TARIFF ORDER

True-up of FY 2020-21, Annual Performance Review of FY 2021-22 and Determination of Aggregate Revenue Requirements (ARR) for 3rd Control Period from FY 2022-23 to FY 2024-25 and Determination of Retail Tariff for FY 2022-23

Petition No. 66/2021

for

Electricity Department of Daman & Diu

31st March 2022

JOINT ELECTRICITY REGULATORY COMMISSION
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List of Abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
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
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crore
Discom	Distribution Company
EDDD	Electricity Department of Daman & Diu
DSM	Deviation Settlement Mechanism
EA, 2003	The Electricity Act, 2003
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
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission (for the state of Goa and Union Territories)
JGPP or GGPP	NTPC Jhanor-Gandhar Gas Based Power Station
KAPPS	Kakrapar Atomic Power Station
KGPP	NTPC Kawas Gas Based Power Station
KSTPP	Korba Super Thermal Power Station
LT	Low Tension
MSTPS	Mauda Super Thermal Power Station
MU	Million Units
MYT	Multi Year Tariff
NFA	Net Fixed Assets

Abbreviation	Full Form
NTPC	National Thermal Power Corporation Ltd.
O&M	Operation and Maintenance
PFC	Power Finance Corporation
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
PWD	Public Works Department
R&M	Repair and Maintenance
REC	Renewable Energy Certificate
RLDC	Regional Load Dispatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RRAS	Reserves Regulation Ancillary Services
SBI PLR	State Bank of India Prime Lending Rate
SERC	State Electricity Regulatory Commission
Sipat	Sipat Super Thermal Power Station
SLDC	State Load Dispatch Center
Solapur or SLP	Solapur Super Thermal Power Station
SOP	Standard of Performance
STU	State Transmission Utility
TAPPS	Tarapur Atomic Power Station
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
VSTPP	Vindhyachal Super Thermal Power Station
WART	Weighted Average Retail Tariff

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

CORAM

Smt. Jyoti Prasad, Member (Law)

Petition No. 66/2021

In the matter of

Approval for the True-up of FY 2020-21, Annual Performance Review for FY 2021-22, Determination of Aggregate Revenue Requirements (ARR) for 3rd Control Period from FY 2022-23 to FY 2024-25 and Retail Tariff for FY 2022-23.

And in the matter of

Electricity Department, Daman & Diu (EDDD) ....**Petitioner**

ORDER

Dated: 31st March 2022

1. This Order is passed in respect of a Petition filed by the Electricity Department, Daman & Diu (EDDD) (herein after referred to as "The Petitioner" or "EDDD" or "The Licensee") for approval of True-up of FY 2020-21, Annual Performance Review of FY 2021-22, Determination of Aggregate Revenue Requirements (ARR) for 3rd Control Period from FY 2022-23 to FY 2024-25 and Retail Tariff for FY 2022-23 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2. The Commission scrutinized the said Petition and generally found it in order. The Commission admitted the Petition on 30th 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. Further, suggestions/comments/views and objections were invited from the Stakeholders and Electricity Consumers. Further, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually. The virtual Public Hearing was held on 2nd February, 2022 and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3. The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the True-up of FY 2020-21 and APR of FY 2021-22. The Commission has also determined the ARR for 3rd Control Period from FY 20222-23 to FY 2024-25 along with the Retail Tariff for FY 2022-23.

4. A summary has been provided as follows:

Secretary, JERC
(For Goa and UTs)

(a) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2020-21:

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1104.30	1095.22
2	Revenue from Retail Sales at Existing Tariff	1090.37	1090.37
	Net Gap /(Surplus)	**13.93**	**4.84**

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

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

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Net Revenue Requirement	1319.77	1333.66
2	Revenue from Retail Sales at Existing Tariff	1188.45	1197.14
3	Revenue from FPPCA	122.10	93.03
4	Total Revenue (2+3)	1310.55	1290.18
	Net Gap /(Surplus)	**9.22**	**43.48**

(c) The following table provides ARR, Revenue and gap/surplus as submitted by the Petitioner and approved by the Commission for FY 2022-23 as approved by the Commission:

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2022-23 (INR Crore)

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Net Revenue Requirement	1319.91	1332.14
2	Revenue from Retail Sales at Approved Tariff	1261.18	1259.57
	Net Gap/(Surplus)	**58.72**	**72.57**

(d) Accordingly, the following table provides the cumulative revenue Gap/ (Surplus) at existing tariff by the end of FY 2022-23:

Table 4: Cumulative Revenue Gap/ (Surplus) approved at Existing Tariff for FY 2022-23 (INR Crore)

S. No	Particulars	Formula	FY 2020-21	FY 2021-22	FY 2022-23
a	Opening Gap/(Surplus)		7.11	12.79	59.03
b	Add: Gap/(Surplus)		4.84	43.48	72.57
c	Closing Gap/(Surplus)	(c=a+b)	11.95	56.27	131.61
d	Average Gap/(Surplus)	(d=(a+c)/2)	9.53	34.53	95.32
e	Interest Rate on carrying cost		8.75%	8.00%	8.00%
f	Carrying/Holding Cost	(f=d*e)	0.83	2.76	7.63
g	**Final Closing Gap/ (Surplus)**	**(g=c+f)**	**12.79**	**59.03**	**139.23**

(e) As the cumulative revenue gap including previous years gap of Rs 59.03 Crore, the Commission has allowed recovery of previous years revenue gap through regulatory surcharge to be levied at 4.40%. For meeting the balance revenue gap, the Commission has decided to revise the tariff of all consumers categories and approved and average tariff hike of 6.58%. The Commission has tried to limit the tariff increase in each category in order to safeguard the interests of consumers by avoiding abnormal increase in tariffs.

(f) Accordingly, upon consideration of tariff hike of 6.58%, the resultant Revenue Gap/(Surplus) at approved tariff has been shown in the following table:

Table 5: Cumulative Revenue Gap/ (Surplus) at approved Retail Tariff for FY 2022-23 (INR Crore)

Sr. No.	Particulars	Value
1	Total Gap	139.23
2	Revenue from Regulatory Surcharge	59.03
3	Balance Gap	80.20
4	Additional Revenue	82.89
5	**Balance Gap/(Surplus)**	**(2.69)**

(g) The Commission intended to approve the cost reflective tariffs by designing the category wise tariff linked to voltage wise cost of supply. However, due to non-availability of crucial information to determine voltage wise cost of supply, the Commission in this Tariff Order has designed the tariffs with respect to average cost of supply. The Commission has directed the Petitioner to maintain and submit the information for voltage wise cost of supply in its next year tariff application.

(h) The Commission has tried to rationalize the tariff and has approved the Fixed Charges for Domestic and Commercial category on Rs/kW basis instead of Rs/connection basis.

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

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

Sd/-
(Jyoti Prasad)
Member (Law)

Place: Gurugram
Date: 31st March, 2022

Certified Copy

RKumar.

Rakesh Kumar
(Secretary)

1. Chapter 1: Introduction

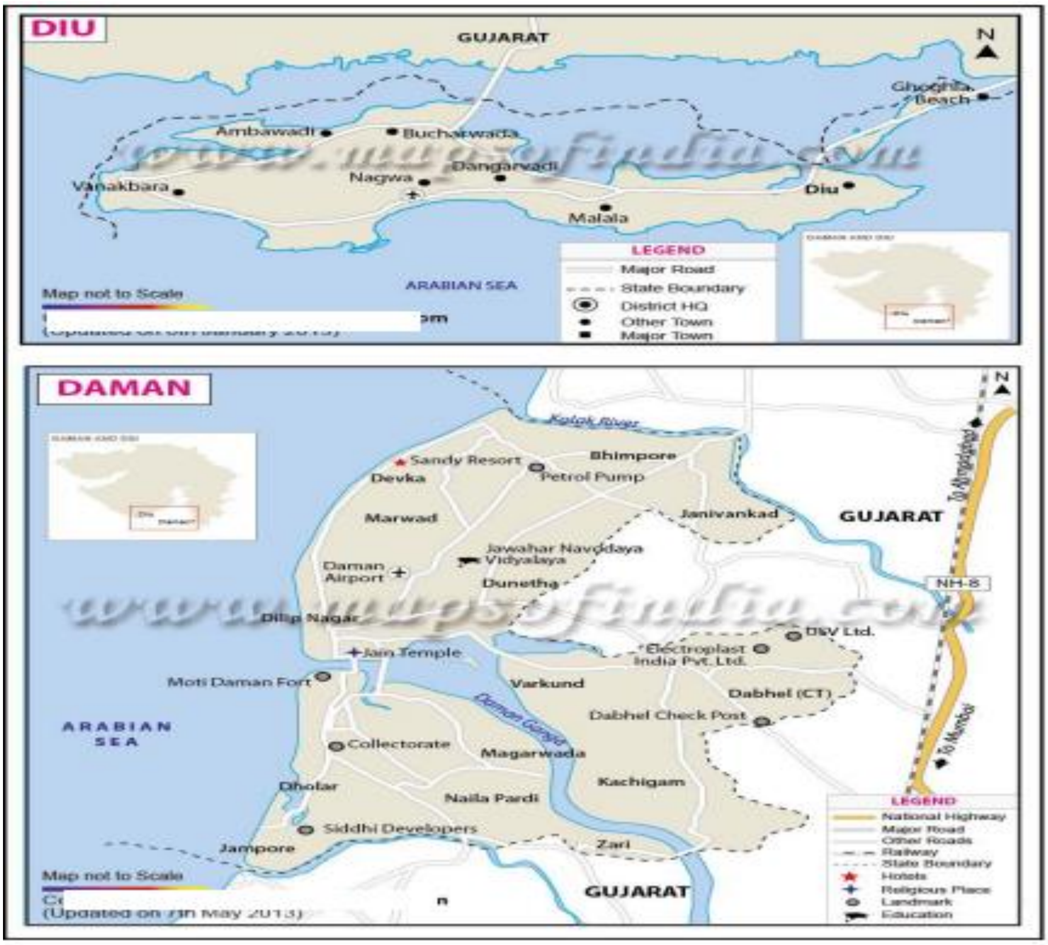
1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "the Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated May 2, 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 May 30, 2008.

JERC is an autonomous 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 interest of consumers and ensuring supply of electricity to all areas.

1.2. About Daman & Diu

Daman and Diu (hereinafter referred to as "DD") covers a total area of 112 sq. km, with the Daman District comprising of an area of 72 sq. km and Diu District of 40 sq. km. In FY 2020-21, the power demand of the DD was predominantly from HT and LT industries, contributing to 82.25% of sales.



1.3. *About Electricity Department of Daman & Diu (ED DD)*

The Electricity Department of Daman and Diu (hereinafter called "EDDD"), is a Deemed Licensee under Section 14 of the Electricity Act 2003, and is carrying on the business of transmission, distribution and retail supply of electricity in Daman & Diu. It is responsible for ensuring quality and continuous power supply to every resident of Daman and Diu at the most economical rates.

The key duties being discharged by Daman & Diu Electricity Department are:

- Laying and operating of such electric line, sub-station and electrical plant that is primarily maintained for the purpose of distributing electricity in the area of supply of 'Daman & Diu Electricity Department', notwithstanding that such line, sub-station or electrical plant are high tension cables or overhead lines or associated with such high-tension cables or overhead lines; or used incidentally for the purpose of transmitting electricity for others, in accordance with Electricity Act. 2003 or the Rules framed there under.

- Operating and maintaining sub-stations and dedicated transmission lines connected there with as per the provisions of the Act and the Rules framed there under.

- Arranging, in-coordination with the Generating Company(ies) operating in or outside the State, for the supply of electricity required within the State and for the distribution of the same in the most economical and efficient manner;

- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;

- Preparing and carrying out schemes for distribution and generally for promoting the use of electricity within the State.

EDDD does not have its own power generation station except some solar generation and completely rely on its allocation in the Central Sector Generating Stations (CSGS) in Western and Eastern Region to meet its energy demand. The present power allocation of Daman & Diu is approximately 398 MW from various central generating stations including 38 MW from Ratnagiri Gas and Power Private Limited (RGPPL). Additionally, EDDD has 70 MW allocations from NSPCL Bhilai Power Station.

The total installed solar capacity in the UT of Daman and Diu is 14.363 MW out of which 10 MW is ground mounted and the remaining 4.363 MW is solar rooftop plants. Further, as per the renewable energy Policy, 2017 all the HT/EHT consumers were directed to install solar rooftop plants at 5% of the contract demand. Hence, as of now a total of 25.90 MW of solar rooftop plants have been installed by HT/EHT consumers.

Existing Network

The present distribution system of EDDD consists of 32.60 circuit km of 220 kV Double Circuit (D/C) lines, 88.70 ckt kms of 66kV lines, 447.62 circuit kms of 11kV lines (O/H as well as U/G) and 791.71 circuit kms of LT OH & U/G lines along with 926 transformers. Presently, there are 124 no. 11 kV feeders and 6 no. 66 kV feeders in the network of Daman & Diu.

Daman gets power at 220/66 kV Magarwada Substation and 220/66 kV Ringanwada Substation. The 220/66 kV Magarwada Substation gets power from 220 kV (D/C) Ambethi-Magarwada line and from 220 kV (D/C) Magarwada (POWERGRID) Magarawada, Daman. The 220/66 KV Ringanwada Substation gets power from 220kV (D/C) Magarwada (POWERGRID) Magarawada, Daman. Diu gets power from 66 kV Una Substation through 66 kV double circuit line emanating from 220 /66 kV Kansari Substation of GETCO.

The details of the transmission and distribution network of EDDD are as follows:

Table 6: Transmission and Distribution System of EDDD

S.No.	Details	Daman (ckms)	Diu (ckms)	Total (ckms)
1	220 KV D/C Line	32.60	-	**32.60**
2	66 KV D/C Line	66.70	22.00	**88.70**
3	11 KV Line O/H	180.32	4.00	**184.32**
4	11 KV Line U/G	177.92	85.38	**263.30**
5	L T Line	430.50	77.00	**507.50**
6	LT Line U/G	174.20	110.00	**284.20**
7	Transformer Center (Nos.)	795	131	**926**

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 on August 10, 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, Dadra & Nagar Haveli and Daman & Diu 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 on 22 March 2021. The said Regulations have been hereinafter referred to as the "JERC MYT Regulations". As per Clause 2.1.18 of these Regulations, the "Control Period" is defined as the multi-year period comprising of three financial years from FY 2022-23 to FY 2024-25. These Regulations are applicable to all the generation companies and 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. Approval of Business Plan for 3rd MYT Control Period

In accordance with the Regulation 8.1 and 17 of the JERC MYT Regulations 2021, the Petitioner filed the Petition for approval of Business Plan for 3rd Multi-Year Control Period from FY 2022-23 to FY 2024-25 on December 22, 2021. The Commission issued the Business Plan Order for the MYT Control Period (hereinafter referred to as 'Business Plan Order') on March 31, 2022.

1.7. Filing and Admission of the Present Petition

In accordance with the Regulation 9.1 of the JERC MYT Regulations, 2021 the Petitioner filed the MYT Petition for approval of True-up of FY 2020-21, Annual Performance Review for FY 2021-22, Aggregate Revenue Requirements (ARR) for 3rd MYT Control Period (FY 2022-23 to FY 2024-25) and Retail Tariff for FY 2022-23 on 22 December, 2021.

After initial scrutiny/analysis, the present Petition was admitted on 30th December, 2021 and marked as Petition no.66/2021.

1.8. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted, and certain deficiencies were observed. Accordingly, deficiency 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 on the issues through various letters/emails.

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

The following table provides the list of interactions with the Petitioner along with the dates:

Table 7: List of interactions with the Petitioner

S. No.	Subject	Date
1	Receipt of Petition by the Commission	December 22, 2021
2	Admission of the Petition by the Commission	January 04, 2022
3	1st Deficiency Note issued by the Commission	January 26, 2022
4	2nd Deficiency Note issued by the Commission	February 04, 2022
5	Reply to the 1st Deficiency Note received by the Commission	February 13, 2022
6	Technical Validation Session (TVS) with Petitioner at JERC Office	February 18, 2022
7	3rd Deficiency Note issued by the Commission on queries raised during TVS	February 19, 2022
8	Reply to the 3rd Deficiency Note received by the Commission	February 26, 2022
9	4th Deficiency Note issued by the Commission	March 7, 2022
10	Reply to the 4th Deficiency Note received by the Commission	March 11, 2022

The Order has referred at numerous places to various actions taken by the "Commission". It may be mentioned for the sake of clarity that the term "Commission," except for the Hearing and Orders, denotes the Secretariat of the Commission responsible for carrying out technical due diligence and validation of data of the Petitions filed by the Utilities, obtaining and analysing information/clarifications received from the Utilities, and submitting relevant issues for consideration of the Commission.

1.9. Notice for Public Hearing

Public notices were published by the Petitioner 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	18.01.2022/19.01.2022	Hindustan Times (English)	Daman & Diu
2	18.01.2022/19.01.2022	Asli Azadi (Hindi)	Daman & Diu
3	18.01.2022/19.01.2022	Vartman Prabha (Gujarati)	Daman & Diu
4	18.01.2022/19.01.2022	Savera India Times (Hindi)	Daman & Diu

The Commission published Public Notices in the leading newspapers as per following table, giving due intimation to the Stakeholders and consumers:

Table 9: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Place of Circulation
1	07.01.2022/31.01.2022	Asli Azadi (Hindi)	Daman & Diu
2	07.01.2022/31.01.2022	Gujarati Samachar (Gujarati)	Daman & Diu
3	07.01.2022/31.01.2022	The Times of India (English)	Daman & Diu
4	07.01.2022/31.01.2022	Savera India Times (Hindi)	Daman & Diu

The notice was also uploaded on the Commission's website.

1.10. Public Hearing

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

Accordingly, the Virtual Public Hearing was held on February 2nd, 2021 from 11 AM onwards to enable the stakeholders to raise issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of stakeholders who attended the Public Hearing are provided as Annexure I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

2. Chapter 2: Stakeholder Comments

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 duly inviting comments from the Public as per the provisions of the JERC MYT Regulations, 2021.

The Virtual Public Hearing was held on February 2nd, 2021 on Petition for the True-up of FY 2020-21, Annual Performance Review of FY 2021-22 and Determination of Aggregate Revenue Requirement (ARR) for 3rd Control Period from FY 2022-23 to FY 2024-25 and Retail Tariff for FY 2022-23. During the Public Hearing, stakeholders presented their views in person before the Commission. There were other participants from the general Public, who were also given an equal opportunity to present their views/suggestions in respect to the Petition.

The Petitioner has also filed the Business Plan Petition for the Control Period from FY 2022-23 to FY 2024-25. The combined public hearing was held on the both the Petitions i.e., Business Plan Petition and MYT Petition. The issues raised by the stakeholders related to Business Plan Petition are discussed in the Order issued by the Commission on Business Plan Petition and the issues related to Truing up of FY 2020-21, APR of 2021-22 and Multi Year Tariff for FY 2022-23 to FY 2024-25 are dealt in this Order.

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

2.2. Suggestions/ Comments, Response of the Petitioner 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 determination of ARR, tariff design and Directives. Relevant observations have been suitably considered by the Commission while finalizing the Tariff Order. The submissions of the Stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Power Purchase Costs

Stakeholder's Comment

The Petitioner has to submit the reasons for projecting much higher power purchase cost.

Petitioner's Response

It is submitted that the power purchase cost for the MYT Control Period has been determined considering the power purchase quantum required by the Department to distribute electricity in Daman and Diu and the cost for purchasing the electricity is determined by considering the cost at which the Department purchased electricity during the first six months of FY 2021-22. Hence, the Hon'ble Commission is requested to approve the power purchase cost as submitted by EDDD in the Petition for the MYT Control Period.

Commission's View

The Commission notes the Stakeholder's observation regarding projection of higher power purchase cost for 3rd Control Period. In this regard, the Commission has duly scrutinized the Power Purchase details including details of the assumptions taken into account by EDDD for projecting the power purchase cost for 3rd Control Period.

Based on the details submitted by the Petitioner and past trends of actual power purchase costs, the Commission has approved the Power Purchase Cost for 3rd Control Period as detailed in Chapter 5 of this Order.

2.2.2. *Revenue Gap submitted at the end of FY 2022-23*

Stakeholder's Comment

The Petitioner has to submit the reasons for revenue gap claimed.

Petitioner's Response

The EDDD would like to submit that the revenue gap claimed depends upon the various cost incurred by the Department in distribution of electricity in Daman and Diu and the revenue billed by the Department at the tariff rate approved by the Hon'ble Commission. Hence, the Hon'ble Commission is requested to approve the revenue gap as submitted by EDDD in the Tariff Petition for FY 2022-23.

Commission's View

The Commission has noted the concern of the Stakeholder. The Commission has carried out the detailed analysis of all the components of ARR and Revenue for FY 2020-21 based on audited accounts and in accordance with the provisions of JERC MYT Regulations, 2018 as detailed in Chapter 3 of the Order and the Commission has carried out the Annual Performance Review of FY 2021-22 in accordance with the provisions of JERC MYT Regulations, 2018 as detailed in Chapter 4 of the Order. Further, the Commission has carried out the detailed analysis of all the elements of ARR for the upcoming Control Period from FY 2022-23 to FY 2024-25 in accordance with the provisions of JERC MYT Regulations, 2021 and has accordingly approved the revenue gap for FY 2022-23.

2.2.3. *Security Deposit*

Stakeholder's Comment:

The Petitioner has to submit the reasons for the increasing Consumer Security Deposit amount. The stakeholder claimed that the Domestic Consumers in the UT cannot afford higher Consumer Security Deposit charges (INR 8,000/- to Rs. 10,000/-). Hence, the Petitioner has to submit the reason for the increasing Consumer Security Deposit amount for the Domestic users.

Petitioner's Response:

It is submitted that the Department takes security deposit from the consumers as per the JERC (Electricity Supply Code) Regulations, 2018.

Commission's View:

The Commission has taken note of the Stakeholder's observation and Petitioner's response. The Security Deposit from the consumers is collected as per the JERC (Electricity Supply Code) Regulations, 2018 and with increase in number of consumers and connected load, the overall security deposit increases every year.

2.2.4. *Non-Functioning of Street Lights*

Stakeholder's View

It has been observed that in majority of the area in Daman & Diu, the Street Lights are not working. The Petitioner has to submit the reason for the same.

Petitioner's Response

It is submitted that providing street lights on major district roads come under the scope of the PWD and providing street lights on other roads come under the scope of local bodies. Recently, due to road widening the street lights have been removed at a number of places. Providing the street lights again will also be done by the PWD and respective local bodies.

Commission's View

The Commission takes a serious note of the Stakeholder's concerns regarding non-functioning of street lights as providing proper lighting forms a major part of safety and security of the residents of UT. The Petitioner should follow up with PWD and local bodies to expedite the road widening work and re-installation of the street lights.

2.2.5. EV Charging Station Tariff

Stakeholder's View

The tariff proposed for EV Charging Station is very high.

Petitioner's Response

The EDDD has noted the observations. However, the Hon'ble Commission is empowered to take any decision in the matter.

Commission's View

The Commission has noted the observations of the Stakeholder. The Commission has taken care of the issue while finalizing the tariff for EV Charging Station

2.2.6. Garden Expenditure

Stakeholder's View

The Petitioner in its accounts has booked expenditure of around INR 70-80 lakh on maintenance of gardens. The stakeholder sought the details of gardens for which such expenses are incurred.

Petitioner's Response

It is submitted that the amount was spent on the upkeep of the gardens which come under the premises of the Department. Hence, the Hon'ble Commission is requested to approve the same.

Commission's View

The Commission has noted the observation of the Stakeholder and the response of the Petitioner. The Commission has observed that the said expenses have been incurred by EDDD on the upkeep of Gardens and the same has been included under A&G Expenses. The Commission has approved the A&G expenses after carrying out the prudence check of the expenses in accordance with the provisions of applicable JERC MYT Regulations.

2.2.7. E-Tendering Expenditure

Stakeholders' Comment

The Petitioner in its accounts has shown nil expenses towards e-tendering process. The stakeholder sought justification for the same and whether e-tendering is being followed or not.

Petitioner's Response

It is submitted that during the past year no major capital infrastructure work was undertaken by the Department and therefore nil expenses have been shown against e-tendering.

Commission's View

The Commission has noted the observation of the Stakeholder and the response of the Petitioner.

2.2.8. Free Electricity for BPL and Agricultural Consumers

Stakeholders' Comment

The stakeholder requested that the free electricity should be provided to BPL consumers and Agricultural consumers. He also suggested that either the Commission should make a provision in Tariff Order for free electricity or Govt. should provide subsidy for the same.

Petitioner's Response

The EDDD has noted the observations. However, the Hon'ble Commission is empowered to take any decision in the matter.

Commission's View

The Commission has noted the suggestion made by the Stakeholder. In this regard, the Commission would like to clarify that under the powers conferred to JERC, providing free power or power at subsidized rates does not fall under the purview of JERC. JERC has been assigned with the responsibility of fixing the Tariff for consumers of each category as per the provision of the Electricity Act, 2003 and Tariff Policy, 2016. Any decision with regard to providing relaxation in tariff to be charged from consumers lies with the various state governments and central government in case of UT's.

2.2.9. Privatization of EDDD

Stakeholders' Comment

The stakeholder submitted that EDDD is planning to sell its INR. 5000 Crore assets and infrastructure to private player at price or around Rs. 500 Crore. The stakeholder opposed the privatization of electricity business.

Petitioner's Response

The Government of India has announced an initiative, as a part of Atmanirbhar Bharat Abhiyan to privatize Power Department/utilities in Union Territories on 16th May, 2020. Accordingly, the PFC has engaged a transaction advisor on behalf of Ministry of Power for the privatization of the distribution business of EDDD and DNHPDCL. Accordingly, the Tender Notice for sale of 51% of shares has been issued by the UT Administration.

Commission's View

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

The limited role of JERC w.r.t the decision of the appropriate government to corporatize and privatize the Electricity Department of Daman & Diu as envisaged under section 86(2) of the Electricity Act, 2003 is advisory in nature.

2.2.10. Power Staggering

Stakeholders' Comment

The stakeholder sought the justification for the weekly power staggering for industrial consumer when there is no shortage of power.

Petitioner's Response

It is submitted that due to coal shortage adequate power was not supplied to the Electricity Department by the generating stations during a few months of FY 2021-22. Hence, the Department had to resort to power staggering owing to the shortage of power. However, in recent months no power staggering has been undertaken by the Department as adequate power supply is being maintained by the generating stations.

Commission's View

The Commission has noted the concern of the Stakeholder regarding power staggering. The Commission directs the Petitioner to maintain adequate power availability at UT periphery to maintain the uninterrupted power supply to the consumers in the UT and ensure that the power cuts and staggering is as minimal as possible.

2.2.11. Occupancy Certificate

Stakeholders' Comment

The stakeholder raised the issue that EDDD is insisting for Occupancy Certificate before providing new connection and the same should not be insisted.

Petitioner's Response

It is submitted that as per the JERC (Electricity Supply Code) Regulations, 2018 laid down by the Hon'ble Commission, various documents are required for providing new connection to the consumers. Hence, the Department follows the guidelines laid by the Hon'ble Commission in issuing new connection.

Commission's View

The Commission has noted the views of the Stakeholder and response of the Petitioner. The Commission observes that the Petitioner has been issuing the connections based on guidelines laid by JERC for issuance of new connection in its Supply Code Regulations.

2.2.12. Notice for Hearing

Stakeholders' Comment

The stakeholder submitted that the proper notice for hearing was not given by EDDD.

Petitioner's Response

It is submitted that the Department took all measures to provide publicity regarding the Public Hearing. Advertisement was issued in newspapers (Hindi, English and Gujarati) having wide circulation in the Union Territory. A copy of the advertisement has also been submitted to the Hon'ble Commission. Further, notification was also given to all the Gram Panchayats, Daman and Diu Municipal Council, Hon'ble Member of Parliament and other local bodies through mail for wider publicity of the Public Hearing.

Commission's View

The Commission observes that EDDD by publishing advertisements in various newspapers had informed regarding the Public Hearing wherein objections / suggestions from the stakeholders on the Business Plan Petition were invited, in line with the relevant Regulations. The details of the publication of public notices are given in Chapter 1 of this Order. The Commission also observes that all the Gram Panchayats, Daman and Diu Municipal Council, Hon'ble Member of Parliament and other local bodies were also informed regarding the Public Hearing through mail for wider publicity of the Public Hearing. The Commission once again advises the Petitioner to adopt more proactive approach for creating the public awareness through timely publication of public notices or any other mode deemed appropriate by it in its area including pamphlets, banners, billboards etc. to be distributed/ displayed at various important public places like Panchayat, Government offices, Marketplaces etc., under intimation to the Commission.

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

3.1. Background

The Tariff Order determining the True-up for FY 2018-19, Annual Performance review of FY 2019-20 and Aggregate Revenue Requirement and tariff for FY 2020-21 was issued on May 18, 2020 (hereinafter referred to as the "ARR Order" for the purposes of True-up of FY 2020-21). The Tariff Order determining the True-up for FY 2019-20, Annual Performance review of FY 2020-21 and Aggregate Revenue Requirement and tariff for FY 2021-22 was issued on March 23, 2021 (hereinafter referred to as the "APR Order" for the purposes of True-up of FY 2020-21).

As per Regulation 11 of the JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018, the review and true-up of revenue and expenses of the Petitioner shall be carried out as follows:

*"**11. Annual Performance Review, Truing-up and tariff determination during the Control Period***

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."

"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;*
.........."

The Commission now in this Chapter carries out the true-up for FY 2020-21 as per the JERC (Generation, Transmission & Distribution Multi Year Tariff) Regulations, 2018.

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

The Petitioner has submitted audited accounts based on audit conducted by statutory auditor M/s Sumit Doshi & Co. (Chartered Accountant). The Commission in this Chapter now carries out the True-up of FY 2020-21, the second year of the 2nd Control Period (FY 2019-20 to FY 2021-22), in accordance with the principles laid down in the JERC MYT Regulations, 2018.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2020-21 as 2,126.89 MU as against approved energy sales quantum of 2,084.46 MU in the APR Order.

Commission's Analysis

Regulation 12.1 of the JERC MYT Regulations, 2018 provides:

"12.1 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;
(c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;
...

"

The Commission had approved the energy sales of 2,084.46 MU in the APR Order, against which actual energy sales of 2,126.89 MU have been submitted by the Petitioner now. The quantum of energy sales was verified from Energy Audit Report and billing data submitted by the Petitioner and the same were found to be in order.

The table below provides the energy sales approved by the Commission in the APR Order, the Petitioner's submission and quantum of energy sales now trued-up by the Commission:

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

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	139.5	139.73	139.73
2	Lifeline Consumer	-	-	-
3	Commercial	41.9	41.77	41.77
4	Agriculture	3.61	3.40	3.40
5	LT Industry	178.06	184.53	184.53
6	HT/EHT Industry	1,712.71	1749.48	1749.48
7	Public Lighting	6.06	5.53	5.53
8	Public Water Works	2.61	2.46	2.46
9	Temp. Supply	-	-	-
10	**Total**	**2,084.46**	**2,126.89**	**2126.89**

The Commission approves 2,126.89 MU as energy sales in the true-up of FY 2020-21.

3.4. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted that there was no open access sales and purchase during the FY 2020-21.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner specifies nil Open Access Sales and Purchase for FY 2020-21. Accordingly, the Commission has approved the same.

3.5. *Inter-State Transmission Loss*

Petitioner's submission

The Petitioner for FY 2020-21 has submitted the Inter-State transmission loss of 3.29%, as against the Commission's approved value of 3.66% in the APR Order.

Commission's Analysis

The Inter-State transmission loss submitted by the Petitioner for FY 2020-21 is 3.29%. It has been observed that the same has been computed on power purchase from energy exchange also. The Commission has determined the energy requirement from tied-up sources at UT periphery (2,001.48 MU) in Energy Balance approved in the "*Section 3.7: **Energy Balance***" of this Order. The energy requirement from tied-up sources (2,069.83 MU) has been considered as actual energy purchased as approved in "*Section 3.8: **Power Purchase Quantum and Cost***" of this Order. The difference between the two has been considered as the Inter-State transmission loss.

The following table provides the Inter-State transmission loss as approved in the APR Order, the Petitioner's submission and now approved by the Commission:

Table 11: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State transmission loss	3.66%	3.29%	3.30%

The Commission approves the Inter-State transmission loss at 3.30% in the true-up of FY 2020-21.

3.6. *Distribution Loss*

Petitioner's submission

The actual distribution loss for FY 2020-21 was 4.48% as compared to 6.60% approved by the Commission in the APR Order.

The Petitioner has submitted that it has been constantly endeavoring to reduce the T&D losses. It has arrived at the distribution loss based on actual sales data.

Commission's Analysis

As per the Energy Audit Report submitted by the Petitioner, the distribution loss is 4.48%, which is same as the Petitioner's submission. Accordingly, the Commission has considered the distribution loss as per the Energy Audit Report. Since, the Petitioner has been able to over-achieve the distribution loss target of 6.60% for the year, the incentive for the same has been provided to the Petitioner in accordance with the JERC MYT Regulations, 2018. The calculation of the same has been discussed in detail in *"Section 3.21: Incentive/Disincentive towards over/under-achievement of norms of distribution losses*" of this Order.

The following table provides the distribution loss approved in the APR of FY 2020-21, the Petitioner's submission and as approved by the Commission now:

Table 12: Distribution loss approved by the Commission (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Distribution loss	6.60%	4.48%	4.48%

The Commission approves Distribution loss at 4.48% in the true-up of FY 2020-21.

3.7. Energy Balance

Petitioner's submission

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

Table 13: Energy requirement submitted by the Petitioner (MU)

S. No.	Particulars	Formulae	Petitioner's Submission
(a)	Retail Sales		2126.89
(b)	Open Access Sales		0.00
(c)	Less: Energy Savings		0.00
(d)	**Total Sales**	d = a+b-c	**2126.89**
(e)	Distribution Loss	e = g-d	99.69
(f)	Distribution Loss (%)	f=e/g	4.48%
(g)	**Energy Required at Periphery**	g = d+e	**2226.58**
(h)	Sale to common pool consumer/UI Sale		12.40
(i)	Own generation		18.43
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2220.55**
(k)	Less: Energy Purchased through UI at Periphery		83.00
(l)	Less: Energy Purchased through exchange at Periphery		136.05
(m)	Less: Energy Purchased through Renewable Sources		0.00
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2001.50**
(o)	Inter-state transmission loss	o=q-n	68.14
(p)	Inter-state transmission loss (%)	p = o/q	3.29%
(q)	**Energy requirement at state periphery from generator end**	q = n+o	**2069.64**
(r)	**Total Energy requirement from tied up sources, UI/Exchange at generator end**	r=q+i+k+l+m	**2307.12**
(s)	**Total Energy requirement in UT including Open Access**		**2307.12**

Commission's Analysis

The information submitted by the Petitioner on power purchase quantum, UI over/under drawl, IEX/ Bilateral purchase has been studied along with the Energy Audit Report and accordingly the energy balance has been derived for FY 2020-21.

The following table provides the energy balance submitted by the Petitioner and now approved by the Commission.

Table 14: Energy balance approved by the Commission for FY 2020-21 (MU)

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved
(a)	Energy sales within the State/UT		2126.89	2126.89
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved
(d)	**Total Sales within the State/UT**	d=a+b-c	**2126.89**	**2126.89**
	Distribution losses			
(e)	In %	e=f/g	4.48%	4.48%
(f)	In MU	f=g-d	99.69	99.69
(g)	**Energy required at State Periphery**	g=d+f	**2226.58**	**2226.58**
(h)	Add: Sales in Unscheduled Interchange		12.40	12.40
(i)	Add: Sales in Power Exchanges		0.00	0.00
(j)	Less: Own Generation		18.43	18.43
(k)	Less: Purchase under UI		83.00	83.00
(l)	Less: Purchase from Exchange		136.05	136.07
(m)	Less: Open Access Purchase		0.00	0.00
(n)	**Total energy requirement at State Periphery from tied-up Sources**	n=g+h+i-j-k-l-m	**2001.50**	**2001.48**
	Transmission losses			
(o)	In %	o=p/q	3.29%	3.30%
(p)	In MU	p=q-n	68.14	68.35
(q)	**Total energy requirement from tied-up sources at generator end**	q=n+p	**2069.64**	**2069.83**
(r)	**Total requirement from Tied-up sources at generator end & UI/ Traders/Banking/within State**	r=q+j+k+l+m	**2307.12**	**2307.33**

3.8. *Power Purchase Quantum & Cost*

Petitioner's submission:

The Petitioner meets its power requirement from allocations from central generating stations like NTPC, NSPCL, NPCIL and other generating stations such as RGGPL including bilateral agreement and banking arrangements. The allocation from CGS consists of a fixed share of allocation for a year, and the Govt. of India changes the variable share of allocation from the unallocated quota, time to time. Since, during the peak summer seasons the allocation of power from various sources is inadequate, therefore the Petitioner procures power from short–term sources, i.e., Power Exchange, UI, Banking etc.

The Petitioner has submitted that against the power purchase cost of INR 966.61 Cr approved by the Commission in the APR Order it has incurred a cost of INR 984.28 Cr (inclusive of cost incurred towards meeting the transmission charges, Renewable Purchase Obligation and UI).

The EDDD purchased 136.07 MUs through the energy exchange at the cost of INR 45.80 Crore to meet its energy demand during FY 2020-21. The EDDD has requested the Commission to allow the UI purchase during FY 2020-21 without any penalty as the EDDD has already incurred that amount. The total UI purchase is 83.00 MU at the cost of INR 21.96 Cr, i.e., at Rs 2.65/kWh. Further, the EDDD generated 18.43 MUs of solar energy from its rooftop and ground mounted solar plants during the FY 2020-21 to meet its solar obligation. Further, the EDDD procured 1,80,000 non solar certificates to meet the Non-Solar RPO obligation.

The power purchase quantum and cost for FY 2020-21 as submitted by the Petitioner has been shown in the table below:

Table 15: Power Purchase quantum and cost submitted by the Petitioner

Particulars	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost
NTPC Stations						
KSTPP 1&2	362.50	22.81	55.72	0.11	78.64	2.17

Particulars	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost
KSTPP 3	46.72	5.52	7.66	0.04	13.21	2.83
VSTPP 1	82.18	6.91	14.58	-0.28	21.20	2.58
VSTPP 2	59.28	4.08	10.13	-0.14	14.07	2.37
VSTPP 3	81.84	7.70	13.95	-0.30	21.35	2.61
VSTPP 4	80.54	13.12	13.12	-0.09	26.16	3.25
VSTPP 5	57.75	9.13	9.98	-0.09	19.02	3.29
KAWAS GPP	35.27	18.70	6.74	1.17	26.61	7.54
Gandhar GPP	30.36	23.92	6.17	1.50	31.59	10.41
SIPAT 1	180.19	21.76	27.97	-0.11	49.62	2.75
SIPAT 2	66.63	8.10	10.43	-0.30	18.24	2.74
MSTPS-I	45.80	15.83	11.38	0.47	27.69	6.05
MAUDA II	37.02	16.72	10.77	0.67	28.15	7.60
KHSTPS 2	9.95	1.23	1.83	0.31	3.38	3.39
Solapur	73.26	30.44	22.04	0.63	53.11	7.25
LARA	71.60	16.87	15.14	0.02	32.03	4.47
GADARWARA	80.71	21.38	20.62	-0.04	41.96	5.20
KHTPP	93.34	28.79	25.72	0.22	54.73	5.86
Subtotal	**1494.95**	**273.00**	**283.97**	**3.78**	**560.76**	**3.75**
NSPCL BHILAI	**401.99**	**80.77**	**103.22**	**-1.36**	**182.62**	**4.54**
NPCIL						
KAPPS	61.83	0.00	14.20	-5.56	8.64	1.40
TAPPS 3&4	78.72	0.00	26.70	12.96	39.66	5.04
Subtotal	**140.55**	**0.00**	**40.89**	**7.41**	**48.30**	**3.44**
Ratnagiri	**32.34**	**15.20**	**11.05**	**0.11**	**26.36**	**8.15**
Open Market Purchase						
PXIL/IEX	136.07	0.00	45.80	0.00	45.80	3.37
UI Under-drawl/ Over-drawl	83.00	0.00	21.96	0.00	21.96	2.65
Solar	*18.43*	0.00	0.00	0.00	0.00	
Non-Solar	0.00	0.00	0.00	0.00	0.00	
Solar REC	0.00	0.00	0.00	0.00	0.00	
Non-Solar REC	0.00	0.00	20.58	0.00	20.58	
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00	0.00	
Subtotal	**237.50**	**0.00**	**88.34**	**0.00**	**88.34**	**3.72**
Total Power Purchase	**2307.33**	**368.97**	**527.47**	**9.94**	**906.38**	**3.93**
PGCIL CHARGES					103.07	
WRLDC					0.21	
MSETCL					0.00	
GETCO					0.03	
PGVCL					0.02	
Rebate for Early Payment					-25.38	
Gross Total	**2307.33**	**368.97**	**527.47**	**9.94**	**984.28**	**4.27**

Commission's Analysis

Regulation 12.1 of the JERC MYT Regulations, 2018 provides:

"12.1 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

(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;

…"

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, and IPPs. It has submitted the overall power purchase cost as INR 984.28 Cr, inclusive of transmission cost and REC cost.

On examining the power purchase quantum and cost as per the monthly and station-wise bills submitted by the Petitioner for each source, the Commission found that the power purchase cost as per audited accounts amounts to INR 963.70 Cr excluding cost against purchase of Renewable Energy Certificates. The Commission has relied on the audited accounts and actual bills of the Petitioner for the purpose of true-up of power purchase cost.

The Petitioner has submitted that the total power purchase cost is inclusive of the cost incurred towards compliance of the Renewable Purchase Obligation (RPO) target for FY 2020-21. The compliance status of RPO has been discussed in detail in the subsequent section. The Commission has considered the total cost of INR 20.58 Crore towards purchase of REC by the Petitioner towards compliance of RPO target in the total power purchase cost approved for FY 2020-21. The Petitioner has submitted that it has received a rebate from NTPC on account of early payment and considered the same as the part of power purchase cost and hence the same have been considered.

The following table provides the power purchase quantum and cost as approved by the Commission in true-up of FY 2020-21:

Table 16: Power Purchase quantum and cost as approved by the Commission for FY 2020-21

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost
NTPC Stations						
KSTPP 1&2	362.50	22.81	55.72	0.11	78.64	2.17
KSTPP 3	46.72	5.52	7.66	0.04	13.21	2.83
VSTPP 1	82.18	6.91	14.58	-0.28	21.20	2.58
VSTPP 2	59.28	4.08	10.13	-0.14	14.07	2.37
VSTPP 3	81.84	7.70	13.95	-0.30	21.35	2.61
VSTPP 4	80.54	13.12	13.12	-0.09	26.16	3.25
VSTPP 5	57.75	9.13	9.98	-0.09	19.02	3.29
KAWAS GPP	35.27	18.70	6.74	1.17	26.61	7.54
Gandhar GPP	30.36	23.92	6.17	1.50	31.59	10.41
SIPAT 1	180.19	21.76	27.97	-0.11	49.62	2.75
SIPAT 2	66.63	8.10	10.43	-0.30	18.24	2.74
MSTPS-I	45.80	15.83	11.38	0.47	27.69	6.05
MAUDA II	37.02	16.72	10.77	0.67	28.15	7.60
KHSTPS 2	9.95	1.23	1.83	0.31	3.38	3.39
Solapur	73.26	30.44	22.04	0.63	53.11	7.25
LARA	71.60	16.87	15.14	0.02	32.03	4.47
GADARWARA	80.71	21.38	20.62	-0.04	41.96	5.20
KHTPP	93.34	28.79	25.72	0.22	54.73	5.86
Subtotal	**1494.95**	**273.00**	**283.97**	**3.78**	**560.76**	**3.75**
NSPCL BHILAI	**401.99**	**80.77**	**103.22**	**-1.36**	**182.62**	**4.54**
NPCIL						

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost
KAPPS	61.83	0.00	14.20	-5.56	8.64	1.40
TAPPS 3&4	78.72	0.00	26.70	12.96	39.66	5.04
Subtotal	**140.55**	**0.00**	**40.89**	**7.41**	**48.30**	**3.44**
Ratnagiri	**32.34**	**15.20**	**11.05**	**0.11**	**26.36**	**8.15**
Open Market Purchase						
PXIL/IEX	136.07	0.00	45.80	0.00	45.80	3.37
UI Under-drawl/ Over-drawl	83.00	0.00	21.96	0.00	21.96	2.65
Solar	18.43	0.00	0.00	0.00	0.00	
Non-Solar	0.00	0.00	0.00	0.00	0.00	
Solar REC	0.00	0.00	0.00	0.00	0.00	
Non-Solar REC	0.00	0.00	0.00	0.00	0.00	
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00	0.00	
Subtotal	**237.50**	**0.00**	**67.76**	**0.00**	**67.76**	**2.85**
Gross power Purchase	**2307.33**	**368.97**	**506.89**	**9.94**	**885.80**	**3.84**
Total Power Purchase	**2307.33**	**368.97**	**506.89**	**9.94**	**885.80**	**3.84**
PGCIL CHARGES					103.07	
WRLDC					0.21	
MSETCL					0.00	
REC					0.00	
GETCO					0.03	
PGVCL					0.02	
Rebate for Early Payment					-25.38	
Gross Total	**2307.33**				**963.70**	**4.18**

The Commission approves power purchase quantum of 2307.33 MU (including own Solar generation) and cost of INR 963.70 Cr in the true-up of FY 2020-21.

3.9. *Renewable Purchase Obligation (RPO)*

Petitioner's submission

The Petitioner submitted that it has procured 18.43 MUs from its own Solar generation and 1,80,000 Non-Solar REC's from the exchange towards the RPO compliance.

Commission's Analysis

As per Regulation 1.1 of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010:

"(1.1) 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 August 22, 2016 and revised the RPO targets, according to which the Petitioner had to purchase 14.10% (Solar-6.10% and Non-Solar-8.00%) of its total consumption (excluding hydro) from renewable sources for FY 2020-21.

As per the above Regulations, for FY 2020-21 the Petitioner had a standalone target of renewable procurement of 299 MU comprising of 129.74 MU Solar and 170.15 MU Non-Solar. Against the target, the Petitioner has generated 18.43 MU of physical Solar power and has purchased REC equivalent to 180.00 MU of Non-Solar RECs while procuring Nil physical Non-Solar power.

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

Table 17: Compliance status of Renewable Purchase Obligation (RPO) (MUs)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY19	FY 20	FY 21
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%	3.60%	4.70%	6.10%
2	Non-Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%	5.40%	6.80%	8.00%
	Total Target	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**	**9.00%**	11.50%	14.10%
3	Sales Within UT	1,655.20	1,771.17	1,862.95	1,754.08	1,621.72	1,691.98	1,757.11	2,101.22	2,433.91	2495.67	2126.89
	RPO Target											
4	Solar	4.14	5.31	7.45	7.02	9.73	14.38	28.99	52.53	87.62	117.30	129.74
5	Non-Solar	12.41	30.11	48.44	45.61	43.79	45.68	56.23	88.25	131.43	169.71	170.15
	Total RPO Target	**16.55**	**35.42**	**55.89**	**52.62**	**53.52**	**60.07**	**85.22**	**140.78**	**219.05**	**287.00**	**299.89**
	RPO Compliance (Actual Purchase)											
6	Solar	0.00	0.00	0.00	0.20	0.40	4.42	14.48	18.63	19.02	21.69	18.43
7	Non-Solar	0.00	0.00	0.00	0.00	0.00	7.13	24.81	0.00	0.00	0.00	0.00
	Total RPO Compliance (Actual Purchase)	**0.00**	**0.00**	**0.00**	**0.20**	**0.40**	**11.55**	**39.29**	**18.63**	**19.02**	**21.69**	**18.43**
	RPO Compliance (REC Certificate Purchase)											
8	Solar	0.00	0.00	0.00	0.00	0.00	57.15	0.00	0.00	26.80	1.15	0.00
9	Non-Solar	0.00	0.75	4.70	13.20	79.73	108.23	13.33	85.01	0.00	64.60	180.00
	Total RPO Compliance (REC Certificate)	**0.00**	**0.75**	**4.70**	**13.20**	**79.73**	**165.38**	**13.33**	**85.01**	**26.80**	**65.75**	**180.00**
	RPO Compliance (REC+Actual)											
10	Solar	0.00	0.00	0.00	0.20	0.40	61.57	14.48	18.63	45.82	22.84	18.43
11	Non-Solar	0.00	0.75	4.70	13.20	79.73	115.36	38.14	85.01	0.00	64.60	180.00
	Total RPO Compliance	**0.00**	**0.75**	**4.70**	**13.40**	**80.13**	**176.93**	**52.62**	**103.64**	**45.82**	**87.44**	**198.43**
	Cumulative Requirement till current year											
12	Solar	4.14	9.45	16.90	23.92	33.65	48.03	77.02	129.55	217.18	334.47	464.21
13	Non-Solar	12.41	42.52	90.96	136.57	180.35	226.04	282.26	370.52	501.95	671.65	841.80
	Total	**16.55**	**51.98**	**107.86**	**160.49**	**214.00**	**274.07**	**359.29**	**500.07**	**719.12**	**1006.12**	**1306.01**
	Cumulative Compliance till current year											
14	Solar	0.00	0.00	0.00	0.20	0.60	62.17	62.51	81.13	126.96	149.80	168.23
15	Non-Solar	0.00	0.75	5.45	18.65	98.38	213.74	251.88	338.87	336.89	401.49	581.49
	Total	**0.00**	**0.75**	**5.45**	**18.85**	**98.98**	**275.91**	**314.39**	**418.03**	**463.85**	**551.29**	**749.72**
	Cumulative Shortfall till current year											
16	Solar	4.14	9.45	16.90	23.72	33.05	-14.14	14.51	48.41	90.21	184.67	295.98
17	Non-Solar	12.41	41.77	85.51	117.92	81.97	12.30	30.38	33.63	165.06	270.16	260.31
	Total	**16.55**	**51.23**	**102.41**	**141.64**	**115.02**	**-1.84**	**44.90**	**82.04**	**255.27**	**454.83**	**556.30**

The Commission has noticed that out of total RPO target (299.89 MUs) set for FY 2020-21, the Petitioner has only achieved 66.17% (198.43 MUs) from Solar & Non-Solar Physical and REC purchase. The Commission feels that the Petitioner has failed to cover not only the entire RPO shortfall till FY 2020-21 but also the standalone RPO target set for FY 2020-21.

The Commission notes that there is a net shortfall in RPO compliance till FY 2020-21 of 556.30 MU (Solar: 295.98 MU and Non-Solar: 260.31 MU) which includes standalone shortfall of 111.31 MU (Solar: 111.31 MU and Non-Solar: 0.00) for FY 2020-21. The following table provides the cost towards compliance of RPO approved in FY 2020-21.

Table 18: Cost towards compliance of Renewable Purchase Obligation (INR Crore)

S. No.	Description	RPO (MU)	Total Cost (INR Cr)
1	Solar Purchase (Own Generation)	18.43	-
2	Solar REC	-	-
3	Non-Solar Purchase	-	-
4	Non-Solar REC	180.00	20.58
5	**Total**	**198.43**	**20.58**

The Commission approves the actual cost of INR 20.58 Cr towards compliance of RPO in the true-up of FY 2020-21.

3.10. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprises of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The JERC MYT Regulations, 2018 considers the variation of O&M Expenses to be controllable. Regulation 12.2 and Regulation 14 of the JERC MYT Regulation, 2018 states the following:

"12. Uncontrollable and Controllable factors

……

12.2 For the purpose of these Regulations, the term "controllable factors" for a Transmission or Distribution Licensee shall comprise of the factors which were within the control of the Licensee, shall inter-alia include:

…

(h) Variation in O&M Expenses, except to the extent of inflation…"

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

"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."

Therefore, any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers in accordance with the JERC MYT Regulations, 2018. The calculation of the same has been discussed in detail in "*Section 3.21: Incentive/Disincentive towards over/under-achievement of norms of distribution losses*" of this Order. Further Regulations 51.6 provides as follows:

"51. Operation and Maintenance (O&M) expenses for Distribution Wires Business
....
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." (Emphasis supplied)***

3.10.1. Employee Expenses

Petitioner's submission

Employee expenses of INR 15.34 Cr have been incurred against approved expenses of INR 16.99 Cr in the APR Order. The employee expenses comprise of Salaries, Dearness allowance, Bonus, Terminal benefits in the form of Pension and Gratuity, Leave encashment and staff welfare expenses.

<u>Commission's Analysis</u>

As per the audited accounts submitted by the Petitioner, the employee expenses during FY 2020-21 are reflected as INR 15.34 Cr.

The JERC MYT Regulations, 2018, stipulates the variation in operation and maintenance expenditure to be a controllable factor and any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers.

For sharing of gains purpose the Commission has determined the revised normative Employee Expenses which is based on the trued-up employee expenses of FY 2019-20 as approved in order dated 23rd March, 2021, and actual CPI Inflation of FY 2020-21 (5.02%) w.r.t FY 2019-20 & Employee growth rate (Gn) for FY 2019-20 (0%) as per the methodology specified in Regulations 51.6 of the JERC MYT Regulations, 2018 as mentioned above. Accordingly, the employee expenses approved by the Commission are as follows:

Table 19: Employee Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative EE	Trued- Up by the Commission
1	Employee Expenses (EE)	16.99	15.34	16.88	15.34

3.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 13.93 Crore as reflected in audited accounts against the approved expenses of INR 10.97 Cr in the APR Order. The Petitioner submitted that an increase in the A&G expenses can be attributed to an amount of INR 4.24 Crore incurred towards celebration expenses during the FY 2020-21.

<u>Commission's Analysis</u>

A&G expenses mainly comprises of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. As per the audited accounts submitted by the Petitioner the A&G expenses for FY 2020-21 are reflected as INR 13.93 Cr. The Commission through the deficiency note asked the Petitioner to submit the details and write up on celebration expenses claimed by it in A&G expenses amounting to INR 4.24 Crore. The Petitioner in its reply submitted that the A&G expenses on account of celebration expenses have increased during the FY 2020-21 as the Department had to incur expenses on illumination of various places during Independence Day, Raksha Bandhan and Diwali festival. Previously these expenses were borne by the Tourism Department. However, during the FY 2020-21, the Department had to bear the expenses and therefore the celebration expenses increased. The Petitioner requested the Commission to approve the celebration expenses of INR 4.24 Crore as claimed in the True up for the FY 2020-21.

The Commission approves the increase in A&G expenses and also verified the same from the signed Annual Accounts for the year ended 31st March, 2021. Similar to the approach followed while approving the revised normative Employee expenses the Commission has determined revised Normative A&G expenses which is based on the actual A&G expenses of FY 2019-20 and actual CPI Inflation for FY 2020-21 with respect to FY 2019-20. Accordingly, the A&G expenses approved by the Commission are as follows:

Table 20: A&G Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative A&G	Trued- Up by the Commission
1	Administration & General Expenses (A&G)	10.97	13.93	10.93	13.93

3.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of INR 14.43 Cr have been incurred against approved expenses of INR 21.07 Cr in the APR Order. R&M expenses are incurred towards day-to-day maintenance of the transmission and distribution network of the Petitioner and form an integral part of the Licensee's efforts towards providing reliable and quality power supply and reduction of losses in the system.

Commission's Analysis

For sharing of gains purpose the Commission has determined the revised normative R&M Expenses which is based on the Opening GFA of FY 2020-21, actual WPI Inflation (1.29%) for FY 2020-21 with respect to FY 2019-20 & k factor as approved in MYT order dated 20th May, 2019 for FY 2020-21, i.e., 3.26%. Further, similar to the approach followed while approving the Employee expenses above, the Commission approves the R&M Expenses as submitted by the Petitioner amounting to INR 14.43 Cr.

Table 21: R&M Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative R&M	Trued- Up by the Commission
1	Repair & Maintenance Expenses (R&M)	21.07	14.43	20.73	14.43

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

Any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers in accordance with the JERC MYT Regulations, 2018. The calculation of the same has been discussed in detail in "Section 3.21: Incentive/Disincentive towards over/under-achievement of Controllable Factors" of this Order.

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

Table 22: O&M Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative Expenses	Trued- Up by the Commission
1	Employee Expenses	16.99	15.34	16.88	15.34
2	Administrative & General Expenses (A&G)	10.97	13.93	10.93	13.93
3	Repair & Maintenance Expenses	21.07	14.43	20.73	14.43
4	**Total Operation & Maintenance Expenses**	**49.03**	**43.70**	**48.54**	**43.70**

The Commission approves the revised normative Operation & Maintenance (O&M) expenses of INR 48.54 Cr and actual O&M expenses of Rs 43.70 in the true-up of FY 2020-21. As the actual O&M expenses are lower than the revised normative expenses, the Commission in accordance with the provisions of JERC MYT Regulations, 2018 has carried out the sharing of gains on account of O&M Expenses.

3.11. *Capital Expenditure and Capitalization*

Petitioner's submission

The actual capital expenditure incurred in FY 2020-21 was INR 24.88 Cr and capitalization achieved during the year was INR 14.26 Cr, against the approved capital expenditure of INR 95.00 Cr and capitalization of INR 38.00 Cr in the APR Order.

Commission's Analysis

The Commission observes that the capitalization achieved by the Petitioner is lower than that approved by the Commission in the APR Order. The Commission through the deficiency note asked the Petitioner to submit the scheme wise details of the Capitalisation claimed by Petitioner amounting to INR 14.26 Crore. The Petitioner in its reply submitted that the capitalization amounting to INR14.26 Crore claimed in the true up petition pertains to various equipment's like electric lines, solar equipment, computers and printers etc. capitalised during the FY 2020-21 by the Department and the details of the assets capitalised during the FY 2020-21 have been provided in the fixed asset register submitted by the Petitioner.

The Commission has examined the Fixed Asset Register (FAR) as submitted by the Petitioner and accordingly approves the capital expenditure and capitalization as shown in the table below:

Table 23: Capital Expenditure and Capitalization approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	95.00	24.88	24.88
2	Capitalization	38.00	14.26	14.26

The Commission approves Capital Expenditure and Capitalization of INR 24.88 Cr and INR 14.26 Cr respectively in the true-up of FY 2020-21.

3.12. *Capital Structure*

Petitioner's Submission

The entire capital deployment by the EDDD is through Government Funding for FY 2020-21.

Commission's Analysis

The JERC MYT Regulations 2018, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Regulation 26.2 of the JERC MYT Regulations 2018 states the following:

"*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:
……"

In accordance with the JERC MYT Regulations, 2018, the Commission has determined the capital structure for FY 2020-21. The opening Gross Fixed Assets for FY 2020-21 has been considered as closing Gross Fixed Assets approved in true-up of FY 2019-20. Further, it was observed that assets under Vehicle category in the FAR have achieved 90% depreciation by the end of FY 2019-20. The same has been adjusted from the opening GFA of FY 2020-21 to work out the revised opening GFA for FY 2020-21. The values of opening loan and equity has been considered as closing loan and equity respectively as approved in true-up of FY 2019-20. The loan and equity addition have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year.

Table 24: Funding Plan approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalization	38.00	14.26	14.26
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	26.60	9.98	9.98
5	Equity	11.40	4.28	4.28

Table 25: GFA addition approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	627.69	627.69	627.69
2	Less: Assets depreciated up to 90% till FY 2019-20	0.00	0.00	0.57
3	Revised Opening GFA	627.69	627.69	627.11
4	Addition during FY 2020-21	38.00	14.26	14.26
5	Adjustment/Retirement during FY 2020-21	0.00	0.00	0.00
6	Closing Gross Fixed Assets	665.69	641.94	641.37

Table 26: Normative Loan addition for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	136.34	136.34	136.34
2	Add: Normative Loan During the year	26.60	9.98	9.98
3	Less: Normative Repayment equivalent to Depreciation	22.48	32.79	21.95

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
4	Closing Normative Loan	140.47	113.53	124.37

Table 27: Normative Equity addition for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	90.25	90.25	90.25
2	Additions on account of new capitalization	11.40	4.28	4.28
3	Closing Equity	101.65	94.53	94.53

3.13. Depreciation

Petitioner's submission

The Petitioner has submitted that for computation of depreciation, the opening GFA and actual addition during FY 2020-21 have been considered as per the audited annual accounts for FY 2020-21. Further, depreciation for the year has been considered based on the Fixed Asset Register prepared for FY 2020-21.

Commission's Analysis

Regulation 30 of the JERC MYT Regulations 2018, states 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.
..."

As per the norms specified in the JERC MYT Regulations, 2018 the Commission has verified the asset wise capitalization of the Petitioner and has accordingly used asset wise depreciation rate prescribed in the JERC MYT Regulations, 2018 as provided in the table as follows:

Table 28: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%

The Petitioner as part of this Petition has submitted the Fixed Asset Register (FAR) for FY 2020-21. As the JERC MYT Regulations, 2018 stipulates that the depreciation shall be allowed to a maximum of 90% of the original cost of the asset, therefore the total value of assets depreciated up to 90% as reflected in the FAR of FY 2020-21 will be deducted (if any) from the opening GFA as approved in the previous section.

Accordingly, the revised GFA will be considered and the depreciation on average Gross Fixed Assets (GFA) has been determined. The net addition during the year has been calculated after deducting the value of retired assets. However, there is a Nil value of retired assets.

The following table provides the calculation of revised GFA for the year FY 2020-21:

Table 29: Calculation of revised GFA for FY 2020-21 (INR Crore)

Description	Opening GFA as per audited accounts	Revised Opening GFA	Addition/ Deletion during the year	Closing GFA
Plant & Machinery	561.11	561.11	13.46	574.56
Buildings	23.70	23.70	0.16	23.86
Vehicles	0.67	0.10	0.00	0.10
Furniture & Fixtures	2.87	2.87	0.00	2.87
Computers & Others	14.56	14.56	0.64	15.20
Land	24.79	24.79	0.00	24.79
Total	**627.69**	**627.11**	**14.26**	**641.37**

The following table provides the calculation of depreciation during the year FY 2020-21:

Table 30: Depreciation approved by the Commission for FY 2020-21 (INR Crore)

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets for calculation of depreciation	627.69	627.69	627.69
2	Addition during FY	38.00	14.26	14.26
3	Adjustment/Retirement during FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	665.69	641.94	641.37
5	Average Gross Fixed Assets	646.69	634.82	634.24
6	Rate of Depreciation (%)	3.48%	5.17%	3.46%
7	**Depreciation**	**22.48**	**32.79**	**21.95**

The Petitioner while calculating the Depreciation relied on depreciation rates of various assets groups such as Plant & Machinery & Computers & Others as considered in the FAR as per Companies Act. This resulted in higher estimation of depreciation by the Petitioner. Hence the significant difference is observed in the depreciation as claimed by the Petitioner & approved by the Commission for FY 2020-21.

The Commission approves depreciation of INR 21.95 Cr in the true-up of FY 2020-21.

3.14. Interest on Loan

Petitioner's submission

The Petitioner has submitted the Interest on Loan on normative basis. The normative loan addition in FY 2020-21 has been computed as 70% of the capitalization for FY 2020-21. The repayment of loans has been considered equal to the depreciation during FY 2020-21.

Further the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 8.75% on April 1, 2020.

Commission's Analysis

Regulation 28 of the JERC MYT Regulations provides:

"***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-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 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 capitalisation 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."*

In accordance with the above, the Commission has considered the values for opening loan and loan addition as approved in the *Section 3.12: Capital Structure* of this Order. Further, the repayment is considered the same as depreciation approved for the year. In accordance with the provisions of JERC MYT Regulations, 2018, the Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI MCLR as on April 1, 2020 (7.75%) plus 100 basis points.

The following table provides the Interest on Loan, approved by the Commission in the APR Order, Petitioner's submission and now trued-up by the Commission.

Table 31: Interest on Loan approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	136.34	136.34	136.34
2	Add: Normative Loan During the year	26.60	9.98	9.98
3	Less: Normative Repayment= Depreciation	22.48	32.79	21.95
4	Closing Normative Loan	140.47	113.53	124.37
5	Average Normative Loan	138.40	124.93	130.35
6	Rate of Interest (%)	8.75%	8.75%	8.75%
7	**Interest on Loan**	**12.11**	**10.93**	**11.41**

The Commission approves the Interest of Loan of INR 11.41 Cr in the true-up of FY 2020-21.

3.15. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations 2018 and is computed on 30% of the capital base. The equity addition has been considered to the tune of 30% of assets capitalized during the year. The Petitioner has computed the Return on Equity at 16% on post-tax basis.

Commission's Analysis

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

"27. Return on Equity

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."

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

………

*30.2 Return on equity shall be computed at the base rate of **15.50%** for thermal generating station, **transmission system** including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
*……..” **(Emphasis supplied)***

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2018, i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations mentioned above) and a rate of 16% for the Retail Supply Business.

The RoE has been calculated on the average of opening and closing of equity during the year at the rate of 16% on post-tax basis for Retail Supply Business and 15.50% on post-tax basis for wires business, with the opening equity considered equivalent to the closing equity of FY 2018-19 approved in the True-up of the same. The following table provides the return on equity approved in the APR Order, the Petitioner's submission and the RoE now approved by the Commission.

Table 32: RoE approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	90.25	-	90.25
2	Additions on account of new capitalization	11.40		4.28
3	Closing Equity	101.65		94.53
4	Average Equity	95.95		92.39
5	Average Equity (Wires Business)	86.36		83.15
6	Average Equity (Retail Supply Business)	9.60		9.24
7	Return on Equity for Wires Business (%)	15.50%		15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%		16.00%
9	Return on Equity for Wires Business	13.39		12.89
10	Return on Equity for Retail Supply Business	1.54		1.48
11	**Return on Equity**	**14.92**	**14.37**	**14.37**

The Commission approves a Return on Equity of INR 14.37 Cr in the true-up of FY 2020-21.

3.16. *Interest on Security Deposits*

Petitioner's submission

Payments of INR 3.67 Cr were released to the consumers towards interest on security deposits during FY 2020-21 against INR 4.68 Cr approved by the Commission in the APR Order.

Commission's Analysis

As per Regulation 5.135 of the JERC Electricity Supply Code Regulations, 2018-

"5.135 The Licensee shall pay interest to the consumer at the State Bank of India Base Rate prevailing on the 1st of April for the year, payable annually on the consumer's security deposit with effect from date of such deposit in case of new connections energized after the date of this notification, or in other cases, from the date of notification of this Supply Code, 2018. The interest accrued during the year shall be adjusted in the consumer's bill for the first billing cycle of the ensuing financial year. If the Security Deposit is submitted in

the form of Bank Guarantee or by providing lien against fixed deposits, no interest shall be payable to the consumer."

The Commission has considered the actual interest on security deposit disbursed to the consumers in their bills, as reflected in the audited accounts of FY 2020-21 for truing-up.

The following table provides the interest on security deposit as approved in the APR Order, the Petitioner's submission and the interest now approved by the Commission:

Table 33: Interest on Consumer Security Deposits approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	4.24	3.67	3.67

The Commission approves interest on security deposit as INR 3.67 Cr in the true-up of FY 2020-21.

3.17. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Tariff) Regulations, 2018.

The working capital requirement has been computed considering the following parameters:

(a) O&M Expense for 1 month
(b) Maintenance spares at 40% of R&M expenses for one (1) month
(c) Receivables equivalent to two (2) months of the expected revenue requirement
(d) Amount, held as security deposits

The interest on working capital is computed at 9.75% (SBI base rate as on April 1, 2020 plus 200 basis points) as has been shown in the following table:

Table 34: Interest on Working Capital submitted by Petitioner for FY 2020-21 (INR Crore)

S. No	Particulars	Petitioner's Submission
1	O&M Expense for 1 month	3.64
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.48
3	Receivables equivalent to two (2) months of the expected revenue requirement	181.73
4	Total Working Capital Requirement	185.85
5	Less: Amount, held as security deposits	95.87
6	Net Working Capital	89.98
7	Rate of Interest (%)	9.75%
8	**Interest on Working Capital**	**8.77**

Commission's Analysis

The computation of working capital requirements and the rate of interest to be considered are stipulated in the JERC MYT Regulations, 2018. Regulation 52.1 & 31 of the JERC MYT Regulations 2018 states the following:

"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 Expense for 1 month; plus
(b) Maintenance spares at 40% of R&M 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, held as security deposits

……..

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 1stApril of the Financial Year in which the Petition is filed plus 200 basis points."

The Commission, for determination of working capital requirements of the Petitioner during the year, has considered the receivables equivalent to two months of the expected revenue requirement, the consumer security deposit, the O&M Expenses for one month & Maintenance spares as 40% of R&M expenses as approved for FY 2020-21.

The Commission noticed that in audited balance sheet the amount against security deposit is INR 96.05 Crore, accordingly the Commission asked the Petitioner regarding basis of claiming INR 95.87 Crore instead of INR 96.05 Crore. The Petitioner submitted that in INR 96.05 crore, consumer security deposits is INR 95.87 Crore only and remaining amount is not pertaining to consumer security deposit.

With regards to the interest rate, the Commission has considered the SBI MCLR rates (One Year) as on April 1, 2020 plus 200 basis points which is 9.75%.

The computation of Interest on Working Capital as shown in the table below in the following table:

Table 35: Interest on Working Capital approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expenses for One Month	3.40	3.64	3.64
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.48	0.48	0.48
3	Receivables equivalent to two (2) months of the expected revenue requirement	185.47	181.73	181.73
4	Less: Amount, held as security deposits	87.32	95.87	95.87
5	Net Working Capital	102.03	89.98	89.98
6	Rate of Interest (%)	10.55%	9.75%	9.75%
7	**Interest on Working Capital**	**10.76**	**8.77**	**8.77**

The Commission approves the Interest on Working Capital as INR 8.77 Cr in the True-Up of FY 2020-21.

3.18. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's Analysis

Regulation 32 of the JERC MYT Regulations, 2018 provides for allowance of provisional Income Tax based on the actual income tax paid in previous year, if any, as per the latest audited accounts available. The Commission has observed that the actual tax payment as per the latest audited accounts available for FY 2020-21 is nil. Accordingly, for FY 2020-21, no income tax liability has been considered

Table 36: Income Tax approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Income Tax	-	-	-

The Commission approves Income Tax liability as Nil for FY 2020-21.

3.19. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the actual Non-Tariff Income of INR 5.92 Cr for FY 2020-21 as against INR 4.24 Cr approved in APR for FY 2020-21.

Commission's Analysis

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

*"**64. Non-Tariff Income***

64.1 The amount of Non-Tariff Income relating to the retail supply of electricity as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of tariff.

64.2 The Non-Tariff Income shall inter-alia include:

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

(g) Income from hire charges from contactors and others;

(h) Income from advertisements, etc.;

(i) Meter/metering equipment/service line rentals;

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

(m) Rebate availed on account of timely payment of bills;

(n) Miscellaneous receipts;

(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;

(p) Prior period income, etc.:

Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee shall not be included in Non-Tariff Income:

Provided further that any income earned by a Distribution Licensee by sale of power to other Distribution Licensees or to Consumers as per Section 49 of the Act using the existing power purchase agreements or bulk supply capacity allocated to the Distribution Licensee's Area of Supply shall be reduced from the Aggregate Revenue Requirement of the Distribution Licensee for the purpose of determination of tariff. Such reduction shall be carried out in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

The Commission vide Deficiency Note dated 26th January 2022 asked the Petitioner to provide the reason for increase in NTI as against the approved value of INR 4.24 Crore in the APR for FY 2020-21. The Petitioner informed the Commission that NTI consists of meter rent of INR 1.20 Crore and miscellaneous income of INR 4.72 Crore and have been considered as per the actual value based on the audited accounts for the FY 2020-21. The Petitioner further requested the Commission to approve the submissions made by the Petitioner.

In accordance with the provisions of Regulation 64, Delayed Payment Surcharge & Interest on FD & others are not to be considered as Non-Tariff Income. Hence, for the true up of FY 2020-21, the Commission has considered the Non-Tariff Income same as submitted by the Petitioner. The same has been verified with the audited accounts.

The NTI approved in the APR Order, the Petitioner's submission and now approved by the Commission is shown in the following table:

Table 37: Non- Tariff Income approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Non-tariff income**	4.24	5.92	5.92

The Commission approves Non-Tariff Income of INR 5.92 Cr in the true-up of FY 2020-21.

3.20. Revenue from sale of Surplus Power

Petitioner's submission:

The revenue on account of surplus power sale/UI under-drawl has been considered as NIL by the Petitioner.

Commission's Analysis

In line with the Petitioner's submission, the Commission has considered revenue on account of surplus power sale/UI under-drawl as NIL.

3.21. Incentive/Disincentive towards over/under achievement of Controllable Factors

Petitioner's submission:

The Incentive towards over achievement of norms of distribution losses has been considered INR 11.71 Cr by the Petitioner and added to ARR.

Commission's Analysis

In the APR for FY 2020-21, the Commission had approved the T&D loss level of 6.60%. The Petitioner has achieved T&D loss of 4.48% against the approved loss level of 6.60%. The Commission, in accordance with Regulation 14.1 of the JERC MYT Regulations, 2018 (reproduced below) has determined the incentive towards the over-achievement of the target of distribution loss for FY 2019-20 as follows:

"14.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable Factor shall be shared equally between Licensee and Consumers:
"

The incentive has been considered at INR 4.33/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner for FY 2020-21. The APPC has been derived at State/UT Periphery based on the Power Purchase cost less cost of Renewable Energy Certificates to meet RPO approved in the true-up and the Energy at the State/UT Periphery that has been computed after grossing up the retail energy sales (2,126.89 MU) with the actual Intra-State T&D Loss (4.48%).

Further, the JERC MYT Regulations, 2018 stipulate the variation in operation and maintenance expenditure to be a controllable factor and any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers.

The assessment of incentive for lower T&D losses and O&M Expenses is shown in the following table:

Table 38: Incentive due to over-achievement of Distribution Loss target and Operation & Maintenance Expenses for FY 2020-21 (INR Crore)

Incentive due to over-achievement of Distribution Loss target			
S. No	**Particulars**	**Approved in APR**	**Trued-up by Commission**
1	Retail Sales (MU)	2684.11	2126.89
2	T&D Loss (%)	6.60%	4.48%
3	Power Purchase at State/UT Periphery (MU)	2873.78	2226.58
4	Gain/(Loss) (MU)		50.60
5	Average Power Purchase Cost (APPC)		4.18
6	Gain/ (Loss) (INR Cr)		21.14
7	Sharing of 50% of gain with the Petitioner		**10.57**
Incentive due to over-achievement of Operation & Maintenance Expenses			
S. No	**Particulars**	**Revised Normative O&M Expenses**	**Actual Considered by the Commission**
1	Total O&M Expenses	48.54	43.71
2	Gain/ (loss)		4.83
3	Sharing of 50% of gain with the Petitioner		**2.41**
Total Incentive due to over-achievement			**12.98**

The Commission approves INR 12.98 Cr as incentive for over-achieving the distribution loss target and savings in O&M Expenses for FY 2020-21.

3.22. *Provision for Bad & Doubtful Debts*

Petitioner's submission

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

Commission's Analysis

As per Regulation 62.1 of the MYT Regulations, 2018:

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

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."

As the Petitioner has not claimed any amount towards Bad Debts, the Commission therefore has not considered any bad and doubtful debts in the true-up of FY 2020-21.

3.23. *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 1,104.30 Cr for approval in the true-up of FY 2020-21.

Commission's Analysis

The Commission based on the detailed analysis of the cost parameters of the ARR approves the Net Revenue Requirement in the true-up of FY 2020-21 as given in the following table:

Table 39: Aggregate Revenue Requirement approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost including cost of RECs purchased	966.61	984.27	984.28
2	Operation & Maintenance Expenses	49.03	43.71	43.71
3	Depreciation	22.48	32.79	21.95
4	Interest and Finance charges	12.11	10.93	11.41
5	Return on Equity	14.92	14.37	14.37
6	Interest on Security Deposit	4.68	3.67	3.67

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
7	Interest on Working Capital	9.54	8.77	8.77
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	0.00	0.00	0.00
10	Incentive/ (Disincentive)on achievement of norms	0.00	11.71	12.98
11	**Total Revenue Requirement**	**1079.37**	**1110.22**	**1101.14**
12	Less: Non-Tariff Income	4.24	5.92	5.92
13	Less: Revenue from Surplus Power Sale/UI	-	-	-
14	**Net Revenue Requirement**	**1075.13**	**1104.30**	**1095.22**

The Commission approves net Aggregate Revenue Requirement of INR 1,095.22 Cr in the true-up of FY 2020-21.

3.24. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for FY 2020-21 is INR 1,090.37 Cr as against INR 1,082.52 Cr approved by the Commission in the APR Order. The final actual figures of income & expenditure as per the audited accounts of FY 2020-21 has also been submitted.

Commission's Analysis

The Commission has verified the revenue from audited accounts. The total revenue as submitted by the Petitioner and approved by the Commission is shown in the following table:

Table 40: Revenue at existing tariff approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Total Revenue**	**1082.52**	**1090.37**	**1090.37**
2	OA Charges	0.00	0.00	0.00
3	**Grand total**	**1082.52**	**1090.37**	**1090.37**

The Commission approves the revenue from sale of power as INR 1,090.37 Cr in the true-up of FY 2020-21.

3.25. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 13.93 Cr is arrived in the true-up of FY 2020-21.

Commission's Analysis

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

Table 41: Standalone Revenue Gap/ (Surplus) for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1075.13	1104.30	1095.22
2	Revenue from Retail Sales at Existing Tariff	1082.52	1090.37	1090.37
3	Open Access Charges	0.00	0.00	0.00
4	Total Revenue	1082.52	1090.37	1090.37
5	**Net Gap /(Surplus)**	**(7.39)**	**13.93**	**4.84**

The Commission, in the true-up of FY 2020-21 approves a standalone Gap of INR 4.84 Cr. This standalone Gap has been carried over in the subsequent years and has been dealt with while determining the tariff for FY 2022-23.

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

4.1. Background

The ARR for the FY 2021-22 was approved in the MYT Order dated 20th May, 2019, issued for the 2nd Control Period (the FY 2019-20 to the FY 2021-22). The ARR for FY 2021-22 was redetermined based on truing up for FY 2019-20 and APR for FY 2020-21 vide order dated 23rd March 2021. This Chapter covers the Annual Performance Review for FY 2021-22 vis-à-vis the cost parameters approved by the Commission in the ARR Order. The Annual Performance Review for FY 2021-22 is to be carried out as per the following provisions of Regulation 11 of the JERC (Multi-Year Tariff) Regulations, 2018:

*"11. **Annual Performance Review, Truing-up and tariff determination during the Control Period***
....
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.

........."

4.2. Approach for the Review for FY 2021-22

The review of the Aggregate Revenue Requirement requires assessment of the quantum of Energy Sales, Energy Loss as well as the various cost elements like Power Purchase Cost, O&M expenses, Interest on long term loans, Interest on Working capital loans, Depreciation etc. The Annual Performance Review for FY 2021-22 has been done based on actual Power Purchase Quantum and Cost of the first 9 months of FY 2021-22, actual Energy Sales for the first 9 months, etc. depending on which the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the JERC MYT Regulations, 2018 and based on the norms approved in the ARR Order dated March 21, 2021.

4.3. Energy Sales

Petitioner's Submission

The Petitioner in its Petition has submitted the revised estimates of 2,461.28 MU of energy sales for FY 2021-22 based on actual sales for first six months and revised estimates for next six months against 2,598.62 MU as approved by the Commission in the ARR Order for FY 2021-22.

Commission's Analysis

The Commission through the deficiency note asked the Petitioner to submit the category-wise actual sales for first 9 months of FY 2021-22 i.e., from April 2021 to December 2021. The Commission has noted the audited figures for FY 2019-20, FY 2020-21 and provisional information provided by the Petitioner for the first 9 months of FY 2021-22. For projecting revised sales of FY 2021-22 for all the categories, the Commission has considered 9 months actual sales data. Sales for last quarter of FY 2021-22 has been projected by applying ratio of Last Quarter actual sales to First Quarter actual sales of FY 2019-20 (wherein sales were at normal level during FY 2019-20 under business-as-usual scenario) to actual 9 months sale of FY 2021-22.

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

Table 42: Energy Sales approved by the Commission for FY 2021-22 (MU)

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Domestic	163.72	155.02	140.09
2	LIG/ Kutir Jyoti	0.00	0.00	0.00
3	Commercial	46.13	50.16	45.41
4	Agriculture	3.37	3.54	3.18
5	LT Industry	221.36	210.30	203.61
6	HT/EHT Industry	2155.94	2034.44	2035.65
7	Public Lighting	5.64	5.20	5.11
8	Public Water Works	2.46	2.60	2.53
9	Temp. Supply	0.00	0.00	0.00
	Gross Total	**2598.62**	**2461.28**	**2435.58**

With this approach the Commission approves energy sales of 2,435.58 MUs in the APR of FY 2021-22.

4.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has considered the Inter-State transmission loss of 3.66%, same as approved in ARR of FY 2021-22.

Commission's Analysis

The Commission in the APR of FY 2021-22 considers the Inter-State transmission losses in line with the loss approved in the ARR of FY 2021-22. The same shall be revised based on actuals during the true-up exercise of FY 2021-22.

The following table provides the Inter-State transmission loss submitted and now approved by the Commission.

Table 43: Inter-State Transmission Loss approved by the Commission for FY 2021-22 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Inter-State transmission losses	3.66%	3.66%	3.66%

The Commission approves Inter-State transmission loss of 3.66% in the APR of FY 2021-22.

4.5. Distribution Loss

Petitioner's submission

The Petitioner has considered the distribution loss of 6.50% in line with the distribution loss target of 6.50% approved by the Commission for FY 2021-22 vide order dated 23rd March 2021.

Commission's Analysis

As distribution loss is a controllable factor, the Commission approves the same as approved in the ARR Order. The Petitioner shall be allowed an incentive/disincentive in the true-up Order considering the actual distribution loss achieved by the Petitioner in the year. Hence, for FY 2021-22 the Commission retains the distribution loss level of 6.50% as approved in the ARR Order dated March 23, 2021.

The following table provides the distribution loss approved in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 44: Distribution Loss approved by the Commission for FY 2021-22 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Distribution loss	**6.50%**	**6.50%**	**6.50%**

The Commission approves distribution loss of 6.50% in the APR of FY 2021-22.

4.6. Energy Balance

Petitioner's submission

The energy requirement as submitted by the Petitioner has been shown in the following table:

Table 45: Energy Requirement of the System for FY 2021-22 as submitted by the Petitioner (MU)

	Particulars	Formulae	ARR Order	Petitioner's Submission
(a)	Retail Sales		2598.62	2461.28
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales**	d = a+b-c	**2598.62**	**2461.28**
(e)	Distribution Loss	e = g-d	6.50%	6.50%
(f)	Distribution Loss (%)	f=e/g	180.65	171.10
(g)	**Energy Required at Periphery**	g = d+e	**2779.27**	**2632.38**

	Particulars	Formulae	ARR Order	Petitioner's Submission
(h)	Sale to common pool consumer/UI Sale		0.00	0.70
(i)	Own generation		60.00	11.25
(j)	**Total energy requirement at state periphery**	j=g+h-i	2719.27	2621.83
(k)	Less: Energy Purchased through UI at Periphery		0.00	46.39
(l)	Less: Energy Purchase from IEX		406.32	235.64
(m)	Less: Energy Purchased through Renewable Sources		-	-
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	2312.95	2339.80
(o)	Inter-state loss	o=q-n	87.87	88.89
(p)	Inter-state loss (%)	p = o/q	3.66%	3.66%
(q)	**Energy requirement at state periphery from generator end**	q = n+o	2400.82	2428.69
(r)	**Total Energy requirement from tied up sources & UI at generator end**	r=q+k+i+m+l	2867.14	2721.97
(s)	**Total Energy requirement in UT including Open Access**		2867.14	2721.97

Commission's Analysis

Based on the revised estimates of energy sales and power purchase quantum, the Commission approves the following energy balance:

Table 46: Energy Balance approved by the Commission for FY 2021-22 (MU)

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved by Commission
(a)	Retail Sales		2461.28	2435.58
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales**	d = a+b-c	2461.28	2435.58
(e)	Distribution Loss (%)		6.50%	6.50%
(f)	Distribution Loss in MU	f=g-d	171.10	169.32
(g)	**Energy Required at Periphery**	g=d/(1-e)	2632.38	2604.89
(h)	Sale to common pool consumer/UI Sale		0.70	0.00
(i)	Own generation		11.25	11.25
(j)	**Total energy requirement at state periphery**	j=g+h-i	2621.83	2593.64
(k)	Less: Energy Purchased through UI at Periphery		46.39	71.19
(l)	Less: Energy Purchased through IEX		235.64	143.27
(m)	Less: Energy Purchased through Renewable Sources		0.00	0.00
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	2339.80	2379.18
(o)	Inter-state loss (%)		3.66%	3.66%
(p)	Inter-state loss	p=q-n	88.89	90.39
(q)	Energy requirement at state periphery from generator end	q= n/(1-o)	2428.69	2469.57
(r)	**Total requirement from Tied-up sources at generator end & UI/ Traders/ Banking within State**	r=q+i+k+l+m	2721.97	2695.28
(s)	**Total availability from tied up sources at generator end (MU)**	s=r-l		**2552.01**

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved by Commission
(t)	**Deficit/(surplus)**	t=r-s	-	**143.27**

The Commission approves the Total Energy Requirement at the generator end (including own generation) as 2,695.28 MU in the APR for FY 2021-22. The Commission has estimated a deficit of 143.27 MU and has assumed that the deficit power will be purchased from the Open Market.

4.7. *Power Purchase Quantum & Cost*

Petitioner's submission:

The EDDD has no generating stations of its own other than some Solar plants and relies on firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar, Sholapur, etc. to meet its energy requirement.

The EDDD for the purpose of estimation of the power availability during FY 2021-22 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Private Sector Power Generating Companies
- Renewable energy sources - Solar and Non-Solar
- Other open market sources

The Petitioner has allocation from western as well as eastern regions from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawl from the Grid.

For projecting of the energy availability for FY 2021-22, six months actual power purchase has been considered by the Petitioner in its Petition. For projection of remaining six months of power purchase for FY 2021-22, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no. WRPC/Comml-I/6/Alloc/2021/1048 dated 29/10/2021 of Western Regional Power Committee. The energy allocation from central generating station and revised estimated power purchase cost for FY 2021-22 as submitted by the Petitioner is presented in the following table:

Table 47: Energy Allocation to EDDD as submitted by the Petitioner for FY 2021-22

Name of plant	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	(MW)	(MW)	(%)
NTPC Stations			
KSTPP	2,100	49	2.35%
KSTPP-III	500	6	1.19%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.93%
VSTPP- III	1,000	11	1.13%
VSTPP- IV	1,000	13	1.26%
VSTPS-V	500	8	1.64%

Name of plant	Plant Capacity	EDDD Allocation	Avg. EDDD Allocation
	(MW)	(MW)	(%)
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
BHILAI UNIT-I &II (NTPC)	500	70	14.00%
SIPAT-I	1980	25	1.28%
SIPAT-II	1000	10	1.00%
MSTPS-I	1000	13	1.26%
MOUDA-II	1320	17	1.30%
SOLAPUR	1320	26	1.97%
LARA	800	21	2.65%
GADARWARA	800	29	3.62%
KHTPP	1320	24	1.79%
Subtotal	**18714**	**407**	
Eastern Region			
KHSTPP-II	1000	1.30	0.13%
Subtotal	**1000**	**1.3**	
NPCIL			
KAPPS	440	9	2.06%
TAPP 3&4	1080	12	1.16%
Subtotal	**1520**	**22**	
Ratnagiri	582	38	6.53%
Subtotal	**582**	**38**	
Grand Total	**21816**	**468**	

Table 48: Power Purchase quantum (MU) and cost (INR Crore) submitted by the Petitioner for FY 2021-22

Station	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
NTPC Stations						
KSTPP	364.33	23.48	56.34	2.00	81.81	2.25
KSTPP-III	44.16	5.77	6.66	-0.07	12.35	2.80
VSTPP-I	91.38	7.65	15.94	1.06	24.65	2.70
VSTPP-II	61.37	4.06	10.21	0.00	14.28	2.33
VSTPP- III	74.18	7.34	12.18	-0.20	19.32	2.60
VSTPP- IV	91.34	13.79	15.09	0.00	28.89	3.16
VSTPS-V	59.33	9.51	10.25	-0.11	19.65	3.31
KAWAS	43.23	18.85	8.90	0.70	28.46	6.58
JGPP	55.81	22.21	11.58	0.44	34.23	6.13
Sipat-I	178.64	23.03	29.44	-0.28	52.20	2.92
Sipat-II	74.87	8.64	12.94	-0.09	21.49	2.87
MSTPS-I	61.32	16.37	18.92	0.35	35.65	5.81
MOUDA-II	63.25	17.38	20.85	0.65	38.88	6.15
KHSTPP-II	11.01	1.48	2.54	-0.01	4.02	3.65
SOLAPUR	97.04	31.07	34.04	0.39	65.51	6.75
LARA	145.46	24.80	34.13	-0.14	58.79	4.04
GADARWARA	162.69	41.89	47.93	-0.22	89.60	5.51

Station	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
KHTPP	114.63	26.41	33.90	-0.24	60.07	5.24
Subtotal	**1794.04**	**303.73**	**381.86**	**4.24**	**689.83**	**3.85**
NTPC Bhilai						-
Bhilai Unit-I &II (NTPC)	480.62	80.77	126.42	0.21	207.40	4.32
Subtotal	**480.62**	**80.77**	**126.42**	**0.21**	**207.40**	**4.32**
NPCIL						-
KAPPS	50.60	-	11.74	-	11.74	2.32
TAPP 3&4	86.34	-	29.13	-	29.13	3.37
Subtotal	**136.94**	-	**40.88**	-	**40.88**	**2.99**
Others						
Ratnagiri	17.10	13.34	10.36	-3.99	19.71	11.53
Subtotal	**17.10**	**13.34**	**10.36**	**(3.99)**	**19.71**	**11.53**
Power purchase from Other Sources						-
Power purchase from Indian E. Exchange	235.64	-	65.81	-	65.81	2.79
UI	46.39	-	16.05	-	16.05	3.46
Solar	11.25	-	-	-	-	-
Non-Solar (Hydro)	-	-	-	-	-	-
Solar REC	-	-	-	-	-	-
Non-Solar REC	-	-	-	-	-	-
Subtotal	**293.27**	-	**81.85**	-	**81.85**	**2.79**
Misc. Arrears					-	-
NTPC Rebate					-	-
Gross Power Purchase Cost	**2721.97**	**397.84**	**641.38**	**0.46**	**1039.68**	**3.82**
						-
Total Power Purchase	**2721.97**	**397.84**	**641.38**	**0.46**	**1039.68**	**3.82**
PGCIL CHARGES					174.48	-
WRLDC					0.26	-
MSETCL					3.50	-
Grand Total of Charges	**2721.97**				**1217.92**	**4.47**

Further, the assumptions for estimating power purchase quantum and cost as submitted by the Petitioner are as follows:

- Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2021.

- Power purchase arrear for the remaining six months has been considered as nil as EDDD has no prior information of arrear bills from the generators and transmission companies.
- For FY 2021-22, till September 2021 the EDDD has procured 5.01 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 6.02 MU of solar power from its own generation and will purchase a further 50.00 MU from open market. Further, EDDD will procure103.25 MU as solar certificates to meet its solar obligation till FY 2021-22.
- To meet its Non-Solar RPO target EDDD has planned to purchase 30 MU from open market and 191.51 MU through non-solar certificates during the remaining six months of FY 2021-22.

Commission's Analysis

The data pertaining to actual power purchase quantum and cost for the period from October to December 2021 was sought from the Petitioner. The Commission considered the data for first nine months of FY 2021-22, as submitted by the Petitioner and estimated the power purchase quantum and cost for the remaining months of the financial year considering the firm and infirm allocation from various generating stations. The source wise methodology followed for estimation of quantum and cost of power procurement has been detailed as follows:

4.7.1. Availability of power

Availability of energy from NTPC Stations:

- Actual Power Purchase Quantum is available for first 9 months for FY 2021-22. From Jan to March 2022, power purchase quantum for 14 of the total 18 NTPC plants has been estimated based on 3 years average of quantum of energy purchased from the respective station during these months (FY 2018-19, FY 2019-20 & FY 2020-21).
- For Gadarwara, KHTPP, Kawas & JGPP the Petitioner's submission has been considered for projecting the power purchase quantum for last 3 months of the year due to irregular scheduling of power from these stations. The actual power purchase of first 9 months is subtracted from total Power Purchase quantum as submitted by the Petitioner. Remaining value of Power Purchase quantum from each plant is equally distributed in last 3 months of the FY to arrive at the month wise quantum purchased for FY 2021-22.

Availability of energy from NSPCL Bhilai station:

- Actual Power Purchase Quantum is available for first 9 months for FY 2021-22. From Jan to March 2022, the power purchase quantum has been estimated based on last 3-year average of quantum of energy purchase from the station during these months (FY 2018-19, FY 2019-20 & FY 2020-21).

Availability of energy from NPCIL stations:

- Daman and Diu receive supply from two NPCIL stations - Tarapur and Kakrapara atomic plants. For Jan to March 2022, the power purchase quantum has been estimated based on average actual power purchase quantum during first nine months of FY 2021-22.

Availability from RGPPL stations:

- For FY 2021-22 the Petitioner submitted purchase of 17.10 MU from RGPPL station. The actual Power purchase for first 9 months is ~16.04 MU. The actual power purchase of first 9 months is subtracted from total Power Purchase quantum as submitted by the Petitioner. Remaining value of Power Purchase quantum from the plant is equally distributed in last 3 months of the FY to arrive at the month wise quantum purchased for FY 2021-22.

- The total power purchase for the financial year from this source is considered at the same level as projected by the Petitioner.

Availability of power from the Open Market, Unscheduled Interchange and Banking

- The Open market purchase of 134.99 MUs for first 9 months has been considered as per actuals. For the remaining months the quantum for purchase/sale has been considered as 8.28 MUs as estimated in the energy balance, discussed in the subsequent section.

- Quantum under UI Over-drawl/ Under-drawl for first 9 months of FY 2021-22 has been considered as 71.19 MUs as per actuals. Further due to availability of Power from firm and other sources, no quantum is approved by the Commission for last quarter (Jan-March) of FY 2021-22.

4.7.2. Power Purchase Cost

Variable Charges:

- Actual variable costs have been considered for the first nine months for all stations for FY 2021-22.
- The per unit variable costs for various power stations and Open Market have been computed by taking the actual variable charges during the first 9 months from April 2021 to December 2021 for all the stations.
- For computing variable cost for January 2021 to March 2021, the derived MUs at Ex-bus is multiplied by the per unit variable cost during the first 9 months of FY 2021-22.
- The cost towards UI Over-drawl/ Under-drawl has been considered as per actuals incurred by the Petitioner in the first 9 months of FY 2021-22 and are not considered for the remaining 3 months of the FY.

- For estimating the power purchase cost for power procured from Exchange, the Commission has considered the actual cost for 9 Months for first three quarters and for the last quarter the actual per unit cost derived from actual power purchase for 6 months has been considered. (Average Rate for 6 months was INR 2.79/kWh and Average Rate for nine months was INR 3.79/kWh)

Fixed Charges:

- Actual Fixed Costs have been considered for the first nine months for all stations for FY 2021-22.
- The fixed costs for the remaining months of the FY have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations.

- Fixed cost has been apportioned as per the DD's share in each station and average of the annual plant availability factor achieved during the last three years.

Other Charges:

- Actual charges have been considered for the first 9 months of FY 2021-22. No other charges have been considered for the remaining months of FY 2021-22.

Cost of Solar Power:

The Commission vide order dated 28.04.2021 in Petition No. 42/2021 had determined the tariff for Ground Mounted Solar PV Plants and Rooftop Solar PV Plants installed in the UT of Daman & Diu. Further, the Commission vide same order empowered EDDD to include and claim the cost incurred towards the power procurement from the Solar Power Plants installed in the UT of Daman & Diu in the Power Purchase Cost from 1st April 2021 onwards.

In this regard, the Petitioner in response to 3rd Deficiency Note has submitted details of Quantum and Cost incurred towards the procurement of Power from the Ground Mounted Solar PV Plants and Rooftop Solar PV Plants installed in the UT of Daman & Diu during FY 2021-22 and each year of the Control Period.

The details of the Power Purchase Quantum and Cost submitted by the Petitioner is as under:

Table 49: Power Purchase Cost for Solar Power submitted by the Petitioner

S. No.	Particulars	Generation during the year (MU)	Total Amount (Rs. Crore)	Average Rate (Rs./Unit)
1	FY 2021-22	11.25	6.855	6.09
2	FY 2022-23	16.00	9.750	6.09
3	FY 2023-24	16.00	9.750	6.09
4	FY 2024-25	16.00	9.750	6.09

Accordingly, the Power Purchase Quantum from Solar Assets and the corresponding Power Purchase Cost for FY 2021-22 has been considered as per the submissions made by the Petitioner. The same would be considered as per actuals during the Truing Up proceedings of FY 2021-22

4.7.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL, WRLDC and MSETCL for the FY 2021-22 based on the actual transmission charges paid in the first nine months of the Financial Year and as per the Petitioner's submission for the whole Financial Year. The same shall be trued-up as per actuals.

4.7.4. Total power purchase quantum and cost

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for FY 2021-22:

Table 50: Power Purchase Quantum (MU) and cost (INR Crore) approved by the Commission for FY 2021-22

Source	Power Purchase at Generator Periphery (MU)	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost (INR/kWh)
NTPC						
KSTP	376.10	23.58	57.70	2.00	83.28	2.21
KSTP 3	46.80	5.82	7.03	-0.07	12.78	2.73
VSTPP-I	94.67	7.66	16.68	1.06	25.39	2.68
VSTPP-II	62.06	4.53	10.22	0.00	14.76	2.38
VSTPP- III	79.65	8.30	13.12	-0.20	21.23	2.67
VSTPP- IV	91.44	13.93	15.03	0.00	28.96	3.17
KAWAS	43.23	19.25	9.64	0.70	29.59	6.85
JGPP	55.81	24.07	13.54	0.44	38.06	6.82
Sipat-I	172.49	23.26	27.39	-0.28	50.37	2.92
Sipat-II	74.91	8.70	12.52	-0.09	21.13	2.82
Mouda/ MSTPS 1	73.42	16.57	23.43	0.35	40.36	5.50
VSTPS-V	61.51	9.60	10.63	-0.11	20.12	3.27
Mouda 2	81.96	17.07	27.72	0.65	45.44	5.54

Source	Power Purchase at Generator Periphery (MU)	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost (INR/kWh)
Solapur	87.63	23.37	31.15	0.39	54.91	6.27
KHSTPP-II	13.98	1.49	3.35	-0.01	4.84	3.46
Lara	134.27	35.48	29.81	-0.14	65.15	4.85
Gadarwara	162.69	30.14	48.28	-0.22	78.20	4.81
KHTPP	114.63	29.91	34.71	-0.24	64.39	5.62
Rebate for early payment			-0.11		-0.11	
Subtotal - NTPC	**1827.27**	**302.76**	**391.86**	**4.24**	**698.86**	**3.82**
NSPCL Bhillai	**471.78**	**81.66**	**124.95**	**0.21**	**206.83**	**4.38**
NPCIL						
KAPS	56.41	0.00	13.00	0.00	13.00	2.30
TAPS	97.02	0.00	32.80	0.00	32.80	3.38
Subtotal	**153.42**	**0.00**	**45.80**	**0.00**	**45.80**	**2.99**
Others						
Ratnagiri	17.10	13.80	10.35	-3.99	20.15	11.78
Subtotal	**17.10**	**13.80**	**10.35**	**(3.99)**	**20.15**	**11.78**
UI Over-drawl/Under-drawl	71.19	0.00	30.94	0.00	30.94	4.35
Open Market Purchase	143.27	0.00	53.48	0.00	53.48	3.73
Sub-total	**214.46**	**0.00**	**84.42**	**0.00**	**84.42**	3.94
Renewable Energy Purchase						
Solar	11.25	6.86	0.00		6.86	6.09
Non-Solar						
REC-Solar						
REC-Non-Solar*						
Subtotal	**11.25**	**6.86**	**0.00**		**6.86**	**6.09**
Total Power Purchase Quantum	**2695.28**	**405.08**	**657.38**	**0.46**	**1062.91**	**3.94**
Transmission Charges						
PGCIL Charges					174.48	
WRLDC Charges					0.26	
MSTCL Charges					3.50	
Total Power Purchase Cost	**2695.28**	**405.08**	**657.38**	**0.46**	**1241.16**	**4.60**

The Commission approves the revised quantum of power purchase as 2695.28 MU at the generator periphery with total cost of INR 1241.16 Cr in the APR for FY 2021-22.

4.8. *Renewable Purchase Obligation (RPO)*

Petitioner's submission:

The Petitioner submitted that till September 2020 it has procured 5.01 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 6.02 MU of solar power from its own generation and will purchase a further 50.00 MU from open market. Further, EDDD will procure 103.25 MU as solar certificates to meet its solar obligation till FY 2021-22.

To meet its Non-Solar RPO target EDDD has planned to purchase 30 MU from open market and 191.51 MU through non-solar certificates during the remaining six months of FY 2021-22.

The RPO requirement for FY 2021-22 and the compliance status as submitted by the Petitioner has been provided in the following table:

Table 51: RPO Requirement (Solar and Non-Solar) for FY 2021-22 as submitted by Petitioner (MU)

Particulars	RPO %	Sales (MU)	Units (MU)	RPO Compliance (Procurement and Own Generation)	RPO Compliance (REC Certificate)
Solar	8.00%	2,461.28	196.90	93.65	103.25
Non-Solar	9.00%	2,461.28	221.51	30.00	191.51
Total	**17.00%**		**418.42**	**123.65**	**294.77**

Commission's Analysis

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

"(1.1) 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 August 22, 2016 and revised the RPO targets, according to which the Petitioner had to purchase 17.00% (Solar - 8.00% and Non-Solar - 9.00%) of its total consumption (excluding hydro) from renewable sources for FY 2021-22.

Also, the Petitioner is required to clear the backlog of 556.30 MU (Solar: 295.98 MU and Non-Solar: 260.31 MU) up to FY 2020-21 that has been carried forward.

The Commission asked the Petitioner to submit the details of actual RPO met from April 2021 to December 2021 and the Petitioner submitted the details of actual RPO met during the period April 2021 to December 2021 as follows:

- Solar – 5.01 MU
- Non-Solar – 0.00 MU

For FY 2021-22 the Petitioner submitted purchase of 11.25 MU from Solar (own Generation). The Commission has considered the total 11.25 MU Solar Power for meeting RPO as proposed by the Petitioner. The Commission further asked the Petitioner to submit the details of REC certificates purchased during FY 2021-22 till 15 March 2022. The Petitioner submitted that it has not procured any REC certificates during FY 2021-22 till date.

The Commission while approving the APR for FY 2021-22 has considered the cost of solar power as discussed above.

In accordance with the JERC (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2021-22:

Table 52: Summary of Renewable Purchase Obligation (RPO) for FY 2021-22 (MU)

S. No.	Description	Formulae	FY 2021-22
A	Solar Target		8.00%
B	Non-Solar Target		9.00%
C	**Total RPO Target (in %)**	**C=A+B**	**17.00%**
D	Sales within UT		2,435.58
E	**RPO obligation for the year**	**E=F+G**	**414.05**
F	Solar	F=D*A	194.85
G	Non-Solar	G=D*B	219.20
H	**RPO compliance (proposed purchase)**	**H=I+J**	**11.25**
I	Solar		11.25
J	Non-Solar		0.00
K	**RPO compliance (REC certificate purchase)**	**K=L+M**	**0.00**
L	Solar		0.00
M	Non-Solar		0.00
N	**Total RPO Compliance for FY 2021-22 (REC+ Physical RE)**	**N=O+P**	**11.25**
O	Solar	O=I+L	11.25
P	Non-Solar	P=J+M	0.00
Q	**Standalone shortfall for FY 2021-22**	**Q=R+S**	**402.80**
R	- Solar	R=F-O	183.60
S	- Non-Solar	S=G-P	219.20
T	**Backlog up to FY 2020-21**	**T=U+V**	**556.30**
U	- Solar		295.98
V	- Non-Solar		260.31
W	**Total Shortfall in RPO Compliance for FY 2021-22**	**W=X+Y**	**959.10**
X	Solar	X=R+U	479.58
Y	Non-Solar	Y=S+V	479.51

The Commission also feels that the Petitioner has failed to cover not only the entire RPO shortfall till FY 2021-22 but also the standalone RPO target set for the year. Accordingly, the **Commission directs the Petitioner to fulfill the RPO obligation in future years by either purchasing power from Renewable energy sources or by purchasing RECs.**

The cost has already been considered in the total power purchase cost approved by the Commission in the previous section and as shown in the following table:

Table 53: Cost towards compliance of Renewable Purchase Obligation approved by the Commission for FY 2021-22 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**11.25**	**6.86**	**6.09**
(a)	*Generation*	11.25	6.86	0.00
(b)	*Renewable Energy Certificates*	0.00	0.00	0.00
2	**Non-Solar**	**0.00**	**0.00**	
(a)	*Generation/Procurement*	0.00	0.00	0.00
(b)	*Renewable Energy Certificates*	0.00	0.00	0.00
	Total	**11.25**	**6.86**	**6.09**

The Commission approves INR 6.86 Cr towards compliance of RPO in the APR of FY 2021-22 that has been included in Power Purchase Cost.

4.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprises of the Employee Expenses, Administrative & General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The JERC MYT Regulations, 2018, recognize the variation of O&M Expenses to be controllable. Regulation 12 and Regulation 51 of the JERC MYT Regulation, 2018 states as shown below:

*"**12. Uncontrollable and Controllable factors***

……..

12.2 For the purpose of these Regulations, the term "controllable factors" for a Transmission or Distribution Licensee shall comprise of the factors which were within the control of the Licensee, shall inter-alia include:

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

b) Variation in Interest and Finance Charges, Return on Equity, and Depreciation on account of variation in capitalisation, as specified in clause (a) above;

c) Variations in technical and commercial losses of Distribution Licensee;

d) Availability of transmission system;

e) Variations in performance parameters;

f) Failure to meet the standards specified in the Joint Electricity Regulatory Commission for the State of Goa & UTs (Standard of Performance for Distribution Licensees) Regulation, 2015, as amended from time to time;

g) Variations in labor productivity;

h) Variation in O&M Expenses, except to the extent of inflation;

……….

*"**51. Operation and Maintenance (O&M) expenses for Distribution Wires Business***

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

R&Mn = K x GFAn-1 x (WPIinflation)

EMPn = (EMPn-1) x (1+Gn) x (CPIinflation)

A&Gn = (A&Gn-1) x (CPIinflation)

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

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

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

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

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

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

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

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

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

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

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

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

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted the employee expenses of INR 16.28 Cr as against approved employee expenses of INR 18.03 Cr in the ARR Order for FY 2021-22.

Commission's Analysis

The Regulation 6 of the JERC MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

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

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

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

As shown above, Regulation 6 provides that the Commission may change the values for Base Year considering the actual figures from audited accounts. As the Commission in this Order has carried out the truing up for FY 2020-21 based on audited accounts, the Commission has considered the trued-up employee expenses for FY 2020-21 as base expenses and applied the CPI Inflation for approving the revised employee expenses for FY 2020-21.

As per the details submitted by the Petitioner in the Petition, the estimated growth in number of employees for FY 2021-22 is 0.37%. Hence, the Commission has considered the revised growth in employee expenses for FY 2021-22 while projecting the employee expenses for FY 2021-22.

The CPI Inflation has been computed as follows:

Table 54: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2018-19	299.92	5.45%	
2019-20	322.50	7.53%	
2020-21	338.69	5.02%	
		CPI Inflation	**6.00%**

Accordingly, the employee expenses approved by the Commission for the FY 2021-22 have been provided in the following table:

Table 55: Employee Expenses approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Values
1	Employee Expenses for the previous year **(EMPn-1)**	15.34
2	Growth in number of employees (Gn)	0.37%
3	CPI Inflation for preceding three years (CPI)	6.00%
	Employee Expenses **EMPn = (EMPn-1) x (1+Gn) x (1+CPI inflation)**	**16.32**

The Commission approves Employee Expenses of INR 16.32 Cr FY 2021-22.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the A&G expenses of INR 14.79 Cr as against approved A&G expenses of INR 11.56 Cr in the ARR Order for FY 2021-22.

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses for FY 2021-22, the Commission has considered the trued-up A&G expenses for FY 2020-21 as Base Year expenses and escalated the same with average CPI Inflation for approving the revised trajectory of A&G expenses for FY 2021-22. The A&G expenses approved by the Commission for FY 2021-22 have been provided in the following table:

Table 56: A&G Expenses approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Values
1	A&G Expenses for the previous year **(A&Gn-1)**	13.93
2	CPI Inflation	6.00%
3	**A&G Expenses** **(A&Gn) = (A&Gn-1) x (1+CPI inflation)**	**14.77**

The Commission approves the Administrative & General (A&G) expenses of INR 14.77 Cr for FY 2021-22.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted the R&M expenses of INR 16.35 Cr as against the approved R&M expenses of INR 22.34 Cr in the ARR Order for FY 2021-22.

Commission's Analysis

Regulation 51.4 of the JERC MYT Regulation, 2018 states as shown below:

"........

'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;

......"

As provided in clause 51.4 of the JERC MYT Regulations, 2018 the Commissions has considered the value of 'K' factor as 3.26% which was approved by the Commission in MYT order dated 20th May 2019, for FY 2020-21.

The WPI Inflation has been computed as follows:

Table 57: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2018-19	119.79	4.28%	
2019-20	121.80	1.68%	
2020-21	123.38	1.29%	
		WPI Inflation	**2.42%**

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

Table 58: R&M Expenses approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Values
1	Opening GFA of year (GFA)	533.36
2	K factor approved (K)	3.26%
3	WPI Inflation	2.42%
	R&M Expenses = (K x (GFA $_{n-1}$) x (1+WPI$_{inflation}$)	**17.81**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 17.81 Cr for FY 2021-22.

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

The following table provides the O&M expenses, approved by the Commission in the ARR Order, Petitioner's submission and O&M expenses now approved by the Commission.

Table 59: O&M Expenses approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	18.03	16.28	16.32
2	Administrative & General Expenses	11.56	14.79	14.77
3	Repair & Maintenance Expenses	22.34	16.35	17.81
	Total Operation & Maintenance Expenses	**51.93**	**47.42**	**48.90**

The Commission considered the trued-up O&M Expenses as approved for FY 2020-21 and escalated the same with inflation indices (WPI & CPI) and other factors like employee growth rate (Gn) and K factor. There is a little difference in K factor and Gn values as claimed by the Petitioner due to which Commission approved value are on higher side.

The Commission approves the Operation & Maintenance (O&M) expenses of INR 48.90 Cr in the APR of FY 2021-22.

4.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has proposed the Capital expenditure and capitalization as shown in the table below:

Table 60: Petitioner's submission for capitalization for FY 2021-22 (INR Crore)

Sr. No.	Particulars	Approved in ARR Order	Petitioner's Submission
1	Capital Expenditure	19.60	20.00
2	Capitalization	49.00	5.00

Commission's Analysis

The Commission sought the details of capitalization projected by the utility for FY 2021-22. The Commission with regard to the capital expenditure and capitalization proposed to be undertaken during the year, directed the

Petitioner to submit the scheme wise details along with the funding details. The Petitioner in response submitted that the proposed capitalization of INR 5.00 Crore for the FY 2021-22 consists of various miscellaneous works being carried out in Daman and Diu and do not pertain to any specific scheme. Accordingly based on the submissions made by the Petitioner, the Commission has considered the capital expenditure and capitalization as submitted by the Petitioner in APR for FY 2021-22 which shall be trued up based on actuals. The following table provides the approved capital expenditure and capitalization for the year:

Table 61: Capitalization approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	19.60	20.00	20.00
2	Capitalization	49.00	5.00	5.00

The Commission approves capital expenditure of INR 20.00 Cr and capitalization of INR 5.00 Cr in the APR for FY 2021-22.

4.11. *Capital Structure*

Petitioner's Submission

The Petitioner has submitted that the entire capital deployment shall be through Government Funding for FY 2021-22.

Commission's Analysis

The JERC MYT Regulations, 2018, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. The 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-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.

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

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

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

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

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

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

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

In accordance with the above, and the submission made by the Petitioner, normative Debt Equity has been considered for the approved capitalization for FY 2021-22.

The Commission has accordingly determined the capital structure for FY 2021-22 as follows:

Table 62: Funding Plan approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalization	49.00	5.00	5.00
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	**Normative Loan**	**34.30**	**3.50**	**3.50**
5	**Equity**	**14.70**	**1.50**	**1.50**

With regard to the approval of Opening GFA for FY 2021-22, the Commission has modified the opening GFA. The Commission vide order dated 28th April 2021 in Petition No. 42/2021 had directed EDDD to segregate the cost of solar assets from the FAR while filing the Petition for APR of FY 2021-22 along with the MYT Petition for 3rd Control Period. The Commission further directed the Petitioner to exclude the same from GFA while considering the same as on 1st April 2021.Further, the Hon'ble Commission allowed EDDD to include the cost incurred towards the power procurement from solar assets in the Power Purchase Cost from 1stt April 2021 onwards. However, the Petitioner has not included the power purchase cost for power purchase from solar assets in FY 2021-22.

In this regard, the Petitioner in response to 3rd Deficiency Note has submitted details of Power Procurement from Solar Assets during FY 2021-22 and each year of the Control Period. The Commission while approving the power purchase cost for FY 2021-22 has considered the power purchase cost of solar power as per the Commission's Order dated 28th April 2021 in Petition No. 42/2021.

As the cost of solar power is considered separately, the cost of solar assets needs to be adjusted from total assets to avoid double accounting of the costs allowed to the Petitioner. Accordingly, Solar Assets of INR 73.30 Crore as on 31st t March 2021 as per Fixed Asset Register has been reduced from GFA of EDDD as on 31st March 2021 to arrive the Gross Block net off Solar Assets for EDDD as on 1st April 2021.

Further assets worth INR. 34.72 Crore under Plant and Machinery & IT Equipment Head of FAR have achieved 90% depreciation. The same have been adjusted with opening GFA to arrive revised GFA as on 1st April 2021.

The opening Gross Fixed Assets for FY 2021-22 has been considered as closing Gross Fixed Assets approved in true-up of FY 2020-21. Further, the values of opening loan and equity for FY 2021-22 has been considered as closing loan and equity approved in true-up of FY 2020-21. The Opening Loan Balance and Equity Balance have also been adjusted in normative Debt:Equity ratio of 70:30 as on 1st April 2021 for adjustment of Solar Assets. The Loan and Equity addition have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year. Accordingly, the details of approved GFA, Loan and Equity for FY 2021-22 is as under:

Table 63: GFA addition approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	665.69	641.94	641.37
2	Less: Assets Depreciated up to 90% till FY 2020-21	0.00	0.00	34.72
3	Adjustment/ for Solar Assets	0.00	0.00	73.30
4	Modified Opening Gross Fixed Assets for FY 2021-22	665.69	641.94	533.36
5	Additions during the FY 2021-22	49.60	5.00	5.00
6	Closing Gross Fixed Assets	715.29	646.94	538.36

Table 64: Normative Loan addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	140.53	113.53	124.37
2	Less: Adjustment for Solar Assets	0.00	0.00	51.31
3	Revised Opening Normative Loan	140.53	113.53	73.06
4	Add: Normative Loan During the year	34.30	3.50	3.50
5	Less: Normative Repayment equivalent to Depreciation	24.05	22.40	18.36
6	Closing Normative Loan	150.78	94.63	58.21

Table 65: Normative Equity addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	101.65	94.53	94.53
2	Adjustment for Solar Assets	0.00	0.00	21.99
2	Additions on account of new capitalization	14.70	1.50	1.50
3	Closing Equity	116.35	96.03	74.04

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of FY 2020-21 is taken as the opening GFA for FY 2021-22 and subsequently considering the proposed capitalization during FY 2021-22, the Depreciation has been calculated as per the rates specified in the JERC MYT Regulations, 2018.

Commission's Analysis

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

"30 Depreciation

……….

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."

As discussed in the section above, the Commission has determined the revised GFA after deducting the value of solar assets and assets that have achieved 90% depreciation. The closing GFA of FY 2020-21 as approved in the true-up has been considered as opening GFA of FY 2021-22. Further, depreciation has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during the year. The depreciation rate has been considered as weighted average rate of depreciation considering actual break-up of assets into various asset classes and depreciation rates in accordance with the JERC MYT Regulations, 2018.

The following table provides the calculation of deprecation during FY 2021-22:

Table 66: Depreciation approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Closing GFA approved in the True-up of FY 2020-21 (a)	665.69	641.94	641.37
2	Adjustment of Solar Asset (b)	0.00	0.00	73.30
3	Less: Assets depreciated up to 90% till FY 2020-21 (c)	0.00	0.00	34.72
4	Revised Opening Gross Fixed Assets (a-b-c)	665.69	641.94	533.36
5	Additions during the FY	49.60	5.00	5.00
6	Closing GFA	715.29	646.94	538.36
7	Average Gross Fixed Assets	690.49	644.44	535.86
8	Rate of Depreciation (%)	3.48%	3.48%	3.43%
	Depreciation	**24.05**	**22.40**	**18.36**

The Commission now approves depreciation of INR 18.36 Cr in the APR for FY 2021-22.

4.13. Interest on Loan

Petitioner's submission

The Petitioner has calculated the Interest on Loan on normative basis according to the JERC MYT Regulations, 2018. The closing balance of FY 2020-21 is taken as the opening balance of loan for FY 2021-22. The normative loan addition in FY 2020-21 has been computed as 70% of the capitalisation proposed during FY 2020-21.

The repayment of loans has been considered equivalent to the depreciation during FY 2020-21. Further, the rate of interest has been considered as 1- year SBI MCLR plus 100 basis points i.e., 8.00%.

Commission's Analysis

The Regulation 28 of the JERC MYT Regulations, 2018 specifies 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-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 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 capitalisation 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 Commission has considered the values for opening loan and loan addition as approved in the *Section 4.11: Capital Structure* of this Order. Further, the repayment is considered same as depreciation approved for the year. In line with past practice, the Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to 1-year SBI MCLR as on April 1, 2021 plus 100 basis points (8.00%) as rate of interest, in accordance with the JERC MYT Regulations, 2018. The following table provides the Interest on Loan approved by the Commission:

Table 67: Interest on Loan approved by the Commission for FY 2021-22 (INR Crore)

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	140.53	113.53	124.37
2	Less: Adjustment for Solar Asset	0.00	0.00	51.31
3	Revised Opening Normative Loan	140.53	113.53	73.06

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
4	Add: Normative Loan During the year	34.30	3.50	3.50
5	Less: Normative Repayment equivalent to Depreciation	24.05	22.40	18.36
6	Closing Normative Loan	150.78	94.63	58.21
7	Average Normative Loan	145.59	104.08	65.63
8	Rate of Interest (%)	8.00%	8.00%	8.00%
	Interest on Loan	**11.65**	**8.33**	**5.25**

Accordingly, the Commission approves Interest on Loan of INR 5.25 Cr in the APR of FY 2021-22.

4.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the JERC MYT Regulations, 2018, and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for FY 2020-21 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. The Petitioner has segregated the average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. Accordingly, the Petitioner has computed the Return on Equity at 16% on post-tax basis for Retail Supply Business and 15.50% on post-tax basis for wires business.

Commission's Analysis

In this regard, the Regulation 27.2 and 27.3 of the JERC MYT Regulations, 2018 stipulates 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****."* ***(Emphasis supplied)***

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

....

30.2 Return on equity shall be computed at the base rate of ***15.50%*** *for thermal generating station,* ***transmission system*** *including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
........" ***(Emphasis supplied)***

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2018, i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business.

The RoE has been calculated on the average of opening and closing of equity during the FY 2021-22 at the rate of 16% on post-tax basis for Retail Supply Business and 15.50% on post-tax basis for wires business, with the opening equity considered equivalent to the closing equity of FY 2020-21 as approved in the True-up Chapter of this Order.

The following table provides the return on equity approved in the ARR Order, the Petitioner's submission and the RoE now approved by the Commission.

Table 68: RoE approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	101.65	94.53	94.53
2	Less: Adjustment for Solar Assets	0.00	0.00	21.99
3	Additions on account of new capitalization	14.70	1.50	1.50
4	Closing Equity	116.35	96.03	74.04
5	Average Equity	109.00	95.28	73.29
6	Average Equity (Wires Business)	98.10	85.75	65.96
7	Average Equity (Retail Supply Business)	10.90	9.53	7.33
8	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
9	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
10	Return on Equity for Wires Business	15.21	13.29	10.22
11	Return on Equity for Retail Supply Business	1.74	1.52	1.17
12	**Return on Equity**	**16.95**	**14.82**	**11.40**

Accordingly, the Commission approves the Return on Equity of INR 11.40 Cr in the APR of FY 2021-22.

4.15. *Interest on Security Deposits*

Petitioner's submission

The Petitioner has submitted the interest on security deposits of INR 3.67 Cr as against approved interest on security deposits of INR 4.68 Cr in the ARR Order for FY 2021-22 .

Commission's Analysis

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 Petitioner has not submitted any data regarding the Opening, addition & Closing in the consumer security deposits. Hence, the Commission has now approved the Consumer security deposit as proposed by the Petitioner. The same shall be trued-up on the actual basis. The following table provides the calculation of interest on consumer security deposits for the year.

Table 69: Interest on Security Deposits approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Interest on Security Deposit**	**4.68**	**3.67**	**3.67**

The Commission approves Interest on Security Deposit as INR 3.67 Cr in the APR of FY 2021-22.

4.16. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles in the JERC (Multi-Year Distribution Tariff) Regulations, 2018.

The working capital requirement for has been computed considering the following parameters:

(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) Consumer security but excluding Bank Guarantee/Fixed Deposit Receipt:

The Interest on Working Capital is computed at the interest rate of 9.00% (1-year SBI MCLR plus 200 basis points) in line with the JERC MYT Regulations, 2018.

Commission's Analysis

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

"52. Norms of Working Capital for Retail Supply Business

52.1 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 re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."

Further, Regulation 31 of the JERC MYT Regulation, 2018 stipulates the following:

"31 Interest on Working Capital

....

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."

In accordance with the JERC MYT Regulations, 2018, the Commission has computed the Interest on Working Capital for FY 2021-22. The rate of interest on working capital is considered as 1- year SBI MCLR rate as on April 1, 2021 plus 200 basis points (7.00%+2% = 9.00%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 70: Interest on Working Capital approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expenses for One Month	4.33	3.95	4.08
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.74	0.55	0.59
3	Receivables equivalent to two (2) months of the expected revenue requirement	212.28	218.43	215.03
4	Less: Amount, held as security deposits	87.32	95.87	95.87
5	Net Working Capital	130.03	127.05	123.83
6	Rate of Interest (%)	9.75%	9.00%	9.00%
7	**Interest on Working Capital**	12.68	11.43	11.14

The Commission approves the Interest on Working Capital as INR 11.14 Cr in the APR of FY 2021-22.

4.17. Income Tax

Petitioner's submission

No submissions have been made in this regard by the Petitioner.

Commission's Analysis

Regulation 32 of the JERC MYT Regulations, 2018 provides for allowance of provisional Income Tax based on the actual income tax paid in previous year, if any, as per the latest audited accounts available. The Commission has observed that the actual tax payment as per the latest audited accounts available for FY 2019-20 is nil. Accordingly, for FY 2021-22, no income tax liability has been considered and the same shall be trued-up based on the actual income tax paid by the Petitioner.

Table 71: Income tax approved by the Commission for FY 2021-22 (INR Crore)

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

The Commission approved Nil income tax liability for FY 2021-22.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not proposed any provision for bad and doubtful debts for the FY 2021-22.

Commission's Analysis

The Commission has not considered any provision for Bad & Doubtful Debts. The same shall be accounted for as per actuals in the true-up of FY 2021-22.

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for FY 2021-22 has been estimated with an increase of 5% p.a. on the actual non-tariff income of FY 2020-21.

Commission's Analysis

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

"64. Non-Tariff Income

64.1 The amount of Non-Tariff Income relating to the retail supply of electricity as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of tariff.

64.2 The Non-Tariff Income shall inter-alia include:

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

(g) Income from hire charges from contactors and others;

(h) Income from advertisements, etc.;

(i) Meter/metering equipment/service line rentals;

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

(m) Rebate availed on account of timely payment of bills;

(n) Miscellaneous receipts;

(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;

(p) Prior period income, etc.:

Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee shall not be included in Non-Tariff Income:

Provided further that any income earned by a Distribution Licensee by sale of power to other Distribution Licensees or to Consumers as per Section 49 of the Act using the existing power purchase agreements or bulk supply capacity allocated to the Distribution Licensee's Area of Supply shall be reduced from the Aggregate Revenue Requirement of the Distribution Licensee for the purpose of determination of tariff. Such reduction shall be carried out in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

For APR of FY 2021-22, the Commission has considered the Non-Tariff Income as approved in true up of FY 2020-21 with an escalation of 5%. The same shall be verified with the audited accounts at the time of truing up.

The NTI approved in the ARR Order, the Petitioner's submission and now approved by the Commission is shown in the following table:

Table 72: Non-Tariff Income approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Non-Tariff Income**	**4.46**	**6.22**	**6.22**

The Commission now approves Non-Tariff Income of INR 6.22 Cr in the APR for FY 2020-21.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,319.77 Cr is submitted after adjusting the Non -Tariff Income and revenue from sale of surplus power for FY 2021-22.

Commission's Analysis

Based on the detailed analysis of the cost parameters of the ARR, the revenue requirements in the APR of FY 2020-21 are approved as follows:

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1179.06	1217.92	1241.16
2	Operation & Maintenance Expenses	51.93	47.42	48.90
3	Depreciation	24.05	22.40	18.36
4	Interest and Finance charges	11.65	8.33	5.25
5	Return on Equity	16.95	14.82	11.40
6	Interest on Security Deposit	4.68	3.67	3.67

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
7	Interest on Working Capital	12.68	11.43	11.14
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	0.00	0.00	0.00
10	**Total Revenue Requirement**	**1301.00**	**1325.99**	**1339.87**
11	Less: Non-Tariff Income	4.46	6.22	6.22
12	Less: Revenue from sale of surplus power	0.00	0.00	0.00
13	**Net Revenue Requirement**	**1296.54**	**1319.77**	**1333.66**

The variation in Net Revenue Requirement is mainly because of Power Purchase Cost (PPC) considered by the Commission. Petitioner claimed PPC on the basis of six months actual cost data but Commission calculated the same on actual nine months data of FY 2021-22. Hence, the approach adopted by the Commission is more realistic.

The Commission approves the net ARR of INR 1,333.66 Cr in the APR of FY 2021-22.

4.21. *Revenue at existing Retail Tariff*

Petitioner's submission

Revenue from sale of power at existing tariff is estimated to be Rs. 1,1310.55 Cr (inc. FPPCA of Rs 122.10 Cr) in FY 2021-22. The estimated revenue for FY 2021-22 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2021-22 dated 23rd March, 2021.

Commission's Analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2021-22. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2021-22 have been shown in the following table.

Table 74: Revenue at existing tariff derived by the Commission for FY 2021-22 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
1	**DOMESTIC SUPPLY (DS)**		**1.47**	**31.17**	**32.65**	**2.33**
1	0-100 units	Single	0.38	5.40	5.78	1.50
2	101-200 units	Single	0.18	3.93	4.11	2.09
3	201-400 units	Single	0.27	3.70	3.97	2.68
4	401 and above units	Single	0.23	7.10	7.33	3.10
5	0-100 units	Three	0.15	1.02	1.16	1.60
6	101-200 units	Three	0.07	1.13	1.19	2.12
7	201-400 units	Three	0.11	1.67	1.78	2.66
8	401 and above units	Three	0.09	7.23	7.32	3.04
2	**Lifeline Consumer**					
1	Lifeline Consumer		**0.00**	**0.00**	**0.00**	**0.00**

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
3	**COMMERCIAL / NON-DOMESTIC**		**0.30**	**18.74**	**19.04**	**3.99**
1	0-100 units	Single	0.09	1.14	1.23	3.23
2	101 Units and Above	Single	0.09	5.02	5.11	4.12
3	0-100 units	Three	0.06	0.60	0.66	3.30
4	101 Units and Above	Three	0.06	11.98	12.04	4.07
4	**AGRICULTURAL**		**0.00**	**0.27**	**0.27**	**0.76**
1	For sanctioned load up to 10 HP		0.00	0.25	0.25	0.75
2	Beyond 10 HP and up to 99 HP sanctioned load		0.00	0.01	0.01	1.05
5	**LT INDUSTRY**		**6.80**	**89.01**	**95.81**	**4.56**
1	LT Industry		6.80	89.01	95.81	4.56
6	**INDUSTRY**		**187.86**	**857.96**	**1045.82**	**5.16**
1	HT General		182.71	835.34	1018.05	5.16
2	HT Industrial (Ferro)		5.15	22.62	27.77	5.13
7	**PUBLIC LIGHTING (PL)**		**0.00**	**2.46**	**2.46**	**4.50**
8	**PUBLIC WATER WORKS**		**0.02**	**1.07**	**1.09**	**4.20**
9	**TEMPORARY SUPPLY**		**0.00**	**0.00**	**0.00**	**0.00**
10	**Temporary Supply**		**0.00**	**0.00**	**0.00**	**0.00**
	TOTAL		**196.45**	**1000.69**	**1197.14**	**4.91**

The Commission has derived revenue from sale of power at existing tariff as INR 1,197.14 Cr in the APR of FY 2021-22.

4.22. FPPCA

Petitioner's submission

The Petitioner submitted that as per direction given by the Commission in its Tariff Order dated 23rd March, 2021, the fuel power purchase adjustment surcharge is being levied to the consumers. Further, the EDDD has considered the actual FPPCA for the second quarter billed to the consumers while arriving at the total revenue for the FY 2021-22 and has shown Rs 122.10 Cr as the FPPCA for FY 2021-22.

Commission's Analysis

The Commission has computed the revenue from FFPCA rate approved in first quarter of FY 2021-22 and billed in second quarter of FY 2021-22 and FFPCA rate approved in second quarter of FY 2021-22 and billed in third quarter of FY 2021-22. Further, the Commission has considered the 4th quarterly sales and FPPCA approved for 3rd quarter along with the K factor approved for FY 2021-22 in the tariff order dated 23rd March 2021 to determine the revenue to be billed in 4th quarter of FY 2021-22.

The details of revenue from FPPCA approved for FY 2021-22 is as under:

Table 75: Revenue from FPPCA approved by the Commission for FY 2021-22

Category	Sales (MUs)				K Factor	Revenue (INR Crore)			Total Rev from FPPPCA
	Q1	Q2	Q3	Q4		Q2	Q3	Q4	
Domestic	39.96	37.78	32.27	30.08	0.47	0.88	0.74	0.35	1.97
Commercial	11.17	13.30	12.46	8.49	0.81	0.54	0.52	0.28	1.34
Agriculture	0.90	0.82	0.81	0.64	0.16	0.00	0.00	0.00	0.00
LT Industry	46.75	55.84	57.69	43.33	0.92	2.51	2.66	1.81	6.98
HT/EHT Industry	475.21	517.41	521.51	521.51	1.05	26.90	27.34	28.28	82.51
Public Lighting	1.26	1.28	1.31	1.27	0.92	0.06	0.06	0.05	0.17
Public Water Works	0.63	0.64	0.67	0.59	0.73	0.02	0.02	0.02	0.06
Total	**575.89**	**627.06**	**626.73**	**605.90**		**30.92**	**31.33**	**30.78**	**93.03**

The Commission has derived revenue from FPPCA as INR 93.03 Cr in the APR of FY 2021-22.

4.23. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 9.22 Cr is observed in the APR for FY 2021-22.

Commission's Analysis

The Standalone Revenue Gap/(Surplus) approved in the ARR Order, as submitted by the Petitioner and now approved by the Commission is as follows:

Table 76: Standalone Revenue Gap/ (Surplus) at existing tariff approved by the Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's submission	Now Approved
1	Net Revenue Requirement	1296.54	1319.77	1333.66
2	Revenue from Retail Sales at Existing Tariff	1273.67	1188.45	1197.14
3	Revenue from FPPCA	0.00	122.10	93.03
4	Total Revenue	1273.67	1310.55	1290.18
5	**Net Gap/(Surplus)**	**22.87**	**9.22**	**43.48**

The standalone gap at existing retail tariff is INR 43.48 Cr in the APR of FY 2021-22. The estimated gap is carried over to the next year and has been considered while determining the tariff for FY 2022-23.

5. Chapter 5: Determination of Aggregate Revenue Requirement for 3rd Control Period from FY 2022-23 to FY 2024-25 and Determination of Retail Tariff for FY 2022-23

5.1. Background

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 on 22 March 2021. The said Regulations have been hereinafter referred to as the "JERC MYT Regulations". As per Clause 2.1.18 of these Regulations, the "Control Period" is defined as the multi-year period comprising of three financial years from FY 2022-23 to FY 2024-25.

In accordance with the Regulation 9.1 of the JERC MYT Regulations 2021, the Petitioner filed the Petition for determination of Aggregate Revenue Requirement (ARR) for 3rd MYT Control Period (FY 2022-23 to FY 2024-25) and Retail Tariff for FY 2022-23 (MYT Petition).

Accordingly, the MYT Petition for determination of ARR for 3rd Control Period was filed on 22nd December 2021 and was admitted by the Commission on 28th January 2022 and marked as Petition No. 66/2021. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for FY 2022-23, FY 2023-24 and FY 2024-25 (3rd MYT Control Period). The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2021.

5.2. Approach for determination of ARR for 3rd Control Period

The Commission has computed the cost of individual elements constituting the Aggregate Revenue Requirement for each year of the Control Period based on figures approved in the Business Plan Order dated March 31, 2022, the actual information available of various parameters for FY 2020-21 as per the audited accounts and the provisional information available for FY 2021-22. The ARR has been determined for each year of the Control Period whereas the revenue at existing tariff is determined only for FY 2022-23 to arrive at the revenue Gap/(Surplus) for FY 2022-23.

5.3. Projection of Number of consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner has considered the energy sales, connected load and number of consumers as submitted in the Business Plan Petition filed by them.

Table 77: Petitioner's submission on projection of Number of Consumers for upcoming 3rd Multi-Year Control Period

Number of Consumers	Projections		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	52819	53775	54748
Commercial	8198	8362	8530
Agriculture	1304	1313	1321
LT Industry	1896	1934	1972
HT/EHT Industry	749	764	779
Public Lighting	663	680	697
Public Water Works	108	110	113
Temp. Supply	-	-	-
Total	**65737**	**66938**	**68161**

Table 78: Petitioner's submission on projection of Connected Load for upcoming 3rd Multi-Year Control Period

Connected Load (kW)	Projections		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	112602	114854	117151
Commercial	30244	31750	33331
Agriculture	3947	3988	4029
LT Industry	127363	130490	133694
HT/EHT Industry	525520	528471	531438
Public Lighting	1598	1630	1663
Public Water Works	757	772	788
Temp. Supply	-	-	-
Total	**802031**	**811955**	**822094**

Table 79: Petitioner's submission on projection of Sales for upcoming 3rd Multi-Year Control Period

Sales (MU)	Projections		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	170.28	187.05	205.46
Commercial	50.96	51.76	52.58
Agriculture	3.83	4.13	4.47
LT Industry	217.00	223.91	231.04
HT/EHT Industry	2131.00	2232.13	2338.07
Public Lighting	5.30	5.41	5.52
Public Water Works	2.63	2.66	2.70
Temp. Supply	0.00	0.00	0.00
Total	**2581.00**	**2707.05**	**2839.82**

Commission's Analysis

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

Table 80: Consumer growth projections approved by the Commission for the upcoming Control Period

Number of Consumers	Approved Projections		
	Control Period		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	52894	53851	54826
Commercial	8198	8362	8530
Agriculture	1304	1313	1321
LT Industry	1896	1934	1972
HT/EHT Industry	749	764	779
Public Lighting	677	694	712
Public Water Works	108	110	113
Temp. Supply	-	-	-
Total	**65826**	**67028**	**68253**

Table 81: Load growth projections approved by the Commission for the upcoming Control Period

Connected Load (kW)	Approved Projections		
	Control Period		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	112602	114854	117151
Commercial	31297	32855	34491
Agriculture	3947	3988	4029
LT Industry	127363	130490	133694
HT/EHT Industry	525520	528471	531438
Public Lighting	1598	1630	1663
Public Water Works	757	772	788
Temp. Supply	-	-	-
Total	**803084**	**813060**	**823254**

Table 82: Sales growth projections approved by the Commission for the upcoming Control Period

Sales (MU)	Approved Projections		
	Control Period		
Consumer Category	**FY 2022-23**	**FY 2023-24**	**FY 2024-25**
Domestic	157.21	176.42	197.98
Commercial	47.37	49.42	51.55
Agriculture	3.43	3.71	4.00
LT Industry	215.61	228.33	241.79
HT/EHT Industry	2132.26	2233.46	2339.45
Public Lighting	5.21	5.32	5.43
Public Water Works	2.56	2.59	2.62

Sales (MU)	Approved Projections		
	Control Period		
Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Temp. Supply	-	-	-
Total	**2563.66**	**2699.23**	**2842.82**

5.4. *Inter-State Transmission Loss*

Petitioner's submission

The Petitioner has considered the Inter-State transmission loss of 3.66% for each year, same as approved in APR for FY 2021-22.

Commission's Analysis

The Commission considers the transmission loss levels for each year of the control period in line with the loss considered in the Business Plan Order for the Control Period. The same shall be revised based on actuals during the truing-up exercise. Accordingly, the Commission approves the Inter-state loss trajectory for the upcoming Control Period as under:

Table 83: T&D loss trajectory approved by the Commission in the upcoming Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Inter-State loss trajectory (%)	3.66%	3.66%	3.66%

5.5. *Distribution Loss*

Petitioner's submission

The Petitioner has submitted that with the system improvement works executed every year under the planned schemes as well as increase in energy sales quantum to the HT consumers, the T & D losses have reduced in its distribution area. The Petitioner further submitted that EDDD has achieved the T&D loss level of 4.48% during FY 2020-21 and that reduction of Distribution losses below 10% involves significant amount of capital expenditure and it is EDDD's endeavour to bring the Distribution loss level further down in the subsequent years.

The actual distribution losses achieved by the Petitioner during past 3 years are as given below:

Table 84: Actual T&D losses (%)

FY 2018-19	FY 2019-20	FY 2020-21
6.19%	4.07%	4.48%

The Petitioner has proposed 0.10% reduction in each year of the Control Period in T&D loss target of 6.50% approved for FY 2021-22 vide order dated 23rd March 2021. The T&D loss trajectory proposed by the Petitioner for the upcoming Control Period is as given below:

Table 85: T&D loss (%) trajectory proposed by the Petitioner for the upcoming Control Period

FY 2022-23	FY 2023-24	FY 2024-25
6.40%	6.30%	6.20%

Commission's Analysis

The Commission considers the T&D loss trajectory for each year of the control period in line with the loss trajectory approved in the Business Plan Order for the Control Period.Accordingly, the Commission approves the T&D loss trajectory for the upcoming Control Period as under:

Table 86: T&D loss trajectory approved by the Commission in the upcoming Control Period

Particulars	FY 2022-23		FY 2023-24		FY 2024-25	
	Petitioner's submission	Approved by Commission	Petitioner's submission	Approved by Commission	Petitioner's submission	Approved by Commission
T&D loss trajectory (%)	6.40%	3.77%	6.30%	3.57%	6.20%	3.47%

5.6. Power Purchase Quantum & Cost

Petitioner's Submission

The Petitioner has made the following assumptions for projecting the quantum of power purchase for the upcoming Control Period:

- **Allocation from CGS:** The firm allocation and allocation from the unallocated quota from the various generating stations has been considered based on the revised allocation issued by the Western Region Power Committee (WRPC) vide No. WRPC/Comml-I/6/Alloc/2021/1048 dated 29 October 2021. For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account. Additionally, EDDD has considered the power availability from NSPCL Bhilai Power Stations for MYT Control Period taking into account the 70 MW allocation from the plant.

- **Purchase of power from Ratnagiri:** EDDD has submitted that it has received 8.55 MU of power from Ratnagiri Gas Power Plant during the H1 of FY 21-22. EDDD expects to receive same quantum of power from Ratnagiri for H2 of FY 2021-22 and therefore has considered the power purchase of 17.10 MUs from the plant for FY 2021-22and for upcoming Control Period.

- **Plant Load Factor (PLF):** The Petitioner submits that it has considered the average of plant load factor for gas based generating stations i.e. Kawas (KGPP) and Gandhar (GGPP) as approved by the Hon'ble Commission vide order dated 31st October, 2018 for the Business Plan for the MYT Control Period.

- **Auxiliary consumption:** The Petitioner has considered an auxiliary consumption of 7.75% and 2.50% for coal and gas based generating stations, respectively

- **Inter-State transmission losses:** The Petitioner has considered 3.66% Inter-State transmission losses

Further, to meet the Solar RPO and Non-Solar RPO for the Control Period, the Petitioner has submitted that it will be procuring 98.40 MU of solar power and 30 MU of non-solar power during the Control Period.

Based on the above inputs and assumptions, the Petitioner has projected the availability of power from tied-up sources as below:

Table 87: Power purchase quantum proposed by the Petitioner for the upcoming Control Period

Particulars	Revised Estimate	Projected		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
NTPC Stations				
KSTPP	364.33	355.52	355.52	355.52
KSTPP-III	44.16	42.82	42.82	42.82
VSTPP-I	91.38	88.35	88.35	88.35
VSTPP-II	61.37	62.22	62.22	62.22
VSTPP- III	74.18	75.64	75.64	75.64
VSTPP- IV	91.34	84.56	84.56	84.56
VSTPS-V	59.33	55.16	55.16	55.16
KAWAS	43.23	82.19	82.19	82.19
JGPP	55.81	96.46	96.46	96.46
Sipat-I	178.64	179.59	179.59	179.59
Sipat-II	74.87	70.97	70.97	70.97
MSTPS-I	61.32	42.79	42.79	42.79
MOUDA-II	63.25	58.06	58.06	58.06
KHSTPP-II	11.01	8.09	8.09	8.09
SOLAPUR	97.04	128.34	128.34	128.34
LARA	145.46	143.39	143.39	143.39
GADARWARA	162.69	196.34	196.34	196.34
KHTPP	114.63	160.22	160.22	160.22
Subtotal - NTPC	**1794.04**	**1930.68**	**1930.68**	**1930.68**
NSPCL - Bhilai	480.62	469.51	469.51	469.51
NPCIL				
KAPS	50.60	51.41	51.41	51.41
TAPS 3& 4	86.34	78.79	78.79	78.79
Subtotal - NPCIL	**136.94**	**130.20**	**130.20**	**130.20**
Others				
Ratnagiri	17.10	17.10	17.10	17.10
Subtotal - Others	**17.10**	**17.10**	**17.10**	**17.10**
Power purchase from Other Sources				
Indian E. Exchange/Bilateral	235.64	288.00	419.00	558.00
UI	46.39	0.00	0.00	0.00
Solar	11.25	16.00	16.00	16.00
Non-Solar (Hydro)	0.00	0.00	0.00	0.00
Solar REC	0.00	0.00	0.00	0.00
Non-Solar REC	0.00	0.00	0.00	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00
Subtotal – Other Sources	**293.27**	**304.00**	**435.00**	**574.00**

Particulars	Revised Estimate	Projected		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Total Power Purchase	**2721.97**	**2851.50**	**2982.50**	**3121.50**

Power Purchase Cost:

The cost of purchase from the central generating stations for FY 2021-22 and the MYT Control Period has been estimated by the Petitioner based on the following assumptions:

- Fixed cost for NTPC for the MYT Control Period has been projected by considering the fixed cost estimated for the various stations for the FY 2021-22.
- Variable cost for each NTPC generating stations for the MYT Control Period has been projected at the same rate as received during the first six months of FY 2021-22.
- For nuclear plants i.e. KAPP and TAPP single part tariff, the actual average variable cost per unit has been considered at the same rate as received during the first six months of FY 2021-22 for projecting the power purchase cost for MYT Control Period.
- The average power purchase cost for procurement of power from the energy exchange has been considered at Rs. 2.50/unit.

The Total Power Purchase cost from various sources for the MYT Control Period is summarized in the Table below:

Table 88: Power Purchase Cost submitted by Petitioner for MYT Control Period

Source	FY 2022-23	FY 2023-24	FY 2024-25
NTPC Stations			
KSTPP	78.45	78.45	78.45
KSTPP-III	12.22	12.22	12.22
VSTPP-I	23.06	23.06	23.06
VSTPP-II	14.42	14.42	14.42
VSTPP- III	19.76	19.76	19.76
VSTPP- IV	27.77	27.77	27.77
VSTPS-V	19.04	19.04	19.04
KAWAS	35.78	35.78	35.78
JGPP	42.22	42.22	42.22
Sipat-I	52.63	52.63	52.63
Sipat-II	20.91	20.91	20.91
MSTPS-I	29.58	29.58	29.58
MOUDA-II	36.52	36.52	36.52
KHSTPP-II	3.35	3.35	3.35
SOLAPUR	76.09	76.09	76.09
LARA	58.44	58.44	58.44
GADARWARA	99.74	99.74	99.74
KHTPP	73.79	73.79	73.79
Subtotal	**723.76**	**723.76**	**723.76**
NTPC Bhilai			
Bhilai Unit-I &II (NTPC)	204.27	204.27	204.27
Subtotal	**204.27**	**204.27**	**204.27**
NPCIL			
KAPPS	11.93	11.93	11.93

Source	FY 2022-23	FY 2023-24	FY 2024-25
TAPP 3&4	26.59	26.59	26.59
Subtotal	**38.52**	**38.52**	**38.52**
Others			
Ratnagiri	23.70	23.70	23.70
Subtotal	**23.70**	**23.70**	**23.70**
Power purchase from Other Sources			
Power purchase from Indian E. Exchange	57.60	104.75	139.50
UI	0.00	0.00	0.00
Solar	0.00	0.00	0.00
Non-Solar (Hydro)	0.00	0.00	0.00
Solar REC	0.00	0.00	0.00
Non-Solar REC	0.00	0.00	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00
Subtotal	**57.60**	**104.75**	**139.50**
Misc. Arrears			
NTPC Rebate			
Gross Power Purchase Cost	**1047.85**	**1095.00**	**1129.75**

Transmission Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. EDDD has a mix of firm and infirm capacity allocations from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Further, EDDD has considered the additional capacity share in the new stations while estimating the Inter-State transmission charges for ensuing year. For projecting the PGCIL transmission charges, WRLDC & MSETCL charges for the MYT Control Period, the Petitioner has considered the transmission charges as estimated for FY 2021-22.

Table 89: Transmission charges submitted by Petitioner for MYT Control Period

Particulars	Charges (INR Cr)		
	FY 2022-23	FY 2023-24	FY 2024-25
Power Purchase Cost	**1047.85**	**1095.00**	**1129.75**
PGCIL CHARGES	174.48	174.48	174.48
WRLDC	0.26	0.26	0.26
MSETCL	3.50	3.50	3.50
Total Power Purchase Cost	**1226.10**	**1273.25**	**1308.00**

Commission's Analysis

The Commission has employed the following approach and assumptions to forecast the power purchase from tied-up sources for the upcoming Control Period:

- **Allocation from CGS:** The firm allocation and allocation from the unallocated quota from the various generating stations has been considered based on the revised allocation issued by the Western Region Power Committee (WRPC) vide No. WRPC/Comml-I/6/Alloc/2021/1048 dated 29 October 2021. The same share of allocation has been assumed for all the years of the upcoming Control Period. As submitted by EDDD an allocation of 1.30 MW from KhSTPP and 70MW from NSPCL Bhilai Power Stations has been considered for MYT Control Period.

- **Purchase of power from Ratnagiri:** As per the submissions of EDDD the power purchase of 17.10 MUs from the plant has been considered for upcoming Control Period.

- **Plant Load Factor (PLF):** For NTPC, NSPCL and NPCIL, the Commission has considered the PLF based on actual PLF achieved during the previous three years. For the newer plants such as Solapur, Lara, Gadarwara and Khargone normative PLF for the Control Period has been considered at 85%.

- **Auxiliary consumption:** The Commission has considered an auxiliary consumption of 5.75% and 2.80% for coal and gas based generating stations, respectively as per CERC Tariff Regulations, 2019.

- **Inter-State transmission losses:** The Commission has considered Inter-State transmission losses as 3.66% for all years of the upcoming Control Period, as per the Petitioner's submission.

- **Power Purchase from IEX/Bilateral Sources:** In order to meet the total energy requirement, the Commission has considered the balance energy requirement after availability from firm sources to be procured from IEX/Bilateral sources.

The quantum of power procurement projected by the Commission for the upcoming Control Period is given in Table 90 at the next page

Table 90: Power purchase plan approved by the Commission for the upcoming Control Period

Sr. No.	Source	Capacity (MW)	Weighted Average allocation to Licensee		Avg. PLF	Gross Generation (MU)	Auxiliary Consumption (%)	Net Generation (MU)	Power Purchase (MU)		
									Approved		
			%	MW					FY 2022-23	FY 2023-24	FY 2024-25
1	2	3	4		5	6	7	8	10	11	12
A	**Central Sector Power Stations**										
I	**NTPC**	**20,814**		**257.80**		**1,46,456.49**		**1,37,563.12**	**2111.88**	**2111.88**	**2111.88**
	KSTPP	2100	2.35%	49.43	90.00%	16556.40	6.68%	15,450.43	363.69	363.69	363.69
	KSTPP-III	500	1.19%	5.95	90.00%	3942.00	5.75%	3,715.34	44.24	44.24	44.24
	VSTPP-I	1260	1.05%	13.17	88.69%	9789.25	9.00%	8,908.22	93.12	93.12	93.12
	VSTPP-II	1000	0.93%	9.28	88.69%	7769.24	5.75%	7,322.51	67.93	67.93	67.93
	VSTPP- III	1000	1.13%	11.28	88.69%	7769.24	5.75%	7,322.51	82.57	82.57	82.57
	VSTPP- IV	1000	1.26%	12.61	88.69%	7769.24	5.75%	7,322.51	92.31	92.31	92.31
	KAWAS	656	4.73%	31.04	40.00%	2299.32	5.75%	2,167.11	102.52	102.52	102.52
	GGPP	657	4.77%	31.37	42.00%	2418.67	5.75%	2,279.60	108.79	108.79	108.79
	Sipat-I	1980	1.28%	25.25	90.00%	15610.32	5.75%	14,712.73	187.65	187.65	187.65
	Sipat-II	1000	1.00%	9.98	90.00%	7884.00	5.75%	7,430.67	74.16	74.16	74.16
	MSTPS-I	1000	1.26%	12.61	48.00%	4204.80	5.75%	3,963.02	49.96	49.96	49.96
	VSTPS-V	500	1.64%	8.22	86.00%	3766.80	5.75%	3,550.21	58.39	58.39	58.39
	MOUDA-II	1320	1.30%	17.11	55.00%	6359.76	5.75%	5,994.07	77.67	77.67	77.67
	SOLAPUR	1320	1.97%	26.04	85.00%	9828.72	5.75%	9,263.57	182.71	182.71	182.71
	LARA	1600	1.32%	21.16	85.00%	11913.60	5.75%	11,228.57	148.51	148.51	148.51
	GADARWARA	1600	1.81%	28.98	85.00%	11913.60	5.75%	11,228.57	203.35	203.35	203.35
	KHTPP	1320	1.79%	23.65	85.00%	9828.72	5.75%	9,263.57	165.94	165.94	165.94
	KHSTPP-II	1000	0.13%	1.30	78.00%	6832.80	5.75%	6,439.91	8.37	8.37	8.37
II	**NPCIL**	**1,520**		**21.29**		**10,343.81**		**9,344.86**	**129.02**	**129.02**	**129.02**

Sr. No.	Source	Capacity (MW)	Weighted Average allocation to Licensee		Avg. PLF	Gross Generation (MU)	Auxiliary Consumption (%)	Net Generation (MU)	Power Purchase (MU) Approved		
			%	MW					FY 2022-23	FY 2023-24	FY 2024-25
1	2	3	4		5	6	7	8	10	11	12
	KAPS	**440**	2.06%	**9.06**	72%	**2775.17**	9.50%	**2511.53**	**51.70**	**51.70**	**51.70**
	TAPP 3&4	**1080**	1.16%	**12.49**	80%	**7568.64**	9.50%	**6849.62**	**79.23**	**79.23**	**79.23**
III	**Others**	**1,082**		**108.00**		**8,144.17**		**3,344.52**	**502.57**	**502.57**	**502.57**
	NSPCL Bhillai	**500**	14.00%	**70.00**	87%	**3810.60**	9.00%	**3467.65**	**485.47**	**485.47**	**485.47**
	Ratnagiri	**582**	6.53%	**38.00**	85%	**4333.57**	2.80%	**4214.40**	**17.10**	**17.10**	**17.10**
IV	**Renewable Sources**								**16.00**	**16.00**	**16.00**
	Solar								**16.00**	**16.00**	**16.000**
	Non-Solar								**-**	**-**	**-**
V	**Power Purchase from External Sources**								**3.99**	**138.47**	**284.85**
	IEX								**3.99**	**138.47**	**284.85**
VI	**POWERGRID Losses**										
	Transmission Loss (%)								**3.66%**	**3.66%**	**3.66%**
	Transmission Loss (MU)								**100.00**	**100.00**	**100.00**
VII	**Total power available at Generator Periphery from firm sources**								**2765.36**	**2899.84**	**3046.23**

The Commission notes that the Petitioner is resorting to short-term procurement of power through Exchange for 10% of its total power requirement for FY 2022-23. The proportion of short term further increases to 18% by the end of the Control Period. The Commission strongly feels that this arrangement is not sustainable and results in exposure of consumers to risk of fluctuating tariffs. Further, the Commission observes that the Petitioner despite carrying huge backlog towards the RPO fulfilment in the previous years, has not considered enough power procurement from renewable sources including Solar and Non-Solar while projecting the power purchase for the Control Period. This is expected to create huge backlog towards the fulfilment of RPO obligation.

The proportion of short-term power as projected by the Commission for each year of the Control Period is substantially lower than that projected by the Petitioner due to following reasons:

- Sales projected by the Commission is slightly lower than the Petitioner's sales projections
- T&D loss targets approved by the Commission are lower than the loss targets proposed by the Petitioner
- Power availability from firm sources as worked out by the Commission are higher than that projected by the Petitioner.

The Commission directs the Petitioner to explore long-term/ medium term power purchase arrangements and thereby minimizing its dependence on more risk-free sources of power and reduce its dependence on purchase of power from short-term sources such as UI/ Traders / Power Exchange. Further, the Commission directs the Petitioner to increase the share of power purchase from renewable sources in the energy mix planned during the Control Period so that the share of clean energy increases in the energy mix and the backlog of RPO targets is cleared by the end of the Control Period.

5.6.1. Power Purchase Cost

Variable Charges:

- The variable charges have been worked out by considering actual Per Unit Variable Charge from April to Dec 2021 for all the stations except for KAWAS and JGPP wherein owing to erratic power scheduling, the Per Unit Variable Cost has been considered at actual FY 2020-21 level. No escalation has been considered in the Variable Charges during the Control Period.

Fixed Charges:

- The fixed costs have been determined based on the Tariff Orders issued by CERC for respective Central Generating Stations.
- The Fixed cost has been apportioned on the basis of EDDD's share in each station and power purchase quantum as approved in the previous section.
- No escalation has been considered in the Fixed Charges during the Control Period.

Charges towards Procurement of Energy from IEX:

- Quantum of Energy projected to be procured from exchange has been considered to be the balance energy between the total energy requirement at state periphery and net energy available from CGS after Transmission Losses. Further, in order to promote procurement of green energy from renewable sources, the Per Unit Rate for projected Power Purchase from Exchange has been considered at Rs 4.00/kWh. It has been observed that the Petitioner has under-estimated the Power Purchase Cost towards energy procurement from Exchange by estimating Rs 2/kWh as per unit rate.

- The Commission has considered REC Cost for the Quantum of RPO shortfall during each year of the Control Period.

Cost of Solar Power:

The Commission vide order dated 28.04.2021 in Petition No. 42/2021 had determined the tariff for Ground Mounted Solar PV Plants and Rooftop Solar PV Plants installed in the UT of Daman & Diu. Further, the Commission vide same order empowered EDDD to include and claim the cost incurred towards the power procurement from the Solar Power Plants installed in the UT of Daman & Diu in the Power Purchase Cost from 1st April 2021 onwards.

In this regard, the Petitioner in response to 3rd Deficiency Note has submitted details of Quantum and Cost incurred towards the procurement of Power from the Ground Mounted Solar PV Plants and Rooftop Solar PV Plants installed in the UT of Daman & Diu during FY 2021-22 and each year of the Control Period.

The details of the Power Purchase Quantum and Cost submitted by the Petitioner is as under:

Table 91: Power Purchase Cost for Solar Power submitted by the Petitioner

S. No.	Particulars	Generation during the year (MU)	Total Amount (Rs. Crore)	Average Rate (Rs./Unit)
1	FY 2021-22	11.25	6.855	6.09
2	FY 2022-23	16.00	9.750	6.09
3	FY 2023-24	16.00	9.750	6.09
4	FY 2024-25	16.00	9.750	6.09

Accordingly, the Power Purchase Quantum from Solar Assets and the corresponding Power Purchase Cost for FY 2021-22 has been considered as per the submissions made by the Petitioner. The same would be reviewed as per actuals during the Truing Up proceedings of FY 2021-22

Other Charges:

- The Petitioner has not claimed any other charges in relation to the Power Purchase Cost. Since, such claims have not been made by the Petitioner, no other charges have been considered and the same shall be considered as per actuals during the True-up of FY 2022-23.

5.6.2. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL by considering actual PGCIL charges of 9 months of FY 2021-22. These charges have been escalated during each year of Control Period at 3%. Escalation based on past trends.

5.6.3. Total Power Purchase Cost

The Power Purchase Cost approved by the Commission for each year of the Control Period is shown in the following table:

Table 92: Power Purchase Cost approved by the Commission for FY 2022-23

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
NTPC					
KSTPS	363.69	23.58	55.80	79.38	2.18
KSTPS 3	44.24	5.82	6.64	12.47	2.82
VSTPP-I	93.12	8.19	16.41	24.59	2.64
VSTPP-II	67.93	4.53	11.19	15.72	2.31
VSTPP- III	82.57	8.30	13.61	21.91	2.65
VSTPP- IV	92.31	13.93	15.17	29.10	3.15
KGPP	102.52	19.25	19.58	38.83	3.79
GGPP	108.79	24.65	22.08	46.73	4.30
Sipat-I	187.65	23.26	29.79	53.06	2.83
Sipat-II	74.16	8.73	12.39	21.12	2.85
Mouda	49.96	16.57	15.95	32.52	6.51
VSTPS-V	58.39	9.60	10.09	19.69	3.37
Mouda 2	77.67	17.73	26.27	44.00	5.66
SLP	182.71	31.27	64.95	96.22	5.27
KHSTPP-II	148.51	24.72	32.97	57.69	3.88
Lara	203.35	42.02	60.35	102.37	5.03
Gadarwara	165.94	29.92	50.25	80.17	4.83
KHTPP	8.37	1.49	2.01	3.50	4.18
Subtotal - NTPC	**2111.88**	**313.57**	**465.50**	**779.07**	**3.69**
NSPCL Bhillai	**485.47**	**81.66**	**128.58**	**210.24**	**4.33**
NPCIL					
KAPS	51.70	0.00	11.91	11.91	2.30
TAPS	79.23	0.00	26.79	26.79	3.38
Subtotal	**130.92**	**0.00**	**38.70**	**38.70**	**2.96**
Others					
RGPPL	17.10	13.34	10.35	23.69	13.85
Subtotal	**17.10**	**13.34**	**10.35**	**23.69**	**13.85**
UI withdrawal	0.00		0.00	0.00	
Open Market purchase	3.99		1.59	1.59	4.00
Renewable Purchase					
Solar-Own Generation	16.00	9.75	-	9.75	6.09
Non-Solar-Hydro	0.00		0.00	0.00	-
Solar -SECI	0.00		0.00	0.00	-
REC (Solar and Non-Solar)*			53.15	53.15	
Subtotal	**16.00**	**9.75**	**53.15**	**62.90**	

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
Total Power Purchase	**2765.36**	**418.32**	**697.88**	**1116.20**	**4.04**
Transmission Charges					
PGCIL Charges				135.57	
WRLDC Charges				0.20	
MSTCL Charges				1.75	
Subtotal				**137.52**	
Total	**2765.36**			**1253.72**	**4.53**
* Cost for RPO is approved in Section 5.8					

Table 93: Power Purchase Cost approved by the Commission for FY 2023-24

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
NTPC					
KSTPS	363.69	23.58	55.80	79.38	2.18
KSTPS 3	44.24	5.82	6.64	12.47	2.82
VSTPP-I	93.12	8.19	16.41	24.59	2.64
VSTPP-II	67.93	4.53	11.19	15.72	2.31
VSTPP- III	82.57	8.30	13.61	21.91	2.65
VSTPP- IV	92.31	13.93	15.17	29.10	3.15
KGPP	102.52	19.25	19.58	38.83	3.79
GGPP	108.79	24.65	22.08	46.73	4.30
Sipat-I	187.65	23.26	29.79	53.06	2.83
Sipat-II	74.16	8.73	12.39	21.12	2.85
Mouda	49.96	16.57	15.95	32.52	6.51
VSTPS-V	58.39	9.60	10.09	19.69	3.37
Mouda 2	77.67	17.73	26.27	44.00	5.66
SLP	182.71	31.27	64.95	96.22	5.27
KHSTPP-II	148.51	24.72	32.97	57.69	3.88
Lara	203.35	42.02	60.35	102.37	5.03
Gadarwara	165.94	29.92	50.25	80.17	4.83
KHTPP	8.37	1.49	2.01	3.50	4.18
Subtotal - NTPC	**2111.88**	**313.57**	**465.50**	**779.07**	**3.69**
NSPCL Bhillai	**485.47**	**81.66**	**128.58**	**210.24**	**4.33**
NPCIL					
KAPS	51.70	0.00	11.91	11.91	2.30
TAPS	79.23	0.00	26.79	26.79	3.38
Subtotal	**130.92**	**0.00**	**38.70**	**38.70**	**2.96**

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
Others					
RGPPL	17.10	13.34	10.35	23.69	13.85
Subtotal	**17.10**	**13.34**	**10.35**	**23.69**	**13.85**
UI withdrawal	0.00		0.00	0.00	
Open Market purchase	138.47		55.39	55.39	4.00
Renewable Purchase					
Solar-Own Generation	16.00	9.75	-	9.75	6.09
Non-Solar-Hydro	0.00		0.00	0.00	-
Solar -SECI	0.00		0.00	0.00	-
REC (Solar and Non-Solar)*			45.19	45.19	
Subtotal	**16.00**	**9.75**	**45.19**	**54.94**	
Total Power Purchase	**2899.84**	**418.32**	**743.70**	**1162.03**	**4.01**
Transmission Charges					
PGCIL Charges				139.64	
WRLDC Charges				0.21	
MSTCL Charges				1.75	
Subtotal				**141.59**	
Total	**2899.84**			**1303.62**	**4.50**
* Cost for RPO is approved in Section 5.8					

Table 94: Power Purchase Cost approved by the Commission for FY 2024-25

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
NTPC					
KSTPS	363.69	23.58	55.80	79.38	2.18
KSTPS 3	44.24	5.82	6.64	12.47	2.82
VSTPP-I	93.12	8.19	16.41	24.59	2.64
VSTPP-II	67.93	4.53	11.19	15.72	2.31
VSTPP- III	82.57	8.30	13.61	21.91	2.65
VSTPP- IV	92.31	13.93	15.17	29.10	3.15
KGPP	102.52	19.25	19.58	38.83	3.79
GGPP	108.79	24.65	22.08	46.73	4.30
Sipat-I	187.65	23.26	29.79	53.06	2.83
Sipat-II	74.16	8.73	12.39	21.12	2.85
Mouda	49.96	16.57	15.95	32.52	6.51
VSTPS-V	58.39	9.60	10.09	19.69	3.37

Source	Quantum (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
Mouda 2	77.67	17.73	26.27	44.00	5.66
SLP	182.71	31.27	64.95	96.22	5.27
KHSTPP-II	148.51	24.72	32.97	57.69	3.88
Lara	203.35	42.02	60.35	102.37	5.03
Gadarwara	165.94	29.92	50.25	80.17	4.83
KHTPP	8.37	1.49	2.01	3.50	4.18
Subtotal - NTPC	**2111.88**	**313.57**	**465.50**	**779.07**	**3.69**
NSPCL Bhillai	**485.47**	**81.66**	**128.58**	**210.24**	**4.33**
NPCIL					
KAPS	51.70	0.00	11.91	11.91	2.30
TAPS	79.23	0.00	26.79	26.79	3.38
Subtotal	**130.92**	**0.00**	**38.70**	**38.70**	**2.96**
Others					
RGPPL	17.10	13.34	10.35	23.69	13.85
Subtotal	**17.10**	**13.34**	**10.35**	**23.69**	**13.85**
UI withdrawal	0.00		0.00	0.00	
Open Market purchase	284.85		113.94	113.94	4.00
Renewable Purchase					
Solar-Own Generation	16.00	9.75	-	9.75	6.09
Non-Solar-Hydro	0.00		0.00	0.00	-
Solar -SECI	0.00		0.00	0.00	-
REC (Solar and Non-Solar)*			36.89	36.89	
Subtotal	**16.00**	**9.75**	**36.89**	**46.64**	
Total Power Purchase	**3046.23**	**418.32**	**793.96**	**1212.28**	**3.98**
Transmission Charges					
PGCIL Charges				143.82	
WRLDC Charges				0.21	
MSTCL Charges				1.75	
Subtotal				**145.78**	
Total	**3046.23**			**1358.06**	**4.46**
* Cost for RPO is approved in Section 5.8					

The APPC has been computed at the UT Periphery excluding the transmission charges and cost of purchase of renewable energy. The same shall be used for the purpose of compensation / payment of surplus power at the end of each settlement period in case of Net-metering consumers by the Petitioner. The Average Power Purchase Cost (APPC) for FY 2022-23 has been determined as provided in the following table:

Table 95: Average Power Purchase Cost (APPC) approved by the Commission for FY 2022-23

Particulars	Value
Total Power Purchase Cost (Rs Cr)	1253.72
Less: Transmission charges and Power Purchase cost from renewable energy sources (Rs Cr)	190.67
Net Power Purchase Cost (Rs Cr)	1063.05
Total Power Purchase quantum (MU)	2765.36
Less: Quantum from renewable energy sources (MU)	16.00
Quantum of energy at State Periphery excluding from renewable energy sources (MU)	2749.36
APPC (Rs/kwh)	**3.86**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.86/ kWh for the FY 2022-23.

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner submitted that the total installed solar capacity in the UT of Daman and Diu is 14.363 MW out of which 10 MW is ground mounted and the remaining 4.363 MW is solar rooftop plants. Additionally, 27 MW of rooftop solar plant has been added to the existing capacity during the 2020-21. Further, the EDDD will also procure 50 MUs of solar power form the open market. Hence, EDDD will procure 93.65 MUs from solar plants during the FY 2021-22 and 98.40 MUs during the MYT Control Period. The remaining solar RPO obligation will be fulfilled by procuring renewable energy certificates. For meeting the non-solar RPOs the EDDD will procure 30 MUs non-solar energy from the open market and the remaining RPO obligation shall be met by purchasing renewable energy certificates during the FY 2021-22 and the MYT Control Period.

The summary of projected Solar and Non-Solar RPO for the Control Period as submitted by the Petitioner is as given below:

Table 96: RPO plan proposed by the Petitioner for the upcoming Control Period

Description	FY 2022-23	FY 2023-24	FY 2024-25
Sales within State (MU)	2,581.00	2,707.05	2,839.82
RPO obligation (%)	**17.00%**	**17.00%**	**17.00%**
Solar	8.00%	8.00%	8.00%
Non-Solar	9.00%	9.00%	9.00%
RPO obligation for the year (MU)	**438.77**	**460.20**	**482.77**
Solar	206.48	216.56	227.19
Non-Solar	232.29	243.63	255.58
RPO Compliance (Procurement and own generation)	**128.40**	**128.40**	**128.40**
Solar	98.40	98.40	98.40
Non-Solar	30.00	30.00	30.00

Description	FY 2022-23	FY 2023-24	FY 2024-25
RPO Compliance (REC purchase)	**310.37**	**331.80**	**354.37**
Solar	108.08	118.16	128.79
Non-Solar	202.29	213.63	225.58

Commission's Analysis

The Commission has made note of the submission of the Petitioner and expects the Petitioner to comply with RPO targets. Actual compliance in respect of the pending RPO obligations would be reviewed at the time of true-up of the respective years and supporting details such as purchase of RECs, and bills from solar/non-solar plants for the respective years must be submitted along with the MYT filing.

The Commission observed that for meeting the RPO compliance, the Petitioner has proposed to procure 98.40 MU Solar power and 30 MU Non-Solar power during each year of the Control Period, but the same has not been submitted separately by the Petitioner while estimating power purchase quantum from various sources as summarised in Table No. 96. The Commission discussed this issue with the Petitioner during the Technical Validation Session and the Petitioner informed that it has considered the same as part of power purchase from IEX and hence it has not been shown separately in source wise Power purchase.

In view of the sales projections approved by the Commission in Section 3.2.5, the Commission has approved the RPO for each year of the Control Period based on the JERC (Procurement of Renewable Energy) Regulations, 2010 and further amendments. Considering the submissions made by the Petitioner, the Commission has considered the projected Solar Power procurement of 16 MU during each year of the Control Period. With regard to remaining RPO Target during each year of the Control Period, the Commission has considered RPO to be fulfilled by Power Purchase from IEX to the extent of energy requirement from short term sources and directs the Petitioner to purchase such power from GTAM market which may be considered as Renewable Power Purchase. Further, the Commission approves balance RPO to be met through REC Certificate Purchase. The details of RPO approved by the Commission for the Control Period is as under:

Table 97: RPO Obligation approved by the Commission

Description	FY 2022-23	FY 2023-24	FY 2024-25
Sales within State (MU)	2563.66	2699.23	2842.82
RPO obligation (%)	**18.35%**	**19.91%**	**21.58%**
Solar	9.00%	10.00%	11.00%
Non-Solar	9.35%	9.91%	10.58%
RPO obligation for the year (MU) (a)	**470.43**	**537.42**	**613.48**
Solar	230.73	269.92	312.71
Non-Solar	239.70	267.49	300.77
RPO Compliance (Procurement and own generation) (MU) (b)	**16.00**	**16.00**	**16.00**
Solar	16.00	16.00	16.00
Non-Solar	0.00	0.00	0.00
Renewable Energy Purchase from Exchange (c)	**3.99**	**138.47**	**284.45**
RPO Compliance (REC purchase) (d = a - b - c)	**450.45**	**382.95**	**312.63**

The cost of REC purchase has already been considered in the total power purchase cost approved by the Commission for each year of 3rd Control Period as shown in the previous section. The compliance and cost towards RPO for each year of the Control Period as approved by the Commission is provided in the following table:

Table 98: Cost towards compliance of RPO approved by the Commission for FY 2022-23 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar (Own)**	16.00	9.75	6.09
2	**Green Energy Purchase Through Exchange**	3.99	1.59	4.00
3	**REC Purchase**	450.45	53.15	1.18
	Total	**470.43**	**64.50**	

The Commission approves INR 64.50 Cr towards compliance of RPO in the ARR of FY 2022-23.

Table 99: Cost towards compliance of RPO approved by the Commission for FY 2023-24 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar (Own)**	16.00	9.75	6.09
2	**Green Energy Purchase Through Exchange**	138.47	55.39	4.00
3	**REC Purchase**	382.95	45.19	1.18
	Total	**537.42**	**110.32**	

The Commission approves INR 110.32 Cr towards compliance of RPO in the ARR of FY 2023-24.

Table 100: Cost towards compliance of RPO approved by the Commission for FY 2024-25 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar (Own)**	16.00	9.75	6.09
2	**Green Energy Purchase Through Exchange**	284.85	113.94	4.00
3	**REC Purchase**	312.63	36.89	1.18
	Total	**613.48**	**160.58**	

The Commission approves INR 160.58 Cr towards compliance of RPO in the ARR of FY 2024-25.

5.8. *Energy Balance*

Petitioner's submission

The Energy Balance for upcoming Control Period as estimated by the Petitioner is as given below:

Table 101: Energy Balance as estimated by the Petitioner (MU)

Particulars	Projected		
	FY 2022-23	FY 2023-24	FY 2024-25
Retail Sales (a)	2,581.00	2,707.05	2,839.82
Open Access Sales (b)	0.00	0.00	0.00
Less: Energy Savings (c)	0.00	0.00	0.00
Total Sales (d=a+b-c)	2,581.00	2,707.05	2,839.82
Distribution Loss (MU) (e=g-d)	176.48	182.01	187.71
Distribution Loss (%) (f=e/g)	6.40%	6.30%	6.20%
Energy Required at Periphery (g)	2757.48	2889.07	3027.53

Particulars	Projected		
	FY 2022-23	FY 2023-24	FY 2024-25
Sale to common pool consumer/UI Sale(h)	0.78	0.19	0.73
Own generation (i)	16.00	16.00	16.00
Total energy requirement at UT periphery(j=g+h-i)	**2742.26**	**2873.26**	**3012.26**
Less: Energy Purchased through UI at Periphery (k)	0.00	0.00	0.00
Less: Energy Purchase from IEX (l)	288.00	419.00	558.00
Less: Open Access Purchase at Periphery (m)	0.00	0.00	0.00
Energy requirement at UT periphery from tied up sources (n=j-k-l-m)	**2454.26**	**2454.26**	**2454.26**
Interstate loss (MU) (o=p-n)	93.24	93.24	93.24
Interstate loss (%)	3.66%	3.66%	3.66%
Energy requirement at UT periphery from generator end (p)	**2547.50**	**2547.50**	**2547.50**
Total Energy requirement from tied up sources, UI and IEX at generator end (q=p+k+l)	**2851.50**	**2982.50**	**3121.50**
Total Energy requirement in UT including Open Access (r=p+m)	**2851.50**	**2982.50**	**3121.50**

Commission's Analysis

The energy balance for upcoming Control Period as approved by the Commission is as given below:

Table 102: Energy Balance as approved by the Commission

Particulars	Approved by the Commission		
	FY 2022-23	FY 2023-24	FY 2024-25
Retail Sales (a)	2563.66	2699.23	2842.82
Open Access Sales (b)	0.00	0.00	0.00
Less: Energy Savings (c)	0.00	0.00	0.00
Total Sales (d=a+b-c)	2563.66	2699.23	2842.82
Distribution Loss (MU) (e=g-d)	100.44	99.93	102.19
Distribution Loss (%) (f=e/g)	3.77%	3.57%	3.47%
Energy Required at Periphery (g)	2563.66	2699.23	2842.82
Sale to common pool consumer/UI Sale(h)	0.78	0.19	0.73
Own generation (i)	16.00	16.00	16.00
Total energy requirement at UT periphery(j=g+h-i)	**2648.88**	**2783.36**	**2929.75**
Less: Energy Purchased through UI at Periphery (k)	0.00	0.00	0.00
Less: Energy Purchase from IEX (l)	3.99	138.47	284.85
Less: Open Access Purchase at Periphery (m)	0.00	0.00	0.00
Energy requirement at UT periphery from tied up sources (n=j-k-l-m)	**2644.89**	**2644.89**	**2644.89**
Interstate loss (MU) (o=p-n)	**100.48**	**100.48**	**100.48**
Interstate loss (%)	3.66%	3.66%	3.66%
Energy requirement at UT periphery from generator end (p)	2745.37	2745.37	2745.37

Particulars	Approved by the Commission		
	FY 2022-23	FY 2023-24	FY 2024-25
Total Energy requirement from tied up sources, UI and IEX at generator end (q=p+k+l)	2765.36	2899.84	3046.23
Total Energy requirement in UT including Open Access (r=p+m)	**2765.36**	**2899.84**	**3046.23**

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M).

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

"52. Operation and Maintenance (O&M) expenses for the Distribution Wires Business

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 considering 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 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 (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 transmission Licensee for the n-1th Year;

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

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

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

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

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

5.9.1. Employee Expenses

Petitioner's submission

The Petitioner has determined the employee expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2021. The employee expenses for FY 2021-22 have been taken as base. The growth factor (Gn) has been calculated on the basis projected growth in the number of employees year over year during the control period. The Petitioner has estimated the average increase in Consumer Price Index (CPI) at 6.11%. The table below provides the employee expenses projected for each year of the MYT Control Period by the Petitioner:

Table 103: Employee Expenses submitted by Petitioner for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Employee Expenses	17.28	18.33	19.45

Commission's Analysis

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 averaged the actual employee expenses for FY 2018-19 to FY 2020-21 to arrive at the employee expenses for the median year. Thereafter, the employee expenses, thus, arrived have been escalated by the CPI inflation twice to arrive at employee expenses for the base year, FY 2021-22. The resultant employee expenses have been escalated by Growth Factor and CPI Inflation to arrive upon the employee expenses of each year of the Control Period.

The CPI Inflation has been computed as follows:

Table 104: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2018-19	299.92	5.45%	
2019-20	322.50	7.53%	
2020-21	338.69	5.02%	
		CPI Inflation	**6.00%**

Accordingly, the employee expenses approved by the Commission for the FY 2020-21 have been provided in the following table:

Table 105: Employee Expenses approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	Average of Three Preceding Years	FY 2021-22 (Base Year)	FY 2022-23	FY 2023-24	FY 2024-25
1	Employee Expenses	15.08				
2	Growth in number of employees (Gn)		0.00%	0.00%	0.00%	0.00%
3	CPI Inflation for preceding three years (CPI)		6.00%	6.00%	6.00%	6.00%
4	**Employee Expenses (Cr.)**	**15.08**	**16.84**	**17.85**	**18.92**	**20.06**

The Commission approves Employee Expenses of INR 17.85 Cr, 18.92 Cr and 20.06 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has determined the A&G expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2021. The A&G expenses for FY 2021-22 have been taken as base. The average increase in Consumer Price Index (CPI) has been considered same as taken while projecting the A&G expenses. The table below provides the A&G expenses projected for each year of the MYT Control Period along with various parameters considered.

Table 106: A&G submitted by Petitioner for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Projected A&G expenses	**15.69**	**16.65**	**17.67**

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses, The Commission has averaged the actual A&G expenses for FY 2018-19 to FY 2020-21 to arrive at the A&G expenses for the median year. Thereafter, the A&G expenses, thus, arrived have been escalated by the CPI inflation twice to arrive at A&G expenses for the base year, FY 2021-22. The resultant A&G expenses have been escalated by CPI Inflation to arrive upon the A&G expenses of each year of the Control Period.

Table 107: A&G Expenses approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	Average of Three Preceding Years	FY 2021-22 (Base Year)	FY 2022-23	FY 2023-24	FY 2024-25
1	A&G Expenses	10.75				
2	CPI Inflation for preceding three years (CPI)		6.00%	6.00%	6.00%	6.00%
3	**A&G Expenses (Cr.)**	**10.75**	**12.01**	**12.73**	**13.49**	**14.30**

The Commission approves A&G Expenses of INR 12.73 Cr, 13.49 Cr and 14.30 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2021. The average increase in Wholesale Price Index (WPI) has been calculated based on the increase in the Wholesale Price Index (WPI) for FY 2018-19 to FY 2020-21. The WPI inflation has been considered at 2.42% for projecting the R&M expenses during 3rd Control Period.

The table below provides the R&M expenses proposed for each year of the MYT Control Period:

Table 108: R&M expenses submitted by Petitioner for 3rd Control Period (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Projected R&M Expenses	16.48	17.08	17.91

Commission's Analysis

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

Table 109: Computation of K-Factor (%)

S. No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	R&M Expenses	17.30	14.34	14.43
2	Opening GFA	587.63	607.45	627.69
3	K Factor	2.94%	2.36%	2.30%
4	**K Factor Approved by the Commission (Average of 3 years)**	**2.53%**		

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for each year of the Control Period.

The WPI Inflation has been computed as follows:

Table 110: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2018-19	119.79	4.28%	
2019-20	121.80	1.68%	

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2020-21	123.38	1.29%	
		WPI Inflation	**2.42%**

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

Table 111: R&M Expenses approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	GFA of the year (GFA)	538.36	561.91	594.49
2	K factor approved (K)	2.53%	2.53%	2.53%
3	WPI Inflation	2.42%	2.42%	2.42%
	R&M Expenses (K x (GFA_{n-1}) x (1+$WPI_{inflation}$)	**13.98**	**14.59**	**15.43**

The Commission approves R&M Expenses of INR 13.98 Cr, 14.59 Cr and 15.43 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

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

The following table provides the total O&M expenses approved by the Commission for 3rd Control Period.

Table 112: O&M Expenses approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Employee Expenses	17.85	18.92	20.06
2	Administrative & General Expenses (A&G)	12.73	13.49	14.30
3	Repair & Maintenance Expenses	13.98	14.59	15.43
4	**Total Operation & Maintenance Expenses**	**44.55**	**47.00**	**49.79**

The Commission approves total O&M Expenses of INR 44.55 Cr, 47.00 Cr and 49.79 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has requested the Commission to approve the capital expenditure and capitalization as given in Table below:

Table 113: Capital Expenditure and Capitalization proposed by the Petitioner

S. No	Particulars (Rs. Cr.)	FY 2022-23	FY 2023-24	FY 2024-25
1	Capital Expenditure	42.55	33.58	31.52
2	Capitalisation	23.55	32.58	31.52

Commission's Analysis

The Commission had approved the capital expenditure and capitalization for the next Control Period in the Business Plan Order dated March 31, 2022. The Commission considers the same for the Control Period and approves the capital expenditure and capitalization as shown in the table below.

Table 114: Capital Expenditure and Capitalization approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Capital Expenditure	42.55	33.58	31.52
2	Capitalization	23.55	32.58	31.52

The Commission approves capital expenditure of INR 107.65 Cr and capitalization of INR 87.65 Cr for the upcoming Control Period.

5.11. *Capital Structure*

Petitioner's Submission

The Petitioner has submitted that the entire proposed capital expenditure is to be funded through Government Funding through budgetary support without any external borrowings. The Petitioner has not provided details of debt:equity ratio to be deployed towards the proposed capital expenditure.

Commission's Analysis

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

"27. Debt to Equity Ratio

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 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.*

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

In accordance with above, since the Petitioner has submitted that the entire capitalization is funded through government funding. The opening Gross Fixed Assets for FY 2022-23 has been considered as the closing Gross Fixed Assets approved in the APR of FY 2021-22. Further, the values of opening loan and equity has been considered as closing loan and equity approved in APR of FY 2021-22. The loan and equity additions have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year. In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Capital Structure for the Control Period as detailed as follows:

Table 115: Approved funding plan for the upcoming Control Period

Sr. No.	Sources of Funds	FY 2022-23	FY 2023-24	FY 2024-25	Total
1	Total Capitalization in INR Cr	**23.55**	**32.58**	**31.52**	**87.65**
2	Debt (%)	70%	70%	70%	70%
3	Equity (%)	30%	30%	30%	30%
4	Normative Debt (INR Cr) (B x A)	16.485	22.806	22.064	61.355
5	Equity (INR Cr) (C x A)	7.065	9.774	9.456	26.295

Table 116: GFA addition approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Gross Fixed Assets	538.36	561.91	594.49
2	Less: Assets depreciated upto 90% till FY 2021-22	-	-	-
3	Addition During FY	23.55	32.58	31.52
4	Adjustment/Retirement During FY	0.00	0.00	0.00
5	Closing Gross Fixed Assets	561.91	594.49	626.01

Table 117: Normative Loan addition approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Normative Loan	58.21	55.82	58.75
2	Add: Normative Loan During the year	16.49	22.81	22.06
3	Less: Normative Repayment equivalent to Depreciation	18.87	19.88	21.03
4	Closing Normative Loan	55.82	58.75	59.78

Table 118: Normative Equity addition approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Equity	74.04	81.10	90.88
2	Additions on account of new capitalization	7.07	9.77	9.46
3	Closing Equity	81.10	90.88	100.33

5.12. *Depreciation*

Petitioner's Submission

The Petitioner has determined the depreciation on normative basis while considering the depreciation rate as per JERC MYT Regulations, 2021.

The following table provides the depreciation for each year of the Control Period.

Table 119: Depreciation as submitted by the Petitioner for 3rd Control Period (INR Crore)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening GFA	646.94	670.49	703.07
2	Additions	23.55	32.58	31.52
3	Closing GFA	670.49	703.07	734.59
4	Average GFA	658.72	686.78	718.83
5	Depreciation Amount	22.92	23.93	25.08

Commission's Analysis

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

"31. Depreciation

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.

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 the 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 based on these Regulations:

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

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

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

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

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate specified in JERC MYT Regulations, 2021, provided in the table below:

Table 120: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%

The opening and closing GFA has been considered as approved in the *Section "5.11: Capital Structure"* of this Order, adjusted by value of assets that have achieved 90% depreciation. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. The overall depreciation rate is considered as the weighted average depreciation rate calculated based on the asset wise depreciation rates and asset classification as per the true-up of FY 2020-21.

The following table provides the calculation of deprecation approved for 3rd Control Period.

Table 121: Depreciation approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening GFA (a)	538.36	561.91	594.49
2	Less: Assets depreciated up to 90% (b)	0.00	0.00	0.00
3	Revised opening Gross Fixed Assets (a-b)	538.36	561.91	594.49
4	Addition During FY	23.55	32.58	31.52
5	Adjustment/Retirement During FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	561.91	594.49	626.01

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
7	Average Gross Fixed Assets	550.13	578.20	610.25
8	Effective Rate of Depreciation (%)	3.43%	3.44%	3.45%
9	**Depreciation**	**18.87**	**19.88**	**21.03**

The Commission approves Depreciation of INR 18.87 Cr, 19.88 Cr and 21.03 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.13. *Interest on Loan*

Petitioner's submission

In line with the methodology adopted for computation of depreciation, the Petitioner has determined the Interest on Loan on normative basis. The Petitioner has considered funding of assets based on normative debt-equity ratio of 70:30 as per the MYT Regulations, 2021 for the MYT Control Period FY 2022-23 to FY 2024-25.

Repayment of the normative loan has been considered equivalent to the depreciation for the respective years in line with the MYT Regulations, 2021.

The interest at the SBI MCLR plus 100 basis at the rate of 8% has been applied on the average normative debt in order to project the interest on normative loans for the control period.

The following table provides the Interest on Loan projected for each year of the Control Period.

Table 122: Interest on Loan submitted by the Petitioner for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Normative Loan	94.63	88.20	87.08
2	Add: Normative Loan During the year	16.49	22.81	22.06
3	Less: Normative Repayment equivalent to Depreciation	22.92	23.93	25.08
4	Closing Normative Loan	88.20	87.08	84.06
5	**Interest on Loan**	**7.31**	**7.01**	**6.85**

Commission's Analysis

The Regulation 29 of the JERC MYT Regulations, 2021 specifies the following:

"29. Interest on Loan

29.1 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-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 de-capitalised 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 30.*

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:

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 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 and the Transmission Licensee or the Distribution Licensee and the Consumers of Distribution Licensee.

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 Commission has considered the values for opening loan and loan addition as approved in the "*Section 5.11: Capital Structure*" of this Order. Further, the repayment is considered same as depreciation approved for the respective year. In absence of any actual loans, the Commission has considered the 1-year SBI MCLR as on March 10, 2021 (7%) plus 100 basis points as rate of interest, in accordance with the JERC MYT Regulations, 2021.

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

Table 123: Interest on loan approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Normative Loan	58.21	55.82	58.75
2	Add: Normative Loan During the year	16.49	22.81	22.06
3	Less: Normative Repayment equal to Depreciation	18.87	19.88	21.03
4	Closing Normative Loan	55.82	58.75	59.78
5	Average Normative Loan	57.01	57.29	59.26
6	Rate of Interest (%)	8.00%	8.00%	8.00%
	Interest on Loan	**4.56**	**4.58**	**4.74**

The Commission approves Interest on Loan of INR 4.56 Cr, 4.58 Cr and 4.74 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.14. Return on Equity (RoE)

Petitioner's submission

As per the JERC (Multi Year Distribution Tariff) Regulations, 2021, EDDD is entitled for a Return on Equity (RoE). The Regulation 28.2 and 28.3 of the JERC MYT Regulations, 2021 stipulates the following:

"28.2 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.

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

The Petitioner has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021, i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Petitioner has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business.

The equity component has been determined in accordance with Regulation 28 of the JERC MYT Regulations 2021. The following table provides the ROE for the 3rd Control Period submitted by the Petitioner:

Table 124: Return on Equity for 3rd Control Period as submitted by the Petitioner (INR Crore)

S. No	Return on Equity	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Equity	96.03	103.09	112.87
2	Addition in equity on account of new capitalization	7.07	9.77	9.46
3	**Closing Equity**	103.09	112.87	122.32

S. No	Return on Equity	FY 2022-23	FY 2023-24	FY 2024-25
4	**Average Equity**	99.56	107.98	117.59
5	Average Equity (Wires Business)	89.60	97.18	105.84
6	Average Equity (Retail Supply Business)	9.96	10.80	11.76
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	13.89	15.06	16.40
10	Return on Equity for Retail Supply Business	1.59	1.73	1.88
11	**Return on Equity**	**15.48**	**16.79**	**18.29**

Commission's Analysis

Regulation 28.2 and 28.3 of the JERC MYT Regulations, 2021 stipulates the following:

"28.2 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****.*

28.3 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****."* ***(Emphasis supplied)***

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

………

30.2 Return on equity shall be computed at the base rate of ***15.50%*** *for thermal generating station,* ***transmission system*** *including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
……..'' ***(Emphasis supplied)***

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed above in "*Section 5.11: Capital Structure*".

The following table provides the Return on Equity approved for 3rd Control Period.

Table 125: RoE approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Equity	74.04	81.10	90.88
2	Additions on account of new capitalization	7.07	9.77	9.46
3	Closing Equity	81.10	90.88	100.33

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
4	Average Equity	77.57	85.99	95.61
5	Average Equity (Wires Business)	69.81	77.39	86.05
6	Average Equity (Retail Supply Business)	7.76	8.60	9.56
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	10.82	12.00	13.34
10	Return on Equity for Retail Supply Business	1.24	1.38	1.53
11	**Total Return on Equity**	**12.06**	**13.37**	**14.87**

The Commission approves RoE of INR 12.06 Cr, 13.37 Cr and 14.87 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.15. *Interest on Security Deposits*

Petitioner's submission

A provision of Rs 3.67 Cr has been made by the Petitioner towards payment of interest on consumer security deposits during each year of the Control Period.

<u>Commission's Analysis</u>

Regulation 29.11 of the JERC 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 as claimed by the Petitioner has been approved by the Commission and the same shall be trued-up on the actual basis. The following table provides the interest on security deposits:

Table 126: Interest on Security Deposits approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	**Interest on Security Deposit**	**3.67**	**3.67**	**3.67**

The Commission approves Interest on Security Deposit as INR 3.67 Cr for each year of 3rd Control Period.

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 JERC MYT Regulations, 2021.

The working capital requirement has been computed considering the following

- Receivable equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month

  Less-
- Power Purchase Cost for One Month
- consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

A rate of interest of 9.00% has been considered on the working capital requirement, being the 1-year SBI MCLR as on 1st April of the year plus 200 basis points in line with the JERC MYT Regulations, 2021. The Interest on Working Capital submitted by Petitioner for 3rd Control Period is given in Table below:

Table 127: Interest on Working Capital for 3rd Control Period as submitted by the Petitioner (INR Crore)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Two Months Receivables	210.20	214.13	224.26
One Month O&M Expenses	4.12	4.34	4.59
40% of Repair and Maintenance expenses for One Month	0.55	0.57	0.60
Less: Consumer Security Deposit excl. BG/FDR	95.87	95.87	95.87
Less: One Month Power Purchase Cost	102.17	106.10	109.00
Total Working after deduction of Security Deposit	**16.83**	**17.07**	**24.58**
Interest Rate (%)	9.00%	9.00%	9.00%
Interest on Working Capital	**1.51**	**1.54**	**2.21**

Commission's Analysis

The Regulation 64 of the JERC 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 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) 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 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 32 of the JERC MYT Regulation, 2021 stipulates the following:

"32. Interest on Working Capital

……..

32.3 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.

32.4 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."

In accordance with the JERC MYT Regulation, 2021, the Commission has computed the Interest on Working Capital for 3rd Control Period. The rate of interest on working capital has been considered as 1-yr SBI MCLR rate as on March 10, 2021 plus 200 basis points (7.00%+2.00% = 9.00%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 128: Interest on Working Capital approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	O&M Expense for 1 month	3.71	3.92	4.15
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.47	0.49	0.51
3	Receivables equivalent to two (2) months of the expected revenue requirement	209.93	218.74	228.34
4	Less: One Month Power Purchase Cost	104.48	108.63	113.17
5	Less: Amount, held as security deposits	95.87	95.87	95.87
6	**Net Working Capital**	**13.76**	**18.64**	**23.96**
7	Rate of Interest (%)	9.00%	9.00%	9.00%
8	**Interest on Working Capital**	**1.24**	**1.68**	**2.16**

The Commission approves IoWC of INR 1.24 Cr, 1.68 Cr and 2.16 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.17. Income Tax

Petitioner's submission

No submission has been made in this regard by the Petitioner.

Commission's Analysis

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

"33. Tax on Income

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

33.2 The Commission in its MYT Order shall provisionally approve Income Tax payable for each Year of the Control Period, if any, based on the actual income tax paid, including cess and surcharge on the same, if any, as per latest audited accounts available for the Distribution Licensee, subject to prudence check.

33.3 Variation between Income Tax actually paid, including cess and surcharge on the same, if any, and approved, if any, on the income stream of the Licensed business of the Distribution Licensees shall be reimbursed to/recovered from the Distribution Licensees, based on the documentary evidence submitted at the time of truing up of each Year of the Control Period, subject to prudence check.

33.4 Under-recovery or over-recovery of any amount from the Consumers on account of such tax having been passed on to them shall be adjusted every Year on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Distribution Licensee may include this variation in its truing up Petition:

Provided that tax on any income stream other than the core business shall not be a pass-through component in tariff and tax on such other income shall be borne by the Distribution Licensee."

For 3rd Control Period no income tax liability is considered as submitted by the Petitioner and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 129: Income Tax approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	**Income Tax**	**0.00**	**0.00**	**0.00**

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not earmarked any provision for bad and doubtful debts for 3rd Control Period.

Commission's Analysis

The Regulation 63 of the JERC MYT Regulations, 2021 stipulates the following:

"63. Provision for bad and doubtful debts

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

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

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

Provided further that if subsequent to the write off of a particular bad debt, revenue is 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 realized."

The Commission has not considered any Provision for Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of the FY 2022-23.

5.19. Non-Tariff Income

Petitioner's submission

For projecting the non-tariff income for each year during the 3rd Control Period, an increase of 5% p.a. over the estimated non-tariff income for the FY 2021-22 has been considered by the Petitioner.

Commission's Analysis

The Regulation 65 of the JERC 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."

For projections of 3rd Control Period, the Commission has considered as escalation of 5% over the approved Non-Tariff Income for FY 2021-22 which comes out same as proposed by the Petitioner. The same shall be subject to True-up on actual basis. The NTI approved for 3rd MYT Control Period is shown in the table below:

Table 130: Non -tariff Income approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	**Non- Tariff Income**	6.53	6.85	7.20

The Commission approves Non-Tariff Income of INR 6.53 Cr, 6.85 Cr and 7.20 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

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 131: Aggregate Revenue Requirement submitted by the Petitioner for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Power Purchase Cost inclusive of cost towards RPO	1226.10	1273.25	1308.00
2	Operation & Maintenance Expenses	49.45	52.06	55.03
3	Depreciation	22.92	23.93	25.08
4	Interest and Finance charges	7.31	7.01	6.85
5	Interest on Working Capital	1.51	1.54	2.21
6	Return on Equity	15.48	16.79	18.29
7	Provision for Bad Debt	0.00	0.00	0.00
8	Interest on Security Deposit	3.67	3.67	3.67
9	Income Tax	0.00	0.00	0.00
10	**Total Revenue Requirement**	**1326.43**	**1378.24**	**1419.11**
11	Less: Non-Tariff Income	6.53	6.85	7.20
12	Less: Revenue from sale of surplus power	0.00	0.00	0.00
13	**Net Revenue Requirement**	**1319.91**	**1371.38**	**1411.92**

Commission's Analysis

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

Table 132: Aggregate Revenue Requirement approved by the Commission for 3rd Control Period (INR Crore)

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Power Purchase Cost inclusive of cost towards RPO	1253.72	1303.62	1358.06
2	Operation & Maintenance Expenses	44.55	47.00	49.79
3	Depreciation	18.87	19.88	21.03
4	Interest and Finance charges	4.56	4.58	4.74
5	Interest on Working Capital	1.21	1.68	2.16
6	Return on Equity	12.06	13.37	14.87
7	Provision for Bad Debt	0.00	0.00	0.00

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
8	Interest on Security Deposit	3.67	3.67	3.67
9	Income Tax	0.00	0.00	0.00
10	**Total Revenue Requirement**	**1338.67**	**1393.79**	**1454.32**
11	Less: Non-Tariff Income	6.53	6.85	7.20
12	Less: Revenue from sale of surplus power	0.00	0.00	0.00
13	**Net Revenue Requirement**	**1332.14**	**1386.94**	**1447.12**

The Commission approves net ARR of INR 1332.14 Cr, INR 1386.94 Cr and INR 1447.12 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.

5.21. *Revenue at existing Retail Tariff*

Petitioner's submission

The revenue from sale of power at existing tariff of Rs 1261.18 Cr is based on the projected energy sales, connected load and number of consumers. The revenue for FY 2022-23 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2021-22 dated 23rd March, 2021.

Commission's Analysis

The category wise/ sub-category wise and slab wise revenue at retail tariff is determined as per the applicable tariff rates. The revenue from demand charges and the energy charges has been projected for each category/ sub-category and slab. The category/ sub-category/ slab wise revenue as computed by the Commission for the FY 2022-23 has been shown in the table below:

Table 133: Revenue at existing tariff computed by the Commission for FY 2022-23 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
1	**DOMESTIC SUPPLY (DS)**		**1.50**	**34.91**	**36.42**	**2.32**
1	0-100 units	Single	0.39	6.05	6.44	**1.49**
2	101-200 units	Single	0.18	4.40	4.58	**2.08**
3	201-400 units	Single	0.28	4.14	4.42	**2.67**
4	401 and above units	Single	0.24	7.95	8.19	**3.09**
5	0-100 units	Three	0.15	1.14	1.29	**1.59**
6	101-200 units	Three	0.07	1.26	1.33	**2.11**
7	201-400 units	Three	0.11	1.87	1.98	**2.64**
8	401 and above units	Three	0.09	8.10	8.19	**3.03**
2	**Lifeline Consumer**		0.00	0.00	0.00	0.00
3	**COMMERCIAL / NON-DOMESTIC**		**0.31**	**18.58**	**18.89**	**3.99**
1	0-100 units	Single	0.09	1.13	1.22	**3.24**
2	101 Units and Above	Single	0.09	4.97	5.07	**4.13**
3	0-100 units	Three	0.06	0.60	0.66	**3.31**
4	101 Units and Above	Three	0.06	11.87	11.94	**4.07**
4	**AGRICULTURAL**		**0.00**	**0.26**	**0.26**	**0.76**
1	For sanctioned load up to 10 HP		0.00	0.25	0.25	**0.75**
2	Beyond 10 HP and up to 99 HP sanctioned load		0.00	0.01	0.01	**1.05**

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
5	**LT INDUSTRY**		**6.97**	**91.32**	**98.28**	**4.56**
6	**INDUSTRY**		**199.72**	**902.73**	**1102.45**	**5.17**
1	HT General		194.54	878.94	1073.48	**5.17**
2	HT Industrial (Ferro)		5.18	23.80	28.97	**5.09**
7	**PUBLIC LIGHTING (PL)**		**0.00**	**2.35**	**2.35**	**4.50**
8	**PUBLIC WATER WORKS**		**0.03**	**0.89**	**0.92**	**3.59**
9	**TEMPORARY SUPPLY**		**0.00**	**0.00**	**0.00**	**0.00**
	TOTAL		**208.52**	**1051.04**	**1259.57**	**4.91**

The Commission has determined revenue from sale of power at existing tariff as INR 1,259.57 Cr in FY 2022-23.

5.22. *Standalone Revenue Gap/ Surplus*

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the Petitioner has submitted a standalone revenue gap of Rs 58.72 Cr for FY 2022-23.

Commission's Analysis

The Commission based on the approved ARR and existing retail tariff has derived the following Revenue Gap/(Surplus) for FY 2022-23:

Table 134: Standalone Revenue Gap/ (Surplus) approved at existing tariff for FY 2022-23 (INR Crore)

S. No	Particulars	Petitioner's submission	Now Approved
1	Annual Revenue Requirement	1319.91	1332.14
2	Revenue from sale of power	1261.18	1259.57
3	**Revenue Gap/(Surplus)**	**58.72**	**72.57**

The Commission approves a Revenue Gap of INR 72.57 Cr in comparison to INR 58.72 Cr of gap as claimed by the Petitioner for FY 2022-23. The reason for this gap is higher ARR approved by the Commission which is mainly because of increased Power Purchase Cost. Details regarding the same are already provided in PPC section**.**

The standalone revenue gap at existing retail tariff is INR 72.57 Cr for FY 2022-23.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

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

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. In this Tariff Order, the Commission has continued with its endeavor to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also mandates the Commission to strike a fine balance between the interests of various stakeholders including Utilities and consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

6.2. Applicable Regulations

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

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

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

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

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

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

"68. Determination of Tariff

68.1 The Commission may categorize Consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required and any other factor as considered appropriate by the Commission.

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

68.3 The Commission shall endeavour to reduce gradually the cross-subsidy between Consumer categories with respect to the cost of supply in accordance with the provisions of the Act.

68.4 The tariff proposal by Licensee and the tariff determination by the Commission shall be based on the following principles:

(a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.

(b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;

(c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of supply for respective categories of Consumers;
(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;
(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers."

6.3. Cumulative Revenue Gap/ Surplus at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a cumulative revenue gap of INR 98.09 Cr till FY 2022-23. The standalone and consolidated revenue Gap/(Surplus) as submitted by the Petitioner has been tabulated below:

Table 135: Standalone Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	1104.30	1319.77	1319.91
Revenue on existing tariff (Including OA charges)	1090.37	1310.55	1261.18
Gap/(Surplus) for the year	**13.93**	**9.22**	**58.72**

Table 136: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

Particular	FY 2020-21	FY 2021-22	FY 2022-23
Opening Gap/(Surplus)	7.11	22.27	33.84
Add: Gap/(Surplus) during the year	13.93	9.22	58.72
Closing Gap/(Surplus)	**21.04**	**31.49**	**92.56**
Carrying cost	0.85	2.35	5.53
Additional Revenue at Proposed Tariff	-	-	-
Total Gap/(Surplus)	**13.19**	**33.84**	**98.09**

Commission's Analysis

Regulation 12.5 (c) of the JERC MYT Regulation, 2021 stipulates the following:

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

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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 there of 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."

Since the Petitioner has not borrowed any loan, therefore the Commission allows Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR, as on 1st April of the relevant FY plus 100 basis points for FY 2020-21 & FY 2021-22 and 1-yr SBI MCLR as on 10.03.2021 for FY 2022-23.

Accordingly, the Commission determines the standalone revenue Gap/(Surplus) for each year and likewise taking into account the previous year's Gap/(Surplus), determines the cumulative revenue Gap/ (Surplus) at the end of FY 2022-23 as shown in the tables as follows:

Table 137: Standalone Revenue Gap/ (Surplus) determined by the Commission at existing tariff (INR Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Net Revenue Requirement	1095.60	1333.66	1332.14
Revenue from Retail Sales at Existing Tariff	1090.37	1197.14	1259.57
Revenue from FPPCA	0.00	93.03	0.00
Total Revenue	**1090.37**	**1290.18**	**1259.57**
Standalone Gap/(Surplus) for the year	**5.23**	**43.48**	**72.57**

Table 138: Consolidated Revenue Gap/ (Surplus) determined by the Commission at existing tariff (INR Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Opening Gap/(Surplus)	7.11	12.79	59.03
Addition Gap/(Surplus) due to standalone year	4.84	43.48	72.57
Closing Gap/(Surplus)	11.95	56.27	131.61
Average Gap/(Surplus)	9.53	34.53	95.32
Rate of Interest	8.75%	8.00%	8.00%
Carrying cost	0.83	2.76	7.63
Closing Gap/ (Surplus)	**12.79**	**59.03**	**139.23**

The Commission determines a cumulative revenue gap of INR 139.23 Cr till FY 2022-23 at existing tariff.

6.4. *Treatment of the cumulative Gap/ Surplus and Tariff Design*

As derived from above, the resultant cumulative revenue gap at the end of FY 2022-23 is INR 139.230 Crore. In view of the substantial gap, the Commission has decided to change the existing tariff schedule and the revised schedule will be applicable for FY 2022-23.

6.4.1. Designing of Tariff

Petitioner's Submission

1. The EDDD did not propose any tariff hike for the FY 2022-23 and has requested that the proposal of EDDD for keeping the tariff unchanged for the FY 2022-23 may be approved.

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 139: Retail Tariff proposed by the Petitioner for FY 2022-23

S. No.	Category	Existing (FY 2021-22)		Proposed (FY 2022-23)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
1	0 to 100 Units	20 INR/Con/Month (Single Phase), 45 INR/Con/Month (Three Phase)	1.40 INR/kWh	20 INR/Con/Month (Single Phase), 45 INR/Con/Month (Three Phase)	1.40 INR/kWh
2	101 to 200 Units		2.00 INR/kWh		2.00 INR/kWh
3	201 to 400 Units		2.50 INR/kWh		2.50 INR/kWh
4	Beyond 401 Units		3.00 INR/kWh		3.00 INR/kWh
2	**Lifeline Consumer**	15 INR/Con/month		15 INR/Con/month	
3	**LT-C/Commercial**				
1	1st 100 Units	25 INR/Con/Month (Single Phase), 50 INR/Con/Month (Three Phase)	3.00 INR/kWh	25 INR/Con/Month (Single Phase), 50 INR/Con/Month (Three Phase)	3.00 INR/kWh
2	Beyond 100 Units		4.05 INR/kWh		4.05 INR/kWh
4	**HT Commercial**	100 INR/kVA/month	4.20 INR/kVAh	100 INR/kVA/month	4.20 INR/kVAh
5	**LT- Ag/ Agriculture**				
1	For sanctioned load up to 10 HP		0.75 INR/kWh		0.75 INR/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		1.05 INR/kWh		1.05 INR/kWh
6	**LT-PL/Public Lighting**		4.50 INR/kWh		4.50 INR/kWh
7	**LT-Public Water Works**	25 INR/HP/month	4.10 INR/kWh	25 INR/HP/month	4.10 INR/kWh
8	**LT Industry**	40 INR/HP/month	3.60 INR/kVAh	40 INR/HP/month	3.60 INR/kVAh
9	**HT**				
1	HTC General Industrial / Motive Power 11KV or 66KV having Contract Demand above 100KVA	315 INR/kVA/month	4.20 INR/ kVAh	315 INR/kVA/month	4.20 INR/ kVAh
2	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)	505 INR/kVA/month	4.15 INR/ kVAh	505 INR/kVA/month	4.15 INR/ kVAh
10	**Hoardings/Sign Boards**	100 INR/kVA/month	6.70 INR/kWh	100 INR/kVA/month	6.70 INR/kWh

S. No.	Category	Existing (FY 2021-22)		Proposed (FY 2022-23)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
11	EV Charging Station	-	4.50 INR/kWh	-	4.50 INR/kWh

Commission's Analysis

The Commission has determined the retail tariff for the FY 2022-23 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the JERC MYT Regulations, 2021. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time allows intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers
3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.
4. Affordability: Assessing affordability of electricity for Domestic and Commercial consumers for defining slab ranges and setting tariffs
5. Revenue stability: Tariff should ensure adequate fixed cost recovery for utilities from fixed/demand charges
6. Avoiding tariff shocks: Tariff shocks should be avoided and stakeholders should be able to predict the future trends in tariffs
7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs
8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small-scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

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

1. Cost of Supply

a) Context

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

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

b) Approach:

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

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

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

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

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

The Commission is of the opinion that for determination of the Category wise Cost of Supply, the embedded cost methodology is an appropriate starting point.

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

2. *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.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, the Commission has determined and restructured the Retail Tariff applicable for FY 2022-23.

As discussed earlier, the cumulative revenue gap for FY 2022-23 at existing tariffs works out to be INR 139.23 Cr which includes previous years gap of Rs 59.03 Crore. The Commission is of the view that instead of revising tariff to meet the cumulative revenue gap of Rs 139.23 Crore including previous years gap of Rs 59.03 Crore, it would be more appropriate to allow recovery of past years gap through Regulatory Surcharge in FY 2022-23 so that the impact of past years gap is not built-in tariff deign. Hence, the Commission allows the recovery of previous years gap through regulatory surcharge to be levied at 4.40% of approved tariffs during 2022-23. This regulatory surcharge of 4.40% will only be levied for FY 2022-23. The revenue estimated from regulatory surcharge works out to Rs 59.03 Crore and after considering this revenue from regulatory surcharge, the balance gap to be met from tariff works out to be Rs 80.23 Crore. To meet this balance revenue gap, the Commission has decided to increase the tariff by way of increasing the fixed charges and energy charges of all consumers categories. Commission has tried to limit the tariff increase in each category in order to safeguard the interests of consumers by avoiding abnormal increase in tariffs.

The revision made in the Tariff for all categories is shown in Table as under:

Table 140: Retail Tariff revised by the Commission for FY 2022-23

S. No.	Category	Revised Tariff Schedule (FY 2022-23)	
		Fixed Charges	**Energy Charges**
1	**LT-D/Domestic**		
1	0 to 100 Units	10 INR/kW/Month (Single Phase)	1.60 INR/kWh
2	101 to 200 Units		2.30 INR/kWh
3	201 to 400 Units	10 INR/kW/Month (Three Phase)	2.80 INR/kWh
4	Beyond 401 Units		3.40 INR/kWh
2	**Lifeline Consumer#**	10 INR/kW/month	1.00 INR/kWh
3	**LT-C/Commercial**		
1	1st 100 Units	20 INR/kW/Month (Single Phase)	3.35 INR/kWh
2	Beyond 100 Units	20 INR/kW/Month (Three Phase)	4.35 INR/kWh

S. No.	Category	Revised Tariff Schedule (FY 2022-23)	
		Fixed Charges	Energy Charges
4	**HT Commercial**	110 INR/kVA/month	4.50 INR/kVAh
5	**LT- Ag/ Agriculture**		
1	For sanctioned load up to 10 HP		0.90 INR/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		1.30 INR/kWh
6	**LT-PL/Public Lighting**		4.80 INR/kWh
7	**LT-Public Water Works**	40 INR/HP/month	4.50 INR/kWh
8	**LT Industry**	50 INR/HP/month	3.85 INR/kVAh
9	**HT**		
1	HTC General Industrial / Motive Power 11KV or 66KV having Contract Demand above 100KVA	355 INR/kVA/month	4.40 INR/ kVAh
2	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)	535 INR/kVA/month	4.35 INR/ kVAh
10	**Hoardings/Sign Boards**	110 INR/kVA/month	7.00 INR/kWh
11	**EV Charging Station** *	-	4.90 INR/kVAh

If the consumption exceeds 50 units per month, then Domestic tariff shall be applicable.

* The Tariff approved for EV Charging Station is for HT Category. For LT category 0.20 Paise additional Tariff will be applicable.

6.4.2. Approved Final Tariff Schedule

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the following table:

Table 141: Existing and Approved tariff by the Commission for FY 2022-23

S. No.	Category	Existing (FY 2021-22)		Approved (FY 2022-23)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
1	0 to 100 Units	20 INR/Con/Month	1.40 INR/kWh	10 INR/kW/Month (Single Phase)	1.60 INR/kWh
2	101 to 200 Units		2.00 INR/kWh		2.30 INR/kWh

S. No.	Category	Existing (FY 2021-22)		Approved (FY 2022-23)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
3	201 to 400 Units	(Single Phase), 45 INR/Con/Month (Three Phase)	2.50 INR/kWh	10 INR/kW/Month (Three Phase)	2.80 INR/kWh
4	Beyond 401 Units		3.00 INR/kWh		3.40 INR/kWh
2	**Lifeline Consumer#**	15 INR/Con/month		10 INR/kW/month	1.00 INR/kWh
3	**LT-C/Commercial**				
1	1st 100 Units	25 INR/Con/Month (Single Phase), 50 INR/Con/Month (Three Phase)	3.00 INR/kWh	20 INR/kW/Month (Single Phase)	3.35 INR/kWh
2	Beyond 100 Units		4.05 INR/kWh	20 INR/kW/Month (Three Phase)	4.35 INR/kWh
4	**HT Commercial**	100 INR/kVA/month	4.20 INR/kVAh	110 INR/kVA/month	4.50 INR/kVAh
5	**LT- Ag/ Agriculture**				
1	For sanctioned load up to 10 HP		0.75 INR/kWh		0.90 INR/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		1.05 INR/kWh		1.30 INR/kWh
6	**LT-PL/Public Lighting**		4.50 INR/kWh		4.80 INR/kWh
7	**LT-Public Water Works**	25 INR/HP/month	4.10 INR/kWh	40 INR/HP/month	4.50 INR/kWh
8	**LT Industry**	40 INR/HP/month	3.60 INR/kVAh	50 INR/HP/month	3.85 INR/kVAh
9	**HT**				
1	HTC General Industrial / Motive Power 11KV or 66KV having Contract Demand above 100KVA	315 INR/kVA/month	4.20 INR/ kVAh	355 INR/kVA/month	4.40 INR/ kVAh
2	HT Industrial ((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)	505 INR/kVA/month	4.15 INR/ kVAh	535 INR/kVA/month	4.35 INR/ kVAh
10	**Hoardings/Sign Boards**	100 INR/kVA/month	6.70 INR/kWh	110 INR/kVA/month	7.00 INR/kWh
11	**EV Charging Station***	-	4.50 INR/kWh	-	4.90 INR/kVAh

If the consumption exceeds 50 units per month, then Domestic tariff shall be applicable.

* The Tariff approved for EV Charging Station is for HT Category. For LT category 0.20 Paise additional Tariff will be applicable.

6.4.3. Regulatory Surcharge

As discussed earlier, the Commission in order to recover past revenue gap has decided to approve the Regulatory Surcharge of 4.40%. The Surcharge shall be applicable on all consumers.

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 from 1st April 2022 till 31st March 2023.

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

Based on the retail tariff approved above, the revenue from approved tariff is shown in the following table.

Table 142: Revenue from approved retail tariff determined by the Commission for FY 2022-23 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/ unit)	k-factor
1	**DOMESTIC SUPPLY (DS)**		**1.35**	**39.65**	**41.00**	**2.61**	**0.50**
(i)	0-100 units	Single		6.91	6.91	1.60	0.31
(ii)	101-200 units	Single		5.06	5.06	2.30	0.44
(iii)	201-400 units	Single		4.64	4.64	2.80	0.53
(iv)	401 and above units	Single		9.01	9.01	3.40	0.65
(v)	0-100 units	Three		1.30	1.30	1.60	0.31
(vi)	101-200 units	Three		1.45	1.45	2.30	0.44
(vii)	201-400 units	Three		2.10	2.10	2.80	0.53
(viii)	401 and above units	Three		9.17	9.17	3.40	0.65
2	**Lifeline Consumer**						
(i)	Lifeline Consumer			-	-	-	-
3	**COMMERCIAL / NON-DOMESTIC**		**0.75**	**20.03**	**20.78**	**4.39**	**0.84**
(i)	0-100 units	Single		1.27	1.27	3.35	0.64
(ii)	101 Units and Above	Single		5.34	5.34	4.35	0.83
(iii)	0-100 units	Three		0.67	0.67	3.35	0.64
(iv)	101 Units and Above	Three		12.75	12.75	4.35	0.83
4	**HT COMMERCIAL**			-	-	-	-
5	**AGRICULTURAL**			**0.31**	**0.31**	**0.92**	**0.17**
(i)	For sanctioned load up to 10 HP			0.30	0.30	0.90	0.17
(ii)	Beyond 10 HP and up to 99 HP sanctioned load			0.02	0.02	1.30	0.25
6	**LT INDUSTRY**		**8.71**	**97.66**	**106.37**	**4.93**	**0.94**
(i)	LT Industry		8.71	97.66	106.37	4.93	0.94

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/ unit)	k-factor
7	**HT INDUSTRY**		**224.73**	**945.73**	**1170.46**	**5.49**	**1.05**
(i)	HT General		219.24	920.79	1140.03	5.49	1.05
(ii)	HT Industrial (Ferro)		5.49	24.94	30.43	5.35	1.02
8	**LT PUBLIC LIGHTING (PL)**		**0.00**	**2.50**	**2.50**	**4.80**	**0.92**
9	**LT PUBLIC WATER WORKS**		**0.04**	**0.98**	**1.02**	**3.99**	**0.76**
10	**HOARDINGS/SIGN BOARDS**		**-**	**-**	**-**	**-**	**-**
11	**ELECTRIC VEHICLE CHARGING STATION**		**-**	**-**	**-**	**-**	**-**
12	**TEMPORARY SUPPLY**		**-**	**-**	**-**	**-**	*
	TOTAL		**235.58**	**1106.87**	**1342.45**	**5.24**	**1.00**

*1.50 times the k factor of the relevant category in which the connection falls

The Commission approves revenue from approved Retail Tariff of INR 1342.45 Cr for FY 2022-23.

The following table provides the category wise Existing Average Billing Rate (ABR), Approved ABR and the change in tariff for each of the consumer categories.

Table 143: Tariff increase/decrease approved by the Commission

Category	ABR at Existing Tariff (INR/kWh)	ABR at Approved Tariff (INR/kWh)	Increase/ (Decrease) %
Domestic	2.32	2.61	12.59%
LT-Commercial	3.99	4.39	10.02%
LT-Agriculture	0.76	0.92	20.20%
LT-Industrial	4.56	4.93	8.22%
LT-Public Lighting	4.50	4.80	6.67%
LT-PWW	3.59	3.99	11.17%
HT-Industry	5.17	5.49	6.17%
Total	**4.91**	**5.24**	**6.58%**

6.4.5. Balance Revenue Gap/ Surplus at approved Retail Tariff

Accordingly, upon consideration of revenue at approved tariff the resultant Revenue Gap/(Surplus) has been shown in the following table:

Table 144: Cumulative Revenue Gap/ (Surplus) at approved Retail Tariff for FY 2022-23 (INR Crore)

Sr. No.	Particulars	Value
1	Total Gap	139.23
2	Revenue from Regulatory Surcharge	59.03
3	Balance Gap	80.20
4	Additional Revenue	82.89
5	**Balance Gap/(Surplus)**	**(2.69)**

The Commission approves a cumulative revenue surplus of INR 2.69 Cr till FY 2022-23 which will be considered at the time of truing up.

6.4.6. Highlights of the Tariff Structure

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

1. The Commission has made every effort to rationalize the tariffs so that they gradually reflect the average cost of supply in accordance with the provisions of the Act and Tariff Policy. Accordingly, the Commission has approved relatively higher percentage increase in tariff for cross-subsidized categories than the cross-subsiding categories.
2. The Commission has approved a Regulatory Surcharge of 4.40% to recover the cumulative revenue gap of Rs. 59.03 Crore up to FY 2021-22.
3. The Commission has approved an average tariff hike of 6.58%.
4. The Commission in order to rationalize the fixed charges of domestic and Commercial Category has approved the Fixed Charges in Rs/kW instead of prevalent mechanism of Rs/connection.

6.4.7. 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, cannot be achieved by rationalizing the tariff in a single year, as this may lead to tariff shock to the cross subsidized consumers. In this Tariff Order, the Commission has continued its approach of rationalization of the tariff for various consumer categories and reducing the cross subsidy.

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

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

Table 145: Cross Subsidy at Retail Tariff for FY 2022-23 (INR Crore)

Category	ACoS (INR/kWh) – A	ABR at existing tariff (INR/kWh) – B	ABR at approved tariff (INR/kWh) – C	Cross Subsidy level at existing tariff (%) D= (1-B/A) x 100	Cross Subsidy level at approved tariff (%) E= (1-C/A) x 100
Domestic	5.20	2.32	2.61	(55.42%)	(49.81%)
LT Commercial	5.20	3.99	4.39	(23.27%)	(15.58%)
Agriculture	5.20	0.76	0.92	(85.34%)	(82.38%)
Public Lighting	5.20	4.50	4.80	(13.40%)	(7.63%)
Public Water Works	5.20	3.59	3.99	(30.99%)	(23.27%)
LT Industrial	5.20	4.56	4.93	(12.28%)	(5.06%)
HT Industrial	5.20	5.17	5.49	(0.50%)	5.64%

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

7.1. Determination of Wheeling Charges

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

Petitioner's submission:

The Petitioner has submitted the allocation of ARR into wheeling and retail supply of electricity for FY 2022-23 as shown in the table below.

Table 146: Allocation matrix as submitted by Petitioner for FY 2022-23

Particulars	Allocation (%)		Allocation FY 2022-23	
	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0.00	0.00
Power Purchase Cost	*0%*	*100%*	0.00	1,226.10
Employee	*40%*	*60%*	6.91	10.37
R&M	*90%*	*10%*	14.83	1.65
A&G	*50%*	*50%*	7.84	7.84
Depreciation	*90%*	*10%*	20.62	2.29
Interest Cost on Long-term Capital Loans	*90%*	*10%*	6.58	0.73
Interest on Working Capital Loans	*10%*	*90%*	0.15	1.36
Interest on Security Deposit	*10%*	*90%*	0.37	3.30
Return on Equity			13.93	1.55
Provision for Bad Debt	*0%*	*100%*	-	-
Annual Revenue Requirement			**71.25**	**1255.19**
Less: Non-Tariff Income	*10%*	*90%*	0.65	5.87
Income from Other Business	*50%*	*50%*	0.00	0.00
Net Revenue Requirement			**70.59**	**1249.31**

Table 147: Voltage wise allocation of wheeling charges as submitted by the Petitioner

Category	Consumers	Sales (MU)	Asset Allocation (%)	Voltage wise losses (%)
LT	64998	450.00	30%	22.93%
HT & EHT	749	2,131.00	70%	1.96%
Total	**65737**	**2581.00**	**100%**	**6.40%**

Accordingly, the Petitioner has submitted the following wheeling charges for FY 2022-23 as shown in the following table:

Table 148: Wheeling charges proposed for FY 2022-23 by the Petitioner

Category	O&M	Others	Total	Wheeling Charges (INR/kWh)
LT	29.26	12.30	41.56	0.71
HT & EHT	0.33	28.70	29.04	0.13
Total	**29.59**	**41.00**	**70.59**	**0.26**

Commission's Analysis

In this regard, the Regulations 49 of the JERC MYT Regulations, 2021 specifies as follows:

"49. Separation of Accounts of Distribution Licensee

48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable….."

The Petitioner has submitted the allocation matrix as per the JERC MYT Regulations, 2021. The Commission as per the JERC MYT Regulations, 2021, as shown above, has calculated the wheeling charges while taking into consideration the allocation matrix and the ARR approved for FY 2022-23. The allocation between wheeling and retail supply business for FY 2022-23 as per the ARR approved in this Order is provided in the table below:

Table 149: Allocation matrix approved by the Commission for FY 2022-22

Particulars	Allocation (%)		FY 2022-23		
	Wheeling	Supply	Wheeling	Supply	Total
Cost of power purchase for full year	*0%*	*100%*	0.00	1253.72	1253.72
Employee costs	*40%*	*60%*	7.14	10.71	17.85
Administration and General Expenses	*50%*	*50%*	6.36	6.36	12.73
Repair and Maintenance Expenses	*90%*	*10%*	12.58	1.40	13.98
Depreciation	*90%*	*10%*	16.98	1.89	18.87
Interest and Finance charges	*90%*	*10%*	4.11	0.46	4.56
Interest on Working Capital	*10%*	*90%*	0.12	1.11	1.24
Interest on consumer security deposit	*10%*	*90%*	0.37	3.30	3.67
Return on Equity			10.86	1.21	12.06
Provision of Bad & Doubtful Debt	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**58.52**	**1280.15**	**1338.67**
Less: Non-Tariff Income	*10%*	*90%*	0.65	5.87	6.53
Income from other Business	*50%*	*50%*	0.00	0.00	0.00
Net Revenue Requirement			**57.86**	**1274.28**	**1332.14**

In order to determine the wheeling charges prudently, the Commission has allocated the wheeling costs on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by Open Access consumers and primarily comprise of O&M Expenses and other costs as provided in the table above. The criteria for allocation of wheeling costs are elaborated as follows:

- O&M Expenses are allocated based on number of consumers under each category

- All expenses other than the O&M expenses are allocated based on voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation. However, the Petitioner has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.

The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

Table 150: Parameters assumed for voltage wise allocation of wheeling charges

Particulars	Energy Sales (MU)	Cumulative Loss (%)	Energy Input (MU)	Consumers	Voltage Wise Asset Allocation (%)
LT	431.40	11.17%	485.65	65077	30%
HT & EHT	2132.26	2.12%	2178.44	749	70%
Total	**2563.66**	**3.77%**	**2664.10**	**65826**	**100%**

The costs corresponding to HT/EHT network have been allocated to HT/EHT and LT level based on the energy input at HT/EHT level for sale at HT/EHT level as well as at LT level. The reason for allocating cost corresponding to HT/EHT network to LT level is because the power supplied at LT level passes through HT/EHT network and hence the HT/EHT network gets utilized for supplying energy at HT/EHT level as well as LT level. The costs corresponding to LT level were allocated to LT level only. Accordingly, the Commission approves the Wheeling Charges for FY 2022-23 as follows:

Table 151: Wheeling Charges approved by the Commission for FY 2022-23

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
LT	25.84	13.59	39.43	0.91
HT & EHT	0.24	18.19	18.43	0.09
Total	**26.08**	**31.78**	**57.86**	**0.23**

The Commission approves wheeling charge of INR 0.91/kWh at LT voltage level and INR 0.09/kWh at HT/EHT voltage level for FY 2022-23.

7.2. *Determination of Additional Surcharge*

Petitioner's Submission:

The Petitioner has submitted the additional surcharge for FY 2022-23 as determined by the Commission in the Tariff Order for FY 2021-22.

Table 152: Additional Surcharge submitted by the Petitioner for FY 2022-23

S. No.	Particulars	FY 2022-23
1	Total Power Purchase cost (INR Crores)	1,226.10
2	Fixed Cost component in Power Purchase Cost (INR Crores)	397.84
3	Energy Sales (MU)	2,581.00
4	**Additional Surcharge (INR/kWh)**	**1.54**

<u>Commission's Analysis</u>

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 of the said Regulations states the following:

"**4.5 Additional Surcharge**

1. *1. 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"*

2. *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 of the aforesaid JERC Regulations states the following:

"**5.2 Imbalance Charges**

1. Settlement of Energy at Drawal Point in Respect of Open Access Consumer, or Trading Licensee on Behalf of Open Access Consumer

…….

<u>b. Open Access Consumer, who is also a Consumer of the Distribution Licensee</u>

……

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 for FY 2022-23 as shown below:

Table 153: Additional Surcharge approved by the Commission for FY 2022-23

S. No.	Particulars	FY 2022-23
1	Total Power Purchase Fixed Cost approved for FY 2022-23 (excluding transmission charges) (INR Crores)	418.32
2	Energy Sales (MU)	2563.66
3	**Additional Surcharge (INR/kWh)**	**1.63**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, which is repealed now, a consumer availing Open Access was required to pay full fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. **However, as per the "JERC (Connectivity and Open Access in Intra-State Transmission**

and Distribution) 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 Regulations.

The Commission approves an Additional Surcharge of INR 1.63/kWh for FY 2022-23.

The Commission **directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers.** The Commission will analyze the information and revise the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's Submission:

The Petitioner has determined the cross-subsidy charges on the basis of Voltage wise cost of supply as shown in the following table:

Table 154: Cross Subsidy Surcharge as submitted by the Petitioner for FY 2022-23

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross Subsidy (INR/kWh)
LT	8.80	3.59	(5.21)
HT & EHT	4.34	5.16	0.82

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 HT/EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the distribution losses at 3.77%, as approved in the ARR for FY 2022-23. 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 155: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
LT level	431.40	11.17%	485.65
HT/ EHT level	2132.26	2.12%	2178.44
Total	**2563.66**	**3.77%**	**2664.10**

Now the overall ARR approved for FY 2022-23 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M, etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level based on energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level based on the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated to LT level based on input energy, as the HT/EHT network is utilized by both HT/EHT and LT network consumers.

- The remaining fixed costs are allocated based on voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 156: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
LT level	485.65	30.00%	65077
HT/EHT level	2178.44	70.00%	749
Total	**2664.10**	**100%**	**65826**

The Variable component of the Power purchase cost is allocated based on energy input. The Voltage wise cost of supply (VCoS) is then determined based on energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the table below:

Table 157: 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)
LT level	159.95	127.22	287.54	431.40	6.66
HT/EHT level	474.31	570.66	1,044.97	2132.26	4.90
Total	**634.26**	**697.88**	**1,332.14**	**2563.66**	**5.20**

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge. Accordingly, the approved Cross-subsidy surcharge is shown in the table below.

Table 158: Cross-Subsidy Surcharge approved by the Commission for FY 2022-23

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
LT	6.66	3.99	(2.67)
HT & EHT	4.90	5.49	0.59

Therefore, the Commission approves Cross-Subsidy Surcharge of INR 0.59/kWh at HT/EHT Voltage level & Nil for LT voltage level for FY 2022-23.

7.4. Other Charges

Commission's Analysis

All other charges would be determined as per the JERC Connectivity and Open Access in Intra-State Transmission and Distribution Regulations, 2017 as amended from time to time.

8. Chapter 8: Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Dadra & Nagar Haveli and Daman & Diu 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 of JERC 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 Dispatch Center (SLDC)/ Regional Load Dispatch 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 its territory/state (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawl/Under-drawl 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 the FY 2022-23 will be undertaken by the Commission once the audited accounts of the FY 2022-23 are available. If the audited accounts for the FY 2022-23 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2022-23, 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) 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. Existing Formula

The Commission first introduced the provision for adjustment of fuel surcharge in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) Regulations, 2009 notified on 08 February 2010. The relevant Clause 7 of the Regulations is provided below:
*"**7. Fuel Surcharge Formula***
(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.
(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto."

The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 on 27 June, 2012 prescribing the methodology for determination and the recovery mechanism of Fuel & Power Purchase Cost Adjustment (FPPCA) formula. Subsequently on 18 January, 2013, the Commission issued a Corrigendum correcting the calculations of the FPPCA for certain consumer categories.

On 30 June, 2014 the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014 wherein the Commission proposed to adopt the same methodology as prescribed in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 in the MYT Period. Clause 19 of the Regulations is shown as follows
"***19. Treatment of Incremental Power procurement cost***
The Distribution Licensee shall recover the incremental cost on account of fuel & power purchase adjustment in accordance with FPPCA formula provided in JERC Terms & Condition for determination of Tariff (first amendment) Regulations, 2009."

On 19 October, 2016 JERC notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Multi Year Distribution Tariff) (Second Amendment) Regulations, 2016 according to which the Fuel and Power Purchase cost adjustment charge shall be levied by distribution licensees on consumer electricity bills on account of the incremental power purchase cost incurred by the licensees and the Transmission charge recovery was also added to the formula.

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:

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

Where:

- $Pact(in\ Rs.Cr.)$: 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
- $Tact\ (in\ Rs.Cr.)$: 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
- $Oact\ (in\ Rs.Cr.)$: 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
- $ASact\ (in\ Rs.Cr.)$: 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

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

- $Papp\ (in\ Rs.Cr.)$: 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
- $Tapp\ (in\ Rs.Cr.)$: 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, 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 a ±10% of the ABR of the consumer category. The distribution licensee shall be allowed to collect the ±10% FPPCA without obtaining prior 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. In case FPPCA is more than ±10% of ABR the licensee shall charge full/higher FPPCA only with prior approval from the Commission.

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

   $$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ sub\ category\ (\frac{Rs.}{unit})}{Weighted\ Average\ Retail\ Tariff\ (WART)(\frac{Rs.}{unit})}$$

   The value of K for different consumer category or subcategory 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

   $$FPPCA\left(\frac{Rs.}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the Fuel and Power Purchase Cost Adjustment (FPPCA) formula notified by the Commission in this Order.

   For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 5.43 per unit for the FY 2022-23, as shown in the following Table.

Table 159: $R_{approved}$ determined by the Commission for FY 2022-23

S. No.	Particulars	Amount
1	Total Power Purchase Cost (INR Cr), Papp	1,253.72
2	Transmission Charges (INR Cr), T_{app}	137.52
3	Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NPCIL, RGGPL) (MU), PPO_{app}	2,745.37
4	Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.66%
5	Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	19.99
6	Quantum of Sale of Surplus Power (MU), PSO_{app}	-

S. No.	Particulars	Amount
7	Approved Intra-State T&D Loss (%), DL_{app}	3.77%
8	Energy Sales for LIG and Agriculture consumer category (MU), Z_{app} (MU)	3.43
9	**R_{app} (INR/kWh)**	**5.43**

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 has been making efforts to comply with 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 once again directs the Petitioner to submit the quarterly progress report along with the detailed action plan for all the directives issued in the subsequent section within 10 days of the end of each quarter of the financial year.

9.1. 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 relevant sections of the Electricity Act 2003 and the Regulations made thereunder.

9.1.1. Assets created from consumer contribution

Originally Issued in Tariff Order dated March 13, 2018
Commission's Directive in Tariff Order Dated May 20, 2019 The Commission has noted with concern that Petitioner is yet to submit the details of assets created from consumer contribution. The absence of this data constraint the Commission in fair determination of average cost of supply and tariff. The Commission directs the Petitioner to submit the data pertaining to the assets created from consumer contribution along with the Tariff petition for determination of retail Tariff for FY 2020-21.
Petitioner's Response in the Tariff Petition Assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2018-19. Further, the depreciation on the assets created out of consumer contribution is not included in the ARR being filed by the Department for determination of Tariff.
Commission's Directive in Tariff Order Dated May 18, 2020 The Commission has noted that the Petitioner has submitted that the assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2018-19 but as per Commissions direction Petitioner has still failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation in future, once the details of the consumer contribution are made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by the Commission in future Tariff Orders.
Petitioner's Response in the Tariff Petition The EDDD would like to submit that the assets created out of consumer contribution are not included in the asset register prepared for FY 2019-20. Further, the EDDD is not claiming any depreciation on the assets created out of consumer contribution in the ARR petition.

Commission's Latest Directive in Tariff Order Dated March 23, 2021 The Commission has noted that the Petitioner has submitted that the assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2018-19 but as per Commissions direction Petitioner has still failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation in future, once the details of the consumer contribution are made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by the Commission in future Tariff Orders.
Petitioner's Response in the Tariff Petition Assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2020-21. Further, the depreciation on the assets created out of consumer contribution is not included in the ARR being filed by the Department for determination of Tariff.
Commission's directions in this Tariff Order *The Commission in the directive to Petitioner in Tariff Order dated March 23rd 2021 noted that the Petitioner has submitted that the assets created out of consumer contribution is not included in the asset register being prepared by the Department for FY 2019-20.* *However as per Commissions directions, the Petitioner has again failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation from the back date effect with carrying cost in future Tariff Petition, once the details of the consumer contribution are made available.* ***The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by the Commission in future Tariff Orders.***

9.1.2. Creation of SLDC

Originally Issued in Tariff Order dated March 13, 2018
Commission's Directive in Tariff Order Dated May 20, 2019 The Commission appreciates the efforts of the Petitioner towards creating an independent SLDC. The Commission directs the Petitioner to expedite the process of creation of separate SLDC and submit a detailed implementation plan for the same within 3 months of the issuance of this Order.
Petitioner's Response in the Tariff Petition The EDDD submits that the Department has provided a separate infrastructure for the functioning of the SLDC.
Commission's Directive in Tariff Order Dated May 18, 2020 The Commission has noted with concern that Petitioner has not submit any report regarding detailed implementation plan to expedite the process of creation of separate SLDC. The Commission directs the Petitioner to submit the detailed implementation plan along with the current status in regard to the creation of separate SLDC within 3 months of the issuance of this Order.
Petitioner's Response in the Tariff Petition The EDDD would like to submit that the Department is functioning as a vertically integrated utility and looks after the transmission and distribution functions. However, the EDDD has provided a separate head for SLDC along with necessary staff and also the budgetary allocation has been done separately for the functioning of SLDC.
Commission's Latest Directive in Tariff Order Dated March 23, 2021 The Commission has noted with concern that Petitioner has not submit any report regarding detailed implementation plan to expedite the process of creation of separate SLDC. The Commission directs the

Petitioner to submit the detailed implementation plan along with the current status in regard to the creation of separate SLDC within 3 months of the issuance of this Order.
Petitioner's Response in the Present Tariff Petition The EDDD would like to submit that presently the UT of Dadra and Nagar Haveli and UT of Daman and Diu have merged into a single UT. The Competent Authority is yet to decide the location of the SLDC and other related matters of the merged UT. Hence, the process of creation of separate SLDC other matters shall be initiated once decision regarding the SLDC is taken by the Competent Authority.
Commission's directions in this Tariff Order *The Commission appreciates the efforts of the Petitioner towards creating an independent SLDC.* ***The Commission directs the Petitioner to expedite the process of creation of separate SLDC after finalizing the location of SLDC and resolving other miscellaneous issues and submit a detailed implementation plan for the same within 3 months of the issuance of this Order.***

9.1.3. Timely submission of Reports and Compliance of directives

Originally Issued in Tariff Order dated May 18, 2020 The Commission has noted that the Petitioner does not submit the quarterly reports and the reports related to compliance of directives in a regular and timely manner. The Commission directs the Petitioner to submit the aforementioned report regularly.
Petitioner's Response in the Tariff Petition The EDDD would like to submit that the Department has been regularly submitting all the reports to the Hon'ble Commission. As directed by the Hon'ble Commission the EDDD submitted the first quarterly report on 08.07.2020 which was again submitted on 27.08.2020 as per the revised format. Further, the second quarterly report was submitted on 12.20.2020.
Commission's directions in this Tariff Order *The Commission has noted the submission and* ***directs the Petitioner to submit the quarterly reports and compliances of directives/orders of the Commission regularly in future also****. Accordingly, the Commission now drops this directive.*

9.1.4. Renewable Purchase Obligation

Originally Issued in Tariff Order dated May 18, 2020 The Commission directs the Petitioner to submit the quarterly RPO report including all the data related to the actual electricity generation/purchase from Solar & Non-Solar and data related to purchase of Solar & Non-Solar energy certificates within timeframe as decided by the Commission in earlier order and regulations.
Petitioner's Response in the Tariff Petition The EDDD would like to submit that the Department has submitted all the quarterly RPO report to the Hon'ble Commission. The first quarterly report was submitted on 17.07.2020 and was again submitted on 27.08.2020 as per the revised format. The second quarterly report was submitted on 12.10.2020.
Commission's directions in this Tariff Order *The Commission has noted the compliance to the above directive and* ***directs the Petitioner to submit the aforementioned report regularly in future also****. Accordingly, the Commission now drops this directive.*

9.1.5. Status of Metering

Originally Issued in Tariff Order dated May 18, 2020 The Commission directs the Petitioner to submit the metering status including status of defective meters for each category of consumers separately within three months from the issuance of this Tariff Order. Further, the Petitioner is also directed to submit the status of the consumers for which billing is being done on actual reading basis or on assessment basis within three months from the issuance of this Tariff Order.
Petitioner's Response in the Tariff Petition The EDDD would like to submit that metering status report has already been submitted to the Hon'ble Commission as per the format provided to the Department.
Commission's directions in this Tariff Order *The Commission has noted the compliance to the above directive and* ***directs the Petitioner to submit the aforementioned report regularly in future also****. Accordingly, the Commission now drops this directive.*

9.1.6. Open Access Consumers

Originally Issued in Tariff Order dated May 18, 2020 The Commission directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers.
Petitioner's Response in the Tariff Petition The EDDD would like to submit to the Hon'ble Commission that as of now there is no open access consumer and therefore no power has been stranded.
Commission's directions in this Tariff Order *The Commission has noted the compliance to the above directive and* ***directs the Petitioner to submit the aforementioned report regularly in future also****. Accordingly, the Commission now drops this directive.*

9.2. New Directives issued in this Order

9.2.1. Power Procurement Planning

The Commission directs the Petitioner to explore long-term/ medium term power purchase arrangements and thereby minimizing its dependence on more risk-free sources of power and reduce its dependence on purchase of power from short-term sources such as UI/ Traders / Power Exchange. Further, the Commission directs the Petitioner to increase the share of power purchase from renewable sources in the energy mix planned during the Control Period so that the share of clean energy increases in the energy mix and the backlog of RPO targets as well as current targets is cleared by the end of the Control Period.

9.2.2. Voltage wise Cost of Supply

The Commission directs the Petitioner to start maintaining the following data for computing Voltage wise Cost of Supply and Category wise Cost to Serve and submit the same in the tariff proceedings of next year.

- *Category wise co-incident and non- co-incident demand*
- *Voltage wise value of assets (Voltage wise asset ratio)*
- *Voltage wise Energy Input*

- *Voltage wise losses*
- *Voltage-wise Employee, A&G and R&M expenses*
- *Category wise break-up of costs related to Metering, Billing and Collection*
- *Voltage wise No. of Consumers, Connected Load and Energy Sales*

The Commission also directs the Petitioner to submit the Voltage Wise Cost of Supply and propose the tariffs based on Voltage wise Cost of Supply in the tariff proceedings of next year.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule*

Table 160: Tariff Schedule

S. No.	Category	Fixed Charges	Energy Charges
1.	**DOMESTIC**		
(i)	0-100 units	INR/kW/Month: INR 10	1.60 INR/kWh
(ii)	101-200 units		2.30 INR/kWh
(iii)	201-400 units		2.80 INR/kWh
(iv)	401 and above		3.40 INR/kWh
(v)	Lifeline Consumer# (Up to 2x40 W bulbs only)	INR/kW/Month: INR 10	1.00 INR/kWh
2.	**COMMERCIAL/NON-DOMESTIC**		
(i)	0-100 units	INR/kW/Month: INR 20	3.35 INR/kWh
(ii)	101 units and above		4.35 INR/kWh
3.	**HT COMMERCIAL**		
(i)	HT Commercial	110 INR/kVA/month	4.50 INR/kVAh
4.	**AGRICULTURE**		
(i)	For sanctioned load up to 10 HP	-	0.90 INR/kWh
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	-	1.30INR/kWh
5.	**PUBLIC LIGHTING**		
(i)	For all units	-	4.80 INR/kWh
6.	**LT Public Water Works**		
(i)	LT Public Water Works	40 INR per HP or part thereof	4.50 INR/kWh
7.	**LT INDUSTRIAL**		
(i)	LTP Motive Power	50 INR per HP or part thereof	3.85 INR/kVAh
1) Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry			
8.	**HT/EHT Industry**		
(i)	High Tension Consumer (For all units)	355 INR/kVA/month	4.40 INR/kVAh
(ii)	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units)	535 INR/kVA/month	4.35 INR/kVAh
• Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry			

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S. No.	Category	Fixed Charges	Energy Charges
9.	**HOARDINGS/SIGNBOARDS**		
(i)	Hoarding/Signboards	110 INR/ kVA / Month or part thereof	7.00 INR/kWh
10.	**EV CHARGING STATION ^**	-	4.90 INR/kVAh
11.	**Temporary Supply**		
	Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.		
* A Regulatory Surcharge of 4.40% 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 gap.			
# If the consumption exceeds 50 units per month then Domestic tariff shall be applicable. ^ The Tariff approved for EV Charging Station is for HT Category. For LT category 0.20 Paise additional Tariff will be applicable.			

10.2. Applicability

Table 161: Applicability of Tariff Schedule

S.No.	Category	Applicability
1.	**Domestic**	This schedule shall apply to private houses, hostels, hospitals run on Non-commercial lines, Religious Institutions, Government Schools & associated facilities for Light, Fans, Radios, Domestic Heating and other household appliances including water pumps up to 2 HP.
2.	**LT Commercial/Non-Domestic**	This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations. **Point of Supply/Notes:** This includes all categories which are not covered by other tariff categories including Domestic Category, Lifeline Consumer, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.
3.	**HT Commercial**	This schedule shall apply to all the consumers falling under the LT Commercial category above but connected at 11 kV or above voltage level
4.	**Agriculture**	This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.
5.	**Public Lighting**	
6.	**LT Public Water Works**	
7.	**LT Industrial**	This schedule shall apply to all Low-Tension Industrial Motive Power Connections including water works/pumps with sanctioned load up to 120 HP.
8.	**HT/EHT consumers**	This schedule shall apply to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.

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S.No.	Category	Applicability
9.	**HHT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units)**	
10.	**Hoardings / Signboards**	This schedule shall apply to 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.
11.	**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 consumption shall be applicable for domestic charging (LT/HT)
12.	**Temporary Supply**	The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations.

10.3. *General Conditions of HT and LT Supply*

1. The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.

2. Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.

3. Supply to consumers having contracted load between 100 KVA to 5000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 KV and for more than 5000 KVA up to 25000 KVA at 66 KV. For the consumer who requires load more than 25000 KVA, the supply voltage shall be at 220 KV level.

4. 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 a 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 & Supply Code Regulation notified by JERC.

5. If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.

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6. **Power Factor Charges -** LT and Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the JERC Supply Code Regulations, 2018 and subsequent amendments thereof, shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice

7. If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days' notice as per the provisions of the Act and the Supply Code Regulations.

8. Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out. Similarly, slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.

9. The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the JERC Supply Code Regulation. If such over-drawal is more than 20% of the contract demand, then the connections shall be disconnected immediately.

   Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

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

11. Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 1.5% per month or part thereof shall be levied on all arrears of bills. 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 the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only up to the month of permanent disconnection.

12. **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

13. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment, a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

14. **TOD Tariff**: For the purpose of TOD Tariff, the peak/off-peak/normal hours and charges for the corresponding period provided in the table as follows:

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Table 162: Definition of Time of Day and applicable 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

15. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula notified in Chapter 8 of this Tariff Order. Such charges shall be recovered/refunded in accordance with the terms and conditions specified in the FPPCA formula.

16. The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order.

10.4. Schedule of Miscellaneous Charges

Table 163: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges	
Single Phase LT meter	INR 10 per month or part thereof
Three Phase LT meter	INR 25 per month or part thereof
LT Meter with MD indicator	INR 200 per month or part thereof
Tri-vector Meter	INR 500 per month or part thereof
Note: The type of meters to be installed in consumer premises will be decided by the department. Generally, the consumers having connected load above 50 HP will be provided with L.T.M.D meters	
Reconnection Charges	
LT Services	
• Single Phase LT	INR 100/-
• Three Phase LT	INR 500/-
HT Services	INR 1500/-
Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges	
Testing Fee for Various Metering Equipment	
Single Phase	INR 200/-
Three Phase	INR 500/-
Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	INR 1,000/-
Three Phase Tri-vector Meter (0.5 Class) 11 kV HT Consumer	INR 1,000/-
Three Phase Tri-vector Meter (0.2 Class) 66 KV EHT Consumers	INR 1,500/-
ABT meter 0.2 class-66 kV/11kV Consumer	INR 3,000/-
Combined CT/PT Unit for 11 KV Consumer	INR 1,000/-

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Description	Approved Charges
66 KV CT/ PT Unit	INR 1,000/-
Three Phase CT Block	INR 500/-
CT Coil	INR 500/-
Service Connection Charges	
Single Phase LT	INR 250/-
Three Phase LT	INR 1,000/-
HT (First 500 KVA)	INR 10,000/-
HT (Beyond 500 KVA)	INR 1,000/- per 100 KVA or part thereof
Extra Length - Single Phase	INR 50 /- per meter
Extra Length - Three Phase	INR 100/- per meter
Extra length chargeable will be beyond the permissible 30 meters free length from existing network for new connections for all categories except agriculture. Free length in respect of new agriculture consumer is 300 meters.	
Entire Cost of setting up HT connection would be borne by the consumer and 15% supervision charges shall be recovered by the EDDD on labor component only, as per the JERC Supply Code 2018.	
Fees (Non-refundable) for submission of Test Report of wiring Completion	
Single Phase Lighting / Domestic	INR 20/- Per Test Report
Three Phase Lighting / Domestic	INR 50/- Per Test Report
Single Phase Lighting / Non-Domestic	INR 100/- Per Test Report
Three Phase Lighting / Non-Domestic	INR 200/- Per Test Report
Three Phase LT Industries	INR 500/- Per Test Report
Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	INR 100/- Per Test Report
HT Industries up to 500 KVA	INR 2,000/- Per Test Report
HT Industries up to 2500 KVA	INR 8,000/- Per Test Report
HT Industries above 2500 KVA	INR 15,000/- Per Test Report

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Annexures

Annexure 1: List of Stakeholders

The following is the list of the stakeholders who have attended virtual public hearing:

S. No.	Name of Stakeholders	Designation
1.	Mr. Umesh Babubhai Patel	Social Worker
2.	Ms. Vaishali Vadhel	Social Worker
3.	Sanjay Dalal	Consumer