cost for the remaining months has been discussed as follows:

5.6.2. Availability of power

Availability of energy from NTPC Stations:

- The energy availability from NTPC Power Stations has been estimated based on the average energy available during the months of April – March in the last three financial years FY 2016-17 to FY 2018-19.

Availability of energy from NLC Stations:

- The energy availability from NLC Power Stations has been estimated based on the average energy available during the months of April – March in the last three financial years FY 2016-17 to FY 2018-19.

Availability of energy from NPCIL plants:

- The energy availability from Madras Atomic Power Station (MAPS) has been estimated based on average of first 6 month as the plant has shown declining trend over FY 2017-18 and data for H2 2018-19 was not available.

- The energy availability from Kaiga Stage I & II has been estimated based on 3 previous years' average, with previous month equivalent for Feb – Mar 2019 due to non-availability of data for the last two months.

- The energy availability from Kundakulum Power Station's Unit I & II has been considered on average of H1 2018 as there was intermittent schedule in previous years.

Availability of energy from Vallur Thermal Plant and New NLC TS -1:

- The energy availability from Vallur Thermal Station has been estimated based on the average energy available in the last 3 years FY 2016-17 to FY 2018-19 during the months of April - March.

- The energy availability from New NLC Ts-1 plant has been considered as submitted by Petitioner since it is relatively new and shall be reconsidered at the time of True-up.

- Energy availability from PPCL has been estimated based on the average energy available during the months of April – March in the last three financial years FY 2016-17 to FY 2018-19.

5.6.3. Power Purchase Cost

Variable Charges:

- The Variable Cost for existing plants has been computed based upon the average variable cost for the first six months of the FY 2019-20 (Apr'19 to Sep'19).

- The variable charges for New NLC Ts-1 plant has been considered as submitted by Petitioner since it is relatively new and shall be reconsidered at the time of True-up.
- For procurement of power from the Open Market, the Average Round the Clock (RTC) rate for the southern region during the calendar year 2019 has been considered.

Fixed Charges:

- The fixed costs have been considered based on the tariff Orders issued by the CERC for respective Central Generating Stations.
- The fixed charges for New NLC TS-1 plant has been considered as submitted by Petitioner since it is relatively new and shall be reconsidered at the time of True-up.
- For PPCL, the fixed cost for H1 has been considered at actuals as submitted by the Petitioner and for H2 the half of the fixed charges approved in Tariff Order for FY 2019-20 has been considered.
- The Fixed cost has been apportioned on the basis of Petitioner's share in each power station and average annual plant availability factor achieved during the last five years by each plant.

UI over-drawl/under-drawl:

The UI over-drawl/under-drawl quantum and amount would be considered at the time of True-up based on the UI bills.

Other Charges:

No other charges have been considered for the FY 2019-20.

5.6.4. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL based on the total capacity allocation of the transmission network to the Petitioner.

For this purpose, the latest three quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 have been considered.

5.6.5. Total Power Purchase Cost

The following table provides the Power Purchase Quantum and Cost approved by the Commission for FY 2019-20:

Table 84: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	Power Purchase at Generator Periphery	Power Purchase at UT periphery (after adjusting ISTS Losses)	Total (INR Cr)	Avg. Rate
NTPC				
RSTPS Stage I & II	579.83	563.30	192.24	2.93
RSTPS Stage -III	145.35	141.20	48.71	2.90
Talcher Stage- II	432.14	419.87	116.57	3.60
Simhadri Stage- II	92.71	90.06	49.89	1.81
Subtotal - NTPC	**1250.03**	**1214.43**	**407.41**	**2.98**
NLC				
NLC TPS II Stage I	426.60	414.39	151.18	2.74
NLC TPS II Stage II	146.52	142.32	54.58	2.61
NLC TPS I (Expn)	109.56	106.44	37.70	2.82
NLC TPS II (Expn)	60.69	58.97	23.21	2.54
NTPL	116.53	113.20	64.31	1.76

Details of the stations	Power Purchase at Generator Periphery	Power Purchase at UT periphery (after adjusting ISTS Losses)	Total (INR Cr)	Avg. Rate
Subtotal- NLC	**859.91**	**835.32**	**330.99**	**2.52**
NPCIL	-	-	-	-
Madras Atomic Power Station	28.61	27.79	7.63	3.64
Kaiga Stage I & II	295.10	286.69	104.85	2.73
Kundakulum Unit I & II	357.67	347.47	136.43	2.55
Subtotal- NPCIL	**681.38**	**661.95**	**248.91**	**2.66**
Others				
New NLC TS-I	56.83	55.26	27.68	2.00
NTECL-Vallur Thermal Project	130.91	127.16	86.48	1.47
Subtotal- Others	**187.74**	**182.42**	**114.17**	**1.60**
State Generation				
PPCL	222.87	204.99	97.16	2.11
Subtotal- State Generation	**222.87**	**204.99**	**97.16**	**2.11**
Renewable Power/RPO	-	-	12.71	-
Subtotal- Renewable Power/RPO	-	-	**12.71**	-
PP from Open Market /(Sale of Surplus Power)	**14.24**	-	**4.53**	**3.18**
Revenue from Sale to TANGEDCO	-	-	-	-
Arrears of NPCIL	-	-	-	-
Unscheduled Interchange (UI) Overdrawal/Underdrawal	-	-	-	-
-				
Total	**3,216.16**	**3,099.10**	**1,215.87**	**2.55**
Transmission Charges	-	-	-	-
PGCIL Charges	-	-	79.97	-
Other Transmission Charges	-	-	-	-
Subtotal	-	-	79.97	-
-				
Total Power Purchase Cost	**3,216.16**	**3,099.10**	**1,295.84**	**2.39**

The Commission approves the revised quantum of power purchase as 3099.10 MU at State/ UT Periphery with total cost of INR 1,295.84 Cr in the APR of FY 2019-20.

5.7. Renewable Purchase Obligations (RPOs)

Petitioner's Submission:

The Petitioner has considered the total cost of compliance of RPO as INR 62.51 Cr wherein INR 33.41 Cr are towards purchase of Non-Solar RECs pertaining to 192.45 MU at a rate of INR 1.73/kWh and INR 29.10 Cr are towards purchase of Solar RECs pertaining to 126.27 MU at a rate of INR 2.30/kWh. The Petitioner also envisages to procure 6.75 MU from Solar Rooftop Net-metering without any addition to the cost.

In its quarterly submissions to the Commission the Petitioner has submitted that the total standalone RPO to be covered for the year (As per actual data till Feb 2020) is 127.11 MU (4.30 MU solar and 122.81 MU non-solar).

Commission's analysis:

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010:

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 11.50% of its total consumption (including 4.70% from Solar) from renewable sources for the FY 2019-20.

The Petitioner is also required to clear the backlog of 473.01 MU (Solar – 195.86 MU and Non-Solar – 277.15 MU) upto the FY 2018-19, as discussed in the True-up Chapter.

The Petitioner in its Petition has proposed to cover the cumulative backlog and the RPO target for FY 2019-20 by year 2021-22. In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's Submission, the table below provides the Renewable Purchase Obligation for the FY 2019-20 as determined by the Commission based on the revised estimate of energy sales:

Table 85: Summary of Renewable Purchase Obligation (RPO) (MU)

Sl. No.	Description	Unit	FY 2019-20	
			Physical	REC
1	Sales Within State	MUs	2724.18	
2	RPO Obligation	%	**11.50%**	
	- Solar	%	4.70%	
	- Non Solar	%	6.80%	
3	RPO Obligation for FY 2019-20	MUs	**313.28**	
	- Solar	MUs	128.04	
	- Non Solar	MUs	185.24	
4	RPO Purchase in FY 2019-20	MUs	**0.00**	**127.11**
	- Solar	MUs	0.00	4.30
	- Non Solar	MUs	0.00	122.81
5	Backlog upto FY 2018-19	MUs	**0.00**	**473.24**
	- Solar	MUs	0.00	196.10
	- Non Solar	MUs	0.00	277.15
6	Total Compliance for FY 2019-20	MUs	**0.00**	**127.11**
	- Solar	MUs	0.00	4.30
	- Non Solar	MUs	0.00	122.81
7	Unit Cost	Rs/kWh		
	- Solar	Rs/kWh	3.00	1.00

Sl. No.	Description	Unit	FY 2019-20	
			Physical	REC
	- Non Solar	Rs/kWh	3.00	1.00
8	Total Cost for FY 2019-20	INR	**0.00**	**12.71**
	- Solar	INR	0.00	0.43
	- Non Solar	INR	0.00	12.28
9	Net shortfall in RPO compliance	MUs		**659.42**
	- Solar	MUs		319.83
	- Non Solar	MUs		339.58

The Commission has assumed the rate of purchase for Solar and Non-Solar REC as INR 1.00/ kWh (IEX Average Clearing Price) due to non–availability of Solar REC's.

The Commission has computed the following cost towards compliance of RPO which has been considered in the total power purchase cost approved by the Commission in the previous section.

Table 86: Cost towards compliance of Renewable Purchase Obligation (RPO) (In INR Cr)

Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (Rs/kWh)
Solar	4.30	0.43	1.00
Non-Solar	122.81	12.28	1.00
Solar Rooftop Net-metering		-	-
Total	**127.11**	**12.71**	**1.00**

The Commission approves INR 12.71 Cr towards RPO compliance for FY 2019-20. The same shall be taken up at the time of true-up.

5.8. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the table below:

Table 87: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within the UT	2,830.21
2	Sales to TANGEDCO	10.76
3	Sale to Open access consumers	0
4	Total Sales	2,840.97
5	Distribution losses (%)	12.24%
	Distribution losses (MU)	394.89
6	Energy required for the Territory (MU)	3,235.86
7	Sales to common pool consumers / UI	0
8	**Energy Requirement @ periphery**	**3,235.86**
B	**Energy Availability**	
1	Net thermal generation (Own+ IPP + Share from Central Stations)	3,321.92
2	Power purchase from Common Pool / UI / Traders / Exchange / Others	0

S. No.	Particulars	Petitioner's Submission
3	Open access power at periphery	0
4	Net Power Purchased	3,321.92
5	Transmission Losses	86.06
6	**Total Energy Availability**	**3,235.86**

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The table below provides the Energy Balance as approved by the Commission in the Tariff Order of FY 2019-20, the Petitioner's Submission and the Energy Balance now approved by the Commission.

Table 88: Energy Balance (MU) approved by Commission

Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement for Discom			
Energy sales within the State/UT	2,649.10	2,830.21	2,724.18
Energy Drawal by TANGEDCO	0.00	10.76	0.00
Less: Energy Savings	0	0.00	0.00
Total Sales within the State/UT	**2,649.10**	**2,840.97**	2,724.18
Distribution losses (%)	12.50%	12.24%	12.50%
Distribution Loss MU	378.44	394.89	389.17
Energy required at State/UT Periphery by Discom	**3,027.54**	**3,235.86**	**3,113.34**
Open Access			
Open Access Sales	0.00	0	0
Pooled Losses			
%	-	-	-
MU	0.00	00	0
Energy Required for Open Access	**0.00**	**0**	**0**
Total energy required at State/UT Periphery	**3,027.54**	**3,235.86**	**3,113.34**
Energy Transactions at Periphery			
Add: Sales in Unscheduled Interchange	0.00	0.00	0.00
Add: Sales in Power Exchanges	0.00	0.00	0.00
Less: Purchase under UI (MU)	0.00	0.00	0.00
Less: Open Access Purchase (MU)	0.00	0.00	0.00
Total energy scheduled at State Periphery from Tied-up Sources (MU)	3,027.54	3,321.92	**3,113.34**
Transmission Loss		86.06	
Energy Available at State/UT periphery from firm sources	3,202.85	3,235.86	3,099.10
Deficit/(Surplus)	**(175.31)**		**14.24**

In the APR of FY 2019-20, the Commission has estimated a deficit quantum of 14.24 MU. The cost of this purchase of deficit power has been discussed and considered in the Total Power Purchase Cost approved for FY 2019-20 in the previous section.

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

"51.1 The Operation and Maintenance expenses for the Distribution Wires Business shall be computed in accordance with this Regulation.

51.2 Operation and Maintenance (O&M) expenses shall comprise of the following:

a) Employee expenses - salaries, wages, pension contribution and other employee costs;

b) Administrative and General expenses including insurance charges if any; and

c) Repairs and Maintenance expenses.

51.3 The Distribution Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the transmission Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

51.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (WPI inflation)

EMPn = (EMPn-1) x (1+Gn) x (CPI inflation)

A&Gn = (A&Gn-1) x (CPI inflation)

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPI inflation – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPI inflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMPn – Employee expenses of the Distribution Licensee for the nth Year;

A&Gn – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&Mn – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

Xn is an efficiency factor for nth Year. Value of Xn shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

Gn is a growth factor for the nth Year. Value of Gn shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

Provided that in case the Distribution Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, O&M Expenses shall be determined on case to case basis.

51.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

51.6 For the purpose of estimation, the same value of factors – CPIinflation and WPIinflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPIinflation and WPIinflation during the truing up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation."

GFAn-1 – Gross Fixed Asset of the Licensee for the n-1th Year;

5.9.1. Employee Expenses

Petitioner's Submission

The Petitioner has submitted employee expenses of INR 116.33 Cr against the approved expenses of INR 106.16 Cr in the Tariff Order. The relevant inflation factor would be last 3 year's average Consumer Price Index (CPI). The average CPI index for FY 16-17, FY 17-18 and FY 18-19 inflation factor is 4.22%. However, the CPI inflation for FY 18-19 was 5.45%. Thus, the petitioner submitted to the Commission to consider 5.45% as the relevant inflation factor for estimating the Employee cost for FY 2019-20.

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts."

The Commission has considered the actual audited employee expenses from FY 2015-16 to FY 2017-18 to arrive at the Base Year estimates i.e. for the FY 2018-19. The average of these three years i.e. FY 2015-16 to FY 2017-18 has been considered as employee expenses for the FY 2016-17. This has been escalated with the average CPI of three previous years (FY 2014-15 to FY 2016-17) to arrive at the employee expenses for FY 2017-18. The resultant employee expenses of the FY 2017-18 have been escalated with average CPI of three previous years (FY 2015-16 to FY 2017-18) to arrive at the employee expenses for Base Year i.e. FY 2018-19. The resultant Base Year expenses have been escalated by Growth Rate determined based on the manpower plan as submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2019-20 and further for FY 2020-21.

Table 89 CPI Inflation Index

FY	Average of (Apr-Mar)	Increase in CPI Index
2014-15	250.83	6.29%
2015-16	265.00	5.65%
2016-17	275.92	4.12%
2017-18	284.42	3.08%
2018-19	299.92	5.45%

Table 90 Computation of employee expenses

S. No	Particulars	As per Audited Accounts		RE		Now Approved	
		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	Gn (Growth factor as per Petitioner Submission)					-1.34%	-3.00%
2	CPI (Average of 3 Previous Years)			5.35%	4.28%	4.22%	4.22%
3	Employee Expenses (excluding impact of 7th Pay Commission)	77.66	77.72	87.94			
4	Average (FY 16-FY 18)		81.11				
5	Expenses with inflation and growth			**85.45**	**89.11**	**91.62**	**92.62**
6	Impact of 7th Pay Commission with inflation and growth	-			**19.52**[6]	**20.07**	**20.29**
7	**Total Employee Expenses**				**108.63**	**111.69**	**112.91**

Table 91: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	90.68	116.33[7]	91.62
2	Impact of 7th Pay Commission	15.48		20.07
3	**Total Employee Expenses**	**106.16**	**116.33**	**111.69**

The Commission now approves employee expenses of INR 111.69 Cr in the APR of the FY 2019-20.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has submitted a revised estimate of A&G expenses at INR 12.83 Cr, calculated in accordance with the MYT Regulations and the methodology prescribed by the Commission in the Tariff Order.

Commission's analysis

The Commission has considered the actual audited A&G expenses from FY 2015-16 to FY 2017-18 to arrive at the Base Year estimates i.e. for the FY 2018-19. The average of these three years i.e. FY 2015-16 to FY 2017-18 has

[6] As per actual based on Audited Annual Accounts for FY 2018-19
[7] Breakup of employee expenses into Impact of 7th Pay Commission is not available in the petition.

been considered as A&G for the FY 2016-17. This has been escalated with the average CPI of three previous years (FY 2014-15 to FY 2016-17) to arrive at the A&G expenses for FY 2017-18. The resultant A&G expenses of the FY 2017-18 have been escalated with average CPI of three previous years (FY 2015-16 to FY 2017-18) to arrive at the A&G expenses for Base Year i.e. FY 2018-19. The resultant Base Year expenses have been escalated by the average CPI Inflation of the last three years to arrive upon the A&G expenses of FY 2019-20 and further for FY 2020-21.

Table 92 A&G Expenses computation (In INR Cr)

S. No	Particulars	As per Audited Accounts		Revised Estimate		Now Approved	
		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	CPI% (3 previous years' avg.)			5.35%	4.28%	4.22%	4.22%
2	**A&G Expenses**	**10.54**	**12.30**	**9.66**			
	Average (FY 16-Fy 18)		10.83				
	Expenses with inflation			**11.41**	**11.90**	**12.40**	**12.93**

In accordance with the MYT Regulations the Commission now approves the same A&G Expenses as derived in the table above.

Table 93: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	12.83	12.83	12.40
	Total A&G Expenses	**12.83**	**12.83**	**12.40**

The Commission now approves the Administrative & General (A&G) expenses of INR 12.40 Cr in the APR of the FY 2019-20.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has submitted a revised estimate of R&M expenses in accordance with the MYT Regulations and the methodology prescribed by the Commission in the Tariff Order considering revised inflation numbers.

Commission's analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2016-17, FY 2017-18 and FY 2018-19 (last three available audited accounts) and averaged for three years. The 'K' factor has been computed as follows:

Table 94: Computation of 'K' factor (In INR Cr)

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	9.38	9.90	4.47
2	Opening GFA (GFA_{n-1})	660.92	676.17	690.27
3	K Factor (%)	1.42%	1.46%	0.65%
	K Factor Approved by the Commission (Average of 3 years) (%)	**1.18%**		

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for the FY 2019-20.

The WPI Inflation has been computed as follows:

Table 95: Computation of WPI Inflation (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2016-17	1.73%	**2.99%**
2017-18	2.92%	
2018-19	4.32%	

The R&M expenses approved by the Commission for FY 2019-20 have been provided in the following table:

Table 96: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20
1	Opening GFA (GFA_{n-1})	799.52
2	K factor approved (K) (%)	1.18%
3	Avg. WPI Inflation (%)	2.99%
4	**R&M Expenses =** **$K \times (GFA_{n-1}) \times (1+WPI_{inflation})$**	**9.69**

Table 97: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**11.44**	**6.74**	**9.69**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.69 Cr in the APR of FY 2019-20.

5.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses approved in the ARR of FY 2019-20, Petitioner's Submission and now approved by the Commission.

Table 98: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	106.16	116.33	111.69
2	Administrative & General Expenses (A&G)	12.83	12.83	12.40
3	Repair & Maintenance Expenses	11.44	6.74	9.69
	Total Operation & Maintenance Expenses	**130.43**	**135.90**	**133.78**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 133.78 Cr in the APR of FY 2019-20.

5.10. Capital Expenditure & Capitalisation

Petitioner's Submission

The Petitioner has submitted revised capital expenditure of INR 60.73 Cr and capitalisation of INR 49.14 Cr during the year. The Commission approved a capital expenditure of INR 175.55 Cr and capitalisation of INR 83.25 Cr in the MYT Order.

Commission's analysis:

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. The following table provides the details of capital expenditure and capitalisation during FY 2019-20.

In accordance with the submission of the Petitioner and the Capital Expenditure and Capitalisation approved in MYT Order, the Commission approves the capital expenditure and capitalisation for the year as shown in the following table:

Table 99: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	175.55	60.73	175.55
1	Capitalisation	83.25	49.14	83.25

The Commission approves capital expenditure of INR 175.55 Cr and capitalisation of INR 83.25 Cr in the APR of FY 2019-20. The same will be taken up at the time of True-up.

5.11. Capital Structure

Petitioner's Submission

The Petitioner submitted that the majority of capital assets shall be created out of equity contribution from Government of Puducherry and the actual borrowing of loan is only to the extent of implementing of the R-APDRP, DDUGJY and IPDS schemes.

Commission's analysis

Regulation 26 of the MYT Regulations, 2018 specifies the following:

"26. Debt to Equity Ratio

26.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2018 shall be considered:

Provided that in case of retirement or replacement or De-capitalization 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-capitalization 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.

26.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 23, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

26.3 Any expenditure incurred or projected to be incurred on or after April 1, 2019, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in this Regulation."

In accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2019-20 as follows:

Table 100: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	794.97	799.51	799.52
2	Addition During the FY	83.25	49.14	83.25
3	Adjustment/Retirement During the FY	0	0	0.00
4	Closing Gross Fixed Assets	878.22	848.65	882.77

Table 101: Normative Loan addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	112.22	139.65	123.70
2	Add: Normative Loan During the year	61.52	34.40	58.28
3	Less: Normative Repayment equivalent to Depreciation	30.60	30.26	30.87*
4	Closing Normative Loan	143.14	143.69	151.11

**Depreciation calculated in next section*

Table 102: Normative Equity addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	238.49	239.85	239.86
2	Additions on account of new capitalisation	15.19	14.74	24.98
3	Closing Equity	253.68	254.60	264.83

5.12. Depreciation

Petitioner's Submission

For computation of Depreciation, the Petitioner has followed JERC MYT Regulations 2018, the depreciation rates as specified by CERC have been adopted for calculation of depreciation on different asset categories.

Commission's analysis

Regulation 30 of the MYT Regulations, 2018 stipulates the following:

"30. Depreciation

30.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets: In the ARR Order, the Commission approved the following asset wise depreciation rate as per the CERC Tariff Regulations, 2014:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

30.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

30.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

30.4 In case of existing assets, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.

30.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

30.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

30.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of the Regulations.

30.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

30.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

30.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan."

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in MYT Regulations, 2018, provided in the following table:

Table 103: Depreciation Rate (%)

Description	Rate
Land & Land Rights	0.00%
Buildings	1.80%
Plant & Machinery	3.60%
Transformer	3.60%
Lines & Cables (HT & LT)	3.60%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Office Equipment	6.00%
IT Equipment	6.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%
SCADA Building	1.80%

The following table provides the calculation of depreciation during the MYT Control Period.

Table 104: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	794.97	799.51	799.52
2	Addition During the FY	83.25	49.14	83.25
3	Less: Government Grant	6.54	0.00	0.00
4	Closing Gross Fixed Assets	871.68	848.65	882.77
5	Average Gross Fixed Assets	833.33	824.08	841.15
6	Weighted Average Depreciation rate (%)	3.67%	3.67%	3.67%
	Depreciation	**30.60**	**30.26**	**30.87**

The Commission now approves depreciation of INR 30.87 Cr in the APR of the FY 2019-20.

5.13. Interest and Finance Charges

Petitioner's Submission

The petitioner has estimated the Interest and Finance charges as per the JERC MYT Regulations, 2018 for the year FY 2019-20. The Petitioner has submitted that the majority of capital assets are created out of the equity contribution from Government of Puducherry and the actual borrowing of loan is only to the extent of the R-APDRP schemes. The rate of interest considered is prevailing Prime Lending Rate of the State Bank of India as on 1stApril of that relevant year.

Commission's analysis:

Regulation 28 of the MYT Regulations, 2018 stipulates the following:

"28. Interest on Loan

28.1 The loans arrived at in the manner indicated in Regulation 26 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalization or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

28.2 The normative loan outstanding as on April 1, 2019, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2018, from the gross normative loan.

28.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 30.

28.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

28.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalization approved by the Commission for the Year.

28.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

28.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

28.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

28.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

28.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries and the Transmission Licensee or the Distribution Licensee and the Consumers of Distribution Licensee.

28.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, in absence of detailed data with respect to the actual loan portfolio, the Commission has considered the SBI 1 Year MCLR rate[8] plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018.

As per the MYT Regulations, 2018, if the equity deployed is more than 30% of the capital cost, then equity in excess of 30% is considered as normative loan. The Interest on Loan has been has considered as the SBI 1 Year MCLR rate plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018.

The following table provides the Interest on Loan approved by the Commission.

Table 105: Interest and Finance Charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	112.22	139.56	123.70
2	Add: Normative Loan During the year	61.52	34.40	58.28

[8] SBI 1 Year MCLR rate as on 10th March 2019 which is applicable rate as on 1st April 2019

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
3	Less: Normative Repayment equivalent to Depreciation	30.60	30.26	30.87
4	Closing Normative Loan	143.14	143.69	151.11
5	Average Normative Loan	127.68	141.63	137.40
6	Rate of Interest (%)	9.55%	13.70%	9.55%
7	Interest on Loan	12.19	19.40	13.12
8	Finance Charges	0	0	
	Interest and Finance Charges	**12.19**	**19.40**	**13.12**

The Commission approves Interest and Finance Charges of INR 13.12 Cr in the APR of the FY 2019-20

5.14. Return on Equity (RoE)

Petitioner's Submission

Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, RoE is computed on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2018-19 and additional equity to the tune of 30% is proposed to be capitalized during the year. Accordingly, RoE is computed at 16% post-tax.

Commission's analysis:

RoE has been calculated on normative basis on the average of opening and closing of equity during the year at the rate of 16% (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2018-19 as approved in the True-up. Income Tax payable shall be considered taken on actual basis at the time of True-up. The following table provides the RoE approved in the ARR of FY 2019-20, the Petitioner's Submission and RoE now approved by the Commission.

Table 106: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity Amount	A	238.49	239.85	239.86
2	Equity Addition during year	B	15.19	14.74	24.98
3	Closing Equity Amount	C	253.68	254.6	264.83
4	Average Equity Amount	D = (A+B)/2	246.09	247.2	252.34
5	Average Equity-Wires Business	E = D*90%	221.48	222.5	227.11
6	Average Equity (Retail Supply Business)	F=D*10%	24.61	24.72	25.23
7	Return on Equity for Wires Business (%)	G	15.50%	15.50%	15.50%
8	Return on Equity for Retail Supply Business (%)	H	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	I=G*E	34.33	34.49	35.20
10	Return on Equity for Retail Supply Business	J=H*F	3.94	3.96	4.04
11	**Total Return on Equity**	**K=I+J**	**38.27**	**38.44**	**39.24**

The Commission approves the Return on Equity of INR 39.24 Cr in the APR of the FY 2019-20.

5.15. Interest on Security Deposits

Petitioner's Submission

Interest on consumer security has been calculated on normative basis however the Petitioner has requested to allow only INR 3.50 Cr as same shall be paid to the consumers in FY 2017-18. The Petitioner has proposed the balance amount shall be disbursed in the subsequent years.

Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the MYT Regulations, 2018 based on the average of opening and closing consumer security deposits during the year. The opening security deposit has been derived based on the closing security deposit as approved in the True-up of FY 2018-19. The addition during the year has been considered the same as submitted by the Petitioner. The same shall be considered as per actuals in the True- up of FY 2019-20. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The table below provides the calculation of interest on consumer security deposits for the year.

Table 107: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	185.05	218.36	193.46
2	Add: Deposits During the year	22.78	21.74	21.74
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	207.83	240.11	215.20
5	Average Security Deposit	196.44	185.76	204.33
6	Rate of Interest (%)	6.25%	6.25%	6.50%
	Interest on Security Deposit (IoSD)	**12.28**	**14.33**	**13.28**
	IoSD to be paid to consumers	**12.28**	**5.00**	**13.28**

The Commission approves Interest on Security Deposit as INR 13.28 Cr in the APR of the FY 2019-20.

5.16. Interest on Working Capital

Petitioner's Submission

Interest on Working Capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2018.

The Petitioner has computed the Interest on Working Capital at rate of 10.55%.

Commission's analysis:

The Commission has considered the receivables as proportionate ARR for 2 months, O&M expenses as determined above and the Maintenance spares at 40% of R&M expenses for one month for computing the Working Capital Requirement for the year.

The Commission has considered the SBI Base rate as on 1st April 2019 for calculation of interest, as stipulated in the MYT Regulations, 2018.

Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 108: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	10.87	11.33	11.15
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.38	0.22	0.32
3	Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff	251.49	265.08	253.94
4	Less: Amount held as security deposits	196.44	229.24	204.33
5	Net Working Capital	66.30	47.40	61.08
6	Rate of Interest (%)	10.15%	10.55%	10.55%
7	**Interest on Working Capital**	**6.73**	**5.00**	**6.44**

The Commission approves the Interest on Working Capital as INR 6.44 Cr in the APR of the FY 2019-20.

5.17. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not earmarked any provision for bad and doubtful debts for the year.

Commission's analysis

The Commission also has not considered any provision towards Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of FY 2019-20.

5.18. Non-Tariff Income

Petitioner's Submission

The Petitioner submitted that the Non-Tariff Income comprises metering, late payment charges, interest on staff loans, income from trading, reconnection fee, UI sales/ Sales to Exchanges and miscellaneous income among others. The Non-Tariff Income for FY 2019-20 was estimated considering the non-tariff income for FY 2018-19 and is considered to remain same for FY 2019-20.

Commission's analysis:

The Petitioner has submitted that NTI for FY 2019-20 shall remain same as FY 2018-19. Hence, the Commission approves the NTI for FY 2019-20 as approved in the True-up for FY 2018-19. The NTI now approved is shown in the table below:

Table 109: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
	Total	**4.51**	**13.12**	**8.96**

The Commission approves Non-Tariff Income of INR 8.96 Cr in the APR of the FY 2019-20. The same shall be considered at actuals at the time of True-up of FY 2019-20.

5.19. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 1590.50 Cr after adjusting the Non -Tariff Income for FY 2019-20.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the Commission has considered and approved the revenue requirement in the APR of the FY 2019-20 as provided in the table below:

Table 110: Aggregate Revenue Requirement approved by the Commission for FY 2019-20 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission	Reference
1	Power Purchase Cost	1,282.96	1,369.61	1,295.84	Table 84
3	Employee costs	106.16	116.33	111.69	Table 91
4	Administration and General expenses	12.83	12.83	12.40	Table 93
5	R&M expenses	11.44	6.74	9.69	Table 97
6	Depreciation	30.60	30.26	30.87	Table 104
7	Interest and Finance charges	12.19	19.40	13.12	Table 105
8	Return on Equity	38.27	38.44	39.24	Table 106
9	Interest on Security Deposit	12.28	5.00	13.28	Table 107
10	Interest on Working Capital	6.73	5.00	6.44	Table 108
12	Provision for Bad Debt	-	-	-	-
13	Income Tax	-	-	-	-
15	**Total Revenue Requirement**	**1513.45**	**1,603.62**	**1,532.58**	
16	Less: Non-Tariff Income	4.51	13.12	8.96	Table 109
17	**Net Revenue Requirement**	**1508.94**	**1,590.50**	**1,523.62**	

The Commission now approves the net ARR of INR 1,523.62 Cr in the APR of FY 2019-20.

5.20. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has submitted the revenue from the sale of power at existing tariff as INR 1600.24 Cr determined on the basis of energy sales in the territory for FY 2019-20. The estimated revenue for FY 2019-20 is based on the six month actual revenue at the existing tariff. The following table provides the category wise revenue determined by the Petitioner for FY 2019-20.

Table 111: Revenue at existing tariff submitted by Petitioner (In INR Cr)

Sr. No.	Category of Consumer	Energy Sale (MUs)	Revenue (INR Crore)			
			Demand Charges	Energy Charges	4% Surcharge	Total
1	**Domestic & Cottage**					
a	0 - 100	355.4	6.6	53.3	2.4	62.3
b	101 - 200	212.8	4.9	53.2	2.3	60.5
c	201 - 300	112.4	2.6	48.9	2.1	53.6
d	>300	167.8	2.7	93.9	3.9	100.5
e	OHOB	7.4	0.4			1.5
f	**Total**	**855.7**	**17.2**	**249.3**	**10.6**	**278.3**
2	**Commercial**					
a	0 - 100	68.2	3.3	37.5	1.6	42.5
b	101 - 250	53.7	1.4	34.9	1.5	37.7
c	> 250	108.2	3.5	77.9	3.3	84.7
d	**Total**	**230.1**	**8.2**	**150.3**	**6.3**	**164.9**
3	**Agriculture**					
a	Small farmers	8.1	0.1		0.0	0.1
b	Other farmers	49.8	2.9	-	0.1	3.0
c	**Total**	**57.9**	**3.0**			**3.1**
4	**Public lighting**	**24.5**	**6.1**	**16.5**	**0.9**	**23.6**
5	**LT Industrial & Water Tank**					
a	LT Industrial	154.8	0.9	89.8	3.6	94.4
c	Water tank	37.4	0.0	25.1	1.0	26.1
d	**Total**	**192.2**	**1.0**	**114.9**	**4.6**	**120.5**
6	**Temporary supply - LT&HT**	**8.1**		**7.9**	**0.3**	**8.2**
7	**Total LT**	**1,368.6**	**35.5**	**538.9**	**22.8**	**598.6**
8	**HT 1 Industrial**	893.2	114.5	477.9	23.7	616.1
b	HT Commercial	91.0	14.7	50.0	2.6	67.3
9	HT II (HT Others)	72.0	13.7	46.8	2.4	62.9
10	HT III (EHT Industries)	405.4	38.8	206.8	9.8	255.4
11	**Total HT**	**1,461.6**	**181.7**	**781.5**	**38.5**	**1,001.7**
12	**Total**	**2830.21**	**217.20**	**1320.43**	**61.37**	**1,600.24**

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2019-20. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not projected any revenue from Power factor incentive etc. and the same shall be considered as per actuals while truing up of the FY 2019-20. The below revenue does not include Regulatory Surcharge, which has been considered separately. The same has been considered while approving the revenue gap/ surplus for FY 2019-20. The revenue from energy charges based on existing tariff as computed by the Commission for FY 2019-20 has been shown in the following table:

Table 112 Revenue from Energy Charges determined by Commission (In INR Cr)

S. No.	**Consumer Category**	**Sales** (MU) (A)	**Approved Tariff**		**Energy Charges** (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	**Energy Charge** (Rs/kWh) (C)	
1	**DOMESTIC**	**736.25**			**218.55**
	0-100 units	302.96	INR 40/connection/ month	1.50	45.44
	101-200 units	184.40	INR 40/connection/ month	2.50	46.10
	201-300 units	99.00	INR 40/connection/ month	4.35	43.06
	Above 300 units	149.89	INR 40/connection/ month	5.60	83.94
2	**HUT SERVICES/ OHOB**	**10.24**	INR 35/connection/ month	**-**	**0.00**
3	**COMMERCIAL**	**219.86**			**144.99**
	0-100 units	58.03	INR 120/connection/ month	5.50	31.92
	101-250 units	49.29		6.50	32.04
	Above 250 units	112.54		7.20	81.03
4	**AGRICULTURE SERVICES**	**60.45**			**0.00**
(i)	Agriculture	60.45			0.00
	Small Farmers	8.13	INR 10/HP/month	-	0.00
	Other farmers	52.32	INR 45/HP/month	-	0.00
(ii)	Cottage Industries	*No sale*			-
	0-100 units		INR 40/connection/ month	1.50	-
	101-200		INR 40/connection/ month	2.50	-
	201-300 units		INR 40/connection/ month	4.35	-
	Above 300 units		INR 40/connection/ month	5.60	-
5	**PUBLIC LIGHTING**	**28.13**	INR 100/pole/ month	6.75	**18.99**
6	**LT INDUSTRIAL & WATER WORKS**	**162.78**			**97.63**
(i)	LT Industrial	127.08	INR 120 /connection/ month	5.80	73.71
(ii)	Water Tanks	35.70	INR 140/connection/ month	6.70	23.92

S. No.	Consumer Category	Sales (MU) (A)	Approved Tariff		Energy Charges (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	Energy Charge (Rs/kWh) (C)	
7	**HIGH TENSION-I**	**1000.41**			**536.50**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	914.94	INR 400 per kVA per month	5.35	489.49
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	85.47	INR 400 per kVA per month	5.50	47.01
8	**HIGH TENSION-II**	**68.86**	INR 450 per kVA per month	6.50	**44.76**
9	**HIGH TENSION-III**	**428.67**	INR 450 per kVA per month	5.10	**218.62**
10	**HOARDINGS/SIGNBOARDS**	***No sale***	INR 120 per kVA per month or part thereof	8.00	-
11	**TEMPORARY**	**8.53**		**7.9**	**8.32**
	TOTAL	**2,724.18**			**1,288.34**

The total revenue based on existing tariff as computed by the Commission for FY 2019-20 has been shown in the following table:

Table 113: Revenue at existing tariff computed by Commission (In INR Cr)

S. No.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (Rs./unit)
1	**DOMESTIC**	**736.25**	**218.55**	**16.48**	**235.02**	**3.19**
	0-100 units	302.96	45.44	6.47	51.91	1.71
	101-200 units	184.40	46.10	4.82	50.92	2.76
	201-300 units	99.00	43.06	2.57	45.64	4.61
	Above 300 units	149.89	83.94	2.62	86.55	5.77
2	**HUT SERVICES/ OHOB**	**10.24**	**0.00**	**1.49**	**1.49**	**1.46**
3	**COMMERCIAL**	**219.86**	**144.99**	**8.10**	**153.09**	**6.96**
	0-100 units	58.03	31.92	3.29	35.21	6.07
	101-250 units	49.29	32.04	1.34	33.38	6.77
	Above 250 units	112.54	81.03	3.46	84.49	7.51
4	**AGRICULTURE SERVICES & COTTAGE INDUSTRIES**	**60.45**	**0.00**	**1.66**	**1.66**	**0.27**
(i)	Agriculture	60.45	0.00	1.66	1.66	0.27
	Small Farmers	8.13	0.00	0.04	0.04	0.05
	Other farmers	52.32	0.00	1.62	1.62	0.31

S. No.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (Rs./unit)
(ii)	Cottage Industries	*No sale*	-	-	-	-
	0-100 units		-	-	-	-
	101-200 units		-	-	-	-
	201-300 units		-	-	-	-
	Above 300 units		-	-	-	-
5	**PUBLIC LIGHTING**	**28.13**	**18.99**	**6.09**	**25.08**	**8.92**
6	**LT INDUSTRIAL & WATER WORKS**	**162.78**	**97.63**	**0.98**	**98.60**	**6.06**
(i)	LT Industrial	127.08	73.71	0.95	74.66	5.88
(ii)	Water Tanks	35.70	23.92	0.02	23.94	6.71
7	**HIGH TENSION-I**	**1000.41**	**536.50**	**147.35**	**683.85**	**6.84**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	914.94	489.49	134.15	623.65	6.82
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	85.47	47.01	13.20	60.20	7.04
8	**HIGH TENSION-II**	**68.86**	**44.76**	**16.17**	**60.93**	**8.85**
9	**HIGH TENSION-III**	**428.67**	**218.62**	**59.71**	**278.33**	**6.49**
10	**HOARDINGS/SIGNBOARDS**	***No sale***	-	-	-	-
11	**TEMPORARY**	**8.53**	**8.32**	-	**8.32**	**9.75**
	TOTAL	**2,724.18**	**1,288.34**	**258.61**	**1,546.95**	**5.68**

Fixed Charges are computed per annum based on connected load, consumers, and horsepower as applicable.

The Commission has determined revenue from the sale of power at existing tariff (excluding Revenue from Regulatory Surcharge) as INR 1,546.95 Cr in the APR of FY 2019-20.

5.21. Revenue from Open Access Charges

Petitioner's Submission

The Petitioner has not submitted any revenue from Open Access sales.

Commission's analysis

The Commission considers the Petitioner's Submission in this regard and approves NIL revenue from Open Access Sales.

The Commission approves Revenue from Open Access as NIL in the APR of FY 2019-20

5.22. Standalone Revenue Gap/Surplus

Petitioner's Submission

Based on the ARR and the revenue from Retail tariff and Open Access sales, the standalone revenue surplus of INR 9.74 Cr is arrived at in the APR of FY 2019-20.

Commission's analysis

The Commission based on the approved ARR and retail tariff has approved the Revenue Gap/Surplus including regulatory surcharge as follows:

Table 114: Standalone Revenue Gap/ Surplus at existing tariff including regulatory surcharge (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	1508.94	1590.50	1,523.62
2	Revenue from Retail Sales at Existing Tariff	1508.03	1538.75	1,546.95
3	**Gap / (Surplus) without Regulatory Surcharge**	**0.91**	**51.75**	**(23.33)**
4	Regulatory Surcharge (@4%)	60.32	61.37	61.88
5	Total Revenue (2+4)	1568.35	1600.24	1,608.83
	Net Gap /(Surplus) (1-5)	**(59.40)**	**(9.74)**	**(85.21)**

The standalone surplus at existing retail tariff is INR 85.21 Cr in the APR of FY 2019-20.

6. Chapter 6: Determination of Aggregate Revenue Requirement for the FY 2020-21

6.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for the FY 2020-21. The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2018.

6.2. Approach for determination of ARR for the FY 2020-21

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for each year based on figures approved in the Business Plan Order dated 31st October 2018, the actual available information of various parameters for the FY 2016-17, FY 2017-18, FY 2018-19 as per the audited accounts and the provisional information available for the FY 2019-20.

6.3. Projection of Number of consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner has considered the same number of consumers, connected load and energy sales as approved by the Commission in the Business Plan Order.

Table 115: Number of consumers, Connected Load, and Energy Sales submitted by the Petitioner for the FY 2020-21

S. No.	Particulars	No. of Consumers	Connected Load (kVA/HP)	Energy Sales (MU)
1	Domestic	363,093	606,966	895.28
2	OHOB	8,808	2,843	7.39
3	Commercial	58,767	149,522	271.67
4	Agriculture	7,029	44,654	60.75
5	Public Lighting	51,153	6,304	24.48
6	LT Industrial	6,791	132,812	202.51
7	Temporary	-	-	11.12
8	HT I	429	378,964	1008.51
9	HT II	66	40,601	73.84
10	HT III	7	139,931	415.53
	Total	**496,143**	**1,502,597**	**2,971.07**

Commission's analysis

For projecting the number of consumers and energy sales for each category, the historical trends in the past 5 years (FY 2014-15 to FY 2018-19) have been considered. For projecting the connected load, the latest available data for FY 2017-18 and FY 2018-19 has been considered. The Compound Annual Growth Rate (CAGR) and the Year on Year (y-o-y) increase for each category has been calculated and using the appropriate growth rate the category wise consumers, connected load and energy sales are projected. The tables below provide the trends observed in the growth in the number of consumers, connected load and energy sales for the Petitioner.

Table 116 Growth in No. of Consumers

	Y-o-Y growth rate					CAGR				
	FY15/FY14	FY16/FY15	FY17/FY16	FY18/FY17	FY19/FY18	5 year	4 year	3 year	2 year	1 year
Domestic	5.25%	6.94%	2.28%	3.98%	3.13%	04.30%	04.07%	03.13%	03.56%	03.13%
OHOB	0.01%	0.00%	0.00%	-0.01%	0.00%	00.00%	00.00%	00.00%	00.00%	00.00%
Commercial	3.59%	10.09%	0.80%	3.60%	2.19%	04.01%	04.11%	02.19%	02.89%	02.19%
Agriculture & Cottage Industries	0.57%	0.07%	0.67%	0.58%	0.48%	00.47%	00.45%	00.58%	00.53%	00.48%
Public Lighting	0.75%	0.32%	0.39%	0.37%	0.46%	00.46%	00.39%	00.41%	00.41%	00.46%
LT Industrial	1.36%	1.66%	0.62%	-0.08%	1.67%	01.04%	00.96%	00.73%	00.79%	01.67%
Water Works	0.00%	32.94%	17.70%	3.76%	0.72%	10.34%	13.08%	07.15%	02.23%	00.72%
HT-1	-5.07%	5.10%	1.39%	-0.46%	-2.97%	-00.47%	00.72%	-00.70%	-01.72%	-02.97%
HT-2	8.16%	0.00%	13.21%	-28.33%	48.84%	05.49%	04.83%	06.49%	03.28%	48.84%
HT-3	0.00%	0.00%	0.00%	-28.57%	40.00%	00.00%	00.00%	00.00%	00.00%	40.00%
Hoardings/Signboards	-	-	-	-	-	-	-	-	-	-
Temporary	-	-	-	-	-	-	-	-	-	-

Table 117 Growth in Connected Load

	Y-o-Y growth rate					CAGR				
	FY15/FY14	FY16/FY15	FY17/FY16	FY18/FY17	FY19/FY18	5 year	4 year	3 year	2 year	1 year
Domestic	-	-	-	-	4.61%	-	-	-	-	04.61%
OHOB	-	-	-	-	0.00%	-	-	-	-	00.00%
Commercial	-	-	-	-	7.88%	-	-	-	-	07.88%
Agriculture & Cottage Industries	0.00%	-25.00%	33.33%	-25.00%	0.00%	-05.59%	-06.94%	00.00%	-13.40%	00.00%
Public Lighting	-	-	-	-	1.00%	-	-	-	-	01.00%
LT Industrial	-	-	-	-	1.98%	-	-	-	-	01.98%
Water Works	-	-	-			-	-	-	-	-
HT-1	-12.05%	2.87%	2.16%	27.96%	3.27%	04.08%	08.56%	10.52%	14.96%	03.27%
HT-2	3.71%	2.00%	7.81%	44.58%	10.00%	12.65%	15.00%	19.69%	26.11%	10.00%
HT-3	-7.19%	2.00%	-2.26%	44.46%	4.94%	07.00%	10.88%	14.00%	23.12%	04.94%
Hoardings/Signboards	-	-	-	-	-	-	-	-	-	-
Temporary	-	-	-	-	-	-	-	-	-	-

Table 118 Growth in Energy Sales

	Y-o-Y growth rate					CAGR				
	FY15/FY14	FY16/FY15	FY17/FY16	FY18/FY17	FY19/FY18	5 year	4 year	3 year	2 year	1 year
Domestic	5.87%	6.26%	3.68%	3.35%	-1.62%	03.47%	02.88%	01.77%	00.84%	-01.62%
OHOB	-17.29%	0.00%	2.10%	0.29%	0.01%	-03.26%	00.60%	00.80%	00.15%	00.01%
Commercial	0.67%	8.66%	6.53%	2.60%	-1.65%	03.29%	03.96%	02.44%	00.46%	-01.65%
Agriculture & Cottage Industries	0.00%	0.00%	0.49%	0.58%	3.91%	00.98%	01.23%	01.65%	02.23%	03.91%
Public Lighting	0.00%	0.00%	-6.78%	1.01%	12.66%	01.19%	01.49%	01.99%	06.68%	12.66%
LT Industrial	-5.99%	3.07%	-9.38%	-3.40%	-15.83%	-06.52%	-06.65%	-09.68%	-09.83%	-15.83%
Water Works	-32.46%	3.07%	4.24%	0.40%	-6.89%	-07.47%	00.11%	-00.86%	-03.31%	-06.89%
HT-1	-0.31%	1.91%	5.85%	-1.14%	4.15%	02.06%	02.66%	02.91%	01.47%	04.15%
HT-2	14.74%	7.22%	3.38%	1.80%	4.62%	06.26%	04.23%	03.26%	03.20%	04.62%
HT-3	-2.16%	-16.15%	-3.37%	26.23%	27.42%	04.98%	06.85%	15.84%	26.83%	27.42%
Hoardings/Signboards	-	-	-	-	-	-	-	-	-	-
Temporary	-39.41%	14.38%	14.29%	-4.25%	6.01%	-04.27%	07.33%	05.07%	00.75%	06.01%

Table 119: Number of consumers approved by the Commission for the FY 2020-21

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	As approved for FY 2019-20	Growth rate		Now Approved by Commission
1	Domestic	357,410	363,093	350,508	5 year	4.30%	365,595
2	OHOB	35,537	8,808	35,537	Subjective Rate	0.00%	35,537
3	Commercial	575,86	58,767	57,354	5 year	4.01%	59,652
4	Agriculture	7,038	7,029	7,006	5 year	0.47%	7,039
5	Public Lighting	51,133	51,153	50,871	3 year	0.41%	51,077
6	LT Industrial	6,839	6,791	6,655	5 year	1.04%	6,869
7	Water works			142	2 year	2.23%	
8	HT I	485	429	428	Subjective Rate	1.00%	433
9	HT II	72	66	66	2 year	3.28%	68
10	HT III	7	7	7	Subjective Rate	0.00%	7
	Total	**516,107**	**496,143**	**508,575**			**526,279**

Table 120: Connected load approved by the Commission for the FY 2020-21 (kVA/HP)

S. No.	Particulars	MOU	Approved in MYT Order	Petitioner's Submission	As computed for FY 2019-20	Growth Rate		Now Approved by Commission
1	Domestic	kVA	606,966	606,966	580,217	1 year	4.61%	606,964
2	OHOB	kVA	2,843	2,843	2,843	1 year	0.00%	2,843
3	Commercial	kVA	149,522	149,522	138,599	1 year	7.88%	149,521
4	Agriculture	HP	44,654	44,654	44,654	1 year	0.00%	44,654
5	Public lighting	kVA	6,304	6,304	6,242	1 year	1.00%	6,304
6	LT Industrial & water tank	kVA	132,821	132,812	130,243	1 year	1.98%	132,822
7	HT I	kVA	378,964	378,964	366,965	1 year	3.27%	378,965
8	HT II	kVA	40,601	40,601	36,909	Subjective Rate	10.00%	40,600
9	HT III	kVA	139,931	139,931	133,215	1 year	4.94%	139,794
	Total		**1,502,606**	**1,502,597**	**1,439,887**			**1,502,467**

Table 121: Energy sales approved by the Commission for the FY 2020-21 (MU)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	As approved for FY 2019-20	Growth rate		Now Approved by Commission
1	Domestic	802.15	895.28	736.25	5 year	3.47%	761.79
2	OHOB	10.61	7.39	10.24	Subjective Rate	0.00%	10.24
3	Commercial	247.31	271.67	219.86	5 year	3.29%	227.11
4	Agriculture	58.08	60.75	60.45	5 year	0.98%	61.04
5	Public Lighting	24.48	24.48	28.13	3 year	1.99%	28.69
6	LT Industrial + Water Works	185.61	202.51	162.78	Subjective Rate	2.00%	166.04
7	Temporary	11.31	11.12	8.53	3 year	5.07%	8.96
8	HT I	905.44	1,008.51	1,000.41	3 year	2.91%	1,029.51
9	HT II	130.98	73.84	68.86	4 year	4.23%	71.77
10	HT III	327.10	415.53	428.67	Subjective Rate	2.91%	441.14
	Total	**2,703.07**	**2,971.07**	**2724.18**			**2,806.29**

The Commission approves the number of consumers at 526279 connected load as 1,502,467 kW/kVA/HP (as applicable) and energy sales as 2,806.29 MU for the FY 2020-21.

6.4. Inter-State transmission loss

Petitioner's Submission

The Petitioner has submitted Inter-State Transmission Losses of 2.92% in its petition for FY 2020-21.

Commission's analysis

The Commission in the ARR of FY 2020-21 considers the transmission loss levels in line with those approved in the APR of FY 2019-20. The following table provides the Inter-State Transmission Losses approved by the Commission for the FY 2020-21.

Table 122: Inter-State transmission loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Inter-State Transmission Losses	2.92%	2.92%	2.77%

The Commission approves an Inter-State Transmission Loss of 2.77% for the FY 2020-21.

6.5. Intra-State Distribution Loss

Petitioner's Submission

The Petitioner has proposed the loss trajectory approved by the Commission in the Business Plan Order i.e. at 11.75%.

Commission's analysis

The Commission, in the Business Plan Order, had set the loss trajectory for the 2nd Control Period (FY 2019-20 to FY 2021-22) considering the actual loss of 13.75% in FY 2017-18, as the Petitioner had already been penalized in the 1st Control Period (FY 2016-17 to FY 2018-19) for failing to meet the loss targets. However, the Commission decided to set a steeper loss trajectory than the proposed one, as the proposed trajectory was not commensurate with the capital expenditure plan and capitalization plan approved by the Commission. Detailed reasoning has been provided in the Commission's Business Plan Order for the 2nd Control Period.

The following provides the Intra-State Distribution Loss approved for the FY 2020-21.

Table 123: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	11.75%	11.75%	11.75%

The Commission approves the Intra-State Distribution Loss of 11.75% for the FY 2020-21.

6.6. Power Purchase Quantum & Cost

Petitioners Submission

1. **Power Purchase Quantum**

The Petitioner has considered the power purchase quantum approved by the Commission in the Business Plan Order for the 2nd Control Period at 3467.86 MU.

2. Power Purchase Cost

The Petitioner has estimated the Power Purchase Cost for the FY 2020-21 based on the station wise provisional power purchase cost for the first six months of the FY 2019-20. For new power plants and renewable sources, the Petitioner has considered fixed and variable charges based on the currently observed price trends.

The assumptions considered for projection of power purchase cost from various generating stations are detailed as follows:

- The Fixed Charges approved in the MYT Order dated 20.05.2019 have been considered for the FY 2020-21.
- The Variable Charges approved in the MYT Order dated 20.05.2019 have been considered for the FY 2020-21.
- The petitioner has considered the estimated transmission charges to be paid by the Petitioner for FY2019-20 in the tariff order and has accordingly considered the same transmission charges for revised estimates for FY 2020-21, subject to true-up.
- Renewable power purchase has been considered at INR 2.3/unit for Solar and INR 1.73/unit for Non-Solar and REC purchase has been considered at INR 2.51/unit for Solar and INR 2.84/unit for Non-Solar.

The projected power purchase quantum and cost are as illustrated in the following table:

Table 124: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for the FY 2020-21

S. No.	Source	Purchase (MU)	FC (INR Crore)	VC (Rs.Crore)	Total (Rs.Crore)
A	**Central Sector Power Stations**				
I	**NTPC**	**1,171.18**	**107.63**	**281.75**	**389.38**
	RSTPS I & II	490.57	39.11	129.19	168.30
	RSTPS III	137.37	10.57	36.34	46.91
	Talcher Stage-II	433.62	34.06	82.64	116.70
	Simhadri Stage-II	109.61	23.89	33.58	57.47
2	**NLC**	**961.43**	**103.75**	**281.42**	**385.17**
	NLC TPS -II Stage-I	469.57	37.78	133.10	170.88
	NLC TPS-II Stage-II	179.76	15.58	50.94	66.52
	NLC TPS-I (Expn)	88.39	11.32	23.30	34.62
	NLC TPS II (Expn)	44.71	4.58	11.73	16.31
	NTPL	179.00	34.49	62.35	96.84
3	**NPCIL**	**595.71**	**-**	**224.23**	**224.23**
	MAPS	46.75	-	11.68	11.68
	KAPS	263.36	-	101.17	101.17
	KKNPP I	127.13	-	49.58	49.58
	KKNPP II	158.47	-	61.80	61.80
4	**OTHERS**	**414.43**	**48.83**	**124.53**	**173.36**
	NTECL-Vallur	161.43	31.79	55.21	87.00
	New NLC TS-I	253.00	17.04	69.32	86.36
5	**Within State Generation**				
	PPCL	**216.37**	**34.83**	**64.45**	**99.28**

S. No.	Source	Purchase (MU)	FC (INR Crore)	VC (Rs.Crore)	Total (Rs.Crore)
C	**RPO Obligation**	-			**30.27**
					-
	Non-Solar				25.56
	Solar				4.71
D	**REC Certificates**	-			**57.74**
	Solar				31.58
	Non Solar				26.15
E	**OTHER CHARGES**	-	-	**51.99**	**51.99**
	PGCIL Transmission Charges	-		51.99	51.99
F	**Total**	**3,467.86**	**295.04**	**1,028.37**	**1411.41**

Commission's analysis

6.6.1. Power Purchase Quantum

The information regarding share of allocation as submitted by the Petitioner has been considered. The Commission has further considered actual energy availability for the FY 2016-17, FY 2017-18, and FY 2018-19, provisional energy availability for first six months (H1) of the FY 2019-20, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for last 2-5 years for each station to arrive at the final projections of power purchase quantum for the FY 2020-21.

6.6.2. Power Purchase Cost

Variable Charges:

The Variable Cost for existing plants has been computed based upon the average variable cost for the first six months of the FY 2019-20 (Apr'19 to Sep'19). The Commission has considered an escalation of 5% for FY 2020-21 from the estimated variable costs of the FY 2019-20.

For the new NLC TS-I station, variable cost has been considered as at INR 4.24/unit, no escalation has been considered owing to the fact that it is a new plant.

Fixed Charges:

The Fixed Cost for existing plants has been computed based on the latest Tariff Orders issued by the CERC for respective Central Generating Stations. The fixed cost has been apportioned as per PED's share in each station and annual plant availability factor. The plant availability factor has been limited to 85% for plants having higher availability, in line with the norms specified by CERC. The Commission has considered an escalation of 2% for the FY 2020-21 from the estimated fixed costs of the FY 2019-20.

Other Charges:

Other charges have not been considered for the FY 2020-21. The same shall be considered as per actuals during the True-up of the respective year.

RPO Charges:

Renewable power (Solar and Non-solar) purchase has been considered at INR 3.0/unit and REC (Solar and Non-solar) purchase has been considered at INR 1.0/unit. The quantum of REC purchase considered is explained in the subsequent section on Renewable Purchase Obligation (RPO).

Sale of Surplus Power:

The Commission has considered a rate of INR 3.18/unit, based on the average RTC (round the clock) price for Southern regions in 2019.

6.6.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the total capacity allocation of the Petitioner of the transmission network.

The transmission charges are determined based on the average of last three quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) as per Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.

6.6.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for each year of the Control Period have been shown in the following tables:

Table 125: Power Purchase Quantum (MU) and cost (INR Cr) approved for the FY 2020-21

Details of the stations	Ex-Bus Power Purchase (MU)	Power Purchase at State Periphery (MU)	Variable Charges (Rs/kWh)	Annual Variable Charges (INR Cr.)	Annual Fixed charges (INR Cr.)	Total (Rs.Cr.)	Avg. Rate (@ Exbus)
NTPC							
RSTPS Stage I & II	547.72	532.54	2.79	148.70	39.11	187.81	3.43
RSTPS Stage -III	133.14	129.45	2.75	35.62	10.58	46.19	3.47
Talcher Stage- II	452.99	440.43	2.11	92.84	34.06	126.89	2.80
Simhadri Stage- II	94.36	91.75	3.39	31.09	23.89	54.99	5.83
Sub Total-NTPC	**1228.21**	**1194.17**	**2.58**	**308.25**	**107.63**	**415.88**	3.39
NLC							
NLC TPS II Stage I	392.85	381.96	2.77	105.98	38.06	144.04	3.67
NLC TPS II Stage II	136.17	132.39	2.78	36.74	16.29	53.04	3.90
NLC TPS I (Expn)	105.54	102.61	2.54	26.07	12.11	38.18	3.62
NLC TPS II (Expn)	62.34	60.61	2.61	15.79	5.66	21.45	3.44
NTPL	118.31	115.03	3.37	38.76	34.23	72.99	6.17
Sub Total-NLC	**815.21**	**792.61**	**2.82**	**223.35**	**106.36**	**329.71**	4.04
NPCIL							
Madras Atomic Power Station	28.61	27.82	2.76	7.67	0.00	7.67	2.68
Kaiga Stage I & II	257.91	250.76	3.69	92.41	0.00	92.41	3.58
Kundakulum Unit I & II	278.49	270.77	3.87	104.78	0.00	104.78	3.76
Sub Total-NPCIL	**565.01**	549.35	**3.73**	**204.86**	**0.00**	**204.86**	3.63
Others							

Details of the stations	Ex-Bus Power Purchase (MU)	Power Purchase at State Periphery (MU)	Variable Charges (Rs/kWh)	Annual Variable Charges (INR Cr.)	Annual Fixed charges (INR Cr.)	Total (Rs.Cr.)	Avg. Rate (@ Exbus)
TNEB (Pondy)	0.00		0.00	0.00	0.00	0.00	0.00
TNEB (Karaikal)	0.00			0.00	0.00	0.00	0.00
Vallur	120.52	117.18	4.07	117.18	31.79	79.50	6.60
New NLC TS-I	271.51	263.98	4.24	263.98	34.83	146.74	5.40
Sub Total-Others	**392.03**	**381.16**	4.19	381.16	**66.62**	226.23	5.77
State Generation							
PPCL	215.56	215.56	3.23	69.59	33.17	102.77	4.77
Sub Total-State Generation	**215.56**	**215.56**	**3.23**	**69.59**	**33.17**	**102.77**	**4.77**
Open Market	**47.08**	**47.08**	**3.18**	**14.97**		**14.97**	**3.18**
RPO							
Solar				17.12		17.12	0.00
Non Solar				22.45		22.45	0.00
Total				**39.57**		**39.57**	0.00
Total	**3,263.10**	**3179.94**	**3.57**	**1,020.20**	**313.79**	**1,333.99**	**4.15**
Transmission Charges						**79.97**	0.00
Total Cost	**3,263.10**	**3179.94**	**3.57**	**1,039.98**	**313.79**	**1,413.96**	**4.39**

The Commission approves the quantum of power purchase as 3,263.10 MU at the Generator Periphery with a total cost of INR 1,413.96 Cr for the FY 2020-21.

The Average Power Purchase Cost (APPC) for the FY 2020-21 has been determined as provided in the table below. The APPC has been computed at the UT Periphery excluding the transmission charges and cost of purchase of renewable energy. The Petitioner shall use the same for the purpose of compensation/ payment of surplus power at the end of each settlement period in case of Solar Net-metering consumers.

Table 126: Average Power Purchase Cost (APPC) for the FY 2020-21

Particulars	Amount
Total Power Purchase Cost (INR Cr)	1,413.96
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	119.54
Net Power Purchase Cost (INR Cr)	1,294.42
Quantum of Ex-bus Power Purchase (MU)	3,263.10
Quantum of energy at UT Periphery excluding from renewable energy sources (MU)	3,179.94
APPC (INR /kWh)	**4.07**

The Commission approves the Average Power Purchase Cost (APPC) as INR 4.07/ kWh for the FY 2020-21.

6.7. Renewable Purchase Obligation (RPO)

Petitioner's Submission:

The detailed plan submitted by the Petitioner is shown in the following table:

Table 127: RPO Compliance Plan submitted by the Petitioner for the FY 2020-21

S.No	Description	Unit	Ensuing Year (Projections)	
			FY 2020-21	
			Physical	REC
1	Sales Within State	MUs		2,971.07
2	RPO Obligation	%		**14.10%**
	- Solar	%		6.00%
	- Non Solar	%		8.10%
3	RPO Obligation	**MUs**		**418.92**
	- Solar	MUs		178.26
	- Non Solar	MUs		240.66
4	RPO Purchase	**MUs**		**287.67**
	- Solar	MUs	41.25	137.01
	- Non Solar	MUs	90.00	150.66
5	Cumulative RPO Obligation		**473.25**	
	- Solar	MUs	196.09	
	- Non Solar	MUs	277.15	
6	Floor Price of REC Certificates /MWH			
	- Solar	Rs./MWH		2305
	- Non Solar	Rs./MWH		1736
7	Amount for RPO Compliance			
	- Solar	INR Crs	4.71	31.58
	- Non Solar	INR Crs	25.56	26.15
8	**Total (INR Crores)**	**INR Crs**	**30.27**	**57.74**
9	**Excess RPO claimed in ARR**	**INR Crs**		
10	**Net RPO Cost to be claimed in MYT Control Period**	**INR Crs**	**88.00**	

In its quarterly submission to the Commission the Petitioner has submitted a cumulative RPO backlog of 300.39 MUs as on 1st April 2020.

Commission's analysis:

As per Regulation 1, Sub-regulation (1) of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010:

"Each distribution licensee shall purchase electricity (in kWh) from renewable energy sources, at a defined minimum percentage of the total consumption of all the consumers in its area during a year."
The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets. In accordance with the JERC for the State of Goa and

UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's Submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2020-21.

Table 128: Summary of Renewable Purchase Obligation (RPO) (MU)

Sl. No.	Description	Unit	FY 2020-21	
			Physical	REC
1	Sales Within State	MUs	2806.29	
2	RPO Obligation	%	**14.10%**	
	- Solar	%	6.10%	
	- Non Solar	%	8.00%	
3	RPO Obligation for FY 2020-21	MUs	**395.69**	
	- Solar	MUs	171.18	
	- Non Solar	MUs	224.50	
4	RPO Purchase for FY 2020-21	MUs	**0.00**	**395.69**
	- Solar	MUs	0.00	171.18
	- Non Solar	MUs	0.00	224.50
5	Backlog upto FY 2019-20	MUs	**0.00**	**473.24**
	- Solar	MUs	0.00	196.10
	- Non Solar	MUs	0.00	277.15
6	Total Purchase for FY 2020-21	MUs	**0.00**	**395.69**
	- Solar	MUs	0.00	171.18
	- Non Solar	MUs	0.00	224.50
7	Unit Cost	Rs/kWh		**1.00**
	- Solar	Rs/kWh	3.00	1.00
	- Non Solar	Rs/kWh	3.00	1.00
8	Total Cost for FY 2020-21	Rs	**0.00**	**39.57**
	- Solar	Rs	0.00	17.12
	- Non Solar	Rs	0.00	22.45
9	Net shortfall in RPO compliance till FY 2020-21	MUs		**473.24**
	- Solar	MUs		196.10
	- Non Solar	MUs		277.15

The cost of compliance of RPO has been approved at INR 39.57 Cr. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section. Any variation in the actual cost towards the compliance shall be taken up at the time of True-up for FY 2020-21.

The Commission directs the Petitioner to clear the standalone RPO obligations for the FY 2020-21 in FY 2020-21 and further directs the Petitioner to clear cumulative backlog upto FY 2020-21 by FY 2021-22. The Commission suggests the Petitioner to obtain physical power to comply with the RPO obligations. The Commission takes serious note on the Petitioner's non-compliance of its obligations upto FY 2019-20. The Petitioner is directed to provide quarterly status updates (within 10 days of the completion of each quarter in the FY) to the Commission on the progress made with respect to RPO.

The compliance and cost status towards RPO for the FY 2020-21 as approved by the Commission is provided in the following table:

Table 129: Cost towards compliance of Renewable Purchase Obligation for the FY 2020-21

S. No	Description	Physical Power		REC		Total Cost (INR Cr)
		Quantum (MU)	Cost (INR Cr)	Quantum (MU)	Cost (INR Cr)	
1	Solar	-	-	171.18	17.12	17.12
2	Non-solar	-	-	224.50	22.45	22.45
	Total	**-**	**-**	**395.69**	**39.57**	**39.57**

The Commission approves INR 39.57 Cr towards compliance of RPO in the ARR of the FY 2020-21.

6.8. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the following table:

Table 130: Energy Balance submitted by the Petitioner (MU)

S. No.	Particulars	FY 2020-21
A	**ENERGY REQUIREMENT**	
1	Sales within UT (MUs)	2,971.07
2	Sales to Electricity Traders / Power Exchange (MUs)	-
3	Loss (%)	12.00%
4	Loss(MUs)	405.15
5	Sales to common pool consumer/UI(MUs)	-
6	**Energy requirement at periphery(MUs)**	**3376.22**
B	**ENERGY AVAILABILITY**	
1	Gross Energy Purchase(MUs)	3467.86
2	External Loss (MUs)	91.64
	Loss (%)	2.92%
3	**Net Energy Availability(MUs)**	**3376.21**

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra-State Loss as approved above the Energy Balance for each year of the MYT Control Period has been shown in following table:

Table 131: Energy Balance approved by Commission (MU)

Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
ENERGY REQUIREMENT				
Energy sales within the UT	A	**2,703.06**	2,971.07	**2806.29**
Distribution losses				
Distribution losses %	B	11.75%	12.00%	11.75%
Distribution losses MU	C=D-A	359.90	405.15	373.64
Energy required at the UT Periphery	D=A/(1-B)	3,062.96	3376.22	3179.94

Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Availability at the UT Periphery				
Availability from firm sources (PP cost at State Periphery less Open Market purchase) (3179.94-47.08)	E	3,310.27	3376.21	3132.86
Deficit/ (Surplus)	(F=E-D)	**(247.31)**	-	**47.08**

The Commission approves the Total Energy Requirement at the UT Periphery for FY 2020-21 as 3,179.94 MU. The Commission has estimated a deficit of 47.08 MU for FY 2020-21 to be purchased from Open market.

6.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

"51.1 The Operation and Maintenance expenses for the Distribution Wires Business shall be computed in accordance with this Regulation.

51.2 Operation and Maintenance (O&M) expenses shall comprise of the following:

a) Employee expenses - salaries, wages, pension contribution and other employee costs;

b) Administrative and General expenses including insurance charges if any; and

c) Repairs and Maintenance expenses.

51.3 The Distribution Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the transmission Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

51.4 O&M expenses for the nthYear of the Control Period shall be approved based on the formula given below:

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (WPIinflation)

EMPn = (EMPn-1) x (1+Gn) x (CPIinflation)

A&Gn = (A&Gn-1) x (CPIinflation)

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPIinflation – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPIinflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMPn – Employee expenses of the Distribution Licensee for the nth Year;

A&Gn – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&Mn – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GFAn-1 – Gross Fixed Asset of the Licensee for the n-1th Year;

Xn is an efficiency factor for nth Year. Value of Xn shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

Gn is a growth factor for the nthYear. Value of Gn shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

Provided that in case the Distribution Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, O&M Expenses shall be determined on case to case basis.

51.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

51.6 For the purpose of estimation, the same value of factors – CPIinflation and WPIinflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPIinflation and WPIinflation during the truing up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation."

6.9.1. Employee Expenses

Petitioner's Submission

The Petitioner has determined the employee expenses for the FY 2020-21 based on the norms specified in the MYT Regulations, 2018. The actual employee costs for FY 2018-19 have been taken as the base year. The base year figure has been inflated with the latest CPI inflation factor available at 5.45% for FY 2018-19. The following table provides the employee expenses projected for FY 2020-21 along with various parameter(s) considered.

Table 132: Employee Expenses submitted by Petitioner

Particular	Unit	FY 2020-21
Employee expenses for FY 2019-20		**116.33**
G_n	%	-
CPI Inflation	%	5.45%
Employee Expenses	INR Cr	**122.67**

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts."

The Commission has considered the actual audited employee expenses from FY 2015-16 to FY 2017-18 to arrive at the Base Year estimates i.e. for the FY 2018-19. The average of these three years i.e. FY 2015-16 to FY 2017-18 has been considered as employee expenses for the FY 2016-17. This has been escalated with the average CPI of three previous years (FY 2014-15 to FY 2016-17) to arrive at the employee expenses for FY 2017-18. The resultant employee expenses of the FY 2017-18 have been escalated with average CPI of three previous years (FY 2015-16 to FY 2017-18) to arrive at the employee expenses for Base Year i.e. FY 2018-19. The resultant Base Year expenses have been escalated by Growth Rate determined based on the manpower plan as submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2019-20 and further for FY 2020-21.

To estimate the impact of the 7th Pay Commission the actual expenses as per the final accounts for FY 2018-19 have been considered and the same have been inflated with the average CPI of three previous (FY 2015-16 to FY 2017-18) to arrive upon the impact for 7th Pay Commission for FY 2019-20 and further for FY 2020-21

The CPI Inflation has been computed as follows:

Table 133: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index
2014-15	250.83	6.29%
2015-16	265.00	5.65%
2016-17	275.92	4.12%
2017-18	284.42	3.08%
2018-19	299.92	5.45%

Accordingly, the employee expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 134: Employee Expenses computation (In INR Cr)

#	Particulars	As per Audited Accounts			RE		Now Approved	
		FY 2015-16	FY 2016-17	FY 2017-18	FY 2017-18	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	G_n[9] (%)						-1.34%	-3.00%
2	CPI (%) (3 previous years' avg.)				5.35%	4.28%	4.22%	4.22%
3	Actual Employee Expenses (excluding 7th Pay Impact)	77.66	77.72	87.94				
4	Average (FY 16-FY 18)	81.11 (Avg.)						
5	Employee Expenses with inflation and growth factor				85.45	89.11	91.62	92.62
6	Impact of 7th Pay Commission					19.52[10]	20.07	20.29
7	**Total Employee Expenses**					**108.63**	**111.69**	**112.91**

[9] G_n – Growth in number of employees compared to the previous FY; As submitted by the Petitioner.
[10] As per actuals submitted by the Petitioner.

Table 135 Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	107.39	122.67	112.91

The Commission approves Employee Expenses of INR 112.91 Cr for FY 2020-21.

6.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has considered the Administrative & General Expenses of INR 13.38 Cr as approved in the Tariff Order for the 2nd MYT Control Period vide Order dated 20th May 2019.

Commission's analysis

The Commission has considered the actual audited A&G expenses from FY 2015-16 to FY 2017-18 to arrive at the Base Year estimates i.e. for the FY 2018-19. The average of these three years i.e. FY 2015-16 to FY 2017-18 has been considered as A&G for the FY 2016-17. This has been escalated with the average CPI of three previous years (FY 2014-15 to FY 2016-17) to arrive at the A&G expenses for FY 2017-18. The resultant A&G expenses of the FY 2017-18 have been escalated with average CPI of three previous years (FY 2015-16 to FY 2017-18) to arrive at the A&G expenses for Base Year i.e. FY 2018-19. The resultant Base Year expenses have been escalated by the average CPI Inflation of the last three years to arrive upon the A&G expenses of FY 2019-20 and further for FY 2020-21.

The A&G expenses approved by the Commission in the FY 2020-21 have been provided in the following table:

Table 136: A&G Expenses computation (In INR Cr)

S. No	Particulars	As per Audited Accounts			RE		Now Approved	
		FY 2015-16	FY 2016-17	FY 2017-18	FY 2017-18	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	CPI Inflation (%) (3 previous years' avg.)	-	-	4.12%	5.3%	4.28%	4.22%	4.22%
2	A&G Expenses	**10.05**	**10.54**	**12.30**	**11.41**	**11.90**	**12.40**	**12.93**
		10.83 (avg.)						

Table 137 Administrative & General (A&G) expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	A&G expenses	13.38	13.38	12.93

The Commission approves the Administrative & General (A&G) expenses of INR 12.93 Cr for FY 2020-21.

6.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has considered the Repair & Maintenance Expenses of INR 12.64 Cr as approved in the Tariff Order for the 2nd MYT Control Period vide Order dated 20th May 2019.

Commission's analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2016-17, FY 2017-18 and FY 2018-19 (last three available audited accounts) and averaged for three years. The 'K' factor has been computed as follows:

Table 138: Computation of 'K' factor (In INR Cr)

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	9.38	9.90	4.47
2	Opening GFA (GFA_{n-1})	660.92	676.17	690.27
3	K Factor (%)	1.42%	1.46%	0.65%
	K Factor Approved by the Commission (Average of 3 years) (%)	**1.18%**		

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for the FY 2020-21.

The WPI Inflation has been computed as follows:

Table 139: Computation of WPI Inflation (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2016-17	1.73%	**2.99%**
2017-18	2.92%	
2018-19	4.32%	

The R&M expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 140: R&M Expenses computation (In INR Cr)

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA_{n-1})	882.77
2	K factor approved (K) (%)	1.18%
3	Avg. WPI Inflation (%)	2.99%
4	**R&M Expenses = $K \times (GFA_{n-1}) \times (1+WPI_{inflation})$**	**10.70**

Table 141 Repair & Maintenance (R&M) expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	R&M Expenses	12.64	12.64	10.70

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.70 Cr for the FY 2020-21

6.9.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the total O&M expenses approved by the Commission for the FY 2020-21:

Table 142: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	107.39	122.67	112.91
2	Administrative & General Expenses	13.38	13.38	12.93
3	Repair & Maintenance Expenses	12.64	12.64	10.70
4	**Total Operation & Maintenance Expenses**	**133.41**	**148.69**	**136.54**

The Commission approves Operation & Maintenance (O&M) expenses of INR 136.54 Cr in FY 2020-21

6.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's Submission

The Petitioner has submitted that as per the MYT Regulations,2018 it has arrived at fixed assets balance after reduction of accumulated depreciation as on 1st April 2019. The same block is carried forward for existing assets and depreciation is charged as per new depreciation rate specified in the MYT regulations 2018. Further, the assets which are newly commissioned or capitalised, for which depreciation is calculated at new rate mentioned in the Regulations.

Commission's analysis:

The Commission has considered the same Capital Expenditure and Capitalisation as approved in the MYT Order for the 2nd Control Period. Further, the actual capital expenditure and capitalisation for the FY 2020-21 shall be considered during the True-up of the FY 2020-21. The following table provides the summary of capital expenditure and capitalization now approved by the Commission vis-à-vis the capital expenditure and capitalisation approved by the Commission in the Business Plan Order (a more detailed description of the capital expenditure plan is given in the Business Plan Order):

Table 143: Capital Expenditure and Capitalization now approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	242.70	242.70	242.70
2	Capitalization	104.56	104.56	104.56

The Commission approves the capital expenditure of INR 242.70 Cr and capitalization of INR 104.56 Cr for the FY 2020-21.

6.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the capital structure based on the funding plan approved by the Commission in the Business Plan Order.

Commission's analysis

Regulation 26 of the MYT Regulations, 2018 specifies the following:

"26. Debt to Equity Ratio

26.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2018 shall be considered:

Provided that in case of retirement or replacement or De-capitalization 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-capitalization 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.

26.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 23, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme, shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilized for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

26.3 Any expenditure incurred or projected to be incurred on or after April 1, 2019, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in this Regulation."

The Commission has determined the capital structure for the FY 2020-21 based on closing capital structure as approved in the True-up for FY 2018-19 and the APR of FY 2019-20.

Therefore, in accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for the FY 2020-21 as follows:

Table 144: GFA addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	878.22	848.65	882.77
2	Addition During the FY	104.56	104.56	104.56
3	Adjustment/Retirement During the FY	-		-
4	Closing Gross Fixed Assets	982.78	953.21	987.33

Table 145: Loan addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Loan	143.14	143.69	151.11
2	Additions during the year	99.82	73.19	73.19
3	Less: Normative Repayment equivalent to Depreciation	33.93	33.08	34.32
4	Closing Loan	209.03	183.80	189.98

Table 146: Normative Equity addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	253.68	254.6	264.83
2	Additions during the year	4.74	31.37	31.37
3	Closing Equity	258.42	286.00	296.20

6.12. Depreciation

Petitioner's Submission

Total depreciation is calculated asset block wise on the total GFA. However, since depreciation on assets created through grants, electricity duty fund or subsidies are not allowed as per regulations. Hence Depreciation for the GFA excluding grant and electricity duty fund arrived in the proportion of total GFA and GFA excluding grant and electricity duty fund. The Depreciation rates have been considered as per the depreciation schedule specified in the MYT Regulations, 2018.

S. No	Particulars	FY 2020-21
1	Opening Value of Assets	848.65
2	Additions during the year	104.56
3	Assets disposed/sold off	0.00
4	GFA at the end of the year	953.21
5	**Net Depreciation**	**33.08**

Commission's analysis

Regulation 30 of the MYT Regulations, 2018 stipulates the following:

"30. Depreciation

30.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

30.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

30.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

30.4 In case of existing assets, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.

30.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

30.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

30.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of the Regulations.

30.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

30.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

30.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan."

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in MYT Regulations, 2018, provided in the following table:

Table 147: Depreciation Rate (%)

Description	Rate
Land & Land Rights	0.00%
Buildings	1.80%
Plant & Machinery	3.60%
Transformer	3.60%
Lines & Cables (HT & LT)	3.60%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Office Equipment	6.00%
IT Equipment	6.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%
SCADA Building	1.80%

The closing GFA of the FY 2019-20 as approved in the APR has been considered as opening GFA of the FY 2020-21. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. The amount of Grants received and utilized and Cumulative depreciation upto the respective years has not been deducted from the closing GFA of due to unavailability of requisite data. Accordingly, the Commission shall consider the same during the True-up of the respective year.

The following table provides the calculation of depreciation during the FY 2020-21.

Table 148: Depreciation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA	871.68	848.65	882.77
2	Addition During the FY	104.56	104.56	104.56
3	Less: Grant Provided by GoI	0.00	0.00	0.00
4	Closing GFA	976.24	953.21	987.33
5	Average GFA	923.96	900.93	935.05
6	Weighted Average Rate of Depreciation (%)	3.67%	3.67%	3.67%
7	**Depreciation**	**33.93**	**33.08**	**34.32**

The Commission approves a depreciation of INR 34.32 Cr for the FY 2020-21.

6.13. Interest on Loan

Petitioner's Submission

The Petitioner has considered the actual proportion of loan from GFA additions (net of Grants from GoI) to arrive at the loan addition for FY 2020-21. Repayment of the loan has been considered equivalent to the depreciation for the respective years in line with the MYT Regulations, 2018. The interest rate has been calculated based on the actual weighted average rates of loans from PFC, JICA and REC to project the interest on normative loans for the Control Period.

The following table provides the Interest on Loan projected for the FY 2020-21.

Table 149: Interest on Loan submitted by the Petitioner (In INR Cr)

Sr. No.	Particulars	FY 2020-21
1	Opening Normative Loan	143.69
2	Add: Normative Loan during the Year	73.19
3	Less: Normative Repayment	33.08
4	**Closing Normative Loan**	183.80
4	Average Normative Loan	**163.75**
5	Rate of Interest (@SBAR rate)	13.70%
6	**Interest on Normative Loan**	**22.43**
7	Other Finance Charges	-
8	**Total Interest & Finance Charges**	**22.43**

Commission's analysis:

Regulation 28 of the MYT Regulations, 2018 stipulates the following:

"28. Interest on Loan

28.1 The loans arrived at in the manner indicated in Regulation 26 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalization or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

28.2 The normative loan outstanding as on April 1, 2019, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2018, from the gross normative loan.

28.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 30.

28.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

28.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalization approved by the Commission for the Year.

28.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

28.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

28.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

28.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

28.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries and the Transmission Licensee or the Distribution Licensee and the Consumers of Distribution Licensee.

28.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, in absence of detailed data with respect to the actual loan portfolio, the Commission has considered the SBI 1 Year MCLR rate[11] plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018.

As per the MYT Regulations, 2018, if the equity deployed is more than 30% of the capital cost, then equity in excess of 30% is considered as normative loan. The Interest on Loan has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved in the APR for the FY 2019-20.

[11] SBI 1 Year MCLR rate as on 10th Feb 2020

The following table provides the Interest on Loan approved by the Commission.

Table 150: Interest on loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	160.60	143.69	151.11
2	Add: Normative Loan During the year	97.41	73.19	73.19
3	Less: Normative Repayment equal to Depreciation	17.17	33.08	34.32
4	Closing Normative Loan	240.84	183.80	189.98
5	Average Normative Loan	200.72	163.75	170.54
6	Rate of Interest (%)	9.23%	13.70%	8.85%
	Interest on Loan	**18.53**	**22.43**	**15.09**

The Commission approves Interest on Loan as INR 15.09 Cr for the FY 2020-21.

6.14. Return on Equity (RoE)

Petitioner's Submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations, 2018, wherein RoE is computed on 30% of the capital base if the actual equity deployed is more than 30% and the actual equity base if the equity deployed is less than 30%. Accordingly, the Petitioner has computed the Return on Equity at 16% on post-tax basis. The following table summarizes Petitioner's Submission:

S. No.	Particulars	FY 2020-21
1	Opening Equity Amount	254.6
2	Equity Addition during year (30% of Capitalization)	31.37
3	Closing Equity Amount	286.0
4	Average Equity Amount	270.3
5	Average Equity-Wires Business	243.3
6	Average Equity (Retail Supply Business)	27.03
7	Return on Equity for Wires Business (%)	15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%
9	**Return on Equity for Wires Business**	**37.70**
10	**Return on Equity for Retail Supply Business**	**4.32**
11	**Total Return on Equity**	**42.03**

Commission's analysis:

Regulations 27.2 and 27.3 of the MYT Regulations, 2018 stipulate the following:

"27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum."

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a post-tax rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a post-tax rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up of the respective years. The following table provides the total return on equity approved for FY 2020-21.

Table 151: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	A	253.68	254.6	264.83
2	Additions on account of new capitalisation	B	4.74	31.37	31.37
3	Closing Equity	C	258.42	286.0	296.20
4	Average Equity	D = (A+B)/2	256.05	270.3	280.51
5	Average Equity (Wires Business)	E = D*90%	230.45	243.3	252.46
6	Average Equity (Retail Supply Business) Business)	F=D*10%	25.61	27.03	28.05
7	Return on Equity for Wires Business (%)	G	15.50%	15.50%	15.50%
8	Return on Equity for Retail Supply Business (%)	H	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	I=G*E	35.72	37.70	39.13
10	Return on Equity for Retail Supply Business	J=H*F	4.10	4.32	4.49
11	**Total Return on Equity**	**K=I+J**	**39.82**	**42.03**	**43.62**

The Commission approves Return on Equity of INR 43.62 Cr for the FY 2020-21.

6.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner has considered the provisional actual addition of consumers' security deposit for the FY 2019-20 and has escalated it by 5% to arrive at the projected addition of security deposit for the FY 2020-21 The following table provides the calculation of interest on consumer security deposits proposed for FY 2020-21.

Table 152: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr)

Particular	FY 2020-21
Opening Consumer Security Deposit	240.11
Net Addition During the year	22.83
Closing Consumer Security Deposit	262.94
Average Security Deposit	251.52
Bank Rate (%)	6.25%
Interest on Consumer Security Deposit	**15.72**
Interest on Consumer Security Deposit to be Paid	**5.0**

Commission's analysis:

Regulation 28.11 of the MYT Regulations, 2018 stipulates the following:

" Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. Net addition during the year has been considered for based on the provisional actual addition of security deposit for the FY 2019-20, with 5% escalation for FY 2020-21, similar to the methodology considered by the Petitioner.

The following table provides the calculation of interest on consumer security deposits approved for FY 2020-21.

Table 153: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	242.83	240.11	215.20
2	Net addition during the year	23.92	22.83	22.83
3	Closing Security Deposit	266.75	262.94	238.03
4	Average Security Deposit	254.79	251.52	226.61
5	Rate of Interest (%)[12]	8.70%	6.25%	5.40%
6	**Interest on Security Deposit**	**22.17**	**15.72**	**12.24**

The Commission approves Interest on Security Deposit as INR 12.24 Cr for the FY 2020-21.

6.16. Interest on Working Capital

Petitioner's Submission

The interest on working capital has been calculated based on the normative principles outlined in the MYT Regulations, 2018.

The working capital requirement for the Control Period has been computed considering the following

- Receivable of two months of billing
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

The SBI 1 year MCLR as on 1st April 2019 plus 200 basis points i.e. 10.55% (8.55% + 2%) has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for FY 2020-21.

[12] Bank Rate as on 1st April 2018

Table 154: Interest on Working Capital submitted by the Petitioner (In INR Cr)

S. No.	Particulars	FY 2020-21
1	Two Months Receivable	275.57
2	O&M Expense - 1 month	12.39
3	Maintenance Spare @ 40% of R&M Exp - one month	0.42
4	Less : Amount held as Security Deposit	251.52
5	Total	36.86
6	Interest Rate	10.55%
7	**Interest on Working Capital**	**3.89**

Commission's analysis:

Regulation 52 of the MYT Regulations, 2018 stipulates the following:

"52. Norms of Working Capital for Distribution Wires Business

52.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:

(a) O&M Expenses for one (1) month; plus

(b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus

(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution

wires at the prevailing tariff;

Less:

(d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from distribution system users except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."

Further, Regulation 31.3 of the MYT Regulation, 2018 stipulates the following:

31.3 The interest on working capital shall be a payable on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures. 31.4 The rate of interest on working capital shall be equal one (1)Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points.

The Commission has computed the Interest on Working Capital for FY 2020-21 in accordance with the MYT Regulation, 2018. The interest rate has been considered as 10.55% (1 year MCLR as on 1st April 2019 i.e. 8.55% + 200 basis points). The computation of interest on working capital is shown in the following table:

Table 155: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	11.12	12.39	11.38
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.42	0.42	0.36
3	Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff	255.13	275.57	275.53
4	Less: Amount held as security deposits	219.79	251.52	226.61
5	Net Working Capital	46.88	36.86	60.66
6	Rate of Interest (%)	10.15%	10.55%	10.55%
7	**Interest on Working Capital**	**4.76**	**3.89**	**6.40**

The Commission approves the Interest on Working Capital as INR 6.40 Cr for the FY 2020-21.

6.17. Income Tax

Petitioner's Submission

The Petitioner has not made any submission has been made in this regard.

Commission's analysis:

Regulation 32 of MYT Regulations, 2018 stipulates the following:

"32. Tax on Income

32.1 The treatment of tax on income for a Transmission Licensee shall be in accordance with the prevalent CERC Tariff Regulations.

32.2 The Commission in its MYT Order shall provisionally approve Income Tax payable for each Year of the Control Period, if any, based on the actual income tax paid, including cess and surcharge on the same, if any, as per latest audited accounts available for the Distribution Licensee, subject to prudence check.

32.3 Variation between Income Tax actually paid, including cess and surcharge on the same, if any, and approved, if any, on the income stream of the Licensed business of the Distribution Licensees shall be reimbursed to/recovered from the Distribution Licensees, based on the documentary evidence submitted at the time of truing up of each Year of the Control Period, subject to prudence check.

32.4 Under-recovery or over-recovery of any amount from the Consumers on account of such tax having been passed on to them shall be adjusted every Year on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Distribution Licensee may include this variation in its truing up Petition:

Provided that tax on any income stream other than the core business shall not be a pass-through component in tariff and tax on such other income shall be borne by the Distribution Licensee."

Since the Petitioner has paid no Income tax in the previous years, no income tax liability is computed for the FY 2020-21 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 156: Income Tax approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	0.00	0.00

6.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not proposed any provision for bad and doubtful debts during the FY 2020-21.

Commission's analysis

Regulation 62 of the MYT Regulations, 2018 stipulates the following:

"62. Provision for bad and doubtful debts

62.1 The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of write off of bad debts in the previous years, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to prudence check:

Provided also that the provision for bad and doubtful debts shall be limited to 1% of the annual Revenue Requirement of the Distribution Licensee:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised."

The Commission also has not considered any Provision for Bad & Doubtful Debts for the FY 2020-21. The same shall be accounted for as per actuals during the True-up of respective years.

6.19. Non-Tariff Income

Petitioner's Submission

The Petitioner has estimated the non-tariff income for FY 2020-21 as shown in the following table:

Table 157: Non-Tariff Income submitted by the Petitioner (In INR Cr)

Particular	FY 2020-21
Non-Tariff Income	13.12

Commission's analysis:

Regulation 64 of the MYT Regulations, 2018 stipulates the following:

"64. Non-Tariff Income

64.1 The amount of Non-Tariff Income relating to the retail supply of electricity as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of tariff.

64.2 The Non-Tariff Income shall inter-alia include:
(a) Income from rent of land or buildings;
(b) Income from sale of scrap;
(c) Income from statutory investments;
(d) Interest on advances to suppliers/contractors;
(e) Rental from staff quarters;
(f) Rental from contractors;
(g) Income from hire charges from contactors and others;
(h) Income from advertisements, etc.;
(i) Meter/metering equipment/service line rentals;
(j) Service charges;
(k) Consumer charges;
(l) Recovery for theft and pilferage of energy;
(m) Rebate availed on account of timely payment of bills;
(n) Miscellaneous receipts;
(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
(p) Prior period income, etc.:

Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee shall not be included in Non-Tariff Income:

Provided further that any income earned by a Distribution Licensee by sale of power to other Distribution Licensees or to Consumers as per Section 49 of the Act using the existing power purchase agreements or bulk supply capacity allocated to the Distribution Licensee's Area of Supply shall be reduced from the Aggregate Revenue Requirement of the Distribution Licensee for the purpose of determination of tariff. Such reduction shall be carried out in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

The Petitioner has submitted the similar NTI for FY 2018-19, FY 2019-20, and FY 2020-21. The Commission considers the same NTI as approved in the APR for FY 2019-20 and True-up for FY 2018-19. The same shall be Trued-up on actual basis.

The NTI approved for the FY 2020-21 has been shown in the following table:

Table 158: Non -tariff Income approved by Commission (In INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Non- Tariff Income	8.59	13.12	8.96

The Commission approves Non-Tariff Income of INR 8.96 Cr for the FY 2020-21.

6.20. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement for each year as shown in the following table:

Table 159: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)

S. No.	Particulars	FY 2020-21
1	Cost of power purchase	1,411.41
2	Employee Costs	122.67
3	R&M Expenses	12.64
4	Administration and General Expenses	13.38
5	Depreciation	33.08
6	Interest & Finance Charges	22.43
7	Interest on Working Capital	3.89
8	Return on Equity	42.03
9	Provision for Bad debt	0.00
10	Interest on consumer security deposit	5.00
11	**Total Revenue Requirement**	**1,666.54**
12	Less: Non- Tariff Income	13.12
13	**Net Aggregate Revenue Requirement**	**1,653.42**

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for FY 2020-21 is approved as provided in the following table:

Table 160: Aggregate Revenue Requirement approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission	Reference
1	Power Purchase Cost	1,294.10	1,411.41	1,413.96	Table 125
2	Employee Costs	120.47	122.67	112.91	Table 134
3	Administration and General Expenses	18.42	13.38	12.93	Table 136
4	R&M Expenses	13.53	12.64	10.70	Table 140
5	Depreciation	17.17	33.08	34.32	Table 148
6	Interest on loan	18.53	22.43	15.09	Table 150
7	Return on Equity	40.21	42.03	43.62	Table 151
8	Interest on Security Deposit	22.17	5.00	12.24	Table 153
9	Interest on Working Capital	1.48	3.89	6.40	Table 155
10	Income Tax	0	0	0.00	-
11	Provision for Bad Debt	0	0	0.00	-
12	**Total Revenue Requirement**	**1,546.09**	**1,666.54**	**1,662.16**	
13	Less: Non-Tariff Income	8.59	13.12	8.96	Table 158
14	**Net Revenue Requirement**	**1,537.50**	**1,653.42**	**1,653.21**	

The Commission approves net ARR of INR 1,653.21 Cr for the FY 2020-21.

6.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 1674.39 Cr (including Regulatory surcharge) for the FY 2020-21 based on the projected energy sales, connected load and number of consumers.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not considered the revenue from Regulatory Surcharge along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for the FY 2020-21. The Commission has considered suitable assumptions wherever necessary. The revenue from energy charges based on existing tariff as computed by the Commission for the FY 2020-21 has been shown in the following table:

Table 161 Revenue from Energy Charges from existing retail tariff determined by Commission (In INR Cr)

S. No.	Consumer Category	Sales (MU) (A)	Approved Tariff		Energy Charges (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	Energy Charge (Rs/kWh) (C)	
1	**DOMESTIC**	**761.79**			**226.13**
	0-100 units	313.47	INR 40/connection/ month	1.50	47.02
	101-200 units	190.80	INR 40/connection/ month	2.50	47.70
	201-300 units	102.43	INR 40/connection/ month	4.35	44.56
	Above 300 units	155.09	INR 40/connection/ month	5.60	86.85
2	**HUT SERVICES/ OHOB**	**10.24**	INR 35/connection/ month	-	-
3	**COMMERCIAL**	**227.11**			**149.76**
	0-100 units	59.94	INR 120/connection/ month	5.50	32.97
	101-250 units	50.92		6.50	33.10
	Above 250 units	116.25		7.20	83.70
4	**AGRICULTURE SERVICES**	**61.04**			-
(i)	Agriculture	61.04			-
	Small Farmers	8.21	INR 10/HP/month	-	-
	Other farmers	52.83	INR 45/HP/month	-	-
(ii)	Cottage Industries				-
	0-100 units		INR 40/connection/ month	1.50	-
	101-200		INR 40/connection/ month	2.50	-
	201-300 units		INR 40/connection/ month	4.35	-
	Above 300 units		INR 40/connection/ month	5.60	-

S. No.	**Consumer Category**	**Sales** (MU) (A)	**Approved Tariff**		**Energy Charges** (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	**Energy Charge** (Rs/kWh) (C)	
5	**PUBLIC LIGHTING**	**28.69**	INR 100/pole/ month	6.75	**19.36**
6	**LT INDUSTRIAL & WATER WORKS**	**166.04**			**99.58**
(i)	LT Industrial	129.62	INR 120 /connection/ month	5.80	75.18
(ii)	Water Tanks	36.41	INR 140/connection/ month	**6.70**	24.40
7	**HIGH TENSION-I**	**1,029.51**			**552.11**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	941.56	INR 400 per kVA per month	5.35	503.73
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	87.95	INR 400 per kVA per month	5.50	48.37
8	**HIGH TENSION-II**	**71.77**	INR 450 per kVA per month	6.50	**46.65**
9	**HIGH TENSION-III**	**441.14**	INR 450 per kVA per month	5.10	**224.98**
10	**HOARDINGS/SIGNBOARDS**	**-**	INR 120 per kVA per month or part thereof	8.00	**-**
11	**TEMPORARY**	**8.96**			**8.74**
	TOTAL	**2,806.29**			**1,327.31**

The total revenue from existing tariff as computed by the Commission for the FY 2020-21 has been shown in the following table:

Table 162: Revenue at existing tariff computed by the Commission for the FY 2020-21 (In INR Cr)

S. No.	**Consumer Category**	**Sales** (MU)	**Energy Charges** (INR Cr.)	**Fixed charges** (INR Cr.)	**Total** (INR Cr.)	**ABR** (Rs./unit)
1	**DOMESTIC**	**761.79**	**226.13**	**16.84**	**242.97**	**3.19**
	0-100 units	313.47	47.02	6.61	53.63	1.71
	101-200 units	190.80	47.70	4.93	52.63	2.76
	201-300 units	102.43	44.56	2.63	47.19	4.61
	Above 300 units	155.09	86.85	2.67	89.52	5.77
2	**HUT SERVICES/ OHOB**	**10.24**	**-**	**1.49**	**1.49**	**1.46**
3	**COMMERCIAL**	**227.11**	**149.76**	**8.27**	**158.03**	**6.96**
	0-100 units	59.94	32.97	3.36	36.33	6.06

S. No.	Consumer Category	Sales (MU)	Energy Charges (INR Cr.)	Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (Rs./unit)
	101-250 units	50.92	33.10	1.37	34.47	6.77
	Above 250 units	116.25	83.70	3.53	87.23	7.50
4	**AGRICULTURE SERVICES**	**61.04**	**-**	**2.24**	**2.24**	**0.37**
(i)	Agriculture	61.04	-	2.24	2.24	0.37
	Small Farmers	8.21	-	0.05	0.05	0.06
	Other farmers	52.83	-	2.19	2.19	0.42
(ii)	Cottage Industries		-	-	-	-
	0-100 units		-	-	-	-
	101-200		-	-	-	-
	201-300 units		-	-	-	-
	Above 300 units		-	-	-	-
5	**PUBLIC LIGHTING**	**28.69**	**19.36**	**6.10**	**25.47**	**8.88**
6	**LT INDUSTRIAL & WATER WORKS**	**166.04**	**99.58**	**0.98**	**100.56**	**6.06**
(i)	LT Industrial	129.62	75.18	0.96	76.14	5.87
(ii)	Water Tanks	36.41	24.40	0.02	24.42	6.71
7	**HIGH TENSION-I**	**1,029.51**	**552.11**	**149.80**	**701.91**	**6.82**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	941.56	503.73	136.38	640.12	6.80
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	87.95	48.37	13.42	61.79	7.03
8	**HIGH TENSION-II**	**71.77**	**46.65**	**17.02**	**63.67**	**8.87**
9	**HIGH TENSION-III**	**441.14**	**224.98**	**61.22**	**286.20**	**6.49**
10	**HOARDINGS/SIGNBOARDS**	**-**	**-**	**-**	**-**	**-**
11	**TEMPORARY**	**8.96**	**8.74**	**-**	**8.74**	**9.75**
	TOTAL	**2,806.29**	**1,327.31**	**263.96**	**1,591.27**	**5.67**

Fixed Charges are computed per annum based on the connected load, consumers, and horsepower as applicable.

The Commission has determined revenue from sale of power at existing tariff as INR 1,591.27 Cr in the FY 2020-21.

6.22. Standalone Revenue Gap/ Surplus for FY 2020-21

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 43.37 Cr (excluding revenue from Regulatory Surcharge) for the FY 2020-21.

Commission's analysis

The Commission based on the approved ARR and existing retail tariff (excluding Regulatory Surcharge) has derived the following Revenue Gap/Surplus:

Table 163: Standalone Revenue Gap/ Surplus approved at existing tariff (excluding Regulatory Surcharge) for the FY 2020-21 (In INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	1,653.42	1,653.21
2	Revenue from sale of power	1,610.05	1,591.27
	Revenue Gap/(Surplus)	**43.37**	**61.93**

The standalone revenue gap at existing retail tariff is INR 61.93 Cr for the FY 2020-21 (excluding Regulatory Surcharge). This gap has been considered while determining the retail tariff for the FY 2020-21, as discussed in the subsequent Chapter.

7. Chapter 7: Tariff Principles and Design

7.1. Overall Approach

The Commission while designing retail tariffs for FY 2020-21 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration PED's submissions as well as the public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. Since the majority of the energy sales within PED's jurisdiction is of industrial nature, the Commission has attempted to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society.

The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost to service a category of consumer in accordance with the provisions of the Act. Accordingly, the Commission has approved relatively higher percentage increase in tariff for the cross-subsidized categories than the cross-subsidizing categories.

7.2. Applicable Regulations

Regulation 67 of the MYT Regulations, 2018 states the following:

"67.1 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 and any other factor as considered appropriate by the Commission.

67.2 The Commission shall endeavour to determine cost of supply for each category/ sub-category of Consumers.

67.3 The Commission shall endeavour to reduce gradually the cross-subsidy between Consumer categories with respect to the cost of supply in accordance with the provisions of the Act.

67.4 The tariff proposal by Licensee and the tariff determination by the Commission shall be based on the following principles:

(a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.

(b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;

(c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of supply for respective categories of Consumers;

(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;

(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers."

7.3. Standalone and Consolidated Revenue Gap/ Surplus at existing tariff

Petitioner's Submission

The Petitioner has proposed a standalone revenue gap of INR 43.37 Cr for FY 2020-21 and a consolidated revenue gap of INR 252.28 Cr till FY 2020-21. The standalone and consolidated revenue gap as submitted by the Petitioner has been tabulated below:

Table 164: Standalone Revenue Gap/ Surplus submitted by Petitioner (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	1,341.53	1,516.03	1,590.50	1,653.42
Revenue from Retail Sales at Existing Tariff inclusive of Regulatory Surcharge	1,311.98	1,443.18	1,600.24	1,610.05*
Standalone Gap /(Surplus) for the year	**29.55**	**72.85**	**(9.74)**	**43.37**

**revenue for FY 2020-21 is exclusive of Regulatory Surcharge*

Table 165: Consolidated Revenue Gap/ Surplus submitted by Petitioner (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap /(Surplus)	94.05	132.31	218.65	208.91
Add: Gap/(Surplus)	29.55	72.85	(9.74)	43.37
Closing Gap /(Surplus)	123.60	205.15	208.91	252.28
Average Gap / (Surplus)	108.82	168.73	213.78	230.59
Carrying Cost	8.71	13.50	-	-
Final Closing Gap/ (Surplus)	**132.31**	**218.65**	**208.91**	**252.28**
			4% surcharge for FY 2020-21	**64.51**
			Closing gap (after considering surcharge)	**187.76**

Commission's analysis

The Commission notices that the Petitioner has not taken any long term loan or working capital loan. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. The Commission for the purpose of calculation of the cumulative gap has considered the carrying cost @ 8.00% till FY 2018-19 and at SBI 1 year MCLR + 1% for FY 2019-20 and FY 2020-21 which is the opportunity cost for the Petitioner.

The Commission, in the Tariff Order for FY 2018-19 had approved a revenue gap of INR 94.05 Cr till 31st March 2017. Taking into account the previous gap, the Commission determines the standalone and consolidated revenue gap/ surplus at the end of FY 2020-21 as shown below:

Table 166: Standalone Revenue Gap/ Surplus determined by Commission (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	1,308.11	1,483.17	1,523.62	1,653.21
Revenue from Retail Sales at Existing Tariff inclusive of Regulatory Surcharge	1,311.97	1,443.18	1,608.83	1,591.27*
Standalone Gap /(Surplus) for the year	(3.85)	39.99	(85.21)	61.93
Reference	Table 44	Table 78	Table 114	Table 163

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21

**revenue for FY 2020-21 is exclusive of Regulatory Surcharge*

Table 167: Consolidated Revenue Gap/ Surplus determined by Commission at existing tariff (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap/(Surplus)	94.05	97.57	146.96	71.72
Additional Standalone Gap/(Surplus)	(3.85)	39.99	(23.33)	61.93
Regulatory Surcharge	included above	included above	61.88	63.65
Closing Gap/(Surplus)	90.20	137.55	61.75	70.00
Average Gap/(Surplus)	92.12	117.56	104.35	70.86
Rate of Interest	8.00%	8.00%	9.55%	8.85%
Carrying cost	7.37	9.40	9.97	6.27
Final Closing Gap/ (Surplus)	**97.57**	**146.96**	**71.72**	**76.27**

The Commission determines a consolidated revenue gap of INR 76.27 Cr till FY 2020-21 at existing tariff considering continuation of Regulatory Surcharge of 4%.

7.4. Treatment of the consolidated Gap/ Surplus and Tariff Design

As derived from above, the resultant consolidated revenue gap till the end of FY 2020-21 is INR 76.27 Cr, signifying that the revenue from existing tariff is not commensurate with the costs incurred by the Petitioner. In this present situation, in order to cover this revenue deficit and to be financially sustainable, the retail consumer tariffs demand a tariff increase. However, the revenue gap being substantial, recovering this entirely from increase in consumer tariffs may lead to a tariff shock. Hence, the Commission proposes to recover a certain proportion of this gap by continuing the Regulatory Surcharge imposed in the Tariff Order of FY 2017-18 and the remaining through a marginal increase in Retail Tariff. The individual approach adopted and the applicability of the same has been discussed in the following sections.

7.4.1. Tariff Proposal

Petitioner's Submission

In order to bridge the gap of INR 252.28 Cr, the Petitioner has not proposed any increase in tariff. Further, the Petitioner has requested to continue the Regulatory surcharge at 4% imposed in the previous Tariff Order for FY 2019-20 in FY 2020-21 as well. The revenue from Regulatory Surcharge will help in earning an additional revenue of INR 64.51 Cr. The Petitioner has requested to allow the balance revenue gap of INR 187.76 Cr to be considered as Regulatory Assets and recovered through Regulatory Surcharge.

Commission's analysis

The Commission has determined a consolidated gap of INR 76.27 Cr against the Petitioners submission of INR 187.76 Cr. The Commission has determined the retail tariff for the FY 2020-21 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2018.

Tariff design in general is guided by the following principles:

1. Cost reflective: The tariff determined should efficiently reflect the cost of supply for each consumer category. The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost to

service a category of consumer in accordance with the provisions of the Act. Accordingly, the Commission has approved relatively higher percentage increase in tariff for the cross-subsidized categories than the cross-subsidizing categories.

2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidize the lower consumption consumers
3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained
4. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs
5. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges
6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs
7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs
8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

The restructured tariff and its applicability to consumers have been shown in the Section 11.1 and Section 11.2 respectively, of this Tariff Order.

7.4.2. Approved Final Tariff Schedule

As described in earlier section, the current tariff is not covering the entire cost of the Petitioner for FY 2020-21. The revenue gap at the end of FY 2020-21 necessitates an increase in Retail Tariff. The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 168: Existing and approved tariff

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
1	**LIFLINE SERVICES**				
a.	0-50 units per month	*Introduced from 2020-21*		-	1.00
2	**DOMESTIC PURPOSES**				
b.	0-100 units per month	INR 40/connection / month	1.50	INR 40/connection/ month	1.50
c.	101-200 units per month	INR 40/connection / month	2.50	INR 45/connection/ month	2.55
d.	201-300 units per month	INR 40/connection	4.35	INR 45/connection/	4.50

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
		/ month		month	
e.	Above 300 units per month	INR 40/connection / month	5.60	INR 45/connection/ month	5.90
3	**HUT SERVICES (OHOB)***				
a.	Hut Services*	INR 35/connection / month	-	*Discontinued from 2020-21**	
4	**COMMERCIAL**				
I	**LT Commercial**				
a.	0-100 units per month	INR 120/connection/ month	5.50	INR 130/connection/ month	5.60
b.	101-250 units per month		6.50		6.65
c.	Above 250 units per month		7.20		7.40
II	**HT Commercial (For contract demand up to 5000 kVA)**	**INR 400 per kVA per month**	**5.50**	**INR 420 per kVA per month**	**5.65**
5	**AGRICULTURE SERVICES**				
I	**Agriculture**				
a.	Small Farmers	INR 10/HP/month	-	INR 11/HP/month	-
b.	Other Farmers	INR 45/HP/month	-	INR 50/HP/month	-
II	**Cottage Industries /Poultry Farms/ Horticulture/Pisciculture**				
a.	0-100 units per month	INR 40/connection/ month	1.50	INR 40/connection/ month	1.50
b.	101-200 units per month	INR 40/connection/ month	2.50	INR 45/connection/ month	2.55
c.	201-300 units per month	INR 40/connection/ month	4.35	INR 45/connection/ month	4.50
d.	Above 300 units per month	INR 40/connection/ month	5.60	INR 45/connection/ month	5.90
6	**PUBLIC LIGHTING**				
a.	Public Lighting	INR 100/pole/ month	6.75	INR 110/pole/ month	6.80
7	**INDUSTRIES**				
a.	LT Industries	INR 120 /connection/ month	5.80	INR 130 /connection/ month	5.95
b.	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	INR 400 per kVA per month	5.35	INR 420 per kVA per month	5.50
c.	EHT Industries (For Supply at 110 kV or 132 kV)	INR 450 per kVA per month	5.10	INR 480 per kVA per month	5.20

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
8	LT WATER WORKS	INR 140/connection/ month	6.70	INR 150/connection / month	6.85
9	HT OTHERS	INR 450 per kVA per month	6.50	INR 480 per kVA per month	6.60
10	ELECTRIC VEHICLE CHARGING STATION	INR 200/kVA/month	5.20	-	4.50
11	TEMPORARY SUPPLY				
		Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.		Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.	
12	HOARDINGS/SIGNBOARDS				
a.	Hoardings/signboards	INR 120 per kVA per month or part thereof	8.00	INR 140 per kVA per month or part thereof	8.00

*OHOB connections are being converted into metered connections hence, from 1st April 2020 they will be charged as per metered tariff upto 50 units at INR 1.00/ kWh and No Fixed Charges. If the consumption exceeds 50 units then Domestic tariff shall be applicable.

7.4.3. Revenue from Approved Retail Tariff for FY 2020-21

Based on the retail tariff approved above, the revenue from energy charges based on the approved tariff is shown in the table below:

Table 169 Revenue from Energy Charges from approved retail tariff determined by Commission (In INR Cr)

S. No.	Category	**Sales** (MUs) (A)	Approved Tariff		**Energy Charges** (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	**Energy Charge** (Rs/kWh) (C)	
1	**DOMESTIC**	**761.79**			**233.27**
	0-100 units	313.47	INR 40/connection/ month	1.50	47.02
	101-200 units	190.80	INR 45/connection/ month	2.55	48.65
	201-300 units	102.43	INR 45/connection/ month	4.50	46.10
	Above 300 units	155.09	INR 45/connection/ month	5.90	91.50

S. No.	Category	Sales (MUs) (A)	Approved Tariff		Energy Charges (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	**Energy Charge** (Rs/kWh) (C)	
2	**HUT SERVICES/ OHOB** [13]	**10.24**	INR 35/connection/ month	-	-
3	**COMMERCIAL**	**227.11**			**153.45**
	0-100 units	59.94	INR 130/connection/ month	5.60	33.57
	101-250 units	50.92		6.65	33.86
	Above 250 units	116.25		7.40	86.02
4	**AGRICULTURE SERVICES**	**61.04**			-
(i)	Agriculture	61.04			-
	Small Farmers	8.21	INR 11/HP/month	-	-
	Other farmers	52.83	INR 50/HP/month	-	-
(ii)	Cottage Industries				-
	0-100 units		INR 40/connection/ month	1.50	-
	101-200 units		INR 45/connection/ month	2.55	-
	201-300 units		INR 45/connection/ month	4.50	-
	Above 300 units		INR 45/connection/ month	5.90	0.00
5	**PUBLIC LIGHTING**	**28.69**	INR 110/pole/ month	6.80	**19.51**
6	**LT INDUSTRIAL & WATER WORKS**	**166.04**			**102.07**
(i)	LT Industrial	129.62	INR 130 /connection/ month	5.95	77.13
(ii)	Water Tanks	36.41	INR 150/connection/ month	6.85	24.94
7	**HIGH TENSION-I**	**1029.51**			**567.55**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	941.56	INR 420 per kVA per month	5.50	517.86
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	87.95	INR 420 per kVA per month	5.65	49.69
8	**HIGH TENSION-II**	**71.77**	INR 480 per kVA per month	6.60	**47.37**
9	**HIGH TENSION-III**	**441.14**	INR 480 per kVA per month	5.20	**229.39**

[13] HUT/OHOB services tariff has been discontinued from 2020-21 and Lifeline Services tariff has been introduced however, the revenue has been projected under the erstwhile category based on the trends since the sales data from new category is not available as of now. The same shall be taken up at the time of Annual Performance Review for FY 2020-21.

S. No.	Category	Sales (MUs) (A)	Approved Tariff		Energy Charges (INR Cr.) D=(A*C/10)
			Fixed Charge (B)	**Energy Charge** (Rs/kWh) (C)	
10	**HOARDINGS/SIGNBOARDS**	**0.00**	INR 140 per kVA per month or part thereof	8.00	**0.00**
11	**TEMPORARY**	**8.96**			**8.74**
	TOTAL	**2806.29**			**1361.35**

Based on the retail tariff approved above, the total revenue from sales based on the approved tariff is shown in the table below:

Table 170: Revenue from approved retail tariff determined by Commission (In INR Cr)

S. No.	Category	Sales (MUs)	Energy Charges (INR Cr.)	Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (Rs./unit)	K Factor (Rs./unit)
1	**DOMESTIC**	**761.79**	**233.27**	**18.12**	**251.39**	**3.30**	**0.56**
	0-100 units	313.47	47.02	6.61	53.63	1.71	**0.29**
	101-200 units	190.80	48.65	5.54	54.20	2.84	**0.49**
	201-300 units	102.43	46.10	2.96	49.06	4.79	**0.82**
	Above 300 units	155.09	91.50	3.01	94.51	6.09	**1.04**
2	**HUT SERVICES/ OHOB**[14]	**10.24**	**0.00**	**1.49**	**1.49**	**1.46**	**0.25**
3	**COMMERCIAL**	**227.11**	**153.45**	**8.95**	**162.41**	**7.15**	**1.22**
	0-100 units	59.94	33.57	3.64	37.21	6.21	**1.06**
	101-250 units	50.92	33.86	1.48	35.34	6.94	**1.19**
	Above 250 units	116.25	86.02	3.83	89.85	7.73	**1.32**
4	**AGRICULTURE & COTTAGE INDUSTRIES**	**61.04**	**0.00**	**2.49**	**2.49**	**0.41**	**0.07**
(i)	Agriculture	**61.04**	**0.00**	**2.49**	**2.49**	**0.41**	**0.07**
	Small Farmers	8.21	0.00	0.05	0.05	0.07	**0.01**
	Other farmers	52.83	0.00	2.44	2.44	0.46	**0.08**
(ii)	Cottage Industries	*No sale*	-	-	-	-	-
5	**PUBLIC LIGHTING**	**28.69**	**19.51**	**6.72**	**26.22**	**9.14**	**1.56**
6	**LT INDUSTRIAL & WATER WORKS**	**166.04**	**102.07**	**1.06**	**103.13**	**6.21**	**1.06**
(i)	LT Industrial	129.62	77.13	1.04	78.16	6.03	**1.03**
(ii)	Water Tanks	36.41	24.94	0.03	24.97	6.86	**1.17**
7	**HIGH TENSION-I**	**1029.51**	**567.55**	**157.29**	**724.84**	**7.04**	**1.20**

[14] HUT/OHOB services tariff has been discontinued from 2020-21 and Lifeline Services tariff has been introduced however, the revenue has been projected under the erstwhile category based on the trends since the sales data from new category is not available as of now. The same shall be taken up at the time of Annual Performance Review for FY 2020-21.

S. No.	Category	Sales (MUs)	Energy Charges (INR Cr.)	Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (Rs./unit)	K Factor (Rs./ unit)
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	941.56	517.86	143.20	661.06	7.02	**1.20**
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	87.95	49.69	14.09	63.78	7.25	**1.24**
8	**HIGH TENSION-II**	**71.77**	**47.37**	**18.15**	**65.52**	**9.13**	**1.56**
9	**HIGH TENSION-III**	**441.14**	**229.39**	**65.30**	**294.69**	**6.68**	**1.14**
10	**HOARDINGS/SIGN BOARDS**	***No sale***	-	-	-	-	-
11	**TEMPORARY**	**8.96**	**8.74**	**0.00**	**8.74**	**9.75**	**1.67**
	TOTAL	**2806.29**	**1361.35**	**279.57**	**1640.92**	**5.85**	**1.00**

Fixed Charges are computed per annum based on the connected load, consumers, and horsepower as applicable.

The Commission approves revenue from approved Retail Tariff of INR 1,640.92 Cr for the FY 2020-21 against a Net Revenue Requirement of INR 1,653.21 Cr

7.4.4. Average Cost of Supply (ACoS) and Average Billing Rate (ABR)

The Commission based on the approved ARR and approved retail tariff (excluding Regulatory Surcharge) has derived the ACoS:

Table 171: ACoS at approved tariff (excluding Regulatory Surcharge) for the FY 2020-21 (In INR Cr)

S. No	Particulars	Now Approved
1	Annual Revenue Requirement	1,653.21
2	Revenue from sale of power	1,640.92
3	**ACoS (Rs/kWh)**	**5.89**

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 3.12%. The table below provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the existing and approved recovery vis-à-vis the (ACoS).

Table 172: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)
Domestic	5.89	3.19	3.30	3.47%
OHOB	5.89	1.46	1.46	0.00%
Commercial	5.89	6.98	7.18	2.90%
Agriculture	5.89	0.37	0.41	11.09%
Public Lighting	5.89	8.88	9.14	2.96%
Industries	5.89	6.63	6.84	3.14%

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)
LT Water Works	5.89	6.71	6.86	2.24%
HT Others	5.89	8.87	9.13	2.91%
Temporary Supply	5.89	9.75	9.75	0.00%
Total	**5.89**	**5.67**	**5.85**	**3.12%**

7.4.5. Regulatory Surcharge

As is evident from the above, with an average tariff increase of 3.12%, the revenue from Approved Retail Tariff recovers the standalone Net Revenue Requirement of FY 2020-21 and some of the cumulative gap upto FY 2019-20. The Commission has tried to limit the tariff increase in each category in order to safeguard the interests of consumers by avoiding abnormal increase in tariffs. However, the cumulative revenue gap till the end of FY 2020-21 resulting from the True-up of FY 2017-18, FY 2018-19 and APR of FY 2019-20 is yet to be recovered. The table below provides the cumulative revenue gap till FY 2020-21.

The Cumulative Revenue Gap/(Surplus) till FY 2020-21 at existing tariff and exclusive of regulatory surcharge for FY 2019-20 and FY 2020-21 is as below:

Table 173: Cumulative Revenue Gap/ Surplus till FY 2020-21 at existing tariff and exclusive of regulatory surcharge (In INR Cr)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	(a)	1,308.12	1,483.17	1,523.62	1,653.21
Revenue from Retail Sales at Existing Tariff	(b)	1,311.97	1,443.18	1,546.95	1,591.27
Revenue from Open Access	(c)	-	-	-	-
Standalone Gap /(Surplus) for the year at existing tariff	(d=a-b-c)	(3.85)	39.99	(23.33)	61.93
Revenue from Retail Sales at Approved Tariff	(e)	-	-	-	1,640.92
Standalone Gap /(Surplus) for the year at approved tariff	(f=a-c-e)	-	-	-	12.28
Opening Gap /(Surplus)	(g)	94.05	97.57	146.96	136.55
Standalone Gap /(Surplus) addition for the year at Approved tariff	(f)	(3.85)	39.99	(23.33)	12.28
Closing Gap /(Surplus)	(h=g+f)	90.20	137.55	123.63	148.83
Average Gap/ (Surplus)	(i=(g+h)/2)	92.12	117.56	135.29	142.69
Percentage of Carrying Cost	(j)	8.00%	8.00%	9.55%	8.85%
Carrying Cost	(k=i x j)	7.37	9.40	12.92	12.63
Final Closing Gap/ (Surplus)	**(h+k)**	**97.57**	**146.96**	**136.55**	**161.46**

**Included in Net ARR*

It can be observed from the table above that the increase in tariff is not enough to recover the cumulative revenue gap. Therefore, the Commission, in order to recover revenue gap inclusive of the carrying cost, has decided to continue with the Regulatory Surcharge of 4.00%. The Surcharge shall be applicable on all consumers. The revenue from the Regulatory Surcharge and the resultant gap after factoring both the additional revenue from Regulatory Surcharge has been discussed subsequently. In order to moderate the tariff increase to consumers the Commission has decided to recover this cumulative gap till FY 2020-21, till further Orders of the Commission.

Applicability and Conditions of the Regulatory Surcharge

- This Regulatory Surcharge shall be applicable to all consumer categories served by the Petitioner.
- The Surcharge shall also be applicable to consumers opting for open access.
- The Regulatory Surcharge shall be levied in the monthly/ bimonthly bill as a percentage of the total Energy and Demand charges payable by the consumer
- The Surcharge shall be applicable for all the bills raised on or after 1st June 2020 and shall continue till further Orders of the Commission.

7.4.6. Revised Revenue Gap/ Surplus

The following table represents the Standalone Gap /(Surplus) for the year at existing tariff and without regulatory surcharge:

Table 174: Revenue Gap / (Surplus) at existing tariff without regulatory surcharge

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement (a)	1,308.12	1,483.17	1,523.62	1,653.21
Revenue from Retail Sales at Existing Tariff (b)	1,311.97	1,443.18	1,546.95	1,591.27
Standalone Gap /(Surplus) for the year at existing tariff (d=a-b-c)	(3.85)	39.99	(23.33)	61.93
Reference	Table 44	Table 78	Table 114	Table 163

Considering the additional revenue from tariff increase and Regulatory Surcharge, the resultant Revenue Gap/Surplus has been shown in the table below:

Table 175 Revised Revenue Gap/ Surplus with Regulatory Surcharge approved by Commission (In INR Cr)

Particulars		FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap /(Surplus)	(a)	94.05	97.57	146.96	71.72
Add: Gap/(Surplus)	(b)	(3.85)	39.99	(23.33)	61.93
Less: Additional Revenue on account of tariff increase	(c)				49.65
Less: Regulatory Surcharge	(d)			61.88	65.64
Closing Gap /(Surplus)	(e=a+b-c-d)	90.20	137.55	61.75	18.36
Average Gap/ (Surplus)	(f=(a+e)/2)	92.12	117.56	104.35	45.04
Percentage of Carrying Cost	(g)	8.00%	8.00%	9.55%	8.85%
Carrying Cost	(h=f*g)	7.37	9.40	9.97	3.99
Final Closing Gap/ (Surplus)	**(i=e+h)**	97.57	146.96	71.72	22.35

The Commission approves a cumulative revenue gap of INR 22.35 Cr till FY 2020-21.

7.4.7. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2020-21 are as follows:

1. The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost to service a category of consumer in accordance with the provisions of the Act. Accordingly, the Commission has approved relatively higher percentage increase in tariff for the cross-subsidized categories than the cross-subsidizing categories.
2. The Commission has approved an average tariff hike of 3.12% while retaining the regulatory surcharge of 4% for the FY 2020-21.
3. The Commission has approved the average revenue for FY 2020-21 as INR 5.85/kWh as against the approved Average Cost of Supply of INR 5.89/kWh.
4. The Commission has discontinued the OHOB tariff category and has introduced a new category of Lifeline Connection for the consumers, hitherto under OHOB tariff category, in order to provide benefit of lower tariffs to this section of the society having consumption upto 50 units per month. Lifeline connections will be metered connections where consumption will be charged upto 50 units at INR 1/kWh without any Fixed Charges. If the consumption exceeds 50 units per month then Domestic tariff shall be applicable for the total consumption.
5. In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for E.V. Charging Stations where the Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of APPC.

8. Chapter 8. Open Access Charges for the FY 2020-21

8.1. Wheeling Charges

8.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's Submission:

As per Regulation 33 of MYT Regulations, the distribution licensee needs to maintain separate books of accounts for wheeling and retail supply business. However, the distribution licensee has not segregated the accounts based on the wheeling and retail supply business as yet. The regulation also states that in the absence of such accounts, the ratio of the segregation may be decided by the Commission based on the data obtained from the distribution licensee. The present accounts of the licensee are maintained in a consolidated manner and the licensee does not have segregated accounts for each of the above businesses. Further, certain segments of business cannot be segregated into two business categories e.g. sub-station catering to both wires and supply business.

Accordingly, it has to rely on certain assumptions for segregation of total expenses into wires and supply business. However, in line with the Regulations, an endeavour has been made to analyse the expenses and incomes attributable to each business and based on assumptions, the ratio for segregation of the expenses under Retail Supply and Wires Business has been worked out and is tabulated below.

Table 176: Allocation matrix as submitted by Petitioner

Particulars	Allocation (%)		FY 2020-21		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	*0%*	*100%*	-	1,411.41	1,411.41
Employee costs	*40%*	*60%*	49.07	73.60	122.67
Repair and Maintenance Expenses	*90%*	*10%*	11.38	1.26	12.64
Administration and General Expenses	*50%*	*50%*	6.69	6.69	13.38
Depreciation	*90%*	*10%*	29.78	3.31	33.08
Interest and Finance charges	*90%*	*10%*	20.19	2.24	22.43
Interest on Working Capital	*10%*	*90%*	0.39	3.50	3.89
Return on Equity	*90%*	*10%*	243.25[15]	27.03	42.03
Interest on consumer security deposit	*10%*	*90%*	0.50	4.50	5.00
Total Revenue Requirement			**361.24**	**1,510.85**	**1,666.54**
Less: Non-Tariff Income	*10%*	*90%*	1.31	11.81	13.12
Net Revenue Requirement			**359.93**	**1,521.74**	**1,653.42**

PED submitted that the apportionment of wheeling charges has to account for losses and therefore in the absence of the voltage wise details, PED has considered the bifurcation of wheeling cost based on the sales and losses at

[15] There seems to be an error on the part of Petitioner while computing the allocation of Return on Equity.

each voltage level. The voltage wise loss levels are taken as approved by the Commission in its last Tariff Order dated 20th May 2019.

Accordingly, the Petitioner has submitted wheeling charges of INR 1.45/kWh at LT Voltage level, INR 1.08/kWh at HT Voltage level and INR 0.70/kWh at EHT Voltage level for FY 2020-21. The computation of Wheeling charges as submitted by the Petition has been shown in the following table:

Table 177: Wheeling Charge calculation as submitted by Petitioner

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)	Wheeling Charges (Rs/kWh)
Low Tension (LT) Level	67.07	146.40	213.46	1473.20	1.45
High Tension (HT) Level	0.07	117.12	117.18	1082.34	1.08
Extra High Tension (EHT) Level	0.00	29.28	29.28	415.53	0.70
Total	**67.14**	**292.79**	**359.93**	**2,971.07**	**1.21**

Commission's analysis:

The allocation between wheeling and retail supply business for the FY 2020-21 as per the ARR approved in this Order is provided in the table below:

Table 178: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2020-21		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	0%	100%	-	1,413.96	1,413.96
Employee costs	40%	60%	45.16	67.75	112.91
Administration and General Expenses	50%	50%	6.46	6.46	12.93
Repair and Maintenance Expenses	90%	10%	9.63	1.07	10.70
Depreciation	90%	10%	30.88	3.43	34.32
Interest and Finance charges	90%	10%	13.58	1.51	15.09
Interest on Working Capital	10%	90%	0.64	5.76	6.40
Interest on consumer security deposit	10%	90%	1.22	11.01	12.24
Return on NFA /Equity	90%	10%	39.13	4.49	43.62
Provision of Bad & Doubtful Debt	0%	100%	-	-	-
	90%	10%	-	-	-
Total Revenue Requirement			**146.72**	**1,515.45**	**1,662.16**
Less: Non-Tariff Income	10%	90%	0.90	8.06	8.96
Net Revenue Requirement			**145.82**	**1,507.39**	**1,653.21**

To determine the wheeling charges, the wheeling costs are allocated on the basis of voltage levels. The wheeling charges are levied for distribution network utilized by the Open Access consumers and primarily comprises of O&M Expenses and other costs as provided in the table above.

The methodology adopted for allocating the derived wheeling costs at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers.

- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation shown in the table below.

- The resultant cost at EHT voltage level is divided among LT, HT and EHT voltage levels on the basis of input energy at respective voltage levels as the EHT network is used by consumers at all voltage levels. Similarly, allocated cost at HT voltage level is divided between HT and LT voltage levels. The cost at LT voltage level is allocated completely to LT voltage level

  The energy input has been determined assuming the loss level of EHT voltage as 1.50% and loss level at HT voltage as 4.00%, the same as approved in the Tariff Order of FY 2019-20. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 11.75% as approved in the MYT Order for FY 2020-21.

Table 179: Parameters assumed for voltage wise allocation of wheeling charges

Category	No. of Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)	Energy Input (MU)
Low Tension (LT) Level	5,25,771	50.00%	1,263.87	19.37%	1,567.44
High Tension (HT) Level	501	40.00%	1,101.28	4.00%	1,164.64
Extra High Tension (EHT) Level	7	10.00%	441.14	1.50%	447.85
Total	**5,26,279**	**100.00%**	**2,806.29**	**11.75%**	**3,179.94**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 180: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)	Wheeling Charges (Rs/kWh)
Low Tension (LT) Level	61.23	63.12	124.35	1,263.87	0.98
High Tension (HT) Level	0.03	20.25	20.28	1,101.28	0.18
Extra High Tension (EHT) Level	0.00	1.19	1.19	441.14	0.03
Total	**61.26**	**84.56**	**145.82**	**2,806.29**	

The Commission approves wheeling charge of INR 0.98/ kWh at LT voltage level, INR 0.18/kWh at HT voltage level and INR 0.03/kWh at EHT voltage level

8.2. Additional Surcharge

Petitioner's Submission:

The Petitioner has proposed additional charges as follows:

Particulars	FY 2020-21
Total Power Purchase Cost	1,411.41
Fixed cost component in Power Purchase Cost (excluding transmission charges)	295.04
Energy Sales (MU)	2,971.07
Additional Surcharge (Rs/kWh)	0.99

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"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 in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulate:

This additional surcharge shall become applicable only if the obligation of the 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 by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.

Further, Regulation 5.2 (1) (b) states the following:

The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following table:

Table 181: Additional Surcharge approved by Commission

Particulars		FY 2018-19
Total Power Purchase cost approved		**1,413.96**
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	A	313.79
Energy Sales including Open Access Sales (MU)	B	2,806.29
Additional Surcharge (Rs/kWh)	C=A/B*10	1.12

Earlier, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. As per the Open Access Regulations, 2017, a consumer now is only required to pay fixed charges on Admissible Drawal rather than on total contracted load.

As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the Regulation. The Commission approves an Additional Surcharge of INR 1.12/kWh for the FY 2020-21.

The Commission directs the Petitioner to submit quarterly details of the power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyse the information and change the applicable Additional Surcharge, if required.

8.3. Cross-Subsidy Surcharge

Petitioner's Submission:

The Cross-Subsidy Surcharge submitted by the Petitioner is shown in the following table:

Table 182: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR /kWh)	ABR (INR /kWh)	Cross- Subsidy (INR /kWh)
Low Tension (LT) Level	6.53	4.55	(1.98)
High Tension (HT)	4.75	6.90	2.14
Extra High Tension(EHT) Level	4.56	6.17	1.61

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for LT, HT & EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 11.75%, as approved in the MYT Order for FY 2020-21. Voltage wise losses assumed at each level have been shown in the table below:

Table 183: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	14.73%	19.37%
High Tension (HT) Level	4.00%	5.44%
Extra High Tension (EHT) Level	1.50%	1.50%

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Total	**11.75%**	**11.75%**

Using these losses, the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 184: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1,263.87	19.37%	1,567.44
High Tension (HT) Level	1,101.28	5.44%	1,164.64
Extra High Tension (EHT) Level	441.14	1.50%	447.85
Total	**2,806.29**	**11.75%**	**3,179.94**

Now the overall ARR approved for FY 2020-21 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to EHT level is then further allocated to EHT, HT and LT levels on the basis of input energy, as the EHT network is utilized by all EHT, HT and LT network consumers. Similarly, the cost allocated to HT is distributed to both HT and LT voltage level.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 185: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	No. of Consumers
Low Tension (LT) Level	1,567.44	50%	525,771
High Tension (HT) Level	1,164.64	40%	501
Extra High Tension (EHT) Level	447.85	10%	7
Total	**3,179.94**	**100%**	**526,279**

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories. Accordingly, the VCoS is determined as shown in the table below:

Table 186: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (Rs/kwh)
Low Tension (LT) Level	381.85	502.87	910.10	1,263.87	7.20
High Tension (HT) Level	185.43	373.64	542.52	1,101.28	4.93

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (Rs/kwh)
Extra High Tension (EHT) Level	65.73	143.68	200.59	441.14	4.55
Total	**633.01**	**1,020.20**	**1,653.21**	**2,806.29**	

The VCoS as determined is used to determine the Cross-Subsidy Surcharge.

Table 187: Cross-Subsidy Surcharge

Category	VCoS (Rs/kWh)	ABR (Rs/kWh)	Cross- Subsidy (Rs/kWh)
Low Tension (LT) Level	7.20	4.40	(2.80)
High Tension (HT) Level	4.93	7.18	2.25
Extra High Tension (EHT) Level	4.55	6.68	2.13

The Cross-Subsidy Surcharge is coming out to be negative for LT voltage level, INR 2.25/kWh for HT and INR 2.13/kWh for EHT voltage levels.

Therefore, the Commission approves nil Cross-Subsidy Surcharge at LT Voltage level, INR 2.25/kWh at HT Voltage Level and INR 2.13/kWh at EHT Voltage levels, in FY 2020-21.

9. Chapter 9. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short-term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Despatch Center (SLDC)/ Regional Load Despatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long-term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within the region (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawal/Under-drawal from the Grid and the Inter-State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market-determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of FY 2016-17 will be undertaken by the Commission once the audited accounts of FY 2016-17 are available. If the audited accounts for FY 2016-17 are prepared timely, the impact of true-up of various cost and revenue items is allowed in the tariff of FY 2018-19, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

9.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Indian Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub-clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of

inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub-clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:
"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

9.2. *Formula*

The following mechanism shall be followed for calculation and adjusting variations on account of Fuel and Power Purchase Cost in the end consumer tariff, which shall come into force w.e.f. 1st April 2020 (i.e. Power Purchased by the Licensee from 1st April 2020 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
    - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
    - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
    - Variation on account of Deviation Settlement Mechanism – shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
    - Variation on account of Central Transmission Charges including arrears/ revisions.
    - Variation on account of State Transmission charges including arrears/revisions

3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
    - Any adjustments /reversals due to over recovery of charges
    - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
    - Any other adjustments on account of factors not envisaged at the time of tariff fixation

4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{INR}}{\boldsymbol{Unit}}\right) = .\left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \mathbf{10}}{\{[\boldsymbol{PPOact} * (\mathbf{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\mathbf{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

Where:

- $Pact(in\ INR\ Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
    - Cost of procurement from sources outside the State,
    - Cost of procurement from sources within the State,
    - Cost of DSM excluding any penal charges,
    - Cost of procurement from the Bilateral/ exchange etc.
    - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ INR\ Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
    - Inter-State transmission cost (PGCIL charges),
    - Intra-State transmission cost
- $Oact\ (in\ INR\ Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ INR\ Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order

- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{INR}{unit}) = \left(\frac{(Papp + Tapp) * 10}{\{[PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ INR\ Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power
- $Tapp\ (in\ INR\ Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, the Commission suggests that all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to $\pm$10% of the ABR for a consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
   - Step 1: Determination of Value of K

$$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ sub\ category\ (\frac{INR}{unit})}{Weighted\ Average\ Retail\ Tariff\ (WART)(\frac{INR}{unit})}$$

The value of K for different consumer category or sub-category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR /unit) consumer category/sub-category wise

$$FPPCA\left(\frac{INR}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute the fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the FPPCA formula as approved by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 5.17/kWh for the FY 2020-21.

Table 188: Rapproved determined by Commission for FY 2020-21

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	1,333.99
Transmission Charges (INR Cr), T_{app}	79.97
Power Purchase Quantum from CGS Stations at Generator Periphery (NTPC, NPCIL, NLC, Vallur) (MU), PPO_{app}	3,000.46
Approved Inter-State Transmission Loss (%), TL_{app}	2.77%
Power Purchase Quantum from sources within State (PPCL) (MU), PPI_{app}	215.56
Quantum of Sale of Surplus Power (MU), PSO_{app}	47.08
Approved Intra-State T&D Loss (%), DL_{app}	11.75%
Energy Sales for Hut Services and Agriculture consumer category (MU), Z_{app} (MU)	71.29
R_{app} (Rs/kWh)	**5.17**

10. Chapter 10: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- The detailed action plan for compliance of all the directives within 1 month of the issuance of this Order.
- The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections and also the quarterly status reports for metering & billing, RPO compliance, FPPCA, SOPs, Capex and Capitalisation, and CGRF within 10 days of the end of each quarter of the calendar year.

10.1. Previous directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate necessary action under Section 142 of the Electricity Act 2003 read with other provisions of the Act, and the Regulations made thereunder.

10.1.1. Accounting of Consumer Security Deposits etc. under appropriate head of accounts

Originally Issued in Tariff Order dated 5th February 2010
Commission's Directive in Tariff Order for the FY 2019-20 *The Commission observes that the Petitioner, in its Petition for provisional True-up of the FY 2017-18, has claimed that only INR 3.50 Cr of interest on security deposits was actually paid against the total of INR 12.22 Cr. As separate accounts have been maintained for security deposits since FY 2012-13, the Petitioner should be able to make the requisite payments on a regular basis. The Commission therefore directs the Petitioner to pay the full interest on consumer deposit to the eligible consumers and update the status to the Commission within three months of issue of this Order.*
Petitioner's Response in Present Tariff Petition *Budgetary provision of Rs.5.00 Crores has been made during the current FY 2019-20. Additional provision will be sought for from the Govt in RE stage.*
Commission's Response The Commission observes that the Petitioner is still not able to tender complete payments to the Consumers, in accordance with the amounts allowed in the Tariff Order the Petitioner should be able to make the requisite payments on a regular basis. The Commission therefore directs the Petitioner to pay the full interest on consumer deposit to the eligible consumers and update the status to the Commission within three months of issuance of this Order.

10.1.2. Energy Audit and T&D Losses

Originally Issued in Tariff Order dated 5th February 2010

Commission's Latest Directive in Tariff Order for the FY 2019-20
The Commission has taken a serious view of the fact that the Petitioner has been unable to submit the Energy Audit Report during the TVS. Since most of the central schemes are planned to be capitalized by FY 2019-20 as per the approved capital expenditure plan, the Commission directs the Petitioner to complete the energy audit of all distribution transformers and submit the same along with the tariff petition for the FY 2020-21
Petitioner's Response in Present Tariff Petition
The Department could not complete the Distribution Transformer wise Energy Audit, as the DTR metering is yet to be completed in the non-R-APDRP areas. However, on completion of the IPDS and DDUGJY schemes, it is anticipated that most of the DTINR would be metered, which would facilitate the Department to conducted Energy Audit at DT level. As such, the Energy Audit will be completed and submitted to the Hon'ble Commission during the year 2020-21.
Commission's Response
The Commission has taken a serious view of the fact that the Petitioner has been unable to submit the Energy Audit Report along with the Tariff Petition for FY 2020-21. Since most of the central schemes were planned to be capitalized by FY 2019-20 as per the approved capital expenditure plan, the Commission directs the Petitioner to complete the energy audit of all distribution transformers and submit the same within 3 months of the issuance of Tariff Order.

10.1.3. Employee Cost/ Manpower Study

Originally Issued in Tariff Order dated 5th February 2010
Commission's Latest Directive in Tariff Order for the FY 2019-20
The Commission, in the Business Plan Order dated 31st October 2018, had also directed the Petitioner to submit a detailed proposal duly indicating the requisite manpower required at each level. The Commission therefore directs the Petitioner to submit the employee cost/manpower study along with a detailed proposal indicating the requisite manpower required at each level while filing the tariff petition for the FY 2020-21.
Petitioner's Response in Present Tariff Petition
At present, around 500 Nos of posts are vacant, which includes around 110 Nos. of Engineering Posts. The department is finding difficult to perform its duties due to the above vacancies. The department is taking necessary action for filling up of these posts at the earliest. *At present, two nos. of 230 KV Sub-stations, two nos. of 110 KV sub-stations, System Control Centre are under operation without creation of any posts.* *Further, the department is executing various central schemes such as IPDS, DDUGJY, Smart Grid, RAPDRP schemes, PSDF without creating not even temporary posts.* *The department will be able to assess the actual manpower requirement after filling up of all the vacant posts.*
Commission's Response
The Commission directs the Petitioner to submit the action plan for manpower study along with the detailed proposal indicating date of awarding of the study, implementation schedule, and date of completion of the study and requisite manpower required at each level by 30th September 2020.

10.1.4. Connected Load/ Contract Demand-based fixed charges for LT Industrial and Commercial categories

Originally Issued in Tariff Order dated 12th June 2012
Commission's Latest Directive in Tariff Order for the FY 2019-20
The Petitioner, in the current MYT petition, has submitted that all related works with respect to R-APDRP is expected to be completed in FY 2018-19 (instead of the FY 2019-20 as proposed in the Business Plan Petition)

as per the directive given by the MoP. The Commission therefore directs the Petitioner to submit the compliance of the directive before 31st May 2019.
Petitioner's Response in Present Tariff Petition *The department has entrusted the work of upgradation of the existing old billing system by an advanced software for Metering, Billing and Collection system to M/s NIC, Puducherry.* *So far, the Collection part of the above upgradation work has been completed enabling web-based collection counters, web application for online payment of cc charges through the department's new portal "pedservices.py.gov.in" and also enabled payment of CC charges by the consumers through Bharat Bill Payment System (BBPS). This has enabled the consumers to make their payment through mobile apps viz. BHIM, Paytm, Phonepe etc.* *The department will be able to implement the billing based on the connected load / Contract Demand based fixed charges on completion of the billing part by NIC.*
Commission's Response The Commission takes note of the efforts by the Petitioner in this regard. The Commission directs the Petitioner to submit a report on the progress of the same within 1 month of issue of this Order, which should include the details of the work allotted to M/s NIC, the work completed, and the pending work with timelines for the completion schedule to enable the billing based on connected load / and contracted demand.

10.1.5. Proposal of the Energy Charges for the agriculture category

Originally Issued in Tariff Order dated 10th April 2013
Commission's Latest Directive in Tariff Order for the FY 2019-20 *The Commission observes that the Petitioner is yet to ensure full compliance of this directive. With regard to the continuation of the existing billing structure based on fixed charges, the Commission opines that the billing rate for each category shall gradually reflect its actual cost of supply in accordance with the provisions of the Act. This endeavour is not possible without adequate metering. Further, since most of the central schemes are planned to be capitalized by FY 2019-20 as per the approved capital expenditure plan, the Commission directs the Petitioner to complete the work of metering by 30th September 2019 and submit a proposal for introduction of energy charges in the Agriculture category in its next Tariff Petition, so that billing of energy charges can be implemented in the tariff petition for the FY 2020-21.*
Petitioner's Response in Present Tariff Petition *All new Agriculture services are being energised with energy meters only. The department has initiated action to provide meters in all the existing Agriculture services and meters are being provided. This work will be completed in all regions of UT of Puducherry during the year 2020-21.* *After providing the meters in all the existing Agriculture services, energy charges for the agriculture category may be levied.*
Commission's Response The Commission takes note of the efforts of the Petitioner in this regard and directs the Petitioner to provide 100% metering to all agricultural consumers as the Commission would be introducing energy charges with effect from FY 2021-22. Further, submit a quarterly progress report in this regard.

10.1.6. Determination of Voltage wise Wheeling charges and Category wise/ Voltage wise Cost of supply

Originally Issued in Tariff Order dated 24th May 2016
Commission's Latest Directive in Tariff Order for the FY 2018-19 *The Commission has taken a serious view of the fact that the Petitioner has been unable to submit the Voltage wise Asset Register or the Energy Audit Report. In light of the same, the Commission in this Tariff Order has again determined the voltage wise wheeling charges based on certain assumptions. The Commission directs*

the Petitioner to submit all the requisite information for determination of voltage wise wheeling charges along with the tariff petition for the FY 2020-21.
Petitioner's Response in Present Tariff Petition *The voltage wise wheeling charge will be furnished during TVS as accounts for FY 17-18 and 18-19 is prepared by audit firm M/s JLN US & co has just been received and the same is being studied. The voltage wise wheeling charges will be furnished during Technical validation session with Asset and Depreciation Register.*
Commission's Response The Commission has taken a serious view of the fact that the Petitioner has been unable to submit the Voltage wise Asset Register or the Energy Audit Report. In light of the same, the Commission in this Tariff Order has again determined the voltage wise wheeling charges based on certain assumptions. The Commission directs the Petitioner to submit all the requisite information for determination of voltage wise wheeling charges within 3 months of the issuance of this Order.

10.1.7. New Bill Format

Originally Issued in Tariff Order dated 24th May 2016
Commission's Latest Directive in Tariff Order for the FY 2019-20 *The Petitioner, in the current MYT petition, has submitted that all related works with respect to R-APDRP is expected to be completed in FY 2018-19 (instead of the FY 2019-20 as proposed in the Business Plan Petition) as per the directive given by the MoP. The Commission therefore directs the Petitioner to submit the compliance of the directive before 31st May 2019 and include all requirements of billing format as per the latest Supply Code Regulations notified by the JERC.*
Petitioner's Response in Present Tariff Petition *It is very difficult to adopt the New Bill Format with the existing old billing system, as presently the bill is being printed on DOS based Line printer and the new bill format needs Windows software system with High speed Laser printer. As the department has entrusted the work of upgradation of the existing old billing system by an advanced software with NIC, the new bill format will be adopted on implementation of the new billing system*
Commission's Response The Commission takes note of the efforts by the Petitioner in this regard. The Commission directs the Petitioner to submit a report on the progress of the same within 1 month of issue of this Order, which should include the details of the work allotted to M/s NIC, the work completed, and the pending work with timelines for the completion schedule.

10.1.8. Time of Day (ToD) Tariff for HT/ EHT consumers

Originally Issued in Tariff Order dated 24th May 2016
Commission's Latest Directive in Tariff Order for the FY 2019-20 *The Commission directs the Petitioner to adopt ToD tariff for all the eligible HT/EHT consumers as per the charges specified in Chapter 10 of this Order. The Petitioner is also directed to complete the work of installing ToD compatible smart meters for all HT/EHT consumers in the first quarter of the FY 2019-20 and submit a status report by 30th July 2019. The Commission also reiterates that the Petitioner is expected to widely publicize the implementation of ToD tariff to the HT/EHT consumers so that they can immediately start availing the benefits of ToD tariff mechanism.*
Petitioner's Response in Present Tariff Petition *The direction of the Hon'ble Commission could not be implemented due to non-availability of facility in the existing old billing software. Provision for implementing ToD tariff is being incorporated in the new Billing*

software being developed by National Informatics Centre. On implementation of the new Billing Software, TOD metering will be implemented for all HT /EHT consumers.
Commission's Response The Commission takes note of the efforts by the Petitioner in this regard. The Department directs the Petitioner to submit a report on the progress of the same within 1 month of issue of this Order.

10.1.9. Capital Expenditure and Capitalisation

Originally Issued in Tariff Order of the FY 2018-19
Commission's Latest Directive in Tariff Order for the FY 2019-20 *The Commission directs the Petitioner to ensure implementation of all proposed schemes, as approved by the Commission for the 2nd Control Period, in a timely manner. The Commission also directs the Petitioner to provide quarterly updates with regard to the capital expenditure and capitalisation achieved as per Clause 8.5 (f) of the MYT Regulations, 2018.*
Petitioner's Response in Present Tariff Petition *The department takes every effort to implement all the proposed schemes with the funds made available by the Government in the Budget. The directives of the Hon'ble Commission in this regard will be adhered to.*
Commission's Response The Commission directs the Petitioner to ensure implementation of all proposed schemes, as approved by the Commission for the 2nd Control Period, in a timely manner. The Commission also directs the Petitioner to provide quarterly updates with regard to the capital expenditure and capitalisation achieved as per Regulation 8.5 (f) of the MYT Regulations, 2018.

10.1.10. Compliance towards Renewable Purchase Obligation (RPO)

Originally Issued in Tariff Order of the FY 2018-19
Commission's Latest Directive in Tariff Order for the FY 2019-20 *The Commission notes the planned procurement of ~340 MUs of Solar and Non-solar power approved for the 2nd Control Period. However, the Commission observes that the Petitioner is yet to clear a backlog of ~567 MUs till FY 2018-19 in order to fully comply with the RPO targets set by the Commission. The Petitioner is directed to clear the complete RPO backlog in FY 2019-20 in addition to fulfilling the standalone RPO targets set by the Commission for the FY 2019-20, as the Commission has allowed expenses for the same as part of the power procurement cost approved for the FY 2019-20.*
Petitioner's Response in Present Tariff Petition *The department has proposed to meet the entire RPO pertaining to the years 2019-20 and 2020-21, by purchase of REC and also by purchase of physical power through M/s SECI. The Govt. of Puducherry has already entered into Agreement with M/s SECI for purchase of 100 MW Wind Power and 50 MW Solar Power. It is also proposed to purchase 100 MW Solar Power from NTPC from their proposed Solar Power Plant at Nokh, in Rajasthan for which required PPA is to be signed shortly.*
Commission's Response The Commission takes note of the Petitioner's Submission. The Petitioner is directed to fulfil the standalone RPO targets set by the Commission for the FY 2020-21, as the Commission has allowed expenses for the same as part of the power procurement cost approved for the FY 2020-21.

10.1.11. Utilising the provision of FPPCA formula

Originally Issued in Tariff Order of the FY 2019-20

Commission's Latest Directive in Tariff Order for the FY 2019-20
The Commission observes that the Petitioner is yet to utilize the provision of Fuel and Power Purchase Cost Adjustment Mechanism in its billing. As power purchase cost is the major cost element of the ARR of the distribution licensee, the Commission considers adjustment due to change in power purchase cost at regular intervals to be vital in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year. The Commission therefore directs the Petitioner to make use of the FPPCA formula specified in Chapter 8 of this Order for any adjustment on account of fuel and power purchase cost variation. A status report on the same is to be submitted to the Commission by 31st August 2019.
Petitioner's Response in Present Tariff Petition
The department works out the adjustment to be made on account of Fuel and Power Cost variation based on the FPPCA formula as stipulated by the Hon'ble Commission every quarter. Report on the FPPCA along with the details of Power Purchase Cost variation are submitted to the Hon'ble Commission on quarterly basis.
Commission's Response
The Commission observed that the Petitioner has not implemented FPPCA mechanism. The Petitioner is not recovering/refunding any revenue pertaining to FPPCA from/to consumers. This may affect their cash flow. Therefore, the Commission directs the petitioner to make use of the FPPCA formula for any adjustments on account of fuel and power purchase cost variation on quarterly basis from FY 2019-20 onwards and submit the supporting bills/documents for the FPPCA calculations on quarterly basis to the Commission for evaluation and assessment.

10.2. New directives in this Order

10.2.1. kVAh based tariff

The Commission targets to implement kVAh tariff for its high voltage consumers beginning from the next tariff cycle of FY 2021-22.

The Commission thus directs the Petitioner to ensure that proper infrastructure and capabilities are in place to roll-out kVAh based tariff for its HT/EHT consumers from the next tariff cycle.

10.2.2. Category-wise per kW/kVA data

The Commission directs the Petitioner to start capturing the connected load / contracted demand data for all the categories and submit the same to the Commission in the next tariff petition.

10.2.3. Quarterly status reports

It has been observed that quarterly status reports for metering & billing, RPO compliance, FPPCA, SOPs, Capex and Capitalisation, and CGRF are not being submitted to the Commission in a regular and timely manner. The Commission directs the Petitioner to submit aforementioned reports regularly along with the supporting documents.

10.2.4. Cottage Industry Sales

The Commission observes that there has been no sales in the Cottage Industry category since the past 2-3 years, therefore, the Commission directs the Petitioner to remove this category from the Tariff Schedule in the next tariff filing.

11. Chapter 11: Tariff Schedule

11.1. Tariff Schedule

Table 189: Tariff Schedule*

S. No	Consumer Category	Fixed Charge	Energy Charge
1.	**LIFELINE SERVICES #**		
	0-50 units per month	-	**1.00 INR /kWh**
2	**DOMESTIC PURPOSES**		
a.	0-100 units per month	INR 40.00/connection/ month	1.50 INR /kWh
b.	101-200 units per month	INR 45.00/connection/ month	2.55 INR /kWh
c.	201-300 units per month	INR 45.00/connection/ month	4.50 INR /kWh
d.	Above 300 units per month	INR 45.00/connection/ month	5.90 INR /kWh
3	**COMMERCIAL**		
I	**LT Commercial**		
a.	0-100 units per month	INR 130.00/connection/ month	5.60 INR /kWh
b.	101-250 units per month		6.65 INR /kWh
c.	Above 250 units per month		7.40 INR /kWh
II.	**HT Commercial (For contract demand up to 5000 kVA)**	420.00 INR /kVA/month	5.65 INR /kWh
4	**AGRICULTURE SERVICES**		
I	Agriculture		
a.	Small Farmers	INR 11.00/HP/month	-
b.	Other Farmers	INR 50.00/HP/month	-
II	Cottage Industries /Poultry Farms/ Horticulture/Pisciculture		
a.	0-100 units per month	INR 40.00/connection/ month	1.50 INR /kWh
b.	101-200 units per month	INR 45.00/connection/ month	2.55 INR /kWh
c.	201-300 units per month	INR 45.00/connection/ month	4.50 INR /kWh
d.	Above 300 units per month	INR 45.00/connection/ month	5.90 INR /kWh
5	**PUBLIC LIGHTING**		
a.	Public Lighting	INR 110.00/pole/ month	6.80 INR /kWh
6	**INDUSTRIES**		

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S. No	Consumer Category	Fixed Charge	Energy Charge
a.	LT Industries	INR 130.00 /connection/ month	5.95 INR /kWh
b.	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	INR 420.00 /kVA/month	5.50 INR /kWh
c.	EHT Industries (For Supply at 110 kV or 132 kV)	INR 480.00 /kVA/month	5.20 INR /kWh
7	**LT Water Tanks**	INR 150.00/connection/ month	6.85 INR /kWh
8	**HT Others**	INR 480.00/kVA/month	6.60 INR /kWh
9	**ELECTRIC VEHICLE CHARGING STATION**	-	4.50 INR /kWh
10	**HOARDINGS/SIGNBOARDS**		
a.	Hoardings/signboards	INR 140.00 /kVA/month or part thereof	8.00 INR /kWh
11	**TEMPORARY SUPPLY**		
	Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.		

#OHOB connections are being converted into metered connections hence, from 1st April 2020 they will be charged as per metered tariff upto 50 units at INR 1.00/ kWh and No Fixed Charges. If the consumption exceeds 50 units then Domestic tariff shall be applicable.

**A Regulatory Surcharge of 4.00% shall be applicable to all the consumer categories as a percentage of the total Energy and Demand charges payable by the consumer towards recovery of past accumulated deficit.*

11.2. Applicability

Table 190: Applicability of Tariff Schedule

LIFELINE SERVICES
OHOB connections are being converted into metered connections hence they will be charged as per metered tariff upto 50 units at INR 1.00/ kWh and No Fixed Charges. If the consumption exceeds 50 units then Domestic tariff shall be applicable.
<u>LT Supply Limit for all LT categories</u> For single phase connection, the connected load shall be upto 5 kW, and for three phase connection, the connected load shall be upto 100 kVA
DOMESTIC PURPOSES
This tariff is applicable to services for lights, fans, Air-conditioning, Heating and other small domestic appliances etc. used for: a) Genuine domestic purposes including common services for staircase, lifts, water tanks in the purely domestic apartments. b) Supply to actual places of public worship such as temples, mosques, churches etc. c) Ashrams and Mutts, Non-commercial orphanage homes and old people homes run by religious and charitable institutions, social welfare and voluntary organizations. d) Government schools along with related facilities. e) Youth hostels, Harijan hostels, Rehabilitation Centres, Anganwadies and Balwadies run by Social Welfare Department. f) For own residences where one room is set apart for the purpose of consultation by doctors, lawyers, engineers, architects and auditors. g) To handloom in residence of handloom weavers (regardless of the fact whether outside labour is employed or not) and to handloom in sheds erected.

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h) To the residences where supply from a house is extended to tailoring shops, job typing, document writing, laundry pressing, and small caterers set up in the verandah of the house with small lighting load only (one tube light only).

HUT SERVICES (OHOB)

OHOB connections are being converted into metered connections hence they will be charged as per metered tariff upto 50 units at INR 1.00/ kWh and No Fixed Charges. If the consumption exceeds 50 units then Domestic tariff shall be applicable.

COMMERCIAL

LT Commercial

This tariff is for Lights and combined installation of lights and fans, mixed loads of lights and power, heating and air-conditioning applicable to:

a) Non-domestic and non-industrial consumers, trade and commercial premises
b) All educational institutions excluding Government Schools along with related facilities
c) Hotels, Restaurants, Boarding and Lodging Homes
d) Hospitals, Private clinics, Nursing Homes, Diagnostic Centres, X-ray Units etc.
e) IT related development Centres and Service Centres
f) Common services for Stair-case, lifts, water tanks etc. in the purely commercial/ combination of commercial and domestic.

HT Commercial

For Commercial Establishments including laboratories, hotels, marriage halls, cinema theatres, private educational institutions, private hospitals, shopping malls, telephone exchanges, broadcasting companies with contracted maximum demand upto 5000 kVA. New High Tension consumers who want to avail a contract demand above 5000 kVA or existing High Tension consumers who want to enhance their demand beyond total contract demand of 5000 kVA should avail power at 110 kV or 132 kV as the case may be.

AGRICULTURE SERVICES

Agriculture

For supply to bonafide agricultural services with a connected load of not less than 3 HP per service

Note

1. Electricity will be supplied under the tariff category “Small farmers” to those consumers whose families are solely dependent on the income derived from their agricultural land holding, which should not exceed two and half acres of wet land or five acres of dry land. A certificate to this effect from Revenue authority shall be produced. "Small farmer” means a person whose total holding, whether as owner, tenant or mortgaged with possession or partly in one capacity and partly in another, does not exceed two-and-a half acres of wetlands or five acres of dry land. In computing the extent of land held by a person who owns both wet and dry lands, two acres of dry land shall be taken as equivalent to one acre of wet land.
2. The above concession will be withdrawn if resale of energy or unauthorized load / extension or use for other purpose is detected by the Department.
3. Agricultural power loads below 3 H.P. will be charged under Tariff Category A1. A bonafide farmer may use his motor in the Agricultural Service for allied agricultural purposes such as sugarcane crushing, thrashing etc.
4. Power supply to Farmhouses shall be metered separately and charged under domestic tariff (A2).

Payment of Tariff Charges by Agriculture Consumers

1. The Tariff shall be collected in three equal instalments payable in April August and December in each year. The instalments shall be payable before the 15th of the respective months.
2. For new service, the first instalment shall be proportionate to the number of whole months remaining till the month in which the first instalment is due. Fraction of a month shall be reckoned as a whole month.

Cottage Industries /Poultry Farms/ Horticulture/Pisciculture

It is applicable to bonafide cottage industries, horticultural nurseries including plant tissue culture media, bona fide poultry farms and Pisciculture.

Note:

(a) Cottage industries

The following conditions should be satisfied in order that an industry may be classified as a bonafide cottage industry:

1) It should be conducted entirely within the home; the home being deemed to be permanent residence of the proprietor.
2) The industry shall not cause any residence to constitute a factory within the meaning of the Factories Act, 1948 or any amendment thereof.
3) Not more than two persons outside the immediate family of the proprietor shall be employed in the factory.
4) It should be certified by the Director of Industries that the industry for which power is used is a cottage industry.
5) The produce is not purely utilized mainly for the domestic consumption of the proprietor but should also be available for sale to the public.

(b) Poultry farms

The following conditions should be satisfied in order that the service may be classified as a bona fide poultry farm.

1) The capacity of the farm shall be a minimum of 100 birds and maximum of 5,000 birds (both layer and broiler birds).
2) The application of the beneficiary seeking such concession shall be verified and recommended by the Animal Husbandry Department.

(c) Horticultural/Pisciculture

1) The applications of the beneficiary seeking such concession shall be verified and recommended by the Director, Agriculture Department. For Pisciculture, applications of the beneficiary seeking such concession shall be verified and recommended by the Director, Fisheries Department.

PUBLIC LIGHTING
This tariff will apply to public lighting in markets, bus stands, traffic signals, high mast lights on public ways, public parks, public lighting in notified industrial estates
INDUSTRIES
LT Industries
Applicable to low tension industrial consumers including lighting in the industrial services.
HT Industries (For Supply at 11 kV, 22 kV or 33 kV)
The supply voltage for HT consumer's upto 5000 kVA will be 33 kV, 22 kV or 11 kV as the case may be. Applicable to industrial establishments, IT and ITES based Companies registered under Factories Act/ Companies Act with contracted maximum demand upto 5000 kVA. New High Tension consumers who want to avail a contract demand above 5000 kVA or existing High Tension consumers who want to enhance their demand beyond total contract demand of 5000 kVA should avail power at 110 kV or 132 kV as the case may be.
EHT Industries (For Supply at 110 kV or 132 kV)
Applicable to all types of industries supplied at 110 KV or 132 KV as the case may be.
LT WATERWORKS
Applicable to low tension consumers with Water Tanks including lighting in the premises maintained by State Government Departments/Undertakings and Local Bodies.
HT OTHERS
Applicable to State and Central Government establishments of non-industrial and non-commercial nature.
ELECTRIC VEHICLE CHARGING STATIONS
This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/ specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time.

The tariff for domestic purposes shall be applicable for domestic charging.
TEMPORARY SUPPLY
NOTE: 1. The rate for Special illumination shall apply to weddings, garden-parties and other Private/Government functions when the illumination is obtained through bulbs fastened in other surfaces of wall of buildings, on trees and poles inside the compound and in pandal etc., outside the main building. 2. In cases where such Special illumination is done in the existing regular services the energy utilized for such illumination shall be metered separately and the consumption will be charged under Special illumination charge as levied under temporary supply. 3. Wherever such Special illumination is done without authorization, a penal charge of INR 500 for service shall be levied in addition to the existing tariff of the installation. 4. Other conditions for connection of line and service connection charges, dismantling, security deposit etc. will be as per the latest Supply Code Regulations notified by JERC.
HOARDINGS/SIGNBOARDS
Electricity for lighting external advertisements, external hoardings and displays at departments stores, malls , multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection under commercial category.

In order to mitigate the hardship of Electricity Consumers and DISCOMs/EDs in view of nation wide lockdown due to COVID-19. The Commission has issued SUO MOTU Order No. JERC/LEGAL/SMP/27/2020 on April 10, 2020 giving directions, wherein the Commission has provided relief to Industrial and Commercial consumers and acknowledged the need for additional working capital requirement by the Distribution Licensees. Further, the Commission is of the view that the lockdown will also impact certain other parameters of ARR like sales/sales mix, power purchase quantum and cost, revenue etc. However, it may not be possible to take into account all these impacts in totality with the desired accuracy and efficacy at this point of time. The Commission will consider all such additional costs and variations in parameters appropriately while evaluating the APR of FY 2020-21 and thereafter True-up of FY 2020-21.

11.3. General Terms and Conditions

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

1) The tariff indicated in this tariff schedule is the tariff rate payable by the consumers of Union Territory of Puducherry.

2) A Regulatory Surcharge of 4.00% shall be applicable to all the consumer categories as a percentage of the total Energy and Demand charges payable by the consumer towards recovery of past accumulated deficit.

3) These tariffs are exclusive of electricity duty, tax on sale of electricity, taxes and other charges levied by the Government or other competent authorities from time to time.

4) Unless otherwise agreed to, these tariffs for power supply are applicable to single point of supply.

5) The power supplied to a consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff. If energy supplied for a specific purpose under a particular tariff is used for a different purpose not contemplated in the contract for supply and/ or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of Section 126 of the Electricity Act, 2003 and the Supply Code Regulations notified by JERC.

Provided that

(a) if a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh

(b) if either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.

6) **Power Factor Charges for HT and EHT**

(a) Power factor means, the average monthly power factor and shall be the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

(b) The consumer shall maintain the monthly average power factor of the supply not less than 90% (lagging). If the monthly average power factor of (a) consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 1% in power factor upto 70%(lagging).

(c) In case the monthly average power factor of the consumer is more than 95% (95% lagging), a power factor incentive @ 1% on demand and energy charges shall be given for each increase of 1% in power factor above 95% (lagging).

(d) If the average power factor falls below 70% (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

7) If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply as per the Act & Supply Code Regulations notified by JERC.

8) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out. Similarly, slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.

9) The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawal is more than 20% of the contract demand, then the connections shall be disconnected immediately.

Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

10) Unless specifically stated to the contrary, the figures of energy charges relate to INR per unit (kWh) charge for energy consumed during the month.

11) **Late Payment Surcharge** shall be applicable to all categories of consumers. Late payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. In case the delay is less than a month, the surcharge will be levied at 2% per month on proportionate basis considering a month consists of 30

days. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paisa shall be ignored and amount of 50 paisa or more shall be rounded off to next rupee. In case of permanent disconnection, late payment surcharge shall be charged only up to the month of permanent disconnection.

12) **Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding Consumer Security Deposit) which remains with the licensee at the end of the month. Such a rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

13) **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

Provided that in case the payment is made by cheque, the prompt payment discount will be applicable only if the payment by cheque is made 3 days prior to date of availing the prompt payment discount i.e. before 10 days from the due date of payment.

14) **Time of Day (TOD) Tariff**

(a) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.

(b) The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Table 191: Applicability of ToD Tariff

Time of use	Demand Charges	Energy Charges
Normal period (6:00 a.m. to 6:00 p.m.)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m. to 10.00 p.m.)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (10:00 p.m. to 6:00 a.m.)	Normal Rate	90% of normal rate of energy charges

(c) Applicability and Terms and Conditions of TOD tariff:

i. The Commission directs the Petitioner to introduce the TOD tariff as mentioned above urgently including installation of the Smart Meters to capture ToD consumption.

ii. The facility of aforesaid TOD tariff shall not be available to the HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power

iii. The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff

iv. In the event of applicability of the TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

15) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula specified in Chapter 8 of this Tariff Order. Such charges shall be recovered / refunded/adjusted in accordance with the terms and conditions specified in the FPPCA mechanism.

16) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order.

17) Schedule of service charges and other charges would be as approved in this Tariff Order.

11.4. Schedule of Other Charges

Table 192: Schedule of Other Charges

S. No.	Description	Charges (INR)
A	Charges for Service Connections	
A1	New LT overhead service lines	
1	One hut one Bulb	Nil
2	Other single phase Services	250
3	Three phase Services	500
4	L.T C.T operated Meter services	3,000
5	H.T Services	10,000
A2	New LT underground service lines	
1	Single Phase services	500
2	Three phase Services	1,000
A3	Rating / re-rating of services	
1	Single phase Services	125
2	Three phase Services	250
3	L.T C.T operated Meter service	1,500
4	H.T Service	2,500
Note: **The above charges under (A1) & (A2) will be applicable for addition or alteration or reduction of connected load and enhancement or reduction of CMD or alteration of internal Electrical installations.**		
B	Testing for Installation	
1	Domestic lighting / Commercial lighting / Agriculture Services	200
2	Other LT Services	900
3	HT/EHT Services	7,500
Note: **Testing for servicing a new installation (or of an extension or alteration) - For the first test No Charge. Subsequent testing warranted due to absence of contractor or his representative (or) due to defects in wiring of consumer's premises or at the request of the consumer or at occasions that warrant testing of installations for the second time for reasons attributable to the consumers**		
C	Testing for meters and metering arrangements	
1	Single phase direct meter	150
2	Three phase direct meter up to 50 A	200
3	L.T C.T coil test	800
4	H.T Tri-vector Meter (0.5 class accuracy or CT operated LT meters)	1,500
5	H.T Tri-vector Meter (0.2 class accuracy)	2,000
6	H.T Metering Cubicle	3,500
D	Testing of HT/EHT Consumer Protective Equipment	
1	Testing charges for protective relays (Earth fault, line fault etc.)	4,500
2	Testing charges for one set of current transformer	4,500
3	Testing charges for one set of potential transformer	4,500
4	Testing charges for one set of EHT current transformer	6,000
5	Testing charges for one set of EHT potential transformer/ CVT	6,000

S. No.	Description	Charges (INR)
6	Testing charges for one set of HT circuit breaker	**4,500**
7	Testing charges for one set of EHT circuit breaker	**6,000**
8	Testing charges for measurement of earth resistance	**3,000**
9	Testing charges for Transformer oils	**500**
E	Disconnection/Re-connection Charges	
1	Disconnection of L.T service on request	**100**
2	Disconnection of HT service on request	**500**
3	Reconnection of L.T Service (on all occasions)	**100**
4	Reconnection of HT Service (on all occasions)	**1,000**
F	Title Transfer of Services	
1	Domestic	**250**
2	Commercial Lighting Installation	**500**
3	All other LT installation	**1,000**
4	HT/EHT Services	**2,000**
G	Furnishing of Certified Copies (To be issued to the consumer only)	
1	Issue of duplicate Monthly bills for a month	**10**
2	Contractor's completion-cum test report	**10**
3	Ledger Extract	**20/calendar year or part thereof**
4	Agreement	**50**
5	Estimate	**50**
H	**Charges for Replacement of Burnt Meters**	
1	LT Single Phase meters	**700**
2	LT Three Phase meters	**1,300**
3	Three Phase LT meters with CTs	**3,000**
4	HT Meter 0.5s class of accuracy	**6,500**
5	HT Meter 0.2s class of accuracy	**30,000**
6	HT Metering Cubicle (CT/PT Unit)	**70,000**
I	Fuse Renewal Charges	
1	Domestic	**NIL**
2	Commercial	**50**
3	L.T Industrial	**50**
4	High Tension/Extra High Tension Installation	**250**
J	Shifting of Meter Board at Consumer's Request	
1	LT Single Phase Supply	**125**
2	**LT Three Phase Supply**	**250**

Annexures

Annexure 1: List of Stakeholders

The following is the list of the participants in Public Hearings conducted in Puducherry and Karaikal:

Table 193: List of participants in Public Hearings

S. No.	Name of Stakeholder
1	Shri. Keerthi Gurunathan, Hotel Association of Puducherry
2	Shri. K. Saravanan
3	Shri. Raghuraman, CII Puducherry
4	Shri .V.Perumal
5	Shri. G. Vazhumuni
6	Shri. M. Narayanasamy Makkal Mandram
7	Thiru. Karthikeyan Pasumai Bharatham
8	Shri.V. Balasubramani, Parent Association
9	Thiru. T. Geethanathan, CPI, Puducherry
10	Shri. P. Ragupathy, President, Human Awareness Organisation
11	Shri. Rajendiran, Sumangala Steels
12	Shri. Daniel
13	Shri. R. Chanemougam
14	Shri Bairavan, Karaikal Industrial Forum
15	Shri. Mohammed Bilal, SUCI Communist Party
16	Shri. A.S.Ravi, AITUC Karaikal District
17	Shri. R.Pazhanirajan
18	Shri. R. Silambarasan
19	Shri. R.Gunasekaran, TR Patinam consumer Forum
20	Shri. M. Rajadurai, FEDCOT India
21	Shri. A.S. Balasubramanian
22	Shri. D. Mathan Kumar
23	Shri. S.Singaravelan
24	Shri. S.Martien
25	Shri. M. Senthil Kumar Gandi
26	Tmt. D.Victoria
27	Shri. G. Balamurugan
28	Shri. K.Jayakumar
29	Shri. S.P. Vedanayagam
30	Shri. J.Sivaganesh
31	Shri. N.G.R. Elangovan
32	Shri. E.Jayaseelan