TARIFF ORDER

True-up for FY 2020-21, Annual Performance Review for FY 2021-22 and Aggregate Revenue Requirement (ARR) 3rd Control Period and Determination of Retail Tariff for the FY 2022-23

Petition No. 70/2021

for

Electricity Department, Government of Puducherry (PED)

31st March 2022

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
3rd and 4th Floor, Plot No. 55-56, Sector -18, Udyog Vihar - Phase IV
Gurugram, (122015) Haryana
Telephone : +91(124) 4684705 Telefax: +91(124) 4684706
Website: www.jercuts.gov.in
E-mail: secy.jercuts@gov.in

This page has been left blank intentionally.

Table of Contents

List of Tables

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

Abbreviation	Full Form
NTI	Non-Tariff Income
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

This page has been left blank intentionally.

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Ms. Jyoti Prasad, Member

Petition No. 70/2021

In the matter of

Approval of True-up for FY 2020-21, Annual Performance Review for FY 2021-22 and Aggregate Revenue Requirement (ARR) of 3rd Control Period and Determination of Retail Tariff for the FY 2022-23.

And in the matter of

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

ORDER

Dated: 31st March 2022

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 for FY 2020-21, Annual Performance Review for FY 2021-22 and Aggregate Revenue Requirement (ARR) for 3rd control period and Determination of Retail Tariff for the FY 2022-23 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 28th December 2021. 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, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually. The virtual Public Hearing was held on 28th January 2022, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) Further, suggestions/ comments/ views and objections were invited from the Stakeholders and Electricity Consumers. Public Hearing through video-conferencing was also held on 28th January 2022, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

4) The Commission based on the Petitioner’s submission, relevant JERC 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 for FY 2020-21, Annual Performance Review for FY 2021-22 and Aggregate Revenue Requirement (ARR) for 3rd control period and Determination of Retail Tariff for the FY 2022-23.

5) 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 2020-21:

Secretary, JERC
(For Goa & UTs)

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2020-21 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1470.43	1,447.48
2	Revenue from Retail Sales at Existing Tariff	**1433.57**	**1,433.70**
	Net Gap /(Surplus)	**36.86**	**13.79**

(b) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the APR of FY 2021-22:

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2021-22 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1,590.20	1,549.19
2	Revenue from Retail Sales at Existing Tariff	1,514.75	1,538.08
3	**Gap / (Surplus) without Regulatory Surcharge**	**75.45**	**11.12**
4	Regulatory Surcharge (@5%)	75.74	76.90
5	Total Revenue (2+4)	1,590.49	1,614.98
6	**Net Gap /(Surplus) (1-5)**	**(0.29)**	**(65.79)**

(c) 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 2022-23:

Table 3: Standalone Revenue Gap/ (Surplus) at existing tariff without regulatory surcharge for the FY 2022-23 (INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1,614.88	1,606.46
2	Revenue from Retail Sales at Existing Tariff	1,546.59*	1,569.05
3	**Gap / (Surplus) without Regulatory Surcharge**	**68.29**	**37.41**

The Petitioner has submitted the existing revenue from retail sales including Regulatory surcharge of INR 1623.92 Cr but for comparison the Commission has separated the regulatory surcharge part of INR 77.33 Cr.

(d) To meet the revenue gap of INR 37.41 Cr, the Commission has approved an average tariff hike of 2.38% while retained the regulatory surcharge of 5% for the FY 2022-23. The Petitioner has proposed an average tariff hike of 1.68% to recover INR 25.94 Cr from total gap of INR 68.29Cr.

Table 4: Standalone Revenue Gap/ (Surplus) at approved revised tariff without regulatory surcharge for the FY 2022-23 (INR Cr)

Particulars	Petitioner's Submission	Now Approved
Net Revenue Requirement (a)	1,614.88	1,606.46
Revenue from Retail Sales at Proposed/Approved Tariff (b)	1,572.53	1,606.44
Standalone Gap /(Surplus) for the year (c=b-a)	**42.35**	**0.02**

(e) Accordingly, the cumulative revenue gap/ (surplus) at approved tariff by the end of the FY 2022-23, as approved by the Commission is given in the following table:

Table 5: Revised Revenue Gap/ Surplus with Regulatory Surcharge approved by Commission (INR Cr)

	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at Revised Tariff (excluding surcharge)	1,433.70	1,538.08	1,606.44
Opening Gap Balance	375.88	423.16	388.59
Standalone Gap /(Surplus) for the year	13.79	11.12	0.02
Regulatory Surcharge rate		5%	5%
Less: Regulatory surcharge		76.90	80.32
Closing Gap Balance	389.67	357.37	308.29
Avg. Gap	382.77	390.27	348.44
Interest rate	8.75%	8.00%	8.00%
Carrying Cost	**33.49**	**31.22**	**27.88**
Cumulative Gap	**423.16**	**388.59**	**336.16**

(f) 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.

(g) The Commission has approved the Average Billing Rate (ABR) for FY 2022-23 as INR 5.68/kWh as against the approved Average Cost of Supply of INR 5.68/kWh.

(h) This Order shall come into force with effect from 1st April, 2022 and shall, unless amended or revoked, continue to be in force till further orders of the Commission.

(i) The Commission has approved the fixed charges on per kW basis from per connection basis for the Domestic category.

6) 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.

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

Sd/-

(Jyoti Prasad)

Member (Law)

Place: Gurugram
Date: 31st March 2022

(Certified Copy)

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

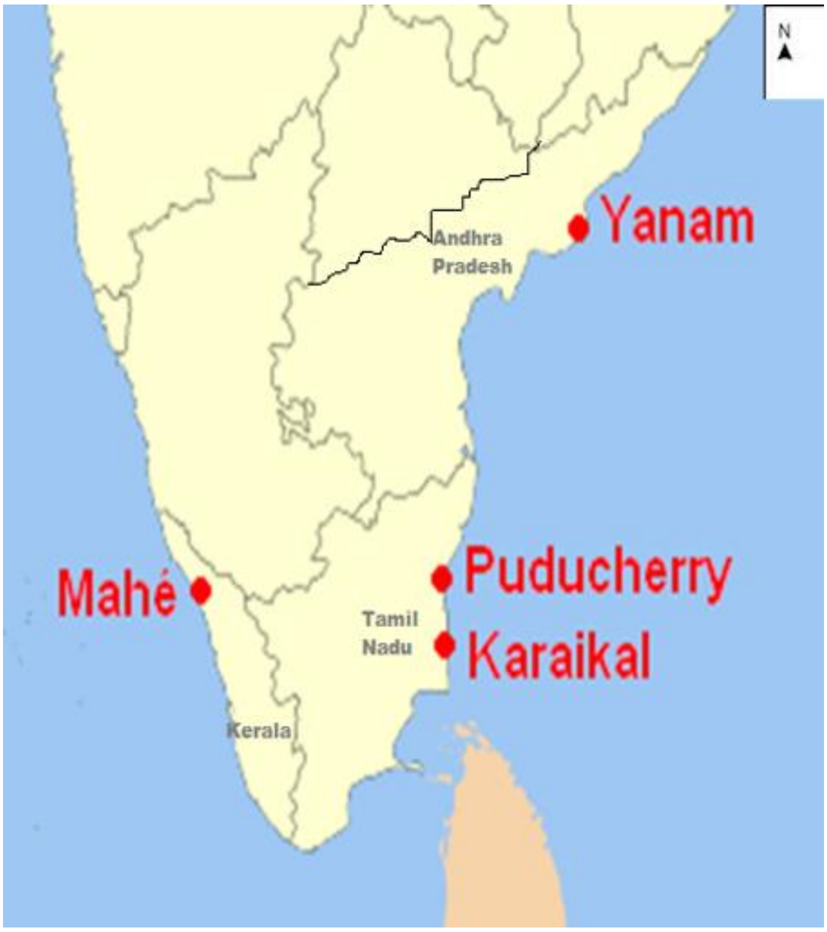
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "the Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R 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 6: 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 PED, 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 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 JERC 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.

1.5. Multi Year Tariff Regulations, 2021

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 (hereinafter referred to as JERC

MYT Regulations, 2021) on 22thMarch 2021. These Regulations are applicable in the 3rd MYT Control Period comprising of three financial years from FY 2022- 23 to FY 2024-25. 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 28th December 2021 and marked as Petition No. 70/2021. 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 7: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of Discrepancy Note	1.2.2022, 17.2.2022 and 3.3.2022
2	Public hearing	28.1.2022
3	Technical Validation Session	17.2.2022 and 3.3.2022
4	Replies received from the Petitioner with regard to Discrepancy Note	10.2.2022,25.2.2022 and 3.3.2022

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 8: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Place of circulation
1	13.01.2022 and 22.01.2022	The New Indian Express	Puducherry, Karaikal, Mahe & Yanam
2		The Daily Thanthi	Puducherry, Karaikal
3		The Hindu	Puducherry, Karaikal
4		Kerala Kaumudi	Mahe
5		Janamitra	Yanam
6		Kal Publication	

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 9: Details of Public Notices published by the Commission

Sl. No.	Date	Name of Newspaper	Place of Circulation
1	6.1.2022 25.1.2022	The Hindu	Visakhapatnam, Vijayawada
2		New Indian Express	All Tamil Nadu
3		Daily Thanthi	Puducherry

Sl. No.	Date	Name of Newspaper	Place of Circulation
4		Dinakaran	Puducherry

1.9. Public Hearing

The COVID-19 pandemic has adversely impacted the movement of people as per the guidelines of GoI. These guidelines have also suggested avoiding of travel and gathering of people as far as possible. In view of above, the physical conduct of proceedings by the Commission was not possible. So, The Commission deemed it is necessary to provide an access to all the stakeholders by conducting proceedings remotely, by the use of audio and video enabled hearings in the matters of Petition submitted by Electricity Department, Puducherry. Therefore, the Commission has decided that the comments/suggestions of the stakeholders need to be heard virtually through video conferencing for seeking their opinion.

Accordingly, the Virtual Public Hearing was held on January 28, 2022 from 11 AM to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

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 JERC MYT Regulations, 2021.

The COVID-19 pandemic has adversely impacted the movement of people as per the guidelines of GoI. These guidelines have also suggested avoiding of travel and gathering of people as far as possible. In view of above, the physical conduct of proceedings by the Commission was not possible. So, The Commission deemed it is necessary to provide an access to all the stakeholders by conducting proceedings remotely, by the use of audio and video enabled hearings in the matters of Petition submitted by Electricity Department, Puducherry. Therefore, the Commission has decided that the comments/suggestions of the stakeholders need to be heard virtually through video conferencing for seeking their opinion.

Accordingly, the virtual Public Hearings was held on 28th January 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. 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. No revision on consumer tariff

Stakeholders' Comments:

Due to Pandemic COVID -19 situation it is requested to not raise Domestic (0-100 slab), Agricultural, Commercial tariff.

Petitioner's Response:

The ARR petition has been filed before the Commission. The decision to be taken by the Commission.

Commission's View:

The Commission notes the Stakeholders' concern. The Commission while designing retail tariffs for the FY 2022-23 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2021.

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.

2.2.2. Out-standing Dues of PED

Stakeholders' Comments:

Pending Payments form all government office/establishments and panchayat offices shall be checked regularly by the PED. If it is collected there will be no need to raise the tariff.

Petitioner's Response:

Recently, the Government of Puducherry vide Go.Ms.No.36/dated.07.12.2021 has accorded approval for making Book Adjustment for an amount of Rs.440,00,00,000 (Rupees Four Hundred and forty Crores only) towards the settlement of outstanding current consumption charges of various Government departments, Companies, Local Bodies and PRIs in the UT of Puducherry. Hence the Government dues would be drastically reduced.

Action is being taken to disconnect all the services those who are having arrears greater than Rs.5000 even in Domestic consumer also. Wide publicity has also been given by the Territorial EE's for creating awareness of the public to pay the outstanding arrears.

Commission's View:

The Commission considers all the expenses and revenue on accrual basis while determining the Annual Revenue Requirement (ARR). Hence, pending dues don't have any impact on ARR/Tariff.

2.2.3. Power subsidy to poor SC Aquaculture marginal Farmers

Stakeholders' Comments:

Power subsidy to poor SC Aquaculture marginal Farmers at Yanam.

Petitioner's Response:

Regarding power subsidy to poor SC Aquaculture marginal Farmers at Yanam, it is informed that the matter of granting subsidy to poor consumers is a subject matter to be decided by the Government of Puducherry and all the tariff category approved by the Commission is without considering any subsidy component. Therefore, the stakeholder is requested to approach Government of Puducherry for grant of relief, if any

Commission's View:

The Commission agrees with the submission of the Petitioner. The Commission while designing retail tariffs for the FY 2022-23 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2021.

2.2.4. Public Grievance meeting through online VC mode

Stakeholders' Comments:

Public grievance meeting shall be conducted frequently through online VC mode.

Petitioner's Response:

Due to Pandemic COVID-19 situation and in order to follow the COVID guidelines issued by the GOP physical Public Grievance meeting was not conducted. Conducting meeting through online VC mode will be made in future. CGRF is conducting periodical Public Grievance meetings in all the Regions.

Commission's View:

The Commission is of the view that the guideline for the conducting of Public Grievance though online mode may be shared on the Petitioner's website. Further, the schedule for online Public Grievance meetings shall be communicated to parties at least seven days in advance from the schedule date.

2.2.5. Publicising of Public hearing

Stakeholders' Comments:

Hearing notice not widely Publicized. PED Published the hearing notice 4 days before the hearing.

Petitioner's Response:

Hearing notice was widely published well before the JERC hearing in all leading dailies and in all Vernacular languages of this UT.

Commission's View:

The Commission noted the stakeholder comments and directs the Petitioner to publish public notice at least 15 days prior to scheduled date of Public Hearing. Further, the Commission also publishes the public hearing notice twice, once at least 21 days in advance and second a week prior to the Public Hearing.

2.2.6. Replacement of old cable

Stakeholders' Comments:

PED shall replace all underground cable which are 30 year old.

Petitioner's Response:

This will be taken care in the new scheme initiated by the Department namely "Revamped Distribution Sector scheme" a Government of India sponsored scheme.

Commission's View:

The Commission noted the Petitioner submission for replacement of old conductor and directs the Petitioner to provide DPR for "Revamped Distribution Scheme- Reforms Based Results Linked Scheme", within 3 month of this Order.

2.2.7. Uninterrupted power supply to rural area

Stakeholders' Comments:

It is requested to provide uninterrupted power supply to rural areas.

Petitioner's Response:

Presently this Department is providing un-interrupted power supply except during natural calamities and without any discrimination between Urban and Rural area.

Commission's View:

The Commission is of view that the Petitioner shall make all out efforts to improve the reliability of supply in rural feeders.

2.2.8. Pre-paid metering

Stakeholders' Comments:

Prepaid metering can be implemented to improve collection efficiency of PED. Provision of prepaid metering is proposed for all Govt. services.

Petitioner's Response:

This Department initiated a scheme namely "Revamped Distribution Scheme- Reforms Based Results Linked Scheme" wherein the Electricity Department, Puducherry envisages replacement of all the existing meters by Pre-paid Smart meters including all Govt services.

Commission's View:

The Commission has noted the Petitioner submission for Pre-Paid metering and directs the Petitioner to provide DPR for "Revamped Distribution Scheme- Reforms Based Results Linked Scheme", within 3 month of this Order.

2.2.9. Sale of Scrap

Stakeholders' Comments:

PED shall Quarterly dispose of all its scrap, as source of Other Income

Petitioner's Response:

Action is being taken by this Department for disposing of scrap.

Commission's View:

The Commission has noted the Petitioner submission for sale of scrap. Income for sale of scrap by the Petitioner should be considered as Non-Tariff Income in ARR.

2.2.10. Availability of material at departmental store

Stakeholders' Comments:

PED shall make sure that sufficient material shall be available with its store, to perform necessary R&M of its network.

Petitioner's Response:

Based on the Budgetary provision made by the GOP materials are procured and available in the Department stores. Major materials like Poles, Transformer, conductors are available in the Stores.

Commission's View:

The Commission directs Petitioner to maintain appropriate spare in its store and perform necessary R&M activity to maintain system reliability.

2.2.11. Privatisation meeting

Stakeholders' Comments:

Public are not allowed on meeting related to Privatisation.

Petitioner's Response:

The meeting was conducted only to apprise employee's union and Engineer's representative to discuss features of Transfer Scheme and hence Public were not allowed.

Commission's View:

The Commission is of the view that the decision to restructure and privatize the power department/utility/Board is the sole prerogative of the State Government, which neither requires nor is contingent upon any prior consultation or approval from the Commission under Section 86(2) of the EA 2003, so long as the applicable provisions under the EA 2003 are duly complied with.

The limited role of JERC w.r.t the decision of the appropriate government to corporatize and privatize the PED as envisaged under section 86(2) of the EA 2003 is advisory in nature.

3. Chapter 3: True-up of FY 2020-21

3.1. Background

The True up for the FY 2020-21 has 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 (herein referred as JERC MYT Regulations, 2018).

The Commission issued the Tariff Order for FY 2021-22, determining the Aggregate Revenue Requirement (ARR) and the tariff for FY 2021-22, Annual Performance Review (APR) of FY 2020-21 and True-up of FY 2019-20 on 07 April 2021.

3.1. Approach for the True-Up of FY 2020-21

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 2020-21 of the second year of the 2nd Control Period, in accordance with the principles laid down in the JERC MYT Regulations, 2018.

3.2. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2020-21 as 2,522.06 MUs as against an approved energy sales quantum of 2,599.21 MUs in the Tariff Order dated 7th April,2021.

Commission's analysis

The JERC MYT Regulations, 2018 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 12.1 of the JERC MYT Regulations, 2018 in this regard stipulates the following

"For the purpose of these Regulations, the term "uncontrollable factors" for a Transmission or Distribution Licensee shall comprise of the following factors, which were beyond the control of the Licensee, and could not be mitigated by the Licensee:

- *a) Force Majeure events;*
- *b) Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;*
- *c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;*
- *d) Transmission loss;*
- *e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;*
- *f) Variation in fuel cost;*
- *g) Change in power purchase mix;*

h) Inflation;

i) Transmission Charges for a Distribution Licensee;

j) Variation in market interest rates for long-term loans;

k) Employee expenses limited to one time payment owing requirements of a pay commission and terminal liability of employees;

l) Taxes and Statutory levies;

m) Taxes on income;

n) Income from the realisation of bad debts written off:

Provided that where the Applicant believes, for any variable not specified above, that there is a material variation or expected variation in performance for any Financial Year on account of uncontrollable factors, such Applicant may apply to the Commission for inclusion of such variable at the Commission's discretion, under this Regulation for such Financial Year:

Provided further that the uncontrollable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations."

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

Table 10: Energy Sales (MUs) trued-up by the Commission

Consumer category	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
Domestic	842.43	806.17	806.17
Lifeline Services	5.62	3.50	3.50
Commercial	189.33	148.50	148.50
Agriculture	68.57	59.99	59.99
Public Lighting	23.23	20.50	20.50
LT Industrial + water tank	164.94	142.00	142.00
Temporary	4.96	4.43	4.43
Total LT -Category	**1299.07**	**1186.27**	**1186.27**
HT-1 (HT Industrial/Commercial)	857.52	864.43	864.43
HT-2 (Government & water tank)	64.41	53.49	53.49
HT-3 (Industrial EHT)	378.21	413.94	413.94
Total HT -Category	**1300.14**	**1331.86**	**1331.86**
Export to other Region	-	3.92	3.92
Grant Total	**2599.21**	**2522.06**	**2522.06**

The Commission approves 2522.06 MUs as energy sales in the True-up of the FY 2020-21.

3.3. Open Access Sales and Purchase

Petitioner's Submission

There were NIL Open Access Sales and NIL Open Access Purchase approved by the Commission. The Petitioner has submitted the NIL Open Access Sales and NIL Open Access Purchase in the true-up.

Commission's analysis

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

Table 11: 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	0	0	0
2	Open Access Purchase	0	0	0

The Commission approves NIL Open Access Sale and Purchase in the True-up of the FY 2020-21.

3.4. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss of 2.45% against an approved figure of 2.12% in the Tariff 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 12: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	For Central Government Stations	2.12%	2.45%	2.45%

The Commission approves the Inter-State Transmission Loss as 2.45% for CGS stations in the True-up of the FY 2020-21.

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 11.99% in the FY 2020-21 against target of 11.75%.

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 has also noticed that the Petitioner has submitted 11.99% T&D losses but after analysing the inputs submitted by the Petitioner the T&D losses worked out as 12.11%. The Commission is constrained to consider Intra-State T&D loss of 12.11% in the FY 2020-21 for the purpose of determination of Energy Balance against an approved T&D loss of 11.75% 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 JERC MYT Regulations, 2018. The calculation of the same has been discussed in detail in Energy balance section of FY 2020-21 of this Order.

The Table below provides the Intra-State T&D loss approved for FY 2020-21 in the Tariff Order date 07 April 2021, The Petitioner's Submission and as approved by the Commission now.

Table 13: Intra-State distribution loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.75%	11.99%	12.11%

The Commission, while Truing up for FY 2020-21, has considered the actual Intra-State T&D loss of 12.11% for the FY 2020-21. However, the dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been detailed in further Section and has been deducted from the trued-up ARR.

3.6. Power Purchase Quantum & Cost

Petitioner's Submission

The Petitioner submitted that it 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. The summary of actual Power Purchase from various sources along with their costs including Transmission Charges, UI charges and purchase from traders as submitted by the Petitioner for FY 2020-21 is shown in Table below:

Table 14: Power Purchase cost submitted by the Petitioner (in INR Cr)

S. No.	Particulars	FY 2020-21		
		Purchase (MU)	Cost (INR Cr.)	Rate (INR/unit)
1	NTPC	1145.09	371.13	3.24
2	NLC	584.84	286.74	4.90
3	PPCL	217.92	79.29	3.64
4	KAIGA	298.15	63.48	2.13
5	MAPS	26.66	6.95	2.60
6	NTECL	53.51	60.20	11.25
7	KKNP	387.94	153.97	3.97
8	NNTPS	164.35	77.26	4.70
9	NTPL (Tuticorin)	127.90	80.34	6.28
10	Open market	-	-	-
11	OA Power purchase	-	-	-
12	PGCL (POC + Non POC Charges)	-	85.73	-
13	SRLDC Charges	-	0.27	-
14	SRPC	-	0.13	-
15	RPO Obligations	-	-	-
16	KPTCL	-	0.08	-
17	UI Charges	-	0.39	-
18	Power purchased expenses for prior period	-	-	-

S. No.	Particulars	FY 2020-21		
		Purchase (MU)	Cost (INR Cr.)	Rate (INR/unit)
19	**Sub-Total**	-	**1265.96**	-
20	Adjustments Bills / Debit Notes / Credit Notes for prior period	-	-	-
21	Less: Interest cost	-	24.88	-
22	**Power Purchase Cost (Sub- Total)**	-	**1241.08**	-
23	URS Income	-	0.07	-
24	UI/DSM Charges	-	11.81	-
25	RARS Charges	-	1.44	-
26	Sale of Trading Materials	-	0.18	-
27	**Sub-total (Additional Income)**	-	**13.50**	-
28	**Net Power Purchase Cost**	**3006.36**	**1227.58**	**4.08**

Commission's analysis

The JERC MYT Regulations, 2018 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor.

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, KSEB and TANGEDCO. No power has been purchased through IEX/ STOA-Bilateral Purchase etc. The Petitioner submitted the overall Power Purchase cost as INR 1,241.08 Crore 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 FY 2020-21.

The Commission has also observed that Petitioner has considered the rebate of INR 8.74 Crore on account of early payments made for the power purchase bills and COVID-19 rebate as part of the power purchase cost. However, as per Regulation 33.2 of JERC MYT Regulation, 2018, rebate earned by the Distribution Licensee shall be considered under Non-Tariff Income for the Distribution Licensee. The relevant extract of said regulation is reproduced as below:

> *"33 Rebate*
>
> ……
>
> *33.2 Such rebate earned by the Distribution Licensee shall be considered under Non-Tariff Income for the Distribution Licensee."*

Accordingly, the Commission has considered the rebate of INR 8.74 Crore as Non-Tariff Income (NTI).

The Commission also observed that the revenue of INR 13.50 Crore on account of UI injection has been reduced by the Petitioner from the Gross Power Purchase cost to arrive at the Net Power Purchase and cost. Same has been considered as NTI and discussed in detail in NTI section.

The Central transmission charges along with the POSOCO charges have been considered as per actuals incurred by the Petitioner. 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 claimed INR 3.00 Crore of bank charges related to power purchase under the head of Interest and Finance charges. Same has been considered under power purchase cost and discussed in detail in Interest and Finance Charges section.

The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2020-21.

Table 15: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

S. no.	Particular	Approved in Tariff Order dated 07 April 2021			Claimed by the Petitioner			True-up by the Commission		
		Quantum (MUs)	Cost (INR Crore)	Rate (INR/ kWh)	Quantum (MUs)	Cost (Rs. Crore)	Rate (INR/ kWh)	Quantum (MUs)	Cost (INR Crore)	Rate (INR/ kWh)
1.	NTPC	1,182.59	379.21	3.21	1,145.09	371.13	3.24	1,145.09	377.79	3.30
2.	NLC	705.70	327.81	4.65	584.84	286.74	4.90	584.84	288.46	4.93
3.	PPCL	220.62	91.04	4.13	217.92	79.29	3.64	217.92	79.58	3.65
4.	KAIGA	295.86	103.72	3.51	298.15	63.48	2.13	298.15	63.26	2.12
5.	MAPS	29.32	7.70	2.63	26.66	6.95	2.60	26.66	6.95	2.61
6.	NTECL	115.24	75.84	6.58	53.51	60.20	11.25	53.51	61.50	11.49
7.	KKNP	313.21	124.25	3.97	387.94	153.97	3.97	387.94	150.31	3.87
8.	NNTPS	75.72	51.33	6.78	164.35	77.26	4.70	164.35	78.00	4.75
9.	NTPL (Tuticorin)	-	-		127.90	80.34	6.28	127.90	80.34	6.28
10.	KSEB	-	-		-	-	-	-	0.01	-
11.	Open market	6.92	1.85		-	-	-	-	-	-
12.	OA Power purchase	-	-		-	-	-	-	-	-
13.	PGCIL (POC + Non POC Charges)	-	64.91		-	85.73	-	-	87.64	-
14.	SRLDC Charges	-	-		-	0.27	-	-	0.27	-
15.	SRPC	-	-		-	0.13	-	-	0.13	-
16.	RPO Obligations	-	-		-	-	-	-	-	-
17.	KPTCL	-	-		-	0.08	-	-	0.08	-
18.	UI Charges	-	-		-	0.39	-	-	0.39	-
19.	**Sub-Total**	**2,945.19**	**1,227.75**	**4.17**	**3,006.36**	**1,265.96**	**4.21**	**3,006.36**	**1,274.71**	**4.24**
20.	Adjustments Bills / Debit Notes / Credit Notes for prior period	-	-		-	-	-	-	-	-
21.	Bank charges related to Power Purchase	-	-		-	-	-	-	3.00	-
22.	Additional Income	-	-		-	13.50	-	-	-	-
23.	Less: Interest cost (DPSC/ LPSC)	-	-		-	24.88	-	-	24.88	-
24.	**Power Purchase Cost (Sub- Total)**	**2,945.19**	**1,227.75**	**4.17**	**3,006.36**	**1,227.58**	**4.08**	**3,006.36**	**1,252.83**	**4.17**

The Commission approves power purchase quantum of 3,006.36 MUs and cost of INR 1,252.83 Cr in the True-up of the FY 2020-21.

3.7. Renewable Purchase Obligation (RPO)

As per Regulation 1, Sub-regulation (1) of the JERC (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 for FY 2020-21 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 14.10% of its total annual consumption, out of which 8% must be from the Solar Power.

Based on the above, the Commission has computed the cumulative RPO compliance and the pending backlog at the end of the FY 2020-21 as shown in the following table:

Table 16: Summary of Renewable Purchase Obligation (RPO) (MU)

S. No.	Particulars	Claimed by the Petitioner	True-up by the Commission
1	Solar Target	6.00%	6.10%
2	Non Solar Target	8.10%	8.00%
	Total Target	**14.10%**	**14.10%**
3	Sales Within UT	2,522.06	2,522.06
	RPO Target		
5	Solar	151.32	153.85
6	Non Solar	204.29	201.76
	Total RPO Target	**355.61**	**355.61**
	RPO Compliance (Actual Purchase)		
7	Solar	10.60	10.60
8	Non Solar	-	-
	Total RPO Compliance (Actual Purchase)	**10.60**	**10.60**
	RPO Compliance (REC Certificate Purchase)		
9	Solar	-	-
10	Non Solar	-	-
	Total RPO Compliance (REC Certificate)	**-**	**-**
	RPO Compliance (REC+ Actual)		
11	Solar	10.60	10.60
12	Non Solar	-	-
	Total RPO Compliance	**10.60**	**10.60**
	Cumulative Requirement till current year		
13	Solar		545.99
14	Non Solar		1,023.39
	Total		**1,569.38**
	Cumulative Compliance till current year		
15	Solar		92.90
16	Non Solar		484.76
	Total		**577.66**
	Net Shortfall in RPO Compliance till current year		

S. No.	Particulars	Claimed by the Petitioner	True-up by the Commission
17	Solar	450.56	453.08
18	Non Solar	541.16	538.63
	Total	**991.72**	**991.72**

The Commission notes that there is a net shortfall in RPO compliance till the FY 2020-21 of 991.72 MUs.

3.8. Energy Balance

Petitioner's Submission

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

Table 17: Energy Balance (MUs) submitted by Petitioner

S. No.	Particulars	FY 2020-21 Actuals
A)	**Energy Requirement**	
1	**Total Sales within the UT**	**2518.14**
2	Energy Drawal by TANGEDGO	3.92
3	Sales to Electricity Traders / Power Exchange	-
4	Sale to Open access Consumers	-
5	**Total Sales**	**2522.06**
6	**T&D Losses**	
a	T&D Loss (%)	11.99%
b	T&D Loss (MU)	343.44
7	**Total Energy Requirement**	**2864.96**
B)	**Energy Availability**	
1	Net Power Purchase (ex Bus)	2788.44
2	Own Generation (PPCL + Renewable)	217.92
3	Power purchase from Common Pool / UI-over drawal / Traders / Exchange / Others	33.12
4	UI Under drawal	102.58
5	Open Access Power Purchase at periphery	-
6	**Net Power Purchased (1+2+3-4+5)**	**2936.90**
7	Transmission Losses	71.93
a	Transmission Losses (%)	2.45%
8	**Total Energy Availability (6-7a)**	**2864.96**

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 2020-21 is derived. The following table provides the energy balance approved in the Tariff Order, the Petitioner's Submission and now trued-up by the Commission.

Table 18: Energy Balance (MUs) approved by Commission

S. no.	Item	Approved in Tariff Order	Petitioner's Submission	True-up by the Commission
A	**Energy Requirement**			
1	Sales Within Territory	2,599.21	2,518.14	2,518.14
2	Sales to TANGEDCO	-	3.92	3.92
3	Sale to Open access consumer	-	-	-
4	Sales to Traders/Exchanges	-	-	-
5	Total Sales	2,599.21	2,522.06	2,522.06
6	Distribution losses (%)	11.75%	11.99%	12.11%
7	**Energy Requirement @ State periphery (MUs)**	**2945.19**	**2864.96**	**2864.96**
B	**Energy Availability**			
1	Net Quantum of Power purchase at state periphery	2,945.19	3,006.36	3,006.36
2	Power purchase from Common Pool / UI / Traders / Exchange / Others	-	33.12	33.12
3	Sales to common pool consumers / UI	-	102.58	102.58
4	Total Power Purchase by PED at Discom (1+2-3)	2,945.19	2,936.90	2,936.90
5	Open access power at periphery	-	-	-
6	**Net Power Purchased at State/UT Periphery (4-5)**	**2988.31**	**2,936.90**	**2,936.90**
7	Transmission loss	50.04	71.93	71.93
8	Transmission loss %	1.70%	2.45%	2.45%
9	**Energy required at the State/UT Periphery (MU) (B6-B7)**	**2,938.27**	**2,864.96**	**2,864.96**

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). Regulation 51 of the JERC 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;

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 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."

3.9.1. Employee Expenses

Petitioner's Submission

The following table provides the employee expenses as submitted by the Petitioner:

Table 19: Employee Expenses submitted by the Petitioner (in INR Cr)

Particulars	Actuals
	FY 2020-21
Salary	128.53
Wages	0.80
Stipend	0.53
Overtime Payment	
Less: Departmental Charges	0.45
Less: Salary Costs Capitalized	14.87
Net amount	
Add : prior period expenses	
Total Employee Expenses for PED	**114.53**

Commission's analysis

In accordance with the JERC MYT Regulations, 2018, the Commission has determined the Employee expenses for the FY 2020-21. Regulation 6 of the JERC 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 base year figures for the FY 2019-20 as determined in Tariff Order dated 7th April 2021. The 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 FY 2020-21 to arrive upon the employee expenses of FY 2020-21.

Table 20: CPI Inflation Index

FY	Average of (Apr-Mar)	Increase in CPI Index
2019-20	322.50	
2020-21	338.68	5.02%

Table 21: Computation of employee expenses (In INR Crore)

S. No	Particulars	(Base Year)	Trued Up
		Trued up FY 2019-20	FY 2020-21
1	Gn (Growth factor as per Petitioner Submission)		-5.33%
2	CPI (Actuals for FY 2020-21) (in %)		5.02%
3	Expenses with inflation and growth	89.68	89.16
4	Impact of 7th Pay Commission with inflation and growth	22.57	22.44
5	**Total Employee Expenses**	**112.25**	**111.60**

Table 22: 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	90.23	114.53[1]	89.16
2	Impact of 7th Pay Commission	22.71		22.44
3	**Total Employee Expenses**	**112.94**	**114.53**	**111.60**

The Commission now approves employee expenses of INR 111.60 Cr in the true-up of the FY 2020-21.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has incurred A&G expenses of INR 17.13 Crore against the approved expenses of INR 13.48 Crore in the Tariff Order dated 07 April 2021.

Commission's analysis

The Commission has considered the base year figures as per revised estimates for FY 2019-20 determined in the Tariff Order dated 7th April 2021. The Base Year expenses have been escalated the actual CPI Inflation of the year 2020-21 to arrive upon the A&G expenses of FY 2020-21.

Table 23: Computation of A&G expenses (In INR Crore)

S. No	Particulars	(Base Year)	Trued Up
		FY 2019-20	FY 2020-21
1	CPI (Actuals for FY 2020-21) (in %)		5.02%
2	A&G Expenses	12.80	13.44
3	**Total A&G Expenses**	**12.80**	**13.44**

Table 24: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued Up by Commission
1	A&G Expenses	13.48	17.13	13.44

The Commission now approves the Administrative & General (A&G) expenses of INR 13.44 Cr in the True-up of FY 2020-21.

---

[1] Breakup of employee expenses into Impact of 7th Pay Commission is not available in the petition.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has claimed R&M expense of INR 11.29 Crore as per expenses actually incurred during FY 2020-21, against R&M expense of INR 10.50 Crore approved by the Commission in Tariff Order dated 7th April 2021. Petitioner further submitted that R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standard of Performance of the utility.

Commission's analysis

The 'K' factor as determined in the Tariff Order dated 18th May 2020 has been considered. 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 25: Computation of WPI Inflation (%)

FY	Increase in WPI Index
2020-21	1.29%

The R&M expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 26: Normative R&M Expenses worked out by the Commission (In INR Cr)

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA_{n-1})	864.29
2	K factor approved (K) (%) (approved in Tariff Order dated 18th May 2020)	1.18%
3	WPI Inflation (Actuals for FY 2020-21) (%)	1.29%
4	**R&M Expenses = K x (GFA_{n-1}) x ($1+WPI_{inflation}$)**	**10.33**

Table 27: R&M Expenses approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued Up by Commission
1	**Repair & Maintenance Expenses (R&M)**	10.50	11.29	10.33

The Commission now approves the Repair & Maintenance (R&M) expenses of INR 10.33 Cr in the true-up of FY 2020-21.

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

In accordance with the JERC MYT Regulations, 2018, the Commission has determined the sharing of gains/losses on account of controllable factors. The Regulation 14 of the JERC MYT Regulations, 2018 stipulates the following:

"14 Mechanism for sharing of gains or losses on account of controllable factors

> *14.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers:*
>
> *Provided that the mechanism for sharing of gains or losses on account of controllable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations.*

> *14.2 Approved aggregate loss, if any to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be on account of the Licensee, and shall not be passed to the Consumers."*

The Following table provides the O&M expenses, approved by the Commission in the Tariff Order for APR of FY 2020-21, Petitioner's submission and O&M expenses now trued up by the Commission.

Table 28: O&M Expenses approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Approved by Commission
1	Employee Expenses	90.23	114.53	89.16
	Impact of 7th Pay	22.71		22.44
	Total Employee Expenses	**112.94**	**114.53**	**111.60**
2	Administration & General Expenses (A&G)	13.48	17.13	13.44
3	Repair & Maintenance Expenses (R&M)	10.50	11.29	10.33
	Total	**136.92**	**142.96**	**135.38**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 135.38 Cr in the true-up of FY 2020-21. Since the normative O&M expenses approved by the Commission are observed to be lower than the actual O&M expenses, 100% of the losses i.e. INR 7.57 Cr (142.96-135.38) is to be borne by the Petitioner in line with Regulation 14.2 quoted above.

3.10. Capitalisation

Petitioner's Submission

The Petitioner submitted the actual capitalisation for the FY 2020-21 as INR 90.34 Cr against an approved capitalization of INR 104.56 Cr in the Tariff Order.

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 Tariff Order, the Petitioner's Submission and the capitalisation approved by the Commission now:

Table 29: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	104.56	90.34	90.34

The Commission approves the Capitalisation of INR 90.34 Cr in the True-up of FY 2020-21.

3.11. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the majority of capital assets are created out of the equity contribution from Government of Puducherry. Further, Petitioner submitted that, for the purpose of ARR, GFA, ROE, Interest on Loan and Depreciation calculation in this petition, the consumer contribution/grant has not been considered.

Commission's analysis

Regulation 26 of the JERC 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 JERC MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2020-21 as follows:

Table 30: 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	864.29	864.29	864.29
2	Addition During the FY	104.56	90.34	90.34
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	968.85	954.63	954.63

Table 31: Capital Structure approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Gross Fixed Assets addition during the FY	104.56	90.34	90.34
2	Normative loan addition During the FY @70% of GFA addition during year	73.19	63.24	63.24
3	Equity addition on account of new Capitalisation @30% of GFA addition during the year	31.37	27.10	27.10

3.12. Depreciation

Petitioner's Submission

The Petitioner has claimed the depreciation of assets as per the Regulation 30 of the JERC MYT Regulations, 2018 for FY 2020-21. The depreciation as claimed by the Petitioner has been tabulated below:

Table 32: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening value of the assets at the beginning of the year	864.29
2	Additions during the year	90.34
3	Value of assets sold /disposed off	0.00
4	**Gross Fixed Assets at the end of the year**	**954.63**
5	**Net Depreciation for the year**	**33.40**
6	**Average Depreciation Rate**	**3.50%**

Commission's analysis

Regulation 30 of the JERC 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 JERC MYT Regulations, 2018, provided in the following table:

Table 33: 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%

Based on above class-wise depreciation rates weighted average depreciation rate of 3.67% has been arrived on average GFA for FY 2020-21. The Commission has calculated the depreciation of INR 33.40 Crore during FY 2020-21.

The Commission observed that the book depreciation as per Audited Account for FY 2020-21 is INR 22.89 Crore, even though the asset -wise depreciation rate has been considered as per JERC MYT Regulations, 2018, while computing book depreciation (as per accounting principle 5, PED's Annual Report 2020-21).

The Commission in data-gaps asked the Petitioner to submit the Asset register for FY 2020-21 reconciled with Audited Accounts for FY 2020-21 and class-wise depreciation rate. The Petitioner has not submitted the same in replies. Further, during the TVS, the Commission sought the reason for variation, in reply the Petitioner has submitted that variation may be due to consideration of assets completing 90% of their life, while computing depreciation of INR 33.40 Crore, which was not considered while computing depreciation in Audited Accounts for FY 2020-21.

Accordingly, the Commission has considered the book depreciation of INR 22.89 Cr as per Audited Accounts for FY 2020-21. **The Commission approves depreciation of INR 22.89 Cr in the True-up of FY 2020-21.**

3.13. 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 FY 2020-21. 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. Along with the normative interest, the Petitioner has also claimed INR 3.20 Crore of financial charges which were incurred by the Petitioner on account of charges claimed by the bank charges, finance charges, L/C., etc.

Commission's analysis

Regulation 28 of the JERC 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."

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[2] plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2018.

As per the JERC 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 JERC MYT Regulations, 2018.

The Commission has also verified the finance charges of INR. 3.20 Crore as claimed by the petitioner from its Audited Account. Detail break-up of finance charges is shown in Table below:

Table 34: Break-up of finance charges (in INR Lakhs)

Particular	FY 2020-21
Bank Charges Debited in Bank A/c	0.02
Bank Charges for MDR, POS	20.11
Bank Charges related to Purchase of power	300.18

Out of total financing charges of INR. 3.20 Crore, the Commission has not considered INR. 3.00 Crore of Bank charges related to power purchase. Since same has been added to power purchase cost. Accordingly, the Commission has approved the financing charge of INR. 0.2 Crore only.

The following table provides the Interest on Loan approved by the Commission.

Table 35: 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	138.50	138.50	138.50
2	Add: Normative Loan During the year	73.19	63.24	63.24
3	Less: Normative Repayment= Depreciation	33.64	33.40	22.89
4	Closing Normative Loan	178.05	168.34	178.85
5	Average Normative Loan	158.27	153.42	158.67
6	Rate of Interest (%)	8.75%	8.75%	8.75%
7	**Interest on Loan**	**13.85**	**13.42**	**13.88**
8	Financing Charges	-	3.20	0.20
	Interest and Finance Charges	**13.85**	**16.63**	**14.09**

The Commission approves the Interest and Finance Charges of INR 14.09 Cr in the True-up of the FY 2020-21.

3.14. Return on Equity (RoE)

Petitioner's Submission

---

[2] SBI 1 Year MCLR rate as on 10th March 2020 which is applicable rate as on 1st April 2020

Return on Equity (RoE) is computed in accordance with the JERC MYT Regulations 2018, RoE is computed on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2019-20 and additional equity to the tune of 30% is proposed to be capitalized during the year. Accordingly, RoE is computed at 16% post-tax. Accordingly, Petitioner has claimed RoE of INR. 42.43 Crore for FY 2020-21.

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% and 15.50%, as applicable, (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2019-20 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 Tariff Order, the Petitioner's Submission and RoE now approved by the Commission.

Table 36: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity Amount	A	259.29	259.29	259.29
2	Equity Addition during year	B	31.37	27.10	27.10
3	Closing Equity Amount	C	290.65	286.39	286.39
4	Average Equity Amount	D = (A+B)/2	274.97	272.84	272.84
5	Average Equity-Wires Business	E = D*90%	247.47	245.55	245.55
6	Average Equity (Retail Supply Business)	F=D*10%	27.50	27.28	27.28
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	38.36	38.06	38.06
10	Return on Equity for Retail Supply Business	J=H*F	4.40	4.37	4.37
11	**Total Return on Equity**	**K=I+J**	**42.76**	**42.43**	**42.43**

The Commission approves a Return on Equity of INR 42.43 Cr in the True-up of FY 2020-21.

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 9.89 Crore, however, only INR 6.89 Crore 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 2020-21.

Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the JERC 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 2019-20. The addition during the year has been considered as per the audited account of Petitioner. Further, it is noticed that variation in the consumer security deposit added during the year is due to consideration of unaudited Accounts for FY 2020-21 by the Petitioner. 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 37: 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	210.82	210.82	210.82
2	Add: Deposits During the year	18.23	3.68	11.26
3	Less: Deposits refunded			-
4	Closing Security Deposit	229.05	214.50	222.09
5	Average Security Deposit	219.94	212.66	216.45
6	Rate of Interest (%)	4.65%	4.65%	4.65%
7	**Interest on Security Deposit on normative basis**	**10.23**	**9.89**	**10.07**
	Interest on Security Deposit paid to consumers		**6.89**	**6.89**

The Commission approves interest on security deposit as INR 6.89 Cr in the True-up of FY 2020-21.

3.16. 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 9.75% and is claimed as under:

Table 38: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	O&M Expenses for 1 month	11.91
2	Maintenance spares at 40% of R&M	0.38
3	Receivables of two months of billing	238.93
5	Less: Security Deposit excluding BG/FDR	212.66
6	Net Working Capital	38.55
7	Rate of Interest (%)	9.75%
	Interest on Working Capital	**3.76**

Commission's analysis:

The Commission has considered the receivables as proportionate Revenue for 2 months, Gross estimated O&M expenses (pre gain-sharing) as determined above and the Maintenance spares at 40% of R&M expenses (pre gain-sharing) for one month for computing the Working Capital Requirement for the year.

The Commission has considered the SBI Base rate as on 1st April 2020 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 39: 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	O&M Expense for 1 month	11.41	11.91	11.28
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.35	0.38	0.34
3	Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff	257.78	238.93	238.95
4	Total Working Capital Requirement	269.54	251.22	249.89
5	Less: Amount held as security deposits	219.94	212.66	216.45
6	Net Working Capital	49.60	38.56	33.43
7	Rate of Interest (%)	9.75%	9.75%	9.75%
8	**Interest on Working Capital**	**4.84**	**3.76**	**3.26**

The Commission approves the Interest on Working Capital as INR 3.26 Cr in the True-up of FY 2020-21.

3.17. 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:

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2020-21. Therefore, the Commission approved NIL provision for bad and doubtful debts in the True-up of FY 2020-21.

3.18. Non-Tariff Income (NTI)

Petitioner's Submission

The Petitioner has claimed a Non-Tariff Income of INR 3.21 Cr against the approved NTI of INR 5.19 Cr by the Commission.

Commission's analysis:

The Commission has verified the submission of the Petitioner from the audited accounts and accordingly trued-up the NTI as shown in the following table:

Table 40: Non- Tariff Income approved by Commission (In INR Cr)

Particulars	Approved in Tariff Order	Petitioner's Submission	True-up by the Commission
URS Income	5.19	3.21	0.07
UI/DSM Charges			11.81
RARS Charges			1.44
Sale of Trading Materials			0.18

Particulars	**Approved in Tariff Order**	**Petitioner's Submission**	**True-up by the Commission**
Rebate (Rebate on early payment +Covid rebate)			8.74
Interest Income on Margin Money Deposit with Bank			1.45
Other receipts			1.77
Total Non-Tariff Income	**5.19**	**3.21**	**25.46**

The Commission approves Non-Tariff Income of INR 25.46 Cr in the True-up of FY 2020-21.

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 Tariff Order dated 07 April 2021, the Commission had approved the distribution loss level of 11.75% for the FY 2020-21. As discussed earlier in approval of Distribution Losses, the Petitioner has only been able to achieve an Intra-State T&D Loss of 11.97%. Thus, there is an underachievement of the loss target. In accordance with the JERC MYT Regulations, 2018, the Commission has determined the sharing of gains/losses on account of controllable factors. The Regulation 14 of the JERC MYT Regulations, 2018 stipulates the following:

"14 Mechanism for sharing of gains or losses on account of controllable factors

> *14.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers:*
>
> *Provided that the mechanism for sharing of gains or losses on account of controllable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations.*
>
> *14.2 Approved aggregate loss, if any to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be on account of the Licensee, and shall not be passed to the Consumers."*

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 11.75% by the Petitioner, at the Average Power Purchase cost (APPC) of INR 4.17/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 (2,518.14 MU) with the approved Intra-State T&D Loss (11.75%).

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

Table 41: Disincentive towards underachievement of Intra-State distribution loss (In INR Cr)

S. No	**Particulars**			
1	Retail Sales	A	2,518.14	2,518.14
2	T&D Loss (%)	B	11.75%	12.11%
3	Power Purchase at State/UT Periphery	C	2,853.41	2,864.96

S. No	Particulars			
4	Gain/(Loss) (MU) (2,864.96 – 2,853.41)	D		(11.55)
5	Average Power Purchase Cost (APPC)	E		4.17
6	Gain/ (Loss) (INR Cr)	F=DxE/10		(4.81)
	Sharing (50% to PED in case of gain and 100% to PED in case of loss) (INR Cr)			**(4.81)**

The Commission determines and approves INR 4.81 Cr as a disincentive for underachieving the Intra-State Distribution Loss target in the True-up of FY 2020-21.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,470.43 Cr is submitted for approval in the True-up of FY 2020-21.

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 2020-21 as given in the following table:

Table 42: Aggregate Revenue Requirement approved by Commission for FY 2020-21 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission	Reference
1	Power Purchase Cost	1,227.75	1,227.58	1,252.83	Table 15
2	Operation & Maintenance Expenses	136.92	142.95	135.38	Table 28
3	Depreciation	33.64	33.40	22.89	
4	Interest and Finance charges	13.85	16.63	14.09	Table 35
5	Return on Equity	42.76	42.43	42.43	Table 36
6	Interest on Security Deposit	10.23	6.89	6.89	Table 37
7	Interest on Working Capital	4.84	3.76	3.26	Table 39
9	Incentive/ (Disincentive) on achievement of norms	-	-	(4.81)	Table 41
10	**Total Revenue Requirement**	**1,469.98**	**1,473.64**	**1,472.95**	
11	Less: Non-Tariff Income	5.19	3.21	25.46	Table 40
12	**Net Revenue Requirement**	**1,464.79**	**1,470.43**	**1,447.48**	

The Commission approves net Aggregate Revenue Requirement of INR 1,447.48 Cr in the True-up of the FY 2020-21.

3.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has submitted the net actual revenue for the FY 2020-21 as INR 1433.57 Cr (including revenue from regulatory surcharge). The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 43: Revenue at existing tariff submitted by the Petitioner for FY 2020-21 (In INR Cr)

Particulars	Sales (MUs)	Revenue (INR Crore)
LT Category		
Domestic	806.17	265.38
Lifeline Services	3.50	0.36
Commercial	148.50	112.15
Agriculture	59.99	3.44
Public Lighting	21.73	22.39
LT Industrial & Water Tank	141.95	91.85
Temporary Supply - LT&HT	4.43	5.37
Total LT	**1,186.27**	**500.94**
HT Category		
HT 1 Industrial / Commercial	864.43	615.48
HT 2 - Government	53.49	50.60
HT 3 - EHT	413.94	245.84
Total HT	**1331.86**	**911.92**
Total LT and HT	**2518.14**	**1412.86**
BPSC Charges LT		
BPSC Charges HT		
Penal Charges		27.42
Incentives		(28.35)
Export to Other Region	3.92	3.42
Consumption of this Financial Year's March billed in Next FY's April		103.40
Consumption of previous FY's March billed Current FY's in April		(85.18)
Total Revenue	**2,522.06**	**1,433.57**

Commission's analysis

While verifying the consumer category wise revenue it was observed that the total revenue was reflected as INR 1433.70 Cr in the annual accounts. The category/ slab wise revenue now Trued-up by the Commission is shown in the following table:

Table 44: Revenue at existing tariff approved by Commission for FY 2020-21 (In INR Cr)

Particulars	Claimed by the Petitioner		Approved by the Commission	
	Sales (MUs)	Revenue (INR Crore)	Sales (MUs)	Revenue (INR Crore)
Total Revenue	**2,522.06**	**1,433.57**	**2,522.06**	**1,433.70**

The Commission approves the revenue from the sale of power as INR 1,433.70 Cr in the True-up of the FY 2020-21.

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 36.86 Cr is arrived at in the True-up of FY 2020-21.

Commission's analysis

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

Table 45: Standalone Revenue Gap/ Surplus for FY 2020-21 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1464.79	1470.43	1,447.48
2	Total Revenue (including surcharge)	**1546.70**	**1433.57**	**1,433.70**
	Net Gap / (Surplus)	**(81.91)**	**36.86**	**13.79**

The Commission, in the True-up of FY 2020-21 approves standalone gap of INR 13.79 Cr. The treatment of the standalone gap has been discussed in Chapter of Tariff Principles and Design.

4. Chapter 4: Annual Performance Review of FY 2021-22

4.1. Background

The Tariff Order for the FY 2021-22 was issued by the Commission on 7th April 2021 approving the ARR and Retail Tariff for the FY 2021-22. This Chapter covers the Annual Performance Review (APR) of the FY 2021-22 vis-à-vis the cost parameters approved by the Commission in the Tariff Order. The Annual Performance Review for the FY 2021-22 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.

4.2. Approach for the Review for the FY 2021-22

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 2021-22 has been done based on the 6 months' actual data as provided by the Petitioner for the FY 2021-22 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 JERC MYT Regulations, 2018 and on the basis of the norms approved in the MYT Order dated 25th May 2019 and Tariff Order of FY 2021-22 dated 07 April 2021.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted a revised estimate of energy sales as 2,773.64 MUs for the FY 2021-22 against initial estimated sales of 2804.14 MUs approved by the Commission in Tariff Order dated 07 April 2021.

Commission's analysis

The audited figures for FY 2020-21 and provisional information provided by the Petitioner for the first 6 months of the FY 2021-22 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 previous years 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. The audited figures of sales for FY 2020-21 and provisional information provided by the Petitioner for the first 6 months of the FY 2021-22 have been examined by the Commission and found the Petitioner projection Prudent.

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

Table 46: Energy Sales (MU) approved by the Commission

Consumer category	Approved in Tariff Order	Petitioner's Submission	Approved in APR
Domestic	833.17	806.72	806.72
Lifeline Services	0.32	3.50	3.50
Commercial	211.33	204.88	204.88
Agriculture	62.94	61.71	61.71
Public Lighting	24.83	19.00	19.00
LT Industrial + water tank	164.45	164.39	164.39
Temporary	4.75	4.96	4.96
Total LT -Category	**1,301.79**	**1,265.16**	**1,265.16**
HT-1 (HT Industrial/Commercial)	1,005.59	1,005.59	1,005.59
HT-2 (Government & water tank)	74.10	74.10	74.10
HT-3 (Industrial EHT)	422.66	428.79	428.79
Total HT -Category	**1,502.35**	**1,508.48**	**1,508.48**
Total	**2,804.14**	**2,773.64**	**2,773.64**

The Commission approves energy sales of 2,773.64 MUs in the APR of FY 2021-22.

4.4. *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 2021-22

Commission's analysis

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

The Commission now approves NIL open access sales and purchase in the APR of FY 2021-22.

4.5. *Inter-State Transmission Loss*

Petitioner's Submission

Petitioner has submitted the Inter-State Transmission Loss of 2.50% in its petition for FY 2021-22.

Commission's analysis

The Commission observed that quantum of losses submitted by the Petitioner is 74.83MU and ex-bus energy purchase as submitted by the Petitioner is 3208.89 Mus. Hence, the interstate losses worked-out to be 2.33% (74.83Mus/3208.89 MUs) instead of 2.50% claimed by the Petitioner.

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

Table 47: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Inter-State Transmission Losses	2.77%	2.50%	2.33%

The Commission approves the Inter-State Transmission Loss as 2.33% in the APR of FY 2021-22.

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

Petitioner's Submission

The Petitioner has proposed Intra-State T&D loss level at 11.50% against an approved loss of 11.00% in the Tariff Order dated 07 April 2021.

Commission's analysis

The Commission had approved loss level of 11.00% for FY 2021-22 in the Tariff Order dated 7th April 2021 while determining tariff for the FY 2021-22. The Commission in the APR of FY 2021-22 considers the loss level of 11.00% as approved in the Tariff Order for the FY 2021-22. The following table provides the Intra-State Transmission and Distribution loss approved in the Tariff Order, the Petitioners submission and now approved by the Commission.

Table 48: Intra-State distribution loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	11.00%	11.50%	11.00%

The Commission approves Intra-State T&D loss of 11.00% in the APR of FY 2021-22.

4.7. Energy Balance

Petitioner's Submission

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

Table 49: Energy Balance (MUs) submitted by Petitioner

Sr. No.	Particulars	Petitioner's Submission
A)	**ENERGY REQUIREMENT**	
1	Energy sales to metered category within the State	2,773.64
2	Energy exported to TANGEDCO	-
3	**Total sales within the State**	**2,773.64**
4	T&D Losses (%)	11.50%
5	T&D Losses (MU)	360.42
6	**Energy required at Discom Periphery**	**3,134.06**
B)	**ENERGY AVAILABILITY**	
1	Net Power Purchase (ex Bus)	2,993.11
2	Own Generation (PPCL)	240.00
3	Power Purchase from Renewable sources	-
4	Power purchase from Common Pool / UI-overdrawl / Traders / Exchange / Others	8.46
5	UI Underdrawl	32.68
6	Open Access Power Purchase at periphery	-
7	**Net Power Purchased (1+2+3+4-5+6)**	**3,208.89**
8	Transmission Losses	74.83

Sr. No.	Particulars	Petitioner's Submission
9	Transmission Losses (%)	2.50%
10	**Total Energy Availability (7-8)**	**3,134.06**
11	**Deficit/(Surplus)**	-

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The following table provides the Energy Balance as approved by the Commission in the Tariff Order of FY 2021-22, the Petitioner's Submission and the Energy Balance now approved by the Commission.

Table 50: Energy Balance (MU) approved by Commission

S. no.	Item	Approved in Tariff Order dated 07 April 2021	Petitioner's Submission	Approved by the Commission in APR
A	**Energy Requirement**			
1	Sales Within Territory	2,804.14	2,773.64	2,773.64
2	Sales to TANGEDCO	-	-	-
3	Sale to Open access consumer	-	-	-
4	Sales to Traders/Exchanges	-	-	-
5	Total Sales	2,804.14	2,773.64	2,773.64
6	Distribution losses (%)	11.00%	11.50%	11.00%
7	**Energy Requirement @ State periphery (MU)**	**3,150.72**	**3,134.06**	**3,116.45**
7	Transmission loss	-	74.83	74.41
8	Transmission loss %	-	2.50%	2.33%
9	**Energy required at the Ex bus**	-	**3,208.89**	**3,190.86**

The Commission approves energy requirement at Ex. Bus of 3190.86 MUs in the APR of FY 2021-22.

4.8. 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. The quantum and cost of power purchase for FY 2021-22 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 2021-22 and for the purpose of the estimation of purchase quantum for H2 for FY 2021-22, the Petitioner has considered the revised estimates of power purchase quantum based on half-yearly power purchase quantum in FY 2021-22. The key assumptions for estimating the power purchase quantum and costs are as under:

1. Power Purchase Quantum

PED has considered the revised estimates of power purchase quantum in line with the estimated actual power purchase quantum in FY 2021-22 H1 &based on the half-yearly power purchase quantum in FY 2019-20 (since it is normal operating year) for FY 2021-22 H2.The revised power purchase quantum for FY 2021-22 is 3233.11 MU.

2. Power Purchase Cost

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

- The per unit Cost of power purchase for each power source as per the estimated actual power purchase cost in FY 2021-22 H1 has been considered for estimating power purchase cost for FY 2021-22 H2.
- Transmission Charges: The petitioner has considered the actual transmission charges paid by the Petitioner for H1 FY2021-22 in this Petition and has accordingly calculated the transmission charges for FY 2021-22 as a whole.

The Power Purchase Cost for the FY 2021-22 has been tabulated below:

Table 51: Power Purchase cost submitted by Petitioner for FY 2021-22 (In INR Cr)

S. No.	Particulars	Actuals (FY 2021-22) - H1			Revised Estimates (FY 2021-22) - H2			Revised Estimates (FY 2021-22)		
		Purchase (MUs)	Cost (Rs. Cr.)	Rate (Rs. /unit)	Purchase (MUs)	Cost (Rs. Cr.)	Rate (Rs. /unit)	Purchase (MUs)	Cost (Rs. Cr.)	Rate (Rs. /unit)
1	NTPC	623.54	206.35	3.31	612.77	204.12	3.33	1236.32	410.46	3.32
2	NTPL	54.65	34.75	6.36	58.13	34.93	6.01	112.78	69.67	6.18
3	NLC	396.83	148.43	3.74	387.00	140.74	3.64	783.83	289.17	3.69
4	PPCL	119.89	48.44	4.04	120.11	41.10	3.42	240.00	89.54	3.73
5	KAIGA	139.76	48.20	3.45	157.82	55.00	3.49	297.58	103.20	3.47
6	NTPC - MAPS	4.03	1.02	2.52	4.07	0.99	2.43	8.10	2.00	2.47
7	NTECL	39.03	28.13	7.21	39.42	28.32	7.19	78.45	56.45	7.20
8	KKNP	220.32	90.00	4.09	179.54	68.30	3.80	399.86	158.30	3.96
9	NNTPS	170.53	69.26	4.06	117.47	47.80	4.07	288.00	117.06	4.06
10	Open market									
11	OA Power purchase/ (Sale)				(211.8)	(46.60)		(215.86)	(47.49)	
12	PGCL (POC Charges)		74.04			17.97			91.89	
13	SRLDC Charges									
14	**Total Power Purchase Cost**	**1768.59**	**748.61**	**4.23**	**1464.53**	**592.66**	**4.05**	**3233.11**	**1341.28**	**4.15**
15	URS Income									
16	UI/DSM Charges									
17	RARS Charges									
18	**Sub-total (Additional Income)**									
19	**Net Power Purchase Cost**	**1768.59**	**748.61**	**4.23**	**1464.53**	**592.66**	**4.05**	**3233.11**	**1341.28**	**4.15**

Commission's analysis:

The Commission while estimating the power purchase quantum and cost for FY 2021-22 has considered the actual quantum and cost of power till September 2021, as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 6 months of the FY 2021-22. The methodology followed for projecting the quantum and cost for the remaining months has been discussed as follows:

4.8.1. 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 last three financial years FY 2018-19 to FY 2020-21.

Availability of energy from NLC Stations:

- The energy availability from NLC Power Stations has been estimated based on the average energy available during the last three financial years FY 2018-19 to FY 2020-21.

Availability of energy from NPCIL plants:

- The energy availability from NPCIL Stations has been estimated based on the average energy available during the last three financial years FY 2018-19 to FY 2020-21.

Availability of energy from Vallur Thermal Plant and PPCL:

- The energy availability from Vallur Thermal Station and PPCL has been estimated based on 3 previous years' average FY 2018-19 to FY 2020-21.

4.8.2. Power Purchase Cost

The Commission has considered the nuclear plants as must run and has not subjected them to merit order dispatch. Also, Renewable power plants have been considered as must run and not subject to merit order principles. For determining the power purchase cost, merit order dispatch principles have been applied. The must-run stations have been assumed at the top of the merit order and variable cost incurred for meeting the energy requirement within the UT has been calculated from the plants at the top of the merit order. Fixed Charges from all the generating stations (irrespective of the merit order) have been considered for arriving at the 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 2021-22 (Apr'21 to Sep'21).

Fixed Charges:

- The fixed costs have been considered based on the tariff Orders issued by the CERC for respective Central Generating Stations.
- For PPCL, the per unit Cost of Power purchase in FY 2021-22 H1 has been considered for estimating power purchase cost for FY 2021-22 H2
- The Fixed cost has been apportioned on the basis of Petitioner's share in each power station and Normative Annual Plant Availability approved by CERC/JERC.

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:

The Petitioner has submitted actual Other Charges as applicable for H1 of FY 2021-22. The same has been considered subjected to the True-up for FY 2021-22.

4.8.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL for FY 2021-22 based on the actual transmission charges paid in FY 2020-21.

4.8.4. Total Power Purchase Cost

The following table provides the Power Purchase Quantum and Cost approved by the Commission after MOD for FY 2021-22:

Table 52: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	PP at Ex Bus (MU)	Variable Charges (INR Crore)	Annual Fixed charges (INR Cr.)	Other charges	Total (INR Cr.)	Avg. Rate
NTPC						
RSTPS Stage I & II	537.74	138.71	49.71	-1.09	187.33	3.48
RSTPS Stage -III	135.80	34.51	13.30	-0.06	47.74	3.52
Talcher Stage- II	454.27	82.91	36.69	0.00	119.60	2.63
Simhadri Stage- II	81.72	23.35	16.58	-0.20	39.73	4.86
Sub Total-NTPC	**1,209.53**	**279.49**	**116.27**	**-1.35**	**394.41**	**3.26**
NLC						
NLC TPS II Stage I	424.88	112.24	36.51	3.39	152.14	3.58
NLC TPS II Stage II	136.64	36.12	15.12	0.73	51.97	3.80
NLC TPS I (Expn)	99.34	23.95	10.83	0.03	34.81	3.50
NLC TPS II (Expn)	64.20	16.38	24.65	-0.04	40.99	6.38
NTPL (Tuticorin)	120.84	7.43	34.23	-0.13	41.53	16.98
Sub Total-NLC	**845.90**	**196.12**	**121.33**	**3.99**	**321.44**	**4.29**
NPCIL						
MAPS	24.42	5.99	0.00	0.04	6.02	2.47
KAPS Stage I	295.73	103.07	0.00	-0.51	102.56	3.47
Kudankulam U1	313.56	119.27	0.00	6.20	125.47	4.00
Sub Total-NPCIL	**633.72**	**228.33**	**0.00**	**5.72**	**234.05**	**3.69**
Others						
TNEB (Karaikal)	-	0.00	0.00	**0.00**	0.00	0.00

Details of the stations	PP at Ex Bus (MU)	Variable Charges (INR Crore)	Annual Fixed charges (INR Cr.)	Other charges	Total (INR Cr.)	Avg. Rate
Vallur Thermal Project (NTECL)	-	0.00	34.05	0.09	34.14	0.00
New NLC TS-I (NNTPS)	373.99	82.16	39.55	0.09	121.80	3.26
Sub Total-Others	**373.99**	**82.16**	**73.60**	**0.17**	**155.94**	**4.17**
State Generation						
PPCL	127.73	67.25	32.38	**7.42**	**107.05**	4.78
Sub Total-State Generation	**127.73**	**67.25**	**32.38**	**7.42**	**107.05**	**4.78**
RPO						
NTPC Solar	-	0.00	0.00		0.00	0.00
SECI Solar Tranche II - 50 MW	-	0.00	0.00		0.00	0.00
SECI Wind Tranche V 100 MW	-	0.00	0.00		0.00	0.00
SECI Wind Tranche VIII 140.64 MW	-	0.00	0.00		0.00	0.00
Total	**-**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Total	**3,190.86**	**853.35**	**343.58**	**15.95**	**1212.88**	3.80
PGCIL Charges	-		94.28		**94.28**	0.00
Total Cost	**3,190.86**	**853.35**	**437.86**	**15.95**	**1307.16**	**4.10**

The Commission approves the revised quantum of power purchase as 3,190.86 MUs at ex-bus with total cost of INR 1307.16 Cr in the APR of FY 2021-22. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc.

4.9. Renewable Purchase Obligations (RPOs)

Petitioner's Submission:

Petitioner submitted that the cumulative RPO obligation pending as on 01.04.2021 was 991.72 MUs (450.56 MUs Solar & 541.16 MUs Non-Solar). The Total RPO Obligation for FY 2021-22 is 17.00% (i.e. 8.00% Solar & 9.00% Non-Solar) amounting to stand alone obligation of 471.52 MUs for FY 2021-22 (221.89 MUs Solar & 249.63 MUs Non-Solar).

Commission's analysis:

As per Regulation 1, Sub-regulation (1) of the JERC (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, according to which for FY 2021-22 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 17% of its total annual consumption, out of which 8% must be from the Solar Power.

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 2021-22 as determined by the Commission based on the revised estimate of energy sales:

Table 53: Summary of Renewable Purchase Obligation (RPO) (MUs)

S. No.	Particulars	Claimed by the Petitioner	Approved by the Commission
1	Solar Target	8.00%	8.00%
2	Non Solar Target	9.00%	**9.00%**
	Total Target	**17.00%**	**17.00%**
3	Sales Within UT	2,773.64	2,773.64
	RPO Target		
5	Solar	221.89	221.89
6	Non Solar	249.63	249.63
	Total RPO Target	**471.52**	**471.52**
	RPO Compliance (Estimated Purchase)		
7	Solar	34.00	34.00
8	Non Solar	-	
	Total RPO Compliance (Estimated Purchase)	**34.00**	**34.00**
	RPO Compliance (REC Certificate Purchase)		
9	Solar	-	-
10	Non Solar	-	-
	Total RPO Compliance (REC Certificate)	**-**	**-**
	RPO Compliance (REC+ Actual)		
11	Solar	34.00	34.00
12	Non Solar	-	-
	Total RPO Compliance	**34.00**	**34.00**
	Cumulative Requirement till current year		
13	Solar		767.68
14	Non Solar		1,272.76
	Total		**2,040.44**
	Cumulative Compliance till current year		
15	Solar	638.46	126.90
16	Non Solar	790.78	484.76
	Total	**1429.24**	**611.66**
	Net Shortfall in RPO Compliance till current year		

S. No.	Particulars	Claimed by the Petitioner	Approved by the Commission
17	Solar	638.46	640.97
18	Non Solar	790.78	788.26
	Total	**1429.24**	**1429.24**

The Commission approves NIL cost towards RPO compliance for FY 2021-22 as no cost has been sought by the Petitioner and the Petitioner has tied up physical RE power through NTPC/SECI which is included in the Power purchase cost. The same shall be taken up at the time of true-up.

4.10. 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 JERC 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:

$O\&Mn = (R\&Mn + EMPn + A\&Gn) \times (1 - Xn) + \text{Terminal Liabilities}$

Where,

$R\&Mn = K \times GFAn\text{-}1 \times (\text{WPI inflation})$

$EMPn = (EMPn\text{-}1) \times (1+Gn) \times (\text{CPI inflation})$

$A\&Gn = (A\&Gn\text{-}1) \times (\text{CPI inflation})$

'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;

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 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."

4.10.1. Employee Expenses

Petitioner's Submission

The Petitioner has submitted employee expenses of INR 114.18 Cr against the approved expenses of INR 116.31 Cr in the Tariff Order.

Commission's analysis

In accordance with the JERC MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC 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 base year figures for the FY 2020-21 as decided in the true-up of this order. The 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 2021-22.

Table 54: CPI Inflation Index

FY	Average of (April – March)	Increase in CPI Index	Average increase In CPI indices over 3 year
FY 2017-18	284.42		6.00%
FY 2018-19	299.92	5.45%	
FY 2019-20	322.50	7.53%	
FY 2020-21	338.68	5.02%	

Table 55: Computation of employee expenses

S. No	Particulars	(Base Year)	Now Approved
		FY 2020-21	FY 2021-22
1	Gn (Growth factor as per Petitioner Submission)		-5.42%
2	CPI (%) (3 previous years' avg.)		6.00%
3	Expenses with inflation and growth	89.16	88.56
4	Impact of 7th Pay Commission with inflation and growth	22.44	22.50
5	**Total Employee Expenses**	**111.60**	**111.06**

Table 56: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	92.92	114.18	88.56
2	Impact of 7th Pay Commission	23.39		22.50
3	**Total Employee Expenses**	**116.31**	**114.18**	**111.06**

The Commission now approves employee expenses of INR 111.06 Cr in the APR of the FY 2021-22.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has submitted a revised estimate of A&G expenses at INR 18.06 Crore, calculated in accordance with the JERC MYT Regulations, 2018 and the methodology prescribed by the Commission in the Tariff Order.

Commission's analysis

The Commission has considered the base year figures for the FY 2020-21 as decided in the true-up of this order. The Base Year expenses have been escalated by Growth Rate determined based on the average CPI Inflation of the last three years to arrive upon the A&G Expenses of FY 2021-22.

Table 57: A&G Expenses computation (In INR Cr)

S. No	Particulars	(Base Year)	Now Approved
		FY 2020-21	FY 2021-22
1	CPI (%) (3 previous years' avg.)		6.00%
2	A&G Expenses	13.44	14.25
3	**Total A&G Expenses**	**13.44**	**14.25**

Table 58: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	14.20	18.06	14.25
	Total A&G Expenses	**14.20**	**18.06**	**14.25**

The Commission now approves the Administrative & General (A&G) expenses of INR 14.25 Cr in the APR of the FY 2022-23.

4.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has submitted a revised estimate of R&M expenses of INR 7.98 Crore in accordance with the JERC MYT Regulations, 2018 and the methodology prescribed by the Commission in the Tariff Order dated 07 April 2021.

Commission's analysis

The 'K' factor of 1.18% has been considered as approved in the Tariff Order dated 18th May 2020.

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.

The WPI Inflation has been computed as follows:

Table 59: Computation of WPI Inflation (%)

FY	Average of (April – March)	Increase in WPI Index	Average increase In CPI indices over 3 year
FY 2017-18	114.88		2.42%
FY 2018-19	119.79	4.28%	
FY 2019-20	121.80	1.68%	
FY 2020-21	123.38	1.29%	

The R&M expenses approved by the Commission for FY 2021-22 have been provided in the following table:

Table 60: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2021-22
1	Opening GFA (GFA_{n-1})	954.63
2	K factor approved (K) (%)(approved in Tariff Order dated 18th May 2020)	1.18%
3	Avg. WPI Inflation (%)	2.42%
4	**R&M Expenses =**	**11.54**

S. No	Particulars	FY 2021-22
	K x (GFA_{n-1}) x $(1+WPI_{inflation})$	

Table 61: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**11.77**	**7.98**	**11.54**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 11.54 Cr in the APR of FY 2021-22.

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

The following table provides the O&M expenses approved in the APR of FY 2021-22, Petitioner's Submission and now approved by the Commission.

Table 62: O&M Expenses approved by Commission (In INR Cr)

Particular	Approved in Tariff Order	Petitioner's Submission	Approved by the Commission
Employee Expenses	92.92	114.18	88.56
Impact of 7th Pay Commission	23.39		22.50
Total Employee Expense	**116.31**	**114.18**	**111.06**
Administration & General Expenses	14.20	18.06	14.25
Repair & Maintenance Expenses	11.77	7.98	11.54
Total R&M Expense	**142.28**	**140.21**	**136.84**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 136.84 Cr in the APR of FY 2021-22.

4.11. Capital Expenditure & Capitalisation

Petitioner's Submission

The Petitioner has submitted capitalization of INR 35.00 Crore during the year against approved capitalisation of INR 100.00 Crore in the Tariff Order dated 07 April 2021. Further, the Petitioner submitted that most 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.

Commission's analysis:

The Commission with regard to the 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 capitalisation during FY 2021-22.

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

Table 63: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	100.00	35.00	35.00

The Commission approves capitalisation of INR 35.00 Cr in the APR of FY 2021-22. Any variation in capitalisation will be taken up at the time of True-up.

4.12. 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 JERC 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 JERC MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2021-22 as follows:

Table 64: GFA addition 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	968.85	954.63	954.63
2	Addition During the FY	100.00	35.00	35.00
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	1,068.85	989.63	989.63

Table 65: Capital Structure approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Gross Fixed Assets addition during the FY	100.00	35.00	35.00
2	Normative loan addition During the FY @70% of GFA addition during year	70.00	24.50	24.50
3	Equity addition on account of new Capitalisation @30% of GFA addition during the year	30.00	10.50	10.50

4.13. Depreciation

Petitioner's Submission

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

Commission's analysis

Regulation 30 of the JERC 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 JERC MYT Regulations, 2018, provided in the following table:

Table 66: Depreciation Rate (%)

Description	Rate
Land & Land Rights	0.00%
Buildings	1.80%

Description	Rate
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 for the FY 2021-22.

Table 67: 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	968.85	954.63	954.63
2	Addition During the FY	100.00	35.00	35.00
3	Less: Government Grant	-	-	-
4	**Closing Gross Fixed Assets**	**1,068.85**	**989.63**	**989.63**
5	Average Gross Fixed Assets	916.57	972.13	972.13
6	Weighted Average Depreciation rate (%)	3.67%	3.61%	3.67%
	Depreciation	**37.39**	**35.70**	**35.70**

The Commission now approves depreciation of INR 35.70 Cr in the APR of the FY 2021-22 subjected to true-up based on Audited Accounts.

4.14. 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 2021-22. 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 one (1) Year State Bank of India (SBI) MCLR applicable as on 1st April of the FY 2021-22 plus 100 basis points. Accordingly, the Petitioner has claimed the Interest & Finance Charges of INR 16.38 Crore for FY 2021-22 against INR 15.55 Crore approved in the Tariff Order.

Commission's analysis:

Regulation 28 of the JERC 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."

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 plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2018.

As per the JERC 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 JERC MYT Regulations, 2018. The Commission is considering nil Finance charges for FY 2021-22, will be reviewed during the True-up.

The following table provides the Interest on Loan approved by the Commission.

Table 68: Interest and Finance Charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	178.05	168.34	178.85
2	Add: Normative Loan During the year	70.00	24.50	24.50
3	Less: Normative Repayment equivalent to Depreciation	37.39	35.70	35.70
4	Closing Normative Loan	210.66	157.14	167.65
5	Average Normative Loan	194.35	162.74	173.25
6	Rate of Interest (%)	8.00%	8.00%	8.00%
7	**Interest on Loan**	**15.55**	**13.02**	**13.86**
8	Finance Charges	-	3.36	-
	Interest and Finance Charges	**15.55**	**16.38**	**13.86**

The Commission approves Interest and Finance Charges of INR 13.86 Cr in the APR of the FY 2021-22.

4.15. Return on Equity (RoE)

Petitioner's Submission

Return on Equity (RoE) is computed in accordance with the JERC MYT Regulations 2018, RoE is computed on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2020-21 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 2020-21 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 Tariff Order, the Petitioner's Submission and RoE now approved by the Commission.

Table 69: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity Amount	A	290.65	286.39	286.39
2	Equity Addition during year	B	30.00	10.50	10.50
3	Closing Equity Amount	C	320.65	296.89	296.89
4	Average Equity Amount	D = (A+B)/2	305.65	291.64	291.64
5	Average Equity-Wires Business	E = D*90%	275.09	262.48	262.48
6	Average Equity (Retail Supply Business)	F=D*10%	30.57	29.16	29.16
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	42.64	40.68	40.68
10	Return on Equity for Retail Supply Business	J=H*F	4.89	4.67	4.67
11	**Total Return on Equity**	**K=I+J**	**47.53**	**45.35**	**45.35**

The Commission approves the Return on Equity of INR 45.35 Cr in the APR of the FY 2021-22.

4.16. Interest on Security Deposits

Petitioner's Submission

The prevailing Bank rate is considered as notified by Reserve Bank of India with effect from 1st April of the relevant financial year for estimating the normative interest on Security Deposits for FY 2021-22.

Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the JERC 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 2020-21. The addition during the year has been considered the same as submitted by the Petitioner. The same shall be considered as per actuals during the True- up of FY 2021-22. 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 70: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	229.05	214.51	222.09
2	Add: Deposits During the year	19.14	3.87	3.87
4	Closing Security Deposit	248.19	218.38	225.96
5	Average Security Deposit	238.62	216.45	224.02
6	Rate of Interest (%)	4.65%	4.25%	4.25%
	Interest on Security Deposit (IoSD)	**11.10**	**9.20**	**9.52**

The Commission approves Interest on Security Deposit as INR 9.52 Cr in the APR of the FY 2021-22.

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 MYT Regulations, 2018. The Petitioner has computed the Interest on Working Capital of INR 5.45 Crore at rate of 9% (SBI 1 year MCLR applicable as on 1st April 2021 i.e. 7.00% + 200 basis points).

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 1 year MCLR as on 1st April 2020 plus 2% for calculation of interest, as stipulated in the JERC MYT Regulations, 2018.

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	Now Approved by Commission
1	O&M Expense for 1 month	11.86	11.68	11.40
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.39	0.27	0.38
3	Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff	285.68	265.08	258.20
4	Less: Amount held as security deposits	238.62	216.44	224.02
5	**Net Working Capital**	59.30	60.59	45.97
6	Rate of Interest (%)	9.75%	9.00%	9.00%
7	**Interest on Working Capital**	**5.78**	**5.45**	**4.14**

The Commission approves the Interest on Working Capital as INR 4.14 Cr in the APR of the FY 2021-22.

4.18. 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 2021-22.

4.19. Income Tax

Petitioner's Submission

The Petitioner has not estimated any Income Tax for the year.

Commission's analysis

The Commission also has not considered any estimate towards Income Tax. The same shall be accounted for as per actuals in the True-up of FY 2021-22.

4.20. 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 2021-22 was estimated as INR 3.38 Cr.

Commission's analysis:

The Commission has considered the Non-Tariff Income of INR 3.38 Crore in the APR of the FY 2021-22, as per the Petitioner submission. The NTI now approved is shown in the table below:

Table 72: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
	Total	**5.19**	**3.38**	**3.38**

The Commission approves Non-Tariff Income of INR 3.38 Cr in the APR of the FY 2021-22. The same shall be considered at actuals at the time of True-up.

4.21. 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 1590.20 Cr after adjusting the Non -Tariff Income for FY 2021-22.

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 2021-22 as provided in the table below:

Table 73: Aggregate Revenue Requirement approved by the Commission for FY 2021-22 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission	Reference
1	Power Purchase Cost	1,366.83	1,341.28	1,307.16	Table 52
2	O&M Expenses	142.28	140.21	136.84	Table 62
3	Depreciation	37.39	35.70	35.70	Table 67
4	Interest and Finance charges	15.55	16.38	13.86	Table 68
5	Return on Equity	47.53	45.35	45.35	Table 69
6	Interest on Security Deposit	11.10	9.20	9.52	Table 70
7	Interest on Working Capital	5.78	5.45	4.14	Table 71
8	Provision for Bad Debt	0.00	-	-	
9	Income Tax	0.00	-	-	
10	**Total Revenue Requirement**	**1,626.46**	**1,593.58**	**1,552.57**	
11	Less: Non-Tariff Income	5.19	3.38	3.38	Table 72
12	**Net Revenue Requirement**	**1,621.27**	**1,590.20**	**1,549.19**	

The Commission now approves the net ARR of INR 1,549.19 Cr in the APR of FY 2021-22.

4.22. Revenue at existing Retail Tariff

Petitioner's Submission

Petitioner submitted the revised Revenue (including regulatory surcharge of 5%) of INR 1590.49 Crore based on the revised sales projection for APR of FY 2021-22. Following Table provides the category wise revenue determined by the Petitioner for FY 2021-22.

Table 74: Revenue at existing tariff submitted by Petitioner (In INR Cr)

S. No.	Particulars	Sales (MUs)	Revenue (INR Cr)
	LT Category		
1	Domestic	806.72	267.09
2	Lifeline Services	3.50	0.37
3	Commercial	204.88	159.81
4	Agriculture	61.71	3.49
5	Public Lighting	19.00	20.69
6	LT Industrial & Water Tank	164.39	114.56
7	Temporary Supply - LT&HT	4.96	5.08
	Total LT	**1,265.16**	**571.10**
	HT Category		
9	HT 1 Industrial / Commercial	1005.59	696.11

S. No.	Particulars	Sales (MUs)	Revenue (INR Cr)
10	HT 2 – Government	74.10	64.57
11	HT 3 – EHT	428.79	258.71
12	**Total HT**	**1508.48**	**1019.40**
13	**Total LT and HT**	**2773.64**	**1590.49**

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 2021-22. 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 2021-22. 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 2021-22. The total revenue based on existing tariff as computed by the Commission for FY 2021-22 has been shown in the following table:

Table 75: 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 Revenue (INR Cr.)	ABR (INR / kWh)
1	**Domestic**	**806.72**	**235.30**	**19.08**	**254.37**	**3.15**
	0-100 units	370.99	57.50	6.97		
	101-200 units	204.90	53.27	5.70		
	201-300 units	108.10	50.27	3.10		
	Above 300 units	122.73	74.25	3.30		
2	**Lifeline Services**	**3.50**	**0.35**	**0.00**	**0.35**	**1.00**
3	**Commercial**	**204.88**	**143.03**	**13.53**	**156.57**	**7.64**
	0-100 units	39.82	22.70	3.57		
	101-250 units	46.13	31.14	3.05		
	Above 250 units	118.93	89.20	6.92		
4	**Agriculture Services**	**61.71**	**0.00**	**4.51**	**4.51**	**0.73**
(i)	*Small Farmers*	8.53		0.10		
(ii)	Other farmers	53.18		4.41		
5	**Public Lighting**	**19.00**	**12.92**	**6.78**	**19.70**	**10.37**
6	**LT Industrial & Water Works**	**164.39**	**102.88**	**8.20**	**111.08**	**6.76**
(i)	LT Industrial	124.11	75.09	8.06		
(ii)	Water Tanks	40.28	27.79	0.15		
7	**High Tension-I**	**1005.60**	**556.51**	**122.72**	**679.23**	**6.75**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	919.99	507.91			
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	85.61	48.60			
8	**High Tension-II**	**74.10**	**49.01**	**14.05**	**63.06**	**8.51**
9	**High Tension-III (EHT)**	**428.79**	**220.89**	**23.48**	**244.38**	**5.70**

S. no.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total Revenue (INR Cr.)	ABR (INR / kWh)
11	**TEMPRORARY**	**4.96**	**4.84**	**-**	**4.84**	**9.75**
	TOTAL	**2773.65**	**1325.73**	**212.35**	**1,538.08**	**5.55**

The Commission has determined revenue from the sale of power at existing tariff (excluding Revenue from Regulatory Surcharge) as INR 1,538.08 Cr in the APR of FY 2021-22.

4.23. 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 2021-22.

4.24. 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 0.29 Cr is arrived at in FY 2021-22.

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 76: Standalone Revenue Gap/ Surplus at existing tariff including regulatory surcharge (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	1,621.27	1,590.20	1,549.19
2	Revenue from Retail Sales at Existing Tariff	1,632.45	1,514.75	1,538.08
3	**Gap / (Surplus) without Regulatory Surcharge**	**(11.18)**	**75.45**	**11.12**
4	Regulatory Surcharge (@5%)	81.62	75.74	76.90
5	Total Revenue (2+4)	1,714.07	1,590.49	1,614.98
6	**Net Gap /(Surplus) (1-5)**	**(92.80)**	**(0.29)**	**(65.79)**

The standalone surplus at existing retail tariff (including surcharge) is INR 65.79 Cr in the APR of FY 2021-22.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the 3rd MYT Control Period

5.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for the 3rd MYT Control Period. The determination of Aggregate Revenue Requirement has been done in accordance with the JERC MYT Regulations, 2021.

5.2. Approach for determination of ARR for each year of the 3rd MYT Control Period

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 31 March 2022, the actual available information of various parameters for the previous financial year as per their audited accounts and the provisional information available for the FY 2021-22. The ARR has been determined for each financial year of the 3rd Control Period whereas the revenue at existing tariff is determined only for the FY 2022-23 to arrive at the revenue gap/surplus for the FY 2022-23.

5.3. 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 proposed by the Petitioner in the Business Plan.

Table 77: Category-wise number of consumer proposed by the Petitioner for 3rd Control Period

S. No.	Particulars	No. of Consumers Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	380468	391882	403639
2	Lifeline Services	8248	8248	8248
3	Commercial	58143	59219	60315
4	Agriculture	7078	7102	7127
5	Public Lighting	52923	54510	56146
6	LT Industrial+ Water Tank	4430	4452	4474
7	Temporary supply - LT&HT	0	0	0
8	HT I	464	469	473
9	HT II	67	69	71
10	HT III	8	9	9
	Total	**511829**	**525960**	**540501**

Table 78: Category-wise connected load (kW) proposed by the Petitioner for 3rd Control Period

S. No.	Particulars	Connected Load (kW/kVA/HP) Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	663845	694386	726332
2	Lifeline Services	2843	2843	2843
3	Commercial	154893	159539	164326
4	Agriculture	60602	60905	61209
5	Public Lighting	6419	6481	6544
6	LT Industrial+ Water Tank	136671	139130	141633
7	Temporary supply - LT&HT	0	0	0
8	HT I	238424	243193	248057
9	HT II	23646	23882	24121
10	HT III	40363	40363	40363
	Total	**13,27,706.1**	**13,70,722.9**	**14,15,428.2**

Table 79: Category-wise energy sales (MUs) proposed by the Petitioner for 3rd Control Period

S. No.	Particulars	Sales Projections (MUs)		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	826.89	847.56	868.75
2	Lifeline Services	3.50	3.50	3.50
3	Commercial	210.00	215.25	220.63
4	Agriculture	61.17	62.06	62.37
5	Public Lighting	17.50	17.50	17.50
6	LT Industrial +Water Tank	167.65	170.97	174.36
7	Temporary supply - LT&HT	5.06	5.16	5.27
8	HT I	1018.35	1031.28	1044.36
9	HT II	76.75	79.50	82.35
10	HT III	437.36	446.11	455.03
	Total	**2824.25**	**2878.90**	**2934.13**

Commission's analysis

The Commission in the Business Plan Order, dated 31st March 2022 had estimated the category wise energy sales, number of consumers and connected load based on historical trends and actual data available for the last 4-5 years. The detailed methodology has been discussed in the Business Plan Order. The Commission retains the same energy sales, connected load and number of consumers as approved in the Business Plan.

Table 80: Category-wise number of consumer approved by the Commission for 3rd Control Period

S. No.	Particulars	No. of Consumers Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	380,469	391,883	403,639
2	Lifeline Services	8,248	8,248	8,248
3	Commercial	58,143	59,219	60,315
4	Agriculture	7,081	7,109	7,137
5	Public Lighting	51,612	51,844	52,077
6	LT Industrial+ Water Tank	4,430	4,452	4,474
7	Temporary supply - LT&HT	0	0	0
8	HT I	465	470	475
9	HT II	67	69	71
10	HT III	8	8	8

S. No.	Particulars	No. of Consumers Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
	Total	**510,523**	**523,302**	**536,444**

Table 81: Category-wise connected load (kW) approved by the Commission for 3rd Control Period

S. No.	Particulars	Connected Load (kW/kVA/HP) Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	663,841	694,377	726,319
2	Lifeline Services	2,843	2,843	2,843
3	Commercial	154,892	159,539	164,325
4	Agriculture	60,602	60,905	61,209
5	Public Lighting	6,419	6,481	6,544
6	LT Industrial+ water tank	136,673	139,133	141,637
7	Temporary supply - LT&HT	0	0	0
8	HT I	238,424	243,192	248,056
9	HT II	23,646	23,883	24,121
10	HT III	44,399	48,839	53,723
	Total	**1,331,738**	**1,379,192**	**1,428,778**

Table 82: Category-wise energy sales (MUs) approved by the Commission for 3rd Control Period

S. No.	Particulars	Sales Projections (MU)		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic	826.89	847.56	868.75
2	Lifeline Services	3.50	3.50	3.50
3	Commercial	210.00	215.25	220.63
4	Agriculture	61.75	62.06	62.37
5	Public Lighting	19.00	19.00	19.00
6	LT Industrial + water tank	167.68	171.03	174.45
7	Temporary supply - LT&HT	1,018.36	1,031.29	1,044.39
8	HT I	76.75	79.50	82.35
9	HT II	437.37	446.11	455.04
10	HT III	5.06	5.16	5.26
	Total	**2,826.36**	**2,880.47**	**2,935.74**

5.4. Inter-State transmission loss

Petitioner's Submission

The Petitioner had submitted Inter-State Transmission Losses of 2.50% for each year of the 3rd MYT Control Period in its Business Plan Petition.

Commission's analysis

The Commission observed that the inter-state loss proposed by the Petitioner is same as considered by the Petitioner in APR of FY 2021-22. Accordingly, the Commission has considered the provisional Inter-State Transmission Loss of 2.50% for the FY 2021-22 for each year of the Control Period. The same shall be revised based on actuals during the True-up exercise of the respective years.

The following table provides the Inter-State Transmission Losses approved by the Commission for the 3rd MYT Control Period.

Table 83: Inter-state losses approved by the Commission for 3rd Control Period

Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Inter-state Transmission losses	2.50%	2.50%	2.50%

5.5. *Intra-State Distribution Loss*

Petitioner's Submission

The Petitioner has submitted Intra-State Distribution Losses for the 3rd MYT Control Period as submitted in the Business Plan Petition, which are as follows:

Table 84: Intra-State Distribution Losses (%)

Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Intra-state Distribution losses	11.00%	10.75%	10.50%

Commission's analysis

The Commission has proposed the same Intra-State Distribution Loss approved in Business Plan of 3rd MYT Control Period in Order dated 31st March 2022.

Table 85: Intra-State Distribution Losses (%)

Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Intra-state Distribution losses	11.00%	10.75%	10.50%

5.6. *Energy Balance*

Petitioner's Submission

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

Table 86: Energy Balance submitted by the Petitioner (MU)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
A	**ENERGY REQUIREMENT**			
1	Sales within UT (MU)	2824.25	2878.90	2934.13
2	T&D Loss(%)	11.00%	10.75%	10.50%
3	Loss(MU)	349.06	346.76	344.23
4	Energy requirement at periphery(MU)	**3,173.31**	**3,225.66**	**3,278.36**
B	**ENERGY AVAILABILITY**			
1	Gross Energy Purchase	3238.46	3281.81	3335.86
2	PGCIL Loss (%)	2.50%	2.50%	2.50%
3	External Loss (MU)	65.14	56.16	57.51
4	**Net Energy Availability**	**3,173.31**	**3,225.66**	**3,278.36**

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra-State Loss as approved above the Energy Balance for FY 2021-22 has been shown in following table:

Table 87: Energy Balance approved by Commission (MU)

S. no.	Item	FY 2022-23	FY 2023-24	FY 2024-25
1	Sales Within Territory	2,826.36	2,880.47	2,935.74
2	Sales to TANGEDCO	-	-	-
3	Sale to Open access consumer	-	-	-
4	Sales to Traders/Exchanges	-	-	-
5	Total Sales	2,826.36	2,880.47	2,935.74
6	Distribution losses (%)	11.00%	10.75%	10.50%
7	**Energy Requirement @ State periphery (MU)**	**3,175.68**	**3,227.42**	**3,280.16**
8	Transmission loss	81.43	82.75	84.11
9	Transmission loss %	2.50%	2.50%	2.50%
10	**Energy required at the Ex-bus**	**3,257.11**	**3,310.17**	**3,364.26**

5.7. Power Purchase Quantum & Cost

Petitioners Submission

1. **Power Purchase Quantum**

The power purchase quantum for the Control period has been considered as the quantum projected by the petitioner in Business Plan petition for FY 2022-23 to FY 2024-25. The Petitioner has projected the net power purchase quantum for the MYT Control period, as 3238.46 MUs, 3281.81 MUs, 3335.86 MUs for FY 2022-23, FY 2023-24, FY 2024-25respectively.

2. **Power Purchase Cost**

Following assumptions have been considered for projecting the cost of power purchase:

Fixed Charges: The Hon'ble CERC had notified the Tariff Regulations, 2019, dated 7th March 2019, however the Hon'ble CERC has not issued any tariff orders for the control period FY 2020-24 of the central generating station. In absence of the tariff orders for FY 2020-24 of the central generating station. Hence the Fixed costs of FY 2021-22, has been calculated based on the H1 figures of FY 2021-22 and considered for calculation of revised projections of base year FY 2021-22 for respective Central Generating Stations and PPCL. Further the projections have been done with an escalation of 2% for purpose of estimation of the fixed charges for the 3rd MYT Control Period.

Variable Charges: The Petitioner has considered the actual per unit variable costs of FY 2021-22 H1 and has calculated the revised projections of base year FY 2021-22 w.r.t to power purchase projections for respective Central Generating Stations and PPCL. Further, y-o-y escalations of 4% has been considered during the 3rd MYT Control Period.

Sale of Surplus Power: The Petitioner has considered surplus power sale of 406.93 MUs, 766.41 MUs, 712.36 MUs for FY 2022-23, FY 2023-24, FY 2024-25 respectively to IEX at the rate of INR 2.20/unit. Further, revenue generated from surplus power has been deducted from the power purchase cost.

PGCIL losses: Petitioner has submitted that the actual transmission/PGCIL losses for FY 2020-21 are 2.45% and the same have been submitted in the chapter of True up of FY 2020-21. However, for the purpose of APR for FY 2021-22, PED has revised the transmission loss percentage to 2.50%. PED has further considered the same percentage of losses i.e2.50% for each year of the 3rd MYT Control period. PED requested the Commission to approve the same. PGCIL Loss for Renewable energy sources and PPCL have been considered as nil.

Transmission Charges: The Petitioner has considered the actual transmission charges for FY 2020-21 and has accordingly calculated the transmission per unit charges for PGCIL and has considered the same per unit charges for the entire control period without any escalations. However, the transmission charges for renewable energy sources and PPCL has been considered nil.

The total power purchase quantum and cost for each year of the MYT control period is as under:

Table 88: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for the 3rd Control Period

S. No.	Source	Power Purchase (MUs)			Power Purchase Cost - Variable Cost (VC) (INR Cr)			Power Purchase Cost - Fixed Cost (FC) (INR Cr)			Total cost (INR Cr)		
		FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25
A	**Central Sector Power Stations**												
I	**NTPC**	**1,159.11**	**1,159.11**	**1,159.11**	**279.62**	**290.80**	**302.43**	**126.97**	**129.50**	**132.09**	**406.58**	**420.31**	**434.53**
	RSTPS Stage I & II	521.29	521.29	521.29	139.85	145.44	151.26	49.78	50.77	51.79	189.63	196.22	203.05
	RSTPS Stage -III	152.47	152.47	152.47	40.30	41.91	43.59	11.34	11.57	11.80	51.64	53.48	55.39
	Talcher Stage- II	416.96	416.96	416.96	79.15	82.31	85.60	46.30	47.23	48.17	125.45	129.54	133.78
	Simhadri Stage- II	68.38	68.38	68.38	20.32	21.14	21.98	19.55	19.94	20.33	39.87	41.07	42.32
II	**NLC**	**1,044.89**	**1,044.89**	**1,044.89**	**270.67**	**281.49**	**292.75**	**132.74**	**135.39**	**138.10**	**403.41**	**416.89**	**430.86**
	NLC TPS II Stage I	424.57	424.57	424.57	116.64	121.31	126.16	36.05	36.77	37.51	152.69	158.08	163.67
	NLC TPS II Stage II	168.09	168.09	168.09	46.21	48.05	49.98	16.44	16.77	17.11	62.65	64.83	67.08
	NLC TPS I (Expn)	105.31	105.31	105.31	26.41	27.47	28.56	10.32	10.52	10.73	36.73	37.99	39.30
	NLC TPS II (Expn)	58.07	58.07	58.07	15.41	16.03	16.67	14.78	15.07	15.37	30.18	31.10	32.04
	NNTPS	288.85	288.85	288.85	66.00	68.64	71.38	55.15	56.26	57.38	121.15	124.90	128.77
III	**NPCIL**	**583.49**	**583.49**	**583.49**	**218.93**	**227.69**	**236.79**				**218.93**	**227.69**	**236.79**
	MAPS	26.80	26.80	26.80	6.76	7.03	7.32				6.76	7.03	7.32
	KAPS Stage I	127.95	127.95	127.95	46.38	48.23	50.16				46.38	48.23	50.16
	KAPS Stage II	115.36	115.36	115.36	41.81	43.49	45.23				41.81	43.49	45.23
	Kudankulam U1	164.05	164.05	164.05	64.90	67.49	70.19				64.90	67.49	70.19
	Kudankulam U2	149.34	149.34	149.34	59.08	61.44	63.90				59.08	61.44	63.90
B	**Others**	**225.16**	**225.16**	**225.16**	**73.67**	**76.61**	**79.68**	**78.45**	**80.02**	**81.62**	**152.12**	**156.64**	**161.30**
	TNEB (Pondy)												
	TNEB (Karaikal)												
	KSEB												
	Vallur Thermal Project	105.89	105.89	105.89	36.01	37.45	38.95	42.29	43.14	44.00	78.30	80.59	82.95
	NTPL (Tutikorin)	*119.27*	119.27	119.27	37.65	39.16	40.73	36.16	36.88	37.62	73.82	76.05	78.35
C	**UI**												

S. No.	Source	Power Purchase (MUs)			Power Purchase Cost - Variable Cost (VC) (INR Cr)			Power Purchase Cost - Fixed Cost (FC) (INR Cr)			Total cost (INR Cr)		
		FY 2022-23	**FY 2023-24**	**FY 2024-25**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
D	**Open Market**	*-406.93*	-766.41	-712.36	-89.52	-168.61	-156.72				**-89.52**	**-168.61**	**-156.72**
	IEX Purchase	-	-	-	-	-	-				-	-	-
	IEX Sale	*406.93*	766.41	712.36	89.52	168.61	156.72				**89.52**	**168.61**	**156.72**
E	**Open Access**	-	-	-	-	-	-	0.00	0.00	0.00	-	-	-
F	**Renewable Sources**	402.84	805.68	805.68	112.93	225.86	225.86	-	-	-	**112.93**	**225.86**	**225.86**
	Solar	118.26	236.52	236.52	-	-	-	-	-	-	-	-	-
	SECI Solar Tranche I -50 MW	39.42	78.84	78.84	9.89	19.79	19.79	-	-	-	**9.89**	**19.79**	**19.79**
	NTPC Solar	78.84	157.68	157.68	21.05	42.10	42.10	-	-	-	**21.05**	**42.10**	**42.10**
	Non-Solar	284.58	569.16	569.16	-	-	-	-	-	-	-	-	-
	SECI Wind Tranche V 100 MW	**118.26**	**236.52**	**236.52**	**33.59**	**67.17**	**67.17**	-	-	-	33.59	67.17	67.17
	SECI Wind Tranche VIII 140.64 MW	166.32	332.64	332.64	48.40	96.80	96.80	-	-	-	**48.40**	**96.80**	**96.80**
	Solar REC	-	-	-	-	-	-	-	-	-	-	-	-
	Non-Solar REC	-	-	-	-	-	-	-	-	-	-	-	-
G	**Within State Generations**	229.90	229.90	229.90	47.27	49.16	51.12	33.88	34.55	35.25	81.14	83.71	86.37
	PPCL	229.895	229.895	229.895	47.27	49.16	51.12	33.88	34.55	35.25	**81.14**	**83.71**	**86.37**
H	**OTHER CHARGES**	-	-	-	-	-	-	-	-	-	80.00	68.96	70.62
	PGCIL Transmission Charges, Wheeling & Other Charges	-	-	-	-	-	-	-	-	-	80.00	68.96	70.62
I	**Total Power Purchase Cost**	**3,238.46**	**3,281.81**	**3,335.86**	**913.55**	**983.00**	**1,031.92**	**372.04**	**379.48**	**387.07**	**1,365.58**	**1,431.44**	**1,489.61**

Commission's analysis

5.7.1. Power Purchase Quantum

The Commission considered the Power Availability for 3rd Control Period as approved in Business Plan in Order dated 31st March 2022. The Petitioner has considered the nuclear plants and Renewable power plants as must run and has not subjected them to merit order dispatch.

The Power Availability for 3rd Control Period in Merit Order stack is as under:

Table 89: Power availability by the Commission for the 3rd Control Period

Sr. No.	Source	Variable rate	Quantum of Power Available		
			FY 2022-23	FY 2023-24	FY 2024-25
		INR/Unit	MUs	MUs	MUs
1	MAPS	2.45	24.42	24.42	24.42
2	KAPS Stage I	3.49	295.73	295.73	295.73
3	Kudankulam U1	3.80	313.56	313.56	313.56
4	SECI Solar Tranche II -50 MW	2.51	39.42	78.84	78.84
5	NTPC Solar	2.67	78.84	157.68	157.68
6	SECI Wind Tranche V 100 MW	2.84	118.26	236.52	236.52
7	SECI Wind Tranche VIII 140.64 MW	2.91	166.32	332.64	332.64
8	Talcher Stage- II	1.83	454.27	454.27	454.27
9	New NLC TS-I (NNTPS)	2.20	373.99	373.99	373.99
10	NLC TPS I (Expn)	2.41	99.34	99.34	99.34
11	RSTPS Stage -III	2.54	135.80	135.80	135.80
12	NLC TPS II (Expn)	2.55	64.20	64.20	64.20
13	RSTPS Stage I & II	2.58	537.74	537.74	537.74
14	NLC TPS II Stage I	2.64	424.88	424.88	424.88
15	NLC TPS II Stage II	2.64	136.64	136.64	136.64
16	Simhadri Stage- II	2.86	81.72	81.72	81.72
17	NTPL (Tuticorin)	3.04	120.84	120.84	120.84
18	PPCL	3.05	224.11	224.11	224.11
19	Vallur Thermal Project (NTECL)	3.27	103.09	103.09	103.09
	Total		**3,793.17**	**4,196.01**	**4,196.01**

5.7.2. Power Purchase Cost

The Commission has considered the nuclear plants as must run and has not subjected them to merit order dispatch. Also, Renewable power plants have been considered as must run and not subject to merit order principles. For determining the power purchase cost, merit order dispatch principles have been applied. The must-run stations have been assumed at the top of the merit order and variable cost incurred for meeting the energy requirement within the UT has been calculated from the plants at the top of the merit order. Fixed Charges from all the generating stations (irrespective of the merit order) have been considered for arriving at the 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 2021-22 (Apr'21 to Sep'21). The Commission has considered an escalation of 4% on the estimated variable costs of the FY 2021-22, for each year from FY 2022-23 to FY 2024-25.

Fixed Charges:

The Fixed Cost for existing plants has been computed based on the latest available Tariff Orders issued by the CERC for respective Central Generating Stations. The fixed cost has been apportioned as per Petitioner share in each station and normative annual plant availability factor. The Commission has considered an escalation of 2% on the estimated fixed costs of the FY 2021-22, for each year from FY 2022-23 to FY 2024-25.

Other Charges:

Other charges have not been considered for the 3rd MYT Control Period. The same shall be considered as per actuals during the true-up of the respective years of the 3rd MYT Control Period.

RPO Charges:

Renewable power (Solar and Non-solar) purchase has been considered at rates as considered in the Business Plan Order dated 31st March 2022. The same shall be considered as per actuals at the time of true-up of the respective year.

5.7.3. Transmission Charges

The Commission has considered the actual transmission charges for FY 2020-21 and has accordingly calculated the transmission per unit charges for PGCIL and has considered the same per unit charges for the entire control period without any escalations.

5.7.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for FY 2021-22 have been shown in the following tables:

Table 90: Power Purchase Quantum (MU) and cost (INR Cr) approved for the 3rd MYT Control Period

Details of the stations	PP at Ex Bus (MU)			Variable Charges (INR/ Kwh)	Annual Variable Charges (INR Crore)			Annual Fixed charges (INR Crore)			Total (INR Crore)		
	FY 2022-23	FY 2023-24	FY 2024-25		FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25
NTPC													
RSTPS Stage I & II	537.74	537.74	537.74	2.58	144.26	150.03	156.03	50.71	51.72	52.75	194.96	201.75	208.78
RSTPS Stage -III	135.80	135.80	135.80	2.54	35.89	37.33	38.82	13.56	13.83	14.11	49.45	51.16	52.93
Talcher Stage- II	454.27	454.27	454.27	1.83	86.23	89.68	93.27	37.42	38.17	38.93	123.65	127.85	132.20
Simhadri Stage- II	0.00	0.00	0.00	2.86	0.00	0.00	0.00	16.91	17.25	17.59	16.91	17.25	17.59
Sub Total-NTPC	**1127.81**	**1127.81**	**1127.81**		**266.38**	**277.04**	**288.12**	**118.60**	**120.97**	**123.39**	**384.98**	**398.01**	**411.51**
NLC													
NLC TPS II Stage I	424.88	205.44	259.53	2.64	116.73	58.70	77.12	37.24	37.98	38.74	153.97	96.68	115.86
NLC TPS II Stage II	130.33	0.00	0.00	2.64	35.83	0.00	0.00	15.42	15.73	16.05	51.25	15.73	16.05
NLC TPS I (Expn)	99.34	99.34	99.34	2.41	24.91	25.91	26.94	11.04	11.26	11.49	35.95	37.17	38.43
NLC TPS II (Expn)	64.20	64.20	64.20	2.55	17.04	17.72	18.43	25.14	25.64	26.16	42.18	43.36	44.58
NTPL (Tuticorin)	0.00	0.00	0.00	3.04	0.00	0.00	0.00	34.92	35.61	36.33	34.92	35.61	36.33
Sub Total-NLC	**718.75**	**368.97**	**423.06**		**194.50**	**102.32**	**122.49**	**123.76**	**126.23**	**128.76**	**318.26**	**228.56**	**251.25**
NPCIL													
MAPS	24.42	24.42	24.42	2.45	6.23	6.48	6.73	0.00	0.00	0.00	6.23	6.48	6.73
KAPS Stage I and Stage II	295.73	295.73	295.73	3.49	107.19	111.48	115.94	0.00	0.00	0.00	107.19	111.48	115.94
Kudankulam U1&U2	313.56	313.56	313.56	3.80	124.05	129.01	134.17	0.00	0.00	0.00	124.05	129.01	134.17
Sub Total-NPCIL	**633.72**	**633.72**	**633.72**		**237.46**	**246.96**	**256.84**	**0.00**	**0.00**	**0.00**	**237.46**	**246.96**	**256.84**
Others													
TNEB (Karaikal)													
Vallur Thermal Project (NTECL)	0.00	0.00	0.00	3.27	0.00	0.00	0.00	34.73	35.43	36.13	34.73	35.43	36.13

Details of the stations	PP at Ex Bus (MU)			Variable Charges (INR/ Kwh)	Annual Variable Charges (INR Crore)			Annual Fixed charges (INR Crore)			Total (INR Crore)		
	FY 2022-23	FY 2023-24	FY 2024-25		FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25	FY 2022-23	FY 2023-24	FY 2024-25
New NLC TS-I (NNTPS)	373.99	373.99	373.99	2.20	85.45	88.87	92.42	40.34	41.15	41.97	125.79	130.02	134.40
Sub Total-Others	**373.99**	**373.99**	**373.99**		**85.45**	**88.87**	**92.42**	**75.07**	**76.57**	**78.11**	**160.52**	**165.44**	**170.53**
State Generation													
PPCL	0.00	0.00	0.00	3.05	0.00	0.00	0.00	34.12	35.44	36.85	34.12	35.44	36.85
Sub Total-State Generation	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**34.12**	**35.44**	**36.85**	**34.12**	**35.44**	**36.85**
RPO													
NTPC Solar	78.84	157.68	157.68	2.67	21.05	42.10	42.10	0.00	0.00	0.00	21.05	42.10	42.10
SECI Solar Tranche II -50 MW	39.42	78.84	78.84	2.51	9.89	19.79	19.79	0.00	0.00	0.00	9.89	19.79	19.79
SECI Wind Tranche V 100 MW	118.26	236.52	236.52	2.84	33.59	67.17	67.17	0.00	0.00	0.00	33.59	67.17	67.17
SECI Wind Tranche VIII 140.64 MW	166.32	332.64	332.64	2.91	48.40	96.80	96.80	0.00	0.00	0.00	48.40	96.80	96.80
Total	**402.84**	**805.68**	**805.68**		**112.93**	**225.86**	**225.86**	**0.00**	**0.00**	**0.00**	**112.93**	**225.86**	**225.86**
Total	**3257.11**	**3310.17**	**3364.26**		**896.73**	**941.05**	**985.73**	**351.55**	**359.22**	**367.11**	**1248.28**	**1300.27**	**1352.84**
PGCIL Charges								96.07	97.91	99.79	96.07	97.91	99.79
Total Cost	**3257.11**	**3310.17**	**3364.26**		**896.73**	**941.05**	**985.73**	**447.63**	**457.13**	**466.90**	**1344.36**	**1398.18**	**1452.63**

The Average Power Purchase Cost (APPC) for the FY 2022-23 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 91: Average Power Purchase Cost (APPC) for the FY 2022-23

Particulars		Amount
Total Power Purchase Cost (INR Cr)	A	1,344.36
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	B	96.07
Net Power Purchase Cost (INR Cr)	C=A-B	1,248.28
Quantum of Ex-bus Power Purchase (MU)	D	3,257.11
Quantum of energy at UT Periphery excluding from renewable energy sources (MU)	E	2,854.27
APPC (INR /kWh)	**F=C/E*10**	**4.37**

The Commission approves the Average Power Purchase Cost (APPC) as INR 4.37/ kWh for the FY 2022-23 for the purpose of compensation/payment for excess generation for prosumers.

5.8. Renewable Purchase Obligation (RPO)

Petitioner's Submission:

The Petitioner has submitted that the Commission has notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets up to FY 2021-22. However, the Commission has not defined the RPO targets after FY 2021-22. PED has submitted that the RPO obligations can be met through the purchase of energy from renewable sources only since REC are mere certificate which will not cater the actual load demand. In this process the PED has tied up with SECI for procuring 240 MW of wind power and 50 MW of Solar power for 25 years. Further the PED has also tied up with NTPC for procurement of 100 MW solar power for 25 years. PED has submitted that it is obliged to comply with the Renewable Purchase Obligation.

Commission's analysis:

The Commission has approved the Renewable Purchase Obligation (RPO) for the 3rd Control Period considering the JERC (Procurement of Renewable Energy), (Fourth Amendment) Regulations, 2010, amended from time to time.

Table 92: Renewable Purchase Obligation (RPO) approved by the Commission for 3rd Control Period

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Solar Target	9.00%	10.00%	11.00%
2	Non Solar Target	**9.35%**	**9.91%**	**10.58%**
	Total Target	**18.35%**	**19.91%**	**21.58%**
3	Sales Within UT	2,826.36	2,880.47	2,935.74
	RPO Target			

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
5	Solar	254.37	288.05	322.93
6	Non Solar	264.26	285.45	310.60
	Total RPO Target	**518.64**	**573.50**	**633.53**
	RPO Compliance (Proposed Purchase)			
7	Solar	118.26	236.52	236.52
8	Non Solar	284.58	569.16	569.16
	Total RPO Compliance (Proposed Purchase)	**402.84**	**805.68**	**805.68**
	RPO Compliance (REC Certificate Purchase)			
9	Solar	-	-	-
10	Non Solar	-	-	-
	Total RPO Compliance (REC Certificate)	**-**	**-**	**-**
	RPO Compliance (REC+ Actual)			
11	Solar	118.26	236.52	236.52
12	Non Solar	284.58	569.16	569.16
	Total RPO Compliance	**402.84**	**805.68**	**805.68**
	Cumulative Requirement till current year			
13	Solar	1,022.25	1,310.30	1,633.23
14	Non Solar	1,537.29	1,822.74	2,133.34
	Total	**2,559.54**	**3,133.04**	**3,766.57**
	Cumulative Compliance till current year			
15	Solar	245.16	481.68	718.20
16	Non Solar	769.34	1,338.50	1,907.66
	Total	**1,014.50**	**1,820.19**	**2,625.87**
	Net Shortfall in RPO Compliance till current year			
17	Solar	777.09	828.61	915.02
18	Non Solar	767.94	484.24	225.68
	Total	**1545.03**	**1312.85**	**1140.70**

The Commission approves NIL cost towards RPO compliance for the 3rd Control Period as no cost has been sought by the Petitioner. The Petitioner has tied up PPAs for purchase of renewable energy with NTPC and SECI, which is included in the power purchase cost. Any expense incurred by the Petitioner in procuring RECs shall be taken up at the time of true-up of the respective years.

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 52 of the JERC MYT Regulation, 2021 states the following:

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

52.2 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.

52.3 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.

52.4 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.

52.5 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.

52.6 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."

5.9.1. Employee Expenses

Petitioner's Submission

The Petitioner has determined the employee expenses for each year of the Control Period based on the norms specified in the JERC MYT Regulations, 2021. The employee expenses for the Base Year FY 2021-22 have been estimated based on the actual data from FY 2020-21. The growth factor (Gn) has been calculated from the projected growth in employee year over year during the Control Period. Accordingly, the Growth factor (Gn) for the control period is as shown in the table below:

Table 93: Employee Growth rate as submitted by the Petitioner for 3rd Control Period

Gn factor working	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Number of employees	1848.00	1772.00	1604.00	1355.00
Gn	-5.42%	-4.11%	-9.48%	-15.52%

The employee expenses projected for the Control Period should take CPI escalation into account along with Growth factor. The average increase in Consumer Price Index (CPI) has been calculated based on the average increase in the Consumer Price Index (CPI) for the FY 2018-19, FY 2019-20 & FY 2020-21. The average CPI Index of last three years i.e., 5.41% has been considered for escalating employee expense per employee of FY 2020-21 (provisional actuals) for the Control period.

Table 94: Employee Expense as submitted by the Petitioner for 3rd Control Period (INR Cr)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
EMPn-1	114.18	115.41	116.65
Gn	-4.11%	-4.11%	-4.11%
CPI Inflation	5.41%	5.41%	5.41%
EMPn	**115.41**	**116.65**	**117.91**

Commission's analysis

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC MYT Regulations, 2021 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 2018-19 to FY 2020-21 to arrive at the Base Year estimates i.e. for the FY 2021-22. The average of these three years i.e. FY 2018-19 to FY 2020-21 has been considered as employee expenses for the FY 2019-20. This has been escalated with the average CPI Inflation of the last three years to arrive at the employee expenses for the Base Year i.e. FY 2021-22. The resultant employee expenses of the Base Year have been escalated by Growth Rate determined based on the manpower plan approved in the Business Plan Order, dated 31st March 2022 and the average CPI Inflation of the last three years to arrive upon the employee expenses of each year of the 3rd Control Period. The CPI inflation has been computed as follows:

Table 95: CPI inflation computed for 3rd Control Period

FY	Average of (April – March)	Increase in CPI Index	Average increase In CPI indices over 3 year
FY 2017-18	284.42		6.00%
FY 2018-19	299.92	5.45%	
FY 2019-20	322.50	7.53%	
FY 2020-21	338.68	5.02%	

Accordingly, the employee expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 96: Employee Expense approved by the Commission for 3rd Control Period

Particular	Base Year	ARR		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Gn (Growth factor as per Petitioner Submission)		-4.11%	-9.48%	-15.52%
CPI (3 previous year avg.) (in %)		6.00%	6.00%	6.00%
Total Employee Expenses (INR Cr)	**126.98**	**129.06**	**123.84**	**110.89**

The Commission approves Employee Expenses of INR 129.06 Crore for the FY 2022-23, INR 123.84 Crore for the FY 2023-24 and INR 110.89 Crore for the FY 2024-25.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner submitted that A&G expenses for each year of the 3rd MYT Control Period has been computed based on the norms specified in the JERC MYT Regulations, 2021 i.e., A&Gn = (A&Gn-1) x (1+CPI inflation). Accordingly. The A&G expenses for the FY 2021-22 have been taken as base. The average increase in Consumer Price Index (CPI) for the past years has been considered for projecting the A&G expenses. As mentioned in the earlier section, only 5 Months CPI Index is considered for the FY 2021-22. The following table provides the A&G expenses projected for each year of the 3rd MYT Control Period along with various parameters considered.

Table 97: A&G Expense as submitted by the Petitioner for 3rd Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
A&G Expenses of Previous Year (A&Gn-1)	18.06	19.04	20.07
CPI Inflation	5.41%	5.41%	5.41%
A&Gn Expenses	**19.04**	**20.07**	**21.15**

Commission's analysis

The Commission has determined the A&G expenses for the Base Year FY 2021-22 by considering the actual audited expenses from FY 2018-19 to FY 2020-21. The average A&G expenses of these three years i.e., FY 2018-19 to FY 2020-21 has been considered as A&G expense for the FY 2019-20 as under:

Particulars	As per Aud. Acc. A&G Exp.
FY 2018-19	11.85
FY 2019-20	18.02
FY 2020-21	17.13
Avg (A&G expense for the FY 2019-20)	15.67

This is escalated with CPI of the respective years to arrive at the Base Year estimates. Thereafter, the Base Year estimate has been escalated by the average CPI Inflation of the last three years to arrive at the A&G expenses for the Base Year i.e. FY 2021-22. The resultant A&G expenses of the Base Year has been escalated by the average CPI Inflation of the last three years to arrive upon the A&G expenses of each year of the 3rd Control Period. The Commission has included EESL charges in the projected A&G expenses. The A&G expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 98: A&G Expense approved by the Commission for 3rd Control Period

Particular	Base Year	ARR		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
CPI (3 previous year avg.) (in %)		6.00%	6.00%	6.00%
Total A&G Expenses	**17.50**	**18.55**	**19.66**	**20.84**

The Commission approves the Administrative & General (A&G) expenses of INR 18.55 Crore for the FY 2022-23, INR 19.66 Crore for the FY 2023-24 and INR 20.84 Crore for the FY 2024-25.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The R&M expenses for each year of the Control Period based on the norms specified in the JERC MYT Regulations, 2021 i.e., R&Mn = K x GFAn-1 x (1+WPI inflation). The R&M expenses for the FY 2021-22 have been taken as base. The 'K' factor as prescribed in the regulations has been calculated as ratio of R&M and average GFA of the last 3 years. The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2018-19, FY 2019-20 and FY 2020-21 (last three available audited accounts) and averaged for three years. The 'K' factor has been computed as follows:

Table 99: Calculation of 'K' as submitted by the Petitioner for 3rd Control Period

S.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA (INR Cr)	690.27	799.51	864.29
2	R&M Expenses (INR Cr)	4.47	5.98	11.29
3	K factor	0.65%	0.75%	1.31%
4	Avg of K factor	**0.90%**		

The Petitioner has submitted that the Hon'ble Prime Minister and Ministry of Power had emphasized that the smart meter has to be rolled out in Mission mode for the Union Territories and assigned the time that the all the consumers (other than Agriculture) in Union Territories shall be metered with smart meters with prepayment mode by December 2023. Accordingly, the Smart pre-payment meter work in UT of Puducherry was awarded to M/s. Power Finance Corporation Consultant Ltd (M/s PFCCL) on TOTEX mode on 4th June 2021.

The Petitioner submitted that M/s PFCCL will be the project implementing agency and will select Advance Metering Infrastructure Service Provider (AMISP) for providing Smart Prepaid meters for all the consumers, Smart meter with AMR facility for HT, EHT consumers. Since the Project has be carried out on the TOTEX mode, PED has to pay the rate quoted by the AMISP. The approximate Facility Management Services(FMS) Cost arrived at INR 80/per consumer/month for the contract period of 90 Months and the exact amount will be known after AMISP is finalized by M/s. PFCCL.

The Petitioner has projected that around 4.05 Lakh consumer meter will be replaced by FY2023-24 the FMS cost tunes to a total of INR 38.88 Cr. Since this project is initiated under TOTEX mode and cost incurred towards FMS is claimed under R&M Cost. Cost incurred for this Smart meter project are then added separately to the calculated R&M expenses as they are not regular expenses. R&M Expenses have been calculated based on the formula and methodology provided in the Regulations, R&Mn = K x GFAn-1 x (1+WPI inflation).

Table 100: R&M Expense submitted by the Petitioner for 3rd Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
K-Factor	0.90%	0.90%	0.90%
GFAn-1	954.63	989.63	1003.75
WPI Inflation	2.42%	2.42%	2.42%
R&M Expenses	**8.81**	**9.13**	**9.26**
FMS Cost towards Prepaid smart meters	**-**	**38.88**	**40.01**
Total R&M Cost	**8.81**	**48.01**	**49.27**

Commission's analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2018-19, FY 2019-20 and FY 2020-21 (last three available audited accounts) and averaged for three years. The 'K' factor has been computed as follows:

Table 101: 'K' computation by the Commission for 3rd MYT Control Period

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
R&M Expenses	4.47	5.98	11.29
Opening GFA (GFAn-1)	660.92	799.51	864.29
K Factor (%)	0.68%	0.75%	1.31%
K Factor Approved by the Commission (Average of 3 years) (%)	**0.91%**		

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 each year of the Control Period. The WPI Inflation has been computed as follows:

Table 102: WPI inflation computed for 3rd MYT Control Period

FY	Average of (April – March)	Increase in WPI Index	Average increase In CPI indices over 3 year
FY 2017-18	114.88		2.42%
FY 2018-19	119.79	4.28%	
FY 2019-20	121.80	1.68%	
FY 2020-21	123.38	1.29%	

The R&M expenses approved by the Commission for each year of the 3rd MYT Control Period have been provided in the following table:

Table 103: R&M Expense approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening GFA (GFAn-1)	989.63	1,001.67	1,089.49
K Factor (%)	0.91%	0.91%	0.91%
Avg. WPI Inflation (%)	2.42%	2.42%	2.42%
R&M Expenses = K x (GFA n-1) x (1+WPIinflation)	**9.23**	**9.34**	**10.16**

Further, the Commission observed that the Petitioner has projected the FMS cost of INR 38.88 Cr for FY 2023-24 and INR 40.01 Crore for FY 2024-25. The Commission observed that this project of metering all consumers (except Agriculture) with smart meters with prepayment mode by December 2023, is initiated under TOTEX mode and cost incurred towards FMS is claimed under R&M Cost. The Commission provisionally allows the FMS Cost INR 38.88 Cr for FY 2023-24 and INR 40.01 Crore for FY 2024-25 incurred towards this Smart meter project. Further, The Commission directs the Petitioner to submit the DPR for this project as soon as possible for the consideration of the Commission.

The Total R&M expenses approved by the Commission for each year of the 3rd MYT Control Period have been provided in the following table:

Table 104: R&M Expense approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Normative R&M Expenses	9.23	9.34	10.16
Additional R&M Expenses (FMS Cost)	-	38.88	40.01
Total R&M Expenses	**9.23**	**48.22**	**50.17**

5.9.4. Summary of O&M Expenses

Petitioner's Submission

The Summary of O&M expenses as per the Petitioner for each year of the 3rd MYT Control Period have been provided in the following table:

Table 105: Summary of O&M expenses submitted by the Petitioner for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Employee Expenses	115.41	116.65	117.91
Total A&G expenses	19.04	20.07	21.15
Total R&M Expenses	8.81	48.01	49.27
Total O&M expenses	**143.26**	**184.73**	**188.33**

Commission's analysis:

The Summary of O&M expenses approved by the Commission for each year of the 3rd MYT Control Period have been provided in the following table:

Table 106: Summary of O&M expenses approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Employee Expenses	129.06	123.84	110.89
Total A&G expenses	18.55	19.66	20.84
Total R&M Expenses	9.23	48.22	50.17
Total O&M expenses	**156.84**	**191.72**	**181.90**

5.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's Submission

Petitioner submitted that, it has plans to carry the capital expenditure during the control period for augmentation and expansion of its capacity and to reduce the transmission and distribution loss in the system. The works to be carried out are with an intention to maintain a reliable and efficient system. The same was submitted in detail in the Business Plan petition. The Petitioner has proposed capital expenditure and Capitalization for the 3rd Control Period as under:

Table 107: Capital Expenditure for the 3rd MYT Control Period (INR Cr)

Sr. No.	Particulars	Projections			
		Capital Expenditure			
		FY 2022-23	FY 2023-24	FY 2024-25	Total
A	**Transmission Schemes**	50.00	90.00	75.00	**215.00**
B	**Distribution Schemes**	35.00	70.00	75.00	**180.00**
	Total	**85.00**	**160.00**	**150.00**	**395.00**

Table 108: Capitalization for the 3rd MYT Control Period (INR Cr)

Sr. No.	Particulars	Projections			
		Capitalisation			
		FY 2022-23	FY 2023-24	FY 2024-25	Total
A	**Transmission Schemes**	17.65	75.94	92.50	**186.08**
B	**Distribution Schemes**	12.35	59.06	92.50	**163.92**
	Total	**30.00**	**135.00**	**185.00**	**350.00**

The proposed capital expenditure will definitely be helpful to achieve the loss targets set by PED in its distribution loss trajectory and to meet any additional load surging due to increase in demand.

Commission's analysis:

The Commission considered the Capital expenditure and capitalization as approved by the Commission in the Business Plan Order, dated 31st March 2022. The following table provides the summary of capital expenditure and capitalization now approved by the Commission:

Table 109: Capital Expenditure & Capitalisation considered by the Commission for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
System Modernization Work	-	34.29	59.04

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Loss reduction Program	13.59	64.82	101.12
Total Capital Expenditure	**13.59**	**99.11**	**160.16**
Total Capitalisation	**12.04**	**87.82**	**141.92**

5.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the capital structure based on the funding plan submitted to the Commission in the Business Plan Petition.

Table 110: Capital Structure submitted by the Petitioner for 3rd Control Period (INR Crore)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Total Capitalisation	30.00	135.00	185.00
2	Less: Capitalisation through Grants	15.88	75.94	74.00
3	Net Capitalisation excluding grant	14.12	59.06	111.00
4	Debt (%)	70%	70%	70%
5	Equity (%)	30%	30%	30%
6	**Normative Loan**	**9.88**	**41.34**	**77.70**
7	**Normative Equity**	**4.24**	**17.72**	**33.30**

Commission's analysis

Regulation 27 of the JERC MYT Regulations, 2021 specifies the following:

"27.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2022 shall be considered:

Provided that in case of retirement or replacement or De-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

Provided further that in case of retirement or replacement or De-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the normative loan component, as the case may be, of the original cost of such assets.

27.2 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 24, 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 utilised 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.

27.3 Any expenditure incurred or projected to be incurred on or after April 1, 2022, 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 these Regulations"

The Commission has considered the Capital structure as approved in the Business Plan order, dated 31st March 2022 for 3rd MYT Control Period.

Table 111: Capital Structure considered by the Commission for 3rd MYT Control Period (INR Crore)

Particulars		FY 2022-23	FY 2023-24	FY 2024-25
Opening GFA balance	A	989.63	994.45	1,029.58
Total Capitalisation	B	12.04	87.82	141.92
Less: Capitalisation through Grants	C	7.22	52.69	85.15
Net Capitalisation excluding grant	D=B-C	4.82	35.13	56.77
Closing GFA balance	E=A+D	994.45	1,029.58	1,086.34
Debt (%)	F	70.00%	70.00%	70.00%
Equity (%)	G	30%	30%	30%
Normative Loan	**D*F**	**3.37**	**24.59**	**39.74**
Normative Equity	**D*G**	**1.44**	**10.54**	**17.03**

5.12. Depreciation

Petitioner's Submission

The Petitioner submitted that the closing GFA of the FY 2021-22 as arrived at APR has been considered as opening GFA of the FY 2022-23. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year.

The Petitioner submitted that 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.

Based on the methodology given in MYT Regulations, depreciation for the 3rd MYT Control Period is submitted as under:

Table 112: Depreciation for the 3rd MYT Control Period (INR Cr)

No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening GFA (Net of Grants)	989.63	1003.75	1062.81
2	Addition During the FY	30.00	135.00	185.00

No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
3	Less: Capitalization through grants	15.88	75.94	74.00
4	Closing GFA (net of Grants)	1003.75	1062.81	1173.81
5	Average GFA (net of Grants)	996.69	1033.28	1118.31
6	Weighted Average Rate of Depreciation (%)	3.67%	3.67%	3.67%
7	**Net Depreciation for the year**	**36.60**	**37.94**	**41.07**

Commission's analysis

Regulation 31 of the JERC MYT Regulations, 2021 stipulates the following:

"31.1 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.

31.2 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.

Provided further that the salvage value of Information Technology equipment and computer software shall be considered at zero (0) per cent of the allowable capital cost.

31.3 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.

31.4 In case of existing assets, the balance depreciable value as on April 1, 2022, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2021, from the gross depreciable value of the assets.

31.5 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.

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

31.7 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 these Regulations.

31.8 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.*

31.9 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.

31.10 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 JERC MYT Regulations, 2021, provided in the following table:

Table 113: Asset-wise depreciation rate considered by the Commission for weighted average rate for 3rd MYT Control Period (%)

Description of Assets	Rate of Depreciation
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	15.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%

The closing GFA of the FY 2021-22 as approved in the APR has been considered as opening GFA of the FY 2022-23. However, grants provided by GoI have been deducted from the GFA, as discussed in the previous section. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. Cumulative depreciation upto the respective years has not been deducted from the closing GFA of each year due to unavailability of requisite data. Accordingly, the Commission shall consider the same during the True-up of the respective years.

The following table provides the calculation of depreciation during the 3rd MYT Control Period.

Table 114: Depreciation considered by the Commission for 3rd MYT Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Gross Fixed Assets	989.63	994.45	1,029.58
Addition During the FY	4.82	35.13	56.77
Adjustment/Retirement during the FY	-	-	-
Closing Gross Fixed Assets	994.45	1,029.58	1,086.34
Average Gross Fixed Assets	992.04	1,012.01	1,057.96
Weighted Avg. rate of Depreciation (%)	3.67%	3.67%	3.67%
Depreciation	**36.43**	**37.16**	**38.85**

The Commission approves a depreciation of INR 36.43 Crore for the FY 2022-23, INR 37.16 Crore for the FY 2023-24 and INR 38.85 Crore for the FY 2024-25.

5.13. Interest on Loan

Petitioner's Submission

Petitioner has considered the normative loan addition during the year. Repayment of the loan has been considered equivalent to the depreciation for the respective years in line with the JERC MYT Regulations, 2021. The interest rate has been calculated based on the one (1) Year State Bank of India (SBI) MCLR as on 1st April plus 100 basis point to project the interest on normative loans for the Control Period. Other finance charges incurred by the Petitioner shall be claimed based on actuals during true-up for the respective years.

The following table provides the Interest on Loan projected for the 3rd MYT Control Period based on JERC MYT regulations, 2021 as under.

Table 115: Interest on Loan for the 3rd MYT Control Period (INR Cr)

Sr. No.	Particulars	Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Normative Loan	157.14	130.42	133.82
2	Add: Normative Loan during the Year	9.88	41.34	77.70
3	Less: Normative Repayment	36.60	37.94	41.07
4	**Closing Normative Loan**	130.42	133.82	170.45
4	Average Normative Loan	**143.78**	**132.12**	**152.14**
5	Rate of Interest (@SBI 1 Year MCLR rate+100 Basis Points)	8.00%	8.00%	8.00%
6	**Interest on Normative Loan**	**11.50**	**10.57**	**12.17**
7	Other Finance Charges	-	-	-
8	**Total Interest & Finance Charges**	**11.50**	**10.57**	**12.17**

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.1 The loans arrived at in the manner indicated in Regulation 27 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-capitalisation 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 decapitalized or retired or replaced assets, based on documentary evidence.

29.2 The normative loan outstanding as on April 1, 2022, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021, from the gross normative loan.

29.3 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 31.

29.4 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 after prudence check:

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.

29.5 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 capitalisation approved by the Commission for the Year.

29.6 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.

29.7 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.

29.8 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.

29.9 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 or Distribution 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.

29.10 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; i.e., the Transmission Licensee and the Distribution Licensee or the Distribution Licensee and the Consumers of Distribution Licensee."

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 as on 1st April 2021, plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2021.

The Interest on Loan has been calculated on the average loan during the year with the opening loan for the first year of the 3rd MYT Control Period considered equivalent to the closing loan approved in the APR for the FY 2021-22. Further, the normative loan addition during each year of the control period has been considered as per the capital structure approved in the previous section.

Repayment of the loan has been considered equivalent to the depreciation for the respective years as determined by the Commission in line with the JERC MYT Regulations, 2021.

The following table provides the Interest on Loan approved by the Commission for the 3rd Control Period.

Table 116: Interest on Loan considered by the Commission for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Normative Loan	167.65	134.59	122.01
Add: Normative Loan During the year	3.37	24.59	39.74
Less: Normative Repayment= Depreciation	36.43	37.16	38.85
Closing Normative Loan	134.59	122.01	122.90
Average Normative Loan	151.12	128.30	122.45
Rate of Interest (%)	8.00%	8.00%	8.00%
Interest on Loan	**12.09**	**10.26**	**9.80**

The Commission approves Interest on Loan as INR 12.09 Crore for the FY 2022-23, INR 10.26 Crore for the FY 2023-24 and INR 09.80 Crore for the FY 2024-25.

5.14. Return on Equity (RoE)

Petitioner's Submission

The Petitioner has segregated the proposed 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 JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

In accordance with the Regulation 28.2 of the JERC MYT Regulations 2021, the Petitioner has considered a post-tax rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations).

Further, in accordance to the Regulation 28.3 of the JERC MYT Regulations, 2021, the Petitioner has considered return on equity at the rate of 16% for the Retail Supply Business.

Table 117: Return on Equity for the 3rd MYT Control Period (INR Cr)

S. No	Particulars	Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Balance of Equity	296.89	301.13	318.84
2	Equity Addition during year (30% of Capitalization)	4.24	17.72	33.30
3	Closing Balance of Equity	301.13	318.84	352.14
4	Average Equity Amount	299.01	309.98	335.49
5	Average Equity-Wires Business (90%)	269.11	278.99	301.94
6	Average Equity -Retail Supply Business (10%)	29.90	31.00	33.55
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%

S. No	Particulars	Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
9	**Return on Equity for Wires Business**	**41.71**	**43.24**	**46.80**
10	**Return on Equity for Retail Supply Business**	**4.78**	**4.96**	**5.37**
11	**Total Return on Equity**	**46.50**	**48.20**	**52.17**

Commission’s analysis:

Regulation 28 of the JERC MYT Regulation, 2021 states the following:

“28.1 Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 27 for the assets put to use for the Transmission Licensee and shall be allowed in accordance with the prevalent CERC Tariff Regulations for transmission system.

28.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

28.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of sixteen (16) per cent per annum.

28.4 The return on equity shall be computed on average of equity capital at the beginning and end of Year.”

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 JERC MYT Regulations, 2021 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 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 Regulations during the True-up of the respective years. The following table provides the total return on equity approved for the 3rd MYT Control Period.

Table 118: Return on Equity considered by the Commission for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Equity Amount	296.89	298.33	308.87
Equity Addition during year	1.44	10.54	17.03
Closing Equity Amount	298.33	308.87	325.90
Average Equity Amount	297.61	303.60	317.39
Average Equity (Wires Business)	267.85	273.24	285.65
Average Equity (Retail Supply Business)	29.76	30.36	31.74
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	41.52	42.35	44.28
Return on Equity for Retail Supply Business	4.76	4.86	5.08
Total Return on Equity	**46.28**	**47.21**	**49.35**

The Commission approves Return on Equity of INR 46.28 Crore for the FY 2022-23, INR 47.21 Crore for the FY 2023-24 and INR 49.35 Crore for the FY 2024-25.

5.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner has considered the provisional actual addition of consumers' security deposit for the FY 2020-21 and has escalated it by 5% each year to arrive at the projected addition of security deposit for each year of the 3rd MYT Control Period.

Table 119: Interest on Security Deposit for 3rd MYT Control Period (INR Cr)

No.	Particulars	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Security Deposit	**218.38**	**222.44**	**226.70**
2	Add: Deposits during the Year	4.06	4.27	4.48
3	Less: Deposits refunded	0.00	0.00	0.00
4	Less: Deposits in form of BG/FDR	0.00	0.00	0.00
5	**Closing Security Deposit**	**222.44**	**226.70**	**231.18**
6	**Bank Rate**	**4.25%**	**4.25%**	**4.25%**
7	**Interest on Security Deposit**	**9.37**	**9.54**	**9.73**

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.11 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."

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, 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 additions during the year have been considered for each year of the Control Period based on the provisional actual addition of security deposit for the FY 2020-21, with 5% escalation for each year thereafter, similar to the methodology considered by the Petitioner.

The following table provides the calculation of interest on consumer security deposits approved for each year of the MYT Control Period.

Table 120: Interest on Consumer security considered by the Commission for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Security Deposit	225.96	230.02	234.29
Add: Deposits During the year	4.06	4.27	4.48
Less: Deposits refunded	-	-	-
Closing Security Deposit	230.02	234.29	238.77

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Average Security Deposit	227.99	232.15	236.53
Rate of Interest (%)	4.25%	4.25%	4.25%
Interest on Security Deposit on normative basis	**9.69**	**9.87**	**10.05**

The Commission approves Interest on Security Deposit as INR 9.69 Crore for the FY 2022-23, INR 9.87 Crore for the FY 2023-24 and INR. 10.05 Crore for the FY 2024-25.

5.16. 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, 2021.

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 interest on working capital considered is the MCLR plus 200 basis points for SBI on 1st April 2021 plus 200 basis points i.e. 9.00% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for 3rd MYT Control Period.

Table 121: Interest on Working Capital submitted by the Petitioner (In INR Cr)

Sr. No.	Particulars	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	O&M Expenses for 1 month	**11.94**	**15.39**	**15.69**
2	Maintenance Spares (@ 40% of R&M Expenses for one (1) month)	0.29	1.60	1.64
3	Receivables equivalent to two (2) months	275.19	287.65	299.51
4	Less: Amount, if any, held as security deposits	220.41	224.57	228.94
5	Total Working Capital	67.02	80.08	87.91
6	Rate of Interest	9.0%	9.0%	9.0%
7	Interest on Working Capital	**6.03**	**7.21**	**7.91**

Commission's analysis:

Regulation 53 of the JERC MYT Regulation, 2021 states the following:

"53.1 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 recalculated on the basis of the values of components of working capital approved by the Commission in the truing up."

The Commission has computed the Interest on Working Capital for each year of the Control Period in accordance with the JERC MYT Regulation, 2021. The interest rate has been considered as 9.00% (1 year MCLR as on 1st April 2021 i.e. 7.00% + 200 basis points). The computation of interest on working capital is shown in the following table:

The following table provides the Interest on working Capital considered for each year of the 3rd MYT Control Period.

Table 122: Interest on working capital considered by the Commission for 3rd MYT Control Period (INR Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
O&M Expense for 1 month	13.07	15.98	15.16
Maintenance spares at 40% of R&M expenses for one (1) month;	0.31	1.61	1.67
Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff	267.74	282.80	290.85
Total Working Capital Requirement	281.12	300.39	307.68
Less: Amount held as security deposits	227.99	232.15	236.53
Net Working Capital	53.14	68.24	71.15
Rate of Interest (%)	9.00%	9.00%	9.00%
Interest on Working Capital	**4.78**	**6.14**	**6.40**

The Commission approves the Interest on Working Capital as INR 4.78 Crore for the FY 2022-23, INR 6.14 Crore for the FY 2023-24 and INR 6.40 Crore for the FY 2024-25.

5.17. Income Tax

Petitioner's Submission

The Petitioner has not made any submission in this regard.

Commission's analysis:

Regulation 33 of JERC MYT Regulations, 2021 stipulates the following:

"33. Tax on Income

33.1 The treatment of tax on income for a Transmission Licensee shall be in accordance with the prevalent CERC Tariff Regulations.

33.2 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.

33.3 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.

33.4 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 3rd MYT Control Period and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

5.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not proposed any provision for bad and doubtful debts during the MYT Control Period.

Commission's analysis

Regulation 63 of the JERC MYT Regulation, 2021 states the following:

"63.1 The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of bad debts written off 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 realized 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 3rd MYT Control Period. The same shall be accounted for as per actuals during the True-up of respective years.

5.19. Non-Tariff Income

Petitioner's Submission

The Petitioner submitted that amount received by the licensee on account of non-tariff Income shall be deducted from the aggregate revenue requirement in calculating the net revenue requirement of such licensee. The non-tariff Income comprises of Testing charges, Service connection charges, Cancellation charges, Meter charges, income from trading of materials, reconnection fee, and miscellaneous income among others. The Petitioner has submitted that Non-tariff income has been escalated by 5% by considering non-tariff income of FY 2020-21 as base and projected for the 3rd MYT Control Period. The NTI proposed for each year of the 3rd MYT Control Period has been shown in the following table:

Table 123: Non-Tariff Income for the Control Period (INR Cr)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Non-tariff income	3.54	3.72	3.91

Commission's analysis:

Regulation 64 of the JERC MYT Regulations, 2018 stipulates the following:

"65. Non-Tariff Income

65.1 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.

65.2 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 Commission approved NTI for each year of the 3rd MYT Control Period has been shown in the following table:

Table 124: Non-Tariff Income Considered by the Commission for 3rd MYT Control Period (INR Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Non-Tariff Income	4.00	3.72	3.91

5.20. 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 of the 3rd MYT Control Period as shown in the following table:

Table 125: ARR submitted by the Petitioner for 3rd Control Period (INR Crore)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Cost of Power Purchase (Excl. Transmission charges)	1285.59	1362.48	1418.99
2	R&M Expenses	8.81	48.01	49.27
3	Employee Cost	115.41	116.65	117.91
4	A&G Expenses	19.04	20.07	21.15
5	Depreciation	36.60	37.94	41.07
6	Interest and Finance Charges	11.50	10.57	12.17
7	Interest on Working Capital	5.62	7.21	7.91
8	Interest on consumer security Deposit	9.37	9.54	9.73
9	Transmission Charges	80.00	68.96	70.62
10	Return on Equity	46.50	48.20	52.17
11	**Total Revenue Requirement**	**1618.84**	**1729.63**	**1800.99**
12	Less: Non-Tariff and other Income	3.54	3.72	3.91
13	**Annual Revenue Requirement**	**1614.88**	**1725.91**	**1797.08**

Commission's Analysis:

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for each year of the MYT Control Period is approved as provided in the following table:

Table 126: ARR approved by the Commission for 3rd Control Period (INR Crore)

Particulars	FY 2022-23		FY 2023-24		FY 2024-25	
	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR
Power Purchase Cost	1,365.59	1,344.36	1,431.44	1,398.18	1,489.61	1,452.63

Particulars	FY 2022-23		FY 2023-24		FY 2024-25	
	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR
Operation & Maintenance Expenses	143.26	156.84	184.73	191.72	188.33	181.90
Depreciation	36.60	36.43	37.94	37.16	41.07	38.85
Interest and Finance charges	11.50	12.09	10.57	10.26	12.17	9.80
Interest on Working Capital	5.62	4.78	7.21	6.14	7.91	6.40
Interest on Security Deposit	9.37	9.69	9.54	9.87	9.73	10.05
Return on Equity	46.50	46.28	48.20	47.21	52.17	49.35
Total Revenue Requirement	**1,618.44**	**1,610.47**	**1,729.63**	**1,700.55**	**1,800.99**	**1,748.99**
Less: Non-Tariff Income	3.54	4.00	3.72	3.72	3.91	3.91
Net Revenue Requirement	**1,614.90**	**1,606.46**	**1,725.91**	**1,696.83**	**1,797.08**	**1,745.08**

The Commission approves the Interest on Working Capital as INR 1606.46 Crore for the FY 2022-23, INR 1696.83 Crore for the FY 2023-24 and INR 1745.08 Crore for the FY 2024-25.

5.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Revenue from sale of power at existing Tariff based on the projected sales, consumer and connected load for FY 2022-23 is tabulated below:

Table 127: Revenue at existing tariff submitted by the Petitioner for FY 2022-23 (INR Crore)

Category	FY 2022-23				
	Sales (Mus)	Fixed Charge (INR Cr)	Energy Charge (INR Cr)	5% Surcharge (INR Cr)	Total Revenue (INR Cr.)
LT Category					
Domestic & Cottage	826.89	19.65	241.18	13.04	273.87
Life Line Services	3.50	0.00	0.35	0.02	0.37
Commercial	210.00	13.94	146.61	8.03	168.58
Agriculture	61.17	3.34	0.00	0.17	3.51
Public lighting	17.50	6.99	11.90	0.94	19.83
LT Industrial	126.59	6.19	76.59	4.14	86.92
Water tank	41.06	0.15	28.33	1.42	29.90
Temporary supply - LT&HT	5.06	0.00	4.94	0.25	5.18
Total LT	**1291.78**	**50.26**	**509.89**	**28.01**	**588.15**
HT Category					
HT-1 Industries and commercial	1018.35	120.17	552.07	33.61	705.85

Category	FY 2022-23				
	Sales (Mus)	Fixed Charge (INR Cr)	Energy Charge (INR Cr)	5% Surcharge (INR Cr)	Total Revenue (INR Cr.)
HT 2 - Government & non-Industrial & non-Commercial	76.75	13.62	49.73	3.17	66.52
HT 3 - EHT Industries	437.36	23.25	227.61	12.54	263.40
Total HT	**1532.47**	**157.04**	**829.41**	**49.32**	**1035.77**
Grand Total	**2824.25**	**207.29**	**1339.30**	**77.33**	**1623.92**

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 2022-23. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab wise tariff as computed by the Commission for the FY 2022-23 has been shown in the following table:

Table 128: Revenue approved by the Commission for FY 2022-23 (INR Crore)

Sr. No.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (INR/unit)
1	**DOMESTIC**	**826.89**	**241.18**	**19.65**	**260.83**	**3.15**
	0-100 units	380.26	58.94	7.18		0.00
	101-200 units	210.02	54.61	5.87		0.00
	201-300 units	110.80	51.52	3.20		0.00
	Above 300 units	125.80	76.11	3.40		0.00
2	**LIFELINE Services**	**3.50**	**0.35**	**0.00**	**0.35**	**1.00**
3	**COMMERCIAL**	**210.00**	**146.61**	**13.94**	**160.55**	**7.65**
	0-100 units	40.82	23.26			0.00
	101-250 units	47.28	31.92			0.00
	Above 250 units	121.90	91.43			0.00
4	**AGRICULTURE SERVICES**	**61.75**	**0.00**	**4.53**	**4.53**	**0.73**
(i)	Agriculture	61.75	0.00	4.53		0.00
	Small Farmers	8.54	0.00	0.10	**0.10**	0.11
	Other farmers	53.21	0.00	4.43	**4.43**	0.83
(ii)	Cottage Industries					0.00
	0-100 units					0.00
	101-200 units					0.00
	201-300 units					0.00
	Above 300 units					0.00
5	**PUBLIC LIGHTING**	**19.00**	**12.92**	**6.81**	**19.73**	**10.39**

Sr. No.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total (INR Cr.)	ABR (INR/unit)
6	**LT INDUSTRIAL & WATER WORKS**	**167.68**	**104.94**	**8.35**	**113.28**	**6.76**
(i)	LT Industrial	**126.59**	76.59	8.20		0.00
(ii)	Water Tanks	41.09	28.35	0.15		0.00
7	**HIGH TENSION-I (Industrial and Commercial)**	**1018.36**	**563.57**	**125.17**	**688.75**	**6.76**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	931.67	514.36	**109.17**	**623.52**	**6.69**
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	86.69	49.22	**16.01**	**65.22**	**7.52**
8	**HIGH TENSION-II (HT Others)**	**76.75**	**50.77**	**14.19**	**64.96**	**8.46**
9	**HIGH TENSION-III (EHT Industries)**	**437.37**	**225.31**	**25.83**	**251.14**	**5.74**
10	**HOARDINGS/ SIGNBOARDS**	**0.00**	**0.00**	**-**	**-**	**-**
11	**TEMPRORARY**	**5.06**	**4.93**	**-**	**4.93**	**9.75**
	TOTAL	**2826.36**	**1350.58**	**218.47**	**1,569.05**	**5.55**

The Commission has determined revenue from sale of power at existing tariff as INR 1569.05 Cr in the FY 2022-23.

5.22. Standalone Revenue Gap/ Surplus for FY 2022-23

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue surplus of INR 9.04 Cr (including revenue from Regulatory Surcharge) for the FY 2022-23.

Commission's analysis

The Commission based on the approved ARR and existing retail tariff (including Regulatory Surcharge) has derived the following Revenue Gap/Surplus:

Table 129: Standalone Revenue Gap/ Surplus approved at existing tariff (including Regulatory Surcharge) for the FY 2022-23 (In INR Cr)

S. No	Particulars		Petitioner's submission	Now Approved
1	Annual Revenue Requirement	A	1,614.88	1,606.46

S. No	Particulars		Petitioner's submission	Now Approved
2	Revenue from sale of power	B	1,546.59	1,569.05
3	**Standalone Revenue Gap/ (Surplus)**	**C=A-B**	**68.29**	**37.41**
4	Revenue from Regulatory Surcharge	D	77.33	78.45
5	**Standalone Revenue Gap/ (Surplus) (including regulatory surcharge)**	**E=C-D**	**(9.04)**	**(41.04)**

The Commission approves the standalone surplus at existing retail tariff as INR 41.04 Cr for FY 2022-23. This estimated surplus is considered while determining the retail tariff for FY 2022-23, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2022-23 has kept in view the principles of determination of tariff as set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2021.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. In this Tariff Order, the Commission has continued with its endeavor 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 mandates the Commission to strike a fine balance between the interests of various stakeholders including Utilities and consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

6.2. Applicable Regulations

Regulation 20 of the JERC MYT Regulations, 2021 states the following:

"***20. Annual determination of tariff***

20.1 The Commission shall determine the tariff of a Generating Company, Transmission Licensee and Distribution Licensee covered under a Multi Year Tariff framework for each Year during the Control Period, in accordance with timelines specified in Regulation 18, having regard to the following:

a) The approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges of the Generating Company, Transmission Licensee and Distribution Licensee for such Financial Year, including modifications approved at the time of Mid-term Review, if any; and

b) Approved gains and losses, including the incentive available, to be passed through in tariff, following the truing up of previous Year."

Further, Regulation 68 of the JERC MYT Regulations, 2021 states the following:

"68. Determination of Tariff

68.1 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.

68.2 The Commission shall endeavour to determine cost of supply for each category/ sub-category of Consumers.

68.3 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.

68.4 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."

6.3. Standalone and Consolidated Revenue Gap/ Surplus at existing tariff

Petitioner's Submission

PED has submitted in the tariff order dated 7th April 2021, the Commission approved a consolidated revenue gap of Rs. 375.89Cr till FY 2019-20 based on trued up costs till FY 2019-20. PED has submitted that standalone revenue gap/(surplus) for FY 2020-21 based on actual costs and standalone gap/(surplus) based on revised estimates for FY 2021-22 and projected gap with Regulatory surcharge for the FY 2022-23 comes as under:

Table 130: Standalone Revenue Gap/ (Surplus)at existing tariff (Rs. Cr)

S. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23
1	Aggregate Revenue Requirement	1470.43	1590.20	1614.88
2	Revenue from Sale of Power+ Regulatory Surcharge (5%)	1433.57	1590.49	1623.92
3	Revenue Gap/ (Surplus)	36.86	(0.29)	(9.04)

PED has submitted that the Commission vide its tariff order date 7th April 2021 for computation of carrying cost for FY 2019-20, has not considered the prior period expenses of Rs. 126.32 Cr in the standalone gap and arrived at a closing Gap for FY 2019-20 of Rs. 249.57 Cr. In line with the Commission Tariff Order for computation of carrying cost, PED has adopted the same methodology and considered the closing Gap of FY 2019-20 as opening gap for FY 2020-21 and rate of interest at SBI 1 year MCLR + 1% as on 1st April of the relevant year. The detailed computation of carrying cost is shown in the table below:

Table 131: Computation of carrying Cost at existing tariff (Rs. Cr)

S.No.	Particulars	FY 2019-20 (Approved)	FY 2020-21	FY 2021-22	FY 2022-23
1	Opening Gap/(Surplus)	146.96	249.57	309.88	334.37
2	Addition Gap/(Surplus) (Standalone Gap)	84.54	36.86	-0.29	-9.04
3	Closing Gap/(Surplus)	231.5	286.43	309.59	325.33
4	Average Gap/(Surplus)	189.23	268.00	309.74	329.85
5	Rate of Interest	9.55%	8.75%	8.00%	8.00%
6	Carrying cost	18.07	23.45	24.78	26.39

S.No.	Particulars	FY 2019-20 (Approved)	FY 2020-21	FY 2021-22	FY 2022-23
7	Final Closing Gap/ (Surplus)	249.57	309.88	334.37	351.72

Now, considering the cumulative Gap upto FY2019-20, stand-alone Gap and carrying cost at existing tariff of each year for FY 2020-21, FY 2021-22 and FY 2022-23 the Cumulative Gap at existing tariff including Regulatory Surcharge for FY 2022-23 comes out to be as under:

Table 132: Cumulative Revenue Gap/(Surplus)at existing tariff (Rs. Cr)

S.No.	Particulars	FY 2019-20 (Approved)	FY 2020-21	FY 2021-22	FY 2022-23
1	Opening Gap/(Surplus)	146.96	375.89	436.20	460.69
2	Add: Gap/(Surplus)	210.86	36.86	-0.29	-9.04
3	Closing Gap/(Surplus)	357.82	412.75	435.91	451.65
4	Carrying cost	18.07	23.45	24.78	26.39
5	Final closing Gap/(Surplus)	375.89	436.20	460.69	478.04

From above, it can be seen that stand-alone Gap for FY 2020-21 is Rs. 36.86 Cr and the Cumulative GapuptoFY2020-21 is Rs. 436.20 Cr. Further the Cumulative Gap upto FY 2022-23 has increased upto Rs. 478.04 Cr.

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, in the Tariff Order dated 07 April 2021 had approved a revenue gap of INR 375.88 Cr till 31st March 2020. Taking into account the previous gap, the Commission determines the standalone and consolidated revenue gap/ surplus at existing tariff at the end of FY 2022-23 as shown below:

Table 133: Standalone Revenue Gap/ Surplus determined by Commission at existing Tariff (In INR Cr)

Particulars		FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	A	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at existing Tariff (excluding surcharge)	B	1,433.70*	1,538.08	1,569.05
Standalone Gap /(Surplus) for the year	C=A-B	**13.79**	**11.12**	**37.41**
Regulatory Surcharge (5%)	D	-	76.90	78.45
Revenue from Retail Sales at Proposed Tariff inclusive of Regulatory Surcharge	E	1,433.70	1,614.98	1,647.50
Standalone Gap /(Surplus) for the year (including surcharge)	**F=A-E**	**13.79**	**-65.79**	**-41.04**

***includes Regulatory Surcharge**

Table 134: Consolidated Revenue Gap/ Surplus determined by Commission at existing tariff (In INR Cr)

	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at Existing Tariff (excluding surcharge)	1,433.70*	1,538.08	1,569.05
Opening Gap Balance	375.88	423.16	388.59
Standalone Gap /(Surplus) for the year	13.79	11.12	37.41
Regulatory Surcharge rate		5%	5%
Less: Regulatory surcharge		76.90	78.45
Closing Gap Balance	389.67	357.37	347.55
Avg. Gap	382.77	390.27	368.07
Interest rate	8.75%	8.00%	8.00%
Carrying Cost	**33.49**	**31.22**	**29.45**
Cumulative Gap	**423.16**	**388.59**	**377.00**

**Includes Regulatory Surcharge*

The Commission determines a consolidated revenue gap of INR 377.00 Cr till FY 2022-23 at existing tariff considering Regulatory Surcharge of 5%.

6.4. Treatment of the consolidated Gap/ Surplus and Tariff Design

As derived from above, the resultant consolidated revenue gap till the end of FY 2022-23 signifies 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 decided to recover a certain proportion of this gap by retaining the Regulatory Surcharge of 5% 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.

6.4.1. Tariff Design

Petitioner's Submission

In order to bridge the Gap, PED has proposed to increase the tariff for some category of consumers against the tariff for FY 2021-22 approved by the Commission in previous Tariff Order dated 7th April 2021 along with additional surcharge of 5%. PED has proposed an average hike of 1.68%. The Petitioner has estimated revenue from proposed tariff as INR 1572.53 Cr and INR 78.63 Cr from 5% regulatory surcharge. PED has requested the commission to approve the tariff schedule as proposed for FY 2022-23 as tabulated below:

Table 135: Summary of Existing and Proposed Tariff Rates for FY 2022-23

S.No.	Category of Consumers	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**Life Line Services**				

S.No.	**Category of Consumers**	**Existing Tariff**		**Proposed Tariff**	
		Fixed Charges	**Energy Charges**	**Fixed Charges**	**Energy Charges**
a	0-50 units per month	-	Rs. 1.00/kWh	-	Rs. 1.00/kWh
2	**Domestic Purposes**				
a	0-100 units per month	Rs. 40/connection/ month	Rs. 1.55 /kWh	Rs. 40/connection/ month	Rs. 1.90 /kWh
b	101-200 units per month	Rs. 45/connection/ month	Rs. 2.60 /kWh	Rs. 45/connection/ month	Rs. 2.75 /kWh
c	201-300 units per month	Rs. 45/connection/ month	Rs. 4.65 /kWh	Rs. 45/connection/ month	Rs. 4.65 /kWh
d	Above 300 units per month	Rs. 45/connection/ month	Rs. 6.05 /kWh	Rs. 45/connection/ month	Rs. 6.05 /kWh
3	**Commercial**				
I	**LT Commercial**				
a	0-100 units per month	Rs. 75.00 /kW/Month	Rs. 5.70 /kWh	Rs. 75.00 /kW/Month	Rs. 5.70 /kWh
b	101-250 units per month		Rs. 6.75 /kWh		Rs. 6.75 /kWh
c	Above 250 units per month		Rs. 7.50 /kWh		Rs. 7.50 /kWh
II	**HT Commercial (For contract demand up to 5000 kVA)**	Rs. 420 /kVA / month	Rs. 5.45 /kVAh	Rs. 420 /kVA / month	Rs. 5.50 /kVAh
4	**Agriculture**				
I	**Agriculture**				
	Small farmers	Rs. 11/HP/month	-	Rs. 20/HP/month	-
	Other Farmers	Rs. 50/HP/month	-	Rs. 75/HP/month	-
II	**Cottage Industries/Poultry Farms /Horticulture/ Pisciculture**				
a	0-100 units per month	Rs. 40/connection/ month	Rs. 1.55 /kWh	Rs. 40/connection/ month	Rs. 1.90 /kWh
b	101-200 units per month	Rs. 45/connection/ month	Rs. 2.60 /kWh	Rs. 45/connection/ month	Rs. 2.75 /kWh
c	201-300 units per month	Rs. 45/connection/ month	Rs. 4.65 /kWh	Rs. 45/connection/ month	Rs. 4.65 /kWh
d	Above 300 units per month	Rs. 45/connection/ month	Rs. 6.05 /kWh	Rs. 45/connection/ month	Rs. 6.05 /kWh
5	**Public Lighting**				
a	Public Lighting	Rs.110/pole/ month	Rs. 6.80 /kWh	Rs.110/pole/ month	Rs. 6.80 /kWh
6	**Industries**				
a	LT Industries	Rs.50.00 /kW/Month	Rs. 6.05/kWh	Rs.50.00 /kW/Month	Rs. 6.05/kWh

S.No.	**Category of Consumers**	**Existing Tariff**		**Proposed Tariff**	
		Fixed Charges	**Energy Charges**	**Fixed Charges**	**Energy Charges**
b	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	Rs. 420 / kVA / month	Rs. 5.30 /kVAh	Rs. 420 / kVA / month	Rs. 5.35 /kVAh
c	EHT Industries (For Supply at 110 kV or 132 kV)	Rs. 480 / kVA / month	Rs. 5.10 /kVAh	Rs. 480 / kVA / month	Rs. 5.15 /kVAh
7	**LT Water Works**	Rs. 150/connection/ month	Rs. 6.90/kWh	Rs. 150/connection/ month	Rs. 6.90/kWh
8	**HT Other**	Rs. 480/ kVA /month	Rs. 6.35/kVAh	Rs. 480/ kVA /month	Rs. 6.40/kVAh
9	**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.	
10	**Electric Vehicle Charging Station**	-	Rs.4.50 /kWh	-	Rs.4.50 /kWh
11	**Hoardings/signboards**	Rs. 140/kVA/ month or part thereof	Rs. 8.00/kWh	Rs. 140/kVA/ month or part thereof	Rs. 8.00/kWh

**A Regulatory Surcharge of 5.00% is proposed 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.*

Commission's analysis

The Commission has determined a consolidated gap of INR 473.01 Cr against the Petitioners submission of INR 478.04 Cr up to FY 2022-23. The Commission has determined the retail tariff for the FY 2022-23 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the JERC MYT Regulations, 2021. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.

2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time allows intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise 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 and Commercial consumers for defining slab ranges and setting tariffs

5. Revenue stability: Tariff should ensure adequate fixed cost recovery for utilities from fixed/demand charges

6. Avoiding tariff shocks: Tariff shocks should be avoided and stakeholders should be able to predict 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.

While all the above parameters contribute significantly in developing a sustainable tariff framework, there are certain parameters namely Cost of Supply and Tariff Affordability which are of importance and constitute the building blocks in achieving the overall objective. The context and the approach for these parameters have been discussed as follows:

Cost of Supply

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Distribution Licensee. For example, in order to ensure that tariffs are kept in check for domestic consumers, while still allowing cost recovery for Distribution Licensees, cross subsidy has been built in between categories. The tariffs so determined, are skewed, with tariff for industrial and commercial consumers being higher and for other categories being lower than their respective costs of supply. The implications of this imbalance in tariffs is two fold – uncompetitive industries owing to higher input costs and inability of Distribution Licensees to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

It is thus essential that tariffs reflect the true cost to service a category of consumer. As a crucial first step towards cost-reflective tariffs, it is important for Distribution Licensees to determine the costs of supply (which cascade from generation to transmission and finally to distribution and retail supply of power) that should be prudently recovered from each consumer category. These costs should correspond to the actual costs being caused/contributed by each consumer category towards total cost incurred by the Distribution Licensee. By determining consumer category wise costs of supply, the Distribution Licensee would be in a better position to allocate costs where relevant and determine how tariffs can be levied fairly on each category.

b) Approach:

The overall approach that can be followed for accurately determining the Cost of Supply has been discussed as follows.

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply (ACoS) method. The ACoS is computed by dividing the Annual Revenue Requirement (ARR) determined by the Commission for recovery through tariffs by the total energy sales for the year. However, this methodology doesn't indicate the costs incurred by consumers at different voltage levels using different assets of the network. Therefore, it doesn't help in determining accurate tariffs for particular consumers, eventually resulting in insufficient cost coverage.

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels.

VCoS uses three parameters for allocating various costs to voltage levels – energy input at each voltage level, energy sales and asset allocation to voltage levels. The losses segregated voltage wise (as percentage of input energy) are to be allocated to different voltage levels based on energy input to each voltage level (as explained in subsequent sections). Subsequently, the cost elements such as power procurement costs, employee expenses, administrative and general expenses and income tax can be allocated to each voltage levels based on total sales at each voltage level. The cost elements, which are dependent on assets such as depreciation, interest costs, return allowed to utility etc. are allocated in ratio of assets allocated to each voltage level. The sum of all the cost components at each voltage level is the cost to supply the particular voltage (EHT/HT/LT).

The Commission is of the opinion that while VCoS differentiates cost allocation based on voltage levels, it does not factor in consumer category level differentiation. For instance, at the same LT level, cost of supplying electricity to a Commercial consumer may be different from that of a domestic consumer. Thus, it believes that the most progressive way forward for the Distribution Licensee is to accurately determine the cost of supply is to attempt to determine Cost of Supply for various consumer categories and also voltage level. The Commission notes that States like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and the Distribution Licensee must also attempt to determine the same. The Commission is of the opinion that for determination of the Category wise Cost of Supply, the embedded cost methodology is an appropriate starting point.

The Commission strongly believes that determination of Category wise Cost of Supply is essential to ensure cost reflectivity in tariffs fixed for different categories. However, the Commission feels that to carry out this exercise a lot of field level information would be required such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. which currently the Petitioner doesn't maintain. Therefore, in absence of the same, the Commission is unable to determine the Category wise Cost of Supply in this Order but directs the Petitioner to start maintaining this data and submit the same in the tariff proceedings of next year. In absence of the requisite data for determination of voltage-wise/category-wise cost of supply as mentioned above, the Commission as part of this Tariff Order has determined the tariff according to the Average Cost of Supply (ACoS).

Tariff Affordability

a) Context

The Commission understands that the consumer base of Distribution Licensee is varied and covers a wide spectrum of socio-economic backgrounds, specially the domestic category consumers. It is also aware that most low-income households spend a substantial share of their income on utility services such as electricity, heating and water. However, any envisaged tariff reforms are often objected to avoid further burdening of these consumers. But to improve the quality of service of electricity, the Distribution Licensee has to undertake significant capital expenditure which eventually deteriorates the affordability of tariffs. Thus, to tackle this problem and in the spirit of economic wellbeing of all consumer classes, the concept of cross-subsidies has been built into the current tariff structure.

However, the Commission believes that a more scientific and logical approach can be adopted to identify the right categories of consumers and the right cross-subsidy/subsidy requirement that will benefit the end consumers at the same time. Hence, the Commission believes that there is a strong need to develop a scientific methodology to assess the social impact of electricity tariffs.

The overall approach that can be followed for determining the tariff affordability has been discussed as follows.

b) Approach

On reviewing methodologies for social impact assessment of electricity tariffs, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

TAR is defined by obtaining the burden incurred by a household for electricity as compared to the overall household expenditure. The rationale behind this concept is that the electricity is basic utility and is unavoidable in today's scenario, however, this does not ensure that the expenditure level is in line with the overall household expenditure. Hence, this concept helps to understand the affordability level of electricity on households with different economic levels.

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Distribution Licensee across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Distribution Licensee's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholders will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers which would be beneficial especially for Domestic category consumers. Additionally, this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

The Commission in these tariff proceedings is not carrying out this exercise due to unavailability of accurate data. The Petitioner is directed to ensure the sanctity of the data maintained pertaining to various categories.

Based on the discussions above, the Commission is continuing with its existing approach of determination of tariff for various consumer categories based on the Average Cost of Supply (ACoS) and reduction of Cross Subsidy amongst various consumer categories, ensuring consumer tariffs progressively moving towards the cost.

Cross Subsidy

As per Section 61 (g) of the Electricity Act 2003

*"(g) that the **tariff progressively reflects the cost of supply** of electricity and also, **reduces and eliminates cross-subsidies** within the period to be specified by the Appropriate Commission;"*

For reduction of cross subsidies, the Tariff Policy 2016 in Section 8.3 stipulates as below:

*"For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought **within ±20% of the average cost of supply**. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy."*

In order to achieve the objectives of the Tariff Policy 2016 of bringing down the cross subsidy levels amongst various consumer categories within ±20% of the average cost of supply, the Commission has tried to rationalize the tariff applicable to various consumer categories.

The limit of cross subsidy, as envisaged in the Tariff Policy 2016, can't be achieved by rationalizing the tariff in a single year, as this may lead to tariff shock to the cross subsidized consumers. In this Tariff Order, the

Commission has continued its approach of rationalization of the tariff for various consumer categories and reducing the cross subsidy.

Accordingly, in this Tariff Order, the Commission has designed tariff for various consumer categories considering the Average Cost of supply in line with the provisions of the Tariff Policy, 2016. While designing the tariff for FY 2022-23, the Commission has reduced the cross-subsidy levels with an endeavored to bring the same within range specified in Tariff Policy 2016. To achieve this objective, the Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and either reduced/maintained the tariff levels or increased tariff at lower than average tariff hike for cross-subsidizing categories.

6.4.2. Approved Tariff Schedule

As described in earlier section, the current tariff is not covering the entire cost of the Petitioner for FY 2022-23. The adoption of kW-based billings for Domestic consumer category is being considered while designing the tariff schedule. The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 136: Existing and approved tariff

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge	Fixed Charge	Energy Charge
1	**LIFLINE SERVICES**				
a.	0-50 units per month	-	1.00 INR/kWh	10.00 INR/kW/Month	1.25 INR/kWh
2	**DOMESTIC AND COTTAGE**				
b.	0-100 units per month	INR 40/connection / month	1.55 INR/kWh	30.00 INR/kW/Month	1.90 INR/kWh
c.	101-200 units per month	INR 45/connection / month	2.60 INR/kWh	30.00 INR/kW/Month	2.90 INR/kWh
d.	201-300 units per month	INR 45/connection / month	4.65 INR/kWh	30.00 INR/kW/Month	5.00 INR/kWh
e.	Above 300 units per month	INR 45/connection / month	6.05 INR/kWh	30.00 INR/kW/Month	6.45 INR/kWh
3	**HUT SERVICES (OHOB)***				
a.	Hut Services*	*Discontinued from 2020-21**			
4	**COMMERCIAL**				
I	**LT Commercial**				
a.	0-100 units per month	75.00 INR/kW/Month	5.70 INR/kWh	75.00 INR/kW/Month	5.70 INR/kWh
b.	101-250 units per month		6.75 INR/kWh		6.75 INR/kWh
c.	Above 250 units per month		7.50 INR/kWh		7.50 INR/kWh

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge	Fixed Charge	Energy Charge
II	**HT Commercial (For contract demand up to 5000 kVA)**	INR 420 per kVA per month	5.45 INR/KVAh	INR 420 per kVA per month	5.45 INR/KVAh
5	**AGRICULTURE SERVICES**				
I	**Agriculture**				
a.	Small Farmers	INR 11/HP/month	-	INR 20/HP/month	-
b.	Other Farmers	INR 50/HP/month	-	INR 75/HP/month	-
6	**PUBLIC LIGHTING**				
a.	Public Lighting	INR 110/pole/ month	6.80 INR/kWh	INR 110/pole/ month	6.80 INR/kWh
7	**INDUSTRIES**				
a.	LT Industries	50.00 INR/kW/Month	6.05 INR/kWh	50.00 INR/kW/Month	6.05 INR/kWh
b.	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	INR 420 per kVA per month	5.30 INR/KVAh	INR 420 per kVA per month	5.30 INR/kVAh
c.	EHT Industries (For Supply at 110 kV or 132 kV)	INR 480 per kVA per month	5.10 INR/KVAh	INR 480 per kVA per month	5.15 INR/kVAh
8	**LT WATER WORKS**	INR 150/connection/ month	6.90 INR/kWh	INR 150/connection/ month	6.90 INR/kWh
9	**HT OTHERS**	INR 480 per kVA per month	6.35 INR/KVAh	INR 480 per kVA per month	6.35 INR/kVAh
10	**ELECTRIC VEHICLE CHARGING STATION**	-	4.50 INR/kWh	-	4.50 INR/kVAh
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 140 per kVA per month or part thereof	8.00 INR/kWh	INR 140 per kVA per month or part thereof	8.00 INR/kWh

*OHOB connections were converted into metered connections from 1st April 2020 under lifeline category.

6.4.3. Revenue from Approved Retail Tariff for FY 2022-23

Based on the retail tariff approved above, the total revenue from sales based on the approved tariff is shown in the table below:

Table 137: Revenue from approved retail tariff determined by Commission (In INR Cr)

Sr. no.	Category	Sales (MUs)	Revenue from Energy Charges (Rs Cr.)	Revenue from Fixed charges (Rs Cr.)	Gross Total (Rs. Cr.)	ABR (Rs./unit)
1	**DOMESTIC**	**826.89**	**269.70**	**23.90**	**293.60**	**3.55**
	0-100 units	380.26	72.25		72.25	1.90
	101-200 units	210.02	60.91		60.91	2.90
	201-300 units	110.80	55.40		55.40	5.00
	Above 300 units	125.80	81.14		81.14	6.45
2	**LIFLINE SERVICES**	**3.50**	**0.44**	**0.03**	**0.47**	**1.35**
3	**COMMERCIAL**	**210.00**	**146.61**	**13.94**	**160.55**	**7.65**
	0-100 units	40.82	23.26		23.26	5.70
	101-250 units	47.28	31.92		31.92	6.75
	Above 250 units	121.90	91.43		91.43	7.50
4	**AGRICULTURE SERVICES**	**61.75**	**0.00**	**6.82**	**6.82**	**1.11**
	Agriculture	61.75	0.00	6.82		0.00
	Small Farmers	8.54	0.00	0.18	0.18	0.21
	Other farmers	53.21	0.00	6.65	6.65	1.25
	Cottage Industries					
	0-100 units					
	101-200 units					
	201-300 units					
	Above 300 units					
5	**PUBLIC LIGHTING**	**19.00**	**12.92**	**6.81**	**19.73**	**10.39**
6	**LT INDUSTRIAL & WATER WORKS**	**167.68**	**104.94**	**8.35**	**113.28**	**6.76**
	LT Industrial	126.59	76.59	8.20		0.00
	Water Tanks	41.09	28.35	0.15		0.00
7	**HIGH TENSION-I (Industrial and Commercial)**	**1018.36**	**563.57**	**125.17**	**688.75**	**6.76**
	HT 1 (a) For contract demand up to 5000 kVA/Industrial	931.67	514.36			
	HT 1 (b) For contract demand up to 5000 kVA/Commercial	86.69	49.22			
8	**HIGH TENSION-II (HT Others)**	**76.75**	**50.77**	**14.19**	**64.96**	**8.46**
9	**HIGH TENSION-III (EHT Industries)**	**437.37**	**227.52**	**25.83**	**253.35**	**5.79**
10	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
11	**TEMPORARY**	**5.06**	**4.93**	**0.00**	**4.93**	**9.75**

Sr. no.	Category	Sales (MUs)	Revenue from Energy Charges (Rs Cr.)	Revenue from Fixed charges (Rs Cr.)	Gross Total (Rs. Cr.)	ABR (Rs./unit)
	TOTAL	**2826.36**	**1381.40**	**225.05**	**1606.44**	**5.68**

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 1,606.44 Cr for the FY 2022-23.

The cross-subsidy levels for various consumer categories at existing and approved tariff are shown in the table below:

Table 138: Cross-subsidy levels for various consumer categories at existing and approved tariff for the FY 2022-23

Sr. no.	Category	ACoS (INR/kWh) - A	ABR at existing tariff (INR/kWh) – B	ABR at approved tariff (INR/kWh) – C	Cross Subsidy level at existing tariff (%) D= (1-B/A) x 100	Cross Subsidy level at approved tariff (%) E= (1-C/A) x 100
1	DOMESTIC	5.68	3.15	3.55	44.50%	37.53%
2	LIFLINE SERVICES	5.68	1.00	1.35	82.41%	76.29%
3	COMMERCIAL	5.68	7.65	7.65	-34.51%	-34.51%
4	AGRICULTURE SERVICES	5.68	0.73	1.11	87.10%	80.56%
5	PUBLIC LIGHTING	5.68	10.39	10.39	-82.72%	-82.72%
6	LT INDUSTRIAL	5.68	6.70	6.70	-17.84%	-17.84%
7	WATER WORKS	5.68	6.94	6.94	-22.02%	-22.02%
8	HIGH TENSION-I (Industrial and Commercial)	5.68	6.76	6.76	-18.99%	-18.99%
9	HIGH TENSION-II(HT Others)	5.68	8.46	8.46	-48.90%	-48.90%
10	HIGH TENSION-III (EHT Industries)	5.68	5.74	5.79	-1.03%	-1.91%
11	Temporary	5.68	9.75	9.75	-71.54%	-71.54%
	TOTAL	5.68	5.55	5.68		

6.4.4. 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 139: ACoS at approved tariff (excluding Regulatory Surcharge) for the FY 2022-23 (In INR Cr)

S. No	Particulars		Now Approved
1	Annual Revenue Requirement	A	1,606.46
2	Sales (MUs)	B	2,826.36
3	**ACoS (INR/kWh)**	**C=A/B*10**	**5.68**
4	**ABR at Existing Tariff**		**5.55**
5	**ABR at Proposed Tariff**		**5.68**

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 2.38% and ABR.

6.4.5. Regulatory Surcharge

As is evident from the above, with an average tariff increase of 2.38%, the revenue from Approved Retail Tariff recovers the standalone Net Revenue Requirement of FY 2022-23. The Commission has tried to rationalise the tariff and to gradually move towards cost of supply. However, the cumulative revenue gap till the end of FY 2022-23 resulting from the True-up of FY 2020-21 and APR of FY 2021-22 is yet to be recovered. The table below provides the cumulative revenue gap till FY 2022-23.

Table 140: Cumulative Revenue Gap/ Surplus till FY 2022-23 at approved tariff exclusive of regulatory surcharge (In INR Cr)

Particulars		FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	(a)	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at Existing Tariff	(b)	1,433.70	1,538.08	1,606.44
Revenue from Open Access	(c)	0	0.00	0
Standalone Gap /(Surplus) for the year at existing tariff	(d=a-b-c)	13.79	11.12	0.02
Revenue from Retail Sales at Approved Tariff	(e)	1,433.70	1,538.08	1,606.44
Standalone Gap /(Surplus) for the year at approved tariff	(f=a-c-e)	13.79	11.12	0.02
Opening Gap /(Surplus)	(g)	375.88	423.16	465.50
Standalone Gap /(Surplus) addition for the year at Approved tariff	(f)	13.79	11.12	0.02
Closing Gap /(Surplus)	(h=g+f)	389.67	434.28	465.51
Average Gap/ (Surplus)	(i=(g+h)/2)	382.77	428.72	465.50
Carrying Cost calculated at Section 6.3	K	33.49	31.22	27.88
Final Closing Gap/ (Surplus)	**(h+k)**	**423.16**	**465.50**	**493.39**

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 retain the Regulatory Surcharge of 5%. 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 2022-23, till further Orders of the Commission. Further, the Commission directs the Petitioner to maintain the separate accounting for Regulatory surcharge.

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 April 2022 and shall continue till further Orders of the Commission.

6.4.6. Revised Revenue Gap/ Surplus

The following table represents the Standalone Gap /(Surplus) for the year at revised tariff and without regulatory surcharge:

Table 141: Revenue Gap / (Surplus) at existing tariff without regulatory surcharge

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement (a)	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at revised Tariff (b)	**1,433.70***	1,538.08	1,606.44
Standalone Gap /(Surplus) for the year at existing tariff (d=a-b)	**13.79**	**11.12**	**0.02**

includes Regulatory Surcharge.

The Commission for the purpose of calculation of the cumulative gap has considered the carrying cost at SBI 1 year MCLR + 1% from FY 2020-21 and onwards which is the opportunity cost for the Petitioner. Considering the additional revenue from tariff increase and Regulatory Surcharge, the resultant Revenue Gap/Surplus has been shown in the table below:

Table 142: Revenue Gap/ Surplus with Regulatory Surcharge at revised tariff approved by Commission (In INR Cr)

	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	1,447.48	1,549.19	1,606.46
Revenue from Retail Sales at revised Tariff (excluding surcharge)	1,433.70*	1,538.08	1,606.44
Opening Gap Balance	375.88	423.16	388.59
Standalone Gap /(Surplus) for the year	13.79	11.12	0.02
Regulatory Surcharge rate		5%	5%
Less: Regulatory surcharge		76.90	80.32
Closing Gap Balance	389.67	357.37	308.29
Avg. Gap	382.77	390.27	348.44
Interest rate	8.75%	8.00%	8.00%
Carrying Cost	**33.49**	**31.22**	**27.88**
Cumulative Gap	**423.16**	**388.59**	**336.16**

includes Regulatory Surcharge

The Commission approves a cumulative revenue gap of INR 336.16 Cr till FY 2022-23.

6.4.7. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2022-23 are as follows:

1. The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost of supply to 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 2.38% while continuing a regulatory surcharge of 5% for the FY 2022-23.
3. The Commission has approved the average billing rate for FY 2022-23 as INR 5.68/kWh as against the approved Average Cost of Supply of INR 5.68/kWh.
4. The Commission has introduced the KW based fixed charges to Domestic tariff category.

7. Chapter 7: Open Access Charges for the FY 2022-23

7.1. Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's Submission:

As per Regulation 49 of JERC MYT Regulations 2021, 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 143: Allocation matrix as submitted by Petitioner

Particulars	Allocation (%)		FY 2022-23		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	*0%*	*100%*	-	1,365.58	1,365.58
Employee costs	*40%*	*60%*	46.16	69.25	115.41
Repair and Maintenance Expenses	*90%*	*10%*	7.93	0.88	8.81
Administration and General Expenses	*50%*	*50%*	9.52	9.52	19.04
Depreciation	*90%*	*10%*	32.94	3.66	36.60
Interest and Finance charges	*90%*	*10%*	10.35	1.15	11.50
Interest on Working Capital	*10%*	*90%*	0.56	5.06	5.62
Return on Equity	*90%*	*10%*	41.85	4.65	46.50
Interest on consumer security deposit	*10%*	*90%*	0.94	8.43	9.37
Total Revenue Requirement			**150.25**	**1,468.18**	**1,618.43**
Less: Non-Tariff Income	*10%*	*90%*	0.35	3.19	3.54
Net Revenue Requirement			**149.89**	**1,464.99**	**1,614.88**

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 each voltage level.

Accordingly, the computation of Wheeling charges as submitted by the Petition has been shown in the following table:

Table 144: Wheeling Charge calculation as submitted by Petitioner

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Total re-distributed cost (based on Input energy)	Sales (MU)	Wheeling Charges (Rs/kWh)
Low Tension (LT) Level	63.54	43.16	106.70	130.90	1291.78	1.01
High Tension (HT)	0.07	34.53	34.60	17.83	1095.11	0.16
Extra High Tension(EHT) Level	0.00	8.63	8.63	1.21	437.36	0.03
Total	**63.61**	**86.32**	**149.93**	**149.93**	**2,824.25**	

Commission's analysis:

The allocation between wheeling and retail supply business for the FY 2022-23 as per the ARR approved in this Order is provided in the table below:

Table 145: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2022-23		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	0%	100%	-	1,344.36	1,344.36
Employee costs	40%	60%	51.46	77.20	128.66
Repair and Maintenance Expenses	50%	50%	16.64	1.85	18.49
Administration and General Expenses	90%	10%	4.61	4.61	9.23
Depreciation	90%	10%	32.79	3.64	36.43
Interest and Finance charges	90%	10%	10.88	1.21	12.09
Return on NFA /Equity	10%	90%	41.65	4.63	46.28
Interest on consumer security deposit	10%	90%	0.97	8.72	9.69
Interest on Working Capital	90%	10%	0.48	4.30	4.78
Total Revenue Requirement			**159.48**	**1,450.52**	**1,610.00**
Less: Non-Tariff Income	10%	90%	0.35	3.19	3.54

Particulars	Allocation (%)		FY 2022-23		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Net Revenue Requirement			**159.13**	**1,447.33**	**1,606.46**

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 Petitioner in this regard has failed to submit the actual 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 11.00%.

Table 146: 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	509983	50.00%	1293.88	16.84%	1,555.90
High Tension (HT) Level	532	40.00%	1095.11	5.44%	1,175.75
Extra High Tension (EHT) Level	8	10.00%	437.37	1.50%	444.03
Total	**510523**	**100%**	**2826.36**	**11.000%**	**3,175.68**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 147: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)	Wheeling Charges (Rs/kWh)
	A	B	C=A+B	D	E=C/D*10
Low Tension (LT) Level	87.67	52.14	139.81	1293.88	1.08
High Tension (HT) Level	0.04	18.07	18.11	1095.11	0.17

Category	**O&M (INR Cr)**	**Others (INR Cr)**	**Total (INR Cr)**	**Energy Sales (MU)**	**Wheeling Charges (Rs/kWh)**
	A	**B**	**C=A+B**	**D**	**E=C/D*10**
Extra High Tension (EHT) Level	0.00	1.21	1.21	437.37	0.03
Total	72.72	86.41	**159.13**	**2,826.36**	

The Commission approves wheeling charge of INR 1.08/ kWh at LT voltage level, INR 0.17/kWh at HT voltage level and INR 0.03/kWh at EHT voltage level

7.2. Additional Surcharge

Petitioner's Submission:

The Petitioner has proposed additional charges as follows:

Particulars	
Total Power Purchase Cost	1,365.58
Fixed cost component in Power Purchase Cost (excluding transmission charges)	372.04
Energy Sales (MU)	2,824.25
Additional Surcharge (Rs/kWh)	**1.32**

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:"

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 148: Additional Surcharge approved by Commission

Particulars		
Total Power Purchase cost approved		1,344.36
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	A	447.63
Energy Sales including Open Access Sales (MU)	B	2,826.36
Additional Surcharge (INR/kWh)	C=A/B*10	**1.58**

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 can 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 1.58/kWh for the FY 2022-23.

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.

7.3. Cross-Subsidy Surcharge

Petitioner's Submission:

The Cross-Subsidy Surcharge submitted by the Petitioner is shown in the following table:

Table 149: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR /kWh)	ABR (INR /kWh)	Cross- Subsidy (INR /kWh)
Low Tension (LT) Level	6.76	4.70	(2.06)
High Tension (HT)	4.92	7.11	2.19
Extra High Tension(EHT) Level	4.72	6.08	1.36

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 11.00%, as approved in the MYT Order for FY 2022-23. Voltage wise losses assumed at each level have been shown in the table below:

Table 150: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	12.27%	16.84%
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	11.00%	11.00%

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 151: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1293.88	16.84%	1,555.90
High Tension (HT) Level	1095.11	5.44%	1,175.75
Extra High Tension (EHT) Level	437.37	1.50%	444.03
Total	**2826.36**	**11.00%**	**3,175.68**

Now the overall ARR approved for FY 2022-23 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 152: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	No. of Consumers
Low Tension (LT) Level	1,555.90	50.00%	509983
High Tension (HT) Level	1,175.75	40.00%	532
Extra High Tension (EHT) Level	444.03	10.00%	8
Total	**3,175.68**	**100.00%**	**510523**

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 153: 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 (INR /kwh)
	A	**B**	**C=A+B**	**D**	**E=C/D*10**
Low Tension (LT) Level	457.75	439.3	897	1,294	6.93

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (INR /kwh)
	A	B	C=A+B	D	E=C/D*10
High Tension (HT) Level	187.92	332.0	520	1,095	4.75
Extra High Tension (EHT) Level	64.07	125.4	189	437	4.33
Total	**709.73**	**897**	**1,606**	**2,826**	**5.68**

The VCoS as determined is used to determine the Cross-Subsidy Surcharge.

Table 154: Cross-Subsidy Surcharge

Category	VCoS (INR /kWh)	ABR (INR /kWh)	Cross- Subsidy (INR /kWh)
	A	B	C=A-B
Low Tension (LT) Level	6.93	4.63	(2.30)
High Tension (HT) Level	4.75	6.88	2.13
Extra High Tension (EHT) Level	4.33	5.79	1.46

The Cross-Subsidy Surcharge is coming out to be negative for LT voltage level, INR 2.13/kWh for HT and INR 1.46/kWh for EHT voltage levels.

Therefore, the Commission approves nil Cross-Subsidy Surcharge at LT Voltage level, INR 2.13/kWh at HT Voltage Level and INR 1.46/kWh at EHT Voltage levels, in FY 2022-23.

8. Chapter 8: 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.

8.1. 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."

8.2. 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:

$$\boldsymbol{FPPCA\left(\frac{INR}{Unit}\right) =. \left(\frac{(Pact + \ Tact \ + Oact - ASact) * 10}{\{[PPOact * \ (1 - TLapp) + PPIact - PSOact] * (1 - DLapp)\} - Zact}\right) - Rapp}$$

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 ±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 5.44/kWh for the FY 2022-23.

Table 155: Rapproved determined by Commission for FY 2022-23

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	1,248.28
Transmission Charges (INR Cr), T_{app}	96.07
Power Purchase Quantum from CGS Stations at Generator Periphery (NTPC, NPCIL, NLC, Vallur) (MU), PPO_{app}	2,854.27
Approved Inter-State Transmission Loss (%), TL_{app}	2.50%
Power Purchase Quantum from sources within State (PPCL) (MU), PPI_{app}	-
Quantum of Sale of Surplus Power (MU), PSO_{app}	-
Approved Intra-State T&D Loss (%), DL_{app}	11.00%
Energy Sales for Hut Services and Agriculture consumer category (MU), Z_{app} (MU)	3.50
R_{app} (INR/kWh)	**5.44**

9. Chapter 9: 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 and Capex and Capitalisation within 10 days of the end of each quarter of the calendar year.

9.1. 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 the Electricity Act 2003, and the Regulations framed by JERC.

9.1.1. 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 2021-22 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 2022-23. As per the timelines envisaged by the Petitioner the Energy Audit Report should be completed by March 2021 therefore the Commission directs the Petitioner to submit the same within 1 month of issue of this Order.
Petitioner's Response in Present Tariff Petition BEE has awarded the work of Energy Audit at Feeder Level and to ascertain the T & D Losses the work has been taken up by M/s. Zenith Energy India (P) Limited. M/s. Zenith has collected all base line data required for Energy Audit for 4 years (FY 2017-18 to 2020-21). The report is yet to receive from Zenith. The same will be submitted to the Commission shortly.
Commission's Response The Commission has taken a serious view of the fact that the Petitioner has not submitted the Energy Audit Report along with the Tariff Petition for FY 2022-23. As per the timelines envisaged by the Petitioner the Energy Audit Report should be completed by March 2021 therefore the Commission directs the Petitioner to submit the same within 1 month of issue of this Order.

9.1.2. 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 2021-22

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 proposed by the Petitioner. The Commission directs the Petitioner to submit a report on the same within 1 month of issue of this Order.

Petitioner's Response in Present Tariff Petition

The provision for metering in Agriculture services have been included in the RDSS scheme under pre-paid smart meter scheme. The same shall be completed shortly.

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 proposed by the Petitioner. The Commission directs the Petitioner to submit a report on the same within 1 month of issue of this Order.

9.1.3. 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 2021-22

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 petition for determination of tariff for FY 2022-23.

Petitioner's Response in Present Tariff Petition

This Department is maintaining year wise Transmission and Distribution Asset Registers separately. However, the 22 KV & 11 KV infrastructure assets will be segregated from the Distribution asset and the report will be submitted.

The Energy Audit report will be submitted shortly to the Commission.

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 along with petition for determination of tariff for FY 2023-24.

9.1.4. New Bill Format

Originally Issued in Tariff Order dated 24th May 2016

Commission's Latest Directive in Tariff Order for the FY 2021-22

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..

Petitioner's Response in Present Tariff Petition

The software for new bill format has been developed and implemented in Urban Area of Puducherry and the action is being taken to implement the same to other regions and rural areas of Puducherry and it is expected to be completed by Jan'2022.

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.

9.1.5. 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 2021-22

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..

Petitioner's Response in Present Tariff Petition

Out of existing 473 Nos. of HT/EHT consumers, 441 nos. of consumers have been provided with TOD enabled Energy meters. For balance 32 Nos. of consumer metering, action will be taken to provide TOD enabled meters by January 2022.

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.

9.1.6. Compliance towards Renewable Purchase Obligation (RPO)

Originally Issued in Tariff Order dated March 28, 2018

Commission's Latest Directive in Tariff Order for the FY 2021-22

The Commission takes note of the Petitioner's Submission. The Petitioner is directed to expedite the engagement of solar power suppliers to ensure compliance of the RPO obligations and a report thereof to be submitted along with the next tariff petition.

Petitioner's Response in Present Tariff Petition

In order to meet the RPO, the Electricity Department Puducherry has already signed a Power Sale Agreement (PSA) with M/s. SECI towards purchase of 240.64 (100+140.64)MW of wind power and 50 MW of Solar Power from ISTS connected RE power projects of MNRE. Under the scheme introduced by GOI namely "Flexibility in Generation and Scheduling of Thermal Power station" NTPC Shimadri stage II has proposed 25 MW solar power plant for UT of Puducherry Based on the availability of Renewable Energy from these plants, the RPO will be met partially.

Further the Electricity Department Puducherry has also signed a PSA with NTPC for procurement of 100 MW of Solar Power.

Commission's Response

The Commission takes note of the Petitioner's Submission. The Petitioner is directed to expedite the engagement of solar power suppliers to ensure compliance of the RPO obligations and a report thereof to be submitted along with the next tariff petition.

9.1.7. Utilising the provision of FPPCA formula

Originally Issued in Tariff Order dated May 20, 2019

Commission's Latest Directive in Tariff Order for the FY 2021-22

The Commission observed that the Petitioner has still 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 2021-22 onwards and submit the supporting bills/documents for the FPPCA calculations on quarterly basis to the Commission for evaluation and assessment.

Petitioner's Response in Present Tariff Petition

The first quarter of FPPCA calculation has been submitted to JERC. The second quarter is under preparation and the same will be submitted shortly.

Commission's Response

The Commission observes that the Petitioner has not yet implemented FPPCA mechanism. FPPCA can be levied up to 10% of ABR without waiting for prior approval of the Commission as provided in Chapter 8 of this Order. Accordingly, the Petitioner is directed to implement FPPCA immediately and submit the compliance of the same to the Commission within 120 days of issuance this Tariff Order.

9.1.8. Category-wise per kW/kVA data

Originally Issued in Tariff Order dated April 7, 2021

Commission's Latest Directive in Tariff Order for the FY 2021-22

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.

Petitioner's Response in Present Tariff Petition

The Same will be submitted during the TVS of Tariff Petition for FY 2022-23.

Commission's Response

The Commission takes note of the Petitioner's Submission.

9.1.9. New billing software

Originally Issued in Tariff Order dated April 7, 2021

Commission's Latest Directive in Tariff Order for the FY 2021-22

The Commission observes that the implantation of the new billing software is pending since 2 years. The Commission directs the Petitioner to ensure quick implementation of the new software so that accurate and complete data is captured and made available for true-up and determination of tariff.

Petitioner's Response in Present Tariff Petition

PED is in the Process of upgrading the billing software. PED had requested the National Informatics Centre to develop Meter Reading Billing and Collection web-based Software which has been operationalized now in Puducherry city. It is expected to cover the whole UT within next 2 months.

Commission's Response

The Commission takes note of the Petitioner's Submission and the Petitioner is directed to submit a report on the progress of the same within 1 month of issue of this Order.

9.1.10. Fixed Assets Register (FAR)

Originally Issued in Tariff Order dated April 7, 2021
Commission's Latest Directive in Tariff Order for the FY 2021-22 The Commission directs the petitioner to ensure preparation of FAR and submit the same to the Commission along with the next tariff petition.
Petitioner's Response in Present Tariff Petition Complied.
Commission's Response The Commission observed that after repeated communication FAR is not received in Soft as well as in hard Copy. The Petitioner is once again directed to submit the same within 1 month of issue of this Order.

9.1.11. Quarterly status reports

Originally Issued in Tariff Order dated April 7, 2021
Commission's Latest Directive in Tariff Order for the FY 2021-22 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.
Petitioner's Response in Present Tariff Petition PED submits that the all the quarterly report has been submitted in timely manner. The Directive of the Commission will be complied in future also.
Commission's Response The Commission takes note of the Petitioner's Submission.

9.2. New directives in this Order

9.2.1. DPR for "Revamped Distribution Scheme- Reforms Based Results Linked Scheme"

The Commission directs the Petitioner to provide DPR for "Revamped Distribution Scheme- Reforms Based Results Linked Scheme", within 3 months of this Order.

9.2.2. DPR for the project of the metering of all consumers (except Agriculture) with smart meters with prepayment

The Commission directs the Petitioner to submit the DPR for the project of the metering of all consumers (except Agriculture) with smart meters with prepayment mode by December 2023 as soon as possible for the consideration of the Commission.

9.2.3. Field level information such as Category wise break-up of costs related to Metering, Billing and Collection etc.

The Commission strongly believes that determination of Category wise Cost of Supply is essential to ensure cost reflectivity in tariffs fixed for different categories. However, the Commission feels that to carry out this exercise a lot of field level information would be required such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. which currently the Petitioner doesn't maintain. Therefore, The Commission directs the Petitioner to start maintaining field level information such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. and submit the same in the tariff proceedings of next year.

9.2.4. Separate Accounting for Regulatory Surcharge

The Commission directs the Petitioner to maintain the separate accounting for Regulatory surcharge.

9.2.5. Sale of surplus power in the open market

The Commission directs the Petitioner to adher to the MOD schedule and in case surplus power same should be sold in the open market when available open market rates are higher than variable rate of power to be sold else transaction should strictly be avoided.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 156: Tariff Schedule*

Category	Fixed Charges	Energy Charges
LIFELINE SERVICES #	10.00 INR/kW/Month	1.25 INR /kWh
0-50 units per month	0-50 units per month	0-50 units per month
DOMESTIC & COTTAGE INDUSTIRES		
0-100 units	30.00 INR/kW/Month	1.90 INR/kWh
101-200 units	30.00 INR/kW/Month	2.90 INR/kWh
201-300 units	30.00 INR/kW/Month	5.00 INR/kWh
Above 300 units	30.00 INR/kW/Month	6.45 INR/kWh
COMMERCIAL		
LT COMMERCIAL		
0-100 units	75.00 INR/kW/Month	5.70 INR/kWh
101-250 units	75.00 INR/kW/Month	6.75 INR/kWh
Above 250 units	75.00 INR/kW/Month	7.50 INR/kWh
HT Commercial (For contract demand up to 5000 kVA)	420.00 INR/kVA/month	5.45 INR/kVAh
AGRICULTURE SERVICES		
Agriculture		
Small Farmers	20.00 INR/HP/Month	-
Other farmers	75.00 INR/HP/Month	-
PUBLIC LIGHTING	110.00 INR/pole/Month	6.80 INR/kWh
INDUSTRIES		
LT Industrial	50.00 INR/kW/Month	6.05 INR/kWh
HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	420.00 INR/kVA/month	5.30 INR/kVAh
EHT Industries (For Supply at 110 kV or 132 kV)	480.00 INR/kVA/month	5.15 INR/kVAh
LT Water Tanks	150.00 INR/Con/Month	6.90 INR/kWh
HT Others	480.00 INR/kVA/month	6.35 INR/kVAh
ELECTRIC VEHICLE CHARGING STATION	-	4.50 INR /kVAh#
HOARDINGS/SIGNBOARDS	140.00 INR/kVA/month	8.00 INR/kWh
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.		

Secretary, JERC
(For Goa & UTs)

*A Regulatory Surcharge of 5.00% 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.

#This tariff is applicable only for supply at HT. In case of LT supply, tariff will be INR 0.2/kVAh higher than the above tariff.

10.2. Applicability

Table 157: 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 1.25/ kWh and Fixed Charges at 10 INR/kW/Month. If the consumption exceeds 50 units then Domestic tariff shall be applicable.
LT Supply Limit for all LT categories 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. 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 1.25/ kWh and Fixed Charges at 10 INR/kW/Month. 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

Secretary, JERC
(For Goa & UTs)

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.

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.

RKumar.
Secretary, JERC
(For Goa & UTs)

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.

10.3. 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 5.00% 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) 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.

7) 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.

8) 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 KVAh, then the consumption corresponding to the contract demand will be 10000 KVAh (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 KVAh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

9) Unless specifically stated to the contrary, the figures of energy charges relate to INR per unit (kWh) charge for energy consumed during the month.

10) **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.

11) **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.

12) **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.

13) **Time of Day (TOD) Tariff**

Secretary, JERC
(For Goa & UTs)

(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 158: 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.

14) 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.

15) 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.

16) Schedule of service charges and other charges would be as approved in this Tariff Order.

Secretary, JERC
(For Goa & UTs)

10.4. Schedule of Other Charges

Table 159: Schedule of Other Charges

S. No.	Description	Charges (INR)
A	Charges for Service Connections	
A1	New LT overhead service lines	
1	Lifeline Services	**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.**

S. No.	Description	Charges (INR)
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**

S. No.	Description	Charges (INR)
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**

Secretary, JERC
(For Goa & UTs)

S. No.	Description	Charges (INR)
5	Testing charges for one set of EHT potential transformer/ CVT	6,000
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 on 28.1.2022 through video conferencing:

Table 160: List of participants in Public Hearing

S. No.	Identification of Stakeholder
1	Shri V. Balasubramanian, Representative of Puducherry People Pulse
2	Shri P. Devanathan (President)- Peoplepulse
3	Shri Umashanker
4	Shri Mellam Srinivasarao, Representative Dr. B.R. Ambedkar Dalita Rights Protection Youth Association
5	Shri Vaibala Subramani (President) - Residence Welfare Association
6	Shri R.Chanemougam