TARIFF ORDER

Approval of Aggregate Revenue Requirements (ARR) for 3rd MYT Control Period from FY 2022-23 to FY 2024-25 and Determination of Retail Tariff for FY 2022-23

Petition No. 63/2021

for

Electricity Department, Government of Goa (ED-Goa)

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

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

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Ms. Jyoti Prasad, Member

Petition No. 63/2021

In the matter of

Approval of Aggregate Revenue Requirements (ARR) for 3rd MYT Control Period from FY 2022-23 to FY 2024-25 and Determination of Retail Tariff for FY 2022-23.

And in the matter of

Electricity Department, Government of Goa (ED-Goa) ....Petitioner

ORDER

Dated: 31st March 2022

1) This Order is passed in respect of the Petition filed by the Electricity Department, Government of Goa (ED-Goa) (herein after referred to as "The Petitioner" or "ED-Goa" or "The Licensee") for Approval of Annual Performance Review for FY 2021-22 and Aggregate Revenue Requirement (ARR) for 3rd MYT Control Period and determination of Retail Tariff for the FY 2022-23 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 30th December 2021. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually. The virtual Public Hearing was held on 24th January 2022, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard. Further, suggestions/ comments/ views and objections were invited from the Stakeholders and Electricity Consumers.

3) The Commission based on the Petitioner's submission, relevant JERC MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the Aggregate Revenue Requirement (ARR) for 3rd MYT Control Period and determination of Retail Tariff for the FY 2022-23.

4) A Summary has been provided as follows:

   (a) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff as submitted by the Petitioner and approved by the Commission for the FY 2022-23:

Secretary, JERC
(For Goa & UTs)

Table 1: Standalone Revenue Gap/ (Surplus) at existing tariff for the FY 2022-23 (INR Cr.)

S. No.	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	2,361.15	2,408.15
2	Revenue from Retail Sales at Existing Tariff	2,109.47	1,992.53
	Net Revenue Gap/ (Surplus)	**251.69**	**415.62**

(b) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at approved tariff as approved by the Commission for the FY 2022-23:

Table 2: Standalone Revenue Gap/ (Surplus) at proposed/approved tariff for the FY 2022-23 (INR Cr.)

S. No.	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	2,361.15	2,408.15
2	Revenue from Retail Sales at Approved Tariff	2001.02	2,024.02
3	Gap / (Surplus) for the year	360.13	384.13
4	Upfront assurance of Budgetary support from Govt.	360.13	384.13
	Net Revenue Gap/ (Surplus)	**0.00**	**0.00**

(c) The Petitioner has proposed a reduction in average tariff rate thereby estimating a reduction of INR 108.44 Cr. from the projected revenue in FY 2022-23.

(d) The Commission has approved an average tariff hike of 1.58% to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa. The Commission has also introduced fixed charges based on connected load for all Domestic and Commercial slabs. The Commission has approved the Average Billing Rate (ABR) of INR 4.77/kWh against the approved Average Cost of Supply (ACoS) of INR 5.68/kWh. The entire revenue gap shall be met through the budgetary support as per assurance letter of the Govt. of Goa dated 29th December 2021. The Commission acknowledges this letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2022-23, and hence the revenue gap for FY 2022-23 has been considered as nil.

(e) The Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

(f) The ABR without the Government Budgetary support has been calculated considering the per unit gap of INR 0.91/kWh (difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support). However, the Commission would like to highlight that in case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an additional average tariff increase of 18.98%.

5) 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.

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

Secretary, JERC
(For Goa & UTs)

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

Sd/-

(Jyoti Prasad)

Member

Place: Gurugram
Date: 31st March 2022

Certified Copy

(Rakesh Kumar)
Secretary, JERC

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission for the State of Goa and UT's (JERC)

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

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

1.2. About Goa

Goa is a state on the southwestern coast of India within the region known as the Konkan, and geographically separated from the Deccan highlands by the Western Ghats. It is surrounded by the Indian states of Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its western coast. It is India's smallest state by area and the fourth-smallest by population. The state is divided into two districts: North Goa and South Goa. North Goa is divided into three subdivisions — Panaji, Mapusa, and Bicholim and further into five talukas (subdistricts). South Goa is divided into five subdivisions — Ponda, Mormugao-Vasco, Margao, Quepem, and Dharbandora and further into seven talukas (subdistricts).

Goa has the highest GDP per capita among all Indian states, two and a half times that of the country. The state of Goa is famous for its excellent beaches, churches, and temples. Tourism is Goa's primary industry, it gets 12% of foreign tourist arrivals in India. The state is also rich in minerals and ores, and mining forms the second largest industry. Iron, bauxite, manganese, clays, limestone, and silica are mined extensively in Goa.

Goa is often described as a fusion between Eastern and Western culture with Portuguese culture having a dominant position in the state in its architectural, cultural or social settings.

1.3. About Electricity Department, Government of Goa (EDG)

The Electricity Department, Government of Goa (hereinafter referred to as "ED-Goa" or "EDG" or 'Petitioner') is a deemed Distribution Licensee within the meaning of Section 2 (17) of Electricity Act 2003 and pursuant to the Section 14 of the Electricity Act. Further, Section 42 and 43 of the Electricity Act 2003 prescribes the following duties of the deemed Distribution Licensee:

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

The primary objective of EDG is to undertake the transmission, distribution and retail supply of electricity in its license area and for this purpose plan, construct, and manage the power system network in all its aspects. EDG is further responsible for carrying out the business of purchasing and selling of electricity along with activities such as billing and collection in the area.

1.4. Multi Year Tariff Regulations, 2021

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 (hereinafter referred to as MYT Regulations, 2021) on 22thMarch 2021. These Regulations are applicable in the 3rd MYT Control Period comprising of three financial years from FY 2022- 23 to FY 2024-25. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Filing and Admission of the Present Petition

The present Petition was admitted on 30th December 2021 and marked as Petition No. 63 of 2021. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.6. Interaction with the Petitioner

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

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

Table 3: Timelines of the interaction with the Petitioner

S. No	Subject	Date
1	Public Hearing	24th January 2022
2	Issue of First Deficiency Note	28th January 2022
3	Reply received from Petitioner	17th February 2022
4	Technical Validation Session	21st February 2022
5	Issue of Second Deficiency Note	22nd February 2022
6	Replies received from Petitioner	28th February 2022 & 4th March 2022

1.7. Notice for Public Hearing

Public Notices were published by the Commission in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing to be conducted by the Commission. These notices were also uploaded on the Commission's website

Table 4: Details of Public Notices published by the Commission

Sl. No.	Date	Name of Newspaper	Language	Place of Circulation
1	1st January 2022 & 22nd January 2022	Gomantak	Konkani	Goa
2		The Times of India	English	Goa
3		The Navhind times	English	Goa
4		oHeraldo	English	Goa

The Public Notice was published by the Petitioner in the following newspapers for inviting objections/ suggestions from the stakeholders on the Tariff Petition:

Table 5: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1.	15th January 2022	The Navhind times	English	Goa
2.		The Times of India	English	Goa
3.		Gomantak	Marathi	Goa
4.		Bhaangar Bhuin	Konkani	Goa

1.8. Public Hearing

The COVID-19 pandemic had adversely impacted the movement of people. The guidelines of GoI had accordingly 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, Goa. 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 24th January 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

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

2.1. Regulatory Process

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

The COVID-19 pandemic has adversely impacted the movement of people as per the guidelines of GoI. These guidelines have also suggested avoiding of travel and gathering of people as far as possible. In view of the 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 the Petitioner. Therefore, the Commission 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 24th January 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I.

2.2. Suggestions/ Objections, 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 process responsive and efficient. The relevant observations of the stakeholders have been suitably considered by the Commission while finalizing this Tariff Order. The submissions of the stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Delayed response post Cyclone Tauktae in Raia Village

Stakeholder's Comment:

The Cyclone hit Goa on May 15, 2021 and parts of Raia Village were affected and were in dark for 3-4 days. Heavy infrastructure damage like falling of huge trees, electricity poles and lines has occurred, and several roads were blocked. The Village Panchayat of Raia acted swiftly and cleared the roads by 10.00 am on the same day. However, there was no JE or any staff at the Electrical Sub-Station for people of Raia to interact with the consumers.

The JE arrived the next day (Monday) at 10.00 am and again was not available in the office to guide the public on Damage Assessment and Restoration Plan. Elderly People, Covid Patients, children, etc were suffering for 3 to 4 days without electricity. After 3 days the power was restored. Still, few of the cracked poles and the sagging electrical live wires are to be repaired.

Petitioner's Response:

The cyclone "Tauktae" that hit Goa on 16/05/2021 has led to huge damage and destruction to the electrical infrastructure and the power distribution network in the entire state of Goa which affected power supply to more than 70% of the power consumers of the State.

All the Department staff were engaged in the restoration works so as to restore the power supply to the consumers at the earliest. A war room was setup to provide directions and monitor the restoration process. Prior to the cyclone, large number of local contractors were assigned for restoration works and further, more contractors were airlifted from other states to increase the pace of the work.

The temporary restoration works were completed to the extent of 70% within 48 hours and up to 95% within 72 hours and simultaneously strengthening and permanent infrastructure restoration was continued and completed.

As the entire network of the State of Goa was down due to the hit, all the departmental staffs and contractors worked round the clock to restore the power stage by stage ranging from the upstream level (i.e 33kV) to downstream level (i.e 440 V).

However, the extent of damage caused by cyclone to the Department infrastructure was massive and carrying out restoration works with only Department staff would have delayed restoration works and consequently would have delayed power supply to consumers across the State especially in remote parts. On instructions of the Minister of Power, it was therefore decided to engage the services of external contractors to carry out power restoration works. Thus, external contractors from Goa and other states were requisitioned immediately to assist the Departmental staff in the restoration works.

In view of above, allegations made by Mr. Martin Rodrigues are denied by ED Goa. It is submitted that ED-Goa is fully committed to provide timely and satisfactory services to its consumers and is striving hard to achieve.

Commission's View:

The stakeholder may note the response of the Petitioner. Further, the Commission directs the Petitioner to maintain the quality and reliability of supply as per the JERC Supply Code Regulations, 2018 and JERC Standards of Supply Regulations, 2015.

2.2.2. Problem of live sagging wire and cracked pole

Stakeholder's Comment:

The sagging live wires are between Pole no. CLR/F1/2 and the other pole towards its south (there is no number on this pole) with the distance between the poles is about. 60.00 ms. The cracked pole and the sagging live wires pose danger to human lives any moment and the same is persisting for 8 months. Kindly, resolve this problem on urgent basis.

Petitioner's Response:

ED-Goa has resolved the grievance of Mr. Martin Rodrigues raised in the Public Hearing. The cracked poles have been replaced and sagging line has been tightened. The span length between pole No. CLR/F1/2 and other poles was measured and found to be 48 m instead of 60 m as claimed by the party. However, the existing LT line was strung along an old HT pole which was present along the existing line after completing fit up of 2 pin and 4 pin cross arms and the line span is now divided into 18 m on one side and 30 m on the other.

Commission's View:

The stakeholder may note the response of the Petitioner. Further, the Commission directs the Petitioner to maintain the quality and reliability of supply as per the Electricity act,2003 and Regulations made thereunder.

2.2.3. Computation of Cross Subsidy Surcharge (CSS)

Stakeholder's Comment:

The IEX has submitted that, it has observed that the Petitioner has proposed a decrease in the energy charge (@30 paise/ unit decrease for the HT industrial category) against the tariff approved for FY 2021-22. However, while computing the CSS, an increase in the Average Billing Rate (ABR) has been considered compared to the ABR approved by the Commission in the Tariff Order for FY 2021-22, which was computed basis the electricity tariff approved for FY 2021-22. The Commission is requested to consider the impact of the proposed decrease in electricity tariff on the computation of ABR while determining the CSS, so that the effect of the proposed tariff rationalization is reflected in CSS also.

Petitioner's Response:

It is submitted that in FY 2021-22, Commission estimated total HT sales of 2178 MUs and revenue of Rs. 1268 Crores arriving of ABR of Rs. 5.82 per kWh. Further, for FY 2022-23 the Petitioner has estimated sales of 2158 MUs based on actual figures of FY 2020-21 and revised projections of FY 2021-22. Further, it is submitted that the impact of kVAh billing for HT/EHT revenue is more than envisaged in FY 2021-22, and the same has been considered in while estimating revenue of FY 2022-23, accordingly revenue for Rs. 1387 MUs has been estimated. Hence, due to increase in revenue estimated and reduction of sales estimated, the ABR of FY 2022-23 comes to Rs. 6.42 per kWh, compared to approved ABR of FY 2021-22.

Commission's View:

The Commission has determined the CSS for the FY 2022-23 based on the approved ARR. The Commission believes that the tariff should progressively reflect the cost of supply. The Commission while determining the tariff for FY 2022-23 has considered the prudent cost of the Petitioner and has accordingly determined the Open Access charges and tariff for each consumer category. The stakeholder may refer to the relevant Chapter for the detailed rationale.

2.2.4. Consideration of Tariff Policy while Computing Cross Subsidy Surcharge (CSS)

Stakeholder's Comment:

The Petitioner has not considered the proviso mentioned in the Tariff Policy to restrict the CSS to 20% of ABR in the Tariff Petitions. Such omission will restrict the ability of open access consumers to avail power to optimise their cost of power purchase

Petitioner's Response:

ED-Goa submits that as per the provision of Section 42 (2) of the Electricity Act 2003, the cross-subsidy surcharge needs to be based on the current level of cross subsidy. Accordingly, the consumers who opted for Open Access need to be charged for the compensation of current level of cross subsidy which prevailed during that period and in order to avoid the burden of the same getting passed on to the other consumers who are with the Distribution Licensee. However, The Tariff Policy 2016 restricts Cross Subsidy Surcharge at 20% of the consumer tariff, this will result in lower CSS applicable than current level of cross subsidy leading to incomplete recovery of Cross Subsidy from Open Access consumers. In this process, Open Access consumers unduly get benefited due to less cross subsidy surcharge and Industrial and commercial consumers who are subsidizing consumers, the more impact gets loaded onto the Industrial and commercial category, raising its tariff further.

Further, there is no such provision provided in JERC MYT Regulations or Open Access Regulations, therefore, in order to avoid burden on other consumers of ED-Goa, it has requested to the Commission to consider the current level of cross subsidy surcharge without any ceiling.

Commission's View:

The Commission has determined the CSS for the FY 2022-23 based on the approved ARR. The Commission while determining the tariff for FY 2022-23 has considered the prudent cost of the Petitioner and has accordingly determined the Open Access charges and tariff for each consumer category. The stakeholder may refer to the relevant Chapter for the detailed rationale.

2.2.5. Additional Surcharge on stranded power due to Open Access

Stakeholder's Comment:

The Commission is requested to allow Additional Surcharge on stranded power due to Open Access, only when the same is demonstrated through data.

Petitioner's Response:

ED-Goa submits that there are no such Open Access Consumers in the State of Goa and the same cannot be demonstrated with data.

Commission's View:

The suggestion of the Stakeholder is noted. The Petitioner is directed to submit a report on the quarterly details of power stranded for the last 3 years along with the Petition of Tariff Determination for FY 2023-24.

2.2.6. Computation of Additional Surcharge

Stakeholder's Comment:

It is requested that the Commission may propose a scientific methodology for additional surcharge (eg: Gujarat, Telangana, etc.) which is also aligned with the Tariff Policy. The basic premise ought to be conclusive demonstration of stranded capacity on account of open access. In the absence of any open access, the question of stranded capacity on its account does not arise.

Petitioner's Response:

ED-Goa submits that it shall be following any such methodology as approved by the Commission.

Commission's View:

The Additional Surcharge is determined in line with the Tariff Policy and the JERC MYT Tariff Regulations, 2021.

2.2.7. Fulfilment of RPO Obligations through IEX products

Stakeholder's Comment:

IEX submitted that the Commission and the Petitioner may consider option to fulfil their RPO obligations by procuring RE power from short term market through Green-DAM and Green-TAM products available at IEX platform while assessing the power purchase of Discoms.

Petitioner's Response:

The ED-Goa submits that it has taken a note of the suggestion of IEX and EDG is aware of the facilities available at IEX. The SLDC-Goa will take a call on real time basis as and when required. However, the quantum available at GTAM is very less and unpredictable and therefore we cannot rely fully on GTAM to optimise the cost of supply as per our requirement.

Commission's View:

The stakeholder may note the Petitioner's Response. The Commission further observes that the Petitioner has proposed to procure power from the Renewable Sources to meet its RPO obligations.

2.2.8. Tariff Shock due to high revenue gap

Stakeholder's Comment:

GCCI has mentioned in the FY 2024-25, the revenue gap (based on commercial accounting) is expected to be Rs.651 Crores (24% of ARR) which may lead to tariff Shock.

Petitioner's Response:

ED-Goa submits that, as per the JERC MYT Regulations the ARR for the MYT Control Period FY 2022-23 to FY 2024-25 are projected. As per prevailing scenario, the projections were carried out for FY 2024-25, which may show the Revenue Gap of Rs.651 Cr. w.r.t revenue computed at the tariff proposed for FY 2022-23. However, the same is subjected to be revised in the respective year's ARR.

Commission's View:

The Commission has determined the Revenue gap for the FY 2022-23 based on the approved ARR. The Commission while determining the tariff for FY 2022-23 has considered the prudent cost of the Petitioner and has accordingly determined the tariff for each consumer category. The stakeholder may refer to the relevant Chapter for the detailed rationale.

2.2.9. High rate of return on equity

Stakeholder's Comment:

GCCI has submitted that Return on equity is considered as 16% (Table 5.22). Norm for ROE was fixed in the earlier year of 2000, based on bank lending rate +3%. Currently, lending rate is less than 9% and hence ROE may be calculated at 11% or 12%. For a risk-free business with captive consumers, ROE of 11% is a reasonable return. Commission is requested to revise the same.

Petitioner's Response:

EDG has considered Return on Equity is 16% per cent per annum as per the Regulations 28 of JERC MYT Regulations for MYT Control Period FY 2022-23 to FY 2024-25.

Quote

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

Unquote.

Commission's View:

The Commission has considered the rate of return on equity as per JERC MYT Regulations, 2021 for MYT Control Period from FY 2022-23 to FY 2024-25.

2.2.10. Formation of District Committee to help monitor loss reduction measures

Stakeholder's Comment:

GCCI has submitted that the AT&C loss is reported as 11.90% for FY 2021-22. This together with inter-state transmission loss of 3.35%, for WR and 7.95 for SR, total ATC loss works out to be 15.8%. Aggressive loss reduction to 9.85% is essential to avoid tariff shock. The loss reduction measures such as completion of 400 kV interstate line, associated 220 kV system and augmentation of intra state transmission and distribution lines are to be monitored and completed aggressively. Forming district committees as per section 166(5) of IE act 2003 will help in monitoring the same. The Commission is requested to recommend formation of District Committees.

Petitioner's Response:

ED-Goa submits that the Commission may take appropriate decision on this matter. However, it is suggested that since Goa is a small state so formation of one co-ordination committee will be feasible and sufficient for entire state of goa.

Commission's View:

The suggestion of the stakeholder is noted.

2.2.11. Reduction in Electricity Duty

Stakeholder's Comment:

The GCCI submitted that ED-Goa creates a fund by levy of Electricity Duty of Rs.0.70 per kWh towards capital expenditure. This amount is not fully utilised in any given year and carried over to the subsequent year. Presently the kitty has nearly Rs. 1000 Cr.. It is requested that ED-Goa provide for interest on accrued fund and treat it as income. We request JERC to recommend Govt. of Goa to reduce Electricity Duty to Rs. 0.40 per kWh.

Petitioner's Response:

Electricity Duty is basically the State Government tax levied by ED Goa as per Electricity Duty Act 1986. The Government of Goa collects Electricity Duty from all the Consumers of ED-Goa, through the electricity bill of the Consumers. Funds collected are utilised for various schemes for the development of Electrical infrastructure to ensure stability of power, development of project. Since the execution of projects takes time, funds collected during the year cannot be completely utilised in the respective year.

Commission's View:

The levy of Electricity Duty fund comes under the ambit of the Government of Goa. The Commission has no jurisdiction in the matter.

2.2.12. kVAh based Tariff for LT consumers

Stakeholder's Comment:

GCCI submitted that, in FY 2021-22, ED-Goa adopted kVAh based billing instead of kWh based for HT Consumers. Its impact is nearly 12%. It is said that kVAh billing will be extended to LT consumers. Such a move will adversely impact economy. The tariff will indirectly increase by 10-12% as has happened in the HT Consumers who are in a position to implement corrective measure which may not be viable. We request the JERC to kindly drop any plans to extend the same for LT Consumers.

Petitioner's Response:

ED-Goa has around 1 Lakh LT Commercial Consumers and 5,000 LT Industrial consumers. Some of the meters installed for these consumer categories are capable of recording kWh reading only. KVAh reading for the all the consumers can be obtained once the old meters are replaced with the Smart/ Prepaid meters. Hence at this stage it is not feasible to get ready for implementation of KVAh based tariff for LT Industrial and Commercial categories as it involves replacement of old Meter/high financial investment.

ED-Goa is in the process of installing smart meters and the Proof of Concept (PoC) for the Smart Meter has also been carried out successfully. The kVAh based billing will be carried out for LT Commercial and LT Industrial after installation of the Smart Meters and as per directions of the Commission.

Commission's View:

The Commission shall examine the matter of introducing kVAh tariff to LT consumers post installation of the Smart Meters. Appropriate decision shall be taken in line with the provisions of the Electricity Act, 2003, the prevalent Tariff Policy and the prevalent JERC MYT Regulations.

2.2.13. Reduction in delayed payment charges

Stakeholder's Comment:

The GCCI submitted that incase the Electricity bills are not paid within the due date mentioned on the bill, delayed payment charges of two percent (2%) (Computed on daily basis on outstanding bill from the due date till date of payment) are levied on the bill amount. ED Goa proposes to continue to levy 2% per month (works out to be 27.1% per annum). Considering the current economic situation & prevailing bank interest rates of 8%, it is submitted to the JERC to reduce it to 0.5% per month cumulative which is below the working capital interest rate.

Petitioner's Response:

ED-Goa submits that it has not proposed any changes in the rate of delayed payment charges in the instant petition. The delayed payment charges of 2% is accordance with the Tariff Order dated 19th May 2020 and as approved by Commission from time to time.

Commission's View:

The Commission has considered the suggestion and accordingly has reduced the late payment surcharge to 1.5% per month.

2.2.14. Tariff on Street lighting within a compound

Stakeholder's Comment:

GCCI submitted that the Street lighting within a compound (residential complex, commercial complex etc) to be charged at residential, commercial, industrial rates etc on the basis of associated activity. Please avoid categorization of Street Lighting charges in residential Complex at Commercial rates.

Petitioner's Response:

The EDG submits that the Street lighting within a compound of residential complex, commercial complex, etc. are charged at the tariff as per the respective Category on the basis of associated activity only. In this regard, if the Consumer has any grievances, can approach the EDG.

Commission's View:

The stakeholder may note the Petitioner's response.

2.2.15. Consideration of Cold storage units as Agriculture allied Industry

Stakeholder's Comment:

GCCI submitted that, it appears that cold storage units are purposely targeted at. Cold storage units provide 24 hrs base load with a flat load curve. It helps the utility. Cold Storage prevents wastage, extends shelf life, enhance export market. Cold Storage thus helps the economy. We kindly request that cold storage wherever it is located & used, to be considered as Agriculture allied Industry irrespective of the Sector. In this connection we are enclosing herewith the judgement of Maharashtra State Electricity Distribution Co. (MSEDCL) Consumer Grievance Redressal Forum Case No 05/2017.

Petitioner's Response:

EDG submits that cold storage is billed as per the Rate Schedule and applicable tariff category approved by Commission in Tariff Order.

Commission's View:

The suggestion of the Stakeholder is noted. The Petitioner shall continue to charge the tariff rates as per the Tariff Schedule approved by the Commission.

2.2.16. Reliability linked tariff

Stakeholder's Comment:

In general, the business plan is a well written document, without spelling out, area wise growth, reduction in losses and improvement in reliability.

There are initiatives like GIS substation, but it will be effective only if reliability of lines is nearly 100%. Even in Panaji, there are numerous tripping which will harm GIS operation. It is suggested to ED-Goa, to declare reliable distribution areas. A reliability linked tariff will be welcome step since consumers will save on diesel.

Petitioner's Response:

ED, Goa has undertaken numerous initiatives for overall improvement of power system reliability in the state of Goa. This includes commission of new substations, conversion of overhead lines to underground system and conversion of existing conductor to High Amperage conductor. A number of new similar projects are also in pipeline and the same has been included in the Business Plan. However, Commission to take a view of tariff.

Commission's View:

The suggestion of the Stakeholder is noted. The Commission has determined the tariff for the FY 2022-23 based on the approved ARR and as per the JERC MYT Regulations, 2021. Further, the Commission in the Business Plan Order dated 31st March 2022. has also prescribed targets of reliability indices for the 3rd MYT Control Period.

2.2.17. Pumped Hydro Storage Systems (PHSS)

Stakeholder's Comment:

The high peak power due to growth in tourism, will be a huge challenge for peak power procurement. Pumped hydro storage is a green power, matured, cost effective technology for energy storage. PHSS works by storing energy in water in an upper reservoir, pumped from second reservoir at a lower elevation when there is excess power in the system. When there is demand for energy the water in the upper reservoir is released and as it falls it rotates turbines that generate power. A consultant may be appointed to study the possibility of developing pumped hydro storage systems in goa.

Petitioner's Response:

No such initiatives are to be taken in near future by Government of Goa. Further, the Pumped Hydro storage Systems are Capital intensive projects are only used for Supporting the Grid during the Peak power compensation. ED Goa is trying to sign innovative PPAs with additional support during peak hours.

Commission's View:

The Petitioner may note the Stakeholder's comment. The Commission directs the Petitioner to explore the feasibility of the proposal suggested by the stakeholder.

2.2.18. Low standards of O&M practices

Stakeholder's Comment:

The GCCI has submitted that the maintenance & Construction standards of ED are well below benchmark standards. There is no proper supervision & inspection during erection & thereafter left to the local linesman to do temporary jobs. The quality of the material/equipment also play a major role in the failures. Open distribution boxes, broken hinges, undresses wires, tilted poles, unclean insulators sparking are common occurrences. The ED should have strict material inspection facility & also carryout preventive maintenance on a regular basis. ED is already using SAP. There is a Plant Maintenance (PM) module which can be used. The repair history, material equipment used, causes of failure & remedial action taken can be updated which will help in cutting down failure rates.

Petitioner's Response:

There has been a substantial improvement in regard to the Reliability Indices and the losses in regard to the Distribution Network of ED, Goa. The figures indicate improved O&M practices. The Plant Maintenance Module of SAP is made operational for carrying out periodic O&M works related to feeders and transformers.

Nodal officers at the level of Junior Engineer are appointed for each project and the projects are directly monitored by the Office of the Superintending Engineer of the concerned circles. Quality Inspector is appointed to carry out surprise checks whilst execution of the project. Further, RECPDCL has been appointed as PMC for supervision of major projects carried out by ED, Goa. Their scope includes approving of GTP/drawings, inspection of material and supervision of onsite works.

Commission's View:

The suggestion of the Stakeholder is noted. The Stakeholder may also note the Petitioner's response. Further, the Commission has already notified SOP Regulations providing limits/timelines for various individual /overall Standard of Performance.

2.2.19. Analyzing metering data

Stakeholder's Comment:

ED-Goa already has metering at DTC's. However, the data available is not analysed. Reputed Institutes like Goa Institute of Management can be roped in to analyse the data based on which suggestions for improvement, mismatch in supply & distribution, consumption, etc can be obtained.

Petitioner's Response:

The data available through Automated Meter Reading (AMR) instrument located at each DTC is made available in the Meter Data Management (MDM) system. The data is periodically analysed for checking the loading trend of the DTC, balancing of the load, losses, lower PF cases, etc.

Commission's View:

The Stakeholder may note the Petitioner's response.

2.2.20. Audit of Annual Accounts

Stakeholder's Comment:

GCCI submitted that they congratulate the current CEE for following up & completing the ED Goa Accounts up to 2018. They were pending since FY 2012 onwards. Without audit no accounts can be verified. We understand the Audit is currently on by CAG. We request that the accounts be bought upto date so that the exact figures can be made public. We are sure that this will be completed by the current CEE.

Petitioner's Response:

ED-Goa submits that once the audit of accounts for FY 2017-18 to FY 2019-20 is completed, the respective details will be submitted to the public. Drafting of provisional accounts for FY 2020-21 is in process, upon completion the same will be submitted for CAG audit.

Commission's View:

The Commission directs the Petitioner to complete the audit of accounts up to FY 2020-21 and submit the same to the Commission along with True-up Petition within 3 months of the issuance of this Order. Further, the audit of FY 2021-22 should be completed and submitted to the Commission along with True-up Petition while filing the Tariff Petition for FY 2023-24.

2.2.21. Periodical education of customers

Stakeholder's Comment:

GCCI submitted that ED-Goa should include periodical education of Customers on issues like connected load, procedures, Energy Efficiency for flattening of load curve. Plan may include this aspect.

Petitioner's Response:

EDG submits that, continuous efforts are being taken in creating awareness and educating the people and future generations through various modes and methods provided in the following:

- Launching of Energy Conservation Mobile Van. The movable mobile Van hired for publicity consisting of a structure with message on Energy Conservation tips through a banner was conveyed to teachers and students of Government High Schools/Kendriya Vidhyalayas/Jawahar Navodaya Vidhyalayas across entire state of Goa and also energy conservation awareness material i.e. poster/sticker to schools was distributed.
- Creation of Energy Clubs by encouraging participation of young children in energy efficiency movement on Energy Saving/Conservation in Government High Schools including Kendriya Vidyalayas, Jawahar Navodaya Schools which will be selected for Model Energy Efficient Schools in the State of Goa. The Work Order has been issued to M/s LILA Digital & Environmental Solutions Pvt. Ltd. on 08/09/2020. The agency has completed online training sessions in all the 25 schools. Balance work is in progress.
- Conversion of 16 nos. of Government high Schools including 5 nos. of Kendriya Vidyalayas and 2 nos. of Jawahar Navodaya Vidyalaya to Model Energy Efficient Schools. The Work Order has been issued to M/s Energy Efficiency Services Limited, New Delhi on 21/09/2020 and the work is completed.
- Conversion of Government High School, Dona Paula to Model Energy Efficient School by replacing all existing conventional appliances as a pilot project. The Work Order had been issued to M/s Energy Efficiency Services Limited, New Delhi on 26/08/2020 and the work is completed.
- Organized Energy Conservation Week programme at Institute Menezes Braganza Conference Hall on 21/12/2021, the programme included Training to Government High
- Schools/Kendriya Vidhyalayas/Jawahar Navodaya Vidhayala Teachers w.r.t. Energy Clubs, quiz Competition for finalists, Awareness/Interactive session on Energy Conservation Building Code and Painting and quiz competition prize distribution to students w.r.t. Energy Clubs.
- Work of Implementation of DSM based Efficient Lighting Programme in the State of Goa by providing 3 nos. of 7W/9W LED Bulbs to each Registered Domestic Consumer of GED at free of cost as a step towards energy conservation. Distributed of 8,04,735 nos. of 9W LED Bulbs to 2,68,245 nos. of Consumers with estimated saving of 106 MUs of annually.

Commission's View:

The Stakeholder may note the Petitioner's response.

2.2.22. Continuous Staff training, Long-term solution for power interruption and improvement of distribution efficiency

Stakeholder's Comment:

Continuous training of engineers, Managers and administrative staff is essential. About 2% of HR expenses may be allocated to the same. There are numerous short duration transient failures & some failures in the distribution system in goa. Besides carrying out repairs & adopting "Jugad" solutions, it is necessary to carry out Root Cause Analysis (RCA) and find long term effective solution in terms of material, specification, procedure & processes by forming separate dedicated groups. It is also necessary to take up pilot projects such as HV Distribution with an objective to improve distribution efficiency.

Petitioner's Response:

EDG submits the reply in three parts provided in the following:

Training: The ED, Goa Training Centre at Ponda has been made fully functional and carries out periodic training for Technical and Clerical staff. Some of these trainings are carried out in association with reputed organizations such as RECL, NTPI and NTPC. Hands on training is also provided by reputed OEM for O&M staff. Trainings related to Safety such as Safe Practices, Use of PEEs, etc. are also provided.

Root Cause Analysis and long-term effective solution: The major cause of power interruption is due to falling of trees / branches on the overhead lines especially during the monsoon season. Further, the existing overhead system is aged and the frequent snapping of the lines causes further deteriorations effecting power supply reliability severely. The Departments has taken up numerous projects for conversion of overhead network to under ground system across the state of Goa to include major cities and towns and also hinterlands and the coastal belts. The projects are under various stage of completions.

HV Distribution: The HV Distribution is for High Load concentrated areas wherein independent transformer is installed to supply large number of consumers located at one location. The system avoids use of long LT lines thereby reducing losses and changes of theft. The system is ideal for Metro cities wherein large cluster of consumers are located very closely. In Goa, individual transformers are provided for multi consumers complexes and single dwelling consumers are supplied through 11/0.433 KV Distribution transformer of requisite ratings.

Commission's View:

The Stakeholder may note the Petitioner's response. Further, the Commission has already notified SOP Regulations providing limits/timelines for various individual /overall Standard of Performance.

3. Chapter 3: True-up of the FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21

3.1. Applicable provisions

The True-up of FY 2017-18 and FY 2018-19 are to be carried out as per Regulation 8 (2) of the JERC MYT Regulations, 2014:

"8. Annual Review of Performance and True-up

...

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

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

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

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

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

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

Further, the True-up of FY 2019-20 and FY 2020-21 are to be carried out as per Regulation 11 of the JERC MYT Regulations, 2018:

"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:

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;*

……….”

3.2. Approach for the True-up of the FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21

Petitioner's submission:

The Petitioner has not submitted the True-Up Petition for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21. Further, the Petitioner has submitted that that audit works is in progress for FY 2017-18 by CAG. The accounts for FY 2018-19 and FY 2019-20 are completed and submitted to CAG, the process of auditing is yet to start. Further the accounts of FY 2020-21 will be finalized by ED-Goa by 31st December 2021 and the same will be submitted to CAG for auditing purposes.

Commission's analysis:

The Commission in its previous Orders had stressed upon the requirement of the audited accounts to reflect the true picture and bring in accuracy in the estimates made by the Commission. The JERC MYT Regulations, 2014 and JERC MYT Regulations, 2018 also require the licensee to file the True up along with the audited accounts in the filing.

The Commission reiterates its direction to the Petitioner to prepare and submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 based on commercial principles along with the True-up Petitions by 30th November 2022.

The True-up would therefore be taken up only after submission of the audited accounts. Accordingly, the Commission has decided not to take up True-up for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 in the current Order.

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

4.1. Applicable Provisions and Background

The MYT Order for each year of the Control Period from FY 2019-20 to FY 2021-22 was issued by the Commission on 20th May 2019 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2019-20. The ARR for FY 2021-22 was further revised and the tariff for FY 2021-22 was approved by the Commission in its Tariff Order dated by the Commission in its Tariff Order dated 30th March 2021. The Annual Performance Review for the FY 2021-22 is to be carried out in accordance with the Regulation 11 of the JERC MYT Regulations 2018:

"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:

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:

...

***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;*

.........."

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

Petitioner's submission:

The Petitioner has submitted the APR of FY 2021-22 based on the actual performance during the H1 (April-September 2021) of the year and the revised estimates for H2 (October - March 2022) of the year. The projections for H2 of FY 2021-22 are arrived at by expected escalation over performance of H1.

Commission's analysis:

The Commission for the purpose of estimating the energy demand of the State sought the information of month-wise historical sales, number of consumers and connected load of the from FY 2017-18 to FY 2021-22 (till H1) from the Petitioner in the first Deficiency Note dated 28th January 2022. Various anomalies and gaps were observed in the data provided.

In addition to the issues in respect of commercial data such as sales, number of consumers, connected load and power purchase, the Commission observes that due to the unavailability of audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21, it is difficult to ascertain the accuracy of the data in respect of capital expenditure and capitalisation during this period thereby leading to unreliable estimates of ARR parameters.

Therefore, the Commission believes that it is not prudent to approve the revised power purchase requirement and revenue from retail sale on the basis of the unreliable information presently available. Therefore, the Commission shall consider the actual performance at the time of the True-up of the FY 2021-22 once the audited accounts are submitted by the Petitioner.

Accordingly, the Commission has decided not to undertake the Annual Performance Review of the FY 2021-22. The Commission directs the Petitioner to submit the True-up of FY 2021-22 and the APR of FY 2022-23 based on reliable data by 30th November 2022.

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

5.1. Background

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

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

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for each year based on figures approved in the Business Plan Order dated 31st March 2022 and the provisional information of various parameters for the previous financial years. The ARR has been determined for each financial year of the 3rd Control Period whereas the revenue at existing tariff is determined only for the FY 2022-23 to arrive at the revenue gap/surplus for the FY 2022-23.

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

Petitioner's Submission

The Petitioner has considered the same number of consumers, connected load and energy sales as proposed by the Petitioner in the Business Plan.

Table 6: Category-wise number of consumers proposed by the Petitioner for 3rd MYT Control Period

Sl. No.	Particulars	Projected No. of Consumers		
		FY 2022-23	FY 2023-24	FY 2024-25
1(a)	Tariff LTD/Domestic	547790	559603	571670
1(b)	Tariff LTIG/Low Income Group	877	877	877
2	Tariff LTC/Commercial	103827	105798	107806
3	Tariff LTI/Industry	5649	5649	5649
4	Tariff LTP/Mixed (Hotel Industries)	116	116	116
5A	Tariff LTAG/Agriculture (Pump sets / Irrigation)	12481	12875	13281
B	Tariff LTAG/Agriculture (Allied Activities)	256	269	282
6	Tariff LTPL/ Public Lighting	5726	6012	6313
7	Tariff LTH/ Hoarding and Signboards	61	61	61
8	Tariff-LTTS/ Temporary Supply	2726	2726	2726
9	Tariff-HTI/ Industrial	798	814	831
10	Tariff HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/ Steel Rolling)	22	22	22
11	Tariff HTC/ Commercial	289	303	318
12 A	Tariff HTAG/ Agriculture (Pump Sets/ irrigation)	43	43	44
B	Tariff HTAG/ Agriculture (allied activity)	3	3	3
13	Tariff HTD/ Domestic	4	4	5
14	Tariff HTMES/ Defense Establishment	15	15	16

Sl. No.	Particulars	Projected No. of Consumers		
		FY 2022-23	FY 2023-24	FY 2024-25
15	Tariff HTTS/ Temporary Supply	16	17	17
16	Single Point Supply	1	1	1
	Total	**680699**	**695208**	**710037**

Table 7: Category-wise connected load (kW) proposed by the Petitioner for 3rd MYT Control Period

Sl. No.	Connected Load (MU)	Proposed Connected Load (kW)		
		FY 2022-23	FY 2023-24	FY 2024-25
1(a)	Tariff LTD/Domestic	1722919.38	1789067.48	1857755.21
1(b)	Tariff LTIG/Low Income Group	85.00	85.00	85.00
2	Tariff LTC/Commercial	390009.09	406751.31	424212.23
3	Tariff LTI/Industry	145742.80	146392.49	147045.07
4	Tariff LTP/Mixed (Hotel Industries)	2295.00	2295.00	2295.00
5A	Tariff LTAG/Agriculture (Pump sets / Irrigation)	48595.81	50444.35	52363.21
B	Tariff LTAG/Agriculture (Allied Activities)	2308.95	2424.40	2545.62
6	Tariff LTPL/ Public Lighting	12192.25	12801.87	13441.96
7	Tariff LTH/ Hoarding and Signboards	514.00	514.00	514.00
8	Tariff-LTTS/ Temporary Supply	9248.00	9248.00	9248.00
9	Tariff-HTI/ Industrial	570982.14	581226.85	591655.37
10	Tariff HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/ Steel Rolling)	93250.00	93250.00	93250.00
11	Tariff HTC/ Commercial	108614.10	114044.81	119747.05
12 A	Tariff HTAG/ Agriculture (Pump Sets/ irrigation)	9476.30	9697.65	9924.17
B	Tariff HTAG/ Agriculture (allied activity)	2200.00	2200.00	2200.00
13	Tariff HTD/ Domestic	420.00	441.00	463.05
14	Tariff HTMES/ Defense Establishment	8709.75	9145.24	9602.50
15	Tariff HTTS/ Temporary Supply	5663.70	5946.89	6244.23
16	Single Point Supply	4035.00	4035.00	4035.00
	Total	**3137261.27**	**3240011.32**	**3346626.67**

Table 8: Category-wise energy sales (MUs) proposed by the Petitioner for 3rd MYT Control Period

Sl. No.	Particulars	Projected Sales (MU)		
		FY 2022-23	FY 2023-24	FY 2024-25
1(a)	Tariff LTD/Domestic	1325.53	1379.16	1434.96
1(b)	Tariff LTIG/Low Income Group	1.27	1.27	1.27
2	Tariff LTC/Commercial	436.59	448.26	460.24
3	Tariff LTI/Industry	80.91	80.91	80.91
4	Tariff LTP/Mixed (Hotel Industries)	4.48	4.48	4.48
5A	Tariff LTAG/Agriculture (Pump sets / Irrigation)	17.25	17.71	18.18
B	Tariff LTAG/Agriculture (Allied Activities)	0.99	0.99	0.99
6	Tariff LTPL/ Public Lighting	50.41	52.93	55.58
7	Tariff LTH/ Hoarding and Signboards	0.16	0.16	0.16
8	Tariff-LTTS/ Temporary Supply	9.77	9.77	9.77
9	Tariff-HTI/ Industrial	1483.35	1512.88	1543.01
10	Tariff HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/ Steel Rolling)	506.83	530.35	554.97
11	Tariff HTC/ Commercial	116.74	122.58	128.71
12 A	Tariff HTAG/ Agriculture (Pump Sets/ irrigation)	5.30	5.30	5.30
B	Tariff HTAG/ Agriculture (allied activity)	9.36	9.82	10.32
13	Tariff HTD/ Domestic	0.43	0.45	0.47
14	Tariff HTMES/ Defense Establishment	27.86	27.86	27.86
15	Tariff HTTS/ Temporary Supply	3.51	3.69	3.87
16	Single Point Supply	5.55	5.60	5.65

Sl. No.	Particulars	Projected Sales (MU)		
		FY 2022-23	FY 2023-24	FY 2024-25
	Total	**4086.29**	**4214.18**	**4346.69**

Commission's analysis

The Commission in the Business Plan Order dated 31st March 2022 had estimated the category wise energy sales, number of consumers and connected load based on historical trends. The detailed methodology has been discussed in the Business Plan Order for the 3rd MYT Control Period. The Commission retains the same energy sales, connected load and number of consumers as approved in the Business Plan.

Table 9: Category-wise number of consumers approved by the Commission for 3rd MYT Control Period

Sl. No.	Consumer Category	Consumer growth projections			
		Base Year (Estimated)	Control Period (Approved)		
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
1	LTD/Domestic	565,369	588,323	612,209	637,065
2	LT-LIG/Low Income Group	1,314	1,314	1,314	1,314
3	LTC/Commercial	105,325	108,137	111,025	113,989
4	LTI/Industrial	5,799	5,799	5,799	5,799
5	LT Mixed/ LT-P Hotel Industries	125	125	125	125
6	LTAG/Agriculture	12,402	12,634	12,870	13,111
7	LT Temporary	2,609	2,609	2,609	2,609
8	HTD Domestic	3	3	3	3
9	HTC Commercial	285	302	321	341
10	HTI Industrial	855	915	978	1,046
11	High Tension-Ferro/SM/PI/SR	26	26	26	26
12	HTAG/Agriculture	46	47	48	49
13	Military Engineering Services/Defense Establishments	14	14	14	15
14	Public Lighting	1,097	1,097	1,097	1,097
15	Hoardings/Signboards	47	47	47	47
16	HT Temporary	11	11	11	11
17	Single Point Supply	1	1	1	1
	Total	**695,328**	**721,405**	**748,498**	**776,648**

Table 10: Category-wise connected load (kW) approved by the Commission for 3rd MYT Control Period

Sl. No.	Consumer Category	Connected load growth projections (kW)			
		Base Year (Estimated)	Control Period (Approved)		
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
1	LTD/Domestic	1,713,671	1,808,437	1,908,443	2,013,980
2	LT-LIG/Low Income Group	117	117	117	117
3	LTC/Commercial	388,838	407,424	426,899	447,305
4	LTI/Industrial	144,633	146,918	149,240	151,598
5	LT Mixed/ LT-P Hotel Industries	2,757	2,757	2,757	2,757
6	LTAG/Agriculture	50,692	52,385	54,134	55,942

Sl. No.	Consumer Category	Connected load growth projections (kW)			
		Base Year (Estimated)	Control Period (Approved)		
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
7	LT Temporary	9,107	9,107	9,107	9,107
8	HTD Domestic	300	300	300	300
9	HTC Commercial	88,125	90,575	93,093	95,681
10	HTI Industrial	589,357	619,237	650,632	683,619
11	High Tension-Ferro/SM/PI/SR	95,340	95,340	95,340	95,340
12	HTAG/Agriculture	12,152	12,610	13,085	13,579
13	Military Engineering Services/Defense Establishments	8,196	8,470	8,753	9,045
14	Public Lighting	3,212	3,212	3,212	3,212
15	Hoardings/Signboards	567	567	567	567
16	HT Temporary	2,468	2,468	2,468	2,468
17	Single Point Supply	4,035	4,035	4,035	4,035
	Total	**3,113,566**	**3,263,959**	**3,422,183**	**3,588,653**

Table 11: Category-wise energy sales (MU) approved by the Commission for 3rd MYT Control Period

Sl. No.	Consumer Category	Energy sales growth projections (MU)			
		Base Year (Estimated)	Control Period (Approved)		
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
1	LTD/Domestic	1,320.92	1,384.58	1,451.32	1,521.28
2	LT-LIG/Low Income Group	1.37	1.37	1.37	1.37
3	LTC/Commercial	460.23	472.52	485.13	498.09
4	LTI/Industrial	80.91	80.91	80.91	80.91
5	LT Mixed/ LT-P Hotel Industries	4.48	4.48	4.48	4.48
6	LTAG/Agriculture	18.08	18.08	18.08	18.08
7	LT Temporary	9.77	9.77	9.77	9.77
8	HTD Domestic	0.38	0.38	0.38	0.38
9	HTC Commercial	128.26	135.02	142.13	149.62
10	HTI Industrial	1,469.87	1,499.12	1,528.95	1,559.37
11	High Tension-Ferro/SM/PI/SR	530.72	555.35	581.12	608.08
12	HTAG/Agriculture	14.13	15.54	17.09	18.79
13	Military Engineering Services/Defense Establishments	26.66	26.96	27.27	27.58
14	Public Lighting	29.61	29.61	29.61	29.61
15	Hoardings/Signboards	0.16	0.16	0.16	0.16
16	HT Temporary	2.33	2.33	2.33	2.33
17	Single Point Supply	5.65	5.69	5.74	5.79
	Total	**4,103.52**	**4,241.87**	**4,385.84**	**4,535.68**

5.4. Inter-State transmission loss

Petitioner's Submission

The Petitioner had submitted Inter-State Transmission Losses for the 3rd MYT Control Period in its Business Plan Petition as follows:

Table 12: Inter-state transmission losses considered by the Petitioner for FY 2021-22 and the 3rd MYT Control Period

Particulars	Projections			
	Base Year FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Western Region	3.35%	3.34%	3.31%	3.29%
Southern Region	7.95%	7.92%	7.85%	7.80%

Commission's analysis

The Commission accepts the projections submitted by the Petitioner. The same shall be revised based on actuals during the truing up of the respective years as per respective Regulations. The following table provides the Inter-State Transmission Losses approved by the Commission for the 3rd MYT Control Period:

Table 13: Inter-state losses approved by the Commission for 3rd MYT Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Western Region	3.34%	3.31%	3.29%
Southern Region	7.92%	7.85%	7.80%

5.5. Intra-State Transmission & Distribution (T&D) Losses

Petitioner's Submission

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

Table 14: Intra-State Distribution Losses (%) submitted by the Petitioner

Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Intra-state T&D losses	10.15%	10.00%	9.85%

Commission's analysis

The Commission has approved the same Intra-State T&D losses approved in Business Plan of 3rd MYT Control Period in Order dated 31st March 2022.

Table 15: Intra-State Distribution Losses (%) approved by the Commission

Consumer Category	FY 2022-23	FY 2023-24	FY 2024-25
Intra-state T&D losses	10.25%	10.00%	9.75%

5.6. Power Purchase Quantum & Cost

Petitioners Submission

1. **Power Purchase Quantum**

The power purchase quantum for the Control period has been considered as the quantum projected by the petitioner in Business Plan petition for FY 2022-23 to FY 2024-25. The Petitioner has projected the net power purchase quantum for the MYT Control period, as 4,548 MU, 4,582 MU and 4,834 MU for FY 2022-23, FY 2023-24, FY 2024-25 respectively.

2. Power Purchase Cost

The Petitioner has submitted in Business Plan petition, EDG had submitted the power purchase procurement plan along with power purchase cost. Following assumptions have been considered for projecting the cost of power purchase:

Fixed Charges: The Petitioner has submitted that the Fixed costs for the Control Period has still not been issued by CERC for most of the Plant, therefore, the Petitioner has considered actual fixed charges paid to the plant in Q1 of FY 2021-22 and extrapolated them to arrive at the revised projections of base year FY 2021-22 for respective Central Generating Stations. Further, projection of fixed charged for the Control Period has been done, considering the CAGR of past 3 yrs of each plant, with a cap of 5% for the Control Period.

Variable Charges: The Petitioner has considered the actual per unit variable costs of FY 2021-22 Q1 and has calculated the revised projections of base year FY 2021-22 w.r.t to power purchase projections for respective Central Generating Stations. Further, year on year projections has been done by considering 3 year CAGR on energy charges for each plant, with an escalation cap of 5% for purpose of estimation of the variable charges for the control period. Escalation % with negative CAGR are considered to be NIL.

Solar and Non-solar: The Petitioner has considered the rates as per the PPA for the entire Control Period from FY 2022-23 to FY 2024-25 without any escalation. Further, to fulfil the RPO compliance, the deficit renewable power as per RPO is compensated by procuring renewable power (Solar and Non-Solar) from the Short-Term Market. The Petitioner has considered the market rates as per the actuals of Q1 FY 2021-22 for the base year FY 2021-22 and also for the entire Control Period from FY 2022-23 to FY 2024-25 without any escalation.

The Petitioner has submitted that it has been procuring power from the Renewable Sources where 6 MW Solar Power is procured from NVVNL and 25 MW from SECI to meet its RPO obligations. The NVVNL tie-up will be till FY 22-23 only (4 or 5 months). Hence, power purchase from NVVNL has been considered in revised projections of FY 2021-22 and FY 2022-23 upto August only. Power Purchase from SECI has been considered as 48 MU as per the PPA and the entire control period.

The Petitioner has submitted that any shortfall (if any) and to fulfil the Solar RPO obligation, EDG shall purchase power through short term (Traders) through DEEP portal, GTAM.

In order to meet its Non- solar RPO, the Petitioner has submitted that it would be procuring power during MYT control period through short term on DEEP portal. The Petitioner has also submitted that it is also procuring 2 MUs (for FY 2024-25 it is 0.5 MUs) every year from Hindustan Waste Energy Ltd and the same has been envisaged to buy during the entire control period. Further, the Petitioner has also tied up with SECI Tranche II 50 MW Wind power and procuring the power at a rate of Rs. 2.72/unit plus trading margin of Rs. 0.07/kWh at goa periphery.

The Petitioner has submitted that no upcoming power purchase planned from the thermal generating stations. It has planned the tie-ups of Renewable energy both outside and within the state during the control period to meet its RPO obligations.

Apart from the above sources, the Petitioner shall purchase power in Short-term from exchanges or Traders or DEEP portal to fulfil its peak requirements. Further, the Petitioner may sell surplus available during off-peak hours and would indulge in banking or sale of power in exchanges in the real time basis

Transmission Charges: The Petitioner has considered the actual transmission charges for H1 of FY 2021-22 and calculated the transmission charges per unit for PGCIL. The same per unit rate has been considered for computation of Transmission charges for the control period without any escalations

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

Table 16: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for the 3rd Control Period

S. No.	Source	Net Generation (MU)	Projections of Energy Quantum			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Cr.)			Projections (VC- Rs. Cr.)			Projections (FC+VC) Rs. Cr.		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
A	**Central Sector Power Stations**													
I	**NTPC**	**3628.75**	**3483.08**	**3484.48**	**3485.41**	**422.80**	**426.62**	**430.62**	**612.98**	**617.33**	**621.66**	**1035.79**	**1043.95**	**1052.28**
1	*KSTPS*	1627.27	1572.89	1573.40	1573.74	102.21	102.21	102.21	224.59	228.53	232.51	326.8	330.74	334.72
2	*VSTPS - I*	261.6	252.86	252.94	252.99	22.76	22.76	22.76	39.85	39.87	39.88	62.62	62.63	62.64
3	*VSTPS - II*	110.31	106.62	106.66	106.68	7.35	7.35	7.35	16.14	16.14	16.15	23.49	23.49	23.5
4	*VSTPS -III*	104.32	100.83	100.87	100.89	9.58	9.58	9.58	15.14	15.15	15.15	24.72	24.73	24.73
5	*VSTPS-IV*	112.18	108.44	108.47	108.49	17.5	17.5	17.5	16.14	16.15	16.15	33.64	33.64	33.65
6	*VSTPS-V*	56.39	54.5	54.52	54.53	8.76	8.76	8.76	8.36	8.36	8.36	17.12	17.12	17.12
7	*KGPP*	17.74	17.15	17.15	17.16	7.53	7.53	7.53	2.63	2.63	2.63	10.15	10.16	10.16
8	*GGPP*	13.45	13	13.01	13.01	9.71	9.71	9.71	2.18	2.18	2.18	11.89	11.89	11.89
9	*SIPAT- I*	223.04	215.58	215.65	215.7	26.91	26.91	26.91	30.83	30.84	30.84	57.74	57.75	57.76
11	*KSTPS-VII*	53.48	55.33	55.35	55.36	6.69	6.69	6.69	7.73	7.85	7.96	14.41	14.53	14.65
14	*RSTPS*	612.22	563.73	564.19	564.49	47.98	47.98	47.98	142.98	143.1	143.17	190.96	191.08	191.15
15	*SIPAT- II*	94.59	91.43	91.46	91.48	11.52	11.52	11.52	13.6	13.71	13.82	25.13	25.24	25.34
16	*Solapur*	59.6	57.61	57.63	57.64	25.48	25.48	25.48	20.08	20.08	20.09	45.56	45.57	45.57
17	*Gadarwara*	61.3	59.25	59.27	59.28	33.78	35.47	37.25	16.36	16.37	16.37	50.15	51.84	53.62
18	*Lara*	53.61	51.82	51.84	51.85	18.46	19.38	20.35	10.99	10.99	10.99	29.45	30.37	31.34
19	*Khargone*	65.92	63.71	63.73	63.75	24	25.2	26.46	17.39	17.39	17.4	41.39	42.59	43.85
20	*Mouda I*	54.85	53.01	53.03	53.04	21.14	21.14	21.14	14.49	14.5	14.5	35.63	35.64	35.64
21	*Mouda II*	46.86	45.3	45.31	45.32	21.43	21.43	21.43	13.51	13.51	13.51	34.94	34.94	34.95
	Add/ Less: Other Adjustments		-											
III	**NPCIL**	**222.63**	**215**	**215**	**215**	**-**	**-**	**-**	**60.78**	**62.06**	**63.39**	**60.78**	**62.06**	**63.39**
	KAPS	123.48	119.36	119.39	119.42	-	-	-	27.33	27.34	27.35	27.33	27.34	27.35
	TAPS	99.15	95.84	95.87	95.89	-	-	-	33.44	34.72	36.04	33.44	34.72	36.04
IV	**Short-Term Purchase**		**-77**	**-301**	**-219.39**				**-19**	**-73**	**-52**	**-19**	**-73**	**-52**
	a) IEX PURCHASE AND SALES		-76.55	-300.90	-219.39	-	-	-	-19.07	-73.21	-52.13	-19.07	-73.21	-52.13
	A1) IEX PURCHASE													
	A2) IEX SALES		76.55	300.90	219.39				19.07	73.21	52.13	19.07	73.21	52.13
	b) Traders		-	-	-							-	-	-

S. No.	Source	Net Generation (MU)	Projections of Energy Quantum			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Cr.)			Projections (VC- Rs. Cr.)			Projections (FC+VC) Rs. Cr.		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
												-	-	-
V	**OVER/ UNDER DRAWAL**					-	-	-	-	-	-	-	-	-
	OVER DRAWAL													
	UNDER DRAWAL													
												-	-	-
VI	***Banking of Power***					-	-	-	-	-	-	-	-	-
												-	-	-
B	**Within State Generations**											-	-	-
I	**CO-GENERATION**		**150**	**150**	**150**				**35.95**	**35.95**	**35.95**	**35.95**	**35.95**	**35.95**
	Vedanta Plant-1		90.88	90.88	90.88	-	-	-	21.81	21.81	21.81	21.81	21.81	21.81
	Vedanta Plant -2		53.10	53.10	53.10	-	-	-	12.74	12.74	12.74	12.74	12.74	12.74
	Goa Sponge and private limited		5.81	5.81	5.81	-	-	-	1.39	1.39	1.39	1.39	1.39	1.39
												-	-	-
C	**RPO Obligation**		**776**	**1,134**	**1,191**				**325.64**	**435.49**	**447.29**	**325.64**	**435.49**	**447.29**
												-	-	-
	Solar		***367.77***	***421.42***	***478.14***				**168.2**	**174.91**	**186.71**	**168.2**	**174.91**	**186.71**
	NVVNL Solar		*12*			-	-	-	6.6	-	-	6.6	-	-
	Solar STOA		*244.64*	*117.53*	*48*	-	-	-	113.75	54.65	22.32	113.75	54.65	22.32
	SECI Solar		*48*	*48*	*48*	-	-	-	26.4	26.4	26.4	26.4	26.4	26.4
	CONVERGENCE SOLAR		*43.36*	*86.72*	*173.45*				15.61	31.22	62.44	15.61	31.22	62.44
	Net Metering		*19.76*	*39.52*	*79.04*				5.84	12.03	24.79	5.84	12.03	24.79
	PM KUSUM			16.64	16.64				-	5.07	5.22	-	5.07	5.22
	SECI Hybrid (Solar)			113	113					45.54	45.54		45.54	45.54
	Non-Solar		***408.63***	***712.38***	***712.38***				**157.44**	**260.59**	**260.59**	**157.44**	**260.59**	**260.59**
	Non Solar - SECI Wind Tranche II LTOA		*112.42*	*112.42*	*112.42*	-	-	-	31.37	31.37	31.37	31.37	31.37	31.37
	STOA (Non Solar)		220.25	-	-				103.84	-	-	103.84	-	-
	SECI Tranche-VI		75	112	112				21.75	32.48	32.48	21.75	32.48	32.48

S. No.	Source	Net Generation (MU)	Projections of Energy Quantum			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Cr.)			Projections (VC- Rs. Cr.)			Projections (FC+VC) Rs. Cr.		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
	Hindustan waste treatment plant Goa		0.96	0.96	0.96	-	-	-	0.48	0.48	0.48	0.48	0.48	0.48
	SECI Hybrid (Non-Solar)			487	487					196.26	196.26		196.26	196.26
D	REC Certificates											-	-	-
												-	-	-
E	**OTHER CHARGES**											-	-	-
	PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges								221.36	227.91	234.69	221.36	227.91	234.69
												-	-	-
F	**Total**		**4548**	**4682**	**4822**	**423**	**427**	**431**	**1238**	**1306**	**1351**	**1660**	**1732**	**1781**

Commission's analysis

5.6.1. *Power Purchase Quantum*

The power purchase quantum for the 3rd Control Period was approved in the Business Plan Order dated 31st March 2022. The approved power purchase quantum is given in the following table:

Table 17: Power purchase quantum at state periphery approved by the Commission for the 3rd Control Period

Sr. No.	Source	Power Purchase (MUs)		
		MYT Projections		
		2022-23	2023-24	2024-25
A	**Central Sector Power Stations**			
I	**NTPC**	**3,445.35**	**3,446.72**	**3,447.63**
1	*KSTPS*	1,572.93	1,573.44	1,573.77
2	*VSTPS - I*	252.69	252.77	252.83
3	*VSTPS - II*	106.61	106.65	106.67
4	*VSTPS -III*	100.82	100.85	100.87
5	*VSTPS-IV*	108.45	108.49	108.51
6	*VSTPS-V*	54.51	54.53	54.54
7	*KGPP*	17.14	17.15	17.15
8	*GGPP*	13.01	13.01	13.01
9	*SIPAT- I*	215.64	215.71	215.76
10	*KSTPS-VII*	51.69	51.71	51.72
11	*RSTPS*	535.92	536.36	536.64
12	*SIPAT- II*	91.43	91.46	91.48
13	*Solapur*	55.46	55.48	55.49
14	*Gadarwara*	59.20	59.22	59.23
15	*Lara*	51.84	51.86	51.87
16	*Khargone*	64.15	64.17	64.19
17	*Mouda I*	51.27	51.29	51.30
18	*Mouda II*	42.56	42.58	42.59
	Add/ Less: Other Adjustments	-		
III	**NPCIL**	**215.19**	**215.26**	**215.31**
	KAPS	119.36	119.39	119.42
	TAPS	95.84	95.87	95.89
IV	**Traders**	**139.59**	**(72.42)**	**22.44**
	a) IEX PURCHASEAND SALES	139.59	(72.42)	22.44
	a) IEX PURCHASE			
	a) IEX SALES	(139.59)	72.42	(22.44)
	b) Traders	-	-	-
B	**Within State Generations**			
I	**CO- GENERATION**	**149.79**	**149.79**	**149.79**
	Vedanta Plant-1	90.88	90.88	90.88
	Vedanta Plant -2	53.10	53.10	53.10
	Goa Sponge and private limited	5.81	5.81	5.81
C	**RPO Obligation**	**776.40**	**1,133.80**	**1,190.52**
	Solar	***367.77***	***421.42***	***478.14***
	NVVNL Solar	*12.00*		
	Solar STOA	*244.64*	*117.53*	*48.00*
	SECI Solar	*48.00*	*48.00*	*48.00*
	CONVERGENCE SOLAR	*43.36*	*86.72*	*173.45*
	Net Metering	*19.76*	*39.52*	*79.04*
	PM KUSUM		16.64	16.64
	SECI Hybrid (Solar)		113.00	113.00

Sr. No.	Source	Power Purchase (MUs)		
		MYT Projections		
		2022-23	2023-24	2024-25
	Non-Solar	***408.63***	***712.38***	***712.38***
	Non Solar - SECI Wind Tranche II LTOA	*112.42*	*112.42*	*112.42*
	STOA (Non Solar)	220.25	-	-
	SECI Tranche-VI	75.00	112.00	112.00
	Hindustan waste treatment plant Goa	0.96	0.96	0.96
	SECI Hybrid (Non-Solar)		487.00	487.00
D	REC Certificates			
F	**Total**	**4,726.31**	**4,873.15**	**5,025.69**

5.6.2. Power Purchase Cost

The Commission has computed the power purchase cost for the 3rd MYT Control Period based on the following assumptions:

Variable Charges:

The variable charges for the existing plants have been considered based on the provisional actual cost submitted by the Petitioner for FY 2020-21. For Central generating Stations, the Commission has considered an annual escalation of 4% on the actual variable costs of the FY 2020-21, for each year from FY 2022-23 to FY 2024-25. For the remaining plants, the Commission has accepted the variable charges submitted by the Petitioner.

Fixed Charges:

The fixed charges for the existing plants have been considered based on the actual cost submitted by the Petitioner for FY 2020-21. For Central generating Stations, the Commission has considered an annual escalation of 2% on the actual fixed costs of the FY 2020-21, for each year from FY 2022-23 to FY 2024-25. For the remaining plants, the Commission has accepted the fixed charges submitted by the Petitioner.

Other Charges:

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

5.6.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the total capacity of the transmission network allocated to the Petitioner. The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC).

5.6.4. Total power purchase quantum and cost

The power purchase cost approved by the Commission for the 3rd MYT Control Period have been shown in the following tables:

Table 18: Power Purchase Quantum (MU) and cost (INR Cr) approved for the 3rd MYT Control Period

Sr. No.	Source	Power Purchase at State Periphery (MUs)			Variable Cost			Fixed Cost			Total Power Purchase Cost		
		2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
A	**Central Sector Power Stations**												
I	**NTPC**	**3,445.35**	**3,446.72**	**3,447.63**	**696.70**	**724.88**	**754.09**	**427.56**	**436.11**	**444.83**	**1,124.26**	**1,160.99**	**1,198.92**
1	*KSTPS*	1,572.93	1,573.44	1,573.77	240.04	249.72	259.76	104.26	106.34	108.47	344.29	356.06	368.23
2	*VSTPS - I*	252.69	252.77	252.83	49.25	51.24	53.30	23.22	23.68	24.16	72.47	74.92	77.46
3	*VSTPS - II*	106.61	106.65	106.67	19.97	20.78	21.61	7.49	7.64	7.80	27.47	28.42	29.41
4	*VSTPS -III*	100.82	100.85	100.87	18.76	19.52	20.30	9.77	9.97	10.17	28.54	29.49	30.47
5	*VSTPS-IV*	108.45	108.49	108.51	19.93	20.73	21.56	17.85	18.20	18.57	37.77	38.93	40.13
6	*VSTPS-V*	54.51	54.53	54.54	10.31	10.73	11.16	8.94	9.12	9.30	19.25	19.84	20.45
7	*KGPP*	17.14	17.15	17.15	5.25	5.46	5.68	7.68	7.83	7.99	12.92	13.29	13.67
8	*GGPP*	13.01	13.01	13.01	4.01	4.17	4.34	9.90	10.10	10.30	13.91	14.27	14.64
9	*SIPAT- I*	215.64	215.71	215.76	34.71	36.11	37.57	27.45	28.00	28.56	62.17	64.12	66.13
10	*KSTPS-VII*	51.69	51.71	51.72	7.77	8.09	8.41	6.82	6.96	7.09	14.59	15.04	15.51
11	*RSTPS*	535.92	536.36	536.64	159.25	165.75	172.47	48.94	49.92	50.92	208.19	215.67	223.39
12	*SIPAT- II*	91.43	91.46	91.48	14.96	15.56	16.19	11.75	11.99	12.23	26.71	27.55	28.42
13	*Solapur*	55.46	55.48	55.49	21.79	22.67	23.59	25.99	26.51	27.04	47.79	49.18	50.63
14	*Gadarwara*	59.20	59.22	59.23	21.91	22.79	23.71	32.82	33.48	34.15	54.73	56.27	57.85
15	*Lara*	51.84	51.86	51.87	14.26	14.83	15.43	17.93	18.29	18.66	32.19	33.13	34.09
16	*Khargone*	64.15	64.17	64.19	21.17	22.02	22.91	23.31	23.78	24.25	44.48	45.80	47.16
17	*Mouda I*	51.27	51.29	51.30	18.31	19.05	19.82	21.56	22.00	22.44	39.88	41.05	42.25
18	*Mouda II*	42.56	42.58	42.59	15.06	15.66	16.29	21.86	22.30	22.75	36.92	37.96	39.04
	Add/ Less: Other Adjustments	-											
III	**NPCIL**	**215.19**	**215.26**	**215.31**	**67.22**	**69.93**	**72.74**	**-**	**-**	**-**	**67.22**	**69.93**	**72.74**
	KAPS	119.36	119.39	119.42	33.56	34.92	36.32	-	-	-	33.56	34.92	36.32
	TAPS	95.84	95.87	95.89	33.65	35.01	36.42	-	-	-	33.65	35.01	36.42
IV	**Traders**	**139.59**	**(72.42)**	**22.44**	**60.32**	**(32.23)**	**10.29**				**60.32**	**(32.23)**	**10.29**
	a)IEX PURCHASEAND SALES	139.59	(72.42)	22.44	60.32	(32.23)	10.29	-	-	-	60.32	(32.23)	10.29
	a)IEX PURCHASE	139.59		22.44									
	a)IEX SALES		(72.42)										
	b) Traders	-	-	-							-	-	-
											-	-	-
V	**OVER/ UNDER DRAWAL**				-	-	-	-	-	-	-	-	-
	OVER DRAWAL												

Sr. No.	Source	Power Purchase at State Periphery (MUs)			Variable Cost			Fixed Cost			Total Power Purchase Cost		
		2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
	UNDER DRAWAL												
											-	-	-
VI	***Banking of Power***				-	-	-	-	-	-	-	-	-
											-	-	-
B	**Within State Generations**										-	-	-
I	**CO- GENERATION**	**149.79**	**149.79**	**149.79**	**35.95**	**35.95**	**35.95**				**35.95**	**35.95**	**35.95**
	Vedanta Plant-1	90.88	90.88	90.88	21.81	21.81	21.81	-	-	-	21.81	21.81	21.81
	Vedanta Plant -2	53.10	53.10	53.10	12.74	12.74	12.74	-	-	-	12.74	12.74	12.74
	Goa Sponge and private limited	5.81	5.81	5.81	1.39	1.39	1.39	-	-	-	1.39	1.39	1.39
											-	-	-
C	**RPO Obligation**	**776.40**	**1,133.80**	**1,190.52**	**325.64**	**435.49**	**447.29**				**325.64**	**435.49**	**447.29**
											-	-	-
	Solar	***367.77***	***421.42***	***478.14***	**168.20**	**174.91**	**186.71**				**168.20**	**174.91**	**186.71**
	NVVNL Solar	*12.00*			6.60	-	-	-	-	-	6.60	-	-
	Solar STOA	*244.64*	*117.53*	*48.00*	113.75	54.65	22.32	-	-	-	113.75	54.65	22.32
	SECI Solar	*48.00*	*48.00*	*48.00*	26.40	26.40	26.40	-	-	-	26.40	26.40	26.40
	CONVERGENCE SOLAR	*43.36*	*86.72*	*173.45*	15.61	31.22	62.44				15.61	31.22	62.44
	Net Metering	*19.76*	*39.52*	*79.04*	5.84	12.03	24.79				5.84	12.03	24.79
	PM KUSUM		16.64	16.64	-	5.07	5.22				-	5.07	5.22
	SECI Hybrid (Solar)		113.00	113.00		45.54	45.54					45.54	45.54
	Non-Solar	***408.63***	***712.38***	***712.38***	**157.44**	**260.59**	**260.59**				**157.44**	**260.59**	**260.59**
	Non Solar - SECI Wind Tranche II LTOA	*112.42*	*112.42*	*112.42*	31.37	31.37	31.37	-	-	-	31.37	31.37	31.37
	STOA (Non Solar)	220.25	-	-	103.84	-	-				103.84	-	-
	SECI Tranche-VI	75.00	112.00	112.00	21.75	32.48	32.48				21.75	32.48	32.48
	Hindustan waste treatment plant Goa	0.96	0.96	0.96	0.48	0.48	0.48	-	-	-	0.48	0.48	0.48
	SECI Hybrid (Non-Solar)		487.00	487.00		196.26	196.26					196.26	196.26
D	REC Certificates										-	-	-
											-	-	-
E	**OTHER CHARGES**										-	-	-
	PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges				226.15	230.68	235.29				226.15	230.68	235.29
											-	-	-
F	**Total**	**4,726.31**	**4,873.15**	**5,025.69**	**1,411.97**	**1,464.69**	**1,555.65**	**427.56**	**436.11**	**444.83**	**1,839.53**	**1,900.80**	**2,000.48**

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

Table 19: Average Power Purchase Cost (APPC) for the FY 2022-23

Particular	FY 2022-23
Total Power Purchase Cost (INR Cr)	1839.53
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	551.79
Net Power Purchase Cost (INR Cr) (A)	1287.74
Total Power Purchase quantum (MU)	4726.31
Less: Quantum from renewable energy sources (MU)	776.40
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	**3949.92**
APPC (INR/kWh) (A/B)	**3.26**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.26/ kWh for the FY 2022-23 for the purpose of compensation/payment for excess generation for prosumers.

5.6.5. Energy Balance

Petitioner's Submission

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

Table 20: Energy Balance submitted by the Petitioner (MU)

Particulars	Energy Balance			
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Energy sales within the State/UT	3,931.70	4,086.29	4,214.18	4,346.69
Distribution losses				
%	10.25%	10.15%	10.00%	9.85%
MU	449.02	461.61	468.24	474.93
Energy required at State Periphery	**4,380.72**	**4,547.90**	**4,682.42**	**4,821.62**
Total Energy available at State Periphery	**4,380.72**	**4,547.90**	**4,682.42**	**4,821.62**

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra-State Loss as approved above the Energy Balance for the 3rd MYT Control Period has been shown in following table:

Table 21: Energy Balance approved by Commission (MU)

Particulars	Approved Projections		
	FY 2022-23	FY 2023-24	FY 2024-25
Energy Required			
Energy sales within the State (A)	4,241.87	4,385.84	4,535.68
T&D Loss (%) (B)	10.25%	10.00%	9.75%
Energy required at State Periphery (C = A/(1-B))	**4,726.31**	**4,873.15**	**5,025.69**
Within State Generation (Co-Gen) (D)	149.79	149.79	149.79
Net energy required at State Periphery (E = C – D)	**4,576.53**	**4,723.37**	**4,875.90**

Particulars	Approved Projections		
	FY 2022-23	FY 2023-24	FY 2024-25
Energy Available			
Central Generating Stations including UI over/under drawl (F)	3,660.55	3,661.99	3,662.94
Renewable Power (G)	776.40	1,133.80	1,190.52
Energy available at State Periphery (H = F + G)	**4,436.94**	**4,795.78**	**4,853.46**
(Sale)/ Purchase in Open Market (I = E - H)	139.59	(72.42)	22.44
Net energy available at State Periphery (J = H + I)	**4,576.53**	**4,723.37**	**4,875.90**

5.6.6. *Renewable Purchase Obligation*

Petitioner's Submission:

The Petitioner has submitted it envisages to meet its RPO obligation through purchase of physical renewable power and may even exceed the RPO obligations as cheap power is available in the market, in comparison to the conventional sources. Further, for the upcoming Control Period, since the Commission has not yet approved any trajectory, ED-Goa has assumed a 1% increase in Solar and Non-Solar RPO every year and has accordingly considered the projections for RPO fulfilment. Further, after considering all the proposed tied-up renewable energy, ED-Goa proposes to meet any shortfall to fulfil the RPO obligation, through purchase from short term (Traders) through DEEP portal and GTAM. For projection of ED-Goa does not plan to buy any REC during the upcoming MYT Control Period. Accordingly, the Petitioner has submitted its RPO plan for FY 2021-22 and the upcoming Control Period as follows:

Table 22: RPO plan submitted by the Petitioner for the 3rd MYT Control Period (MU)

Sl. No.	Description	Unit	Revised Projections	Projections		
			FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
1	Sales Within State	MUs	3,931.70	4,086.29	4,214.18	4,346.69
2	RPO Obligation	%				
	- Solar	%	8.00%	9.00%	10.00%	11.00%
	- Non Solar	%	9.00%	10.00%	11.00%	12.00%
3	RPO Obligation	**MUs**				
	- Solar	MUs	314.54	367.77	421.42	478.14
	- Non Solar	MUs	353.85	408.63	463.56	521.60
4	Power Purchase	**MUs**				
	- Solar	MUs	314.54	367.77	421.42	478.14
	- Non Solar	Mus	353.85	408.63	712.38	712.38

Commission's analysis:

The Commission has approved the Renewable Purchase Obligation (RPO) for the 3rd Control Period considering the JERC (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time. The cumulative backlog of solar and non-solar compliance up to FY 2020-21 has been considered as per the Commission's Order on the Suo Moto Petition No. 61/2012 dated 5th July 2021. The solar and non-solar compliance for FY 2021-22 is considered as per the RPO compliance approved in the Tariff Order for FY 2021-22 dated 30th March 2021. Accordingly, the RPO approved by the Commission for the 3rd MYT Control Period is as follows:

Table 23: Renewable Purchase Obligation (RPO) approved by the Commission for 3rd MYT Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Sales within State (MU) (A)	4241.87	4385.84	4535.68

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Hydro Power available at State Periphery (MU) (B)	-	-	-
T&D Loss (%) (C)	10.25%	10.00%	9.75%
T&D Loss (MU) (D = B * C)	0.00	0.00	0.00
Hydro Power Consumed (E = B - D)	0.00	0.00	0.00
Conventional Power Consumed (F = A - E)	**4241.87**	**4385.84**	**4535.68**
RPO obligation (%)	**18.35%**	**19.91%**	**21.58%**
Solar (G)	9.00%	10.00%	11.00%
Non-Solar (H)	9.35%	9.91%	10.58%
RPO obligation for the year (MU)	**778.38**	**873.22**	**978.80**
Solar (F * G)	381.77	438.58	498.93
Non-Solar (F * H)	396.61	434.64	479.88
RPO Compliance from Physical Power (MU)	**776.40**	**1133.80**	**1190.52**
Solar	367.77	421.42	478.14
Non-Solar	408.63	712.38	712.38
Standalone RPO Compliance Backlog (MU)	**14.00**	**17.17**	**20.79**
Solar	14.00	17.17	20.79
Non-Solar	-	-	-
Cumulative RPO Compliance Backlog (MU)	**391.41**	**361.47**	**382.26**
Solar	344.30	361.47	382.26
Non-Solar	47.10	-	-

5.7. 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 61 of the JERC MYT Regulation, 2021 states the following:

"61.1 The Operation and Maintenance Expenses for the Retail Supply Business shall be computed in accordance with this Regulation.

61.2 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.

61.3 The 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 Distribution Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

61.4 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 (1+WPIinflation)

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

A&Gn = (A&Gn-1) x (1+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 Distribution Licensee for the n-1th Year;

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

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

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

61.5 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.

61.6 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.

Provided that at the time of truing up, the variation in the normative and actual O&M expenses shall be dealt in accordance with Regulation 15."

5.7.1. Employee Expenses

Petitioner's Submission

The Petitioner has determined the employee expenses for each year of the Control Period based on the norms specified in the JERC MYT Regulations, 2021. The Petitioner has considered FY 2021-22 as the base year and the employee expenses for the Base Year FY 2021-22 have been estimated based on the provisional data from FY 2017-18 to FY 2020-21 due to unavailability of audited accounts. For FY 2021-22 (base year), the employee expenses are arrived by escalating the average expenses (FY 2017-18 to FY 2020-21) by CPI inflation. The working for computing employee expenses for the base year is provided in table below:

Table 24: Calculation of CPI rate considered for Employee Cost projection

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22

CPI based on Industrial Workers, All India	284.42	299.92	323.50	338.69	351.12
YoY	3.08%	5.45%	7.53%	5.02%	3.67%
3 years average					**5.41%**

Table 25: Calculations of Employee Expenses for base year as submitted by the Petitioner (INR Crore)

S. No.	Particulars	Employee Expenses			3-Year Average	3-Year Average	FY 2021-22 (Base Year)
		FY 2018-19	FY 2019-20	FY 2020-21			
		(a)	(b)	(c)	(d) = [(a)+(b)+(c)]/3	CPI Inflation (%)	(e)
1	Employee Expenses	270.41	294.08	300.81	288.43	5.41%	320.47

The growth factor (Gn) has been Nil for the control period considering the employee strength in the past few years have shown a negative growth trend. The Petitioner has projected the employee expenses for the control period in line with the MYT Regulations 2021 and is provided in the table below:

Table 26: Employee Expense as submitted by the Petitioner for 3rd Control Period (INR Cr)

Particulars	Units	Base Year	MYT Control period		
		FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Employee Cost for nth-1 year (A)	Rs.Crs		364.31	384.01	404.77
Gn Factor (Y-O-Y) (B)	%		0.00%	0.00%	0.00%
CPI Inflation (C)	%		5.41%	5.41%	5.41%
Employee Cost for nth year D= A*(1+B)*(1+C)	Rs.Crs	**364.31**	**384.01**	**404.77**	**426.65**

Commission's analysis

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC MYT Regulations, 2021 stipulates the following:

"6. Values for Base Year

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

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

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

The Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21. In response to the Commission's query regarding submission of provisional accounts, the Petitioner vide its reply dated 28.02.2022 has submitted the provisional accounts for FY 2017-18, FY 2018-19 and FY 2019-20. The Commission has considered the provisional employee expenses from FY 2017-18, FY 2018-19 and FY 2019-20 as follows:

Table 27: Computation of Base Employee Expenses (INR Cr.)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Base Employee Expenses (including impact of 7th Pay Commission Arrears and excluding Terminal Benefits)	326.39	318.78	336.59
Less: Impact of 7th Pay Commission Arrears	30.53	3.96	2.82
Base Employee Expenses	**295.86**	**314.82**	**333.77**
Base Employee Expenses (Avg.)		**314.82**	

The Commission has arrived at the Base Year estimates i.e., for FY 2021-22 of INR 357.07 Cr. based on the approved avg. increase in CPI and the growth in no. of employees based on the manpower plan submitted by the Petitioner in the Business Plan Order dated 31st March 2022. The resultant employee expenses of the Base Year have been escalated by Growth Rate determined based on the manpower plan approved in the Business Plan Order, dated 31st March 2022 and the average CPI Inflation of the last three years to arrive upon the employee expenses of each year of the 3rd Control Period. The Terminal Benefits for each year of the 3rd MYT Control Period has been allowed separately based on the average of Terminal Benefits from FY 2017-18 to FY 2019-20 as per the provisional accounts. The same shall be allowed as per actuals during the time of truing up of the respective years. The CPI inflation has been computed as follows:

Table 28: CPI inflation computed for 3rd Control Period

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

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

Table 29: Employee Expense approved by the Commission for 3rd Control Period

Particular	Base Year	3rd MYT Control Period		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
Gn (Growth factor as per the Manpower Plan approved in the Business Plan Order)		-10.02%	-2.94%	-2.62%
CPI (3 previous year avg.) (in %)		6.00%	6.00%	6.00%
Base Employee Expenses (INR Cr)	**357.07**	**340.57**	**350.41**	**361.70**
Terminal Benefits		3.99	3.99	3.99
Total Employee Expenses		**344.56**	**354.39**	**365.69**

The Commission approves Employee Expenses of INR 344.56 Cr. for the FY 2022-23, INR 354.39 Cr. for the FY 2023-24 and INR 365.69 Cr. for the FY 2024-25. However, as the base expenses have been computed on the basis of provisional annual accounts, the trajectory shall be considered again for the 3rd MYT Control Period after the availability of audited annual accounts from FY 2017-18 to FY 2020-21.

5.7.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner submitted that A&G expenses for each year of the 3rd MYT Control Period has been computed based on the norms specified in the JERC MYT Regulations, 2021 i.e., A&Gn = (A&Gn-1) x (1+CPI inflation). The Petitioner has considered FY 2021-22 as the base year and has been projected based on the provisional A&G

expenses of FY 2017-18 to FY 2020-21 as the audited accounts are still under preparation. The average increase in Consumer Price Index (CPI) for the past years has been considered for projecting the A&G expenses and the working for the same is provided in the following tables:

Table 30: Calculation of CPI rate considered for A&G Expenses projection

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
CPI based on Industrial Workers, All India	284.42	299.92	323.50	338.69	351.12
YoY	3.08%	5.45%	7.53%	5.02%	3.67%
3 years average					**5.41%**

Table 31: Calculations of A&G Expenses for base year as submitted by the Petitioner (INR Crore)

S. No.	Particulars	A&G Expenses			3-Year Average	3-Year Average	FY 2021-22 (Base Year)
		FY 2018-19	FY 2019-20	FY 2020-21			
		(a)	(b)	(c)	(d) = [(a)+(b)+(c)]/3	CPI Inflation (%)	(e)
1	A&G Expenses	27.42	23.03	21.47	23.97	5.41%	26.63

The following table provides the A&G expenses projected for each year of the 3rd MYT Control Period along with various parameters considered.

Table 32: A&G Expense as submitted by the Petitioner for 3rd MYT Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
A&G Expenses of Previous Year (A&Gn-1)	26.63	28.07	29.59
CPI Inflation	5.41%	5.41%	5.41%
A&Gn Expenses	**28.07**	**29.59**	**31.19**

Commission's analysis

The Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21. In response to the Commission's query regarding submission of provisional accounts, the Petitioner vide its reply dated 28.02.2022 has submitted the provisional accounts for FY 2017-18, FY 2018-19 and FY 2019-20. The Commission has considered the provisional A&G expenses from FY 2017-18 to FY 2019-20 as follows:

Particulars	As per Prov. A&G Exp.
FY 2017-18	26.62
FY 2018-19	27.42
FY 2019-20	26.91
Avg. A&G expenses	**26.98**

This is escalated with the avg. CPI to arrive at the Base Year estimates. Thereafter, the Base Year estimate has been escalated by average CPI Inflation of the last three years to determine the A&G expense for each year of the Control Period. The A&G expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 33: A&G Expense approved by the Commission for 3rd Control Period

Particular	Base Year	ARR

	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
CPI (3 previous year avg.) (in %)		6.00%	6.00%	6.00%
Total A&G Expenses	**32.13**	**34.06**	**36.11**	**38.27**

The Commission approves the Administrative & General (A&G) expenses of INR 34.06 Cr. for the FY 2022-23, INR 36.11 Cr. for the FY 2023-24 and INR 38.27 Cr. for the FY 2024-25. However, as the base expenses have been computed on the basis of provisional annual accounts, the trajectory shall be considered again for the 3rd MYT Control Period after the availability of audited annual accounts from FY 2017-18 to FY 2020-21.

5.7.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The R&M expenses for each year of the Control Period has been projected based on the norms specified in the JERC MYT Regulations, 2021 i.e., R&Mn = K x GFAn-1 x (1+WPI inflation). The R&M expenses for the FY 2021-22 have been taken as base. The Petitioner has considered the provisional data for FY 2017-18 to FY 2020-21 to compute the base year FY 2021-22. The average increase in Wholesale Price Index (WPI) for the past years has been considered for projecting the R&M expenses and the working for the same is provided in the following tables:

Table 34: Calculation of WPI rate considered for R&M Expenses projection

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
WPI based on Office of Economic Advisor, GoI	114.88	119.79	121.80	123.38	134.99
YoY	2.92%	4.28%	1.68%	1.29%	9.41%
3 years average					**4.13%**

The 'K' factor as prescribed in the regulations has been calculated as ratio of R&M and average GFA of the last 3 years. The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2018-19, FY 2019-20 and FY 2020-21 and averaged for three years. The 'K' factor has been computed as follows:

Table 35: Calculation of 'K' as submitted by the Petitioner for 3rd Control Period

S.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA (INR Cr)	1,236.61	1,274.13	1,478.29
2	R&M Expenses (INR Cr)	39.46	43.21	59.62
3	K factor	3.19%	3.39%	4.03%
4	Avg of K factor			**3.54%**

R&M Expenses have been calculated based on the formula and methodology provided in the Regulations, R&Mn = K x GFAn-1 x (1+WPI inflation).

Table 36: R&M Expense submitted by the Petitioner for 3rd Control Period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
GFAn-1	1681.25	2091.64	3410.25
K-Factor	3.54%	3.54%	3.54%
WPI Inflation	4.13%	4.13%	4.13%
R&M Expenses	**61.94**	**77.07**	**125.65**

Commission's analysis

The Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21. In response to the Commission's query regarding submission of provisional accounts, the Petitioner vide its reply dated 28.02.2022 has submitted the provisional accounts for FY 2017-18, FY 2018-19 and FY 2019-20. The 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2017-18, FY 2018-19 and FY 2019-20 and averaged for three years. The 'K' factor has been computed as follows:

Table 37: 'K' computation by the Commission for 3rd MYT Control Period

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
R&M Expenses	28.01	32.37	29.19
Opening GFA (GFAn-1)	1216.92	1244.46	1286.47
K Factor (%)	2.30%	2.60%	2.27%
K Factor Approved by the Commission (Average of 3 years) (%)			**2.39%**

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for each year of the Control Period. The WPI Inflation has been computed as follows:

Table 38: CPI inflation computed for 3rd MYT Control Period

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

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

Table 39: R&M Expense approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening GFA (GFAn-1)	2103.98	3054.90	3778.49
K Factor (%)	2.39%	2.39%	2.39%
Avg. WPI Inflation (%)	2.42%	2.42%	2.42%
R&M Expenses = K x (GFA n-1) x (1+WPIinflation)	**55.33**	**82.28**	**104.23**

The Commission therefore approves the Repair & Maintenance (R&M) expenses of INR 55.33 Cr. for the FY 2022-23, INR 82.28 Cr. for the FY 2023-24 and INR 104.23 Cr. for the FY 2024-25. However, as the K factor has been computed on the basis of provisional annual accounts, the trajectory shall be considered again for the 3rd MYT Control Period after the availability of audited annual accounts from FY 2017-18 to FY 2020-21.

5.7.4. Summary of O&M Expenses

Petitioner's Submission

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

Table 40: Summary of O&M expenses submitted by the Petitioner for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Employee Expenses	384.01	404.77	426.65
Total A&G expenses	28.07	29.59	31.19

Total R&M Expenses	61.94	77.07	125.65
Total O&M expenses	**474.02**	**511.43**	**583.49**

Commission's analysis:

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

Table 41: Summary of O&M expenses approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Employee Expenses	344.56	354.39	365.69
Total A&G expenses	34.06	36.11	38.27
Total R&M Expenses	55.33	82.28	104.23
Total O&M expenses	**433.95**	**472.78**	**508.20**

5.8. Gross Fixed Assets (GFA) and Capitalization

Petitioner's Submission

The Petitioner submitted that they have considered the capital expenditure for the control period as per thie submission of capital expenditure plan in the Business Plan Petition. The details of the capital expenditure and capitalisation as proposed by the Petitioner for the 3rd Control Period is as under:

Table 42: Capital Expenditure submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

Sl. No.	Name of scheme	FY 2022-23	FY 2022-23	FY 2022-23
		Projected	Projected	Projected
Existing Schemes				
A1	Schedule Tribe Development Scheme (P)	55.86	28.83	-
A2	Infrastructure development through Electricity Duty (Plan)	107.78	39.01	-
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)	5.00	5.00	5.00
A4	Normal Development Schemes (Plan)	6.00	6.00	6.00
A5	System Improvement Schemes (Plan)	17.23	3.00	3.00
A6	Construction of staff quarters and office buildings (Plan)	21.00	26.00	15.00
A7	Strengthening of 220 KV Transmission Network	15.00	-	-
A8	Erection of 220/110/33/11 KV Sub-Station at Verna (New)	-	-	-
A9	Restructured Accelerated Power Development and Reforms Programme Part A	18.00	18.00	18.00
A10	Underground Cabling	141.50	57.00	-
A11	R-APDRP Part B / IPDS	15.00	-	-
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes	-	-	-
B1	Smart grid Development of existing network	-	-	-
B2	Sub-transmission and distribution improvement scheme	57.00	2.00	-
	Other Schemes			
	Public Lighting Scheme	0.10	-	-
	Sub- Total (existing schemes)	**459.47**	**184.84**	**47.00**
New Schemes				

Sl. No.	Name of scheme	FY 2022-23 Projected	FY 2022-23 Projected	FY 2022-23 Projected
A	Projects with Administrative approval	93.37	77.73	19.25
B	Projects Approved by EFC	414.72	103.68	-
C	Projects tendered (To start next year)	103.94	62.00	6.00
D	New EHV Works	90.86	163.34	270.00
E	REVAMPED Distribution Projects	255.00	450.00	225.00
F	Sub-Total New Schemes	957.90	856.75	520.25
G	DEPOSIT WORKS	35.37	-	-
	Sub- Total (New Schemes)	**993.27**	**856.75**	**520.25**
	GRAND TOTAL	**1,452.74**	**1,041.59**	**567.25**

Table 43: Capitalization submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

Sr. No.	Particulars	Projections Capitalisation			
		FY 2022-23	FY 2023-24	FY 2024-25	Total
A	Existing Schemes	574.07	253.94	67.00	**895.01**
B	New Schemes	744.54	739.91	850.25	**2,334.70**
C	Deposit Works	53.37	-	-	**53.37**
	Total	**1,371.98**	**993.85**	**917.25**	**3,283.08**

Commission's analysis:

The Commission considered the Capital expenditure and capitalization as approved by the Commission in the Business Plan Order dated 31st March 2022. The following table provides the summary of capital expenditure and capitalization now approved by the Commission (a more detailed description of the capital expenditure plan is given in the Business Plan section of this Order):

Table 44: Capital Expenditure & Capitalisation considered by the Commission for 3rd Control Period (INR Cr.)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Total Capital Expenditure	997.35	728.59	256.25
Total Capitalisation	950.92	723.59	406.25

5.9. Capital Structure

Petitioner's Submission

The Petitioner has proposed the following funding plan for the capital expenditure proposed for the 3rd control period:

Table 45: Funding Plan as proposed by the Petitioner for the 3rd Control period (INR Crore)

Sl. No.	Sources of Funds	FY 2022-23	FY 2023-24	FY 2024-25	Total
A	**Total Capital Expenditure (without deposit works)**	**1417.37**	**1041.59**	**567.25**	**3026.21**
B	Electricity Duty Fund	638.05	345.79	282.70	1266.54
C	Grant	165.50	270.25	135.25	571.00
D	**Total Capital Expenditure (excluding Electricity Duty Fund and Grant) (A-B-C)**	**613.82**	**425.55**	**149.30**	**1188.67**
E	Debt (%)	70%	70%	70%	70%
F	Equity (%)	30%	30%	30%	30%

Sl. No.	Sources of Funds	FY 2022-23	FY 2023-24	FY 2024-25	Total
G	**Normative Debt (D x E)**	**429.67**	**297.89**	**104.51**	**832.07**
H	**Equity (INR Cr) (D x F)**	**184.15**	**127.67**	**44.79**	**356.60**

The Petitioner has also provided the calculation of net GFA/Capitalisation after removal of grant and electricity duty portion, as depreciation, Interest on loan and return on equity is not allowed on the assets created through grants and electricity duty fund or any subsidy. The details are provided in the following table:

Table 46: Capital Structure submitted by the Petitioner for 3rd MYT Control Period (INR Crore)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Total Capitalisation	1318.61	993.85	917.25
2	Less: 60% and 75% Grant Component of APDRP Part-B / IPDS scheme	13.20	0.00	0.00
3	Less: Revamped Scheme (15% Grant Prepaid Meter; 100% for DBM, billing modules etc; 60% for SCADA)	113.50	379.25	329.25
4	Less: Schemes out of ED Fund	156.78	39.01	0.00
5	**Net Capitalisation excluding grant**	**1035.13**	**575.59**	**588.00**
6	Debt (%)	70%	70%	70%
7	Equity (%)	30%	30%	30%
8	**Normative Loan**	**724.59**	**402.91**	**411.60**
9	**Normative Equity**	**310.54**	**172.68**	**176.40**

Commission's analysis

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

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

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

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

27.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 24, after prudence check for determination of tariff:

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

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

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

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

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme,

shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

27.3 Any expenditure incurred or projected to be incurred on or after April 1, 2022, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in these Regulations"

The Petitioner has failed submit the Petition for True-up for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 based on annual audited accounts. The Commission has therefore considered actual trued up closing values of GFA, loan and equity approved for FY 2016-17 and the provisional/estimated figures of capitalisation and funding breakup in capitalisation schedule submitted by the Petitioner for FY 2017-18 (provisional), FY 2018-19 (provisional), FY 2019-20 (provisional), FY 2020-21 (provisional) and FY 2021-22 (estimated) to arrive at the opening values of GFA, loan and equity for FY 2022-23. The provisional values considered shall be trued up based on audited annual accounts during the True-up of respective years. The reconciliation of Capital Structure, GFA, normative loan and normative equity from FY 2017-18 to FY 2021-22 and that approved by the Commission for the 3rd MYT Control Period are shown in the following tables:

Table 47: Capital Structure considered by the Commission (INR Cr.)

S. No	Particulars	Reconciliation based on provisional information submitted by the Petitioner					Approved for 3rd MYT Control Period		
		FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1	**Total Capitalisation**	**27.54**	**42.01**	**204.16**	**202.96**	**410.39**	**950.92**	**723.59**	**406.25**
2	Less Capitalisation through Grant & Consumer Contribution	5.61	18.72	185.80	151.05	216.90	719.38	473.35	237.95
	Electricity Duty Fund	5.57	18.48	158.08	130.31	159.07	571.31	218.10	12.70
	Grant & Consumer Contribution	0.04	0.24	27.72	20.74	57.83	148.07	255.25	225.25
3	**Net Capitalisation excluding Electricity Duty Fund & Govt. Grants**	**21.93**	**23.29**	**18.36**	**51.91**	**193.49**	**231.55**	**250.24**	**168.30**
4	Debt (%)	70%	70%	70%	70%	70%	70%	70%	70%
5	Equity (%)	30%	30%	30%	30%	30%	30%	30%	30%
6	**Normative Loan**	**15.35**	**16.30**	**12.85**	**36.34**	**135.44**	**162.08**	**175.17**	**117.81**
7	**Normative Equity**	**6.58**	**6.99**	**5.51**	**15.57**	**58.05**	**69.46**	**75.07**	**50.49**

Table 48: GFA (including GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for 3rd MYT Control Period (INR Cr.)

Sl. No.	Particulars	Reconciliation based on provisional information submitted by the Petitioner					Approved for 3rd MYT Control Period		
		FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1	Opening Gross Fixed Assets	1,216.92	1,244.46	1,286.47	1,490.63	1,693.59	2,103.98	3,054.90	3,778.49

Sl. No.	Particulars	Reconciliation based on provisional information submitted by the Petitioner					Approved for 3rd MYT Control Period		
		FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
2	Addition During the FY	27.54	42.01	204.16	202.96	410.39	950.92	723.59	406.25
3	Adjustment/Retirement During the FY	-	-	-	-	-	-	-	-
4	Closing Gross Fixed Assets	1,244.46	1,286.47	1,490.63	1,693.59	2,103.98	3,054.90	3,778.49	4,184.74

Table 49: GFA (excluding GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for 3rd MYT Control Period (INR Cr.)

Sl. No.	Particulars	Reconciliation based on provisional information submitted by the Petitioner					Approved for 3rd MYT Control Period		
		FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25
1	Opening Gross Fixed Assets	952.90	974.83	998.12	1,016.48	1,068.40	1,261.89	1,493.43	1,743.67
2	Addition During the FY	21.93	23.29	18.36	51.91	193.49	231.55	250.24	168.30
3	Adjustment/Retirement During the FY	-	-	-	-	-	-	-	-
4	Closing Gross Fixed Assets	974.83	998.12	1,016.48	1,068.40	1,261.89	1,493.43	1,743.67	1,911.97

Table 50: Reconciliation of normative loan up to FY 2021-22 based on provisional information submitted by the Petitioner (INR Cr.)

S. No	Particulars	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
1	Opening Normative Loan	242.21	202.14	161.71	136.07	132.58
2	Add: Normative Loan During the year	15.35	16.30	12.85	36.34	135.44
3	Less: Normative Repayment	55.43	56.73	38.49	39.83	44.52
4	Closing Normative Loan	202.14	161.71	136.07	132.58	223.50

Table 51: Reconciliation of normative equity up to FY 2021-22 based on provisional information submitted by the Petitioner (INR Cr.)

S. No	Particulars	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
1	Opening Equity	286.46	293.04	300.03	305.54	321.11
2	Add: Equity During the year	6.58	6.99	5.51	15.57	58.05
3	Closing Equity	293.04	300.03	305.54	321.11	379.16

5.10. Depreciation

Petitioner's Submission

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

The Petitioner submitted that total depreciation is calculated asset block wise on the total GFA. However, since depreciation on assets created through grants, electricity duty fund or subsidies are not allowed as per Regulations. Hence, Depreciation for the GFA excluding grant and electricity duty fund arrived in the proportion of total GFA and GFA excluding grant and electricity duty fund.

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

Table 52: Depreciation submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc)	1357.51	2392.63	2968.22
2	Add: Gross Asset Addition	1318.61	993.85	917.25
3	Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution	283.48	418.26	329.25
4	Value of Asset eligible for depreciation	1035.13	575.59	588.00
5	Add: Addition During the Year	1035.13	575.59	588.00
6	Less: Decapitalisation	-	-	-
7	Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	2392.63	2968.22	3556.22
8	Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	1875.07	2680.43	3262.22
9	Weighted Average Rate of Depreciation (%)	4.56%	4.56%	4.56%
10	**Depreciation for the year**	**85.51**	**122.24**	**148.77**

Commission's analysis

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

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

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

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

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

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

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

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

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

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

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

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

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

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure,

subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

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

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

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

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

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

Table 53: Asset-wise depreciation rate considered by the Commission for weighted average rate for 3rd MYT Control Period (%)

Description of Assets	Rate of Depreciation
Land & Land Rights	0.00%
Buildings	1.80%
Plant & Machinery	3.60%
Transformer	3.60%
Lines & Cables (HT & LT)	3.60%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Office Equipment	6.00%
IT Equipment	15.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%

The opening GFA of the FY 2022-23 is considered as discussed in section 5.9 of this Order. As discussed in the preceding section, GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution have been excluded for the computation of Depreciation. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved during each year. The GFA of assets that have completed 90% depreciation but still included in the GFA have not been excluded for the computation of Depreciation due to unavailability of requisite data. Accordingly, the Commission shall consider the same during the True-up of the respective years.

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

Table 54: Depreciation considered by the Commission for 3rd MYT Control Period (INR Cr.)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Gross Fixed Assets	1261.89	1493.43	1743.67
Addition During the FY	231.55	250.24	168.30
Adjustment/Retirement during the FY	0.00	0.00	0.00
Closing Gross Fixed Assets	1493.43	1743.67	1911.97
Average Gross Fixed Assets	1377.66	1618.55	1827.82
Weighted Avg. rate of Depreciation (%)	3.82%	3.82%	3.82%
Depreciation	**52.64**	**61.84**	**69.84**

The Commission approves a depreciation of INR 52.64 Cr. for the FY 2022-23, INR 61.84 Cr. for the FY 2023-24 and INR 69.84 Cr. for the FY 2024-25.

5.11. Interest on Loan

Petitioner's Submission

Petitioner has considered the normative loan addition during the year. Repayment of the loan has been considered equivalent to the depreciation for the respective years in line with the JERC MYT Regulations, 2021. The interest rate has been calculated based on the one (1) Year State Bank of India (SBI) MCLR as on 1st April

plus 100 basis point to project the interest on normative loans for the Control Period. Other finance charges incurred by the Petitioner shall be claimed based on actuals during true-up for the respective years.

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

Table 55: Interest on Normative Loan submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

Sr. No.	Particulars	Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Normative Loan	241.74	880.82	1161.49
2	Add: Normative Loan during the Year/GFA during the year	724.59	402.91	411.60
3	Less: Normative Repayment	85.51	122.24	148.77
4	**Closing Normative Loan**	**880.82**	**1161.49**	**1424.32**
4	Average Normative Loan	561.28	1021.15	1292.91
5	Rate of Interest (@SBI 1 Year MCLR rate+100 Basis Points)	8.00%	8.00%	8.00%
6	**Interest on Normative Loan**	**44.90**	**81.69**	**103.43**
7	Other Finance Charges	-	-	-
8	**Total Interest & Finance Charges**	**44.90**	**81.69**	**103.43**

Commission's analysis:

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

"29.1 The loans arrived at in the manner indicated in Regulation 27 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

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

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

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

29.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 31.

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

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

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

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

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

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

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

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

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

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

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

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

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

As the Petitioner only has normative loan and no actual loan i.e., no fixed assets in operation which are funded through loans, the Commission has considered the SBI 1 Year MCLR rate as on 1st April 2021, plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2021.

The Interest on Loan has been calculated on the average loan during the year with the opening loan for the first year of the 3rd MYT Control Period considered as discussed in section 5.9 of this Order. Further, the normative loan addition during each year of the control period has been considered as per the capital structure approved in section 5.9 of this Order.

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

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

Table 56: Interest on Loan considered by the Commission for 3rd MYT Control Period (INR Cr.)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Normative Loan	223.50	332.94	446.27
Add: Normative Loan During the year	162.08	175.17	117.81
Less: Normative Repayment= Depreciation	52.64	61.84	69.84
Closing Normative Loan	332.94	446.27	494.24
Average Normative Loan	278.22	389.61	470.25
Rate of Interest (%)	8.00%	8.00%	8.00%
Interest on Loan	**22.26**	**31.17**	**37.62**

The Commission approves Interest on Loan as INR 22.26 Cr. for the FY 2022-23, INR 31.17 Cr. for the FY 2023-24 and INR 37.62 Cr. for the FY 2024-25.

5.12. Return on Equity (RoE)

Petitioner's Submission

The Petitioner has segregated the proposed average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. Further, the opening equity for FY 2022-23 is taken as per closing normative equity for FY 2021-22.

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

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

Table 57: Return on Equity submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

S. No	Particulars	Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Balance of Equity	393.53	704.06	876.74
2	Equity Addition during year (30% of Capitalization)	310.54	172.68	176.40
3	Closing Balance of Equity	704.06	876.74	1053.14
4	Average Equity Amount	548.80	790.40	964.94
5	Average Equity-Wires Business (90%)	493.92	711.36	868.45
6	Average Equity -Retail Supply Business (10%)	54.88	79.04	96.49
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**	**76.56**	**110.26**	**134.31**
10	**Return on Equity for Retail Supply Business**	**8.78**	**12.65**	**15.44**
11	**Total Return on Equity**	**85.34**	**122.91**	**150.05**

Commission's analysis:

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

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

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

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

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

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

The Commission has considered a post-tax rate of 15.50% for the Distribution Wires Business and a post-tax rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the capital structure as discussed in section 5.9 of this Order. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent Regulations during the True-up of the respective years. The following table provides the total return on equity approved for the 3rd MYT Control Period.

Table 58: Return on Equity considered by the Commission for 3rd Control Period (INR Cr.)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Equity Amount	379.16	448.62	523.70
Equity Addition during year	69.46	75.07	50.49
Closing Equity Amount	**448.62**	**523.70**	**574.18**
Average Equity Amount	413.89	486.16	548.94
Average Equity (Wires Business)	372.50	437.54	494.05

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Average Equity (Retail Supply Business)	41.39	48.62	54.89
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	57.74	67.82	76.58
Return on Equity for Retail Supply Business	6.62	7.78	8.78
Total Return on Equity	**64.36**	**75.60**	**85.36**

The Commission approves Return on Equity of INR 64.36 Cr. for the FY 2022-23, INR 75.60 Cr. for the FY 2023-24 and INR 85.36 Cr. for the FY 2024-25.

5.13. Interest on Security Deposits

Petitioner's Submission

The opening security deposit is considered from the closing balance of deposit arrived for FY 2021-22. Addition of consumer security deposit projected as per new consumer expected to connect during MYT control period. The interest rate considered is 4.25% based on the RBI Bank rate applicable on the 1st April of the financial year in which tariff Petition is being filed.

Table 59: Interest on Security Deposit submitted by the Petitioner for the 3rd MYT Control Period (INR Cr)

No.	Particulars	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Opening Security Deposit	**77.02**	**92.31**	**108.09**
2	Add: Deposits during the Year	15.65	16.16	16.69
3	Less: Deposits refunded	0.37	0.38	0.39
4	Less: Deposits in form of BG/FDR	0.00	0.00	0.00
5	**Closing Security Deposit**	**92.31**	**108.09**	**124.40**
6	**Average Security Deposit**	**84.67**	**100.20**	**116.24**
7	**Rate of Interest (%)**	**4.25%**	**4.25%**	**4.25%**
8	**Interest on Security Deposit**	**3.60**	**4.26**	**4.94**
9	**Interest on Security Deposit to be paid and claimed in ARR**	**5.58**	**4.26**	**4.94**

Commission's analysis:

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

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

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

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, based on the average of the opening and closing consumer security deposits during the year. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. Net additions during the year have been considered for each year of the Control Period based on that considered by the Petitioner.

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

Table 60: Interest on Consumer security considered by the Commission for 3rd Control Period (INR Cr.)

Particular	FY 2022-23	FY 2023-24	FY 2024-25
Opening Security Deposit	77.02	92.31	108.09
Add: Deposits During the year	15.65	16.16	16.69
Less: Deposits refunded	0.37	0.38	0.39
Closing Security Deposit	92.31	108.09	124.40
Average Security Deposit	84.67	100.20	116.24
RBI Bank Rate (%)	4.25%	4.25%	4.25%
Interest on Security Deposit on normative basis	**3.60**	**4.26**	**4.94**

The Commission approves Interest on Security Deposit as INR 3.60 Cr. for the FY 2022-23, INR 4.26 Cr. for the FY 2023-24 and INR. 4.94 Cr. for the FY 2024-25.

5.14. Interest on Working Capital

Petitioner's Submission

The interest on working capital has been calculated based on the normative principles outlined in the MYT Regulations, 2021.

The working capital requirement for the Control Period has been computed considering the following

- Receivable of two months of billing
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

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

Table 61: Interest on Working Capital submitted by the Petitioner for the 3rd MYT Control Period (In INR Cr)

Sr. No.	Particulars	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
1	O&M Expenses for 1 month	39.50	42.62	48.62
2	Maintenance Spares (@ 40% of R&M Expenses for one (1) month)	2.06	2.57	4.19
3	Receivables equivalent to two (2) months	333.51	342.96	352.72

Sr. No.	Particulars	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
4	Less: Amount, if any, held as security deposits	84.67	100.20	116.24
5	Total Working Capital	290.41	287.94	289.29
6	Rate of Interest	9.0%	9.0%	9.0%
7	Interest on Working Capital	**26.14**	**25.91**	**26.04**

Commission's analysis:

Regulation 64 of the JERC MYT Regulation, 2021 states the following:

"64.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Retail Supply Business for the Financial Year, computed as follows:

a) O&M Expenses for one (1) month; plus

b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus

c) Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff;

Less

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

e) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from Consumers except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be recalculated on the basis of the values of components of working capital approved by the Commission in the truing up."

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

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

Table 62: Interest on working capital considered by the Commission for 3rd MYT Control Period (INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
O&M Expense for 1 month	36.16	39.40	42.35
Maintenance spares at 40% of R&M expenses for one (1) month;	1.84	2.74	3.47
Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff	401.36	423.12	449.88
Less: Power Purchase cost for one (1) month	153.29	158.40	166.71
Less: Amount held as security deposits	84.67	100.20	116.24
Net Working Capital	**201.41**	**206.66**	**212.75**
Rate of Interest (%)	9.00%	9.00%	9.00%

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Interest on Working Capital	**18.13**	**18.60**	**19.15**

5.15. Income Tax

Petitioner's Submission

The Petitioner has not made any submission in this regard.

Commission's analysis:

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

"33. Tax on Income

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

33.2 The Commission in its MYT Order shall provisionally approve Income Tax payable for each Year of the Control Period, if any, based on the actual income tax paid, including cess and surcharge on the same, if any, as per latest audited accounts available for the Distribution Licensee, subject to prudence check.

33.3 Variation between Income Tax actually paid, including cess and surcharge on the same, if any, and approved, if any, on the income stream of the Licensed business of the Distribution Licensees shall be reimbursed to/recovered from the Distribution Licensees, based on the documentary evidence submitted at the time of truing up of each Year of the Control Period, subject to prudence check.

33.4 Under-recovery or over-recovery of any amount from the Consumers on account of such tax having been passed on to them shall be adjusted every Year on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Distribution Licensee may include this variation in its truing up Petition:

Provided that tax on any income stream other than the core business shall not be a pass-through component in tariff and tax on such other income shall be borne by the Distribution Licensee."

Since the Petitioner has paid no Income tax in the previous years, no income tax liability is computed for the 3rd MYT Control Period and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

5.16. Provision for Bad & Doubtful Debts

Petitioner's Submission

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

Commission's analysis

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

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

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

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

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

The Commission also has not considered any Provision for Bad & Doubtful Debts for the 3rd MYT Control Period. The same shall be accounted for as per actuals during the True-up of respective years.

5.17. Non-Tariff Income (NTI)

Petitioner's Submission

The NTI proposed for each year of the 3rd MYT Control Period has been shown in the following table:

Table 63: Non-Tariff Income claimed by the Petitioner for the 3rd MYT Control Period (INR Cr)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Total Non-tariff income	20.78	29.20	30.33

Commission's analysis:

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."

The Commission considers the same NTI as approved by the Commission in the True up of FY 2016-17. The same shall be Trued-up on actual basis. The NTI approved for each year of the 3rd MYT Control Period has been shown in the following table:

Table 64: Non-Tariff Income considered by the Commission for 3rd MYT Control Period (INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Non-Tariff Income	**26.32**	**26.32**	**26.32**

5.18. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement for each year of the 3rd MYT Control Period as shown in the following table:

Table 65: ARR submitted by the Petitioner for 3rd MYT Control Period (INR Cr.)

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Power Purchase Cost	1,660.44	1,732.15	1,781.47
2	Operation & Maintenance Expenses	474.02	511.43	583.49
3	Depreciation	85.51	122.24	148.77
4	Interest and Finance charges	44.90	81.69	103.43
5	Interest on Working Capital	26.14	25.91	26.04
6	Interest on Security Deposit	5.58	4.26	4.94
7	Return on Equity	85.34	122.91	150.05
8	**Total Revenue Requirement**	**2,381.93**	**2,600.59**	**2,798.19**
9	Less: Non-Tariff Income	20.78	29.20	30.33
10	**Net Revenue Requirement**	**2,361.15**	**2,571.38**	**2,767.86**

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 66: ARR approved by the Commission for the 3rd MYT Control Period (INR Cr.)

Particulars	FY 2022-23		FY 2023-24		FY 2024-25	
	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR	Claimed by the Petitioner	Approved in ARR
Power Purchase Cost	1,660.44	1,839.53	1,732.15	1,900.80	1,781.47	2,000.48
Operation & Maintenance Expenses	474.02	433.95	511.43	472.78	583.49	508.20
Depreciation	85.51	52.64	122.24	61.84	148.77	69.84
Interest and Finance charges	44.90	22.26	81.69	31.17	103.43	37.62
Interest on Working Capital	26.14	18.13	25.91	18.60	26.04	19.15
Interest on Security Deposit	5.58	3.60	4.26	4.26	4.94	4.94
Return on Equity	85.34	64.36	122.91	75.60	150.05	85.36
Total Revenue Requirement	**2,381.93**	**2,434.47**	**2,600.59**	**2,565.05**	**2,798.19**	**2,725.59**
Less: Non-Tariff Income	20.78	26.32	29.20	26.32	30.33	26.32
Net Revenue Requirement	**2,361.15**	**2,408.15**	**2,571.38**	**2,538.73**	**2,767.86**	**2,699.27**

5.19. Revenue at existing Retail Tariff

Petitioner's Submission

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

Table 67: Revenue at existing tariff submitted by the Petitioner for FY 2022-23 (INR Cr.)

Sl. No.	Category	Sales in MU	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total
1	**Domestic**					
	11 kV Voltage Level					
	Tariff HTD/Domestic	0.43	0.06		0.17	**0.22**
	Tariff-HTTS/Temporary Supply (HT Domestic)	3.51	1.12		2.15	**3.27**
	LT Voltage Level					
	Tariff LTD/Domestic and Non-Commercial	**1325.53**	**25.15**	**0.00**	**329.27**	**354.42**
	0-100 units	508.38	6.56		76.26	
	101-200 units	320.26	4.43		72.06	
	201 to 300 units	174.32	6.92		49.68	
	301 to 400 units	96.92	3.32		35.37	
	Above 400 units	225.65	3.92		95.90	
	Tariff LTD/Low Income Group	**1.27**	**0.05**		**-**	**0.05**
	Tariff-LT/Temporary Domestic	**0.69**	**0.09**		**0.15**	**0.20**
	0-100 Units	0.69	0.05		0.15	0.20
	101 to 200 Units	0.00	0.05		-	
	201 to 300 Units	0.00	0.00		-	
	301 to 400 Units	0.00	0.00		-	
	Above 400 Units	0.00	0.00		-	

Sl. No.	Category	Sales in MU	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total
	Sub-Total	**1331.43**	**26.47**	**0.00**	**331.75**	**358.17**
2	**Commercial**					
	33 kV & 11 kV Voltage Level					
	Tariff HT-Commercial	116.74	32.58		73.32	**105.91**
	33 kV Voltage Level					
	Tariff HT-Commercial					
	11 kV Voltage Level					
	Tariff HT-Commercial					
	Tariff-HTTS/Temporary Supply (HT Commercial)					
	LT Voltage Level					
	Tariff-LTC/Commercial	**436.59**	**14.32**		**209.81**	**224.13**
	0-20 KW/Commercial Consumers					
	1-100 Units	72.87	3.82		25.87	29.69
	101-200 units	42.59	0.84		18.53	19.37
	201-400 Units	50.72	0.68		24.60	25.28
	Above 400 units	159.46	0.70		83.72	84.42
	>20-90Kw Commercial Consumers					
	1-100 Units	3.52	1.11		1.25	2.36
	101-200 units	3.34	0.37		1.45	1.82
	201-400 Units	6.29	0.68		3.05	3.73
	Above 400 units	97.80	6.10		51.35	57.45
	Tariff-LT/Temporary Commercial	9.08	0.15		4.84	4.99
	0-20 KW/Commercial Consumers					
	0-100 Units	9.08	0.15		4.84	4.99
	101 - 200 Units		0.00		-	0.00
	201 - 400 Units		0.00		-	0.00
	Above 400 Units		0.00		-	0.00
	>20-90Kw and above Commercial Consumers					
	0 - 100 units		0.00		-	0.00
	101 - 200 units		0.00		-	0.00
	201-400 units		0.00		-	0.00
	Above 400 units		0.00		-	0.00
	Sub-Total	**562.42**	**47.06**		**287.97**	**335.02**
3	**Public Lighting**					
	LT Voltage Level					
	Tariff-LTPL/Public Lighting	50	1.02		21.17	22.20
4	**Agricultural Pumpsets**					
	HT Voltage Level (33 kV & 11 kV)					
	HT-Agriculture					
	Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)	5	0.45		1.51	**1.97**
	Tariff-HTAG/Agriculture (Allied Activities) (B)	9	0.18		1.86	**2.04**
	LT Voltage Level					
	LT-Agriculture					
	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	17	1.05		2.59	3.64
	Tariff-LTAG/Agriculture Allied (B)	1	0.07		0.17	0.24
	Sub-Total	**32.90**	**1.76**		**6.13**	**7.89**
5	**Small Power**					

Sl. No.	Category	Sales in MU	Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total
	LT Voltage Level					
	LTI-Industry	81	7		31	38
	0-500 Units	17	3.24		5.62	8.86
	Above 500 units	64	3.76		25.43	29.18
	Tariff-LTP/Mixed (Hotel Industries)	4	0.14		2.22	2.35
	Sub-Total	**85.38**	**7.13**		**33.27**	**40.40**
6	**Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV**					
	33 kV / 11 kV & 110 kV Voltage Level					
	Tariff HTI/Industrial	1483	171		845	1016.35
	33 kV/11kV	1228	148.91		706.51	855.42
	110kV	255	22.38		138.54	160.93
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	507	27.98		279.96	307.94
	H.T. MES/Defence Establishments	28	2.09		15.47	17.56
	Sub-Total	**2018.04**	**201.36**		**1140.48**	**1341.84**
7	**Bulk Supply**					
	33 kV Voltage Level					
	Single Point Supply	5.55	1.07	0.00	2.67	3.74
	Residential Complexes		0.00		0.00	0.00
	Commercial Complexes	5.55	1.07		2.67	3.74
	Industrial Complexes		0.00		0.00	0.00
	Sub-Total	5.55	1.07	0.00	2.67	3.74
8	**Other Categories**					
	33 kV Voltage Level					
	Electric Vehicle Charging Station					
	11 kV Voltage Level					
	Tariff-LT Hoarding and Sign Board	0	0.04		0.16	0.21
	Electric Vehicle Charging Station					
	Grand Total	**4086.29**	**285.91**	**0.00**	**1823.60**	**2109.47**

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has considered the energy sales, connected load and number of consumers approved by the Commission in the Business Plan Order dated 31st March 2022 for projecting the revenue at existing tariff. The Commission has considered suitable assumptions wherever necessary. The revenue at existing tariff as computed by the Commission for the FY 2022-23 has been shown in the following table:

Table 68: Revenue at existing tariff approved by the Commission for FY 2022-23 (INR Cr.)

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
1	**DOMESTIC**	**1386.33**	**26.09**	**342.15**	**368.24**
(i)	LT-D Domestic	**1384.58**	**25.98**	**342.00**	**367.98**
	0-100 units	544.79	7.20	81.72	88.91
	101-200 units	331.54	5.25	74.60	79.84
	201-300 units	175.22	6.93	49.94	56.87

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
	301-400 units	96.50	3.11	35.22	38.33
	Above 400 units	236.53	3.50	100.53	104.02
(ii)	Low Income Group	1.37	0.08	-	0.08
(iii)	HT-D Domestic	0.38	0.03	0.15	0.18
2	**COMMERCIAL**	**607.53**	**43.18**	**305.26**	**348.43**
(i)	LT-C Commercial	**472.52**	**20.08**	**228.11**	**248.19**
	0-100 units	77.99	3.61	27.69	31.30
	101-200 units	47.80	0.97	20.79	21.76
	201-400 units	60.12	3.14	29.16	32.30
	Above 400 units	286.61	12.36	150.47	162.83
(ii)	HT-C Commercial	135.02	23.10	77.15	100.25
3	**INDUSTRIAL**	**2139.85**	**189.41**	**1035.85**	**1225.26**
(i)	LT-I Industrial	**80.91**	**7.05**	**31.07**	**38.12**
	0-500 units	16.18	3.40	5.50	8.90
	Above 500 units	64.73	3.66	25.57	29.22
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.48	0.14	2.22	2.36
(iii)	High Tension-I/HT-I	1499.12	157.91	734.68	892.58
	Connected at 11/33 kV	1247.94	135.20	616.15	751.36
	Connected at 110 kV	251.18	22.70	118.52	141.22
(iv)	High Tension-Ferro/SM/PI/SR	555.35	24.31	267.89	292.20
4	**AGRICULTURE**	**33.62**	**1.71**	**5.88**	**7.59**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	17.29	1.09	2.59	3.69
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.79	0.05	0.14	0.19
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.89	0.44	1.03	1.47
(iv)	High Tension-AG/HT-AG (Allied Activities)	10.65	0.12	2.12	2.24
5	**Military Engineering Services/defense Establishments**	**26.96**	**1.73**	14.54	**16.27**
6	**PUBLIC LIGHTING**	**29.61**	**0.23**	**12.44**	**12.67**
7	**HOARDINGS/SIGNBOARDS**	**0.16**	**0.04**	**0.16**	**0.20**
8	**TEMPORARY**	**12.10**	**0.00**	**10.19**	**10.19**
(i)	**LT**	**9.77**	**0.00**	**8.09**	**8.09**
	LT Domestic	0.69	0.00	0.27	0.27
	LT Commercial	9.08	0.00	7.81	7.81
(ii)	HT	**2.33**	0.00	2.11	2.11
9	**Single Point Supply**	**5.69**	**0.91**	**2.76**	**3.67**
(i)	Residential Complexes	0.00	0.00	0.00	0.00
(ii)	Commercial Complexes	5.69	0.91	2.76	3.67
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00
	TOTAL	**4241.87**	**263.30**	**1729.23**	**1992.53**

The Commission has determined revenue from sale of power at existing tariff as INR 1992.53 Cr. in the FY 2022-23.

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

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 251.69 Cr for the FY 2022-23.

Commission's analysis

Based on the approved ARR and existing retail tariff, the following Revenue Gap/Surplus is arrived at for the FY 2021-22:

Table 69: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2022-23 (In INR Cr)

S. No	Particulars	Petitioners' Submission	Now Approved
1	Net Revenue Requirement	2,361.15	2,408.15
2	Revenue from Retail Sales at Existing Tariff	2,109.47	1,992.53
	Net Gap /(Surplus)	**251.69**	**415.62**

The standalone gap at existing retail tariff is INR 415.62 Cr. for FY 2022-23. This estimated gap is considered while determining the retail tariff for FY 2022-23, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

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

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. In this Tariff Order, the Commission has continued with its endeavor to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also mandates the Commission to strike a fine balance between the interests of various stakeholders including Utilities and consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

6.2. Applicable Regulations

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

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

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

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

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

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

*"**68. Determination of Tariff***

68.1 The Commission may categorize Consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required and any other factor as considered appropriate by the Commission.

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

68.3 The Commission shall endeavour to reduce gradually the cross-subsidy between Consumer categories with respect to the cost of supply in accordance with the provisions of the Act.

68.4 The tariff proposal by Licensee and the tariff determination by the Commission shall be based on the following principles:

(a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.

(b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;

(c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of supply for respective categories of Consumers;

(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;

(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers."

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

Petitioner's Submission

The Petitioner has proposed a standalone revenue gap at existing tariff for FY 2022-23 as shown in the table below:

Table 70: Standalone Revenue Gap/ (Surplus) submitted by Petitioner for FY 2022-23 (In Rs Cr)

Particulars	FY 2022-23
Net Revenue Requirement	2,361.15
Revenue from Retail Sales at Existing Tariff	2,109.47
Standalone Gap /(Surplus) for the year	**251.69**

The Petitioner has further submitted that the Council of Ministers in the meeting held on 25th August 2021 resolved to keep the Tariff Order for FY 2021-22 in abeyance for the period from 1st April, 2021 till 31st March, 2022 (12 months) except for levy of Tariff of Rs.3.50/Unit as per Tariff Order for FY 2021-22 to Consumer Category "Electric Vehicle Charging Station" and implementation of kVAh based tariff for HT/EHT Categories and to grant of subsidy to all categories of Consumers to nullify the impact of hike in Tariff Order for FY 2021-22 issued vide Petition No: 39/2020 by the Commission. The Petitioner has estimated a reduction of INR 108.44 Cr. from the projected revenue in FY 2022-23 as follows:

Table 71: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner for FY 2022-23 (In Rs Cr)

Particulars	FY 2022-23
Net ARR	2,361.15
Revenue from Existing Tariff	2,109.47
Revenue Gap for the Year (at existing tariff)	251.69
Opening Balance of Gap	**0.00**
Total Cumulative Gap for years	251.69
Less: Budgetary Support commitment provided	-
Balance Gap to be recovered	**0.00**
Proposed Gap Recovery	**251.69**
Proposed Tariff Reduction from last year	**-108.44**
Budgetary Support required from Government of Goa to meet balance Revenue Gap	**360.13**

Commission's analysis

The Commission takes a stern view of the fact that the tariff schedule prescribed by the Commission in the Tariff Order dated 30.03.2021 has not been implemented by the Petitioner. The Commission directs the Petitioner to implement the Tariff Schedule as approved in this Order from 1st April 2022.

The Commission in the True-up of FY 2016-17 approved the revenue gap/surplus as nil in the Tariff Order dated 30.03.2021. Further, the Commission has not approved any revenue gap for the FY 2017-18 to FY 2020-21 due to non–availability of audited annual accounts and for FY 2021-22 due to unreliable data. The Commission has determined the tariff for FY 2022-23 as part of this Order. Therefore, the Commission approves the standalone revenue gap for FY 2022-23 as follows:

Table 72: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2022-23 (In INR Cr)

S. No	Particulars	Now Approved
1	Net Revenue Requirement	2,408.15
2	Revenue from Retail Sales at Existing Tariff	1,992.53
	Net Gap /(Surplus)	**415.62**

The Commission has computed a standalone revenue gap of INR 415.62 Cr in the FY 2022-23 at the existing tariff.

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

The revenue gap of INR 415.62 Cr. typically signifies that the revenue from the existing tariff is not commensurate with the costs incurred by the Petitioner. However, it is observed that due to unavailability of audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21, it is difficult to ascertain the accuracy of the data in respect of capital expenditure, capitalisation, power purchase, energy sales etc. during this period thereby leading to unreliable estimates of ARR parameters for FY 2022-23. Further, the Commission also does not have verified figures for revenue from sale of power during this period. Therefore, the Commission does not have an accurate picture of standalone revenue gap at existing tariff for FY 2022-23. The Commission has accordingly dealt with this issue in the following section.

6.4.1. Tariff Design

Petitioner's Submission

The Petitioner has submitted that the Council of Ministers in the meeting held on 25th August 2021 resolved to keep the Tariff Order for FY 2021-22 in abeyance for the period from 1st April, 2021 till 31st March, 2022 (12 months) except for levy of Tariff of Rs.3.50/Unit as per Tariff Order for FY 2021-22 to Consumer Category "Electric Vehicle Charging Station" and implementation of kVAh based tariff for HT/EHT Categories and to grant of subsidy to all categories of Consumers to nullify the impact of hike in Tariff Order for FY 2021-22 issued vide Petition No: 39/2020 by the Commission. The Petitioner has proposed the tariff schedule as follows:

Table 73: Tariff Schedule proposed by the Petitioner for FY 2022-23

S. No.	Category	Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	
			Units	Rate
1	**Domestic**			
A	**Low Tension-D/LT-D**			
	0-100 units	**Single Phase** INR 25/Con/Month **Three Phase** INR 60/Con/Month	Rs/kWh	1.40
	101-200 units		Rs/kWh	2.10
	201 to 300 units		Rs/kWh	2.65
	301 to 400 units		Rs/kWh	3.45
	Above 400 units		Rs/kWh	4.00
B	**Low Tension-LIG/LT-LIG**			
	All Units	INR 40/Con/Month	Rs/kWh	-
C	**High Tension-D/HT-D**			
	All Units	INR 100/kVA/Month	Rs/kVAh	3.45
2	**Commercial**			
A	**Low Tension-C/LT-C**			

S. No.	Category	Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	
			Units	Rate
	0-100 units	**For consumers with Load upto 20 kW** INR 50/Con/Month **For consumers with Load more than 20 kW and upto 90 kW** INR 55/kW/Month	Rs/kWh	3.40
	101-200 units		Rs/kWh	4.10
	201 units- 400 units		Rs/kWh	4.60
	Above 400 units		Rs/kWh	5.00
B	**High Tension-C/HT-C**			
	All Units	INR 250/kVA/month	Rs/kVAh	5.50
3	**Industrial**			
A	**Low Tension-I/LT-I**			
	0-500 units	INR 35/HP/Month	Rs/kWh	3.30
	Above 500 units	INR 35/HP/Month	Rs/kWh	3.80
B	**Low Tension-Mixed/LT-P (Hotel Industries)**			
	All Units	INR 40/kW/Month	Rs/kWh	4.70
C	**High Tension-I/HT-I**			
	Connected at 11/33 kV	INR 250/kVA/Month	Rs/kVAh	4.50
	Connected at 110 kV	INR 250/kVA/Month	Rs/kVAh	4.40
D	**High Tension- Ferro/SM/ PI/ SR**			
	All Units	INR 250/kVA/Month	Rs/kVAh	4.50
4	**Agricultural**			
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**			
	All Units	INR 15/HP/Month	Rs/kWh	1.40
B	**Low Tension-AG/LT-AGA (Allied Activities)**			
	All Units	INR 20/HP/Month	Rs/kWh	1.70
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**			
	All Units	INR 35/kVA/Month	Rs/kVAh	1.50
D	**High Tension-AG/HT-AG (Allied Activities)**			
	All Units	INR 60/kVA/Month	Rs/kVAh	1.90
5	**Military Engineering Services/ defense Establishments**			
	All Units	INR 175/kVA/Month	Rs/kVAh	5.00
6	**Public Lighting**			
	All Units	INR 50/kW/Month	Rs/kWh	4.10
7	**Hoardings/Signboards**			
	All Units	INR 60/kVA/Month	Rs/kWh	9.90
8	**Temporary Supply**			
A	LT Temporary Domestic	Tariff 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 commercial category for permanent supply.		
B	LT Temporary Commercial			
C	HT Temporary			
9	**Single Point Supply**			
A	Residential Complexes	INR 100 per kVA per month or part thereof	Rs/kVAh	3.45
B	Commercial Complexes	INR 200 per kVA per month or part thereof	Rs/kVAh	4.60

S. No.	Category	Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	
			Units	Rate
C	Industrial Complexes	INR 200 per kVA per month or part thereof	Rs/kVAh	4.20
10	**Electric Vehicle Charging Station**			
	All Units	-	Rs/kWh	3.50

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

Cost of Supply

a) Context

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

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

b) Approach:

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

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

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

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

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

The Commission is of the opinion that for determination of the Category wise Cost of Supply, the embedded cost methodology is an appropriate starting point.

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

Tariff Affordability

a) Context

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

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

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

b) Approach

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

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

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

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

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

Based on the discussions above, the Commission is continuing with its existing approach of determination of tariff for various consumer categories based on the Average Cost of Supply (ACoS) and reduction of Cross

Subsidy amongst various consumer categories, ensuring consumer tariffs progressively moving towards the cost.

Cross Subsidy

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

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

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

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

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

The limit of cross subsidy, as envisaged in the Tariff Policy 2016, can't be achieved by rationalizing the tariff in a single year, as this may lead to tariff shock to the cross subsidized consumers. In this Tariff Order, the Commission has continued its approach of rationalization of the tariff for various consumer categories and reducing the cross subsidy.

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

6.4.2. Approved Final Tariff Schedule

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 74: Existing and approved tariff

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**Domestic**				
A	**Low Tension-D/LT-D**				
	0-100 units	Single Phase INR 25/Con/Month Three Phase INR 65/Con/Month	1.50 INR/kWh	INR 20/kW/Month	1.60 Rs/kWh
	101-200 units		2.25 INR/kWh	INR 20/kW/Month	2.35 Rs/kWh
	201 to 300 units		2.85 INR/kWh	INR 20/kW/Month	2.95 Rs/kWh
	301 to 400 units		3.65 INR/kWh	INR 20/kW/Month	3.90 Rs/kWh
	Above 400 units		4.25 INR/kWh	INR 20/kW/Month	4.50 Rs/kWh
B	**Low Tension-LIG/LT-LIG**	INR 50/Con/Month	-	INR 20/kW/Month	-
C	**High Tension-D/HT-D**				
	All Units	INR 110/kVA/Month	3.65 INR/kVAh	INR 110/kVA/Month	4.60 Rs/kVAh
2	**Commercial**				
A	**Low Tension-C/LT-C**				
	0-100 units		3.55 INR/kWh		3.55 INR/kWh

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
	101-200 units	For consumers with Load upto 20 kW INR 50/Con/Month For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	4.35 INR/kWh	For consumers with Load upto 20 kW INR 40/kW/Month For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	4.35 INR/kWh
	201 units- 400 units		4.85 INR/kWh		4.85 INR/kWh
	Above 400 units		5.25 INR/kWh		5.25 INR/kWh
B	**High Tension-C/HT-C**				
	All Units	INR 250/kVA/month	5.50 INR/kVAh	INR 250/kVA/month	5.25 INR/kVAh
3	**Industrial**				
A	**Low Tension-I/LT-I**				
	0-500 units	INR 40/HP/Month	3.40 INR/kWh	INR 40/HP/Month	3.40 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh	INR 40/HP/Month	3.95 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**				
	All Units	INR 50/kW/Month	4.95 INR/kWh	INR 50/kW/Month	5.25 INR/kWh
C	**High Tension-I/HT-I**				
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kVAh	INR 250/kVA/Month	4.80 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kVAh	INR 250/kVA/Month	4.70 INR/kVAh
D	**High Tension- Ferro/SM/ PI/ SR**				
	All Units	INR 250/kVA/Month	4.80 INR/kVAh	INR 250/kVA/Month	4.80 INR/kVAh
4	**Agricultural**				
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 18/HP/Month	1.50 INR/kWh	INR 18/HP/Month	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**				
	All Units	INR 25/HP/Month	1.75 INR/kWh	INR 25/HP/Month	1.75 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 40/kVA/Month	1.60 INR/kVAh	INR 40/kVA/Month	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**				
	All Units	INR 70/kVA/Month	1.95 INR/kVAh	INR 70/kVA/Month	1.95 INR/kVAh
5	**Military Engineering Services/defense Establishments**				
	All Units	INR 200/kVA/Month	5.20 INR/kVAh	INR 200/kVA/Month	4.90 INR/kVAh
6	**Public Lighting**				
	All Units	INR 70/kW/Month	4.20 INR/kWh	INR 70/kW/Month	5.65 INR/kWh
7	**Hoardings/Signboards**				
	All Units	INR 70/kVA/Month	10.00 INR/kWh	INR 70/kVA/Month	10.00 INR/kWh
8	**Temporary Supply**				
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.	
B	LT Temporary Commercial				
C	HT Temporary				

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
		For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
9	**Single Point Supply**				
A	Residential Complexes	INR 110 per kVA per month or part thereof	3.55 INR/kVAh	INR 110 per kVA per month or part thereof	3.55 INR/kVAh
B	Commercial Complexes	INR 220 per kVA per month or part thereof	4.80 INR/kVAh	INR 220 per kVA per month or part thereof	4.80 INR/kVAh
C	Industrial Complexes	INR 220 per kVA per month or part thereof	4.40 INR/kVAh	INR 220 per kVA per month or part thereof	4.40 INR/kVAh
10	**Electric Vehicle Charging Station**	-	3.50 INR/kWh	-	3.50* INR/kVAh

**This tariff is applicable only for supply at HT. In case of LT supply, tariff will be INR 0.20/kVAh higher than the above tariff.*

6.4.3. 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. The Commission has not estimated any revenue for Electric Vehicle Charging Station, Residential Complexes and Industrial Complexes categories as no sales have been booked under the respective categories. the Commission as of now approves the k factor for the category as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under these categories. Accordingly, the revenue from approved retail tariff is determined as follows:

Table 75: Revenue from approved retail tariff determined by Commission (In INR Cr)

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
1	**Domestic**	**1386.33**	**36.93**	**361.03**	**397.96**	**2.87**	**0.60**
(i)	LT-D Domestic	**1384.58**	**36.89**	**360.84**	**397.74**	**2.87**	**0.60**
	0-100 units	544.79	11.80	87.17	98.96	1.82	0.38
	101-200 units	331.54	9.07	77.91	86.98	2.62	0.55
	201-300 units	175.22	6.17	51.69	57.86	3.30	0.69
	301-400 units	96.50	3.48	37.64	41.12	4.26	0.89
	Above 400 units	236.53	6.38	106.44	112.82	4.77	1.00
(ii)	Low Income Group	1.37	0.00	-	0.00	0.02	0.00
(iii)	HT-D Domestic	0.38	0.03	0.18	0.22	5.75	1.21
2	**Commercial**	**607.53**	**44.89**	**301.75**	**346.64**	**5.71**	**1.20**
(i)	LT-C Commercial	**472.52**	**21.79**	**228.11**	**249.90**	**5.29**	**1.11**
	0-100 units	77.99	4.59	27.69	32.28	4.14	0.87
	101-200 units	47.80	1.69	20.79	22.49	4.70	0.99
	201-400 units	60.12	3.14	29.16	32.30	5.37	1.13
	Above 400 units	286.61	12.36	150.47	162.83	5.68	1.19
(ii)	HT-C Commercial	135.02	23.10	73.64	96.74	7.17	1.50
3	**Industrial**	**2139.85**	**189.41**	**1035.98**	**1225.39**	**5.73**	**1.20**
(i)	LT-I Industrial	**80.91**	**7.05**	**31.07**	**38.12**	**4.71**	**0.99**
	0-500 units	16.18	3.40	5.50	8.90	5.50	1.15
	Above 500 units	64.73	3.66	25.57	29.22	4.51	0.95

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.48	0.14	2.35	2.49	5.56	1.17
(iii)	High Tension-I/HT-I	1499.12	157.91	734.68	892.58	5.95	1.25
	Connected at 11/33 kV	1247.94	135.20	616.15	751.36	6.02	1.26
	Connected at 110 kV	251.18	22.70	118.52	141.22	5.62	1.18
(iv)	High Tension-Ferro/SM/PI/SR	555.35	24.31	267.89	292.20	5.26	1.10
4	**Agriculture**	**33.62**	**1.71**	**5.88**	**7.59**	**2.26**	**-**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	17.29	1.09	2.59	3.69	2.13	-
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.79	0.05	0.14	0.19	2.42	-
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.89	0.44	1.03	1.47	3.01	-
(iv)	High Tension-AG/HT-AG (Allied Activities)	10.65	0.12	2.12	2.24	2.11	-
5	**Military Engineering Services/ defense Establishments**	**26.96**	**1.73**	13.70	**15.43**	**5.72**	**1.20**
6	**Public Lighting**	**29.61**	**0.23**	**16.73**	**16.96**	**5.73**	**1.20**
7	**Hoardings/Signboards**	**0.16**	**0.04**	**0.16**	**0.20**	**12.48**	**2.62**
8	**Temporary**	**12.10**	**0.00**	**10.18**	**10.18**	**8.41**	**1.50***
(i)	LT	**9.77**	**0.00**	**8.07**	**8.07**	**8.26**	1.50*
	LT Domestic	0.69	0.00	0.30	0.30	4.31	
	LT Commercial	9.08	0.00	7.77	7.77	8.56	
(ii)	HT	**2.33**	**0.00**	**2.11**	**2.11**	**9.04**	
		5.69	**0.91**	**2.76**	**3.67**	**6.44**	
9	**Single Point Supply**	0.00	0.00	0.00	0.00		**1.35**
(i)	Residential Complexes	5.69	0.91	2.76	3.67	6.44	0.00
(ii)	Commercial Complexes	0.00	0.00	0.00	0.00		1.35
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00		0.00
10	**Electric Vehicle Charging Station**	-	-	-	-	-	**0.74**
	TOTAL	**4241.87**	**275.84**	**1748.18**	**2024.02**	**4.77**	**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 2024.02 Cr. for the FY 2021-22

The average increase in the retail tariff now approved by the Commission vis-à-vis the prevailing tariff is 1.58%. The table below provides the category wise Average Cost of Supply (ACoS), existing Average Billing Rate (ABR), Approved ABR and category wise increase in tariff approved by Commission.

Table 76: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)	Cross Subsidy level at existing tariff (%)	Cross Subsidy level at approved tariff (%)
Domestic	5.68	2.66	2.87	8.07%	46.8%	50.6%
Commercial	5.68	5.74	5.71	-0.52%	101.0%	100.5%
Industrial	5.68	5.68	5.68	0.00%	100.0%	100.0%
Agriculture	5.68	2.26	2.26	0.00%	39.8%	39.8%
Military Engineering Services	5.68	6.03	5.72	-5.16%	106.3%	100.8%
Public Lighting	5.68	4.28	5.73	33.90%	75.3%	100.9%
Hoardings/ Signboards	5.68	12.48	12.48	0.00%	219.9%	219.9%
Temporary	5.68	8.42	8.41	-0.18%	148.4%	148.1%
Single Point Supply	5.68	6.44	6.44	0.00%	113.5%	113.5%
Total	**5.68**	**4.70**	**4.77**	**1.58%**	**82.7%**	**84.0%**

It can be observed in the above table that the Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

6.4.4. Revenue Gap/ (Surplus) at Approved Tariff

The Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/300 dated 29th December 2021 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission. Moreover, no gap is carried forward from previous years to FY 2022-23 as the Govt. of Goa had provided an upfront budgetary support for the entire gap in FY 2021-22.

In view of above the Commission approves the revenue gap as follows:

Table 77: Revenue Gap/ (Surplus) approved by Commission for FY 2022-23 (In INR Cr)

S. No.	Particulars	FY 2022-23
1	Net Revenue Requirement	**2,408.15**
2	Revenue from Retail Sales at Existing Tariff	1,992.53
3	Revenue from Retail Sales at Approved Tariff	2,024.02
4	Revenue Gap/ (Surplus) at Existing Tariff	415.62
5	Revenue Gap/ (Surplus) at Approved Tariff	384.13
6	Gap/(Surplus) for the previous year	-
7	Total Gap/ (Surplus)	384.13
8	Budgetary support from Govt. of Goa	384.13
9	**Final Gap/ (Surplus) for FY 2022-23**	-

The Govt. of Goa has given an upfront commitment to bridge the revenue gap by way of budgetary support, in line with the practice followed in previous years.

6.4.5. Government Budgetary Support

The Commission has approved an overall revenue gap of INR 384.13 Cr at approved tariff in FY 2022-23. The Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/300 dated 29th December 2021 has given an upfront commitment to bridge the revenue gap by way of budgetary support for any revenue gap that may arise.

It is observed that the Govt. of Goa has been providing budgetary assistance to the Petitioner during the past few years. The Commission in this matter would like to point out the over reliance of the Petitioner on Govt.'s budgetary support. The Petitioner should prepare itself of the repercussions in case the Govt. withdraws the budgetary support in the future.

The ABR without the Government Budgetary support has been calculated considering the per unit gap of INR 0.91/kWh (difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support). However, **the Commission would like to highlight that in case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an additional average tariff increase of 18.98%.**

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 Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/300 dated 29th December 2021 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission. The Commission acknowledges the letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2022-23.

2. The Petitioner has proposed a reduction in average tariff rate thereby estimating a reduction of INR 108.44 Cr. from the projected revenue in FY 2022-23.

3. The Commission has approved an average tariff hike of 1.58% to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa. The Commission has also introduced fixed charges based on connected load for all Domestic and Commercial slabs.

4. The Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

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

7.1. Wheeling Charges

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

Petitioner's Submission:

The Petitioner has submitted the bifurcation of all expenses of FY 2022-23 between the functions of wheeling business (wire business) and retail supply business based on the Regulation 49 of the JERC MYT Regulations, 2021. The summary of the allocation statement and the segregation of ARR into wheeling and retail supply business for FY 2022-23 is given in the table below:

Table 78: Allocation matrix as submitted by the Petitioner

Sl. No.	Particulars	Distribution Wires Business	Retail Supply Business	FY 2022-23 (INR Cr.)		
		%	%	Distribution Wire business	Retail Supply Business	Total
1	Cost of Power Purchase from Own Generating Stations					
2	Cost of Power Purchase from other Generating Stations	0%	100%	0.00	1,439.07	1,439.07
3	Inter State Transmission Charges	0%	100%	0.00	221.36	221.36
4	Intra State Transmission Charges					
5	SLDC Fees & Charges					
6	O&M Expenses (Gross)			223.39	250.64	474.02
	a) R&M Expenses	90%	10%	55.75	6.19	61.94
	b) Employee Cost	40%	60%	153.60	230.40	384.01
	c) A&G Expenses	50%	50%	14.04	14.04	28.07
7	Depreciation	90%	10%	76.96	8.55	85.51
8	Interest and Finance Charges	90%	10%	40.41	4.49	44.90
9	Interest on Working Capital	10%	90%	2.61	23.52	26.14
10	Prior Period Expenses					
	Interest on Consumer Security Deposit	10%	90%	0.56	5.03	5.58
11	**Extraordinary Items**					
12	Bad and Doubtful Debts	0%	100%			
13	**Other Debts and Write-offs**					
14	**Statutory Levies and Taxes, if any**					
15	Less: Expenses Capitalised					
	a) Interest Charges Capitalized					
	b) R&M Expenses Capitalized					
	c) A&G Expenses Capitalized					

Sl. No.	Particulars	Distribution Wires Business	Retail Supply Business	FY 2022-23 (INR Cr.)		
		%	%	Distribution Wire business	Retail Supply Business	Total
	d) Employee Cost Capitalized					
	Sub Total (a+b+c+d)					
	Sub Total Expenditure (1 to 14-15)			343.93	1952.66	2,296.59
16	Return on Equity	90%	10%	76.56	8.78	85.34
17	Less: Non-Tariff and other Income	10%	90%	2.08	18.70	20.78
18	Less: Any Grant/ Subventions, other subsidy provided by the Government					
19	**Annual Revenue Requirement**			**418.41**	**1942.74**	**2,361.15**
20	**Energy Sales**					**4086.29**
21	**Average Cost of Supply (Rs./kWh)**					**5.78**

The Petitioner has further submitted that it has computed the wheeling charges based on the following methodology:

a) O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level based on number of consumers.

b) All expenses other than the O&M expenses are allocated to each voltage level based on voltage wise asset allocation.

c) The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.

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

Table 79: Wheeling Charge calculation as submitted by Petitioner

Category	O&M expenses (INR Cr.)	Other Expenses (INR Cr.)	Total Expenses (INR Cr.)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	223.00	117.01	417.68	1927.36	1.76
High Tension (HT)/ Extra High Tension (EHT)Level	0.39	78.01	0.73	2158.94	0.36
Total	**223.39**	**195.02**	**418.41**	**4086.29**	**1.02**

Commission's analysis:

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

Table 80: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2021-22		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (Rs Cr)	Retail Supply Business (Rs Cr)	Total ARR (Rs Cr)
Power purchase expenses inclusive of Inter-State Transmission expenses	*0%*	*100%*	0.00	1839.53	1839.53
Employee costs	*40%*	*60%*	137.82	206.74	344.56
Administration and General Expenses	*50%*	*50%*	17.03	17.03	34.06
Repair and Maintenance Expenses	*90%*	*10%*	49.80	5.53	55.33
Depreciation	*90%*	*10%*	47.38	5.26	52.64
Interest on Loan	*90%*	*10%*	20.03	2.23	22.26
Interest on Working Capital	*10%*	*90%*	1.81	16.31	18.13
Interest on consumer security deposit	*10%*	*90%*	0.36	3.24	3.60
Return on Equity	*90%*	*10%*	57.74	6.62	64.36
Bad & Doubtful Debt written off	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**331.97**	**2102.49**	**2434.47**
Less: Non-Tariff Income	*10%*	*90%*	2.63	23.69	26.32
Net Revenue Requirement			**329.34**	**2078.81**	**2408.15**

To determine the wheeling charges, the wheeling costs are allocated on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by the Open Access consumers and primarily comprises of O&M Expenses and other costs as provided in the table above.

The methodology adopted for allocating the derived wheeling costs at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers
- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.
- The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.
- The energy input has been determined assuming the cumulative loss level of HT/EHT voltage as 3.64%, which is the same as approved in the MYT Order for FY 2021-22. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 10.25% as approved in the Business Plan Order dated 31.03.2022.

Table 81: Parameters assumed for voltage wise allocation of wheeling costs

Category	No. of Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)
Low Tension (LT) Level	720,039	60.00%	2,001.31	16.65%
High Tension (HT)/ Extra High Tension (EHT) Level	1,366	40.00%	2,240.55	3.64%
Total	**721,405**	**100.00%**	**4,241.87**	**10.25%**

Accordingly, the Commission approves the Wheeling Charges as shown in the table below:

Table 82: Allocation of costs based on voltage level

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)
Low Tension (LT) Level	204.46	100.15	304.61	2,001.31
High Tension (HT)/ Extra High Tension (EHT) Level	0.19	24.54	24.73	2,240.55
Total	**204.65**	**124.69**	**329.34**	**4,241.87**

Table 83: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	204.46	100.15	304.61	2,001.31	1.52
High Tension (HT)/ Extra High Tension (EHT) Level	0.19	24.54	24.73	2,240.55	0.11
Total	**204.65**	**124.69**	**329.34**	**4,241.87**	

The Commission approves wheeling charge of INR 1.52/kWh at LT voltage level and INR 0.11/kWh at HT/EHT voltage level

7.2. Additional Surcharge

Petitioner's submission:

The Petitioner has computed the additional surcharge based on the methodology followed by the Commission in the Tariff Order for FY 2021-22. The additional surcharge determined by the Petitioner for FY 2022-23 has been provided in the table as follows:

Table 84: Additional Surcharge calculation as submitted by Petitioner

Particulars	FY 2022-23
Total Power Purchase cost approved	1,615.79
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	422.80
Energy Sales (MU)	4,086.29
Additional Surcharge (INR/kWh)	**1.03**

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act"

Regulation 4.5 (2) of the said Regulations stipulates:

This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.

Further, Regulation 5.2 (1) (b) states the following:

The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Table 85: Additional Surcharge approved by Commission

Particulars	2022-23
Total Power Purchase cost approved	1,839.53
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	427.56
Energy Sales (MU)	4,241.87
Additional Surcharge (INR/kWh)	**1.01**

Earlier, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new "Open Access Regulations, 2017", a consumer may choose to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 1.01/kWh for FY 2022-23.

The Commission directs the Petitioner to submit quarterly details of the power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyse the information and change the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's submission:

The Petitioner has adopted the same methodology for computation of Cross-Subsidy Surcharge as approved by the Commission in the Tariff Order for FY 2021-22. The cross-subsidy surcharge determined by the Petitioner for FY 2022-23 has been provided in the table as follows:

Table 86: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.20	3.19	-
High Tension (HT)/ Extra High Tension(EHT) Level	4.31	6.42	2.12

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses are assumed for HT/EHT voltage level. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 10.25%, as approved in the ARR for FY 2022-23. Voltage wise losses assumed at each level have been shown in the table below:

Table 87: Voltage wise losses assumed by Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	13.50%	16.65%
High Tension (HT)/ Extra High Tension (EHT) Level	3.64%	3.64%
Total	**10.25%**	**10.25%**

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

Table 88: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	2,001.31	16.65%	2,401.12
High Tension (HT)/ Extra High Tension (EHT) Level	2,240.55	3.64%	2,325.19
Total	**4,241.87**	**10.25%**	**4,726.31**

Now the overall ARR approved for FY 2022-23 is divided into variable and fixed ARR with variable ARR comprising of variable component of the power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.

- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated between HT/EHT and LT level on the basis of input energy, as the HT/EHT network is utilized by both LT and HT/EHT network consumers.

- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 89: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
Low Tension (LT) Level	2,401.12	60.00%	720,039
High Tension (HT)/ Extra High Tension(EHT) Level	2,325.19	40.00%	1,366
Total	**4,726.31**	**100.00%**	**721,405**

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories. Accordingly, the VCoS is determined as shown in the table below:

Table 90: 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)
Low Tension (LT) Level	873.82	602.44	1,476.25	2,001.31	7.38
High Tension (HT)/ Extra High Tension (EHT) Level	348.51	583.38	931.89	2,240.55	4.16
Total	**1,222.33**	**1,185.82**	**2,408.15**	**4,241.87**	

This, VCoS is then used to determine the Cross-Subsidy Surcharge at each voltage level.

Table 91: Cross-Subsidy Surcharge approved by Commission (INR/kWh)

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.38	3.58	-
High Tension (HT)/ Extra High Tension (EHT) Level	4.16	5.83	1.67

The Commission approves nil Cross-Subsidy Surcharge at LT Voltage level and INR 1.67/kWh at HT/EHT Voltage level, in FY 2022-23.

8. Chapter 8: Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short-term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Despatch Center (SLDC)/ Regional Load Despatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long-term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within the region (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawal/Under-drawal from the Grid and the Inter-State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market-determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of FY 2016-17 will be undertaken by the Commission once the audited accounts of FY 2016-17 are available. If the audited accounts for FY 2016-17 are prepared timely, the impact of true-up of various cost and revenue items is allowed in the tariff of FY 2018-19, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

8.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub-clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of

inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub-clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs

Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

8.2. Formula

The following mechanism shall be followed for calculation and adjusting variations on account of Fuel and Power Purchase Cost in the end consumer tariff, which shall come into force w.e.f. 1st April 2020 (i.e. Power Purchased by the Licensee from 1st April 2020 onwards).

1. Periodicity for recovery (Cycle)

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

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

2. Chargeability

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

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
    - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
    - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).

- Variation on account of Deviation Settlement Mechanism – shall be allowed, but the incentive/penalty shall be excluded

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

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

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

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

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

Where:

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

- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

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

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

4. Other Terms and conditions

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

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

3. The FPPCA charges for a quarter shall be limited to ±10% of the ABR for a consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
    - Step 1: Determination of Value of K

$$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ sub\ category\ (\frac{INR}{unit})}{Weighted\ Average\ Retail\ Tariff\ (WART)(\frac{INR}{unit})}$$

The value of K for different consumer category or sub-category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR /unit) consumer category/sub-category wise

$$FPPCA\left(\frac{INR}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute the fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the FPPCA formula as approved by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 5.24/kWh for the FY 2022-23.

Table 92: Rapproved determined by Commission for FY 2022-23

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	1,613.38
Transmission Charges (INR Cr), T_{app}	226.15
Power Purchase Quantum from CGS Stations at Ex-Bus Periphery (NTPC, NPCIL) (MU), PPO_{app}	3,814.68
Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	4.05%
Power Purchase Quantum from sources within State/ Open Market (Own Gen and Open Market) (MU), PPI_{app}	290.33
Quantum of Sale of Surplus Power (MU), PSO_{app}	-
Approved Intra-State T&D Loss (%), DL_{app}	10.25%
Energy Sales for LIG/BPL and Agriculture consumer category (MU), Z_{app} (MU)	34.99
R_{app} (INR/kWh)	**5.24**

9. Chapter 9: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now submit:

- ***The detailed action plan for compliance of all the directives <u>within 1 month of the issuance of this Order</u>.***
- ***The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections <u>within 10 days of the end of each quarter of the calendar year</u>.***

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 appropriate action under the Electricity Act, 2003 and Regulations made there under.

9.1.1. Annual Statement of Accounts

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 30th March 2021 *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner has failed to comply with the directive every year since the issuance of Tariff Order dated 27th June 2012. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 by November 2021 so that the appropriate base year values for 3rd MYT Control Period can be considered.*
Petitioner's Response in the Present Tariff Petition • *The CAG audit process for Financial Accounts of FY 2017-18 is under process.* • *The Financial Accounts of FY 2018-19 and FY 2019-20 are submitted to CAG and is due for Audit.* • *Financial Accounts for FY 2020-21 are under progress and the same will be completed by 31st December 2021. Upon completion, the same will be submitted to CAG for audit purposes.*
Commission's Response *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner has failed to comply with the directive every year since the issuance of Tariff Order dated 27th June 2012. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 by November 2022 along with Tariff petition for FY 2023-24.*

9.1.2. Preparation of Fixed Asset Register

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 30th March 2021

The Commission reiterates that the information with regards to type, nature and value of assets depreciated upto 90% in the relevant year has not been provided, the purpose for which FAR is prepared. The Petitioner is directed to submit the information upto FY 2020-21 in the next tariff petition.
Petitioner's Response in the Present Tariff Petition *Collection of Information for the Assets for FY 2020-21 is under progress and the same shall be submitted on 31st December 2021.*
Commission's Response *The Petitioner is directed to submit the information up to FY 2021-22 in the next tariff petition, along with the audited annual accounts as sought in the preceding directive. The Petitioner is to also ensure that the FAR reports contain the details of the assets which have completed 90% of their but are still included in the FAR.*

9.1.3. Energy Audit Reports

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission reiterates that it has noted with serious concern that the Petitioner is yet to submit the Energy Audit Reports for previous years despite repeated directions. The Commission directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority.*
Petitioner's Response in the Present Tariff Petition *• Department has started process of energy audit. However, at this point of time because of 100% DT metering is not done and we are unable to ascertain the losses of feeder-wise.* *• However, on the broader level we are able to measure losses based on the Power delivered during the April 2019 to March 2020 and respective energy recorded billed in May 2019 to April 2020 at each Feeder level, Sub-Division level and Division level are listed out the attached along with the Petition.* *• The proposal for the procurement of non-working CT's, PT's and meters was kept on hold due to financial constraint resulted from the recent Pandemic but it is now being processed and all non-working CTs, PTs, and meters shall be installed by May 2022. Further after installation of above required equipments, Energy Audit will be conducted by September 2022.*
Commission's Response *The Commission has noted with serious concern that the Petitioner has not submitted the Energy Audit Reports for previous years despite repeated directions. The Commission directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority, and positively submit the same along with Tariff Petition for FY 2023-24.*

9.1.4. Employee Cost / Manpower study

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission is yet to receive the Manpower Study report from the Petitioner. The Commission directs the Petitioner to submit the same along with the next quarterly progress report without further delay.*
Petitioner's Response in the Present Tariff Petition *Manpower Analysis has been done at all the divisional level. The Details of the same was submitted in the 1st quarter directives. However, in this regard, some clarifications were sought by the Commission and the ED-Goa has prepared a detailed Manpower Analysis, which is attached with the Petition.*
Commission's Response

The Commission is yet to receive the Manpower Study report from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.

9.1.5. Interest on Consumer Security Deposit

Originally Issued in Tariff Order dated 31st March 2013
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission acknowledges the efforts made by the Petitioner. The Commission directs the Petitioner to ensure payment of interest on security deposit upto FY 2020-21 as per the provisions of Supply Code, 2018.*
Petitioner's Response in the Present Tariff Petition *Payment towards consumer's security deposit for FY 2020-21 is in the process of disbursement and the same shall be completed by March 2022 along with the arrears if any.*
Commission's Response *The Commission reiterates that the Petitioner is directed to ensure payment of interest on security deposit upto FY 2021-22 as per the provisions of Supply Code, 2018.*

9.1.6. Sub-Divisions as Strategic Business Units

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission is yet to receive the compiled data for Strategic Business Unit for Sub-Division of Division –VII Curchorem and Division XIV Verna. The Petitioner is directed to submit the same within one month of the issuance of this Order.* *Further an overall strategic plan to implement the same in the entire area/ all subdivisions of Petitioner's serving area.*
Petitioner's Response in the Present Tariff Petition *Collection of Data for Strategic Business Unit for Sub-Division of Division 6 is completed. The same is being submitted to the Hon'ble Commission along with this Tariff petition in the* ***Annexure-5.*** *The Collection of data for Sub-Division of 4 & 17 are under progress.*
Commission's Response *The Commission is yet to receive the compiled data as stated by the Petitioner. The Petitioner is directed to submit the same within one month of the issuance of this Order.*

9.1.7. Installation of Pre-Paid Meters

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report.*
Petitioner's Response in the Present Tariff Petition *Administrative approval from the Government has been obtained for installation of 7 Lakhs Prepaid SMART meters on Totax mode. The project will be tendered after the receipt of the standard bidding document from REC as the project is proposed to be funded under the Revamped Distribution Sector Scheme.*
Commission's Response

The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report.

9.1.8. Unbundling of Electricity Department

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission reiterates that the Petitioner should submit the proposal to the State Govt. at the earliest and provide a status on the same along with the next quarterly progress report.*
Petitioner's Response in the Present Tariff Petition *The Matter has been discussed with the Government of Goa and the Government decision is to continue as Department.*
Commission's Response *The Commission directs the Petitioner to submit the documentary evidence for the decision of the Govt. of Goa to the Commission within one month of the issuance of this Order.*

9.1.9. Renewable Purchase Obligation

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission reiterates its directive to the Petitioner that it must continue its efforts towards fulfilment of RPO and ensure yearly obligation is fulfilled.*
Petitioner's Response in the Present Tariff Petition *EDG submits that it has fulfilled 50% of the total RPO Obligation for FY 2021-22 and is making continuous efforts to fulfil the RPO Target for FY 2021-22.*
Commission's Response *The Commission appreciates the efforts undertaken by the Petitioner towards fulfillment of RPO. The Petitioner is emphasizing on procuring more physical power than purchase REC's in accordance with the Commissions directions. The Petitioner is directed to continue its efforts towards fulfillment of RPO and ensure yearly compliance are achieved.*

9.1.10. Billing and Collection Efficiency

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 30th March 2021 *The Commission directs the Petitioner to submit a detailed status report along with the next quarterly progress report.*
Petitioner's Response in the Present Tariff Petition *The Report on OTS scheme is already submitted.*
Commission's Response *The Commission is yet to receive the report from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.*

9.1.11. Determination of Category wise/ Voltage wise Cost of supply

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 30th March 2021 *The Petitioner is directed to expedite the process of energy audit and submit the requisite data and the proposal along with the next tariff petition.*
Petitioner's Response in the Present Tariff Petition *GIS Mapping for 11kV/33kV assets are under progress. It shall be completed once the energy audit and the same is expected to be completed by November 2022.*
Commission's Response *The Petitioner is directed to submit voltage-wise and category-wise details of assets, O&M expenses and fixed asset cost allocation for the last 3 years along with the Tariff Petition for FY 2023-24.*

9.1.12. Submission of Petition for True up of FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20 and APR of FY 2020-21

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 30th March 2021 *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 by 30th November 2021 so that the appropriate base year values for 3rd MYT Control Period can be considered.*
Petitioner's Response in the Present Tariff Petition • *The CAG audit process for Financial Accounts of FY 2017-18 is under process.* • *The Financial Accounts of FY 2018-19 and FY 2019-20 are submitted to CAG and is due for Audit.* • *Financial Accounts for FY 2020-21 are under progress and the same will be completed by 31st December 2021. Further completion the same will be submitted to CAG for audit purposes.* • *The True-up petition for FY 2017-18, FY 2018-19 and FY 2019-20 will be submitted separately once the accounts are audited by CAG.*
Commission's Response *The progress shown by the Petitioner is not satisfactory. As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 by 30th November 2022.*

9.1.13. Collection of data based on consumer type

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 30th March 2021 *The Petitioner is directed to submit the requisite information along with the next quarterly progress report.*
Petitioner's Response in the Present Tariff Petition

The requisite data has been collected from all the sub-division and division level. The sub division/division personnel has performed physical survey for identification of Hotel Industries, Govt./Private educational institutions, Govt./Private hospitals etc category of consumers and respective details were flagged and updated in SAP database. Accordingly, the requisite details are summarised and submitted along with the Tariff Petition for FY 2022-23.

Commission's Response

The Commission is yet to receive the requisite details from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.

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

Issued in Tariff Order dated 30th March 2021

Commission's Directive in Tariff Order dated 30th March 2021

The Commission is considering the introduction of kVAh based tariff for LT-Industrial and LT-Commercial categories. Accordingly, the Petitioner is hereby directed to submit a compliance report indicating its readiness for implementation of kVAh billing for LT-Industrial and LT-Commercial categories with the next tariff petition.

Petitioner's Response in the Present Tariff Petition

ED-Goa is in the process of installing smart meters and the Proof of Concept (PoC) for the Smart Meter has also been carried out successfully. The kVAh based billing will be carried out for LT Commercial and LT Industrial after installation of the Smart Meters..

Commission's Response

The Petitioner is directed to ensure kVAh reading for all LT-Industrial and LT-commercial meters at the earliest so that kVAh based billing can be introduced for them too as has been done for HT consumers and submit the requisite information along with the Tariff Petition for FY 2023-24.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 93: Tariff Schedule

	Category	Approved Tariff	
		Fixed Charges	Energy Charges
1	**Domestic**		
A	**Low Tension-D/LT-D**		
	0-100 units	INR 20/kW/Month	1.60 Rs/kWh
	101-200 units	INR 20/kW/Month	2.35 Rs/kWh
	201 to 300 units	INR 20/kW/Month	2.95 Rs/kWh
	301 to 400 units	INR 20/kW/Month	3.90 Rs/kWh
	Above 400 units	INR 20/kW/Month	4.50 Rs/kWh
B	**Low Tension-LIG/LT-LIG**	INR 20/kW/Month	-
C	**High Tension-D/HT-D**		
	All Units	INR 110/kVA/Month	4.60 Rs/kVAh
2	**Commercial**		
A	**Low Tension-C/LT-C**		
	0-100 units	For consumers with Load upto 20 kW INR 40/kW/Month For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	3.55 INR/kWh
	101-200 units		4.35 INR/kWh
	201 units- 400 units		4.85 INR/kWh
	Above 400 units		5.25 INR/kWh
B	**High Tension-C/HT-C**		
	All Units	INR 250/kVA/month	5.25 INR/kVAh
3	**Industrial**		
A	**Low Tension-I/LT-I**		
	0-500 units	INR 40/HP/Month	3.40 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**		
	All Units	INR 50/kW/Month	5.25 INR/kWh
C	**High Tension-I/HT-I**		
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kVAh
D	**High Tension- Ferro/SM/ PI/ SR**		
	All Units	INR 250/kVA/Month	4.80 INR/kVAh
4	**Agricultural**		
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 18/HP/Month	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**		
	All Units	INR 25/HP/Month	1.75 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 40/kVA/Month	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**		
	All Units	INR 70/kVA/Month	1.95 INR/kVAh

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	Category	Approved Tariff	
		Fixed Charges	Energy Charges
5	**Military Engineering Services/defense Establishments**		
	All Units	INR 200/kVA/Month	4.90 INR/kVAh
6	**Public Lighting**		
	All Units	INR 70/kW/Month	5.65 INR/kWh
7	**Hoardings/Signboards**		
	All Units	INR 70/kVA/Month	10.00 INR/kWh
8	**Temporary Supply**		
A	LT Temporary Domestic	Tariff 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 commercial category for permanent supply.	
B	LT Temporary Commercial		
C	HT Temporary		
9	**Single Point Supply**		
A	Residential Complexes	INR 110 per kVA per month or part thereof	3.55 INR/kVAh
B	Commercial Complexes	INR 220 per kVA per month or part thereof	4.80 INR/kVAh
C	Industrial Complexes	INR 220 per kVA per month or part thereof	4.40 INR/kVAh
10	**Electric Vehicle Charging Station**	-	3.50* INR/kVAh

**This tariff is applicable only for supply at HT. In case of LT supply, tariff will be INR 0.20/kVAh higher than the above tariff.*

10.2. Applicability

Low Tension Category - Applicable to Power Supply of Voltages at 230V and 440V Voltages when the Sanctioned Load is below 100 KVA/90 KW / 120 HP and power is supplied at single/ three phase.

High Tension/ Extra High Tension Category - Applicable to Power Supply of Voltages at 11KV/ 33KV/ 110KV and above i.e. High/Extra High Voltages when the Contracted Demand is above 100 KVA/ 90 KW / 120 HP and power is supplied at three phase.

Table 94: Applicability of Tariff Schedule

Category	Applicability	Point of Supply/Notes
1. LT Domestic	This schedule shall apply to private residential houses, government residential quarters, Government schools and related facilities, charitable institutions, religious institutions etc. for consumption of energy using normal domestic appliances. Professionals such as Doctors, Engineers, Lawyers, CAs, Journalists and Consultants practicing from their residence irrespective of location provided that such use shall not exceed 25% of the area of the premises or as	a. For the premises or flats which are closed or locked for a continuous period of more than three months and having sanctioned / connected load more than 10 kW, the monthly minimum charges would be Rs 1000/-.

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Category	Applicability	Point of Supply/Notes
	specified in the rules/regulations of their respective State or Union Territory.	
2. HT Domestic	This schedule shall apply to individual residential consumers of Bungalows, Villas, Cottages, etc. using normal domestic appliances and whose contract demand falls within the threshold limit of HT category.	
3. Low Income Group/ Life Line consumers	This schedule shall apply to consumers of Low Income Group who have a sanctioned load of up to 0.25 kW and who consume up to 50 units per month only.	The applicability of the Low Income Group category will be assessed at the end of each month and in case the consumption exceeds 50 units per month, the entire consumption would be billed at the rate of LTD-/Domestic for that particular month.
4. Commercial – LT and HT	This tariff is applicable to any activity not specifically covered in any other consumer categories, or although covered in another activity, the use is made for a commercial category. It would include electricity used in all non- residential, non-industrial premises and/or commercial premises for commercial consumption meant for operating various appliances. It would include the following categories but not limited to: • Houses with rent back facilities • Government hospitals • Professionals not covered in domestic category. • Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops; • Combined lighting and power services for Entertainment including film studios, cinemas and theatres, including multiplexes, Race Course, Meeting/Town Halls, Clubs, all types of Guest houses; • Offices including Government Offices, Commercial Establishments; • Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private hospitals, private messes, Internet / Cyber Cafes, Mobile Towers, Microwave Towers, Satellite Antennas used for telecommunication activity, Telephone Booths, Fax / Xerox Shops, X-ray installations, bars and cold drink houses, Tailoring Shops, Computer Training Schools, Typing Institutes, Photo Laboratories, Photo	Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture Allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged commercial tariff.

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Category	Applicability	Point of Supply/Notes
	Studios, Laundries, Beauty Parlours and Saloons, dry cleaners etc • Automobile and any other type of repair centers, Retail Gas Filling stations, Petrol Pumps and Service Stations including Garages, Tyre Vulcanizing units, Battery Charging Units, Tyre vulcanizing centres etc; • Banks, Telephone Exchanges, TV Station, Micro Wave Stations, All India Radio (AIR) Stations, ATM Centres etc; • For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes; • Sports Clubs, Health Clubs, Gymnasium, Swimming Pools; • Research and Development units situated outside Industrial premises; • Airports, Railways, Railway Stations, Bus stands of KTC etc; • Educational institutions excluding Government Schools and related facilities	
5. LT Industrial	This tariff shall apply to industrial units engaged in industrial activities, manufacturing process etc. It would include the following categories but not limited to: • Flour Mills, wet grinding, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills, Power looms including other allied activities like Warping, Doubling, Twisting, etc. • Ice Factories, Ice Cream Manufacturing units/ Plants, Dairy Testing Process, Milk Dairies, Milk Processing/ Chilling Plants (Dairy) etc; • Engineering workshops, Engineering Goods Manufacturing units, Printing Presses, Transformer repairing Workshops, Tyre retreading units, Motive Power Loads etc; • Mining, Quarry and Stone Crushing units etc; • Garment Manufacturing units, • LPG/ CNG Bottling plants etc; • Sewage Water Treatment Plants/ Common Effluent Treatment Plants owned, operated and managed by Industrial Associations and situated within industrial area. • Pumping of water for public water supply, Sewage Treatment Plants,	The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

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Category	Applicability	Point of Supply/Notes
	activities related with public water Supply Schemes and Sewage Pumping Stations. • Use of electricity / power supply for activities/ facilities exclusively meant for employees of the industry within the premises of the Industry. • IT Industry, IT parks etc.	
6. LT Mixed – Hotel Industries	This schedule shall apply to Hotels/ restaurants with lodging and boarding facilities.	Hotel Industry consumers intending to avail the facility of this tariff should produce a certificate from the Tourism Department stating that the intending applicant is registered under Goa Registration of Tourist Trade Act, 1982 and in the Hotel business on a regular basis. On receipt of the certificate, such tariff shall be made effective from the date of original validity of the certificate. In case of failure to produce the certificate, the same shall be considered under Commercial category.
7. HT Industrial	This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories: • Bulk Supply of power at 11 KV, 33 kV /110 KV and above for industries, factories and other industrial purposes. • Bulk supply of power at 11 KV and above for educational institutions owned or aided by Government, non-industrial establishments, • Industrial units engaged in Ice Manufacturing Units; • Hotels with lodging and boarding facilities etc • Use of electricity / power supply by an establishment such as IT Industries, IT Parks, IT Units • Pumping of water, public water supply, public water treatment plant, activities related with Supply Schemes and Sewage Treatment Plants, Sewage Pumping Stations etc	
8. HT Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive	This schedule shall apply to supply of power having a Contract Demand from 100 KVA up to 1000 KVA at 11 KV and above 1000 KVA at 33 KV for Steel rolling industry and Metal Alloy, Steel Melting, Ferro Alloy, and Ferro metallurgical industries where melting is involved using electric power.	

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<table>
<tr><th>Category</th><th>Applicability</th><th>Point of Supply/Notes</th></tr>
<tr><td>9. LT and HT Agriculture Pump sets</td><td>This schedule shall apply to establishments for Irrigation pumping, De-watering and Lift Irrigation for cultivation of food crops such as cereals, pulses, vegetables and fruits etc and Cane crusher and/or fodder cutter for self-use for Agricultural purposes.</td><td rowspan="2">This tariff shall be applicable from the date of production of a certificate from the Directorate of Animal Husbandry or Agriculture Department of Government of Goa to the effect that the consumer carried on the said activity on regular basis. In case of failure to produce the certificate, the same shall be considered under Commercial category.
Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged Commercial Tariff.</td></tr>
<tr><td>10. LT and HT Agriculture Allied Activities</td><td>This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to:
• Poultry farms, Livestock farms, Combination of livestock farms with dairy, Piggery etc
• Horticulture, Green Houses, Plantations, all types of nurseries etc.
• Fish farms including ornamental fish farms, prawn farms, other aqua farms etc
• Tissue culture, Mushroom activities, Aquaculture, Floriculture, Fisheries, Sericulture, Floricultural nurseries, hatcheries etc
• Any other agricultural activity not falling under HT-Agriculture (A) shall be covered under this category</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>11. MES/Defense Establishments</td><td>This schedule shall apply to supply of power for defense installation establishments, having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load.</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>12. LT Public Lighting</td><td>This schedule shall apply to public lighting systems. It would include the following categories but not limited to:
• Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/ Panchayats/ Government;
• Lighting in Public Gardens;
• Traffic Signals and Traffic Islands;
• State Transport Bus Shelters;
• Public Sanitary Conveniences; and
• Public Water Fountains and such other Public Places open for general public free of charge.
• Street lighting in the colony of a factory which is situated separately from the main factory.
• This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>13. LT Hoardings/ Sign Boards</td><td>This schedule shall apply to lighting advertisements, hoardings and displays at</td><td></td></tr>
</table>

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Category	Applicability	Point of Supply/Notes
	departmental stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations etc. and shall be separately metered and charged at the tariff applicable for "Hoardings / Sign Board" category. However use of electricity for displays for the purpose of indicating / displaying the name and other details of the shop, on commercial premises itself, shall be covered under the prevailing tariff for such shops or commercial premises.	
14. Temporary Supply	This schedule shall apply to usage of electricity for all temporary purposes.	i. The temporary connection shall be released through a proper meter ii. 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 as notified by JERC.
15. HT SPS Single Point Supply	This schedule shall apply to a group of consumers who desire to take a HT connection at single point for consumption of energy within a Residential Complex – Group Housing Societies, Residential Housing Colonies, Cooperative Group Housing Societies, Township Areas; Commercial Complexes, including Malls; Industrial Complexes, including IT Parks, Bio-Parks or other entities classified as industries by the Government of Goa.	In case of a dispute on whether the complex can be classified as an industrial complex, a certificate from Industries Department, Government of Goa will be required. The following shall be the different combinations for SPS in a defined area: i. All LT consumer mix area ii. All HT consumer mix area iii. HT+LT consumer mix area a. The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories. b. Based on technical and administrative feasibility, the ED-Goa may consider providing SPS power supply at HV/ EHV level to a complex at a mutually agreed injection point. c. The SPS arrangement would be applicable for the application received from a Residential complex / Association of Persons (AOP) / Developer of the complex or any other such similar person. d. The SPS arrangement would be considered by ED-Goa only if the minimum sanctioned cumulative contracted demand of the complex (group of consumers) is 1.15 MVA/ 1 MW. e. The complete cost of erection and O&M for the sub-transmission and distribution infrastructure within

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Category	Applicability	Point of Supply/Notes
		such complex would need to be borne by the said SPS applicant. f. The SPS applicant would be required to develop and maintain an efficient, coordinated and quality sub-transmission and distribution system in its area of electricity supply. Further, the applicant would be responsible to comply with Standards of Performance and Supply Code Regulation as laid down under JERC Regulations and guidelines of Goa Electricity Department, if any. The network within the complex will need to be certified by the Chief Electrical Inspector. g. For Residential Complexes, SPS application shall be entertained for groups of LT consumers only. The loads of common amenities for such group may include pumps for pumping water supply, lifts and lighting of common area. However, the consumption of energy for common services shall be separately metered with meters installed by the consumer and tested and sealed by licensee. The consumption of such energy over and above 10% of the total consumption of energy shall be billed at LT Commercial Tariff. The user shall inform the details of every non-domestic activity within the residential complex, such as commercial complex, industrial activity, and recreation club, along with the connected load to the licensee at the time of seeking the connection or at the time of enhancement in contract demand, and shall seek a separate connection for the same in case the common load is more than 10%. h. Individual Domestic HT consumers in a residential complex that opt for SPS shall need to apply separately under HT Domestic category. i. The SPS applicant shall not charge tariff to the downstream consumers higher than stipulated. j. The applicant shall be obliged to pay the total tariff (total billed amount) due to ED-Goa, as measured at HT end of SPS. However, to cover energy transformation losses and other

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Category	Applicability	Point of Supply/Notes
		O&M expenses, such applicant would be eligible to get rebates from ED-Goa on full bill payment, within the due time: i. 5% on the overall billed amount in all cases of LT and HT consumers ii. Any other loss would be to the account of the applicant. k. For CC and IC applicant, any LT / HT Consumer in the area should have minimum 80% pre-dominant load of their appropriate category i.e. mix load is allowed only upto 20%. For e.g. If a HT/ LT Industry Consumer has Factory, Residential Colony for its workers and also some Commercial facilities for his staff and the total of Residential and Commercial load is say around 30%, then separate Individual SPD connection may be taken for each such group as per activity. l. The implementation of SPS arrangement should be in accordance with the Electricity Act, 2003 and APTEL judgement dated 11th July 2011 in appeal no. 155 and 156 of 2010 in this regard.
16. 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)	

10.3. General Terms and Conditions

1) The tariffs are exclusive of electricity duty and taxes 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) Unless specifically stated to the contrary the figures of energy charges relate to rupee per unit (kWh) charge for energy consumed and fixed charge relates to a month.

4) If the 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 shall be deemed as unauthorized use of electricity and shall be assessed under the provisions of section 126 of the Electricity Act, 2003 and Supply Code Regulation notified by the JERC.

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5) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. These shall be double in case bi-monthly billing is carried out and shall be proportionately calculated as per the number of days of billing, Similarly slabs of energy consumption shall also be considered accordingly in case of bi-monthly or periodic billing.

6) The consumption for factory lighting/pump house lighting shall be billed as per respective main tariff category. A separate energy meter for recording energy consumed towards factory lighting for new installation need not be provided. For the existing installations, till the factory lighting meter's mains are shifted to main meter, the total energy consumption shall be arrived at by adding the energy consumption of the main energy meter and the factory lighting meter.

7) The conditions, definitions etc. shall be applicable as per the Electricity Act 2003 and various JERC Regulations, such as Standards of Performance, Supply Code, Conditions of Supply, Distribution Code etc., issued from time to time.

8) **Billing of Demand in excess of Contracted Demand**

The billing 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 energy rate.

The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawal is more than 20% of the contracted demand then the connection shall be disconnected immediately.

Explanation:

Assuming the contract demand as 100 kVA, maximum demand at 120 kVA and total energy consumption as 12000 units, then the consumption corresponding to the contract demand will be 10,000 units (12000 X 100/ 120) and consumption corresponding to the excess demand will be 2000 units. This excess demand of 20 kVA and excess consumption of 2000 units will be billed at twice the respective normal rate.

9) The adjustment because of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.

10) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in Chapter 9 of this Tariff Order.

11) For staff quarters, rest/guest houses, street lighting in the colony of a factory which is situated separately from the main factory and for distribution lines, service lines, etc. permitted to be owned and maintained by the HT consumer owning the factory, there shall be a separate connection and such energy consumed shall be charged under Single Point Supply.

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, taxes and duties) 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.

If payment is made in advance along with prior declaration of premises to be closed for a certain period of time, a rebate of 1% per month shall be given on the amount (excluding security deposit, taxes and duties) 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 (excluding taxes and duties) shall be given in case of cash payment and . Those consumers having arrears shall not be entitled for such rebate and the amount paid will first be used to set off past liabilities.

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Provided that in case the payment is made by cheque, the prompt payment discount will be applicable only if the payment by cheque is made 3 days prior to date of availing the prompt payment discount i.e. before 10 days from the due date of payment.

14) **Delayed Payment Charges (DPC)**: In case the electricity bills are not paid within the due date mentioned on the bill, delayed payment charges of 1.5% (computed on a daily basis on the outstanding bill from the due date till the date of payment) shall be levied on the bill amount. However, if a consumer makes part payment of a bill (in exceptional circumstances, with prior approval of the Chief Electrical Engineer), within the due date, then the delayed payment charges shall be applicable only on the amount which was not paid within the due date.

Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to the next rupee.

If the consumer fails to pay the energy bill presented to him by the due date the department shall have the right to disconnect the supply as per provision of the Electricity Act 2003 and Supply Code Regulations notified by JERC as amended from time to time.

In case of non-realization of payment through Cheque, a penalty of 5% of the cheque amount in addition to the Delayed Payment Charges (DPC) will be levied on the consumers

15) **Time of Day Tariff (ToD):**

i. Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off peak load period, shall be recorded by installing a ToD meter.

ii. The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Table 95: Applicability of ToD Tariff

Time of use	Demand Charges	Energy Charges
Normal period (7:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 11.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (11:00 p.m to 7:00 a.m)	Normal Rate	90% of normal rate of energy charges

iii. Applicability and Terms and Conditions of TOD tariff:

a) TOD tariff is mandatory for HT/EHT consumers and shall be optional for LT industrial and commercial consumers

b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from sources other than ED-Goa through wheeling of power.

c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff

d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

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10.4. Schedule of Miscellaneous Charges

Table 96: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges(as per provisions of Supply Code Regulations notified by JERC)	
Single Phase LT meter	INR 15/month
Three Phase LT meter	INR 25/month
Three Phase LT meter with CTs	INR 75/month
LT Meter with MD Indicator	INR 30/month
LT Tri-vector meter with CT's	INR 75/month
Tri-vector Meter	INR 1200/month
Bi- directional meter	INR 1,500/month
Temporary Supply	Shall be twice as applicable in above meter types
Changing or moving a Meter board	Actual Cost + 15%
Note: a. For all domestic and other LT loads less than 50 kW loads in Urban and Rural areas - Static single phase / three phase meters b. For LT (contracted load ≥ 50 KW) / HT / EHT consumer – Static, 3 Phase Tri-vector meters with MDI (MD Display)	
Reconnection Charges (as per provisions of Supply Code Regulations notified by JERC)	
LT Services – At Cut outs	
• Single Phase	INR 25/-
• Three Phase	INR 50/-
LT Services – At Overhead Mains	
• Single Phase	INR 30/-
• Three Phase	INR 50/-
LT Services – At Underground Mains	
• Single Phase	INR 75/-
• Three Phase	INR 125/-
HT Services	INR 200/-
Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges	
Re-Rating of Installations	
Lighting Installation	INR 50/-
Motive Power Installation	INR 100/-
High Tension	INR 500/-
Testing Fee for Various Metering Equipments (as per provisions of Supply Code Regulations notified by JERC)	

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Description	Approved Charges
Single phase LT	INR 25/energy meter
Poly Phase LT without CT	INR 50/energy meter
L.T. meter with CTs/Demand or Special Type Meters	INR 150/energy meter
H.T and E.H.T. metering equipment	INR 10,000/- at site
Transformer Oil	INR 200/- per sample
LT Current Transformer at Lab	INR 50/- per sample
3 – Ø Phase Tri-vector Meter Industrial LT Consumer	INR 1000/- for laboratory testing
3 – Ø Phase Tri-vector Meter 11 KV and 33kV HT Consumer	INR 5,000/- at site
Three Phase Tri-Vector Meter 110 KV EHT Consumers	INR 1,000/-at site
Combined CTPT Unit for 11kV and 33kV Consumer	INR 2,500/-
110KV CT / PT Unit	INR 10,000/-
Single Phase CT	INR 150/ unit
Three Phase TT Block	INR 500/unit
Distribution Transformer Testing (HT con.)	INR 6,000
Power Transformer Testing (EHT consumer)	INR 20,000
Service Connection Charges(as per provisions of Supply Code Regulations notified by JERC)	
Single Phase 1 ф	INR 250
Three Phase 3 ф	
Up to 5 HP	INR 500
5 HP to 20 HP	INR 800
Above 20 HP	INR 1,200
HT (First 500 KVA)	INR 10,000
HT (Beyond 500 KVA)	INR 20,000
HT Additional Load	INR 500/- for every addition of 100 KVA
Extra Length for 1 ф (beyond 30 meters)	INR 50 /meter
Extra Length for 1 ф for agricultural consumers (beyond 300 meters)	INR 25 /meter
Extra Length for 3 ф (beyond 30 meters)	INR 100 /meter
Extra Length for 3 ф for agricultural consumers (beyond 300 meters)	INR 50 /meter
Underground Service Cable	Actual Charges + 15%
Shunt Capacitor- 20 kW to 50 kW	INR 2,000
Shunt Capacitor- above 50 kW	INR 5,000
Testing Consumer's installation (as per provisions of Supply Code Regulations notified by JERC)	

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Description	Approved Charges
For first test of the new installation on or off an extension to an existing installation if the installation is found to be defective.	NIL
For Subsequent test of the new installation or of an existing installation if the installation is found to be defective	
• Single phase LT	INR 100/-
• Three phase	INR 200/-
• MS/BS loads upto70kW	INR 4,000 + GST
• LS/BS/RT (loads Above 70kW)	INR 8,000 + GST
• Shunt Capacitor- 20 kW to 50 kW	INR 1,000 + GST
• Shunt Capacitor- above 50 kW	INR 4,000 + GST
Changing the Meter or its position in the same premises at the request of the consumer when no additional material is required (as per provisions of Supply Code Regulations notified by JERC)	
Single phase	INR 100/-
3-phase without C.Ts	INR 200/-
L.T. meter with C.T.s	INR 500/-
H.T and E.H.T. metering equipment	INR 8,000 + GST
Re-sealing charges irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer	
Meter cupboard / Meter Cubical / Box	INR 50/-
Where cut-out is independently sealed	INR 50/-
Meter cover or Meter Terminal cover	INR 50/-
Meter cover of Meter Terminal cover (3 phase).	INR 50/-
Maximum demand Indicator or C.T.s chamber	INR 50/-
Service Charges	
General Supply	
• Single Phase	INR 10/-
• Three phase below 70kW	INR 20/-
• Three phase above 70kW	INR 50/-
Industrial/bulk/ agriculture /Street Lightning Supply	
• Upto70kW	INR 25/-
• Above 70kW	INR 50/-
Replacement of broken glass	
Replacement of broken glass of meter cupboard (When there is default on Consumer Side)	INR 50/-
Replacement of broken Glass of single phase meter if the consumer has broken or tamper and with meter.	INR 50/-
Replacement of broken Glass of three phase meter if the consumer has broken or tamper and with meter	INR 50/-

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Description	Approved Charges
Supply of duplicate copies of electricity bills	
Domestic Consumers	INR 5 per bill
Non Domestic consumers	INR 10 per bill
LT Industrial upto 20kW and AP Consumer	INR 5 per bill
H.T Industrial and Bulk supply consumer	INR 10 per bill
Stand by Meter	
HT	INR 10,000/-
EHT	INR 20,000/-
Check Meter	
HT	INR 10,000/-
EHT	INR 20,000/-
Load Enhancement	Actual Cost + 15% Supervision Charges
System Strengthening charges or capacity building charges,	Actual Cost + 15% Supervision Charges
Advance for Temporary Connections (Except for Prepaid meters)	
• Single phase LT	INR 2,000/-
• Three phase	INR 5,000/-
• HT	INR 20,000/-
• EHT	INR 20,000/-
Note : this shall be adjusted in bills	
Non-Refundable Registration-cum-processing fees	As per Supply Code Regulations notified by JERC
Underground service cable	
1 Phase through underground service cable	Rs.100/meter
Extra Length 1 phase for Agriculture consumer(beyond 300 meters) through underground service cable	Rs.25/meter
3 Phase through underground service cable	Rs.300/meter
Extra Length for 3Phase for Agriculture consumers (beyond 300meters) through underground service cable	Rs.100/meter
At location where overhead network exist and consumer desires to avail power through Underground service cable	Actual charges+15%

In case of bonafide agricultural pumping loads, the department shall provide overhead service lines at a free of cost upto 300 meters from the nearest distribution point i.e. existing rural transformer sub-station or from a service line already laid for supply to any other consumer, provided the latter has sufficient current carrying capacity. Any length in excess of the specified length shall be payable at a fixed cost of INR 25 / metre for single phase and INR.50/ meter for Three phase as approved under Schedule of General and Miscellaneous Charges

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Annexures

Annexure 1: List of Stakeholders

The following is the list of the participants in Public Hearings conducted on 24.1.2022 through video conferencing:

Table 97: List of participants in Public Hearing

S. No.	Name of Person (Mr/Ms)	Organization/ Address
1	Martin Rodrigues	Secretary, Raia Civic and Consumer Forum.
2	Mr. Gerard DMello	Goa Chamber of Commerce & Industry
3	Mr. Sanjay Y. Amonkar	Goa Chamber of Commerce & Industry
4	Mr. Joseph D'Souza	Goa Chamber of Commerce & Industry
5	Mr. M. Durairaj	Goa Chamber of Commerce & Industry