TARIFF ORDER

True-up for FY 2021-22, Annual Performance Review for FY 2022-23 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2023-24

Petition No. 96/2022

for

Electricity Department, Government of Puducherry (PED)

30th March 2023

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

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

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
RRAS	Reserves Regulation Ancillary Services
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Smt. Jyoti Prasad, Member (Law)

Petition No. 96/2022

In the matter of

Approval of True-up for FY 2021-22, Annual Performance Review for FY 2022-23 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2023-24.

And in the matter of

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

ORDER

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 2021-22, Annual Performance Review for FY 2022-23 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2023-24 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 26th December 2022. 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. The Public Hearing was held on 24th February 2023, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) 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 2021-22, Annual Performance Review for FY 2022-23 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2023-24.

4) 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 2021-22:

Table 1: 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	1657.08	1611.85
2	Revenue from Retail Sales at Existing Tariff	1635.59	1634.97
	Net Gap /(Surplus)	**21.49**	**(23.12)**

(b) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the APR of FY 2022-23:

Table 2: Standalone Revenue Gap/ (Surplus) without regulatory surcharge approved for FY 2022-23 (In INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1828.81	1719.65
2	Revenue from Retail Sales at Existing Tariff	1707.33	1623.02
3	**Gap / (Surplus) without Regulatory Surcharge**	**121.23**	**96.63**

(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 2023-24:

Table 3: Standalone Revenue Gap/ (Surplus) at existing tariff without regulatory surcharge for the FY 2023-24 (INR Cr)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1860.11	1713.45
2	Revenue from Retail Sales at Existing Tariff	1767.48	1638.61
3	**Gap / (Surplus) without Regulatory Surcharge**	**92.63**	**74.84**

(d) To meet the revenue gap of INR 74.84 Cr, the Commission has approved an average tariff hike of 4.69% while the regulatory surcharge has been increased to 8.00% for the FY 2023-24. The Petitioner has proposed an average tariff hike of 8.29%:

Table 4: Standalone Revenue Gap/ (Surplus) at approved tariff without regulatory surcharge for the FY 2023-24 (INR Cr)

Particulars	Petitioner's Submission	Now Approved
Net Revenue Requirement (a)	1860.11	1713.45
Revenue from Retail Sales at Approved Tariff (b)	1851.96	1715.46
Standalone Gap /(Surplus) for the year (c=b-a)	**(8.15)**	**(2.00)**

(e) Accordingly, the cumulative revenue gap/ (surplus) at approved tariff by the end of the FY 2023-24, 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)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Net Revenue Requirement	1,611.85	1,719.65	1,713.45
Revenue from Retail Sales at revised Tariff (excluding surcharge)	1,634.97	1,623.02	1,715.46
Opening Gap Balance	423.16*	432.96	479.83
Standalone Gap /(Surplus) for the year	(23.12)	96.63	(2.00)
Regulatory Surcharge rate		5%	8%
Less: Regulatory surcharge		81.15	137.24
Closing Gap Balance	400.04	448.44	340.59
Avg. Gap	411.60	440.70	410.21

Secretary (I/c), JERC
(For Goa and UTs)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Interest rate	8.00%	8.00%	8.00%
Carrying Cost	**32.93**	**31.39#**	**32.82**
Cumulative Gap	**432.96**	**479.83**	**373.41**

**includes Regulatory Surcharge*

#Carrying cost not allowed on standalone gap for FY 2022-23.

(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 2023-24 as INR 5.93/kWh as against the approved Average Cost of Supply of INR 5.92/kWh.

(h) This Order shall come into force with effect from 1st April, 2023 and shall, unless amended or revoked, continue to be in force till further orders of the Commission.

5) 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.

6) The attached documents giving detailed reasons, grounds and conditions are an Integral part of this Order.

7) Ordered accordingly.

Sd/-

(Jyoti Prasad)

Member (Law)

Place: Gurugram
Date: 30th March 2023

Certified Copy

(S.D. Sharma)
Secretary (I/c), JERC

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

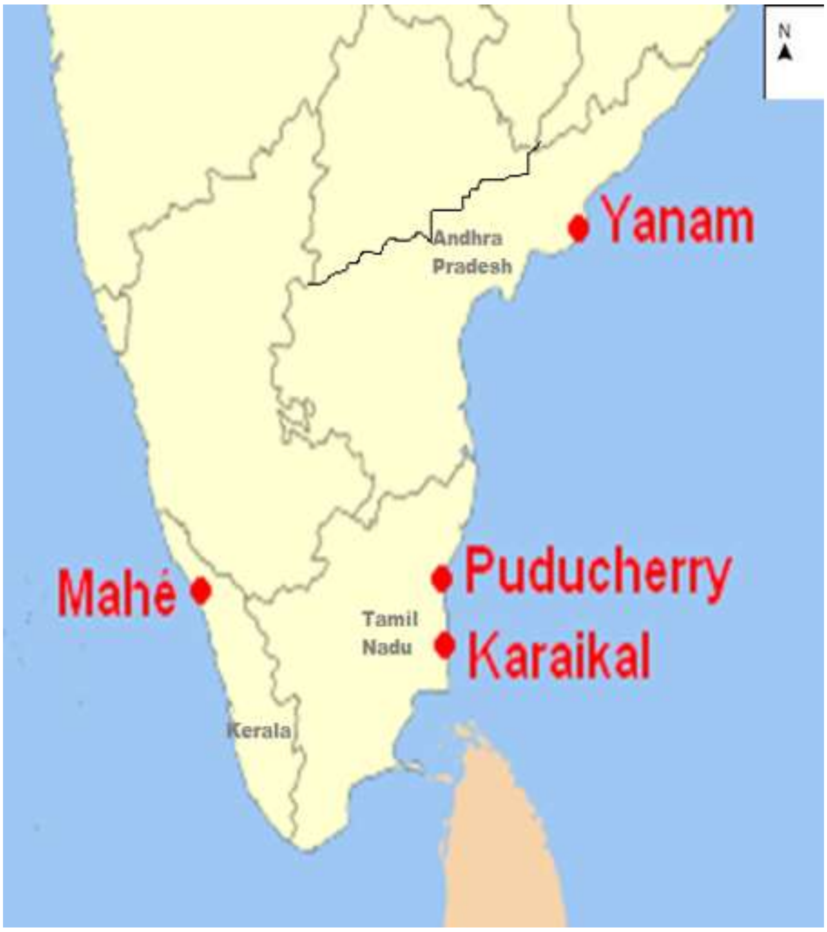
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "the Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R 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, Dadra & Nagar Haveli and Daman & Diu, 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 22ndMarch 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 26th December 2022 and marked as Petition No. 96/2022. 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: Timelines of interactions with the Petitioner

S. No	Subject	Date
1	Issue of Discrepancy Note	19.01.2023
2	Public hearing	24.02.2023
3	Technical Validation Session (TVS)	06.03.2023
4	Replies received from the Petitioner with regard to Discrepancy Note	15.02.2023, 01.03.2023
5	Issue of second Discrepancy Note	10.02.2023
6	Replies received from the Petitioner with regard to second Discrepancy Note	14.03.2023
7	Issue of queries discussed in TVS session	06.03.2023
8	Replies received from the Petitioner with regard to TVS queries	21.03.2023

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	14.02.2023	The New Indian Express	Puducherry, Karaikal, Mahe & Yanam
2	20.01.2023	The Daily Thanthi	Puducherry, Karaikal
3	20.01.2023	Kerala Kaumudi	Mahe
4	20.01.2023	Janamitra	Yanam

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

Table 9: Details of Public Notices published by the Commission

Sl. No.	Date	Name of Newspaper	Place of Circulation
1	8.02.2023 and 22.02.2023	The Hindu	Visakhapatnam, Vijayawada
2		New Indian Express	All Tamil Nadu

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

1.9. Public Hearing

The Public Hearing was held on 24th February 2023 at PMSSS Complex, 81, Laporte Street, Puducherry- 605001 to discuss the issues related to the Petition filed by the Petitioner. The list of the Stakeholders is attached as Annexure 1 to this Order. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

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

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting suggestions/ comments from the public as per the provisions of the JERC (MYT) Regulations, 2018 and JERC (MYT) Regulations, 2021.

The Public Hearing was held on 24th February 2023 at PMSSS Complex, 81, Laporte Street, Puducherry- 605001 to discuss the issues related on the Petition True-up of the FY 2021-22, Annual Performance Review (APR) of FY 2022-23 and Aggregate Revenue Requirement (ARR) and Determination of Tariff for the FY 2023-24. During the Public Hearing, a few of the stakeholders 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. Prepaid metering

Stakeholder's Comment:

The stakeholder has raised objection to that prepaid metering should be ceased as rural poor will be put into lot of hardship as they are not using smart phones and also the concept of prepayment will be difficult for them.

Petitioner's Response:

The Petitioner has submitted that, there is an option to visit the department cash counters on any working day for making advance payment in the form of cash. Power supply will not be interrupted during night hours and public holidays, for not recharging their prepaid account so that rural consumers are not affected.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.2. Collection of dues

Stakeholder's Comment:

The stakeholder has submitted that the Petitioner is not collecting dues properly from large industries/ commercial establishment. Even the Government departments are having huge arrears but the Petitioner is hiking tariff without collecting dues from them.

Petitioner's Response:

The Petitioner has submitted that, the tariff is fixed by the Commission assuming 100% collection efficiency and therefore tariff is not dependent on collection efficiency. However prepaid meters scheme will further improve collections close to 100%. The Petitioner is also taking strenuous efforts for realization of billed amount from all categories of consumers. The Petitioner will further ensure that no HT industry remains extended with power supply for not paying their dues.

Commission's View:

The Commission takes note of the stakeholder's comment. The Commission also directs the Petitioner to ensure collection of dues in a timely manner.

2.2.3. Tariff

Stakeholder's Comment:

The stakeholder has submitted that the Fixed charges based on Rs. 30 / kilowatt for domestic consumers may be dropped.

Petitioner's Response:

The Petitioner has submitted that, the Connected load based tariff for all category of consumers is as per the directions of the Commission and such tariff is prevailing in most of the States.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The Commission has discussed the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.4. Tariff hike

Stakeholder's Comment:

The stakeholder has submitted that proposed tariff hike to domestic consumers to be dropped.

Petitioner's Response:

The Petitioner has submitted that, even with the proposed tariff for domestic consumers, the tariff realization for domestic services is still far below the average ACOS.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The Commission has discussed the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.5. Infrastructure

Stakeholder's Comment:

The stakeholder has submitted that Deteriorated infrastructure which was installed long back need to be replaced with new assets.

Petitioner's Response:

The Petitioner has submitted that, new infrastructure will be installed by the Petitioner under RDSS scheme and other schemes of the department.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.6. Completeness of Petition

Stakeholder's Comment:

The stakeholder has submitted that the Petitioner has not submitted the details pertaining to Annual Fixed Cost, Variable Charges, etc. pertaining to Summary of Power Purchase from Own Stations and Other Sources, without which prudence check cannot be conducted properly.

The Petitioner has not provided on its internet website, in text searchable format or in downloadable spreadsheet format furnishing detailed computations, the Petition filed before the Commission along with all regulatory filings, information, particulars and documents in the manner stipulated by the Commission.

Petitioner's Response:

The Petitioner has submitted that, the details of Annual fixed cost and variable cost pertaining to summary of power purchase from own generation and other sources has already been provided in the Revised Forms submitted to the Commission.

The Petitioner has further submitted that it has uploaded the gist of the Petition on Newspaper and has advertised about the Tariff Petition and public hearing on its website as well as local news and electricity counters. The gist of the Petition was published on 20.01.2023 and 21.01.2023 and the paper notification informing the date and venue of the public hearing was released on 08.02.2023 and 22.02.2023 in compliance of Regulation 17.4 of JERC MYT Regulations, 2021.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.7. Non-Segregation of Accounts of Retail Supply and Distribution Wires Business

Stakeholder's Comment:

The stakeholder has submitted that the MYT Regulations provide for a rider that states 'for such period until accounts are segregated, the Licensees shall use the Allocation Statement provided in the Regulation 49 to apportion costs and revenues to respective businesses', it is submitted that the Petitioner has been using such rider as an easy out. Despite the fact that it has been 10 years since the segregation of accounts has been stipulated, the Petitioner has failed to segregate its accounts.

Petitioner's Response:

The Petitioner has submitted that, DISCOM is still functioning as a combined entity of Transmission and Distribution. However based on the direction of the Commission the assets have been segregated between transmission and distribution sector and the same is furnished to the Commission.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.8. Power purchase cost

Stakeholder's Comment:

The stakeholder has submitted that the Petitioner has claimed an arbitrary escalation ranging from 5% to 39% in the Average Power Purchase Cost rates against the Approved APPC rates as per Commission's order dated 07.04.2021 for FY 2021-22, without providing due reasoning or detailed breakup for such increase. The Petitioner has submitted unreasonably high power purchase cost from PPCL.

The stakeholder has further submitted that the Petitioner has estimated 34.56 MUs as surplus power which is estimated to be sold at an average price of Rs. 4.40/kWh for FY 2022-23. Subsequently, Revenue from such surplus power (Rs. 15.51 Crores) has been subtracted from the Power Purchase Cost. It is submitted that the average IEX MCP for FY 2022-23 till month of January 2023 is Rs. 5.90/kWh.

The stakeholder has further submitted that the Petitioner has claimed significantly high PGCIL charges.

Petitioner's Response:

The Petitioner has submitted that, the various parameters which influences the cost of Generation and interalia the price for the Discoms are:

1. Increase in Fuel price (use of imported coal)
2. Freight charges for fuel transportation
3. Change in Power Purchase mix and
4. Increase in Transmission Charges

The Petitioner has submitted that because of all these uncontrollable factors there is an increase in Power purchase cost. Further, the increase in PPCL energy cost is due to the abnormal increase in the international gas prices which falls under the uncontrollable factors by PPCL.

The Petitioner has further submitted that Revenue from sale of power was estimated at a market price of Rs. 4.40/kWh based on IEX DAM Market Clearing Price of February 2022 as power sale will mainly happen from January to March, DAM MCP for March 2022 was Rs 8.23/kWh, which seemed very high and hence not taken in consideration.

The Petitioner has further submitted that the increase in transmission charges is due to change in sharing of Interstate Transmission charges Regulation. The Central Commission has notified the CERC (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2020 from 01st November 2020.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.9. T&D Losses

Stakeholder's Comment:

The stakeholder has submitted that the Petitioner has claimed T&D Losses of 11.08% for FY 2021-22 despite the Hon'ble JERC approving T&D Losses of 11.00% in FY 2021-22 Tariff Order as well as business plan.

Petitioner's Response:

The Petitioner has submitted that, T&D losses of 11.08% for FY 2021-22 is on actual basis and it is only slightly more than the approved value of 11%. It is evident that PED has taken corrective actions and T&D losses has decreased significantly and very near will reach to the approved value.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The T&D loss are to be considered on actuals for the true-up year. The Commission considers the incentive/disincentive on achievement/underachievement of loss targets and same are incorporated in the approved ARR for the respective year.

2.2.10. O&M Expenses

Stakeholder's Comment:

The stakeholder has submitted that O&M expenses as assessed by the stakeholder are Rs 139.20 Crores for FY 2021-22 and Rs. 140.70 Crores for FY 2022-23 as against Petitioner's claim of Rs. 169.77 Crores for FY 2021-22 and Rs. 167.57 Crores for FY 2022-23.

Petitioner's Response:

The Petitioner has submitted that, O&M Expenses for FY 2021-22 has been claimed as actual and for FY 2022-23 has been estimated based on 2021-22 data in accordance with the JERC MYT Regulations, 2018 & 2021.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. O&M Expenses controllable in nature hence, they are allowed as per the applicable regulations.

2.2.11. Summary of True-up, APR and ARR

Stakeholder's Comment:

The stakeholder has submitted that there seems to be a surplus (true-down) of Rs. 84.07 Crores for FY 2021-22 as per the stakeholder's assessment, as against a true-up of Rs.21.49 Crores claimed by the Petitioner for FY 2021-22. The Stakeholder has further submitted that there seems to be surplus (true-down) of Rs. 17.15 Crores for FY 2022-23 as per the stakeholder's assessment, as against a true-up of Rs.121.48 Crores claimed by the Petitioner for FY 2022-23. The stakeholder has further submitted that the Commission may allow the tariff for FY 2023-24 based on the stakeholder's assessment.

Petitioner's Response:

The Petitioner has submitted that, it has computed the True-up, APR and Tariff as per the JERC MYT Regulations. The Petitioner has not sought any deviation from the norms specified in the Regulations. Further, the Petitioner submits that determination of retail supply tariff is a prerogative of the Commission under Section 62(3) of the Act.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The Commission has considered the applicable MYT Regulations in this order.

2.2.12. Sharing of gains and losses

Stakeholder's Comment:

The stakeholder has submitted that in consonance with the JERC MYT Regulations 2021, it is prayed that the Hon'ble Commission may allow:

a) Sharing of Gains/Losses in fair ratio between the Distribution Licensee and the Consumer.

b) The portion of Trued-up/down amount refundable/recoverable from the Consumers on the basis of the specified ratio, may be passed on in the prospective ARR.

Petitioner's Response:

The Petitioner has submitted that, determination of retail supply tariff is a prerogative of the Commission under Section 62(3) of the Act.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. Sharing of gains and losses, wherever applicable, are considered in this order.

2.2.13. Wheeling charges & Additional surcharge

Stakeholder's Comment:

The stakeholder has submitted that the Commission may approve the wheeling charge as computed by the Objector's Assessment for FY 2023-24 instead of the Petitioner's claim.

The stakeholder has further submitted that the Petitions should produce documentary evidence for its claim of additional surcharge.

Petitioner's Response:

The Petitioner has submitted that, the Electricity Act 2003 has provided under section 42(4) the liability for payment of Additional Surcharge by a class of consumers to meet the fixed cost of the distribution licensee arising out of its obligation to supply.

The Additional Surcharges have been imposed for Open Access consumers in order to compensate the long term commitment made by Electricity Department, Puducherry to various Gencos & Transcos. When the consumer opts for open Access, the department has to make request to the Generators to back down any power from them.

The additional surcharge is the under-recovery of fixed cost to meet out the fixed cost obligation towards the power purchase and loss due to open access consumers and therefore PED has claimed the additional surcharge. Therefore the contention of the Petitioner not to allow the additional surcharge is wrong and liable to be denied.

The Petitioner further submits that there is an inadvertent error happened while computing the fixed cost component (Excluding Transmission Charges) while calculating the Additional Surcharge. The Petitioner submits that detailed computation of Additional Surcharge for FY 2023-24 it was informed to the Commission for consideration.

Commission's View:

The Commission has noted the concern of the stakeholder and the same is discussed in the principles adopted for approving the Open Access Charges in Chapter 7 of the Tariff Order.

2.2.14. Rationalization of Tariff as Per Voltage-Wise Cost of Supply Reducing the Cross-Subsidy Levels

Stakeholder's Comment:

The stakeholder has submitted that, the ABR (Effective Tariff) for HT and EHT Categories exceeds more than 20% of the actual cost of supply of a distribution licensee at the said voltage levels. This is in direct violation of the APTEL's Judgement dt. 18.02.2022 in Appeal No. 248 of 2018:

In view of the above, the Objector states that the current tariffs for industrial consumers need more rationalisation to adhere with the mandate of the Electricity Act, National Tariff Policy and APTEL's Judgement dt. 18.02.2022 in Appeal No. 248 of 2018.

Petitioner's Response:

The Petitioner has submitted that, PED submits that determination of retail supply tariff is a prerogative of the Commission under Section 62(3) of the Act

Commission's View:

The Commission has noted the concern of the stakeholders and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.15. Cross-subsidy surcharge

Stakeholder's Comment:

The stakeholder has submitted that, the Commission may limit the Cross Subsidy Surcharge within the maximum allowable Cross Subsidy Surcharge computed by the Objector for FY 2023-24.

Petitioner's Response:

The Petitioner has submitted that, the tariff policy mandates Electricity Regulatory Commission to determine road map of cross subsidy surcharge and bring tariff ± 20% of Average Cost of Supply (ACos).

As per section 39 & 40 of Electricity Act 2003, the surcharge / Cross Subsidy Surcharge shall be progressively reduced in a manner as specified by the Commission. As per Clause 83 of National Tariff Policy, for achieving the objective that the tariff progressively reflects the cost of supply of electricity, the cross subsidy may be reduced gradually in a phased manner to keep tariff within ± 20% ACos. The Petitioner requests the Commission to gradually reduce the CSS over a period of 5 years, to avoid tariff shock to other category of consumers

Commission's View:

The Commission has noted the concern of the stakeholder and the same is discussed in the principles adopted for approving the Open Access Charges in Chapter 7 of the Tariff Order.

2.2.16. Power Factor Incentive

Stakeholder's Comment:

The stakeholder has submitted that, the Commission may continue with the PF Incentive system till a proper impact analysis of KVAh billing for the HT Industrial Consumers has been conducted and it may be ensured that the kVAh based metering has built-in subsidising/penalising of power factor of the consumers.

Petitioner's Response:

The Petitioner has submitted that, levying tariff based on KVAh will ensure maintaining optimum power factor level by industries. The Hon'ble Commission has allowed pf incentive to industries for a long period and after switching over to KVAh tariff, allowing pf incentive is not reasonable as requested by Objector.

Further, under Section 62 of the Electricity Act, 2003, the Commission has the power to differentiate the consumer tariff on the basis of Power Factor, Load Factor, voltage, consumption of electricity, time at which supply is required, geographical position of the area, nature of supply and purpose for which supply is required. Therefore, the Commission may take an appropriate view on the same.

Commission's View:

The Commission has noted the concern of the stakeholder and the same is discussed in the principles adopted for approving the Open Access Charges in Chapter 7 of the Tariff Order.

2.2.17. FPPCA for Q1 FY 2022-23

Stakeholder's Comment:

The stakeholder has submitted that, the Commission may direct the PED to submit necessary details and copies of all its Power Purchase invoices only after which the FPPCA claim for Q1 of FY 2022-23 made by the Petitioner may be considered

Petitioner's Response:

The Petitioner has submitted that, all the power purchase data has been uploaded in the Petitioner's website along with FPPCA charge calculation based on the request of the Objector pertaining to Q1 of FY 2022-23.

Commission's View:

The Commission has noted the concern of the stakeholder and the same is discussed in the principles adopted for approving FPPCA in Chapter 8 of the Tariff Order.

3. Chapter 3: True-up of FY 2021-22

3.1. Background

Under the second MYT regime of the JERC, 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 was issued on 7th April 2021 (hereinafter referred to as the "Tariff Order").

The True up for the FY 2021-22 is to be carried out in accordance with Regulation 11 of the JERC MYT Regulations, 2018, stated as following:

"11.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.

11.2 The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

11.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:

a) ***True-up:*** *a comparison of the audited performance of the Applicant for the Financial Year for which the true up is being carried out with the approved forecast for such previous Financial Year, subject to the prudence check;*

b) ***Annual Performance Review****: a comparison of the revised performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;*

c) ***Tariff determination*** *for the ensuing Year of the Control Period based on the revised forecast of the Aggregate Revenue Requirement for the Year;*

d) Review of compliance with directives issued by the Commission from time to time;

e) Other relevant details, if any.

11.4 Upon completion of the exercise, the Commission shall attribute any variations or expected variations in performance for variables specified under Regulation 12below, to factors within the control of the Applicant (controllable factors) or to factors beyond the control of the Applicant (uncontrollable factors):

Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 12below shall be attributed entirely to controllable factors.

11.5 Upon completion of the exercise, the Commission shall pass an order recording:

a) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous Year, to be passed through in tariff as per Regulation 13 of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

b) Approved aggregate gain or loss to the Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 14 of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

c) Carrying cost shall be allowed for a Generating Company, Transmission Licensee or Distribution Licensee on the amount of revenue gap for the period from the date on which such gap has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed, on the basis of actual rate of loan taken by the Licensee to fund the deficit in revenue:

Provided that carrying cost on the amount of revenue gap shall be allowed subject to prudence check and submission of documentary evidence for having incurred the carrying cost in the years prior to the year in which the revenue gap is addressed:

Provided also that if no loan has been taken to fund revenue deficit, the Commission shall allow Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR /any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points;

Provided further that in case of revenue surplus, the Commission shall charge the Licensee a Carrying Cost from the date on which such surplus has become due, i.e., from the end of the Year for which true up has been done, till the end of the Year in which it is addressed on simple interest basis at one(1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points.

d) Revision of estimates and tariff for the ensuing Financial Year."

3.1. Approach for the True-Up of FY 2021-22

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 2021-22 of the third 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 2021-22 as 2,782.63 MUs as against an approved energy sales quantum of 2,804.14 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 for FY 2021-22

Consumer category	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
Domestic	833.17	803.76	803.76
OHOB	0.32	3.62	3.62
Commercial	211.33	174.45	174.45
Agriculture	62.94	60.06	60.06

Public Lighting	24.83	19.95	19.95
LT Industrial + water tank	164.45	170.07	170.07
Temporary	4.75	3.85	3.85
Total LT -Category	**1301.79**	**1235.76**	**1235.76**
HT-1 (HT Industrial/Commercial)	1005.59	911.82	911.82
HT-2 (Government & water tank)	74.10	55.45	55.45
HT-3 (Industrial EHT)	422.66	579.60	579.60
Total HT -Category	**1502.35**	**1546.87**	**1546.87**
Export to other Region	-	-	-
Grant Total	**2804.14**	**2782.63**	**2782.63**

The Commission approves 2782.63 MUs as energy sales in the True-up of the FY 2021-22.

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 2021-22.

3.4. *Inter-State Transmission Loss*

Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss of 3.25% against an approved figure of 2.13% in the Tariff Order.

Commission's analysis

The Commission in this regard directed the Petitioner to submit the supporting documentary evidence to verify the loss levels. The Petitioner has submitted that they have computed the inter-state transmission loss considering the total scheduled energy at Ex-bus and the state periphery. Therefore, the Commission has considered the difference between the total energy scheduled at Ex-Bus periphery and the total energy scheduled at state periphery for computing the transmission losses. The detailed computation can be referred in the energy balance section. The Commission accordingly trues-up 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	Inter-State Transmission Loss	2.13%	3.25%	3.30%

The Commission approves the Inter-State Transmission Loss as 3.30% for CGS stations in the True-up of the FY 2021-22.

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 11.08% in the FY 2021-22 against target of 11.00%.

Commission's analysis

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2021-22. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawl at State periphery as registered in the energy meters at the state periphery and the energy sales as approved above.

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 2021-22 of this Order.

The Table below provides the Intra-State T&D loss approved for FY 2021-22 in the Tariff Order date 7th 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 (%)	11.00%	11.08%	11.08%

The Commission, while Truing up for FY 2021-22, has considered the actual Intra-State T&D loss of 11.08% for the FY 2021-22. However, the dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been detailed in section 3.19 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 2021-22 is shown in Table below:

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

S. No.	Particulars	FY 2021-22		
		Purchase (MU)	Cost (INR Cr.)	Rate (INR/unit)
1	NTPC	1173.91	389.68	3.32
2	NLC	631.82	230.54	3.65
3	PPCL	236.44	99.63	4.21
4	KAIGA	294.52	105.14	3.57
5	MAPS	14.71	4.18	2.84
6	NTECL	75.17	56.33	7.49
7	KKNP	474.51	204.59	4.31

S. No.	Particulars	FY 2021-22		
		Purchase (MU)	Cost (INR Cr.)	Rate (INR/unit)
8	NNTPS	326.18	133.01	4.08
9	NTPL (Tuticorin)	88.31	59.49	6.74
10	Open market	0.00	0.00	0.00
11	OA Power purchase			
12	PGCL (POC + Non POC Charges)		173.29	
13	SRLDC Charges		0.64	
14	SRPC		0.12	
15	RPO Obligations		0.00	
16	KPTCL		0.01	
17	UI Charges		0.49	
18	Power purchased expenses for prior period			
19	**Sub-Total**		**1457.14**	
20	Adjustments Bills / Debit Notes / Credit Notes for prior period			
21	Less: Interest cost		25.01	
22	**Power Purchase Cost (Sub- Total)**		1432.13	
23	URS Income		27.49	
24	Net UI (Under-drawal)	84.53	22.63	
25	RRAS Charges		6.34	
26	Sale of Trading Materials		0.50	
27	**Sub-total (Additional Income)**		56.96	
28	**Net Power Purchase Cost**	**3231.04**	**1375.18**	**4.25**

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 1375.18 Crore inclusive of transmission charges.

The Commission has verified the power purchase details as submitted by the Petitioner in its Petition with the publicly available information from the Regional Energy Accounts (REA) maintained by Southern Region Power Committee (SRPC) for the Central Generating Stations (CGS). The Commission has verified the power purchase quantum and cost as per the station-wise monthly bills submitted by the Petitioner.

The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2021-22 has adjusted the Income from UI Under-drawal in the Power Purchase cost approved now. Transmission Charges and the Other Charges submitted have been considered based on actuals.

The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2021-22.

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

S. no.	Particular	Approved in Tariff Order			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	1232.13	423.32	3.44	1173.91	389.68	3.32	1173.91	389.68	3.32
2.	NLC	875.27	346.18	3.96	631.82	230.54	3.65	631.82	230.54	3.65
3.	PPCL	231.39	109.34	4.73	236.44	99.63	4.21	236.44	99.63	4.21
4.	KAIGA	289.85	104.55	3.61	294.52	105.14	3.57	294.52	105.14	3.57
5.	MAPS	29.21	7.88	2.70	14.71	4.18	2.84	14.71	4.18	2.84
6.	NTECL	119.45	79.78	6.68	75.17	56.33	7.49	75.17	56.33	7.49
7.	KKNP	276.93	104.89	3.79	474.51	204.59	4.31	474.51	204.59	4.31
8.	NNTPS	84.85	30.17	3.56	326.18	133.01	4.08	326.18	133.01	4.08
9.	NTPL (Tuticorin)				88.31	59.49	6.74	88.31	59.49	6.74
10.	Open market	73.16	19.60	2.68	0.00	0.00	0.00	0.00	0.00	0.00
11.	OA Power purchase									
12.	PGCL (POC + Non POC Charges)		66.21			173.29			173.29	
13.	SRLDC Charges					0.64			0.64	
14.	SRPC					0.12			0.12	
15.	RPO Obligations					0.00			0.00	
16.	KPTCL					0.01			0.01	
17.	UI Charges					0.49			0.49	
18.	**Sub-Total**	**3212.25**	**1366.83**	**4.26**		**1,457.14**			**1,457.14**	
19.	Less: Interest cost					25.01			25.01	
20.	URS Income					27.49			27.49	
21.	Net UI (Under-drawal)				84.53	22.63		84.53	22.63	
22.	RRAS Charges					6.34			6.34	
23.	Sale of Trading Materials					0.50				
24.	Sub-total (Additional Income)					56.96			56.96	
25.	Net Power Purchase Cost	**3212.25**	**1366.83**	**4.26**	**3231.04**	**1375.18**	**4.25**	**3231.04**	**1375.68**	**4.25**

The Commission approves power purchase quantum of 3231.04 MUs and cost of INR 1375.68 Cr in the True-up of the FY 2021-22.

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 2021-22 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 17.00% 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 2021-22 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	8.00%	8.00%
2	Non Solar Target	9.00%	9.00%
	Total Target	**17.00%**	**17.00%**
3	Sales Within UT	2782.63	2782.63
	RPO Target		
5	Solar	222.59	222.61
6	Non Solar	250.41	250.44
	Total RPO Target	**473.00**	**473.05**
	RPO Compliance (Actual Purchase)		
7	Solar	38.79	38.79
8	Non Solar	-	
	Total RPO Compliance (Actual Purchase)	**38.79**	**38.79**
	RPO Compliance (REC Certificate Purchase)		
9	Solar	-	
10	Non Solar	-	
	Total RPO Compliance (REC Certificate)	-	
	RPO Compliance (REC+ Actual)		
11	Solar	38.79	38.79
12	Non Solar	-	-
	Total RPO Compliance	**38.79**	**38.79**
	Cumulative Requirement till current year		
13	Solar		768.60
14	Non Solar		1273.83
	Total		**2042.43**
	Cumulative Compliance till current year		
15	Solar		131.69
16	Non Solar		484.76
	Total		**616.45**
	Net Shortfall in RPO Compliance till current year		
17	Solar	636.18	636.90

S. No.	Particulars	Claimed by the Petitioner	True-up by the Commission
18	Non Solar	788.26	789.07
	Total	**1424.44**	**1425.97**

The Commission notes that there is a net shortfall in RPO compliance till the FY 2021-22 of 1425.97 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 2021-22 Actuals
A)	**Energy Requirement**	
1	**Total Sales within the UT**	2782.63
2	Energy Drawal by TANGEDGO	0.00
3	Sales to Electricity Traders / Power Exchange	
4	Sale to Open access Consumers	
5	**Total Sales**	**2782.63**
6	**T&D Losses**	
a	T&D Loss (%)	11.08%
b	T&D Loss (MU)	346.84
7	**Total Energy Requirement**	**3129.47**
B)	**Energy Availability**	
1	Net Power Purchase (ex Bus)	3079.13
2	Own Generation (PPCL + Renewable)	236.44
3	Power purchase from Common Pool / UI-over drawal / Traders / Exchange / Others	33.18
4	UI Under drawal	117.70
5	Open Access Power Purchase at periphery	
6	**Net Power Purchased (1+2+3-4+5)**	**3231.04**
7	Transmission Losses	101.57
a	Transmission Losses (%)	3.25%
8	**Total Energy Availability (6-7a)**	**3129.47**

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 FY 2021-22 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by SRPC and documentary evidence submitted by the Petitioner against the Inter-State Transmission Loss, the Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance as submitted by the Petitioner and now trued-up by the Commission.

Table 18: Energy Balance (MUs) approved by Commission

S. no.	Particulars	Approved in Tariff Order	Petitioner's Submission	True-up by the Commission
A	**Energy Requirement**			
1	Sales Within Territory	2804.14	2782.63	2782.63
2	Sales to TANGEDCO	-	-	-
3	Sale to Open access consumer	-	-	-
4	Sales to Traders/Exchanges	-	-	-
5	Total Sales	2804.14	2782.63	2782.63
6	Transmission & Distribution losses (%)	11.00%	11.08%	11.08%
7	**Energy Requirement @ State periphery (MUs)**	**3150.72**	**3129.47**	**3129.47**
B	**Energy Availability**			
1	Net Power Purchase (CGS)		3079.13	3079.13
2	Own Generation (PPCL+Renewable)		236.44	236.44
3	Power purchase from Common Pool / UI-overdrawal / Traders / Exchange / Others		33.18	33.18
4	UI Underdrawal		117.70	117.70
5	Open Access Power Purchase at periphery			
6	**Net Power Purchased (1+2+3-4+5)**		**3231.04**	**3231.04**
7	Transmission loss (B6-B9)		101.57	101.57
8	Transmission loss % (B7/B1)		3.25%	3.30%
9	**Energy required at the State/UT Periphery (MU)**		**3129.47**	**3129.47***

*Total energy drawal as per meter.

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:

$O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times (1 - X_n) + \text{Terminal Liabilities}$

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 2021-22
Salary	155.20
Wages	0.82
Stipend	0.72
Overtime Payment	0.00
Less: Departmental Charges	0.53
Less: Salary Costs Capitalized	16.23
Add : prior period expenses	0.00
Total Employee Expenses for PED	**140.58**

Commission's analysis

In accordance with the JERC MYT Regulations, 2018, the Commission has determined the Employee expenses for the FY 2021-22. 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 determined in MYT Order dated 31st March 2022. The Base Year expenses have been escalated by Growth Rate determined based on the manpower plan as submitted by the Petitioner and the actual CPI Inflation of FY 2021-22 to arrive upon the employee expenses of FY 2021-22.

Table 20: CPI Inflation Index

FY	Average of (Apr-Mar)	Increase in CPI Index
2020-21	338.69	
2021-22	356.06	5.13%

Table 21: Growth rate of employee

FY	Employees	Increase/(Decrease) in employees
2020-21	1954	
2021-22	1848	-5.42%

Table 22: Computation of employee expenses (In INR Crore)

S. No	Particulars	(Base Year)	Trued Up
		Trued up FY 2020-21	FY 2021-22
1	Gn (Growth factor as per Petitioner Submission)		-5.42%
2	CPI (Actuals for FY 2021-22) (in %)		5.13%

S. No	Particulars	(Base Year) Trued up FY 2020-21	Trued Up FY 2021-22
3	Expenses with inflation and growth	89.16	88.65
4	Impact of 7th Pay Commission with inflation and growth	22.44	22.47
5	**Total Employee Expenses**	**111.60**	**111.13**

Table 23: 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	92.92	140.58	88.65
2	Impact of 7th Pay Commission	23.39		22.47
3	**Total Employee Expenses**	**116.31**	**140.58**	**111.13**

The Commission estimates employee expenses of INR 111.13 Cr in the true-up of the FY 2021-22.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has incurred A&G expenses of INR 14.23 Crore against the approved expenses of INR 14.20 Crore in the Tariff Order dated 7th April 2021.

Commission's analysis

The Commission has considered the base year figures as per for FY 2020-21 as trued-up in the MYT Order dated 31st March 2022. The Base Year expenses have been escalated the average CPI Inflation to arrive upon the A&G expenses of FY 2021-22.

Table 24: Computation of A&G expenses (In INR Crore)

S. No	Particulars	(Base Year) FY 2020-21	Trued Up FY 2021-22
1	CPI (in %)		5.13%%
2	A&G Expenses	13.44	14.13
3	**Total A&G Expenses**	**13.44**	**14.13**

Table 25: 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	14.20	14.23	14.13

The Commission estimates the Administrative & General (A&G) expenses of INR 14.13 Cr in the True-up of FY 2021-22.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has claimed R&M expense of INR 15.56 Crore as per expenses actually incurred during FY 2021-22, against R&M expense of INR 11.77 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 2021 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 actual WPI Inflation for F 2021-22 to arrive upon the R&M Expenses for the FY 2021-22.

The WPI Inflation has been computed as follows:

Table 26: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Yearly increase
2020-21	123.38	-
2021-22	139.41	13.00%

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

Table 27: Normative R&M Expenses worked out by the 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 2021)	1.18%
3	WPI Inflation (Actuals for FY 2021-22) (%)	13.00%
4	**R&M Expenses =** **K x (GFA_{n-1}) x ($1+WPI_{inflation}$)**	**12.73**

Table 28: 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)**	11.77	15.56	12.73

The Commission estimates the Repair & Maintenance (R&M) expenses of INR 12.73 Cr in the true-up of FY 2021-22.

3.9.4. Sharing of gains/losses

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

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Estimated by Commission	Gain/(loss)	Sharing of gain/(loss)	O&M Expenses Approved
		A	B	C			
1	Employee Expenses	92.92	140.58	88.65	(29.45)	N/A	88.65
	Impact of 7th Pay	23.39		22.47			22.47
	Total Employee Expenses	116.31	140.58	111.13	(0.10)		111.13
2	Administration & General Expenses (A&G)	14.20	14.23	14.13	(2.83)	N/A	14.13
3	Repair & Maintenance Expenses (R&M)	11.77	15.56	12.73	(29.45)	N/A	12.73
	Total	**142.28**	**170.37**	**137.99**			**137.99**

Since the Petitioner's claim towards O&M Expenses is higher than normative O&M expenses as computed by the Commission, the loss on account of O&M expenses shall be borne by the Licensee.

3.9.5. 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 Following table provides the O&M expenses, approved by the Commission in the Tariff Order for ARR of FY 2021-22, Petitioner's submission and O&M expenses now trued up by the Commission.

Table 29: 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	116.31	140.58	88.65
	Impact of 7th Pay			22.47
	Total Employee Expenses	**116.31**	**140.58**	**111.13**
2	Administration & General Expenses (A&G)	14.20	14.23	14.13
3	Repair & Maintenance Expenses (R&M)	11.77	15.56	12.73
	Total	**142.28**	**170.37**	**137.99**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 137.99 Cr in the true-up of FY 2021-22.

3.10. Capitalisation

Petitioner's Submission

The Petitioner submitted the actual capitalisation for the FY 2021-22 as INR 74.90 Cr against an approved capitalization of INR 100.00 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 30: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	100.00	74.90	74.90

The Commission approves the Capitalisation of INR 74.90 Cr in the True-up of FY 2021-22.

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."

The capitalisation has been 100% funded through equity. In accordance with the JERC MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2021-22 as follows:

Table 31: 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	968.85	954.63	954.63
2	Addition During the FY	100.00	74.90	74.90
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	1068.85	1029.53	1029.53

Table 32: 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	100.00	74.90	74.90
2	Normative loan addition During the FY @70% of GFA addition during year	70.00	52.43	52.43
3	Equity addition on account of new Capitalisation @30% of GFA addition during the year	30.00	22.47	22.47

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 2021-22. The depreciation as claimed by the Petitioner has been tabulated below:

Table 33: 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	954.63
2	Additions during the year	74.90
3	Value of assets sold /disposed off	0.00
4	Gross Fixed Assets at the end of the year	1029.53
5	Net Depreciation for the year	36.47
6	Average Depreciation Rate	3.68%

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 34: Depreciation Rate (%)

Asset	Rate of Depreciation (A)	FY 2021-22		
		Opening GFA (B)	Additional Capitalisation (C)	Annual Depreciation [D=(B+C/2)*A]
Land and Land right	0.00%	10.37	-	-
Building	1.80%	24.53	-	0.44
Plant & Machinery	3.60%	535.97	59.58	20.37
Line and Cables	3.60%	334.40	9.89	12.22
Vehicle	18.00%	2.67	-	0.48
Furniture and Fixtures	6.00%	0.21	0.00	0.01
Office Equipments	6.00%	1.19	0.04	0.07
IT equipment	6.00%	2.82	0.01	0.17
Testing & Measuring	6.00%	4.68	0.00	0.28
SCADA Centre	6.00%	37.80	5.38	2.43
Total		**954.64**	**74.90**	**36.47**
Weighted average rate of depreciation =D/(B+C/2) = 3.68%				

The Commission has calculated the depreciation during FY 2021-22 as under:

Table 35: Computation of depreciation for FY 2021-22

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Proposed for True-up
1	Opening Gross Fixed Assets	968.85	954.63	954.63
2	Addition During the FY	100.00	74.90	74.90
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	1068.85	1029.53	1029.53
5	Average Gross Fixed Assets	1018.85	992.08	992.08
6	Rate of Depreciation (%)	3.67%	3.68%	3.68%
7	**Depreciation**	**37.39**	**36.47**	**36.47**

Accordingly, the Commission approves depreciation of INR 36.47 Cr in the True-up of FY 2021-22.

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 2021-22. The Petitioner has submitted that the majority of capital assets are created out of the equity contribution from Government of Puducherry. The rate of interest considered is prevailing Prime Lending Rate of the State Bank of India as on 1st April of that relevant year. Along with the normative interest, the Petitioner has also claimed INR 2.40 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[1] plus 100 basis points i.e. rate applicable as on 1.4.2021 (7.00%) 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. 2.40 Crore as claimed by the petitioner from its Audited Account.

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

Table 36: 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	178.05	178.85	178.85
2	Add: Normative Loan During the year	70.00	52.43	52.43
3	Less: Normative Repayment= Depreciation	37.39	36.47	36.47
4	Closing Normative Loan	210.66	194.81	194.81
5	Average Normative Loan	194.35	186.83	186.83
6	Rate of Interest (%)	8.00%	8.00%	8.00%
7	**Interest on Loan**	**15.55**	**14.95**	**14.95**
8	Financing Charges	0.00	2.40	2.40
9	**Interest and Finance Charges**	**15.55**	**17.35**	**17.35**

[1] SBI 1 Year MCLR rate as on 10th March 2021 which is applicable rate as on 1st April 2021

The Commission approves the Interest and Finance Charges of INR 17.35 Cr in the True-up of the FY 2021-22.

3.14. 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. Accordingly, Petitioner has claimed RoE of INR. 46.28 Crore for FY 2021-22.

Commission's analysis:

The Regulations 27.2 and 27.3 of the JERC MYT Regulations, 2018 stipulate the following:

"27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum."

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 37: 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	290.65	286.39	286.39
2	Equity Addition during year	B	30.00	22.47	22.47
3	Closing Equity Amount	C	320.65	308.86	308.86
4	Average Equity Amount	D = (A+B)/2	305.65	297.62	297.62
5	Average Equity-Wires Business	E = D*90%	275.09	267.86	267.86
6	Average Equity (Retail Supply Business)	F=D*10%	30.57	29.76	29.76
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	41.52	41.52
10	Return on Equity for Retail Supply Business	J=H*F	4.89	4.76	4.76
11	**Total Return on Equity**	**K=I+J**	**47.53**	**46.28**	**46.28**

The Commission approves a Return on Equity of INR 46.28 Cr in the True-up of FY 2021-22.

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 9.66 Crore, however, only INR 6.92 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 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. Regulation 28.11 of the JERC MYT Regulations, 2018 stipulates the following:

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

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

The 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 as per the audited account of Petitioner. The rate of interest has been considered equivalent to the prevailing RBI Bank rate as on 1.4.2021. The table below provides the calculation of interest on consumer security deposits for the year.

Table 38: 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	229.05	222.09	222.09
2	Add: Deposits During the year	19.14	23.64	23.64
3	Less: Deposits refunded		13.19	13.19
4	Less: Deposits in the form of BG/FDR		0.00	0.00
5	Closing Security Deposit	248.19	232.54	232.54
6	Average Security Deposit	238.62	227.31	227.32
7	Rate of Interest (%)	4.65%	4.25%	4.25%
	Interest on Security Deposit on normative basis	**11.10**	**9.66**	**9.66**
	Interest on Security Deposit paid to consumers		**6.92**	**6.92**

The Commission approves interest on security deposit as INR 6.92 Cr in the True-up of FY 2021-22.

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 9.00% and is claimed as under:

Table 39: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	O&M Expenses for 1 month	14.20
2	Maintenance spares at 40% of R&M	0.52
3	Receivables of two months of billing	272.60
5	Less: Security Deposit excluding BG/FDR	227.31
6	Net Working Capital	60.00
7	Rate of Interest (%)	9.00%
	Interest on Working Capital	**5.40**

Commission's analysis:

The Regulation 52 of the JERC MYT Regulations, 2018 stipulates the following:

"52. Norms of Working Capital for Distribution Wires Business
52.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:
(a) O&M Expenses for one (1) month; plus
(b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus
(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;
Less:
(d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from distribution system users except the security deposits held in the form of Bank Guarantees:
Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."

Further, Regulation 63 of the JERC MYT Regulation, 2018 stipulates the following:

"63.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Retail Supply 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 Consumers 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 Consumers except the security deposits held in the form of Bank Guarantees:
Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."

Further, Regulation 31.3 of the JERC MYT Regulation, 2018 stipulates the following:

"31.3 The interest on working capital shall be a payable on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures.

31.4 The rate of interest on working capital shall be equal one (1)Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points."

The Commission has 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 2021 for calculation of interest plus 200 basis points i.e. 7.00% + 200 basis points, as stipulated in the MYT Regulations, 2018.

Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 40: 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	11.86	14.20	11.50
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.39	0.52	0.42
3	Receivables equivalent to two (2) months of the expected revenue at prevailing tariff	285.68	272.60	272.50
4	Total Working Capital Requirement	2697.93	287.32	283.57
5	Less: Amount held as security deposits	238.62	227.31	227.32
6	Net Working Capital	59.30	60.00	56.25
7	Rate of Interest (%)	9.75%	9.00%	9.00%
8	**Interest on Working Capital**	**5.78**	**5.40**	**5.06**

The Commission approves the Interest on Working Capital as INR 5.06 Cr in the True-up of FY 2021-22.

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:

As per Regulation 62 of the JERC MYT Regulations, 2018:

"The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of write off of bad debts in the previous years, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to prudence check:

Provided also that the provision for bad and doubtful debts shall be limited to 1% of the annual Revenue Requirement of the Distribution Licensee:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realised from such bad *debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised."*

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2021-22. Therefore, the Commission approved NIL provision for bad and doubtful debts in the True-up of FY 2021-22.

3.18. Non-Tariff Income (NTI)

Petitioner's Submission

The Petitioner has claimed a Non-Tariff Income of INR 3.63 Cr against the approved NTI of INR 3.38 Cr by the Commission.

Commission's analysis:

Regulation 43 of JERC MYT Regulation, 2018 states the following:

"43. Non-Tariff Income
43.1 The amount of Non-Tariff Income relating to the transmission business as approved by the Commission shall
be deducted from the Aggregate Revenue Requirement in determining annual transmission charges of the Transmission Licensee:
Provided that the Transmission Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of Aggregate Revenue Requirement.
43.2 The Non-Tariff Income shall inter-alia include:
a) Income from rent on 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) Miscellaneous receipts like parallel operation charges;
j) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
k) Excess found on physical verification;
l) Interest on investments, fixed and call deposits and bank balances;
m) Prior period income, etc.:
Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Licensed Business of the Transmission Licensee shall not be included in Non-Tariff Income."

The Commission has verified the submission of the Petitioner from the audited accounts and observed that the Petitioner has not considered the rebate availed on payment of power purchase, accordingly trued-up the NTI is shown in the following table:

Table 41: Non- Tariff Income approved by Commission (In INR Cr)

Particulars	Approved in Tariff Order	Petitioner's Submission	True-up by the Commission
Income from Trading of materials	5.19	3.21	0.50
Interest Income on Margin Money Deposit with Bank			1.13
Other Receipts			2.50
Rebate availed on payment of power purchase			8.68
Total Non-Tariff Income	**3.38**	**3.63**	**12.81**

The Commission approves Non-Tariff Income of INR 12.81 Cr in the True-up of FY 2021-22.

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 7th April 2021, the Commission had approved the distribution loss level of 11.00% for the FY 2021-22. As discussed earlier in approval of Distribution Losses, the Petitioner has only been able to achieve an Intra-State T&D Loss of 11.08%. 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 11.00% by the Petitioner, at the Average Power Purchase cost (APPC). The APPC has been derived as follows:

Table 42: Table 85: Average Power Purchase Cost (APPC) for the FY 2021-22

Particulars		Amount
Total Power Purchase Cost (INR Cr)	A	1375.68
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	B	173.29
Net Power Purchase Cost (INR Cr)	C=A-B	1202.39
Quantum of Ex-bus Power Purchase (MU)	D	3231.04
Quantum of energy at UT Periphery excluding from renewable energy sources (MU)	E	3231.04
APPC (INR /kWh)	**F=C/E*10**	**3.72**

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

Table 43: Disincentive towards underachievement of Intra-State distribution loss (In INR Cr)

S. No	Particulars		Approved in Tariff Order	True-up by the Commission
1	Retail Sales	A	2782.63	2782.63
2	T&D Loss (%)	B	11.00%	11.08%
3	Power Purchase at State/UT Periphery	C	3126.54	3129.47

S. No	Particulars		Approved in Tariff Order	True-up by the Commission
4	Gain/(Loss) (MU) (2,864.96 – 2,853.41)	D		(2.93)
5	Average Power Purchase Cost (APPC)	E		3.72
6	Gain/ (Loss) (INR Cr)	F=DxE/10		(1.09)
	Sharing (50% to PED in case of gain and 100% to PED in case of loss) (INR Cr)			**(1.09)**

The Commission determines and approves INR 1.09 Cr as a disincentive for underachieving the Intra-State Distribution Loss target in the True-up of FY 2021-22.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1657.08 Cr is submitted for approval in the True-up of FY 2021-22.

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 2021-22 as given in the following table:

Table 44: Aggregate Revenue Requirement approved by Commission for FY 2021-22 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	1366.83	1375.18	1375.68
2	Operation & Maintenance Expenses	142.28	170.37	137.99
3	Depreciation	37.39	36.47	36.47
4	Interest and Finance charges	15.55	17.35	17.35
5	Return on Equity	47.53	46.28	46.28
6	Interest on Security Deposit	11.10	9.66	6.92
7	Interest on Working Capital	5.78	5.40	5.06
9	Incentive/ (Disincentive) on achievement of norms	-	-	(1.09)
10	**Total Revenue Requirement**	**1626.46**	**1660.71**	**1624.66**
11	Less: Non-Tariff Income	5.19	3.63	12.81
12	**Net Revenue Requirement**	**1621.27**	**1657.08**	**1611.85**

The Commission approves net Aggregate Revenue Requirement of INR 1611.85 Cr in the True-up of the FY 2021-22.

3.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has submitted the net actual revenue for the FY 2021-22 as INR 1635.59 Cr. The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 45: Revenue at existing tariff submitted by the Petitioner for FY 2021-22 (In INR Cr)

Particulars	Sales (MUs)	Revenue (INR Crore)
LT Category		
Domestic	803.76	242.35
OHOB	3.62	0.36
Commercial	174.45	158.50
Agriculture	60.06	4.26
Public Lighting	19.95	19.77
LT Industrial & Water Tank	170.07	119.39
Temporary Supply - LT&HT	3.85	3.88
Total LT	**1235.76**	**548.51**
HT Category		
HT 1 Industrial / Commercial	911.82	631.81
HT 2 - Government	55.45	53.01
HT 3 - EHT	579.60	315.90
Total HT	1546.87	1000.72
Total LT and HT	2782.36	1549.23
BPSC Charges LT		53.91
BPSC Charges HT		19.30
Penal Charges		2.63
Incentives		
5% Surcharge		-
Export to Other Region		
Consumption of this Financial Year's March billed in Next FY's April		113.95
Consumption of previous FY's March billed Current FY's in April		(103.39)
Total Revenue	**2,782.63**	**1635.59**

Commission's analysis

The total revenue was derived as INR 1634.96 Cr from the annual accounts. The revenue now Trued-up by the Commission is shown in the following table:

Table 46: Revenue at existing tariff approved by Commission for FY 2021-22 (In INR Cr)

Particulars	Claimed by the Petitioner		Approved by the Commission	
	Sales (MUs)	Revenue (INR Crore)	Sales (MUs)	Revenue (INR Crore)
Total Revenue	**2782.63**	**1635.59**	**2782.63**	**1634.97**

The Commission approves the revenue from the sale of power as INR 1634.97 Cr in the True-up of the FY 2021-22.

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 21.49 Cr is arrived at in the True-up of FY 2021-22.

Commission's analysis

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

Table 47: Standalone Revenue Gap/ Surplus for FY 2021-22 (In INR Cr)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1621.27	1657.08	1611.85
2	Total Revenue	1596.50	1635.59	1634.97
	Net Gap / (Surplus)	**(24.77)**	**21.49**	**(23.12)**

The Commission, in the True-up of FY 2021-22 approves standalone surplus of INR 23.12 Cr. The treatment of the standalone surplus has been discussed in Chapter of Tariff Principles and Design.

4. Chapter 4: Annual Performance Review of FY 2022-23

4.1. Background

The Tariff Order for the FY 2022-23 was issued by the Commission on 31st March 2022, hereinafter referred to as MYT Order) approving the ARR and Retail Tariff for the FY 2022-23. This Chapter covers the Annual Performance Review (APR) of the FY 2022-23 vis-à-vis the cost parameters approved by the Commission in the Tariff Order. The Annual Performance Review for the FY 2022-23 is to be carried out as per the provisions of Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021.

4.2. Approach for the Review for the FY 2022-23

The review of the Aggregate Revenue Requirement for FY 2022-23 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 2022-23 has been done based on the 9 months' actual data as provided by the Petitioner for the FY 2022-23 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, 2021 and on the basis of the norms approved in the MYT Order dated 31st March 2022.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted an estimate of energy sales as 2826.36 MUs for the FY 2022-23 against initial estimated sales of 2826.36 MUs approved by the Commission in MYT Order dated 31st March 2022 hereinafter referred to as the "MYT Order".

Commission's analysis

The audited figures for FY 2021-22 and provisional information provided by the Petitioner for the first 6 months of the FY 2022-23 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. Hence, the Commission considers it prudent to determine the Energy Sales with trued-up sales of FY 2021-22 escalated with CAGR.

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

Table 48: Energy Sales (MU) approved by the Commission for APR of FY 2022-23

Consumer category	Approved in Tariff Order	Petitioner's Submission	Approved in APR
Domestic	826.89	818.90	823.85
OHOB	3.50	3.62	3.62
Commercial	210.00	185.96	178.81
Agriculture	61.75	61.75	61.75
Public Lighting	19.00	19.00	19.95
LT Industrial + water tank	167.68	174.07	173.47
Temporary	5.06	5.06	3.93
Total LT -Category	**1293.88**	**1268.36**	**1265.38**
HT-1 (HT Industrial/Commercial)	1018.36	923.00	923.40
HT-2 (Government & water tank)	76.75	51.00	58.78
HT-3 (Industrial EHT)	437.37	584.00	591.19
Total HT -Category	**1532.48**	**1558.00**	**1573.37**
Total	**2826.36**	**2826.36**	**2838.75**

The Commission approves energy sales of 2838.75 MUs in the APR of FY 2022-23.

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 2022-23

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 2022-23.

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 2022-23.

Commission's analysis

The Commission in the APR of FY 2022-23 considers the transmission loss levels in line with latest submission by the Petitioner which are in line with the transmission loss levels approved in the MYT Order dated 31st March 2022.

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

Table 49: Inter-State Transmission Loss (%)

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

The Commission approves the Inter-State Transmission Loss as 2.50% in the APR of FY 2022-23.

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

Petitioner's Submission

The Petitioner has proposed Intra-State T&D loss level at 11.00% against an approved loss of 11.00% in the Tariff Order dated 31st March 2022.

Commission's analysis

The Commission had approved loss level of 11.00% for FY 2022-23 in the MYT Order while determining tariff for the FY 2022-23. The Commission in the APR of FY 2022-23 considers the loss level of 11.00% as approved in the Tariff Order for the FY 2022-23. The following table provides the Intra-State Distribution loss approved in the MYT Order, the Petitioners submission and now approved by the Commission.

Table 50: Intra-State distribution loss (%)

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

The Commission approves Intra-State T&D loss of 11.00% in the APR of FY 2022-23.

4.7. *Energy Balance*

Petitioner's Submission

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

Table 51: Energy Balance (MUs) submitted by Petitioner

Sr. No.	Particulars	Petitioner's Submission
A)	**ENERGY REQUIREMENT**	
1	Energy sales to metered category within the State	2826.36
2	Energy exported to TANGEDCO	-
3	**Total sales within the State**	2826.36
4	T&D Losses (%)	11.00%
5	T&D Losses (MU)	349.32
6	**Energy required at Discom Periphery**	**3,175.68**
B)	**ENERGY AVAILABILITY**	
1	Net Power Purchase (ex Bus)	2,713.68
2	Own Generation (PPCL)	196.24
3	Power Purchase from Renewable sources	418.01
4	Power purchase from Common Pool / UI-overdrawl / Traders / Exchange / Others	20.48
5	UI Underdrawl	58.76
6	Open Access Power Purchase at periphery	-
7	**Net Power Purchased (1+2+3+4-5+6)**	**3,289.65**
8	Transmission Losses	67.84
9	Transmission Losses (%)	2.50%

Sr. No.	Particulars	Petitioner's Submission
10	**Total Energy Availability (7-8)**	**3,221.81**
11	**Deficit/(Surplus)**	**(46.13)**

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 2022-23, the Petitioner's Submission and the Energy Balance now approved by the Commission.

Table 52: Energy Balance (MU) approved by Commission

S. no.	Item	Approved in MYT Order	Petitioner's Submission	Approved by the Commission in APR
A	**Energy Requirement**			
1	Sales Within Territory	2824.25	2826.36	2838.75
2	Sales to TANGEDCO	-	-	-
3	Sale to Open access consumer	-	-	-
4	Sales to Traders/Exchanges	-	-	-
5	Total Sales	2824.25	2826.36	2838.75
6	T&D Losses (%)	11.00%	11.00%	11.00%
7	T&D Losses (MU)	349.06	349.32	350.86
8	**Energy Requirement @ State periphery (MU)**	**3,173.31**	**3,137.26**	**3189.60**
7	Transmission loss (MUs)	65.14	67.84	66.89
8	Transmission loss %	2.50%	2.50%	2.50%
9	**Energy required at the Ex bus**	**3,173.31**	**3,205.10**	**3256.48**
B	**Energy Availability at Ex-Bus**			
1	**Total scheduled at CGS**		2,713.68	2675.40
2	ISTS Losses (%)		2.50%	2.50%
3	ISTS Losses (MU)		67.84	66.89
4	**Energy Scheduled at state periphery through CGS (B1*(1-B2%)**		**2645.84**	**2608.51**
5	Add: Own Generation (PPCL)		196.24	196.24
6	Add: Power Purchase from Renewable sources		418.01	418.01
7	Add: Purchase from open market		0.00	5.12
8	Add: UI Overdrawal		20.48	20.48
9	Less: Sale in open market		0.00	0.00
10	Less: UI Underdrawal		58.76	58.76
11	**Energy Availability at state periphery (B4+B5+B6+B7+B8-B9-B10)**		**3221.81**	**3189.60**

S. no.	Item	Approved in MYT Order	Petitioner's Submission	Approved by the Commission in APR
11	**Deficit/(Surplus) (A9-B10)**		**(46.13)**	0.00

In the APR of FY 2022-23, the Commission has approved energy requirement at state periphery of 3189.60 MUs.

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 2022-23 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 2022-23 and for the purpose of the estimation of purchase quantum for H2 for FY 2022-23, the Petitioner has considered the revised estimates of power purchase quantum based on half-yearly power purchase quantum in FY 2022-23. The key assumptions for estimating the power purchase quantum and costs are as under:

1. Power Purchase Quantum and cost

The Petitioner has submitted that the actual power purchase quantum for H1 of FY 2022-23 is 1800.31 MU and power purchase cost of INR 846.56 Cr. However, for the purpose of the estimation of purchase quantum for H2 for FY 2022-23, PED has considered the revised estimates based on the approved Distribution loss of 11% and Transmission loss 2.50% arriving at a Power Purchase quantum of 3289.65 MUs. However, the per unit Cost of power purchase for each power source as per the estimated actual power purchase cost in FY 2022-23 H1 has been considered for estimating power purchase cost for FY 2022-23 H2.

The Power Purchase Cost for the FY 2022-23 has been tabulated below:

Table 53: Power Purchase cost submitted by Petitioner for FY 2022-23 (In INR Cr)

S. No.	Particulars	Actuals (FY 2022-23) - H1			Revised Estimates (FY 2022-23) - H2			Revised Estimates (FY 2022-23)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (INR/unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (INR/unit)
1	NTPC	620.34	257.03	4.14	393.17	170.62	4.34	1013.51	427.65	4.22
2	NTPL	58.69	43.20	7.36	44.60	32.83	7.36	103.29	76.03	7.36
3	NLC	322.03	106.56	3.31	216.40	71.61	3.31	538.43	178.17	3.31
4	PPCL	107.40	83.01	7.73	88.84	68.67	7.73	196.24	151.68	7.73
5	KAIGA	149.07	52.74	3.54	103.32	36.55	3.54	252.39	89.29	3.54
6	NTPC - MAPS	12.78	3.29	2.57	10.57	2.72	2.57	23.35	6.01	2.57
7	NTECL	47.23	32.46	6.87	19.07	13.11	6.87	66.30	45.57	6.87
8	KKNP	184.17	80.57	4.37	108.81	47.60	4.37	292.98	128.17	4.37
9	NNTPS	210.78	82.72	3.92	174.37	68.43	3.92	385.15	151.15	3.92
10	KSEB	0.00	0.01	-	0.00	0.01	-	0.00	0.03	-
11	NTPC Solar	62.29	16.50	2.65	218.16	58.69	2.69	280.45	75.19	2.68
12	SECI Wind	25.55	6.36	2.48	112.01	31.07	2.77	137.56	37.43	2.72

S. No.	Particulars	Actuals (FY 2022-23) - H1			Revised Estimates (FY 2022-23) - H2			Revised Estimates (FY 2022-23)		
		Purchase (MUs)	Cost (INR Cr.)	Rate (Rs./unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (INR/unit)	Purchase (MUs)	Cost (INR Cr.)	Rate (INR/unit)
13	UI Charges		0.76						0.76	
14	IEX Purchase / Sale				(34.56)	(15.22)		(34.56)	(15.22)	
15	Open market									
16	OA Power purchase/ (Sale)									
17	PGCL (POC Charges)		95.32			146.40			241.72	
18	SRLDC Charges		0.32			0.32			0.64	
19	**Total Power Purchase Cost**	**1800.31**	**860.85**	**4.78**	**1489.32**	**733.41**	**4.92**	**3289.65**	**1594.27**	**4.85**
20	URS Income		0.00			0.00			0.00	
21	UI/DSM Charges		12.33			12.33			24.65	
22	RARS Charges		1.57			1.57			3.15	
23	Sale of Trading Material		0.39			0.39			0.78	
24	Sub-total (Additional Income)		**14.29**			**14.29**			**28.59**	
25	**Net Power Purchase Cost**	**1800.31**	**846.56**	**470.23**	**1489.32**	**719.12**	**4.83**	**3289.65**	**1565.68**	**4.76**

Commission's analysis:

The Commission while estimating the power purchase quantum and cost for FY 2022-23 has considered the actual quantum and cost of power till September 2022, as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 6 months of the FY 2022-23. 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 Renewable Sources

The Commission has considered the energy availability from the renewable sources in line with the Petitioner's submission.

Availability of energy from Conventional Sources

The commission observes that the Petitioner has proposed 418.01 MUs of energy purchase from renewable energy sources. Since this is positive approach towards RPO compliance and not as per the historical trend of Power Purchase for the Petitioner. The Commission has considered the Petitioner's projections towards energy procurement for FY 2022-23. The same shall be reviewed at the time of true-up.

4.8.2. Power Purchase Cost

Variable Charges:

The variable charges for the existing plants have been considered based on the actual cost submitted by the Petitioner for FY 2021-22 and for initial 9 months of FY 2022-23. For Central generating Stations, the

Commission has segregated the plants into two buckets for projecting the variable charges. The Commission has considered the variable cost in line with per unit cost submitted by the Petitioner for Q4 of FY 2022-23 for the plants facing a reasonable hike in variable charges over FY 2021-22.

For the plants witnessing an exorbitant increase in the variable charges over FY 2021-22, mainly on account of increase in coal prices or blending of import coals, the variable charges have been projected considering the variable charges of FY 2021-22 and escalating it twice by 10% for reflecting the variable charges. For the remaining plants, the Commission has accepted the variable charges submitted by the Petitioner.

Fixed Charges:

The fixed charges have been considered based on actual data submitted for 9 months. The Commission has extrapolated the fixed cost for Q3 and estimated the cost for H2 of FY 2022-23.

Other Charges:

Other charges have not been considered for the FY 2022-23. The same shall be considered as per actuals during the true-up of the respective year.

RPO Charges:

Renewable power (Solar and Non-solar) purchase has been considered at rates as adopted in the MYT order. The same shall be considered as per actuals at the time of true-up of the respective year.

Purchase/(Sale) from/to open market:

The Commission has considered the APPC rate for purchase from open market. APPC for FY 2022-23 has been computed as follows:

Table 54: Average Power Purchase Cost (APPC) for the FY 2022-23

Particulars		Amount
Total Power Purchase Cost (INR Cr)	A	1475.86
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	B	286.25
Net Power Purchase Cost (INR Cr)	C=A-B	1189.61
Quantum of Ex-bus Power Purchase (MU)	D	3256.48
Quantum of energy excluding from renewable energy sources (MU)	E	2838.47
APPC (INR /kWh)	**F=C/E*10**	**4.19**

4.8.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL for FY 2022-23 based on the actual transmission charges paid in FY 2021-22.

4.8.4. Total Power Purchase Cost

The following table provides the Power Purchase Quantum and Cost approved by the Commission for FY 2022-23:

Table 55: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	PP at Ex Bus (MU)	Variable Charges (Rs/Kwh)	Annual Variable Charges (Rs. Cr.)	Annual Fixed charges (Rs. Cr.)	Total (Rs.Cr.)	Avg. Rate (@ Exbus)
NTPC						
RSTPS Stage I & II	408.07	3.31	135.02	43.53	178.55	4.38
RSTPS Stage -III	91.52	3.26	29.82	12.12	41.94	4.58
Talcher Stage- II	473.31	1.90	89.70	34.04	123.74	2.61
Simhadri Stage- II	40.61	3.51	14.24	16.94	31.18	7.68
Sub Total-NTPC	**1013.51**	**2.65**	**268.79**	**106.62**	375.41	**3.70**
NLC						
NLC TPS II Stage I	315.52	2.65	83.69	20.90	104.59	3.31
NLC TPS II Stage II	101.47	2.65	26.91	7.36	34.28	3.38
NLC TPS I (Expn)	73.77	2.65	19.57	20.81	40.38	5.47
NLC TPS II (Expn)	47.68	2.65	12.65	15.44	28.09	5.89
NTPL (Tuticorin)	103.29	3.91	40.38	28.45	68.83	6.66
Sub Total-NLC	**641.72**	**2.85**	**183.20**	**92.97**	276.17	**4.30**
NPCIL						
MAPS	23.35	2.40	5.61	0.00	5.61	2.40
KAPS Stage I	252.39	3.49	87.96	0.00	87.96	3.49
Kudankulam U1	292.98	3.55	103.92	0.00	103.92	3.55
Sub Total-NPCIL	**568.72**	**3.47**	**197.49**	**0.00**	197.49	**3.47**
Others						
TNEB (Karaikal)	0.00	0.00	0.00	0.00	0.00	0.00
Vallur Thermal Project (NTECL)	66.30	3.54	23.44	28.28	51.72	7.80
New NLC TS-I (NNTPS)	385.15	2.20	84.88	72.99	157.87	4.10
Sub Total-Others	**451.45**	**2.40**	**108.32**	**101.27**	209.59	**4.64**
State Generation						
PPCL	196.24	6.33	124.25	29.20	153.46	7.82
Sub Total-State Generation	**196.24**	**6.33**	**124.25**	**29.20**	153.46	**7.82**
Open market	**5.12**	**4.19**	**2.15**	**0.00**	**2.15**	4.19
IEX Purchase	5.12	4.19	2.15	0.00	2.15	4.19
IEX Sale	0.00		0.00	0.00	0.00	0.00
Traders	0.00		0.00	0.00	0.00	0.00
RPO						
NTPC Solar	0.00	0.00	0.00	0.00	0.00	0.00
SECI Solar Tranche II -50 MW	280.45	2.51	70.39	0.00	70.39	2.51
SECI Wind Tranche V 100 MW	137.56	2.84	39.07	0.00	39.07	2.84
SECI Wind Tranche VIII 140.64 MW	0.00	0.00	0.00	0.00	0.00	0.00

Details of the stations	PP at Ex Bus (MU)	Variable Charges (Rs/Kwh)	Annual Variable Charges (Rs. Cr.)	Annual Fixed charges (Rs. Cr.)	Total (Rs.Cr.)	Avg. Rate (@ Exbus)
Total	**418.01**	**2.62**	**109.46**	**0.00**	109.46	**2.62**
Net UI (Underdrawal)	**38.28**		24.65		**24.65**	
Total	**3256.48**		**969.01**	**330.07**	1299.07	3.99
PGCIL Charges				176.79	**176.79**	0.00
Total Cost	**3256.48**		**969.01**	**506.85**	**1475.86**	**4.53**

The Commission approves the revised quantum of power purchase as 3256.48 MUs at ex-bus with total cost of INR 1475.86 Cr in the APR of FY 2022-23.

4.9. Renewable Purchase Obligations (RPOs)

Petitioner's Submission:

Petitioner submitted that the cumulative RPO obligation pending as on 1.4.2022 was 1424.44 MUs (636.18 MUs Solar & 788.26 MUs Non-Solar). The Total RPO Obligation for FY 2022-23 is 18.35% (i.e. 9.00% Solar & 9.35% Non-Solar) amounting to stand alone obligation of 518.64 MUs for FY 2022-23 (254.37 MUs Solar & 264.26 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), (Fourth Amendment) Regulations, 2022 on 24th March 2022 and revised the RPO targets, according to which for FY 2022-23 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 18.35% of its total annual consumption, out of which 9.00% must be from Solar Power.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time, and the Petitioner's Submission, the table below provides the Renewable Purchase Obligation for the FY 2022-23 as determined by the Commission based on the revised estimate of energy sales:

Table 56: Summary of Renewable Purchase Obligation (RPO) (MUs)

S. No.	Particulars	Claimed by the Petitioner	Approved by the Commission
1	Solar Target	9.00%	9.00%
2	Non Solar Target	9.35%	9.35%
	Total Target	**18.35%**	**18.35%**

S. No.	Particulars	Claimed by the Petitioner	Approved by the Commission
3	Sales Within UT	2826.36	2838.75
	RPO Target		
5	Solar	254.37	255.49
6	Non Solar	264.26	265.42
	Total RPO Target	**518.64**	**520.91**
	RPO Compliance (Estimated Purchase)		
7	Solar	280.44	280.45
8	Non Solar	137.55	137.56
	Total RPO Compliance (Estimated Purchase)	**417.99**	**418.01**
	RPO Compliance (REC Certificate Purchase)		
9	Solar	-	
10	Non Solar	-	
	Total RPO Compliance (REC Certificate)	-	
	RPO Compliance (REC+ Actual)		
11	Solar	280.44	280.45
12	Non Solar	**137.55**	137.56
	Total RPO Compliance	**417.99**	**418.01**
	Cumulative Requirement till current year		
13	Solar		1024.08
14	Non Solar		1,539.25
	Total		**2563.34**
	Cumulative Compliance till current year		
15	Solar	610.11	412.14
16	Non Solar	914.97	622.32
	Total	**1525.08**	**1034.46**
	Net Shortfall in RPO Compliance till current year		
17	Solar	610.11	611.94
18	Non Solar	914.97	916.93
	Total	**1525.08**	**1528.87**

The Commission approves a cost of INR 109.46 cr towards RPO compliance of 418.01 MUs for FY 2022-23 based on rates, considered in MYT Order dated 31st March 2022, of INR 2.51/unit for Solar and INR 2.84/unit for Non-solar. 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 52 of the JERC (MYT) Regulation, 2021 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."

4.10.1. Employee Expenses

Petitioner's Submission

The Petitioner has submitted employee expenses of INR 142.89 Cr against the approved expenses of INR 116.31 Cr in the Tariff Order.

Commission's analysis

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for each year for FY 2023-24. 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 base year figures for the FY 2021-22 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 2022-23.

Table 57: CPI Inflation Index

FY	Average of (April – March)	Increase in CPI Index	Average increase In CPI indices over 3 year
FY 2018-19	299.92	-	5.89%
FY 2019-20	322.50	7.53%	
FY 2020-21	338.69	5.02%	
FY 2021-22	356.06	5.13%	

Table 58: Computation of employee expenses

S. No	Particulars	(Base Year)	Now Approved
		FY 2021-22	FY 2022-23
1	Gn (Growth factor as per Petitioner Submission)		-4.11%
2	CPI (%) (3 previous years' avg.)		5.89%
5	**Total Employee Expenses**	**126.98**	**128.93**

Table 59: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	129.06	142.89	128.93
2	Impact of 7th Pay Commission			
3	**Total Employee Expenses**	**129.06**	**142.89**	**128.93**

The Commission now approves employee expenses of INR 128.93 Cr in the APR of the FY 2022-23.

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 15.08 Crore, calculated in accordance with the JERC MYT Regulations, 2021 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 2021-22 as decided in the MYT 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 2022-23.

Table 60: A&G Expenses computation (In INR Cr)

S. No	Particulars	(Base Year)	Now Approved
		FY 2021-22	FY 2022-23
1	CPI (%) (3 previous years' avg.)		5.89%
2	A&G Expenses		18.53
3	**Total A&G Expenses**	**17.50**	**18.53**

Table 61: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	18.55	15.08	18.53
	Total A&G Expenses	**18.55**	**15.08**	**18.53**

The Commission now approves the Administrative & General (A&G) expenses of INR 18.53 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 9.60 Cr in accordance with the JERC MYT Regulations, 2021 and the methodology prescribed by the Commission in the Tariff Order dated 31st March 2022.

Commission's analysis

The 'K' factor of 0.91% has been considered as approved in the MYT Order dated 31st March 2022.

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 62: Computation of WPI Inflation (%)

FY	Average of (April – March)	Increase in WPI Index	Average increase In CPI indices over 3 year
FY 2018-19	119.79	-	5.32%
FY 2019-20	121.80	1.68%	
FY 2020-21	123.38	1.29%	
FY 2021-22	139.41	13.00%	

The R&M expenses approved by the Commission for FY 2022-23 have been provided in the following table:

Table 63: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2022-23
1	Opening GFA (GFA_{n-1})	1029.53
2	K factor approved (K) (%)(approved in MYT Order)	0.91%
3	Avg. WPI Inflation (%)	5.32%
4	**R&M Expenses =** **K x (GFA_{n-1}) x ($1+WPI_{inflation}$)**	**9.87**

Table 64: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**9.23**	**9.60**	**9.87**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.87 Cr in the APR of FY 2022-23.

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

The following table provides the O&M expenses approved in the APR of FY 2022-23, Petitioner's Submission and now approved by the Commission.

Table 65: O&M Expenses approved by Commission (In INR Cr)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Employee Expenses	129.06	142.89	128.93

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Impact of 7th Pay Commission			
Total Employee Expense	**129.06**	**142.89**	**128.93**
Administration & General Expenses	18.55	18.55	18.53
Repair & Maintenance Expenses	9.23	9.23	9.87
Total O&M Expense	**156.84**	**167.57**	**157.33**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 157.33 Cr in the APR of FY 2022-23.

4.11. Capital Expenditure & Capitalisation

Petitioner's Submission

The Petitioner has submitted capitalization of INR 12.04 Cr during the year against approved capitalisation of INR 12.04 Cr in the Tariff Order dated 31st March 2022. 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:

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 66: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	12.04	12.04	12.04

The Commission approves capitalisation of INR 12.04 Cr in the APR of FY 2022-23. The same 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 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"

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Capital Structure for FY 2022-23 as follows:

Table 67: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	989.63	1029.53	1029.53
2	Addition During the FY	12.04	12.04	12.04
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Grant Provided by GOI	7.22	7.22	7.22
5	Closing Gross Fixed Assets	994.45	1034.35	1034.35

Table 68: Capital Structure approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Gross Fixed Assets addition during the FY (Net of Grants)	4.82	4.82	4.82
2	Normative loan addition During the FY @70% of GFA addition during year	3.37	3.37	3.37
3	Equity addition on account of new Capitalisation @30% of GFA addition during the year	1.44	1.44	1.44

4.13. Depreciation

Petitioner's Submission

For computation of Depreciation, the Petitioner has followed JERC MYT Regulations 2021, the depreciation rates as specified by the Commission has been adopted for calculation of depreciation on different asset categories.

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 considered the weighted average rate as derived in the MYT Order. The same shall be taken up at the time of true-up.

The following table provides the calculation of depreciation for the FY 2022-23.

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	989.63	1029.53	1029.53
2	Addition During the FY	12.04	12.04	12.04
3	Less: Government Grant	7.22	7.22	7.22
4	Closing Gross Fixed Assets	994.45	1034.35	1034.35
5	**Average Gross Fixed Assets**	**992.04**	**1031.94**	**1031.94**
6	Weighted Average Depreciation rate (%)	3.67%	3.70%	3.67%
7	**Depreciation**	**36.43**	**38.23**	**37.90**

The Commission now approves depreciation of INR 37.90 Cr in the APR of the FY 2022-23 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, 2021 for the FY 2022-23. 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 2022-23 plus 100 basis points. Accordingly, the Petitioner has claimed the Interest & Finance Charges of INR 17.33 Cr for FY 2022-23 against INR 12.09 Cr approved in the Tariff Order.

Commission's analysis:

Regulation 29 of the JERC MYT Regulations, 2021 stipulates 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 plus 100 basis points as Rate of Interest applicable as on 1.4.2022 i.e. (7.00%+ 100 basis points), in accordance with the JERC MYT Regulations, 2021.

As per the JERC MYT Regulations, 2021, 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, 2021. The Commission is considering NIL Finance charges for FY 2022-23, which will be reviewed during the True-up.

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

Table 70: Interest and Finance Charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	167.65	194.81	194.81
2	Add: Normative Loan During the year	3.37	3.37	3.37
3	Less: Normative Repayment equivalent to Depreciation	36.43	38.23	37.90
4	Closing Normative Loan	134.59	159.95	160.28
5	Average Normative Loan	151.12	177.38	177.55
6	Rate of Interest (%)	8.00%	8.00%	8.00%
7	**Interest on Loan**	**12.09**	**14.19**	**14.20**
8	Finance Charges	0.00	3.14	0.00
	Interest and Finance Charges	**12.09**	**17.33**	**14.20**

The Commission approves Interest and Finance Charges of INR 14.20 Cr in the APR of the FY 2022-23.

4.15. Return on Equity (RoE)

Petitioner's Submission

Return on Equity (RoE) is computed in accordance with the JERC MYT Regulations 2021, RoE is computed on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2022-23 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 2022-23 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 71: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity Amount	A	296.89	308.86	308.86
2	Equity Addition during year	B	1.44	1.45	1.44
3	Closing Equity Amount	C	298.33	310.30	310.30
4	Average Equity Amount	D = (A+B)/2	297.61	309.58	309.58
5	Average Equity-Wires Business	E = D*90%	267.85	278.62	278.62
6	Average Equity (Retail Supply Business)	F=D*10%	29.76	30.96	30.96
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	41.52	43.19	**43.19**
10	Return on Equity for Retail Supply Business	J=H*F	4.76	4.95	**4.95**
11	**Total Return on Equity**	**K=I+J**	**46.28**	**48.14**	**48.14**

The Commission approves the Return on Equity of INR 48.14 Cr in the APR of the FY 2022-23.

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 2022-23.

Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the JERC MYT Regulations, 2021 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 2021-22. 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 2022-23. The rate of interest has been considered equivalent to the prevailing RBI Bank rate as on 1.4.2022 i.e. 4.25%. The table below provides the calculation of interest on consumer security deposits for the year.

Table 72: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	225.96	232.54	232.54
2	Add: Deposits During the year	4.06	12.81	12.81

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	230.02	245.35	245.35
5	Average Security Deposit	227.99	238.95	238.95
6	Rate of Interest (%)	4.25%	4.25%	4.25%
7	**Interest on Security Deposit (IoSD)**	**9.69**	**10.16**	**10.16**

The Commission approves Interest on Security Deposit as INR 10.16 Cr in the APR of the FY 2022-23.

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, 2021. The Petitioner has computed the Interest on Working Capital of INR 5.63 Crore at rate of 9.00% (SBI 1 year MCLR applicable as on 1st April 2021 i.e. 7.00% + 200 basis points).

Commission's analysis:

Regulation 53 of the MYT Regulations, 2021 stipulates the following:

"53.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Retail Supply 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."

Regulation 64 of the MYT Regulations, 2021 stipulates the following:

"64 Norms of Working Capital for Retail Supply Business

64.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for

the Retail Supply 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 Consumers at the prevailing tariff;*

Less

d) Power Purchase cost for one (1) month; plus

e) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from Consumers 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 considered the SBI 1 year MCLR as on 1st April 2022 plus 2% for calculation of interest i.e. 7.00% + 200 basis points, as stipulated in the JERC MYT Regulations, 2021.

Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 73: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	13.96	13.11
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.32	0.33
3	Receivables equivalent to two (2) months of the expected revenue from charges at the prevailing tariff	287.27	286.62
4	Total Working Capital Requirement	0.00	300.06
5	Less: Amount held as security deposits	238.94	238.95
6	Less: Power Purchase cost for one (1) month	0.00	122.99
7	**Net Working Capital**	**62.61**	**(61.88)**
8	Rate of Interest (%)	9.00%	9.00%
9	**Interest on Working Capital**	**5.63**	**0.00**

The Commission approves the Interest on Working Capital as NIL in the APR of the FY 2022-23.

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 and doubtful debts. The same shall be accounted for as per actuals in the True-up of FY 2022-23.

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 2022-23.

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 2022-23 was estimated as INR 23.93 Cr.

Commission's analysis:

The Commission has considered the Non-Tariff Income of INR 23.93 Crore in the APR of the FY 2022-23, as per the Petitioner submission. The NTI now approved is shown in the table below:

Table 74: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Petitioner's Submission	Now Approved by Commission
	Total	**23.93**	**23.93**

The Commission approves Non-Tariff Income of INR 23.93 Cr in the APR of the FY 2022-23. 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 1828.81 Cr after adjusting the Non-Tariff Income for FY 2022-23.

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 2022-23 as provided in the table below:

Table 75: Aggregate Revenue Requirement approved by the Commission for FY 2022-23 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1344.36	1565.68	1475.86
2	Employee Costs	115.41	142.89	128.93
3	R&M Expenses	8.81	9.60	9.87
4	Administration and General Expenses	19.04	15.08	18.53
5	Depreciation	36.43	38.23	37.90
6	Interest and Finance charges	12.09	17.33	14.20
7	Return on Equity	46.28	48.14	48.14
8	Interest on Security Deposit	9.69	10.16	10.16
9	Interest on Working Capital	4.78	5.63	0.00
10	Provision for Bad Debt	0.00	0.00	0.00
11	Income Tax	0.00	0.00	0.00
12	**Total Revenue Requirement**	**1610.47**	**1852.74**	**1743.58**
13	Less: Non-Tariff Income	4.00	23.93	23.93
14	**Net Revenue Requirement**	**1606.47**	**1828.81**	**1719.65**

The Commission now approves the net ARR of INR 1719.65 Cr in the APR of FY 2022-23.

4.22. Revenue at existing Retail Tariff

Petitioner's Submission

Following Table provides the category wise revenue determined by the Petitioner for FY 2022-23.

Table 76: Revenue at existing tariff submitted by Petitioner (In INR Cr)

S. No.	Particulars	Sales (MUs)	Revenue (INR Cr)
	LT Category		
1	Domestic	818.90	280.72
2	OHOB	3.62	0.36
3	Commercial	185.96	166.88
4	Agriculture	61.75	5.04
5	Public Lighting	19.00	19.24
6	LT Industrial & Water Tank	174.07	122.90
7	Temporary Supply - LT&HT	5.06	5.06
	Total LT	**1268.36**	**600.21**
	HT Category		
9	HT 1 Industrial / Commercial	923.00	639.01
10	HT 2 – Government	51.00	50.33
11	HT 3 – EHT	584.00	321.06
12	**Total HT**	**1558.00**	**1010.40**

S. No.	Particulars	Sales (MUs)	Revenue (INR Cr)
13	**Total LT and HT**	**2826.36**	**1610.61**
14	FPPCA charges		18.73
15	BPSC Collected		78.00
16	Regulatory Surcharge		80.53
17	**Total Revenue Excluding Regulatory Surcharge (13+14+15)**		**1707.33**

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 2022-23. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. 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 2022-23. The total revenue based on existing tariff as computed by the Commission for FY 2022-23 has been shown in the following table:

Table 77: 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**	**823.85**	**277.08**	**23.90**	**300.98**	**3.65**
	0-100 units	365.82	69.51	0.00	69.51	1.90
	101-200 units	199.88	57.97	0.00	57.97	2.90
	201-300 units	116.50	58.25	0.00	58.25	5.00
	Above 300 units	141.64	91.36	0.00	91.36	6.45
2	**OHOB**	**3.62**	**0.45**	**0.00**	**0.45**	**1.25**
3	**Commercial**	**178.81**	**121.11**	**13.94**	**135.05**	**7.55**
	0-100 units	49.06	27.96	3.68	31.64	6.45
	101-250 units	55.58	37.52	3.14	40.66	7.31
	Above 250 units	74.17	55.63	7.13	62.76	8.46
4	**Agriculture Services**	**61.75**	**0.00**	**6.79**	**6.79**	**1.10**
(i)	*Small Farmers*	8.74	0.00	0.18	0.18	0.20
(ii)	Other farmers	53.01	0.00	6.61	6.61	1.25
5	**Public Lighting**	**19.95**	**13.57**	**6.81**	**20.38**	**10.21**
6	**LT Industrial & Water Works**	**173.47**	**108.59**	**8.22**	**116.81**	**6.73**
(i)	LT Industrial	130.64	79.04	8.06	87.09	6.67
(ii)	Water Tanks	42.83	29.55	0.16	29.72	6.94
7	**High Tension-I**	**923.40**	**508.39**	**125.17**	**633.57**	**6.86**
(i)	*HT 1 (a) For contract demand up to 5000 kVA/Industrial*	861.29	475.50	0.00	475.50	5.52

S. no.	Category	Sales (MUs)	Revenue from Energy Charges (INR Cr.)	Revenue from Fixed charges (INR Cr.)	Total Revenue (INR Cr.)	ABR (INR / kWh)
(ii)	*HT 1 (b) For contract demand up to 5000 kVA/Commercial*	57.93	32.89	0.00	32.89	5.68
8	**High Tension-II**	**58.78**	**38.88**	**14.19**	**53.07**	**9.03**
9	**High Tension-III (EHT)**	**591.19**	**307.54**	**25.83**	**333.37**	**5.64**
10	**TEMPRORARY**	**3.93**	**3.83**	**0.00**	**3.83**	**9.75**
11	**FPPCA recovery estimated**				**18.73**	
	TOTAL	**2838.75**	**1379.44**	**224.85**	**1623.02**	**5.72**

The Commission has determined revenue from the sale of power at existing tariff (excluding Revenue from Regulatory Surcharge) as INR 1623.02 Cr in the APR of FY 2022-23.

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 2022-23.

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 gap of INR 121.23 Cr is arrived at in FY 2022-23.

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	1606.46	1828.81	1719.65
2	Revenue from Retail Sales at Existing Tariff (Excluding Regulatory Surcharge)	1647.50	1707.33	1623.02
3	**Gap / (Surplus) without Regulatory Surcharge**	**(41.04)**	**121.23**	**96.63**

The standalone gap at existing retail tariff (excluding surcharge) is INR 96.63 Cr in the APR of FY 2022-23.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2023-24

5.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for the FY 2023-24. The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2021.

5.2. Approach for determination of ARR for the FY 2023-24

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2023-24 based on figures approved in the MYT Order dated 31st March 2022, the actual available information of various parameters for the FY 2021-22 as per provisional information available 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 following number of consumers, connected load and energy sales:

Table 79: Number of consumers, Connected Load, and Energy Sales submitted by the Petitioner for the FY 2023-24

Category of Consumer	Consumers [Nos]	Sales [MUs]
Domestic	387440	830.94
OHOB	8248	3.62
Commercial	54490	190.25
Agriculture	7109	62.06
Public lighting	54609	19.00
Industrial	4493	180.03
Water tanks	-	-
Temporary supply	-	5.16
Total LT	**516389**	**1,285.90**
HT 1	482	927.41
HT-2	69	72.00
HT-3	10	590.00
Total HT	**561**	**1,589.41**
Total	**521950**	**2880.47**

Commission's analysis

For projecting the number of consumers and energy sales for each category, the Commission has assumed the growth rates as considered in the MYT Order. The approved number of consumers, connected load and sales are as follows:

Table 80: Number of consumers approved by the Commission for the FY 2023-24

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	As approved for FY 2022-23	Growth rate	Now Approved by Commission
1	Domestic	391,883	387440	380469	3.00%	391883
2	OHOB	8,248	8248	8248	0.00%	8248
3	Commercial	59,219	54490	58143	1.85%	59219
4	Agriculture	7,109	7109	7081	0.40%	7109
5	Public Lighting	51,844	54609	51612	0.45%	51844
6	LT Industrial	4,452	4493	4430	0.50%	4452
7	Water works					
8	HT I	470	482	465	1.00%	470
9	HT II	69	69	67	3.00%	69
10	HT III	8	10	8	0.00%	8
	Total	**523,302**	**521950**	**510523**		**523302**

Table 81: Connected load approved by the Commission for the FY 2023-24 (kW/kVA/HP)

S. No.	Particulars	UOM	Approved in MYT Order	Petitioner's Submission	As computed for FY 2022-23	Growth Rate	Now Approved by Commission
1	Domestic	kW	694377	647397	663841	4.60%	694377
2	OHOB	kW	2843	2843	2843	0.00%	2843
3	Commercial	kW	159539	323889	154892	3.00%	159539
4	Agriculture	HP	60905	60247	60602	0.50%	60905
5	Public lighting	kW	6481	6357	6419	0.97%	6481
6	LT Industrial & water tank	kW	139133	295667	136673	1.80%	139133
7	HT I	kVA	243192	292222	238424	2.00%	243192
8	HT II	kVA	23883	30903	23646	1.00%	23883
9	HT III	kVA	48839	35243	44399	10.00%	48839
	Total		**1379192**	**1694767**	**1331738**		**1379192**

Table 82: Energy sales approved by the Commission for the FY 2023-24 (MU)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	As computed for FY 2022-23	Growth rate	Now Approved by Commission
1	Domestic	847.56	830.94	823.85	2.50%	844.45
2	OHOB	3.50	3.62	3.62	0.00%	3.62
3	Commercial	215.25	190.25	178.81	2.50%	183.28
4	Agriculture	62.06	62.06	61.75	0.50%	62.06
5	Public Lighting	19.00	19.00	19.95	0.00%	19.95
6	LT Industrial + Water Works	171.03	180.03	130.43	2.00%	133.04
				43.04	2.00%	43.90
7	Temporary	1,031.29	5.16	3.93	2.00%	4.01
8	HT I	79.50	927.41	923.40	6.00%	935.13
9	HT II	446.11	72.00	58.78	2.00%	62.30
10	HT III	5.16	590.00	591.19	0.00%	603.02
	Total	**2,880.47**	**2880.47**	**2838.75**		**2894.75**

The Commission approves the number of consumers at 523302, connected load as 1379192 kW/kVA/HP (as applicable) and energy sales as 2894.75 MU for the FY 2023-24.

5.4. *Inter-State transmission loss*

Petitioner's Submission

The Petitioner has submitted Inter-State Transmission Losses of 2.50% in its petition for FY 2023-24.

Commission's analysis

The Commission in the ARR of FY 2023-24 considers the transmission loss levels in line with those approved in the MYT Order. The following table provides the Inter-State Transmission Losses approved by the Commission for the FY 2023-24.

Table 83: Inter-State transmission loss (%)

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

The Commission approves an Inter-State Transmission Loss of 2.50% for the FY 2023-24.

5.5. *Intra-State Distribution Loss*

Petitioner's Submission

The Petitioner has proposed the loss trajectory at 10.75% for the FY 2023-24 as per Intra-State Distribution Loss approved in the MYT Order dated 31st March 2022

Commission's analysis

The Commission, in the Business Plan Order, had set the loss trajectory for the 3rd Control Period (FY 2022-23 to FY 2024-25). Detailed reasoning has been provided in the Commission's Business Plan Order for the 3rd Control Period.

The following provides the Intra-State Distribution Loss approved for the FY 2023-24.

Table 84: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	10.75%	10.75%	10.75%

The Commission approves the Intra-State Distribution Loss of 10.75% for the FY 2023-24.

5.6. *Power Purchase Quantum & Cost*

Petitioners Submission

1. **Power Purchase Quantum**

The Petitioner has considered the power purchase quantum at 3508.10 MU.

2. Power Purchase Cost

Fixed Charges:

The Fixed costs of FY 2023-24 has been calculated based on the H1 figures of FY 2022-23 and the average of first 6 month has been considered for calculation of revised projections for respective Central Generating Stations and PPCL. Further the projections has been done with no escalation from FY 2022-23 H1 Cost for purpose of estimation of the fixed charges for the FY 2023-24.

Variable Charges:

The Petitioner has considered the actual per unit variable costs of FY 2022-23 H1 and has calculated the revised projections for FY 2023-24 w.r.t to power purchase projections for respective Central Generating Stations and PPCL after escalating the same for 5%.

Sale of Surplus Power:

The Petitioner has considered surplus power diverted to IEX of quantum200 MUs for FY 2023-24 at the rate of Rs. 4.40/unit which has been deducted from the net power purchase cost.

PGCIL losses:

The Petitioner has submitted that the actual transmission/PGCIL losses for FY 2021-22 are 3.25% and the same have been submitted in the chapter of True up of FY 2021-22. However for the purpose of APR for FY 2022-23, PED has revised the transmission loss percentage to 2.50%. PED has further considered the same percentage of losses i.e 2.50% for FY 2023-24. PED requests the Hon`ble Commission to approve the same. Loss for Renewable energy sources and PPCL have been considered as nil.

Transmission Charges:

The petitioner has considered the actual transmission charges for FY 2021-22 and has considered the same per unit charges for the entire control period without any escalations.

The projected power purchase quantum and cost are as illustrated in the following table:

Table 85: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for the FY 2023-24

S. No	Source	Energy Sent out (Scheduled)	Fixed Cost (FC)	Variable Cost (VC)	Other Charges	Total Cost
		MU	₹ Cr	₹ Cr	₹ Cr	₹ Cr
A	**Central Sector Power Stations**					
I	**NTPC**	**898.79**	**84.12**	**311.79**	**0.00**	**395.91**
	RSTPS Stage I & II	388.49	29.13	174.42		203.55
	RSTPS Stage -III	78.26	7.08	31.17		38.25
	Talcher Stage- II	377.40	27.86	81.27		109.13
	Simhadri Stage- II	54.64	20.06	24.93		44.98
II	**NLC**	**920.20**	**95.39**	**241.05**	**0.00**	**336.44**
	NLC TPS II Stage I	587.51	38.25	163.96		202.21
	NLC TPS II Stage II					
	NLC TPS I (Expn)					
	NLC TPS II (Expn)					
	NNTPS	332.69	57.14	77.09		134.23
III	**NPCIL**	**444.26**	**19.55**	**161.22**	**0.00**	**180.77**
	MAPS	24.90	0.43	6.28		6.71
	KAPS	200.48	1.06	73.36		74.42
	Kudankulam	218.88	18.06	81.57		99.64

S. No	Source	Energy Sent out (Scheduled)	Fixed Cost (FC)	Variable Cost (VC)	Other Charges	Total Cost
		MU	₹ Cr	₹ Cr	₹ Cr	₹ Cr
B	**Others**	**176.39**	**54.32**	**75.61**	**0.00**	**129.92**
	TNEB (Pondy)	0.00				0.00
	TNEB (Karaikal)	0.00				0.00
	KSEB	0.00				0.00
	Vallur Thermal Project (NTECL)	72.03	21.26	29.65		50.91
	NTPL (Tuticorin)	104.36	33.05	45.96		79.01
C	**UI**	**0.00**				**0.00**
	OverDrawl					
	Under Drawl					
D	**Open Market**	**-200.00**				**-88.00**
	IEX Purchase	0.00				
	IEX Sale	200.00				88.00
	Traders	0.00				
E	**Open Access**	**0.00**				**0.00**
F	**Renewable Sources**	**869.19**	**0.00**	**241.39**	**0.00**	**241.39**
	Solar	396.73	0.00	107.75		107.75
	Non-Solar	472.46	0.00	133.64		133.64
	Solar REC					
	Non-Solar REC					
G	**Within State Generations**	**199.27**	**27.86**	**132.49**	**0.00**	**160.34**
	PPCL	199.27	27.86	132.49		160.34
H	**OTHER CHARGES**					**209.72**
	PGCIL Transmission Charges, Wheeling & Other Charges					209.72
I	Other (SRLDC,SRPC & RPO) CHARGES					0.72
J	**Total Power Purchase Cost**	**3508.10**				**1567.21**

Commission's analysis

5.6.1. Power Purchase Quantum

Availability of energy from Renewable Sources

The Commission has considered the energy availability from the renewable sources in line with the Petitioner's submission.

Availability of energy from Conventional Sources

The commission observes that the Petitioner has proposed 869.19 MUs of energy purchase from renewable energy sources. Since this is positive approach towards RPO compliance and not as per the historical trend of Power Purchase for the Petitioner. The Commission has considered the Petitioner's projections towards energy procurement for FY 2023-24. The same shall be reviewed at the time of true-up.

5.6.2. Power Purchase Cost

Variable Charges:

The variable charges for the existing plants have been considered based on the actual cost submitted by the Petitioner for FY 2021-22 and for initial 9 months of FY 2022-23. For Central generating Stations, the Commission has segregated the plants into two buckets for projecting the variable charges. The Commission has considered the variable cost in line with per unit cost submitted by the Petitioner for Q4 of FY 2022-23 for the plants facing a reasonable hike in variable charges over FY 2021-22.

For the plants witnessing an exorbitant increase in the variable charges over FY 2021-22, mainly on account of increase in coal prices or blending of import coals, the variable charges have been projected considering the variable charges of FY 2021-22 and escalating it twice by 10% for reflecting the variable charges for FY 2023-24. For the remaining plants, the Commission has accepted the variable charges submitted by the Petitioner.

Fixed Charges:

The fixed charges have been considered based on actual data submitted for 9 months. The Commission has extrapolated the fixed cost for Q3 and estimated the cost for H2 of FY 2022-23. This approach is as per the Fixed Charges considered for FY 2022-23.

Other Charges:

Other charges have not been considered for the FY 2023-24. The same shall be considered as per actuals during the true-up of the respective year.

RPO Charges:

Renewable power (Solar and Non-solar) purchase has been considered at rates as adopted in the MYT order. The same shall be considered as per actuals at the time of true-up of the respective year.

Purchase/(Sale) from/to open market:

The Petitioner has proposed a rate of INR 4.40/unit for sale in open market. The Commission has considered the rate of INR 4.40/unit for Sale in open market. The same shall be taken up at the time of true-up.

5.6.3. Transmission Charges

The transmission charges have been considered for FY 2023-24 based on transmission charges approved for true-up of FY 2021-22.

5.6.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for FY 2023-24 have been shown in the following tables:

Table 86: Power Purchase Quantum (MU) and cost (INR Cr) approved for the FY 2023-24

Details of the stations	PP at Ex Bus (MU)	Variable Charges (Rs/kWh)	Annual Variable Charges (Rs. Crore)	Annual Fixed charges (Rs. Crore)	Total (Rs.Crore)	Avg. Rate (@ Exbus) (Rs/kWh)
NTPC						
RSTPS Stage I & II	388.49	3.31	128.54	43.53	172.07	4.43
RSTPS Stage -III	78.26	3.26	25.50	12.12	37.62	4.81
Talcher Stage- II	377.40	1.90	71.53	34.04	105.57	2.80
Simhadri Stage- II	54.64	3.51	19.16	16.94	36.10	6.61

Details of the stations	PP at Ex Bus (MU)	Variable Charges (Rs/kWh)	Annual Variable Charges (Rs. Crore)	Annual Fixed charges (Rs. Crore)	Total (Rs.Crore)	Avg. Rate (@ Exbus) (Rs/kWh)
Sub Total-NTPC	**898.79**		**244.73**	**106.62**	**351.35**	**3.91**
NLC						
NLC TPS II Stage I	344.28	2.65	91.32	20.90	112.22	3.26
NLC TPS II Stage II	119.07		31.58	7.36	38.95	3.27
NLC TPS I (Expn)	108.57		28.80	20.81	49.61	4.57
NLC TPS II (Expn)	35.19		9.33	15.44	24.78	7.04
NTPL (Tuticorin)	104.36	3.91	40.80	28.45	69.25	6.64
Sub Total-NLC	**711.47**		**201.84**	**92.97**	**294.81**	**4.14**
NPCIL						
MAPS	24.90	2.40	5.98	0.00	5.98	2.40
KAPS Stage I	200.48	3.49	69.87	0.00	69.87	3.49
Kudankulam U1	218.88	3.55	77.64	0.00	77.64	3.55
Sub Total-NPCIL	**444.26**		**153.49**	**0.00**	**153.49**	**3.45**
Others						
TNEB (Karaikal)	0.00	0.00				
Vallur Thermal Project (NTECL)	72.03	3.54	25.46	28.28	53.75	7.46
New NLC TS-I (NNTPS)	332.69	2.20	73.32	72.99	146.31	4.40
Sub Total-Others	**404.72**		**98.78**	**101.27**	**200.06**	**4.94**
State Generation						
PPCL	199.27	6.56	130.76	34.12	164.88	8.27
Sub Total-State Generation	**199.27**		**130.76**	**34.12**	**164.88**	**8.27**
Open market	**-222.81**		**-98.04**		**-98.04**	4.40
IEX Purchase	**0.00**		**0.00**		**0.00**	
IEX Sale	**222.81**		**98.04**		**98.04**	4.40
Traders	**0.00**				**0.00**	
RPO						
Solar	396.73	2.51	99.58	0.00	99.58	2.51
Non-solar	472.46	2.84	134.18	0.00	134.18	2.84
Total	**869.19**		**233.76**	**0.00**	**233.76**	**2.69**
Total	**3304.90**		**965.33**	**334.99**	**1300.31**	3.93
PGCIL Charges				180.27	180.27	0.00
Total Cost	**3304.90**		**965.33**	**515.26**	**1480.59**	**4.48**

The Commission approves the quantum of power purchase as 3304.90 MU at the Ex-bus with a total cost of INR 1480.59 Cr for the FY 2023-24.

5.6.5. Net Power Purchase Cost

The generating companies and transmission licensees provide 1.5% rebate on the bills on payment within 5 days from the production of such bills and 1% rebate on payment within 30 days from production of such bills. Since adequate interest for working capital is provided in the ARR, the Petitioner shall take every effort to make payment of the bills of Gencos and Transcos atleast within one month from production of such bills so as to avail this opportunity and reduce their power purchase costs. Accordingly, the Commission approved power purchase cost (net of rebate) as detailed below in line with the APTEL's order dated 30th July 2010 in Appeal No. 153 of 2009:

Table 87: Net Power Purchase Cost approved by the Commission for FY 2023-24

Particular	FY 2023-24
Total Power Purchase Cost including transmission charges (INR Cr)	1480.59
Less: Rebate @1% (INR Cr)	14.81
Net Power Purchase Cost (INR Cr)	**1465.78**

The rebate considered above has been considered as NTI and adjusted in relevant section of NTI for FY 2023-24.

The Average Power Purchase Cost (APPC) for the FY 2023-24 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 88: Average Power Purchase Cost (APPC) for the FY 2023-24

Particulars		Amount
Total Power Purchase Cost (INR Cr)	A	1480.59
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	B	414.03
Net Power Purchase Cost (INR Cr)	C=A-B	1066.56
Quantum of Ex-bus Power Purchase (MU)	D	3304.90
Quantum of energy excluding from renewable energy sources (MU)	E	2435.71
APPC (INR /kWh)	**F=C/E*10**	**4.38**

The Commission approves the Average Power Purchase Cost (APPC) as INR 4.38/ kWh for the FY 2023-24 for the purpose of compensation/payment for excess generation for prosumers.

5.7. Renewable Purchase Obligation (RPO)

Petitioner's Submission:

The plan submitted by the Petitioner is shown in the following table:

Table 89: RPO Compliance Plan submitted by the Petitioner for the FY 2023-24

Renewable Sources	Quantum (MUs)	Variable Charges (INR Cr)	Variable Charges per unit
Solar	396.73	107.75	2.72
Non-solar	472.46	133.64	2.83
	869.19	**241.39**	

Commission's analysis:

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Fourth Amendment) Regulations, 2022 on 24th March 2022 and revised the RPO targets, according to which for FY 2022-23 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 19.91% of its total annual consumption, out of which 10.00% must be from Solar Power.

Further, the cumulative backlog of solar and non-solar compliance up to FY 2022-23 has been considered as per the APR for FY 2022-23. Accordingly, the RPO approved by the Commission in the ARR of FY 2023-24 is as follows:

S. No	Particulars	FY 2021-22	FY 2022-23	FY 2023-24
1	Solar Target	8.00%	9.00%	10.00%
2	Non Solar Target	**9.00%**	**9.35%**	**9.91%**
	Total Target	**17.00%**	**18.35%**	**19.91%**
3	Sales Within UT	2,782.63	2,838.75	2,894.75
	RPO Target			
5	Solar	222.61	255.49	289.47
6	Non Solar	250.44	265.42	286.87
	Total RPO Target	**473.05**	**520.91**	**576.34**
	RPO Compliance (Actual Purchase)			
7	Solar	38.79	280.45	396.73
8	Non Solar		137.56	472.46
	Total RPO Compliance (Actual Purchase)	**38.79**	**418.01**	**869.19**
	RPO Compliance (REC Certificate Purchase)			
9	Solar	-	-	-
10	Non Solar	-	-	-
	Total RPO Compliance (REC Certificate)	**-**	**-**	**-**
	RPO Compliance (REC+ Actual)			
11	Solar	38.79	280.45	396.73
12	Non Solar	-	137.56	472.46
	Total RPO Compliance	**38.79**	**418.01**	**869.19**
	Cumulative Requirement till current year			
13	Solar	768.60	1,024.08	1,313.56

S. No	Particulars	FY 2021-22	FY 2022-23	FY 2023-24
14	Non Solar	1,273.83	1,539.25	1,826.12
	Total	**2,042.43**	**2,563.34**	**3,139.68**
	Cumulative Compliance till current year			
15	Solar	131.69	412.14	808.87
16	Non Solar	484.76	622.32	1,094.78
	Total	**616.45**	**1,034.46**	**1,903.65**
	Net Shortfall in RPO Compliance till current year			
17	Solar	636.90	611.94	504.69
18	Non Solar	789.07	916.93	731.34
	Total	**1425.97**	**1528.87**	**1236.03**

The Commission has considered the Petitioner's submission and has allowed purchase 869.19 MUs of renewable power. The variable cost per unit as allowed vide MYT Order has been considered to work out cost of compliance to RPO for FY 2023-24.

Table 90: Cost towards compliance of Renewable Purchase Obligation for the FY 2023-24

S. No	Description	Renewable Power		Variable Cost per unit
		Quantum (MU)*	Cost (INR Cr)	
1	Solar	396.73	99.58	2.51
2	Non-solar	472.46	134.18	2.84
	Total	**869.19**	**233.76**	

The Commission approves INR 233.76 Cr towards compliance of RPO for the FY 2023-24

5.8. Energy Balance

Petitioner's Submission

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

Table 91: Energy Balance submitted by the Petitioner (MU)

Sr. No.	Particulars	(Revised Estimates)
		FY 2023-24
A)	ENERGY REQUIREMENT	
1	Energy sales to metered category within the State	2,880.47
2	Energy exported to TANGEDCO	-
3	Total sales within the State	2,880.47
4	T&D Losses (%)	10.75%
5	T&D Losses (MU)	346.95
6	**Energy required at Discom Periphery**	**3,227.41**
B)	ENERGY AVAILABILITY	
1	Net Power Purchase (ex Bus)	2,439.64
2	Own Generation (PPCL)	199.27
3	Power Purchase from Renewable sources	869.19

Sr. No.	Particulars	(Revised Estimates)
		FY 2023-24
4	Power purchase from Common Pool / UI-over drawl / Traders / Exchange / Others	-
5	UI Under drawl	-
6	Open Access Power Purchase at periphery	-
7	**Net Power Purchased (1+2+3+4-5+6)**	3,508.10
8	Transmission Losses	60.99
9	Transmission Losses (%)	2.50%
10	Total Energy Availability (7-8)	3,447.11
11	Deficit/(Surplus)	(219.70)

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra-State Loss as approved above the Energy Balance for FY 2023-24 has been shown in following table:

Table 92: Energy Balance approved by Commission (MU)

	Particulars	Now Approved
A	**Energy Requirement**	
1	Sales Within Territory	2894.75
2	Sales to TANGEDCO	0.00
3	Sale to Open access consumer	0.00
4	Sales to Traders/Exchanges	0.00
5	**Total Sales**	**2894.75**
6	Transmission & Distribution losses (%)	10.75%
7	Transmission & Distribution losses (MU)	348.67
8	**Energy Requirement @ periphery**	**3243.42**
B	**Energy Availability at Ex-Bus**	
1	Total scheduled at CGS	2459.24
2	ISTS Losses	2.50%
3	Energy Scheduled at state periphery through CGS	2397.76
4	Add: Own Generation (PPCL)	199.27
5	Add: Power Purchase from Renewable sources	869.19
6	Add: Purchase from open market	0.00
7	Add: UI Overdrwal	0.00
8	Less: Sale in open market	222.81
9	Less: UI Underdrawal	0.00
10	**Energy Availability at state periphery**	**3243.42**

The Commission approves the Total Energy Requirement at the UT Periphery for FY 2023-24 as 3243.42 MUs.

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 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 considered the employee expenses for FY 2023-24 as INR 137.10 Cr as against INR 123.84 Cr approved in the MYT Order dated 31st March 2022.

Commission's analysis

In accordance with the MYT Regulations, 2021, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the 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 base year figures for the FY 2022-23 as decided in the APR chapter 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 2023-24. The CPI Inflation has been computed as follows:

Table 93: Computation of CPI Inflation (%)

FY	Average of (April – March)	Increase in CPI Index	Average increase In CPI indices over 3 year
FY 2018-19	299.92	-	5.89%
FY 2019-20	322.50	7.53%	
FY 2020-21	338.69	5.02%	
FY 2021-22	356.06	5.13%	

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

Table 94: Employee Expenses computation (In INR Cr)

S. No	Particulars	(Base Year)	Now Approved
		FY 2022-23	FY 2023-24
1	Gn (Growth factor as per Petitioner Submission)		-3.50%
2	CPI (%) (3 previous years' avg.)		5.89%
3	**Total Employee Expenses**	**128.93**	**131.76**

Table 95 Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	123.84	137.10	131.76

The Commission approves Employee Expenses of INR 131.76 Cr for FY 2023-24.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has considered the A&G for FY 2023-24 as INR 15.99 Cr as against INR 19.66 Cr approved vide MYT Order dated 31st March 2022.

Commission's analysis

The Commission has considered the base year figures for the FY 2023-24 as decided in the APR chapter 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 2023-24.

The A&G expenses approved by the Commission in the FY 2023-24 have been provided in the following table:

Table 96: A&G Expenses computation (In INR Cr)

S. No	Particulars	(Base Year)	Now Approved
		FY 2022-23	FY 2023-24
1	CPI (%) (3 previous years' avg.)		5.89%
2	A&G Expenses	18.53	19.62
3	**Total A&G Expenses**	**18.53**	**19.62**

Table 97: Administrative & General (A&G) expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	A&G expenses	19.66	15.99	19.62

The Commission approves the Administrative & General (A&G) expenses of INR 19.62 Cr for FY 2023-24.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has considered the R&M for FY 2023-24 as INR 48.53 Cr as against INR 48.22 Cr approved vide MYT Order dated 31st March 2022.

Commission's analysis

The 'K' factor of 0.91% has been considered as approved in the MYT Order dated 31st March 2022.

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 98: Computation of WPI Inflation (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2019-20	1.68%	**5.32%**
2020-21	1.29%	
2021-22	13.00%	

Table 99: Computation of R&M Expenses for FY 2023-24 (In INR Cr)

S. No	Particulars	FY 2023-24
1	Opening GFA (GFA_{n-1})	1117.35
2	K factor approved (K) (%)	0.91%
3	Avg. WPI Inflation (%)	5.32%
4	**R&M Expenses = $K \times (GFA_{n-1}) \times (1+WPI_{inflation})$**	**10.71**

The Petitioner has claimed for INR 38.88 Cr towards prepaid smart metering project. The Commission vide MYT Order dated 31st March 2022 allowed some cost for the same and directed the Petitioner to submit the DPR for the said project. The Petitioner has not submitted the same for Commission's consideration. The Petitioner is directed to comply with the directive of the Commission and also submit the status of the project as soon as possible. The Commission has not allowed any cost towards prepaid meters and the same shall be taken-up at the time of true-up.

Table 100: Repair & Maintenance (R&M) expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	R&M Expenses	**48.22**	**48.53**	**10.71**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.71 Cr for the FY 2023-24.

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

The following table provides the total O&M expenses approved by the Commission for the FY 2023-24:

Table 101: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	116.65	137.10	131.76
2	Administrative & General Expenses	20.07	15.99	19.62
3	Repair & Maintenance Expenses	48.01	48.53	10.71
4	**Total Operation & Maintenance Expenses**	**184.73**	**201.62**	**162.08**

The Commission approves Operation & Maintenance (O&M) expenses of INR 162.08 Cr in FY 2023-24.

5.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's Submission

The Petitioner has proposed capital expenditure of INR 99.11 Cr and Capitalization of INR 87.82 Cr for the FY 2023-24.

Commission's analysis:

The Commission has considered the same Capital Expenditure and Capitalisation proposed by the Petitioner. Further, the actual capital expenditure and capitalisation for the FY 2023-24 shall be considered at the time of true-up. The following table provides the summary of capital expenditure and capitalization now approved by the Commission vis-à-vis the capital expenditure and capitalisation approved by the Commission in the MYT Order:

Table 102: Capital Expenditure and Capitalization now approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	99.11	99.11	99.11
2	Capitalization	87.82	87.82	87.82

The Commission approves the capital expenditure of INR 99.11 Cr and capitalization of INR 87.82 Cr for the FY 2023-24.

5.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the capital structure based on the funding plan approved by the Commission in the Business Plan Order.

Table 103: GFA addition submitted by the Petitioner (In INR Cr)

No.	Particulars	FY 2023-24
1	Opening GFA	1034.35
2	Addition	87.82
3	Less: Grant	52.69

No.	Particulars	FY 2023-24
4	Less: Consumer Contribution	0.00
5	Net Additions to GFA	35.13
6	Closing GFA	1069.48

S.No.	Particulars	FY 2023-24
1	Total Capitalisation	87.82
2	Less: Capitalisation through Grants	52.69
3	Net Capitalisation excluding grant	35.13
4	Debt (%)	70%
5	Equity (%)	30%
6	Normative Loan	24.59
7	Normative Equity	10.54

Commission's analysis

Regulation 27 of the 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 determined the capital structure for the FY 2023-24 based on closing capital structure as approved in the True-up for FY 2021-22 and the APR of FY 2022-23.

Therefore, in accordance with the MYT Regulations, 2021, the Commission has determined the Capital Structure for the FY 2023-24 as follows:

Table 104: GFA addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	994.45	1034.35	1034.35
2	Addition During the FY	87.82	87.82	87.82
3	Less: Grant	52.69	52.69	52.69
4	Less: Consumer Contribution	-	-	-
5	Net Additions to GFA	35.13	35.13	35.13
6	Closing GFA	1029.58	1069.48	1069.47

Table 105: Loan addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Loan	134.59	159.95	160.32
2	Additions during the year	24.59	24.59	24.59
3	Less: Normative Repayment equivalent to Depreciation	37.16	38.98	38.63
4	Closing Loan	122.01	145.56	146.28

Table 106: Normative Equity addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	298.33	310.30	310.30
2	Additions during the year	10.54	10.54	10.54
3	Closing Equity	308.87	320.84	320.84

5.12. Depreciation

Petitioner's Submission

Total depreciation is calculated asset block wise on the total GFA. However, since depreciation on assets created through grants, electricity duty fund or subsidies are not allowed as per regulations. Hence Depreciation for the GFA excluding grant and electricity duty fund arrived in the proportion of total GFA and GFA excluding grant and electricity duty fund. The Depreciation rates have been considered as per the depreciation schedule specified in the MYT Regulations, 2021.

Table 107: Depreciation submitted by the Petitioner

S. No.	Particulars	FY 2023-24
1	Opening GFA (Net of Grants)	1034.35

2	Addition During the FY	87.82
3	Less: Capitalization through grants	52.69
4	Closing GFA (net of Grants)	1069.48
5	Average GFA (net of Grants)	1051.91
6	Weighted Average Rate of Depreciation (%)	3.71%
7	Net Depreciation for the year	38.98

Commission's analysis

Regulation 31 of the 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 considered the weighted average rate as derived in the MYT Order. The same shall be taken up at the time of true-up.

The closing GFA of the FY 2022.23 as approved in the APR chapter has been considered as opening GFA of the FY 2023-24. Further, depreciation for the year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed. Accordingly, the Commission shall consider the same during the True-up of the respective year.

The following table provides the calculation of depreciation during the FY 2023-24.

Table 108: Depreciation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA	994.45	1034.35	1034.35
2	Addition During the FY	35.13	87.82	87.82
3	Less: Grant Provided by GoI	-	52.69	52.69
4	Closing GFA	1,029.58	1069.48	1069.47
5	Average GFA	1,012.01	1051.91	1051.91
6	Weighted Average Rate of Depreciation (%)	3.67%	3.71%	3.67%
7	**Depreciation**	**37.16**	**38.98**	**38.63**

The Commission approves a depreciation of INR 38.63 Cr for the FY 2023-24.

5.13. Interest on Loan

Petitioner's Submission

The Petitioner has considered the actual proportion of loan from GFA additions to arrive at the loan addition for FY 2023-24. Repayment of the loan has been considered equivalent to the depreciation for the year in line with the MYT Regulations, 2021.

The following table provides the Interest on Loan projected for the FY 2023-24.

Table 109: Interest on Loan submitted by the Petitioner (In INR Cr)

Sr. No.	Particulars	FY 2023-24
1	Opening Normative Loan	159.95
2	Add: Normative Loan during the Year	24.59
3	Less: Normative Repayment	38.98
4	**Closing Normative Loan**	145.56
4	Average Normative Loan	152.76
5	Rate of Interest (@SBAR rate)	8.00%
6	**Interest on Normative Loan**	**12.22**
7	Other Finance Charges	0.00
8	**Total Interest & Finance Charges**	**12.22**

Commission's analysis:

Regulation 29 of the MYT Regulations, 2021 stipulates 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."

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, in absence of detailed data with respect to the actual loan portfolio, the Commission has considered the SBI 1 Year MCLR rate plus 100 basis points as Rate of Interest i.e. rate applicable as on 1.4.2022 (7.00%+100 basis points), in accordance with the MYT Regulations, 2021.

As per the MYT Regulations, 2021, if the equity deployed is more than 30% of the capital cost, then equity in excess of 30% is considered as normative loan. The Interest on Loan has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved in the APR for the FY 2019-20.

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

Table 110: Interest on loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	134.59	159.95	160.28
2	Add: Normative Loan During the year	24.59	24.59	24.59
3	Less: Normative Repayment equal to Depreciation	37.16	38.98	38.63
4	Closing Normative Loan	122.01	145.56	146.24
5	Average Normative Loan	128.30	152.76	153.26
6	Rate of Interest (%)	8.00%	8.00%	8.00%
	Interest on Loan	**10.26**	**12.22**	**12.26**

The Commission approves Interest on Loan as INR 12.26 Cr for the FY 2023-24.

5.14. Return on Equity (RoE)

Petitioner's Submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations, 2021, wherein RoE is computed on 30% of the capital base if the actual equity deployed is more than 30% and the actual equity base if the equity deployed is less than 30%. Accordingly, the Petitioner has computed the Return on Equity at 16% on post-tax basis. The following table summarizes Petitioner's Submission:

Table 111: RoE submitted by the Petitioner (In INR Cr)

S. No.	Particulars	FY 2023-24
1	Opening Equity Amount	310.30
2	Equity Addition during year (30% of Capitalization)	10.54
3	Closing Equity Amount	320.84
4	Average Equity Amount	315.57
5	Average Equity-Wires Business	284.02
6	Average Equity (Retail Supply Business)	31.56
7	Return on Equity for Wires Business	15.50%
8	Return on Equity for Retail Supply Business	16.00%
9	**Return on Equity for Wires Business**	**44.02**
10	**Return on Equity for Retail Supply Business**	**5.05**
11	**Total Return on Equity**	**49.07**

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 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 (as per the prevalent CERC Regulations) and a post-tax rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up. The following table provides the total return on equity approved for FY 2023-24.

Table 112: RoE approved by Commission (In INR Cr)

S. No	Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	A	298.33	310.30	310.30
2	Additions on account of new capitalisation	B	10.54	10.54	10.54
3	Closing Equity	C	308.87	320.84	320.84

S. No	Particulars		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
4	Average Equity	D = (A+B)/2	303.60	315.57	315.57
5	Average Equity (Wires Business)	E = D*90%	273.24	284.02	284.02
6	Average Equity (Retail Supply Business) Business)	F=D*10%	30.36	31.56	31.56
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	42.35	44.02	44.02
10	Return on Equity for Retail Supply Business	J=H*F	4.86	5.05	5.05
11	**Total Return on Equity**	**K=I+J**	**47.21**	**49.07**	**49.07**

The Commission approves Return on Equity of INR 49.07 Cr for the FY 2023-24.

5.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner has considered the provisional actual addition of consumers' security deposit for the FY 2022-23 and has escalated it by 10% to arrive at the projected addition of security deposit for the FY 2023-24. The following table provides the calculation of interest on consumer security deposits proposed for FY 2023-24.

Table 113: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr)

Particular	FY 2023-24
Opening Security Deposit	245.35
Add: Deposits during the Year	28.61
Less: Deposits refunded	13.19
Less: Deposits in form of BG/FDR	0.00
Closing Security Deposit	260.76
Average Security Deposit	253.06
Bank Rate	4.25%
Interest on Security Deposit	**10.75**

Commission's analysis:

Regulation 29.11 of the MYT Regulations, 2021 stipulates 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 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 applicable as on 1.4.2022 i.e. 4.25%. Net addition during the year has been considered same as considered by the Petitioner, subject to true-up.

The following table provides the calculation of interest on consumer security deposits approved for FY 2023-24.

Table 114: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	230.02	245.35	245.35
2	Add: Deposits during the Year	4.27	28.61	28.61
3	Less: Deposits refunded	0.00	13.19	13.19
4	Less: Deposits in form of BG/FDR	0.00	0.00	0.00
5	Closing Security Deposit	234.29	260.76	260.77
6	Average Security Deposit	232.15	253.06	253.06
7	Bank Rate	4.25%	4.25%	4.25%
8	Interest on Security Deposit	**9.87**	**10.75**	**10.76**

The Commission approves Interest on Security Deposit as INR 10.76 Cr for the FY 2023-24.

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 the 1st April 2022. The following table provides the Interest on working Capital proposed for FY 2023-24.

Table 115: Interest on Working Capital submitted by the Petitioner (In INR Cr)

S. No.	Particulars	FY 2023-24
1	Two Months Receivable	294.58
2	O&M Expense - 1 month	16.80
3	Maintenance Spare @ 40% of R&M Exp - one month	1.62
4	Less : Amount held as Security Deposit	253.06
5	Total	59.94
6	Interest Rate	9.00%
7	**Interest on Working Capital**	**5.39**

Commission's analysis:

Regulation 53 of the MYT Regulations, 2021 stipulates the following:

"53.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Retail Supply 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."

Regulation 64 of the MYT Regulations, 2021 stipulates the following:

"64 Norms of Working Capital for Retail Supply Business

64.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for

the Retail Supply 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 Consumers at the

prevailing tariff;

Less

d) Power Purchase cost for one (1) month; plus

e) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of

the Act from Consumers 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 FY 2023-24 in accordance with the MYT Regulations, 2021. The interest rate has been considered as 9.00% (1 year MCLR applicable as on 1st April 2022 i.e. 7.00% + 200 basis points). The computation of interest on working capital is shown in the following table:

Table 116: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	16.80	13.51
2	Maintenance spares at 40% of R&M expenses for one (1) month	1.62	0.36
3	Receivables equivalent to two (2) months of the expected revenue at the prevailing tariff	294.58	285.58
4	Total working capital	313.00	299.44
5	Less: Amount held as security deposits	253.06	253.06
6	Less: Power Purchase cost for one (1) month	0.00	123.38
7	Net Working Capital	59.94	(77.00)
8	Rate of Interest (%)	9.00%	9.00%
9	**Interest on Working Capital**	**5.39**	**0.00**

The Commission approves the Interest on Working Capital as NIL for the FY 2023-24.

5.17. Income Tax

Petitioner's Submission

The Petitioner has not made any submission has been made in this regard.

Commission's analysis:

Regulation 33 of 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 FY 2023-24 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 117: Income Tax approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	0.00	0.00

5.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not proposed any provision for bad and doubtful debts during the FY 2023-24.

Commission's analysis

Regulation 63 of the MYT Regulations, 2021 stipulates 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 FY 2023-24. 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 has estimated the non-tariff income for FY 2023-24 as shown in the following table:

Table 118: Non-Tariff Income submitted by the Petitioner (In INR Cr)

Particular	FY 2023-24
Non-Tariff Income	25.13

Commission's analysis:

Regulation 65 of the MYT Regulations, 2021 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 considers the same NTI as submitted by the Petitioner along with the Normative Rebate considered in power purchase cost, as discussed in power purchase cost section. The same shall be Trued-up on actual basis.

The NTI approved for the FY 2023-24 has been shown in the following table:

Table 119: Non-tariff Income approved by Commission (In INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Misc/Other Receipts	47.21	25.13	25.13
Normative rebate			14.81
Total	**47.21**	**25.13**	**39.94**

The Commission approves Non-Tariff Income of INR 39.94 Cr for the FY 2023-24.

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 as shown in the following table:

Table 120: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)

S. No.	Particulars	FY 2023-24
1	Cost of power purchase	1567.21
2	Employee costs	137.10
3	R&M expenses	48.53
4	Administration and General expenses	15.99
5	Depreciation	38.98
6	Interest charges	12.22
7	Interest on working capital	5.39
8	Interest on consumer security Deposit	10.75
9	Provision for Bad Debt	0.00
10	Return on Equity	49.07
11	**Total Revenue Requirement**	**1885.25**
12	Less: Non tariff Income	25.13
13	**Net Revenue Requirement (12-13)**	**1860.11**

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for FY 2023-24is approved as provided in the following table:

Table 121: Aggregate Revenue Requirement approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1398.18	1567.21	1480.59
2	O&M Expenses	191.72	201.62	162.08
3	Depreciation	37.16	38.98	38.63
4	Interest on loan	10.26	12.22	12.26
5	Return on Equity	47.21	49.07	49.07
6	Interest on Security Deposit	9.87	10.75	10.76
7	Interest on Working Capital	6.14	5.39	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	0.00	0.00	0.00
10	**Total Revenue Requirement**	**1700.55**	**1885.25**	**1753.39**
11	Less: Non-Tariff Income	3.72	25.13	39.94
12	**Net Revenue Requirement**	**1696.83**	**1860.11**	**1713.45**

The Commission approves net ARR of INR 1713.45 Cr for the FY 2023-24.

5.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 1851.96 Cr for the FY 2023-24 based on the projected energy sales, connected load and number of consumers.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not considered the revenue from Regulatory Surcharge along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for the FY 2023-24. The Commission has considered suitable assumptions wherever necessary. The total revenue from existing tariff as computed by the Commission for the FY 2023-24 has been shown in the following table:

Table 122: Revenue at existing tariff computed by the Commission for the FY 2023-24 (In INR Cr)

Sr. no.	Category	Voltage level	Sales	Revenue from Energy Charges	Revenue from Fixed charges	Total	ABR
			MU	(INR Cr.)	(INR Cr.)	(INR Cr.)	(INR/unit)
1	DOMESTIC	LT	844.45	284.01	25.00	309.01	3.66
2	HUT SERVICES/ OHOB	LT	3.62	0.45	0.03	0.49	1.34
3	COMMERCIAL	LT	183.28	124.14	14.36	138.50	7.56
4	AGRICULTURE SERVICES	LT	62.06	0.00	6.86	6.86	1.11
5	PUBLIC LIGHTING	LT	19.95	13.57	6.84	20.41	10.23
6	LT INDUSTRIAL	LT	133.04	80.49	8.35	88.83	6.68
7	WATER WORKS		43.90	30.29	0.15	30.44	6.93
8	HIGH TENSION-I (Industrial and Commercial)	HT	935.13	514.85	127.68	642.53	6.87
9	HIGH TENSION-II(HT Others)	HT	62.30	41.21	14.33	55.54	8.91
10	HIGH TENSION-III (EHT Industries)	EHT	603.02	313.69	28.42	342.11	5.67
11	Temprorary	LT	4.01	3.91	0.00	3.91	9.75
	TOTAL		**2,894.75**	**1,406.60**	**232.01**	**1,638.61**	**5.66**

Fixed Charges are computed per annum based on the connected load, consumers, and horsepower as applicable.

The Commission has determined revenue from sale of power at existing tariff as INR 1 638.61 Cr in the FY 2023-24.

5.22. Standalone Revenue Gap/ Surplus for FY 2023-24

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 92.63 Cr (excluding revenue from Regulatory Surcharge) for the FY 2023-24.

Commission's analysis

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

Table 123: Standalone Revenue Gap/ Surplus approved at existing tariff (excluding Regulatory Surcharge) for the FY 2023-24 (In INR Cr)

S. No	Particulars		Petitioner's submission	Now Approved
1	Annual Revenue Requirement	A	1860.11	1713.45
2	Revenue from sale of power	B	1767.48	1638.61
3	**Standalone Revenue Gap/ (Surplus)**	**C=A-B**	**92.63**	**74.84**

The Commission approves the standalone gap at existing retail tariff (excluding regulatory surcharge) as INR 74.84 Cr for FY 2023-24. This estimated gap is considered while determining the retail tariff for FY 2023-24, 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 2023-24 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.

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

Petitioner's Submission

Petitioner has submitted in the tariff order dated 31st March 2022, the Commission approved a consolidated revenue gap of INR 423.16 Cr till FY 2020-21 based on trued up costs till FY 2020-21. Petitioner has submitted that standalone revenue gap/(surplus) for FY 2021-22 based on actual costs and standalone gap/(surplus) based on revised estimates for FY 2022-23 and projected gap with Regulatory surcharge for the FY 2023-24 comes as under:

Table 124: Standalone Revenue Gap/ (Surplus)at existing tariff (Rs. Cr)

S. No.	Particulars	FY 2021-22	FY 2022-23	FY 2023-24
1	Aggregate Revenue Requirement	1657.08	1828.81	1860.11
2	Revenue from Sale of Power+ Regulatory Surcharge (5%)	1635.59	1707.33	1,767.48
3	Revenue Gap/ (Surplus)	21.49	121.23	92.63

PED has submitted that the Commission vide its tariff order date 31st March 2022 for computation of carrying cost for FY 2020-21. In line with the Tariff Order for computation of carrying cost, PED has adopted the same methodology and considered the closing Gap of FY 2022-23 as opening gap for FY 2023-24 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 125: Computation of carrying Cost at existing tariff (Rs. Cr)

S.No.	Particulars	FY 2020-21 (Approved)	FY 2021-22	FY 2022-23	FY 2023-24
1	Opening Gap/(Surplus)	375.88	423.16	397.34	471.45
2	Regulatory Asset Recovered from Regulatory Surcharge		78.87	80.53	84.47
3	Addition Gap/(Surplus) (Standalone Gap)	13.79	21.49	121.23	92.63
4	Closing Gap/(Surplus)	389.67	365.78	438.04	479.61
5	Average Gap/(Surplus)	382.78	394.47	417.69	475.53
6	Rate of Interest	8.75%	8.00%	8.00%	8.00%
7	Carrying cost	33.49	31.56	33.42	38.04
8	Final Closing Gap/ (Surplus)	**423.16**	**397.34**	**471.45**	**517.66**

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 31st March 2022 had approved a revenue gap of INR 375.88 Cr till 31st March 2021. Taking into account the previous gap, the Commission determines the standalone and consolidated revenue gap/ surplus at existing tariff at the end of FY 2023-24 as shown below:

Table 126: Consolidated Revenue Gap/ Surplus determined by Commission at existing Tariff (In INR Cr)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Net Revenue Requirement	1,611.85	1,719.65	1,713.45
Revenue from Retail Sales at Existing Tariff (excluding surcharge)	1,634.97	1,623.02	1,638.61
Opening Gap Balance	423.16*	432.96	479.83
Standalone Gap /(Surplus) for the year	(23.12)	96.63	74.84
Regulatory Surcharge rate		5%	5%
Less: Regulatory surcharge		81.15	81.93
Closing Gap Balance	400.04	448.44	472.74
Avg. Gap	411.60	440.70	476.29
Interest rate	8.00%	8.00%	8.00%
Carrying Cost	**32.93**	**31.39#**	**38.10**
Cumulative Gap	**432.96**	**479.83**	**510.85**

***includes Regulatory Surcharge*

#Carrying cost not allowed on standalone gap for FY 2022-23.

The Commission determines a consolidated revenue gap of INR 510.85 Cr till FY 2023-24 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 2023-24 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 increasing the Regulatory Surcharge of 5% to 8% 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, Petitioner has proposed to increase the tariff for some category of consumers against the tariff for FY 2023-24 approved by the Commission in previous Tariff Order dated 31st March 2022 along with additional surcharge of 10%. PED has proposed an average hike of 8.29%. PED has requested the commission to approve the tariff schedule as proposed for FY 2023-24 as tabulated below:

Table 127: Summary of Existing and Proposed Tariff Rates for FY 2023-24

S.No.	Category of Consumers	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	Life Line Services /OHOB				
a	0-50 units per month	-	Rs. 1.25/kWh	-	Rs. 2.50/kWh

S.No.	Category of Consumers	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
2	Domestic Purposes				
a	0-100 units per month	Rs 30/kW/Month	Rs. 1.90 /kWh	Rs 30/kW/Month	Rs. 2.30 /kWh
b	101-200 units per month		Rs. 2.90 /kWh		Rs. 3.30 /kWh
c	201-300 units per month		Rs. 5.00 /kWh		Rs. 5.45 /kWh
d	Above 300 units per month		Rs. 6.45 /kWh		Rs. 6.85 /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. 6.00 /kWh
b	101-250 units per month		Rs. 6.75 /kWh		Rs. 6.85 /kWh
c	Above 250 units per month		Rs. 7.50 /kWh		Rs. 7.60 /kWh
II	HT Commercial (For contract demand up to 5000 kVA)	Rs. 420 /kVA / month	Rs. 5.45 /kVAh	Rs. 420 /kVA / month	Rs. 5.60 /kVAh
4	Agriculture				
I	Agriculture				
	Small farmers	Rs. 20/HP/month	-	Rs. 20/HP/month	-
	Other Farmers	Rs. 75/HP/month	-	Rs. 75/HP/month	-
II	Cottage Industries/Poultry Farms /Horticulture/ Pisciculture				
a	0-100 units per month	Rs 30/kW/Month	Rs. 1.90 /kWh	Rs 30/kW/Month	Rs. 2.30 /kWh
b	101-200 units per month		Rs. 2.90 /kWh		Rs. 3.30 /kWh
c	201-300 units per month		Rs. 5.00 /kWh		Rs. 5.45 /kWh
d	Above 300 units per month		Rs. 6.45 /kWh		Rs. 6.85 /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
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. 5.45 / kVAh
c	EHT Industries (For Supply at 110 kV or 132 kV)	Rs. 480 / kVA / month	Rs. 5.15 / kVAh	Rs. 480 / kVA / month	Rs. 5.30 / kVAh
7	LT Water Works	Rs. 150/connection/ month	Rs. 6.90/kWh	Rs. 150/connection/ month	Rs. 6.90/kWh

S.No.	Category of Consumers	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
8	HT Other	Rs. 480/ kVA /month	Rs. 6.35/ kVAh	Rs. 480/ kVA /month	Rs. 6.35/ 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 /kVAh	-	Rs.4.50 /kVAh
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 511.93 Cr at the end of FY 2023-24. The Commission has determined the retail tariff for the FY 2023-24 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 to 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 imposed by each consumer category on 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. A simplified version of the same was suggested by Hon'ble APTEL in 2010, to determine VCoS in the absence of all necessary data. In this method, the power purchase costs and other costs (such as network costs, wheeling costs etc.) are allocated to various consumer categories based on energy input or energy sales (as considered appropriate by the State Commission). This approach factors in the voltage level differentiation based on losses, however, it does not factor in asset utilization at different voltage levels.

A more refined version of determination of 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.

On studying the existing methodologies followed internationally, among developing nations with energy access situations like India's, 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 embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Distribution Licensee's revenue requirement to all categories and sub-categories of consumers. This method involves three steps:

- Cost Functionalization
- Cost Classification
- Cost Allocation

Cost functionalization separates cost data into the functional activities performed in the operation of a utility system - power generation/supply, transmission, distribution and retail supply. Cost classification determines the portion of the cost that is related to specific cost-causal factors, such as those that are demand-related, energy-related, or customer-related. Finally, the cost allocation step assigns the costs to specific customer categories based on the customer's contribution to the specific classifier selected.

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 adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, 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 2023-24, 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 Final Tariff Schedule

As described in earlier section, the current tariff is not covering the entire cost of the Petitioner for FY 2023-24. 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 128: Existing and approved tariff

S.No.	Category of Consumers	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	Life Line Services /OHOB				
a	0-50 units per month	Rs. 10/kW/Month	Rs. 1.25/kWh	Rs. 10/kW/Month or part thereof	Rs. 1.45/kWh
2	Domestic Purposes				
a	0-100 units per month	Rs 30/kW/Month	Rs. 1.90 /kWh	Rs 30/kW/Month or part thereof	Rs. 2.25 /kWh
b	101-200 units per month		Rs. 2.90 /kWh		Rs. 3.25 /kWh
c	201-300 units per month		Rs. 5.00 /kWh		Rs. 5.40 /kWh
d	Above 300 units per month		Rs. 6.45 /kWh		Rs. 6.80 /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 or part thereof	Rs. 6.00 /kWh
b	101-250 units per month		Rs. 6.75 /kWh		Rs. 7.05 /kWh
c	Above 250 units per month		Rs. 7.50 /kWh		Rs. 7.80 /kWh

S.No.	Category of Consumers	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
II	HT Commercial (For contract demand up to 5000 kVA)	Rs. 420 /kVA / month	Rs. 5.45 /kVAh	Rs. 420 /kVA / month or part thereof	Rs. 5.60 /kVAh
4	Agriculture				
I	Agriculture				
	Small farmers	Rs. 20/HP/month	-	Rs. 20/HP/month or part thereof	-
	Other Farmers	Rs. 75/HP/month	-	Rs. 75/HP/month or part thereof	-
II	Cottage Industries/Poultry Farms /Horticulture/ Pisciculture				
a	0-100 units per month	Rs 30/kW/Month	Rs. 1.90 /kWh	Rs 30/kW/Month or part thereof	Rs. 2.25 /kWh
b	101-200 units per month		Rs. 2.90 /kWh		Rs. 3.25 /kWh
c	201-300 units per month		Rs. 5.00 /kWh		Rs. 5.40 /kWh
d	Above 300 units per month		Rs. 6.45 /kWh		Rs. 6.80 /kWh
5	Public Lighting				
a	Public Lighting	Rs.110/pole/ month	Rs. 6.80 /kWh	Rs.110/pole/ month or part thereof	Rs. 7.10 /kWh
6	Industries				
a	LT Industries	Rs.50.00 /kW/Month	Rs. 6.05/kWh	Rs.50.00 /kW/Month or part thereof	Rs. 6.35/kWh
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 or part thereof	Rs. 5.45 /KVAh
c	EHT Industries (For Supply at 110 kV or 132 kV)	Rs. 480 / kVA / month	Rs. 5.15 /KVAh	Rs. 480 / kVA / month or part thereof	Rs. 5.50 /KVAh
7	LT Water Works	Rs. 150/connection/ month	Rs. 6.90/kWh	Rs. 150/connection/ month or part thereof	Rs. 7.20/kWh
8	HT Other	Rs. 480/ kVA /month	Rs. 6.35/KVAh	Rs. 480/ kVA /month or part thereof	Rs. 6.25/KVAh

S.No.	Category of Consumers	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
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 /kVAh	-	Rs.5.33 /kVAh
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

6.4.3. Revenue from Approved Retail Tariff for FY 2023-24

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

Table 129: Revenue from approved retail tariff determined by Commission (In INR Cr)

Sr. no.	Category	Voltage level	Sales	Revenue from Energy Charges	Revenue from Fixed charges	Total	ABR
			MU	(INR Cr.)	(INR Cr.)	(INR Cr.)	(INR/unit)
1	DOMESTIC	LT	844.45	314.16	25.00	339.16	4.02
2	HUT SERVICES/ OHOB	LT	3.62	0.52	0.03	0.56	1.54
3	COMMERCIAL	LT	183.28	129.64	14.36	143.99	7.86
4	AGRICULTURE SERVICES	LT	62.06	0.00	6.86	6.86	1.11
5	PUBLIC LIGHTING	LT	19.95	14.16	6.84	21.01	10.53
6	LT INDUSTRIAL	LT	133.04	84.48	8.35	92.83	6.98
7	WATER WORKS		43.90	31.61	0.15	31.76	7.23
8	HIGH TENSION-I (Industrial and Commercial)	HT	935.13	529.39	127.68	657.07	7.03
9	HIGH TENSION-II(HT Others)	HT	62.30	40.56	14.33	54.89	8.81

Sr. no.	Category	Voltage level	Sales	Revenue from Energy Charges	Revenue from Fixed charges	Total	ABR
			MU	(INR Cr.)	(INR Cr.)	(INR Cr.)	(INR/unit)
10	HIGH TENSION-III (EHT Industries)	EHT	603.02	335.01	28.42	363.42	6.03
11	Temprorary	LT	4.01	3.91	0.00	3.91	9.75
	TOTAL		**2894.75**	**1483.45**	**232.01**	**1715.46**	**5.93**

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 1715.46 Cr for the FY 2023-24.

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

Table 130: Cross-subsidy levels for consumer categories at existing and approved tariff for the FY 2023-24

Sr. no.	Category	ACOS	ABR at existing tariff	Cost Coverage at existing tariff	ABR at approved tariff	Cost Coverage at approved tariff
		Rs/Unit	Rs/Unit	%	Rs/Unit	
1	DOMESTIC	5.92	3.66	62%	4.02	68%
2	HUT SERVICES/ OHOB	5.92	1.34	23%	1.54	26%
3	COMMERCIAL	5.92	7.56	128%	7.86	133%
4	AGRICULTURE SERVICES	5.92	1.11	19%	1.11	19%
5	PUBLIC LIGHTING	5.92	10.23	173%	10.53	178%
6	LT INDUSTRIAL & WATER WORKS	5.92	6.74	114%	7.04	119%
7	HIGH TENSION-I (Industrial and Commercial)	5.92	6.87	116%	7.03	119%
8	HIGH TENSION-II(HT Others)	5.92	8.91	151%	8.81	149%
9	HIGH TENSION-III (EHT Industries)	5.92	5.67	96%	6.03	102%
10	Temporary	5.92	9.75	165%	9.75	165%
		5.92	5.66	96%	5.93	100%

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 131: ACoS at approved tariff (excluding Regulatory Surcharge) for the FY 2023-24 (In INR Cr)

S. No	Particulars		Now Approved
1	Annual Revenue Requirement	A	1713.45
2	Sales (MUs)	B	2894.75
3	**ACoS (INR/kWh)**	**C=A/B*10**	**5.92**
4	**ABR at Approved Tariff**		**5.93**

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 4.69%

6.4.5. Regulatory Surcharge

As is evident from the above, with an average tariff increase of 4.69%, the revenue from Approved Retail Tariff recovers the standalone Net Revenue Requirement of FY 2023-24. 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 2023-24 is yet to be recovered. The table below provides the cumulative revenue gap till FY 2023-24.

It can be observed 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 increase the Regulatory Surcharge of 5% to 8%. 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 2023-24, till further Orders of the Commission.

Applicability and Conditions of the Regulatory Surcharge

- This Regulatory Surcharge shall be applicable to all consumer categories served by the Petitioner.
- The Surcharge shall also be applicable to consumers opting for open access.
- The Regulatory Surcharge shall be levied in the monthly/ bimonthly bill as a percentage of the total Energy and Demand charges payable by the consumer
- The Surcharge shall be applicable for all the bills raised on or after 1st April 2023 and shall continue till further Orders of the Commission.

6.4.6. Revised Revenue Gap/ Surplus

The Commission for the purpose of calculation of the cumulative gap has considered the carrying cost at SBI 1 year MCLR + 1% i.e. 7.00% + 100 basis points which is the opportunity cost for the Petitioner. The Commission observes that the Petitioner is not charging FPPCA as directed vide various previous Orders, therefore, the Commission is not allowing carrying cost on the standalone gap for the FY 2022-23. Considering the additional revenue from tariff increase and Regulatory Surcharge, the resultant Revenue Gap/Surplus has been shown in the table below:

Table 132: Revenue Gap/ Surplus with Regulatory Surcharge at revised tariff approved by Commission (In INR Cr)

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Net Revenue Requirement	1,611.85	1,719.65	1,713.45
Revenue from Retail Sales at revised Tariff (excluding surcharge)	1,634.97	1,623.02	1,715.46
Opening Gap Balance	423.16*	432.96	479.83

Particulars	FY 2021-22	FY 2022-23	FY 2023-24
Standalone Gap /(Surplus) for the year	(23.12)	96.63	(2.00)
Regulatory Surcharge rate		5%	8%
Less: Regulatory surcharge		81.15	137.24
Closing Gap Balance	400.04	448.44	340.59
Avg. Gap	411.60	440.70	410.21
Interest rate	8.00%	8.00%	8.00%
Carrying Cost	**32.93**	**31.39#**	**32.82**
Cumulative Gap	**432.96**	**479.83**	**373.41**

**includes Regulatory Surcharge*
#Carrying cost not allowed on standalone gap for FY 2022-23.

The Commission approves a cumulative revenue gap of INR 373.41 Cr till FY 2023-24.

6.4.7. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2023-24 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 4.69% while approving a regulatory surcharge of 8% for the FY 2023-24.
3. The Commission has approved the Average Billing Rate for FY 2023-24 as INR 5.93/kWh as against the approved Average Cost of Supply of INR 5.92/kWh.

7. Chapter 7: Open Access Charges for the FY 2023-24

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 133: Allocation matrix as submitted by Petitioner

Particulars	Allocation (%)		FY 2023-24		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	*0%*	*100%*	-	1,567.21	1,567.21
Employee costs	*40%*	*60%*	54.84	82.26	137.10
Repair and Maintenance Expenses	*90%*	*10%*	43.67	4.85	48.53
Administration and General Expenses	*50%*	*50%*	7.99	7.99	15.99
Depreciation	*90%*	*10%*	35.08	3.90	38.98
Interest and Finance charges	*90%*	*10%*	11.00	1.22	12.22
Interest on Working Capital	*10%*	*90%*	0.62	5.62	6.25
Return on Equity	*90%*	*10%*	44.16	4.91	49.07
Provision for bad debt	*0%*	*100%*	0.00	0.00	0.00
Interest on consumer security deposit	*10%*	*90%*	1.08	9.68	10.75
Total Revenue Requirement			**198.45**	**1687.65**	**1886.10**
Less: Non-Tariff Income	*10%*	*90%*	2.51	22.62	25.13
Net Revenue Requirement			**195.94**	**1665.03**	**1860.97**

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 134: 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	106.39	44.72	151.11	171.07	1291.06	1.33
High Tension (HT)	0.11	35.77	35.89	23.30	999.41	0.23
Extra High Tension(EHT) Level	0.00	8.94	8.95	1.58	590.00	0.03
Total	**106.51**	**89.43**	**195.94**	**195.95**	**2880.47**	

Commission's analysis:

The allocation between wheeling and retail supply business for the FY 2023-24 as per the ARR approved in this Order is provided in the table below:

Table 135: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2023-24		
	Wheeling	Supply	Wheeling (INR Cr)	Supply (INR Cr)	Total (INR Cr)
Cost of power purchase for full year	0%	100%	0.00	1480.59	1480.59
Employee costs	40%	60%	52.70	79.05	131.76
Repair and Maintenance Expenses	50%	50%	17.66	1.96	19.62
Administration and General Expenses	90%	10%	5.35	5.35	10.71
Depreciation	90%	10%	34.77	3.86	38.63
Interest and Finance charges	90%	10%	11.04	1.23	12.26
Return on NFA /Equity	10%	90%	44.16	4.91	49.07
Interest on consumer security deposit	10%	90%	1.08	9.68	10.76
Interest on Working Capital	90%	10%	0.00	0.00	0.00
Total Revenue Requirement			**166.76**	**1586.63**	**1753.39**
Less: Non-Tariff Income	10%	90%	3.99	35.94	39.94
Net Revenue Requirement			**162.76**	**1550.69**	**1713.45**

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 5.44%. 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 10.75%.

Table 136: 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	522755	50.00%	1294.30	17.05%	1560.34
High Tension (HT) Level	539	40.00%	997.43	5.44%	1070.88
Extra High Tension (EHT) Level	8	10.00%	603.02	1.50%	612.20
Total	**523302**	**100%**	**2894.75**	**10.75%**	**3243.42**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 137: 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	75.64	43.52	119.16	1294.30	1.11
High Tension (HT) Level	0.08	34.82	34.90	997.43	0.17
Extra High Tension (EHT) Level	0.00	8.70	8.71	603.02	0.03
Total	**75.71**	**87.05**	**162.76**	**2894.75**	

The Commission approves wheeling charge of INR 1.11/ 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 had proposed an Additional Surcharge of INR 1.71/kWh in the pleading whereas the petitioner in response to the deficiency note has revised its submission. The Petitioner has proposed additional charges as follows:

Particulars	
Total Power Purchase Cost	1572.40
Fixed cost component in Power Purchase Cost (excluding transmission charges)	281.24
Energy Sales (MU)	2880.47
Additional Surcharge (Rs/kWh)	**0.98**

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 138: Additional Surcharge approved by Commission

Particulars		
Total Power Purchase cost approved		1480.59
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	A	334.99
Energy Sales including Open Access Sales (MU)	B	2894.75
Additional Surcharge (INR/kWh)	C=A/B*10	**1.16**

Earlier, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. As per the Open Access Regulations, 2017, a consumer now is only required to pay fixed charges on Admissible Drawal rather than on total contracted load.

As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the Regulation. The Commission approves an Additional Surcharge of INR 1.16/kWh for the FY 2023-24.

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 139: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR /kWh)	ABR (INR /kWh)	Cross- Subsidy (INR /kWh)
Low Tension (LT) Level	7.83	5.88	NIL
High Tension (HT)	5.51	7.96	2.45
Extra High Tension(EHT) Level	5.09	6.21	1.12

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 10.75%, as approved in the MYT Order for FY 2023-24. Voltage wise losses assumed at each level have been shown in the table below:

Table 140: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	11.55%	17.05%
High Tension (HT) Level	4.00%	5.44%
Extra High Tension (EHT) Level	1.50%	1.50%
Total	10.75%	10.75%

Using these losses, the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 141: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1294.30	17.05%	1560.34
High Tension (HT) Level	997.43	5.44%	1070.88
Extra High Tension (EHT) Level	603.02	1.50%	612.20
Total	**2894.75**	**10.75%**	**3243.42**

Now the overall ARR approved for FY 2023-24 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 142: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	No. of Consumers
Low Tension (LT) Level	1560.34	50.00%	522755
High Tension (HT) Level	1070.88	40.00%	539
Extra High Tension (EHT) Level	612.20	10.00%	8
Total	**3243.42**	**100.00%**	**523302**

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 143: 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	378.76	551.12	929.88	1294.30	7.18
High Tension (HT) Level	124.53	378.24	502.77	997.43	5.04
Extra High Tension (EHT) Level	64.57	216.23	280.80	603.02	4.66
Total	**567.85**	**1145.60**	**1713.45**	**2894.75**	**5.92**

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

Table 144: Cross-Subsidy Surcharge

Category	VCoS (INR /kWh)	ABR (INR /kWh)	Cross- Subsidy (INR /kWh)
	A	B	C=A-B
Low Tension (LT) Level	7.18	4.95	(2.24)
High Tension (HT) Level	5.04	7.14	2.10
Extra High Tension (EHT) Level	4.66	6.03	1.37

The Cross-Subsidy Surcharge is coming out to be negative for LT voltage level, INR 2.10/kWh for HT voltage levels and INR 1.37/kWh for EHT voltage levels.

Therefore, the Commission approves nil Cross-Subsidy Surcharge at LT Voltage level, INR 2.10/kWh for HT voltage levels and INR 1.37/kWh at EHT Voltage levels, in FY 2023-24.

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 2021 (i.e. Power Purchased by the Licensee from 1st April 2021 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
    - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties

- Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
- Variation on account of Deviation Settlement Mechanism – shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
   - Variation on account of Central Transmission Charges including arrears/ revisions.
   - Variation on account of State Transmission charges including arrears/revisions

3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
   - Any adjustments /reversals due to over recovery of charges
   - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
   - Any other adjustments on account of factors not envisaged at the time of tariff fixation

4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

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

Where:

- $Pact(in\ INR\ Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ INR\ Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost
- $Oact\ (in\ INR\ Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ INR\ Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM

- $PSOact\ \ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{INR}{unit}) = \left(\frac{(Papp +\ Tapp\ ) * 10}{\{[PPOapp *\ (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ INR\ Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
    - Cost of procurement from sources outside the State,
    - Cost of procurement from sources within the State,
    - Cost of procurement from the Bilateral/ exchange etc.
    - Less: Revenue from sale of surplus power
- $Tapp\ (in\ INR\ Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
    - Inter-State transmission charges (PGCIL charges),
    - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, the Commission suggests that all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to ±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 for the FY 2023-24 as follows:.

Table 145: Rapproved determined by Commission for FY 2023-24

Particulars		Amount
Total Power Purchase Cost (INR Cr), Papp	A	1300.31
Transmission Charges (INR Cr), Tapp	B	180.27
Power Purchase Quantum from CGS Stations at Generator Periphery (NTPC, NPCIL, NLC, Vallur) excluding renewable sources and IEX/ traders (MU), PPOapp	C	2459.24
Approved Inter-State Transmission Loss (%), TLapp	D	2.50%
Power Purchase Quantum from sources within State/ Open Market and renewable sources (MU), PPIapp	E	1068.46
Quantum of Sale of Surplus Power (MU), PSOapp	F	222.81
Approved Intra-State T&D Loss (%), DLapp	G	10.75%
Energy Sales for Hut Services and Agriculture consumer category (MU), Zapp (MU)	H	65.67
Rapp (INR/kWh)	**I=[(A+B)*10/[{(C*(1-D)+E-F))*(1-G)-H}]**	**5.23**

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 Section 142 of the Electricity Act 2003 read with other provisions of the Act, and the Regulations made thereunder.

9.1.1. Energy Audit and T&D Losses

Originally Issued in Tariff Order dated 5th February 2010
Commission's Latest Directive in MYT Order 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.
Petitioner's Response in Present Tariff Petition M/s Zenith Energy India (P) Ltd. has submitted the Base line energy audit for the 4 Financial years from FY 2017-18 to 2020-21 and the same is submitted herewith. Further it is also to be stated that since BEE has stipulated mandatory conduct of energy audit by DISCOMs through BEE accredited Energy Auditor this Department has floated e tender for carrying out Energy audit for the period from FY 2021-22 to FY 2023-24. M/s A-Z Energy Engineers Pvt Ltd, New Delhi has been appointed as Energy Auditor.
Commission's Response The Petitioner is directed to submit the status of the Energy Audit being conducted by the appointed energy auditor withing 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 MYT Order 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 Under Part A of RDSS scheme - Smart metering – wherein it is proposed to convert 4.06lacs meters into Smart prepaid meters at a cost of Rs.251 Crs. This project is to be implemented through M/s PFCCL as PIA under TOTEX model. The e tender for selection of the Advanced metering Infrastructure provider (AMISP) has been opened on 2/11/2022 and the Technical evaluation of bids is in progress. After award of contract to the successful bidder the project will be completed within 10 months. During the implementation, the AMISP would be requested to provide meters to all agriculture services at the first instant and there on energy charges can be levied to Agriculture consumers.
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 MYT Order 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.
Petitioner's Response in Present Tariff Petition EDP submits that the Voltage wise cost of supply has been submitted with the Commission.
Commission's Response The Commission takes note of the same.

9.1.4. New Bill Format

Originally Issued in Tariff Order dated 24th May 2016
Commission's Latest Directive in MYT Order 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 Department proposes to purchase 200 nos. of handheld blue tooth enabled bill printing machine for issue of on the spot CC bills to the consumers for the remaining areas of the UT of Puducherry. All the consumers of the UT of Puducherry would be served real time CC bills shortly.

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 MYT Order 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. Since the Government of India has directed for conversion of all existing meters with Pre paid smart meters before December 2023 and this project is being executed through M/s PFFCL as PIA under TOTEX mode. The tender for selecting the AMISP provider has been opened and the process for selection of the bidder is in progress and on issue of letter of award it is expected that the AMISP would commence the work shortly. EDP proposes to replace the balance 32 nos. HT industries with prepaid smart meter with Time of Day facility at the first instant of the project.
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 MYT Order 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 Presently the Aggregate capacity of grid connected small and rooftop solar PP installed in the UT of Puducherry under the Net-Metering Regulations as on March 2022 is 25.00 MW. The quantum of energy injected into the grid from these plants is accounted for fulfilling a part of the Renewable Purchase Obligation (RPO) of the Department. Solar Power Developer M/s. Waree Private Limited has set up grid connected solar PV power plant of capacity 10 MW at Polagam, Karaikal for sale of Solar Power to industrial consumer under long term open access. The quantum of energy injected into the grid from this plant is also accounted for fulfilling the Renewable Purchase Obligation (RPO) of the Department. Further EDP has executed the following PPA: - 100MW of Solar power from NTPC and has been receiving RE power from 9/5/2022 which is being accounted for RPO - 50 MW of Solar RE power from SECI - 240.64 MW of Wind RE power from SECI and EDP is receiving 85.50MW of wind power since August 2022 which is being accounted for RPO. EDP submits to inform that the RE power from the above sources would be sufficient to fulfill EDP's RPO obligation.

Commission's Response
The Commission takes note of the Petitioner's Submission.

9.1.7. Utilising the provision of FPPCA formula

Originally Issued in Tariff Order dated May 20, 2019
Commission's Latest Directive in MYT Order The Commission takes note of the Petitioner's Submission.
Petitioner's Response in Present Tariff Petition The FPPCA calculations for the 2nd to 4th Quarter of FY 2021-22 has been submitted to the Commission on 17/8/2022. Since the difference between the Rapp and Ract is 3 paisa/unit for Q2, 6 paisa/unit for Q3, 13 paisa/unit for Q4 EDP has accounted the same in the True up exercise of FY 2021-22. The FPPCA calculations for the 1st qtr of FY 2022-23 was also submitted to JERC on 5/8/2022 and approval of JERC has also issued directions for collections of the same on 28/10/2022. Since EDP being an integral part of the Govt of Puducherry the approval of the Government has been sought for levy of 35 paisa/unit for Q1 of FY 2022-23. Upon receipt of Govt approval FPPCA charges would be levied and collected.
Commission's Response The Commission takes note of the Petitioner's Submission.

9.1.8. Category-wise per kW/kVA data

Originally Issued in Tariff Order dated April 7, 2021
Commission's Latest Directive in MYT Order The Commission takes note of the Petitioner's Submission.
Petitioner's Response in Present Tariff Petition The same is under preparation and would be submitted shortly.
Commission's Response The Commission takes note of the Petitioner's Submission. The Petitioner to submit the same within 1 month of issue of this order.

9.1.9. New billing software

Originally Issued in Tariff Order dated April 7, 2021
Commission's Latest Directive in MYT Order 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.
Petitioner's Response in Present Tariff Petition The new billing software developed by NIC has been implemented in the outlying regions of Mahe and Yanam. In respect of Puducherry region the new billing software has been implemented in the Urban Division. Since the number of services with respect to Karaikal and other divisions of Puducherry region is voluminous the implementation is being done in a phased manner. The same is expected to be completed within 3 months in coordination with NIC. Portable blue tooth printers are being procured to issue real-time spot billing to consumers.
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 MYT Order 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.
Petitioner's Response in Present Tariff Petition Complied.
Commission's Response The Commission takes note of the Petitioner's Submission.

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 The Commission takes note of the Petitioner's Submission.
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.

9.1.12. DPR for Revamped Distribution Scheme- Reforms Based Results Linked Scheme

Commission's Latest Directive in MYT Order The Commission directs the Petitioner to provide DPR for "Revamped Distribution Scheme- Reforms Based Results Linked Scheme", within 3 months of this Order.
Petitioner's Response in Present Tariff Petition EDP has submitted the details of the RDSS to the commission in the Business Plan for the Control period FY 2022-23 to FY 2024-25. In this connection it is to be stated that the DPR has been approved by the Government only during September 2022. As such the soft copy of the approved DPR has already been submitted to Commission on 22-11-2022.
Commission's Response The Commission takes note of the Petitioner's Submission.

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

Commission's Latest Directive in MYT Order

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
Petitioner's Response in Present Tariff Petition EDP has submitted the details of the Pre-paid Smart meter part of RDSS to the Commission in the Business Plan for the Control period FY 2022-23 to FY 2024-25. In this connection it is to be stated that the DPR has been approved by the Government only during September 2022. As such the soft copy of the approved DPR has already been submitted to Commission on 22-11-2022. It is also to be stated that since the percentage of the number of Agriculture services is very meager, fixing of smart meters has also been contemplated for Agriculture services also.
Commission's Response The Commission takes note of the Petitioner's Submission. The Petitioner is directed to submit the detailed plan for smart metering within 3 months of issue of this Order.

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

Commission's Latest Directive in MYT Order 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
Petitioner's Response in Present Tariff Petition EDP submits that category wise break up of costs relating MBC is very difficult for the Department as no MIS/ERP solution is implemented at the Department. It is therefore requested that Commission may give time to implement ERP & MIS system at Electricity Department through which field level information abstract could be obtained.
Commission's Response The Commission takes note of the Petitioner's Submission. The Petitioner is directed to submit a detailed plan for ERP & MIS system withing 3 months of the issue of the order.

9.1.15. Separate Accounting for Regulatory Surcharge

Commission's Latest Directive in MYT Order The Commission directs the Petitioner to maintain the separate accounting for Regulatory surcharge.
Petitioner's Response in Present Tariff Petition EDP is maintaining separate accounting for Regulatory Surcharge as per the directions.
Commission's Response The Commission takes note of the Petitioner's Submission.

9.1.16. Sale of surplus power in the open market

Commission's Latest Directive in MYT Order
The Commission directs the Petitioner to adhere 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.
Petitioner's Response in Present Tariff Petition
The Department is in the process of appointing M/s. PTC as Consultant for real time power portfolio Management which includes sale of surplus power. Provisional Letter of Award issued to M/s PTC has been accepted and on issue of LOA the Consultant would assist the PED for comprehensive Power Portfolio Management efficiently. Apart from the above the Un-Requisitioned Surplus Power through from M/s. NLCIL and M/s. NTPC are being traded by the same entities on behalf of PED, on profit sharing basis.
Commission's Response
The Commission takes note of the Petitioner's Submission.

9.2. New directive(s) in this Order

9.2.1. kVAh based tariff for LT-Industrial and LT-Commercial categories

The Petitioner is directed to ensure kVAh reading for all LT-Industrial and LT-commercial meters at the earliest so that kVAh based billing can be introduced for them too as has been done for HT consumers and submit the requisite information along with the Tariff Petition for FY 2024-25.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 146: Tariff Schedule*

S.No.	Category of Consumers	Approved Tariff	
		Fixed Charges	Energy Charges
1	Life Line Services /OHOB		
a	0-50 units per month	Rs. 10/kW/Month or part thereof	Rs. 1.45/kWh
2	Domestic Purposes		
a	0-100 units per month	Rs 30/kW/Month or part thereof	Rs. 2.25 /kWh
b	101-200 units per month		Rs. 3.25 /kWh
c	201-300 units per month		Rs. 5.40 /kWh
d	Above 300 units per month		Rs. 6.80 /kWh
3	Commercial		
I	LT Commercial		
a	0-100 units per month	Rs. 75.00 /kW/Month or part thereof	Rs. 6.00 /kWh
b	101-250 units per month		Rs. 7.05 /kWh
c	Above 250 units per month		Rs. 7.80 /kWh
II	HT Commercial (For contract demand up to 5000 kVA)	Rs. 420 /kVA / month or part thereof	Rs. 5.60 /kVAh
4	Agriculture		
I	Agriculture		
	Small farmers	Rs. 20/HP/month or part thereof	-
	Other Farmers	Rs. 75/HP/month or part thereof	-
II	Cottage Industries/Poultry Farms /Horticulture/ Pisciculture		
a	0-100 units per month	Rs 30/kW/Month or part thereof	Rs. 2.25 /kWh
b	101-200 units per month		Rs. 3.25 /kWh
c	201-300 units per month		Rs. 5.40 /kWh
d	Above 300 units per month		Rs. 6.80 /kWh
5	Public Lighting		
a	Public Lighting	Rs.110/pole/ month or part thereof	Rs. 7.10 /kWh

Secretary (I/c), JERC
(For Goa and UTs)

S.No.	Category of Consumers	Approved Tariff	
		Fixed Charges	Energy Charges
6	Industries		
a	LT Industries	Rs.50.00 /kW/Month or part thereof	Rs. 6.35/kWh
b	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	Rs. 420 / kVA / month or part thereof	Rs. 5.45 /kVAh
c	EHT Industries (For Supply at 110 kV or 132 kV)	Rs. 480 / kVA / month or part thereof	Rs. 5.50 /kVAh
7	LT Water Works	Rs. 150/connection/ month or part thereof	Rs. 7.20/kWh
8	HT Other	Rs. 480/ kVA /month or part thereof	Rs. 6.25/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.	
10	Electric Vehicle Charging Station	-	Rs.5.33/kVAh#
11	Hoardings/signboards	Rs. 140/kVA/ month or part thereof	Rs. 8.00/kWh

*A Regulatory Surcharge of 8.00% 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.

Secretary (I/c), JERC
(For Goa and UTs)

10.2. Applicability

Table 147: 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 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.
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 8.00% 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 kVAh. 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 1.5% 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 1.5% 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**

   (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 148: 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.

10.4. Schedule of Other Charges

Table 149: Schedule of Other Charges

S. No.	Description	Charges (INR)
A	Charges for Service Connections	
A1	New LT overhead service lines	
1	One hut one Bulb	Nil
2	Other single phase Services	250
3	Three phase Services	500
4	L.T C. T operated Meter services	3,000
5	H.T Services	10,000
A2	New LT underground service lines	
1	Single Phase services	500
2	Three phase Services	1,000
A3	Rating / re-rating of services	
1	Single phase Services	125
2	Three phase Services	250
3	L.T C.T operated Meter service	1,500
4	H.T Service	2,500
Note: **The above charges under (A1) & (A2) will be applicable for addition or alteration or reduction of connected load and enhancement or reduction of CMD or alteration of internal Electrical installations.**		
B	Testing for Installation	
1	Domestic lighting / Commercial lighting / Agriculture Services	200
2	Other LT Services	900
3	HT/EHT Services	7,500
Note: **Testing for servicing a new installation (or of an extension or alteration) - For the first test No Charge. Subsequent testing warranted due to absence of contractor or his representative (or) due to defects in wiring of consumer's premises or at the request of the consumer or at occasions that warrant testing of installations for the second time for reasons attributable to the consumers**		
C	Testing for meters and metering arrangements	
1	Single phase direct meter	150
2	Three phase direct meter up to 50 A	200
3	L.T C.T coil test	800
4	H.T Tri-vector Meter (0.5 class accuracy or CT operated LT meters)	1,500
5	H.T Tri-vector Meter (0.2 class accuracy)	2,000
6	H.T Metering Cubicle	3,500
D	Testing of HT/EHT Consumer Protective Equipment	
1	Testing charges for protective relays (Earth fault, line fault etc.)	4,500
2	Testing charges for one set of current transformer	4,500
3	Testing charges for one set of potential transformer	4,500
4	Testing charges for one set of EHT current transformer	6,000
5	Testing charges for one set of EHT potential transformer/ CVT	6,000

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S. No.	Description	Charges (INR)
6	Testing charges for one set of HT circuit breaker	4,500
7	Testing charges for one set of EHT circuit breaker	6,000
8	Testing charges for measurement of earth resistance	3,000
9	Testing charges for Transformer oils	500
E	Disconnection/Re-connection Charges	
1	Disconnection of L.T service on request	100
2	Disconnection of HT service on request	500
3	Reconnection of L.T Service (on all occasions)	100
4	Reconnection of HT Service (on all occasions)	1,000
F	Title Transfer of Services	
1	Domestic	250
2	Commercial Lighting Installation	500
3	All other LT installation	1,000
4	HT/EHT Services	2,000
G	Furnishing of Certified Copies (To be issued to the consumer only)	
1	Issue of duplicate Monthly bills for a month	10
2	Contractor's completion-cum test report	10
3	Ledger Extract	20/calendar year or part thereof
4	Agreement	50
5	Estimate	50
H	**Charges for Replacement of Burnt Meters**	
1	LT Single Phase meters	700
2	LT Three Phase meters	1,300
3	Three Phase LT meters with CTs	3,000
4	HT Meter 0.5s class of accuracy	6,500
5	HT Meter 0.2s class of accuracy	30,000
6	HT Metering Cubicle (CT/PT Unit)	70,000
I	Fuse Renewal Charges	
1	Domestic	NIL
2	Commercial	50
3	L.T Industrial	50
4	High Tension/Extra High Tension Installation	250
J	Shifting of Meter Board at Consumer's Request	
1	LT Single Phase Supply	125
2	**LT Three Phase Supply**	250

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Annexures

Annexure 1: List of Stakeholders

The following is the list of the participants in Public Hearing conducted on 24.2.2023:

Table 150: List of participants in Public Hearing

S. No.	Name
1.	Sh .Shrikanth representative of M/s Chemfab Alkalies Ltd.
2.	Sh. Vai.Bala – Puducherry Consumers forum representative
3.	Sh. Nehru @ Kuppusamy MLA
4.	Sh. Rajangam
5.	Sh. Arunachalam
6.	Sh. Pavadaisamy
7.	Sh.Rajangam
8.	Sh.Srinivasan
9.	Sh.Sanjay
10.	Sh. Kolanjiyappan
11.	Sh.Perumal
12.	Sh.G.Ramasamy
13.	Sh. Arulmathi
14.	Sh.R.Lenin
15.	Sh.Kameshwaran
16.	SNAM Alloys Private Limited