# Tariff Order

True-up for the FY 2022-23, Annual Performance Review for FY 2023-24, Aggregate Revenue Requirement for FY 2024-25, and Determination of Retail Tariff for FY 2024-25

**Petition No. 115/2023**

for

Electricity Department, Government of GOA (EDG)

13th June, 2024

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

| Abbreviation | Full Form |
|---|---|
| A&G | Administrative & General |
| ABR | Average Billing Rate |
| ACoS | Average Cost of Supply |
| Act | The Electricity Act, 2003 |
| APR | Annual Performance Review |
| ARR | Aggregate Revenue Requirement |
| ATE | Appellate Tribunal for 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 |
| Commission/JERC | Joint Electricity Regulatory Commission for the State of Goa and Union Territories |
| Cr | Crore |
| Discom | Distribution Company |
| DDUGJY | Deen Dayal Upadhyaya Gram Jyoti Yojana |
| DSM | Deviation Settlement Mechanism |
| DT | Distribution Transformer |
| EA 2003 | The Electricity Act, 2003 |
| EDG | Electricity Department, Govt. of Goa |
| ED | Electricity Department |
| EHT | Extra High Tension |
| ERP | Enterprise Resource Planning |
| FAR | Fixed Asset Register |
| FPPCA | Fuel and Power Purchase Cost Adjustment |
| FY | Financial Year |
| GFA | Gross Fixed Assets |
| HT | High Tension |
| IEX | Indian Energy Exchange Limited |
| RS | Indian Rupee |
| IPDS | Integrated Power Development Scheme |
| IPP | Independent Power Producer |
| ISTS | Inter-State Transmission System |
| KSEB | Kerala State Electricity Board Limited |
| LT | Low Tension |
| MOD | Merit Order Dispatch |

| Abbreviation | Full Form |
|---|---|
| MU | Million Units |
| MW | Mega Watt |
| MYT | Multi-Year Tariff |
| MCLR | Marginal Cost of funds based Lending Rate |
| NFA | Net Fixed Assets |
| NPCIL | Nuclear Power Corporation of India Limited |
| NTPC | National Thermal Power Corporation |
| O&M | Operation and Maintenance |
| PLF | Fac Plant Load factor |
| PGCIL | Power Grid Corporation of India Ltd. |
| 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 |
| REA | Regional Energy Accounting |
| RLDC | Regional Load Despatch Centre |
| RoE | Return on Equity |
| RPO | Renewable Purchase Obligation |
| RSTPS | Ramagundam Super Thermal Power Station |
| RRAS | Reserves Regulation Ancillary Services |
| SECI | Solar Energy Corporation of India |
| SERC | State Electricity Regulatory Commission |
| SLDC | State Load Dispatch Centre |
| SOP | Standard of Performance |
| SRPC | Southern Regional Power Committee |
| TAPS | Tarapur Atomic Power Station |
| 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**

**CORAM**

Shri Alok Tandon, Chairperson
Smt. Jyoti Prasad, Member (Law)
Petition No. 115/2023
Dated: 13.06.2024

**In the matter of**

Approval for the True-up for FY 2022-23, Annual Perfromance Review (APR) for FY 2023-24, Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for FY 2024-25

**And in the matter of**

Electricity Department, Government of Goa (EDG)......................**Petititioner**

**ORDER**

1. This Order is passed in respect of the Petition filed by the Electricity Department, Government of Goa (EDG) (herein after referred to as “The Petitioner” or “EDG” or “The Licensee”) for Approval of True-up for FY 2022-23, Annual Performance Review (APR) for FY 2023-24 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2024-25 before the Joint Electricity Regulatory Commission (herein after referred to as “The Commission” or “JERC”).
2. The Commission scrutinized the said Petition and generally found it in order. The Commission admitted the Petition on 18th December 2023. The Commission thereafter requisitioned further informations/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session (TVS) to determine sufficiency of data and the veracity of the informations submitted. The Public Hearing was held on 08.01.2024 at North Goa and on 09.01.2024 at South Goa and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.
3. The Commission based on the Petitioner’s submission, relevant JERC MYT Regulations, facts of the matter, Rules and provisions of the

Electricity Act, 2003 and after proper due diligence and prudence check, has approved the true-up for FY 2022-23, Annual Performance Review (APR) for FY 2023-24, Aggregate Revenue Requirement (ARR) and determination of Retail Tariff for the FY 2024-25.

4. A summary has been provided as follows.

### I. True-Up for FY 2022-23

The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2022-23:

**Table 1 Standalone Revenue Gap/ (Surplus) approved for FY 2022-23 (Rs Cr.)**

| Sr. No. | Particulars | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| 1. | Net Revenue Requirement | 2816.84 | 2835.29 |
| 2. | Revenue from Retail Sales at existing tariff | 2506.47 | 2506.47 |
| **3.** | **Net Gap /(Surplus)** | **310.37** | **328.82** |

### II. APR for FY 2023-24

The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff as submitted by the Petitioner and approved by the Commission in the APR of the FY 2023-24:

**Table 2 Standalone Revenue Gap/ (Surplus) approved for the FY 2023-24 (Rs Cr.)**

| Sr. No. | Particulars | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| 1. | Net Revenue Requirement | 3029.27 | 2636.88 |
| 2. | Revenue from Retail Sales at existing Tariff | 2795.08 | 2417.37 |
| **3.** | **Net Gap /(Surplus)** | **234.19** | **219.51** |

### III. ARR for FY 2024-25

a. The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff as submitted by the Petitioner and approved by the Commission in the ARR of the FY 2024-25:

**Table 3 Standalone Revenue Gap/ (Surplus) approved for the FY 2024-25 (Rs Cr.)**

| Sr. No. | Particulars | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| 1. | Net Revenue Requirement | 3057.54 | 2719.41 |
| 2. | Revenue from Retail Sales at existing Tariff | 2442.60 | 2510.11 |
| **3.** | **Net Gap /(Surplus)** | **614.94** | **209.31** |

b. The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at approved tariff.

c. The Petitoner has proposed a tariff hike of 3.48% in its tariff schedule of FY 2024-25.

d. The Commission has approved an average tariff hike of 3.50% to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa. The Commission has approved the Average Billing Rate (ABR) of Rs. 5.34/kWh against the approved Average Cost of Supply (ACoS) of Rs. 5.59/kWh. The Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/928 dated 11/12/2023 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 2024-25 and hence the revenue gap for FY 2024-25 has been considered as NIL.

**Table 4 Standalone Revenue Gap/ (Surplus) at approved tariff for the FY 2024-25 (Rs Cr)**

| Sr. No. | Particulars | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| 1. | Net Revenue Requirement | 3057.54 | 2719.42 |
| 2. | Revenue from Retail Sales at approved Tariff | 2527.50 | 2597.38 |
| 3. | Gap / (Surplus) for the year | 414.73 | 122.04 |
| 4. | Upfront assurance of Budgetary support from Govt | 414.73 | 122.04 |
| **5.** | **Net Revenue Gap/ (Surplus)** | **0.00** | **0.00** |

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

5. This Order shall come into force with effect from 16$^{th}$ June, 2024 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.

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

Ordered accordingly.

| | |
|---|---|
| **Sd/-** | **Sd/-** |
| **(Jyoti Prasad)** | **(Alok Tandon)** |
| **Member (Law)** | **Chairperson** |

Place: Gurugram, Haryana
Date: 13th June, 2024

# Chapter 1: Introduction

## 1.1 About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted 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, Dadra & Nagar Haveli and Daman & Diu 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 under its jurisdiction.

## 1.2 About Goa

Goa is a state on the southern 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 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 subdivions – Panaji, Mapusa and Bicholim and further into five talukas (subdistricts). South Goa is divided into five subdivisions- Ponda, Morgumao-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, Govt. 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

- 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 JERC MYT Regulations, 2021) on 22nd March 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, Dadra & Nagar and Daman & Diu Haveli and Puducherry.

## 1.5 Filing and Admission of the Present Petition

The present Petition was admitted on 18th December, 2023 and marked as Petition No. 116/2023. 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, deficiency notes were issued to the Petitioner. Further, additional information/clarifications/ justifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petition and key data gaps, which included energy sales, power purchase, capitalisation, revenue from retail tariff, tariff proposal etc. The Petitioner submitted its response on the issue through various letters/emails.

The Commission conducted the Technical Validation Session (TVS) in online mode with the Petitioner during which the discrepancies in the Petition were discussed and additional information required by the Commission were sought. Subsequently, the Petitioner submitted replies to the issues raised in these sessions 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 date:

**Table 5 Timelines of the interaction with the Petitioner**

| S. No. | Subject | Date |
|---|---|---|
| 1. | Issue of First Deficiency Note. | 05.01.2024 |
| 2. | Public hearing | 08.01.2024 & 09.01.2024 |
| 3. | Technical Validation Session (TVS) | 16.05.2024 |
| 4. | Replies received from the Petitioner with regard to 1st Discrepancy Note | 01.02.2024 |
| 5. | Issue of second Discrepancy Note | 09.04.2024 |
| 6. | Replies received from the Petitioner with regard to second Discrepancy Note | 30.04.2024 |
| 7. | Issue of queries discussed in TVS session | 15.05.2024 |
| 8. | Replies received from the Petitioner with regard to TVS queries | 17.05.2024 |

## 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.

**Table 6 Details of Public Notices published by the Commission**

| Sr. No. | Date | | Name of News Paper | Language | Place of Circulation |
|---|---|---|---|---|---|
| | Public Notice 1 | Public Notice 2 | | | |
| 1. | 20.12.2023 | 06.01.2024 | Gomantak | Marathi | Goa |
| 2. | | | The Times of India | English | Goa |
| 3. | | | The Navhind times | English | Goa |
| 4. | | | Tarun Bharat | Marathi | Goa |

The Public Notice regarding ARR and tariff for FY 2024-25 was published by the Petitioner in the following newspapers for inviting objections/ suggestions/comments from the stakeholders/public/electricity consumers on the Tariff Petition:

**Table 7 Details of Public Notices published by the Petitioner**

| Sr. No. | Date | Name of News Paper | Language | Place of Circulation |
|---|---|---|---|---|
| 1. | 23.12.2023 | The Navhind times | English | Goa |
| 2. | | The Times of India | English | Goa |
| 3. | | Gomantak | Marathi | Goa |
| 4. | 24.12.2023 | Bhaangar Bhuin | Konkani | Goa |

## 1.8 Public Hearing

The Public Hearing was held on 08.01.2024 at North Goa and 09.01.2024 at South Goa to obtain comments/ suggestions of the stakeholders, 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.

## 1.9 Adherence to the Model Code of Conduct

The Commission has noted that in view of the General Elections 2024, the Model Code of Conduct (MCC) was imposed by the Election Commission of India. The MCC was effective from 16.03.2024 to 06.06.2024.

Therefore, in view of enforcement of Model Code of Conduct, the Commission decided to issue the tariff order once the Model Code of Conduct is over.

# CHAPTER 2: Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's View

## 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 "JERC MYT Regulations, 2021". The Public Hearing was held on 08.01.2024 at North Goa and 09.01.2024 at South Goa to discuss the issues if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders/public 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 Hearings is provided in Annexure-I of this order.

## 2.2. Suggestions/ Objections of the stakeholders Response of the Petitioner and Commission's Views

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/ observations to make the electricity Distribution Sector responsive and efficient. The 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. Appreciation

**Stakeholder's Comment:**

Goa Chamber of Commerce and Industries (GCCI) thanks and appreciates the Hon'ble Chief minister and the Hon'ble Power Minister for continued support by funding the revenue gap. GCCI thanks and appreciates the Hon'ble Commission, for timely publishing the tariff orders. GCCI thanks and appreciates the Power Secretary and the Chief Electrical Engineer for filing the tariff petition on time for the first time.

**Petitioner's Response:**

The Electricity Department of Goa (EDG) appreciates the commendation extended by the Goa Chamber of Commerce and Industries (GCCI).

**Commission's View:**

The Commission has noted the submission.

### 2.2.2 Tariff Hike

**Stakeholder's Comment:**

Goa's economy stands at the threshold of collapse. Mining operations have ceased due to low global demand. Tourist destinations like Kerala, Himachal have taken steps and are more competitive than Goa. The Electricity tariff for Industries being higher than Gujarat, Goan Industries will not be able to compete with them in manufacturing. The proposed increases, as outlined in the Annexure of Tariff Petition for FY 2024-25 and set to be implemented from April 1, will significantly impact household finances in Goa and negatively affect the state's economy. The tariff hike for the low-tension domestic category, which includes substantial increases across various units consumed, is particularly concerning. For instance, the per-unit cost hike from Rs 1.75 to Rs 1.88 for 0-100 units, and similar increases for higher slabs, will impose a heavy burden on families, especially those with limited incomes. This escalation in costs will not only strain household budgets but also reduce disposable income, leading to a decrease in consumer spending - a vital driver of our local economy. Moreover, the proposed hike in energy charges for commercial, industrial, hotel industries, and agricultural categories, along with public lighting, hoardings, signboards, and electric vehicle charging stations, will inflate operational costs for businesses. This could lead to higher prices for goods and services, affecting all consumers and potentially slowing down economic growth in the state. The proposed revision of tariff will strangle the Goan populace which is largely the lower- or middle-class dependant on their salaries for their livelihood and children's education especially given the fact that cost of everything is spiralling upwards every given day. On behalf of the power consumers of Margao in particular, and Goa in general, we wish to file our strong objection to the proposed hike in power tariffs.

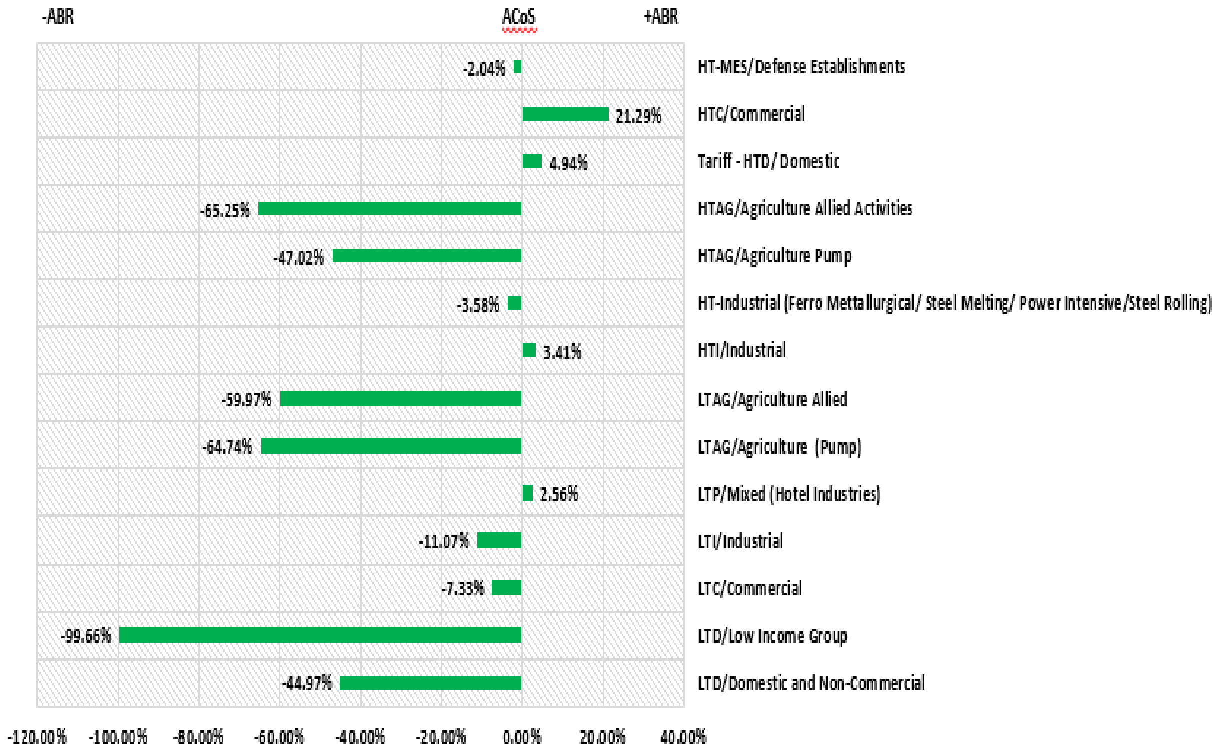
**Petitioner's Response:**

EDG submits that the state of Goa does not have its own power generation and is mainly dependent on the centrally allocated power though NTPC and NPCIL stations. Also, the balance power is procured through short-term power arrangements and open market. Almost 70% to 80% of the cost is directly associated with the purchase of power which becomes uncontrollable factor.

Further, the state like Gujarat has its own generation capacity and also has the highest solar rooftop power generation amongst all states. Hence, for a small state like Goa which is mainly dependent on tourism, can hardly compete with Gujarat which has more resources. However, Goa is focussing on promoting solar rooftop power generation so that the power purchase can be reduced and the state's resources can be utilised efficiently. The state of Goa has come up with solar subsidy scheme for rooftop solar domestic installations to promote Rooftop generation.

EDG submits that in the state of Goa, the LT consumers are heavily subsidized. The Average Cost of Supply (ACoS) for EDG to consumers for FY 2022-23 is Rs. 5.68 per unit. However, the Average Billing rate for Domestic consumers is just Rs. 2.87 per unit. That means for every unit supplied to domestic customers, EDG is losing Rs. 2.81. Further, in accordance with the regulation Section 8.3 (2) of the Tariff Policy 2016 the EDG is determined in bringing the Average Billing Rate within the ±20% limit by gradually increasing the tariff rates against the Average Cost of Supply.

Hence to bring balance between subsidized and subsidizing consumer, EDG has proposed this marginal hike of 3.48% in the Tariff rate for the LT consumers to the Hon'ble commission.



EDG faces a substantial surge in peak demand, especially from HT and Industrial consumers between 6:00 PM to 11:00 PM. Further, in spite of the peak period tariff rates being 120% of the normal rates for HT consumers, there was not much effect on the load consumption during peak hours. In addition the peak duration has been increased from 4 hours to 6 hours resulting into more costly power purchase. The cost of power during these peak hours is almost Rs. 10/unit in the Open Market. Keeping this in view, the ToD slab rate for the Peak hours has been proposed to increase from 120% to 140%. It is anticipated that this will shift the industrial consumer's load into other time slabs and help flatten the load curve and also reduce the peak power purchase costs. However, the Government of Goa provides the Budgetary support every financial year so that the revenue gap is partially bridged and ensures that the entire revenue gap is not passed on to the consumers of Goa in the form of additional tariff hike which can result in tariff shock to the consumers.

The Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by EDG. EDG submits that, the department is working swiftly to provide 24x7 power supply to its consumers in the State of Goa. Overhead lines are being converted to Underground lines to avert the unnecessary power cuts and power outages due to faults and other reasons. System Strengthening works are in progress to meet the existing and upcoming demand of the state.

The department is constantly working on replacing the old and worn out electrical lines to provide uninterrupted supply of electricity to its consumers. The new connections to the potential consumers are provided only after giving the load approval and doing proper inspection of the site.

EDG submits that the department inspects the cases of illegal use of electricity on complaints received and takes necessary action by penalising such consumers and also change the category of the consumer to commercial connection if any domestic consumer misuses their connection for commercial use.

As regards to Electric vehicles, the department has been increasing the number of charging stations all around the state. However, some consumers use the domestic connection to charge their EVs which is difficult to locate. The department shall work on rectifying the same.

Further, to maintain the power quality and stable voltage, new transformers and sub-stations of increased capacity are being built at various locations in the state. EDG has taken the note on compensation towards the power failure and equipment damage and will work on providing compensation for the same.

**Commission's View:**

The Commission has noted the concern of the stakeholders and reply submitted the Petitioner. The Petitioner mentioned about sources of supply and steps taken to reduce the cost of power purchase. The Commission has reviewed the power procurement plan submitted by the Petitioner. The Commission has derived the power purchase requirement as per approved loss level only. For approving the power purchase cost, the Commission has followed merit order despatch principle, so that power purchase cost is optimized. In addition, for CGS projects, the recent bills are considered, the tariff of which are determined by CERC only. However, for APR of FY 2023-24, the Petitioner has mentioned about high-cost purchase from exchange to meet the peak demand. The same will be reviewed during true-up of FY 2023-24 from the perspective of its necessity and discovered market cost. The Commission makes it clear that for meeting RPO target, the Petitioner can purchase power from RE projects, REC or through exchange. It is totally prerogative of the Petitioner to plan for purchasing RE power from exchange or REC for meeting the RPO target and if Petitioner is willing to purchase RE power from exchange they can do it, after doing a proper cost-benefit analysis.

### 2.2.3 Proposed Tariff Hike

**Stakeholder's Comment:**

The increase in power purchase cost is more than 11%. Such an increase was not noticed during any of the previous ten years. Most of other utilities in this country and under the control of JERC have not shown such increase in power purchase cost. Cost of power upto 650 MW has not increased much. (Cost of power with long term power purchase contracts). As a result of the above, substantial increase in tariff has been proposed for LT Domestic, LT commercial and LT Industrial consumers in FY 2024-25. Tariff upward revision for consumers whose consumption is above 400 units is in the order of 11% to 14%.

ED-Goa has ceased to be efficient in power purchase and in containing expenses. The attitude that all costs of inefficiency can be quietly passed on to the poor consumer, will be dangerous for the people of Goa in the long run. Why the tariff should be revised for domestic consumers using up to 100 units of electricity per month given the fact that in Delhi and Punjab those using 100 units of electricity per month are not even given any bill and hence get it free.

**Petitioner's Response**

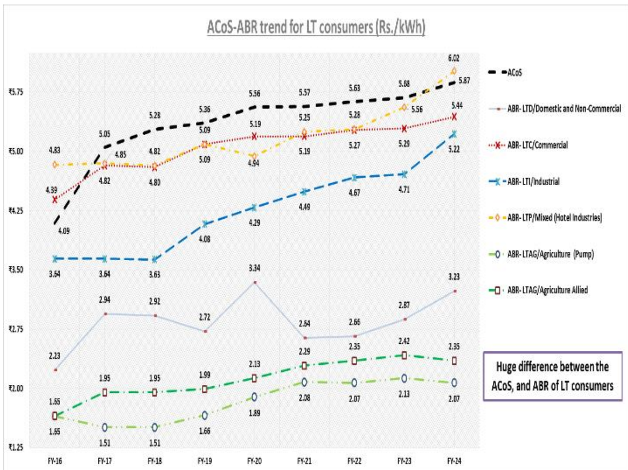
EDG submits that, In FY 2023-24, peak power demand hit 780 MW in June, with only 526.12 MW allocated to Goa from Central Generating Stations. To ensure a dependable power supply to the people of Goa particularly during peak demand period, EDG purchases power from the short-term open market at elevated rates. Peak prices in the exchange are high upto Rs. 10.00 /Kwh.

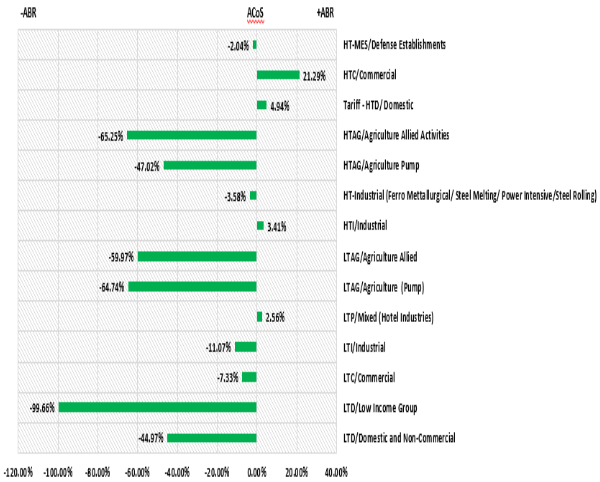
Further, meeting the renewable purchase obligation (RPO) mandated by Hon'ble Commission requires EDG to procure renewable power from the short term market or Green Term Ahead Market (GTAM) at rates between Rs.5.00 to 6.00/Kwh. Eventually, these conditions results in high power purchase cost.

Further, as stated in the comment regarding the increase in expenses, EDG submits that almost 80% of the ARR comprises of the power purchase cost and almost 15% comprises of Employee Expenses which are necessary and uncontrollable factors.

EDG submits that in the state of Goa, the LT consumers are heavily subsidized. The Average Cost of Supply (ACoS) for EDG to consumers for FY 2022-23 is Rs. 5.68 per unit. However, the Average Billing rate for Domestic consumers is just Rs. 2.87 per unit. That means for every unit supplied to domestic customers, EDG is losing Rs. 2.81. Further, in accordance with the regulation Section 8.3 (2) of the Tariff Policy 2016 the EDG is determined in bringing the Average Billing Rate within the ±20% limit by gradually increasing the tariff rates against the Average Cost of Supply.

Hence to bring balance between subsidized and subsidizing consumer, EDG has proposed this marginal hike of 3.48% in the Tariff rate for the LT consumers to the Hon'ble commission.



Further, for efficient power procurement, EDG procures almost 70% power requirement from the Central Generating Stations (CGS) at rates comparatively lower than the open market. Also, whenever feasible, Department carries out Banking (Power Swap) transactions through CERC approved traders wherein the power is supplied to the needy utility during low demand or surplus regime and this power is taken back during peak hours or high demand regime. This in turn saves high power purchase cost which otherwise would get passed on to the consumer in the form of hike in tariff. EDG submits that the increase in the tariff rates proposed is very modest as compared to the other states. Goa's current tariff rate for LT-Domestic consumers using up to 100 units of electricity is Rs. 1.75 per unit and is proposed to escalate to Rs. 1.88 per unit. Below table shows the comparison of Goa's tariff rates with other states:

| **State** | | **Energy Charge for consumption up to 100 units (Rs. /unit)** | |
|---|---|---|---|
| Name | Population (Nos.) | FY 2022-23 | FY 2023-24 |
| Maharashtra | 126,385,000 | 3.36 | 4.41 |
| Kerala | 35,776,000 | 3.15 (0-50 units),<br>3.95 (51-100 units) | 3.25 (0-50 units),<br>4.05 (51-100 units) |
| Uttarakhand | 11,637,000 | 2.90 | 3.15/kWh |
| Puducherry | 1,646,000 | 1.90 | 2.25 |

Further, the government of Goa provides Budgetary support in order to partially bridge the revenue gap which in turn is not passed on to the consumers in the form of tariff hike. The benefit of this budgetary support is gained by all the categories of consumers.

**Commission's Response**

The Commission has noted the concern of the stakeholders and reply submitted the Petitioner. The Petitioner mentioned about sources of supply and steps taken to reduce the cost of power purchase. The Commission has reviewed the power procurement plan submitted by the Petitioner. The Commission has derived the power purchase requirement as per approved loss level only. For approving the power purchase cost, the Commission has followed merit order principle, so that power purchase cost is optimized. In addition, for CGS projects, the recent bills are considered the tariff of which are determined for them by CERC only. However, for APR of FY 2023-24, the Petitioner has mentioned about high-cost purchase from exchange to meet the peak demand. The same will be reviewed during true-up of FY 2023-24 from the perspective of its necessity and discovered market cost. The Commission makes it clear that for meeting RPO target, the Petitioner can purchase power from RE projects, REC or through exchange. It is totally prerogative of the Petitioner to plan for purchasing RE power from exchange or REC for meeting the RPO target and if Petitioner is willing to purchase RE power from exchange they can do it, after doing a proper cost-benefit analysis.

### 2.2.4 TOD Tariff

**Stakeholder's Comment:**

TOD tariff is meant to flatten the load curve, by encouraging consumers to avoid drawing power during the peak load period, and to draw power during the Off-peak hours. Goa has adopted ToD billing for HT consumers for many years. A review indicates that there is no change in consumer behaviour and in the load curve. Goa, being a tourist destination, power will be required during the peak hours, and the change in load pattern is not feasible. For Industries too, the lack of suitable public transport makes it impossible to shift the work timings.

Effectively this means that some consumers are forced to pay 120% of the declared power rate, in order to survive. In the case of a continuous process consumer, whose load curve is flat, the power tariff is 1.01 times the declared value. The effective rate = (off peak rate * off peak hours + peak rate * peak hours + normal rate * normal hours) /24

When we calculate the effective rate = (0.9*8+1.2*5 +1*11)/24= (7.2+6+11)/24 = 24.2/24 = 1.0083 Effective energy charges for HT Industrial = 4.95 * 1.0083 = nearly Rs 5.00/kvah. This is a back door entry (increase in tariff) This anomaly may please be rectified. Also, kindly do not extend TOD tariff to LT consumers having demand >10 KW, as per national tariff policy.

**Petitioner's Response**

The Ministry of Power (MoP) has notified Electricity (Rights of Consumers) Amendment Rules 2023 dated 14th June, 2023. As per the amendment, the time of day (ToD) tariff for commercial and industrial consumers having maximum demand more than 10 kW will be made effective from a date not later than April 1, 2024 and for other consumers except agricultural consumers, the ToD tariff shall be made effective not later than April 1, 2025. Further, ToD tariff shall be made effective immediately after installation of smart meters, for the consumers with smart meters. EDG submits that currently, ToD tariff is mandatory for HT/EHT consumers and shall be optional for LT industrial and commercial consumers. Further, in spite of the peak period tariff rates being 120% of the normal rates for HT consumers, there was not much effect on the load consumption during peak hours. In addition the peak duration has been increased from 4 hours to 6 hours resulting into more costly power purchase. The cost of power during these peak hours is almost Rs. 10/unit in the Open Market. Keeping this in view, the ToD slab rate for the Peak hours has been proposed to increase from 120% to 140%. It is anticipated that this will shift the industrial consumer's load into other time slabs and help flatten the load curve and also reduce the peak power purchase costs.

**Commission's Response**

As submitted by the stakeholder, the Commission has introduced the ToD tariff long back. The intention of ToD tariff is well established and it is helpful for all stakeholders. The stakeholders know the ToD tariff and hence are open to adopt any changes they are willing to do to reduce their electricity bills. It is not right to say that ToD tariff will increase the tariff. The Commission has designed an appropriate ToD tariff and the details are provided under the Tariff design chapter. The applicability of ToD tariff is also mentioned by the Commission.

### 2.2.5 kVAh based Tariff

**Stakeholder's Comment:**

KVAh based tariff was introduced in Goa four years ago. This has only resulted in increase of tariff to high value consumers by 5 to 7 %. In India, there are many states which continue to bill on KWH basis. Gujarat is one such state. Our request is to revert back to KWH based billing.

**Petitioner's Response**

EDG submits that, in compliance to the directives of the Commission, the proposal for kVAh based Tariff for all HT/EHT categories were implemented from FY 2021-22 onwards. The kVAh tariff ensures the consumer to maintain the disciplined power factor by installing the capacitor banks thereby benefiting by way of paying less energy charges as compared to others who are not maintaining the power factor. Moreover, under kVAh billing, the EDG does not have to buy the additional power in order to compensate for the reactive power which goes unaccounted.

KVAh billing holds significant importance, especially considering the evolving landscape of energy consumption. In the past, incentives were provided to maintain the Power Factor (PF). However, with the increasing demand and limitations in infrastructure expansion, maximizing line capacity becomes crucial. The equipment's, including induction motors and appliances, necessitates a certain reactive power, which is essential for operation especially for Medium and Heavy industries. Therefore, KVAh billing becomes essential for optimizing capacity usage under current constraints.

**Commission's Response**

The Commission has noted the concern of the stakeholder. It is noted that the Petitioner has clearly mentioned about importance of kVAh based tariff. The Commission has also introduced the same after detailed analysis.

### 2.2.6 Distribution Inefficiency

**Stakeholder's Comment:**

Distribution Efficiency refers to distribution losses, and ability of the network to deliver power to consumers seamlessly. Identification of low efficiency areas are of priority. Billing is being carried out using SAP, transformer centers are metered, and service to every consumer is from a numbered pole.

The distribution losses indicated in the tariff filing is without any supporting document. Our submission is that ED-Goa may identify high distribution loss areas and peak load restriction areas. It will benefit consumers as well as ED-Goa.

**Petitioner's Response**

EDG submits that, the department is working on loss reduction and system strengthening by diligently employing various techniques under the RDSS scheme which will mitigate distribution losses. The work included underground cabling, enhancing transformer capacity efficiency, upgradation of old infrastructure etc.

The department has successfully reduced the distribution loss from 8% to 7%. However, the department shall work on further towards reducing the losses.

**Commission's Response**

The Commission has noted the submissions of stakeholders and Petitioner's.

### 2.2.7 Mismanagement of Metering System

**Stakeholder's Comment:**

The stakeholder has submitted that many of these meters are not working or connectivity is poor. Hence the intended benefits are not being accrued to ED-Goa and to the Consumers. Many of the Consumers' complaints relate to metering. This is due to ED-Goa not adhering to periodic testing of meters as stipulated in the regulations. The tariff filing also does not reflect whether ED-Goa is carrying out periodic meter testing as per regulations. The Regulations provide for engaging private labs and Engineers for this activity. Government Installations and substations of ED-Goa need to be tested on priority.

Honourable Commission may please direct ED-Goa to develop a Meter and Metering Management Manual. If required, ED-Goa may rope in private entities as provided in the relevant Act and Regulations.

This is a priority issue which needs to be addressed before installing Smart Meters.

**Petitioner's Response**

EDG submits that department is identifying such meter boxes and needful action is being taken up. Further, the EDG acknowledges the suggestion for Meter and metering management manual and will act suitably in this issue.

**Commission's Response**

The Commission noted the concern of the stakeholders and response of Petitioner's. The Commission directs the Petitioner to follow the provisions regarding periodic meter testing without any deviation.

### 2.2.8 Unsafe Construction Practices

**Stakeholder's Comment:**

With a view to improve reliability and to cater for additional load ED-Goa is undertaking several capital works, which is a welcome step. But these works are being executed without complying with safety Regulations, IS Code of Practice, etc. With this, the intended improvement is unlikely to be achieved.

Our purpose is not to highlight defective design and hazardous manner of execution. It will be obvious to any person walking in Goa. The Institutions of Electrical Inspector, Design and Quality Improvement Cell of ED-Goa may be strengthened. If need be, Private Qualified Engineers may be authorised, as per Government of India Policy. Such authorised supervisors are functioning effectively in neighbouring states.

**Petitioner's Response**

EDG submits that any capital work taken up by the EDG is carefully monitored and supervised by the departmental authorities and all the safety measures are taken into consideration.

**Commission's Response**

The Commission has noted the submission

### 2.2.9 Poor Quality and Low Reliability of Power Supply

**Stakeholder's Comment:**

The quality and reliability of power supply is much below as compared to major cities like Mumbai and Delhi or smaller towns like Hubli, Kolhapur, etc. The data on ED-Goa website is only partial as it does not state when power was restored after a power failure to all the consumers in a feeder. Only partial (incomplete) data of outages are available in the website. It is suggested that ED-Goa should install automated sectionalizes, so that

automatic sectionalising takes pace thus reducing down time and date and time of operation is recorded. Formation of mini-grids, with BESS or taking advantage of waste heat recovery Generating stations at Amona will enhance reliability and quality of power supply.

**Petitioner's Response**

EDG submits that department is working on adding new features and giving details report on the official website. Whereas, the use of sectionalized in overhead line are not required as now the department has taken up underground cabling works in various areas.

**Commission's Response**

The Commission has noted the submission of the Stakeholder and welcome the suggestion given by the Stakeholder. The Petitioner may plan towards mini-grid, BESS and waste heat recovery projects, as per the requirement.

### 2.2.10 Inadequacy of Peak Power

**Stakeholder's Comment:**

ED-Goa does not have sustainable long-term contracts for purchase of peak power. There exists peak power shortage of 120 to 150 MW. Presently ED-Goa sources peak power from exchanges. It imposes peak power restrictions on rate-paying Industrial Consumers. In 2021 when the price of power on the exchange sky-rocketed, Industrial consumers had to step in and agree to pay additional tariff of Rs 1.20 per unit, over and above the tariff determined by the Commission. We request that ED-Goa may be directed to explore all avenues (such as Pumped Hydro Electric Generation, BESS, open tender, etc.) for procuring peak power.

**Petitioner's Response**

EDG submits that, the department has already signed a long-term PPA with Solar Energy Corporation of India (SECI) for procurement of 150 MW hybrid power (Wind-Solar and BESS) and it is anticipated that the partial procurement of power will commence from March, 2024 onwards which can fulfil the peak hour power requirements. Further, EDG is looking forward to explore all avenues for generation of hydroelectric power and work has been taken by the department of Water Resource Development for feasibility of dam construction. Also, EDG has tied up through open market for purchase of additional power to cater to summer requirements. Banking of power transaction is also tied up.

**Commission's Response**

The Commission has noted the steps taken by the Petitioner to meet the peak load.

### 2.2.11 Delay in forming District Committee

**Stakeholder's Comment:**

The stakeholder has submitted that as per Section 166 (5) of IE Act 2003 provides that District Committees will be formed. Even after a lapse of 20 years such a committee has not been formed in Goa. One of the responsibilities of this committee is to review the quality of power. Priority and essential services like Goa Medical College, District Hospitals, Fire Services, etc., can be identified and supplied with improved reliable power.

**Petitioner's Response**

EDG submits that district committees does not come under the EDG's jurisdiction.

**Commission's Response**

The Commission has noted the submission of the stakeholders.

### 2.2.12 Fatal Incidents

**Stakeholder's Comment:**

The Consumers are facing hardships to get uninterrupted Power Supply. There are almost 60 Human Deaths in last four years including the deaths of Staff of Electricity Department and almost 50 Animals have died due to Electrocution. The Employees of the Electricity Department are not provided with proper Training, Safety Equipment's and Gadgets, Vehicles etc. resulting in development of Fatigue among the Workers and Accidental Deaths. The Junction Boxes, Transformers and Electrical Wires are left exposed at various Public Places including Market Areas endangering the Lives of Humans and Animals.

**Petitioner's Response**

EDG submits that the department provides all the necessary safety equipment to all their employees working on electrical lines. However, negligence at individual levels and overconfidence for not using the personal protective equipment (PPEs) while working on electrical line causes accidents in spite of having all the proper training on safety. EDG has provided extensive training sessions to all of their staffs working on lines.

EDG identifies any defaults in the Junction Boxes, Transformers or Electrical Wires during routine checks on a periodic basis and also when complaints are received. Necessary actions are taken as per the requirement to sort out any discrepancy and maintain the safety protocols. Further, EDG is still willing to further improve on maintaining the safety measures and take prompt actions on any issue pertaining to repair and maintenance. However, in regards to animal deaths, when lightning strikes a power line, the current seeks the path of least resistance, often grounding itself. Tragically, animals in the vicinity become unwitting victims of this natural phenomenon. While humans bear responsibility for electrical safety measures, the inherent behaviour of animals also plays a role in such incidents during lightning strikes. Also, in the ignorance of electrical principles, animals may inadvertently approach live wires, leading to fatal consequences.

**Commission's Response**

The Commission has noted the concern of the stakeholders and reply submitted the Petitioner.

### 2.2.13 Outstanding Dues

**Stakeholder's Comment:**

The Government has completely failed in recovering the Outstanding Dues from Defaulters of Industrial Consumers, Commercial Establishments and Government Officials. The information provided to me in the Reply to my Legislative Assembly Question reveals that one of the Offices of the Electricity Department has Outstanding Dues of almost Rs. 16 Lakhs. The Arrears are pending for more than three to four years and also demand that those who do not pay their bills for long periods that proceedings be held to recover the amount by attaching their assets etc. but the law-abiding consumers not be taxed to recover the non-payments by such erring consumers. Similarly, an audit of all large commercial establishments who err in payment be also identified and such proceedings be held.

**Petitioner's Response**

EDG is diligently working on recovering the outstanding dues. However, EDG would like to point out that the dues have no relevance or connection with the ARR since the calculations are done as per the billed unit basis. Further, as regards to the outstanding dues of almost Rs. 16 lakhs of departmental employee, EDG has taken efforts in finding out the defaulters, but even after pursuance with the stakeholder, the information is not provided by him as on date.

EDG submits that, efforts are continuously on to recover the arrears from the defaulters. However, arrears are not linked to tariff hike since the defaulted amount/arrears are not included in the revenue of the year for which the tariff is determined. i.e., for determination of tariff for FY 2024-25, the arrears are not included in the revenue projected. Further, even if arrears are made zero it won't have any link to the revenue gap. Hence, the revenue gap is not inclusive of arrears.

**Commission's Response**

The Commission has noted the submissions of stakeholders and Petitioner's.

### 2.2.14 New & Renewable Energy

**Stakeholder's Comment:**

The Government has also failed in switching over to New & Renewable Energy such as Solar Power in the State and also demand that the government work towards the use of renewable energy and create incentives for domestic users to make it viable to use renewable resources.

**Petitioner's Response**

EDG submits that in the state of Goa, efforts are being done to promote and incentivise the use of renewable energy by adopting to solar rooftop for power generation, and promoting biogas plant. Further, EDG is looking forward to explore all avenues for generation of hydroelectric power and work has been taken by the department of Water Resource Development for feasibility of dam construction. Also, Goa is encouraging private developers to invest in the solar power plant projects through Goa State Solar Policy -2017 and its amendments. EDG is also promoting PM KUSUM scheme which will assist the farmers in setting up grid-connected solar plants of individual capacity ranging between 500 kW to 2MW under Component-A and Standalone Solar pumps under Component-B. Also, Goa is focussing on promoting solar rooftop power generation so that the power purchase can be reduced and the state's resources can be utilised efficiently. The state of Goa has come up with solar subsidy scheme for rooftop solar domestic installations to promote Rooftop generation.

EDG has taken the note of the stakeholder's comment regarding the use of renewable energy. Efforts are being done to promote and incentivise the use of renewable energy by adopting to solar power generation and promoting biogas plant. Also, Goa is focussing on promoting solar rooftop power generation so that the power purchase can be reduced and the state's resources can be utilised efficiently. The state of Goa has come up with solar subsidy scheme for rooftop solar domestic installations to promote Rooftop generation.

**Commission's Response**

The Commission has noted the submissions of stakeholders and Petitioner's.

### 2.2.15 Al/ML powered Analytics Technologies

**Stakeholder's Comment:**

The stakeholders have submitted that the extent to which Al/ML powered Analytics Technologies are being employed to tackle critical issues such as Theft Detection, AT&C Loss reduction, Demand Forecasting, Renewable Generation Forecasting, Fraud detection in Procurement, Predictive Asset Analytics, Smart Meter analytics, Customer Complaints Analytics, Network Data Analytics, KPI monitoring, etc. In light of the increasing complexities in the power sector, leveraging advanced analytics seems imperative for GED to enhance operational efficiency, reduce losses, and improve overall performance. It would be valuable to know whether analytics technologies are being utilized uniformly across different departments within GED or if there are plans to expand their usage.

**Petitioner's Response**

EDG submits that the department has undertaken the Central Government RDSS Scheme.

The scheme has the following components: Part A – Financial support for Prepaid Smart Metering & System Metering and up-gradation of the Distribution Infrastructure. Part B – Training & Capacity Building and other Enabling & Supporting Activities. Under this scheme, the upgradation of SCADA system, cabling connection, infra development, and modernization is being undertaken by the state of Goa. Also, the department has been sanctioned with 750356 Prepaid Smart meters under the Central Government's RDSS scheme. Some of the salient features of the scheme are as below: Prepaid Smart metering and system metering are proposed to be implemented through PPP on TOTEX (CAPEX+OPEX) mode.

Part A of the scheme also provides financial assistance to DISCOMs for infrastructure creation and undertaking reforms to achieve the desired results towards improvement in operational efficiency and financial sustainability. Provision of feeder segregation for unsegregated feeders. Thereafter these feeders are to be solarized under KUSUM – leading to cheap/ free daytime power for irrigation. The agency implementing the RDSS program in the state has the Al/ML powered Analytics Technologies in their scope of work. EDG appreciates and acknowledges the suggestions of the stakeholder and is keen on working to improve the department. Further, EDG has implemented SAP system to track the department's data more efficiently. Also, the Planning department is constantly working with advance data modelling in consultation with private entities. EDG is also exploring the feasibility of Energy Portfolio Management (EPM) in which AI/ML analytics technologies are used for load forecasting (Weekly/monthly/yearly/seasonal) and study optimizing the purchase of power of the state.

EDG has taken a note in regards to the Centre of Excellence (COE) and will further look into the feasibility of implementing it.

**Commission's Response**

The submission of the stakeholder is well appreciated. As mentioned by the Petitioner, EDG should explore the feasibility of Energy Portfolio Management (EPM) in which AI/ML analytics technologies are used for load forecasting (Weekly/monthly/yearly/seasonal).

### 2.2.16 Re- Schedule tariff of LT Agriculture consumers

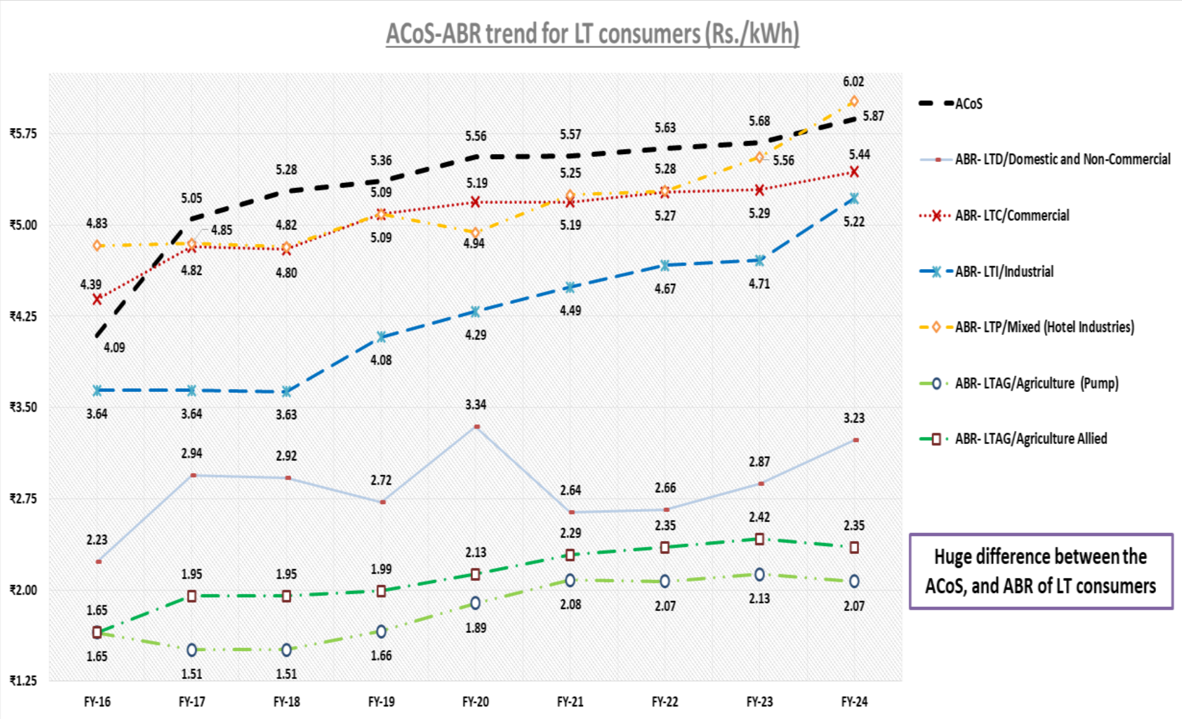
**Stakeholder's Comment:**

The stakeholders have submitted that Agriculture Faculty in order to save their Agriculture Activities as it is very uncertain able. It is requested to roll back the tariff for LT Agriculture consumers to Rs 1/- and give relief to this agriculture sector. Agriculture is on the decline in Goa because of various reasons with the most important factor being that it is very expensive in comparison to the returns. If the power tariff is increased in the agriculture sector also, the very few farmers who use it to irrigate their farms will stop agriculture altogether and this will result in severely affecting our state economy.

**Petitioner's Response**

EDG submits that, the Fixed charges of the LT agriculture category has been kept the same as approved by the Hon'ble Commission in its Tariff Order dated 30th March, 2023 whereas the Energy charge has been escalated by a mere 5 paisa (LT-AGP Pump Sets/Irrigation) and 10 paisa (LT-AG Allied Activities). Further, in accordance with the regulation Section 8.3 (2) of the Tariff Policy 2016 the EDG is determined in bringing the Average Billing Rate within the ±20% limit by gradually increasing the tariff rates against the Average Cost of Supply. Since the agriculture sector is highly subsidised, EDG is obligated to gradually bring its tariff towards ±20% of the Average Cost of Supply (ACoS).

Further, the Agriculture tariff in the state has the lowest tariff slab. However, the department does not have the authority to reduce the agriculture tariff to Nil.




**Commission's Response**

has noted the submissions of stakeholders and Petitioner's and has dealt in chapter 6 of this order. The Agricultural tariff is determined based on approved ACoS for FY 2024-25. The Commission keeps a balance between consumer and Utility, while finalizing the tariff.

### 2.2.17 Misuse of Domestic connections for Commercial purposes

**Stakeholder's Comment:**

Domestic connections are used for commercial uses. It is found that most of the vendors of ice cream carts all along the coast charge their carts at private residential homes. Multiple Freezers maintained in their residential rented premises near the beaches and in public spaces in municipal and village areas are used to store ice-creams and other products for sale.

**Petitioner's Response**

EDG submits that the department inspects the cases of illegal use of electricity on complaints received and takes necessary action by penalising such consumers and also change the category of the consumer to commercial connection if any domestic consumer misuses their connection for commercial use.

**Commission's Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.18 Illegal Electrical connections

**Stakeholder's Comment:**

All road side stalls have to be inspected for pilferage as it is often found that these stalls use electricity directly from overhead lines or are connected to domestic meter in the vicinity. Illegally set up stalls/eateries etc which have no NOC's from Panchayats/Municipal permissions in connivance with the local electricians pilfer electricity directly from the mainline.

**Petitioner's Response**

EDG submits that the department is working on converting the overhead lines into underground cabling. This will reduce the pilferage done by any consumers. Further, if any complaint is received of such misuse of electricity, the consumer is penalised and necessary action is taken.

EDG submits that regarding the illegal stalls/eateries using electrical connections illegally, the department inspects such cases on complaints received and takes necessary action by penalising such consumers.

**Commission's Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.19 Power Failures due to Electrical breakdowns

**Stakeholder's Comment:**

The use of sub-standard electrical equipment/ parts like jumpers/conductors etc are the cause of constant electrical breakdowns. Faulty parts in the Transformers are the cause of frequent breaks in electricity/ power outages. Due to severe outages often expensive electronic and electric equipment's are damaged beyond repair causing severe economic losses. Many poles are old and in dilapidated condition risking lives of citizens.

**Petitioner's Response**

EDG submits that the department gives works to 3rd party contractors, however EDG will put in stringent norms for the improved quality of the equipment's. EDG is constantly working on replacing the old and worn-out equipment's for system strengthening to reduce the number of electrical breakdowns. Also, the department is focused on converting the existing overhead lines into underground cabling system which will further reduce the event of power failures or breakdowns. EDG submits that, the department is constantly working on replacing the old and worn-out transformers and also new sub-stations are planned for system strengthening. Further, frequent maintenance of the transformers is performed to ensure smooth functioning of the power system.

EDG has taken the note of the stakeholder’s comment and is constantly working on improving the power system and power quality by building new substations at various locations throughout the state. Also, efforts are made to educate the consumers through awareness programs on safety measures. EDG submits that, the department is constantly working on replacing/repairing the old or damaged electrical poles from time to time when the complaints are received from the citizens or whenever damaged poles are inspected.

**Commission’s Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.20 Underground Cabling

**Stakeholder’s Comment:**

Underground cables are laid but not yet charged in many places. Low tension line underground cables must also be laid as the domestic users are the worst affected. All domestic users do not have the economic strength to purchase inverters. Underground Cabling in Coastal areas are a must. Unnecessarily trees are cut down with an excuse that the branches are causing tripping of lines. Until underground cables are laid all the poles should be of a height that does not interfere with traffic as it is often found that when goods trucks and interstate buses pass the wires are broken.

The underground cabling work carried out in Madkai, Goa is at substandard level. Several times complaints have been raised that the contractors working for underground cabling are using unauthorized electricity. If the contractors of the department are stealing the electricity, then how will the department work efficiently? The burden of the energy theft done by such contractors are passed on to the honest consumers of Goa. The EDG should look into this matter and act quickly on it.

Various defaulters from government offices, industrial sector, commercial establishments, and also the EDG itself owns Rs. 15.49 lakhs towards power consumption charges to the government. This should be resolved.

The street lighting consumption payment should be equally distributed among the consumers and not according to the consumption.

There is a very poor awareness of Solar Programs among the consumers. GEDA should have awareness program at the village level.

The underground cabling is causing disruption of other lines like BSNL connections.

**Petitioner's Response**

EDG submits that the department has to undergo due procedures before charging the underground cables to ensure smooth functioning of the power system and safety of the consumers. EDG submits that the underground cabling infrastructure is provided for all the consumers in the vicinity where the projects are carried out.

EDG is working on expanding the network of underground cabling throughout the state. EDG has taken the note of the stakeholder's comment regarding the pole's height. However, the poles are laid down by following the standard procedures of the department.

EDG submits that whenever contractors need temporary power supply, the department provide separate meter to them under the category of temporary connection.

Goa is focussing on promoting solar rooftop power generation so that the power purchase can be reduced and the state's resources can be utilised efficiently. The state of Goa has come up with solar subsidy scheme for rooftop solar domestic installations to promote Rooftop generation.

EDG submits that the department shall look into the applications regarding the installation of Rooftop solar power system by the Panchayats and shall process the applications as soon as possible.

EDG submits that the Power Purchase Agreement (PPA) for the PM KUSUM scheme has been drafted and sent to the Hon'ble Commission and the Legal department for its finalization.

EDG submits that the department shall work on resolving the issues related to the pending payments of the defaulters.

EDG submits that department cannot equally charge from the consumers for Public Lighting Duty because there are different types of categories of consumers in the state of Goa and it may result in the burden for some category of consumers especially to Domestic and Low-Income Group consumers.

EDG submits that regarding Solar Power awareness, the department will work on improving the awareness campaigns on Solar Power awareness programs along with GEDA and other NGOs, organizations etc.

EDG submits that the department shall resolve all the issues related to disruption caused by underground cabling to other infrastructures/connections of the state.

**Commission's Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.21 Colva substation

**Stakeholder's Comment:**

At the Colva substation which is often short staffed has been given only one vehicle to service the entire areas of Seraulim, Sernabatim, Vanelim, Colva and Gandaulim hence whenever there are multiple break downs in the other villages, consumers are forced to wait for many hours to correct small defects. More vehicles and adequate staff commensurate with the number of consumers are a must. OR electricity linesmen should be kept on emergency calls whenever there is a need. One such e.g., if a coconut branch fall causing tripping, the reconnection needs a two minute intervention at the transformer but the people in that area have to wait for many hours for electricity to be restored till the only vehicle and electricians can visit this area.

**Petitioner's Response**

EDG has taken the note of the stakeholder's comment and necessary action will be taken as per the requirement.

**Commission's Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.22 Fixed Charges

**Stakeholder's Comment:**

The Fixed Charges which were hiked for FY 2022-23 from Rs.60/Months to Rs.20KW/Month = Rs. 320/Month. The Hike of Rs. 260/Month was Extremely High. The Fixed Charges are Proposed to Be Hiked to Rs.22KWMonth= Rs.352/Month for FY2023-24. Please Reduce the Fixed Charges from Rs. 20KW/Month (Rs. 320) to Rs.10/Month (Rs.160). To compensate for the Losses for Financial year, kindly Increase only the Energy Charges and Not Fixed Charges. Kindly Reduce the Fixed Charges. Please Give Justice to the Consumer Using 5 star Rated Appliances.

**Petitioner's Response**

EDG submits that, the department is not charging any energy charges to the consumers of Low Income Group (LIG) category apart from fixed charges. For the LT Domestic and Commercial consumers consuming energy above 400 units, the energy charges are the highest as compared to the lower slabs.

In regards to the Fixed charge, it is the amount collected from the consumer to recover the Capital Expenditure invested and overheads of the department. EDG also pays fixed charges to its generators even if they are on shut downs/ overhauling/maintenance. Prior to FY 22-23 the fixed charges were fixed for single phase and three phase domestic consumers irrespective of the load of the consumer. Hon'ble Commission in its tariff order for FY 22-23 has introduced the fixed charges to be charged based on load of the consumer. From the above objection it is noticed that the consumer is having 16 KW of load hence is getting the bill of Rs. 320/month.

The increase in tariff by overall 3.48% for LT consumers has been proposed by EDG and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by EDG.

**Commission's Response**

The Commission takes note of the stakeholders and also has dealt in the "Tariff Principles and Design" (chapter 6).

### 2.2.23 Transparency and Accountability

**Stakeholder's Comment:**

Lack of transparency and accountability in the fiscal transactions of GED in its day to day functioning as the sole power utility in the State. If EDG is to be treated as a commercial entity and permitted this tariff hike, what is the justification for it not to function like a commercial operation and introduce double entry accounting and like all commercial entities have an annual balance sheet.

**Petitioner's Response**

EDG submits the annual accounts which is audited and certified by the Comptroller and Audit General (CAG) to the Hon'ble commission. The department also provides the latest petitions and orders in its official website along with all the other related information which is available in public domain.

EDG submits that, it functions as a department under the control of Government of Goa. It is to inform that all the departments functioning under Government of Goa are following single entry system of accounting. Accordingly, ED Goa also follows single entry system of accounting. However, EDG has taken the note of the stakeholder's comment.

**Commission's Response**

The Commission appreciates the suggestions and directs the Petitioner to take note of the concern and act appropriately.

### 2.2.24 T&D losses

**Stakeholder's Comment:**

Unaccepted high levels of T&D losses, which is actually theft, partly aided by corruption in EDG.

**Petitioner's Response**

EDG submits that, the T&D losses are maintained well below the approved figures by the Hon'ble Commission for the past several years. The T&D losses for FY 2020-21 to FY 2022-23 is provided in the table below:

| Financial Year | Approved T&D losses by the Hon'ble Commission in its Tariff Orders | Actual T&D losses achieved |
|---|---|---|
| FY 2020-21 | 10.50% | 7.49% (Trued-up) |
| FY 2021-22 | 10.25% | 8.18% (Trued-up) |
| FY 2022-23 | 10.25% | 7.41% ((True-up petition) |

**Commission's Response**

The Commission has noted the concern of the stakeholders and reply submitted the Petitioner.

### 2.2.25 Budgetary Support

**Stakeholder's Comment:**

Every year, EDG is supported with tax payer's money by way of budgetary support to the tune of Rs. 350 plus crore. This has been the case year after year with not a single year of improvement.

**Petitioner's Response**

EDG submits that the Government of Goa provides the Budgetary support every financial year so that the revenue gap is partially bridged. If the government doesn't provide the budgetary support to bridge the revenue gap partially the entire revenue gap will be passed on to the consumers of Goa in the form of additional tariff hike which can result in tariff shock to the consumers.

EDG submits that, to reduce the burden of additional tariff hike on consumers, the Government of Goa indirectly subsidises all the consumers in the form of the budgetary support. Further, the consumers falling in Lower Income Group are charged with only fixed charges and are exempted from paying the energy charges. The Government of Goa, for the welfare of its citizens, provides huge budgetary support across all categories of consumers every financial year.

**Commission's Response**

The Commission has noted the concern of the stakeholders and reply submitted by the Petitioner. The Commission further clarifies that subsidy or the budgetary support is the prerogative of the GOVT. of GOA.

### 2.2.26 Increase in Load

**Stakeholder's Comment:**

Consumers having lower load connections are consuming higher load without increasing their sanctioned/connected load. This is increasing the transformer's load capacity due to which the honest consumers are not getting the quality power they deserve. Rocky Barren lands all over the state of Goa should be utilized by placing solar farm.

**Petitioner's Response**

The Electricity Department of Goa (EDG) acknowledges the suggestion of the stakeholder. The department has already taken measures for increasing the load of the consumers who are consuming higher than its sanctioned/connection load.

In regards to the installation of Solar Farms on rocky barren lands, the Goa Energy Development Agency (GEDA) are in the process of studying feasibility and other issues.

**Commission's Response**

The Commission take note of the concern of the stakeholders. The Petitioner is directed to go for demand-based tariff from next year onwards.

### 2.2.27 Miscellaneous (Verbal Comments/Suggestions)

**Stakeholder's Comment:**

The department should charge the entities like cable operators for the hiring of the electrical poles to lay their cables. Also, the temporary hoarding placed all over the state during events should be charged by the department. These small collections can help in accumulating revenue for the department.

Rebates should be given per power failure to the consumers affected in the region. (E.g. 0.1% rebate per failure) to make things accountable.

Sagging on the overhead lines conductor results in power failures in many locations. The department should work on mitigating this issue to ensure quality of power.

**Petitioner's Response**

EDG acknowledges the stakeholder's submission. However, the department already charges the cable operators for utilizing the electrical poles and also take charges for the temporary hoardings placed on the poles.

EDG acknowledges the suggestions of the stakeholder and will work on the feasibility of providing rebate on power failures and also take necessary actions to provide quality power to its consumers.

EDG has taken the note on the sagging overhead lines and shall work on the same. Also, the suggestion for audit of wires has been noted by the department. Further, the lines which are more than 30 years old will be replaced. Currently, the underground cabling of the overhead wires is being done in the state to tackle such challenges.

**Commission's Response**

The suggestion of different ways to increase the revenue of Petitioner is appreciated. The Petitioner should act accordingly.

**2.2.28 Increase of the Project Cost**

**Stakeholders Comment**

Many projects get delayed resulting in the increase of the project cost. For example, the Salegaon Substation has been delayed for almost 10 years should be completed.

**Petitioner's Response**

EDG has taken then note of the stakeholder's comment and is constantly monitoring all the projects to get completed without any delay. Also, the department's Capital Expenditure and Capitalization has increased over the years which has resulted in the faster development of the power infrastructure in the state.

**Commission's Response**

The Commission take note of the concern of the stakeholders and reply of the Petitioner.

**2.2.29 Accident of Electrical Poles**

**Stakeholders Comment**

The Electrical poles getting knocked down due to accidents in the state of Goa are resulting into huge losses and the same should be recovered to compensate for the revenue gap. Waivers should not be provided to the consumers who are not paying the electricity bills and instead, rebate should be provided to the consumers who are paying the bills on time.

**Petitioner's Response**

EDG submits that in the event of accidents leading to the destruction of the Electricity Department's assets, such as electrical poles, formal FIRs are filed to hold the responsible parties accountable for the damages caused. However, it is worth noting that apprehending all culprits involved in such incidents can be challenging, especially when these accidents occur predominantly during night-time hours.

Further, if electricity bill's payment is made by the consumer 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) is given.

**Commission's Response**

The Commission take note of the concern of the stakeholders.

**2.2.30 Illegal situation and meter problem**

**Stakeholders Comment**

The building of the Institute Menezes Braganza has taken the electrical connection directly from the transformer without electrical meter. EDG has to justify why the meter is not installed in the premises.

There are many illegal constructions happening in Goa without the approval of Town and Country Planning department (TCP) and the electrical connections are given to such constructions without inspecting the sites and also on health grounds. The analog meters were more beneficial to the consumers since the billed units were generated on lower side as lower as compared to new digital meters. This change is robbing the consumers by generating more billed units. As a result the electricity bills have increased.

The underground cables are not laid deep enough and are not inspected regularly by the engineers of the department. There has been several accidental deaths of line staffs due to negligence and by not using safety equipment. There is no supervision done by the engineers while such work is carried out. The old analog electrical meter has been changed to new digital meter in my absence by the department due to which the bills have been increased from Rs. 100 to Rs. 500.

**Petitioner's Response**

EDG submits that the premises of the Institute Menezes Braganza has a proper electrical HT connection with a separate meter. The electricity bill of the HT connection of the premises has been presented during the Public Hearing.

Further, Due to the Health Act of Government of Goa, the department cannot deny, and is bound to give the connection once a valid health certificate is presented by the applicant.

EDG submits that the old analog meters were replaced as per the changing norms of the Ministry of Power. Also, the old meters were easily tempered by external force and the inaccuracy of the meter reading was resulting in the loss of power.

EDG submits that the underground cabling all over the state is done as per the standard procedure and sites are inspected regularly. EDG provides all the necessary safety equipment to all their employees working on electrical lines. However, negligence and overconfidence at individual levels and not using the safety equipment's while working on electrical line causes accidents in spite of having all the proper training on safety. Also, it is not possible for the department's engineer to be present at multiple sites at once for supervision of line maintenance works especially during monsoon season.

As regards to the suspension of the engineers for not working responsibly or efficiently, the department has taken the note of the suggestion provided by the stakeholder.

**Commission's Response**

The Commission has already published the Open Access Regulations to promote open access in the State.

### 2.2.31 Power Outages Problem

**Stakeholders Comment**

The state's coastal belt areas like Calangute suffers from power outages for several hours. This is due to no forward planning done by the department.

The new substation installed in Calangute is a complete failure and isn't working. The department should plan such substations first and then build it. The EDG's total outstanding Arrears are almost Rs. 150 crores. The department should first collect the outstanding amount and then go for any Tariff hike.

The OTS scheme has benefitted only the rich people of the society and not the poor people. People who pay their bills on time does not get any benefit. More than 600 pending cases of Revenue Recovery Cases (RRC) should be cleared. The billing cycle should be made for 30 days (instead of 45 days). The department employees coming for billing and meter reading should have proper identification and uniform on them.

Appreciations for the EDG for solving the power interruptions by commissioning new 50 MVA transformer at Verna. The Open Access and Renewable Energy policies should be promoted in the state. This will help the consumers to reduce their carbon footprints by utilizing green energy through the open access.

The distribution losses mentioned in the petition does not show any signs of reduction. 7.41% losses in a small state like Goa is ridiculous even after so much expenditure in the infrastructure development. The department should bring it down to 6%. The state's Solar Power Policy should be strengthened. The faulty underground cables should be replaced and maintained by the department. The unregistered tourist homes using domestic rates instead of commercial rates.

**Petitioner's Response**

EDG submits that the department plans the substation as per the load requirement of the area. It may be noted that Calangute substation is not a failure. Also, a new substation at Saligao of 220/33 kV 3x63 MVA has been planned to improve transmission network which in turn will improve the power quality of the entire North Goa along the coastal belt region.

By submitting an RTI request, the applicant will promptly receive details on any outstanding payments within 15 days. While arrears may appear in any given month, their presence doesn't signify continuous non-payment. The disconnection occurs only when necessary. Currently, the department has implemented stricter measures and no longer allow repeated defaulters access to our services. However, we still consider installment options based on individual circumstances, ensuring fair treatment for all.

EDG submits that the OTS scheme was introduced for all categories of consumers in order to provide relief to consumers who were burdened to pay the outstanding bills and also clear certain disputes. The RRC cases referred by the stakeholder are old cases and the department has taken the necessary action against them.

Further, EDG submits that the department generates the electricity bill on monthly cycle basis. Additionally, the suggestion for having proper identification and uniforms for the meter readers has been noted by the department and shall take necessary steps to implement it. Appreciations for the EDG for solving the power interruptions by commissioning new 50 MVA transformer at Verna. The Open Access and Renewable Energy policies should be promoted in the state. This will help the consumers to reduce their carbon footprints by utilizing green energy through the open access.

EDG's every account is audited though CAG and the Audited Accounts along with the Audit Certificate is provided to the Hon'ble commission.

EDG submits that the T&D losses of 7.41% achieved by the department for FY 2022-23 is much lower than the approved losses of 10.25% by the Hon'ble Commission in its Tariff Order for the said year. However, the department is constantly working on improving its infrastructure to further reduce the losses. EDG has taken the note of the stakeholder's suggestion to strengthen the state Solar Policy and shall work on improving the same.

EDG submits that the department is working on providing the fault-finding machine to effectively detect the faulty underground cables.

EDG is working on tracking down the unregistered tourist homes which are using domestic connection instead of commercial connection. However, most of the complaints regarding the same are fake and the actual ones are penalized and recategorized as commercial consumers.

**Commission's Response**

The Commission has noted the submission of the stakeholder. The Commission will Review the performance of the petitioner in this regard on continuous basis according to the SOP Regulations, in force.

### 2.2.32 Strengthening the Transmission Network

**Stakeholders Comment**

The department should invest on strengthening the transmission as well as the distribution network in the state. The IPPs in the state should be provided with reliable transmission infrastructure to connect to the grid. Airbnb are charged with domestic charges instead of commercial charges. The department should provide an ombudsmen mechanism so that the consumers can raise their queries.

**Petitioner's Response**

EDG submits that every financial year, the department allocates a substantial portion of its budget to capital expenditure in order to improve, upgrade, and maintain the power transmission and distribution network of the state.

EDG has taken the note of the stakeholder's comment with regards to providing reliable transmission infrastructure for Independent Power Producers (IPPs) to connect to the grid. EDG is constantly working on improving its transmission & distribution network.

With regards to Airbnb, determining whether someone intended to reside or rent out their property posed a considerable challenge. However, with the help of the Tourism department, the EDG is working on tracking down these properties and take necessary action as per the rules and regulations.

EDG submits that the queries/issues of the consumers can be raised to the Consumer Grievance Redressal Forum (CGRF). Further, if the consumer is not satisfied with the verdict given by the CGRF, then the consumer may submit their grievances to the Ombudsmen of the Hon'ble Joint Elelectricity Regulatory Commission.

**Commission's Response**

The Commission has noted the concern of the stakeholders and reply submitted the Petitioner.

### 2.2.33 Low Voltage Issue

**Stakeholders Comment**

There is a Low voltage issue in the Calangute region. Due to these fluctuations, the appliances are not functioning properly. Also, the Rooftop solar system is not working due to the lower voltage in the system.

The department should compensate for the damaged appliances due to the voltage fluctuation.

**Petitioner's Response**

EDG submits that the issue of the low voltage will be resolved after increasing the capacity of the power transformer in the Calangute region. EDG is aware of this issue and the work of increasing the capacity of the existing transformers and, building of new substations at several places in Goa is currently in process.

EDG submits that currently there is no such mechanism of providing compensation for the damaged appliances due to voltage fluctuations. However, the department shall consider the suggestion of the stakeholder and work on the mechanism to provide the compensation for the same.

**Commission's Response**

The Commission has noted the stakeholder's Comment.

### 2.2.34 Power Plant's Investment

**Stakeholders Comment**

The stakeholder has submitted that is there any independent audit done to verify the need of this increase in tariff hike?

**Petitioner's Response**

EDG submits that the department procures almost 80% of its power from Central Generating Stations of NTPC and NPCIL. The data of their power plants are available in the public domains.

EDG submits that in the department, there are Financial and Technical audits done by CAG which is an independent audit firm. Also, Hon'ble JERC does the prudent check of the petition submitted by the department along with the Annual Accounts and accordingly issues the Tariff Order.

**Commission's Response**

The Commission has noted the stakeholder's Comment.

### 2.2.35 Promote Renewable Energy Sector

**Stakeholders Comment**

The government should promote off-shore wind farms and tidal wave farms in the state. Hydro power plant should be introduced in the state to tap the potential of overflowing dams and generate clean and cheaper electricity.

There are metering issues in the industries since pilferage is taking place. The department should look into this.

**Petitioner's Response**

EDG has taken the note of the stakeholder's suggestion and shall conduct research on the new and renewable energy generation like off-shore wind farms and tidal wave farms.

Related to Hydro power plant, the EDG submits that it presents certain challenges to implement. However, study will be conducted for its feasibility in the state. EDG submits that, while the use of LEDs and solar heaters are saving some electricity units, but it is to be noted that today's households use different electrical and electronic appliances which results in increase of load and in turn increases the demand.

EDG has taken the note of the stakeholder regarding the meter pilferages taking place in the industries and shall further resolve the issue.

**Commission's Response**

The Commission has noted the submission of the stakeholder

# CHAPTER 3: True-up of the FY 2022-23

## 3.1 Regulatory Provisions

The True up for the FY 2022-23 has been carried out by the Commission in accordance with Regulation 12 of the JERC MYT Regulations, 2021, as stated below:

*"12.1 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.*

*12.2 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.*

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

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

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

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

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

*e) Other relevant details, if any.*

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

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

*Provided further that, where the Petitioner believes, for any variable not specified under Regulation 13.1, that there is a material variation or expected variation in performance for any year on account of uncontrollable factors, it may apply to the Commission for inclusion of such variable.*

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

*a) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous Year, to be passed through in tariff as per Regulation 14 of these Regulations:*

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

*b) Approved aggregate gain or loss to the Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 15 of these Regulations:*

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

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

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

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

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

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

## 3.2 Approach for the True-Up of FY 2022-23

The Petitioner has requested for the approval of the True-up of FY 2022-23 and submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the MYT Order of FY 2022-23 dated 30.03.2022. The Petitioner has submitted the audited accounts for FY 2022-23 based on audit conducted by statutory auditor. The Commission in this Chapter has carried out the True-up of FY 2022-23 in accordance with the principles laid down in the JERC MYT Regulations, 2021.

## 3.3 Energy Sales

### Petitioner's Submission

The Petitioner has submitted that total actual sales of EDG for FY 2022-23 are 4438.06 MUs. The Category-wise actual and approved sale for FY 2022-23 is shown in the table below:

**Table 8 Energy Sales (MUs) for FY 2022-23, submitted by the Petitioner**

| S/No | Category of Consumer | Approved in MYT order 31st March, 2022 | Actual FY 2022-23 |
|---|---|---|---|
| **A. LOW TENSION SUPPLY** | | | |
| 1. | LTD/Domestic | 1,384.58 | 1,368.24 |
| 2. | LT-LIG (Low Income Group) | 1.37 | 0.94 |
| 3. | LTC/Commercial | 472.52 | 477.04 |
| 4. | LTI/ Industrial | 80.91 | 89.98 |
| 5. | LT Mixed/ LT-P Hotel Industries | 4.48 | 3.74 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 18.08 | 16.40 |
| 7. | LTAG/LT-AGA (Allied Activities) | | 1.23 |
| 8. | LTPL Public lighting | 29.61 | 45.60 |
| 9. | LT Hoarding /Sign Board | 0.16 | 0.24 |
| **B. HIGH TENSION SUPPLY** | | | |
| 10. | HTD Domestic | 0.38 | 0.36 |
| 11. | HT-Commercial | 135.02 | 166.25 |
| 12. | HTI/Industrial – Connected at 11/33 kV | 1,499.12 | 1,407.96 |
| 13. | HTI/Industrial – Connected at 110 | | 250.74 |

| S/No | Category of Consumer | Approved in MYT order 31st March, 2022 | Actual FY 2022-23 |
|---|---|---|---|
| | kV | | |
| 14. | HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling) | 555.35 | 516.07 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 15.54 | 6.68 |
| 16. | HTAG/HT-AG (Allied Activities) | | 12.87 |
| 17. | HTMES/Defence Establishment | 26.96 | 31.81 |
| **C. TEMPORARY SUPPLY** | | | |
| 18. | LT-Temporary Domestic | 9.77 | 2.91 |
| 19. | LT-Temporary Commercial | | 23.31 |
| 20. | HT-Temporary | 2.33 | 5.17 |
| **D. SINGLE POINT SUPPLY** | | | |
| 21. | Residential Complexes | - | - |
| 22. | Commercial Complexes | 5.69 | 5.48 |
| 23. | Industrial Complexes | - | - |
| **E. OTHER CATEGORIES** | | | |
| 24. | EV Charging Stations | - | 5.04 |
| **Total** | | **4,241.87** | **4,438.06** |

### Commission's analysis

The JERC MYT Regulations, 2021 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated by the Petitioner. The Commission notes that Regulation 13.1 of the JERC MYT Regulations, 2021 in this regard stipulates the following:

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

*a) Force Majeure events;*

*b) Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;*

*c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;*

*d) Inter- State Transmission loss;*

*e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;*

*f) Variation in fuel cost;*

*g) Change in power purchase mix;*

*h) Inflation;*

*i) Transmission Charges for a Distribution Licensee;*

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

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

*l) Taxes and Statutory levies;*

*m) Taxes on income;*

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

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

As variation in the number or mix of Consumers or quantities of electricity supplied to Consumers are uncontrollable, the actual sales has been approved for true-up of FY 2022-23. The table below provides the energy sales approved by the Commission in the MYT Order of FY 2022-23 dated 31.03.2022, the Petitioner's Submission and quantum of energy sales trued-up by the Commission:

**Table 9 Energy Sales (MUs) approved by the Commission for FY 2022-23**

| S/No | Category of Consumer | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Trued-up by the commission |
|---|---|---|---|---|
| **A. LOW TENSION SUPPLY** | | | | |
| 1. | LTD/Domestic | 1,384.58 | 1,368.24 | 1,368.24 |
| 2. | LT-LIG (Low Income Group) | 1.37 | 0.94 | 0.94 |
| 3. | LTC/Commercial | 472.52 | 477.04 | 477.04 |
| 4. | LTI/ Industrial | 80.91 | 89.98 | 89.98 |
| 5. | LT Mixed/ LT-P Hotel Industries | 4.48 | 3.74 | 3.74 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 18.08 | 16.40 | 16.40 |
| 7. | LTAG/LT-AGA (Allied Activities) | | 1.23 | 1.23 |
| 8. | LTPL Public lighting | 29.61 | 45.60 | 45.60 |
| 9. | LT Hoarding /Sign Board | 0.16 | 0.24 | 0.24 |
| **B. HIGH TENSION SUPPLY** | | | | |
| 10. | HTD Domestic | 0.38 | 0.36 | 0.36 |
| 11. | HT-Commercial | 135.02 | 166.25 | 166.25 |
| 12. | HTI/Industrial – | 1,499.12 | 1,407.96 | 1,407.96 |

| S/No | Category of Consumer | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Trued-up by the commission |
|---|---|---|---|---|
| | Connected at 11/33 kV | | | |
| 13. | HTI/Industrial – Connected at 110 kV | | 250.74 | 250.74 |
| 14. | HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling) | 555.35 | 516.07 | 516.07 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 15.54 | 6.68 | 6.68 |
| 16. | HTAG/HT-AG (Allied Activities) | | 12.87 | 12.87 |
| 17. | HTMES/Defence Establishment | 26.96 | 31.81 | 31.81 |
| **C. TEMPORARY SUPPLY** | | | | |
| 18. | LT-Temporary Domestic | 9.77 | 2.91 | 2.91 |
| 19. | LT-Temporary Commercial | | 23.31 | 23.31 |
| 20. | HT-Temporary | 2.33 | 5.17 | 5.17 |
| **D. SINGLE POINT SUPPLY** | | | | |
| 21. | Residential Complexes | - | - | - |
| 22. | Commercial Complexes | 5.69 | 5.48 | 5.48 |
| 23. | Industrial Complexes | - | - | - |
| **E. OTHER CATEGORIES** | | | | |
| 24. | EV Charging Stations | - | 5.04 | 5.04 |
| **Total** | | **4,241.87** | **4,438.06** | **4,438.06** |

The Commission approves 4,438.06 MUs as energy sales in the True-up of the FY 2022-23.

## 3.4 Open Access Sales and Purchase

### Petitioner's Submission

There were NIL Open Access Sales and NIL Open Access Purchase approved by the Commission in its Tariff order for FY 2022-23. The Petitioner has submitted NIL Open Access Sales and NIL Open Access Purchase in the true-up.

### Commission's analysis

The Commission approves NIL Open Access Sale and Purchase in the True-up of the FY 2022-23, as per information submitted by the Petitioner.

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

**Table 10 Open Access Sales (MU) and purchase trued-up by the Commission**

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

## 3.5 Inter-State Transmission Loss

### Petitioner's Submission

The Petitioner has submitted the Inter-State Transmission Loss of 3.75 % against an approved figure of 3.34% in Western Region and 7.92% in Southern Region in the MYT Tariff Order for FY 2022-23.

### Commission's analysis

The Commission directed to the Petitioner to submit the supporting documentary evidence to verify the inter-state loss levels. The Petitioner has submitted that they have computed the Inter-State Transmission loss considering the total scheduled energy at Ex-bus and the schedule energy at state periphery. Therefore, the Commission has considered the difference between the total energy scheduled at Ex-Bus periphery and the total energy scheduled at state periphery for computing the transmission losses from the data available from the Regional Energy Accounting. The detailed computation approved by the Commission is provided in the energy balance section. The Commission accordingly approves the Inter-State Losses for FY 2022-23 as shown in the following table:

**Table 11 Approved Inter-State Transmission Loss for FY 2022-23 (%)**

<table>
<tr><th>Particulars</th><th>Approved in MYT order 31st March, 2022</th><th>Petitioner's Submission</th><th>Trued-up by Commission</th></tr>
<tr><td>Inter-State Transmission Loss Western Region</td><td>3.34 %</td><td rowspan="3">3.75 %</td><td rowspan="3">3.55 %</td></tr>
<tr><td>Inter-State Transmission Loss Southern Region</td><td>7.92 %</td></tr>
<tr><td>Total Inter-State Transmission Loss</td><td></td></tr>
</table>

The Commission approves the Inter-State Transmission Loss as 3.55% in the True-up of the FY 2022-23.

## 3.6 Intra- State Transmission & Distribution (T&D) loss

### Petitioner's Submission

EDG submitted the actual T&D loss as 7.41 % against the Commission approved energy loss of 10.25 % for FY 2022-23. The table below provides the details.

**Table 12 Transmission and Distribution Loss for FY 2022-23 (MU) as submitted by the Petitioner**

| S. No. | Particulars | FY 2022-23 (Actuals) |
|---|---|---|
| 1 | T&D Loss (%) | 7.41 % |

### Commission's analysis

The Commission has noted that the energy audit report for FY 2022-23 has not been furnished in time by the Petitioner. Therefore, the submissions made in tariff petition and subsequent replies to the deficiency note and TVS have only been considered. Further, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of actual energy drawl at State periphery as registered in the energy meters at the state periphery (data source: Weekly DSM account 2022-23) and the energy sales as approved above. Accordingly, T&D loss is approved by the Commission.

The Table below provides the Intra-State T&D loss approved for FY 2022-23:

**Table 13 Approved T&D loss for FY 2022-23**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|
| T&D Losses (%) | 10.25 % | 7.41 % | 7.41 % |

The Commission, while Truing up for FY 2022-23, has considered the actual Intra-State T&D loss of 7.41 % for the FY 2022-23. However, the sharing gain/(loss) on account of overachievement of T&D loss is dealt at section no. 3.24 of this order

## 3.7 Power Purchase Quantum & Cost

### Petitioner's Submission

The table provides a summary of power purchase sources, costs, transmission charges, UI charges, and purchases from traders for FY 2022-23 as submitted by the petitioner for FY 2022-23:

**Table 14 Actual Power Purchase Quantum and Cost for FY 2022-23 submitted by the Petitioner**

| S/No | Source | Approved in MYT order 31st March, 2022 | | Actual FY 2022-23 | |
|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| A) | **NTPC** | 3,445.35 | 1,124.26 | 3974.08 | 1495.95 |
| 1. | KSTPS | 1,572.93 | 344.29 | 1657.47 | 428.59 |
| 2. | VSTPS-I | 252.69 | 72.47 | 272.13 | 76.65 |

| S/No | Source | Approved in MYT order 31st March, 2022 | | Actual FY 2022-23 | |
|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| 3. | VSTPS-II | 106.61 | 27.47 | 116.33 | 31.17 |
| 4. | VSTPS-III | 100.82 | 28.54 | 98.06 | 21.25 |
| 5. | VSTPS-IV | 108.45 | 37.77 | 129.31 | 41.91 |
| 6. | VSTPS-V | 54.51 | 19.25 | 58.22 | 18.93 |
| 7. | KGPP | 17.14 | 12.92 | - | 11.30 |
| 8. | GGPP | 13.01 | 13.91 | - | 9.76 |
| 9. | SIPAT-I | 215.64 | 62.17 | 202.41 | 77.22 |
| 10. | KSTPS-III | 51.69 | 14.59 | 48.38 | 14.65 |
| 11. | RSTPS | 535.92 | 208.19 | 670.41 | 323.06 |
| 12. | SIPAT-II | 91.43 | 26.71 | 98.95 | 30.14 |
| 13. | Solapur | 55.46 | 47.79 | 76.10 | 63.65 |
| 14. | Gadarwara | 59.20 | 54.73 | 128.12 | 90.30 |
| 15. | Lara | 51.84 | 32.19 | 110.25 | 49.58 |
| 16. | Khargone | 64.15 | 44.48 | 68.18 | 58.54 |
| 17. | Mauda I | 51.27 | 39.88 | 103.19 | 59.89 |
| 18. | Mauda II | 42.56 | 36.92 | 136.56 | 89.33 |
| | | | | | |
| B) | **NPCIL** | 215.19 | 67.22 | 235.56 | 67.27 |
| 1. | KAPS | 119.36 | 33.56 | 120.52 | 27.59 |
| 2. | TAPS | 95.84 | 33.65 | 115.04 | 39.68 |
| | | | | | |
| C) | **Traders** | 139.59 | 60.32 | (116.65) | 19.63 |
| 1. | IEX Purchase | 139.59 | 60.32 | 164.37 | 115.78 |
| 2. | IEX Sales | - | - | 312.72 | 139.89 |
| 3. | Traders (Net Drawal/Injection) | - | - | 31.70 | 43.74 |
| | | | | | |
| D) | **Net UI (Over/Under Drawal)** | - | - | 74.57 | 61.35 |
| | | | | | |
| E) | **Banking of Power** | - | - | 23.28 | 0.46 |
| | | | | | |
| F) | **Co-Generation** | 149.79 | 35.95 | 123.04 | 29.07 |
| 1. | Vedanta Plant-1, Amona | 90.88 | 21.81 | 51.94 | 12.47 |
| 2. | Vedanta Plant-2 | 53.10 | 12.74 | 59.89 | 13.87 |
| 3. | Goa Sponge and private limited | 5.81 | 1.39 | 5.18 | 1.24 |
| 4. | PTC India Ltd, New Delhi(GEPL) | | | 6.04 | 1.49 |
| | | | | | |
| G) | **RPO Obligation** | 776.40 | 325.64 | 669.67 | 303.16 |
| | **Solar** | 367.77 | 168.20 | 265.92 | 139.62 |
| 1. | NVVNL Solar | 12.00 | 6.60 | 13.26 | 7.85 |
| 2. | Solar STOA | 244.64 | 113.75 | 200.89 | 101.49 |
| 3. | SECI Solar | 48.00 | 26.40 | 50.33 | 29.85 |
| 4. | CONVERGENCE SOLAR | 43.36 | 15.61 | - | - |
| 5. | Net Metering | 19.76 | 5.84 | 1.44 | 0.44 |
| | **Non-Solar** | 408.63 | 157.44 | 403.75 | 163.53 |

| S/No | Source | Approved in MYT order 31st March, 2022 | | Actual FY 2022-23 | |
|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| 6. | Non Solar – SECI Wind Tranche II LTOA | 112.42 | 31.37 | 139.46 | 37.79 |
| 7. | STOA (Non Solar) | 220.25 | 103.84 | 228.56 | 115.42 |
| 8. | SECI Wind Tranche-VI | 75.00 | 21.75 | 33.72 | 8.72 |
| 9. | Hindustan waste treatment plant Goa | 0.96 | 0.48 | 2.00 | 1.59 |
| | | | | | |
| H) | **REC** | - | - | - | 11.17 |
| | | | | | |
| I) | **PGCIL Charges** | | 226.15 | - | 335.13 |
| | | | | | |
| J) | **Additional Power Purchase Cost recovered from Industrial Consumers** | | | (26.76) | (33.34) |
| | **TOTAL** | **4,726.31** | **1,839.53** | **4956.78** | **2289.84** |

## Commission's analysis

The Commission notes that the JERC MYT Regulations, 2021 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor. The relevant provisions of Regulations 13.1 of JERC MYT Regulations, 2021 is provided below.

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

..

*e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;*

*f) Variation in fuel cost;*

*g) Change in power purchase mix;*

*h) Inflation;*

*i) Transmission Charges for a Distribution Licensee;"*

The Commission has noted that the Petitioner procures power mainly from NTPC Stations and NPCIL stations. Further, the Petitioner procured power through exchange and traders. The Petitioner has procured solar and non-solar power along with REC to meet the RPO obligations. The Commission observes that the Petitioner has utilised banking services and net procurement through banking of power (Net Banking Drawal is 23.28 MU) is reflected under power purchase. Although, a significant quantum of Net Overdrawal is shown under power purchase and its associated cost (Net Cost of Rs. 61.35 Cr.), the Commission directs the Petitioner to reduce the over drawal quantum to maintain the grid stability. The power purchase from co-generation plants is approved as submitted by the Petitioner. The Petitioner submitted the overall Power Purchase cost as Rs. 2289.64 Crore inclusive of transmission charges.

The Commission has considered the power purchase bills submitted by the Petitioner in its reply of 1st deficiency note with the publicly available information from the Regional Energy Accounts (REA) maintained by Southern Region Power Committee (SRPC) and Western Region Power Committee (WRPC) for the Central Generating Stations (CGS) and data reflected in the Audited account for FY 2022-23. For considering the power purchase cost, the Commission has considered the actual audited account, which was submitted by the petitioner.

Although, the payment made to PGCIL is higher than the approved under MYT Order, the Commission approved the PGCIL cost as per actual. Further, the Commission has considered the monthly PGCIL charges as submitted by the Petitioner as given below:

**Table 15 PGCIL charges approved by the Commission (Rs. Cr.)**

| Particulars | Apr | May | June | July | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PGCIL Charges | 15.8 | 22.52 | 20.2 | 39.1 | 24.45 | 19.72 | 39.75 | 20.2 | 28.66 | 19.72 | 19.19 | 65.81 | 335.13 |

The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2022-23.

**Table 16 Power Purchase Cost and Quantum approved by the commission FY 2022-23**

| S/No | Source | Approved in T.O dated 31st March, 2022 | | Petitioner's Submission | | Actual FY 2022-23 | |
|---|---|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| A) | NTPC | 3,445.35 | 1,124.26 | 3974.08 | 1495.95 | 3974.08 | 1495.95 |
| 1. | KSTPS | 1,572.93 | 344.29 | 1657.47 | 428.59 | 1657.47 | 428.59 |
| 2. | VSTPS-I | 252.69 | 72.47 | 272.13 | 76.65 | 272.13 | 76.65 |
| 3. | VSTPS-II | 106.61 | 27.47 | 116.33 | 31.17 | 116.33 | 31.17 |
| 4. | VSTPS-III | 100.82 | 28.54 | 98.06 | 21.25 | 98.06 | 21.25 |
| 5. | VSTPS-IV | 108.45 | 37.77 | 129.31 | 41.91 | 129.31 | 41.91 |
| 6. | VSTPS-V | 54.51 | 19.25 | 58.22 | 18.93 | 58.22 | 18.93 |
| 7. | KGPP | 17.14 | 12.92 | - | 11.30 | - | 11.30 |

| S/No | Source | Approved in T.O dated 31st March, 2022 | | Petitioner's Submission | | Actual FY 2022-23 | |
|---|---|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| 8. | GGPP | 13.01 | 13.91 | - | 9.76 | - | 9.76 |
| 9. | SIPAT-I | 215.64 | 62.17 | 202.41 | 77.22 | 202.41 | 77.22 |
| 10. | KSTPS-III | 51.69 | 14.59 | 48.38 | 14.65 | 48.38 | 14.65 |
| 11. | RSTPS | 535.92 | 208.19 | 670.41 | 323.06 | 670.41 | 323.06 |
| 12. | SIPAT-II | 91.43 | 26.71 | 98.95 | 30.14 | 98.95 | 30.14 |
| 13. | Solapur | 55.46 | 47.79 | 76.10 | 63.65 | 76.10 | 63.65 |
| 14. | Gadarwara | 59.20 | 54.73 | 128.12 | 90.30 | 128.12 | 90.30 |
| 15. | Lara | 51.84 | 32.19 | 110.25 | 49.58 | 110.25 | 49.58 |
| 16. | Khargone | 64.15 | 44.48 | 68.18 | 58.54 | 68.18 | 58.54 |
| 17. | Mauda I | 51.27 | 39.88 | 103.19 | 59.89 | 103.19 | 59.89 |
| 18. | Mauda II | 42.56 | 36.92 | 136.56 | 89.33 | 136.56 | 89.33 |
| | | | | | | | |
| B) | NPCIL | 215.19 | 67.22 | 235.56 | 67.27 | 235.56 | 67.27 |
| 1. | KAPS | 119.36 | 33.56 | 120.52 | 27.59 | 120.52 | 27.59 |
| 2. | TAPS | 95.84 | 33.65 | 115.04 | 39.68 | 115.04 | 39.68 |
| | | | | | | | |
| C) | Traders | 139.59 | 60.32 | (116.65) | 19.63 | (116.65) | 19.63 |
| 1. | IEX Purchase | 139.59 | 60.32 | 164.37 | 115.78 | 164.37 | 115.78 |
| 2. | IEX Sales | - | - | (312.72) | (139.89) | (312.72) | (139.89) |
| 3. | Traders (Net Drawal/Injection) | - | - | 31.70 | 43.74 | 31.70 | 43.74 |
| | | | | | | | |
| D) | Net UI (Over/Under Drawal) | - | - | 74.57* | 61.35 | 50.42 | 61.35 |
| | | | | | | | |
| E) | Banking of Power | - | - | 23.28 | 0.46 | 23.28 | 0.46 |
| | | | | | | | |
| F) | Co-Generation | 149.79 | 35.95 | 123.04 | 29.07 | 123.04 | 29.07 |
| 1. | Vedanta Plant-1, Amona | 90.88 | 21.81 | 51.94 | 12.47 | 51.94 | 12.47 |
| 2. | Vedanta Plant-2 | 53.10 | 12.74 | 59.89 | 13.87 | 59.89 | 13.87 |
| 3. | Goa Sponge and private limited | 5.81 | 1.39 | 5.18 | 1.24 | 5.18 | 1.24 |
| 4. | PTC India Ltd, New Delhi (GEPL) | | | 6.04 | 1.49 | 6.04 | 1.49 |
| | | | | | | | |
| G) | RPO Obligation | 776.40 | 325.64 | 669.67 | 303.16 | 669.67 | 303.16 |
| | Solar | 367.77 | 168.20 | 265.92 | 139.62 | 265.92 | 139.62 |
| 1. | NVVNL Solar | 12.00 | 6.60 | 13.26 | 7.85 | 13.26 | 7.85 |
| 2. | Solar STOA | 244.64 | 113.75 | 200.89 | 101.49 | 200.89 | 101.49 |
| 3. | SECI Solar | 48.00 | 26.40 | 50.33 | 29.85 | 50.33 | 29.85 |
| 4. | CONVERGENCE SOLAR | 43.36 | 15.61 | - | - | - | - |
| 5. | Net Metering | 19.76 | 5.84 | 1.44 | 0.44 | 1.44 | 0.44 |
| | Non-Solar | 408.63 | 157.44 | 403.75 | 163.53 | 403.75 | 163.53 |
| 6. | Non-Solar – SECI Wind Tranche II LTOA | 112.42 | 31.37 | 139.46 | 37.79 | 139.46 | 37.79 |
| 7. | STOA (Non-Solar) | 220.25 | 103.84 | 228.56 | 115.42 | 228.56 | 115.42 |

| S/No | Source | Approved in T.O dated 31st March, 2022 | | Petitioner's Submission | | Actual FY 2022-23 | |
|---|---|---|---|---|---|---|---|
| | | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) | Quantum (MUs) | Cost (Rs. Crore) |
| 8. | SECI Wind Tranche-VI | 75.00 | 21.75 | 33.72 | 8.72 | 33.72 | 8.72 |
| 9. | Hindustan waste treatment plant Goa | 0.96 | 0.48 | 2.00 | 1.59 | 2.00 | 1.59 |
| | | | | | | | |
| H) | REC | - | - | - | 11.17 | - | 11.17 |
| | | | | | | | |
| I) | PGCIL Charges | | 226.15 | - | 335.13 | - | 335.13 |
| | | | | | | | |
| J) | Additional Power Purchase Cost recovered from Industrial Consumers | | | (26.76) | (33.34) | (26.76) | (33.34) |
| | **TOTAL** | **4,726.31** | **1,839.53** | **4956.78** | **2289.84** | **4932.63** | **2289.84** |

*considered as 50.42 MUs based on revised submission of the Petitioner.

The Commission approves power purchase quantum of 4932.63 MUs and cost of Rs. 2289.84 Cr in the True-up of the FY 2022-23.

### 3.8 Renewable Purchase Obligation (RPO)

The Commission observed that as per Regulation 3, Sub-regulation (1) of the JERC (Procurement of Renewable Energy) Regulations, 2010:

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

The Commission notified the JERC (Procurement of Renewable Energy), (Fourth Amendment) Regulations, 2022 on 24th March 2022 and revised the RPO targets, according to which for FY 2022-23 the Petitioner is obligated to purchase power from renewable sources at minimum of 18.35% of its total annual consumption, out of which 9% must be from the Solar Power.

In reference to the suo-moto order dated 10.04.2024, the Commission after considering the prayer of the Petitioner and prudence check has adjusted 72.88 MUs of Wind power by adding it to Non-Solar RPO of FY 2022-23 for its compliance. Further, the Commission has noted that the Petitioner has complied its HPO target through banking from a hydro power plant which has been commissioned after 08.03.2019 which is as per the JERC (Procurement of Renewable Energy) (Fourth Amendment) Regulations, 2022.

Based on the above, the Commission has computed the cumulative RPO compliance and the pending backlog at the end of the FY 2022-23 as shown in the following table:

**Table 17 Summary of Renewable Purchase Obligation (RPO) (MU) for FY 2022-23**

| Description | Approved in T.O dated 31st March, 2022 | Petitioner's Submission | FY 2022-23 |
|---|---|---|---|
| Sales within State (MU) (A) | 4241.87 | 4,438.06 | 4,438.06 |
| Hydro Power available at State Periphery (MU) (B) | | - | - |
| T&D Loss (%) (C) | 10.25 % | 7.41% | 7.41% |
| T&D Loss (MU) (D = B * C) | | - | - |
| Hydro Power Consumed (E = B - D) | | - | - |
| **Conventional Power Consumed (F = A - E)** | **4241.87** | **4,438.06** | **4,438.06** |
| RPO obligation (%) | 18.35% | 18.35% | 18.35% |
| Solar (G) | 9.00% | 9.00% | 9.00% |
| Non-Solar (H) | 9.35% | 9.00% | 9.00% |
| HPO | - | 0.35% | 0.35% |
| **RPO obligation for the year (MU)** | **778.38** | **814.38** | **814.38** |
| Solar (F * G) | 381.77 | 399.43 | 399.43 |
| Non-Solar (F * H) | 396.61 | 399.43 | 399.43 |
| HPO (F*I) | - | 15.53 | 15.53 |
| **RPO Compliance (Physical Power + Certificates) (MU)** | **776.40** | **895.71** | **895.71** |
| Solar | 367.77 | 382.07 | 382.07* |
| Non-Solar | 408.63 | 497.96 | 497.96 |
| HPO | - | 15.68 | 15.68 |
| **Cumulative RPO Shortfall (MU)** | **391.41** | **103.91** | **120.57** |
| Solar | 344.30 | 95.76 | 112.65 |
| Non-Solar | 47.10 | 8.29 | 8.08 |
| HPO | - | (0.14) | (0.15) |
| **Cumulative RPO Compliance (MU)** | | | **3,642.71** |
| Solar | | | 1,399.77 |
| Non-Solar | | | 2,227.26 |
| HPO | | | 15.68 |

* 382.07 MUs of Solar RPO includes REC of 83.30 MUs and Net-Metering of 36.13 MUs

The Commission notes that there is a net shortfall in RPO compliance till the FY 2022-23 of 120.57 MUs. The same has to be carried forward to subsequent years.

## 3.9 Energy Balance

### Petitioner's Submission

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

**Table 18 Energy Balance submitted by the Petitioner for FY 2022-23 (Mus)**

| S/No | Item | Actual FY 2022-23 (MUs) |
|---|---|---|
| 1. | Energy Input at Goa Periphery | 4,666.85 |
| | | |
| 2. | Total Power Scheduled/ Purchased at Goa Periphery | |
| | Total Scheduled Billed Drawal – CGS | 4,209.64 |
| | Add: Overdrawal | 75.36 |
| | Add: Power purchase from NVVN / Banking | 23.28 |
| | Add: Power purchase from Traders/ Open Market | 205.72 |
| | Add : Hydro Power | - |
| | Less: Underdrawal | 0.79 |
| | Add: Renewable Power | 648.17 |
| | Less: Power diverted to Exchange | 312.72 |
| | Total | 4,848.65 |
| | | |
| 3. | PGCIL Losses – MUs | 181.80 |
| | PGCIL Losses - % | 3.75% |
| | | |
| 4. | Total Power Purchased within Goa State | |
| | Add: Co-generation | 123.04 |
| | Add: Independent Power Producers (IPP) | |
| | Add: Net Metering | 1.44 |
| | Add: PM KUSUM | |
| | Add: Hindustan Waste Treatment Plant | 2.00 |
| | Total | 126.48 |
| | | |
| **5.** | **Total Power Purchase availability after PGCIL Losses** | **4,793.33** |
| | **Less: Retail Sales to Consumers** | **4,438.06** |
| | **Distribution Losses – MUs** | **355.27** |
| **6.** | **Distribution Losses - %** | **7.41%** |

### Commission's analysis

The information submitted by the Petitioner regarding power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase, NVVN/Banking etc. has been considered and accordingly the energy balance for FY 2022-23 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by SRPC and WRPC and the documentary evidence submitted by the Petitioner against the Inter-State Transmission Loss, the Commission has determined the energy balance. The following table provides the energy balance as submitted by the Petitioner and now approved by the Commission.

Further, the Commission has considered the weekly DSM account of WRPC and SRPC and approved the actual schedule power, actual drawal power at DISCOM periphery, underdrawal and overdrawal as given below:

**Table 19 Acual power, schedule power, underdrawal and overdrawal approved by the Commission for FY 2022-23 (Mus)**

| Western Regional Power Committee (WRPC) | | | | Southern Regional Power Committee (SRPC) | | | |
|---|---|---|---|---|---|---|---|
| **Actual** | **Schedule** | **Underdrawal (-)** | **Overdrawal** | **Actual** | **Schedule** | **Underdrawal (-)** | **Overdrawal** |
| 34.07 | 33.58 | 0.00 | 0.49 | 7.53 | 7.44 | 0.00 | 0.08 |
| 81.00 | 79.41 | 0.00 | 1.59 | 16.75 | 15.41 | 0.00 | 1.34 |
| 79.83 | 77.75 | 0.00 | 2.08 | 15.94 | 14.21 | 0.00 | 1.73 |
| 83.11 | 81.11 | 0.00 | 2.00 | 17.45 | 15.43 | 0.00 | 2.02 |
| 81.48 | 80.45 | 0.00 | 1.03 | 17.19 | 15.18 | 0.00 | 2.00 |
| 84.90 | 83.79 | 0.00 | 1.11 | 17.99 | 16.24 | 0.00 | 1.75 |
| 85.09 | 84.14 | 0.00 | 0.95 | 16.93 | 17.24 | -0.31 | 0.00 |
| 75.24 | 75.72 | -0.48 | 0.00 | 14.93 | 14.99 | -0.06 | 0.00 |
| 82.74 | 82.23 | 0.00 | 0.51 | 16.37 | 15.75 | 0.00 | 0.62 |
| 82.28 | 81.14 | 0.00 | 1.14 | 14.72 | 15.14 | -0.42 | 0.00 |
| 76.92 | 76.57 | 0.00 | 0.35 | 13.48 | 13.84 | -0.36 | 0.00 |
| 73.93 | 72.70 | 0.00 | 1.23 | 13.40 | 13.74 | -0.34 | 0.00 |
| 70.04 | 69.40 | 0.00 | 0.64 | 12.64 | 12.62 | 0.00 | 0.01 |
| 70.43 | 68.93 | 0.00 | 1.50 | 13.45 | 12.98 | 0.00 | 0.47 |
| 71.19 | 70.45 | 0.00 | 0.74 | 12.20 | 11.98 | 0.00 | 0.21 |
| 68.29 | 68.09 | 0.00 | 0.20 | 13.15 | 12.75 | 0.00 | 0.41 |
| 72.39 | 71.04 | 0.00 | 1.35 | 13.18 | 13.39 | -0.21 | 0.00 |
| 74.80 | 73.39 | 0.00 | 1.41 | 13.51 | 13.30 | 0.00 | 0.21 |
| 73.24 | 73.33 | -0.09 | 0.00 | 13.67 | 13.23 | 0.00 | 0.44 |
| 71.62 | 71.13 | 0.00 | 0.49 | 12.43 | 12.39 | 0.00 | 0.05 |
| 75.28 | 74.93 | 0.00 | 0.35 | 11.20 | 11.45 | -0.25 | 0.00 |
| 77.73 | 77.39 | 0.00 | 0.34 | 9.73 | 10.09 | -0.36 | 0.00 |
| 66.17 | 66.19 | -0.02 | 0.00 | 12.57 | 12.55 | 0.00 | 0.02 |
| 72.68 | 72.34 | 0.00 | 0.34 | 12.63 | 12.83 | -0.20 | 0.00 |
| 69.15 | 69.45 | -0.30 | 0.00 | 12.37 | 12.78 | -0.41 | 0.00 |
| 72.65 | 72.44 | 0.00 | 0.21 | 13.16 | 12.84 | 0.00 | 0.32 |
| 75.75 | 74.82 | 0.00 | 0.93 | 11.83 | 11.63 | 0.00 | 0.20 |
| 72.96 | 72.15 | 0.00 | 0.81 | 14.39 | 13.65 | 0.00 | 0.74 |
| 73.98 | 73.68 | 0.00 | 0.30 | 14.84 | 13.99 | 0.00 | 0.85 |
| 77.22 | 77.16 | 0.00 | 0.06 | 13.95 | 13.68 | 0.00 | 0.28 |
| 68.98 | 69.59 | -0.61 | 0.00 | 14.39 | 14.12 | 0.00 | 0.27 |
| 74.31 | 73.28 | 0.00 | 1.03 | 15.07 | 14.10 | 0.00 | 0.97 |
| 73.29 | 72.79 | 0.00 | 0.50 | 14.60 | 14.03 | 0.00 | 0.57 |
| 72.56 | 72.35 | 0.00 | 0.21 | 15.57 | 15.73 | -0.16 | 0.00 |
| 70.53 | 69.25 | 0.00 | 1.28 | 15.30 | 14.72 | 0.00 | 0.58 |
| 73.38 | 72.72 | 0.00 | 0.66 | 15.57 | 14.63 | 0.00 | 0.94 |
| 69.00 | 68.79 | 0.00 | 0.21 | 15.40 | 15.23 | 0.00 | 0.17 |
| 72.53 | 71.02 | 0.00 | 1.51 | 13.83 | 13.32 | 0.00 | 0.51 |
| 68.79 | 68.65 | 0.00 | 0.14 | 15.82 | 15.66 | 0.00 | 0.16 |
| 74.77 | 73.96 | 0.00 | 0.81 | 17.07 | 16.52 | 0.00 | 0.55 |
| 88.16 | 87.86 | 0.00 | 0.30 | 0.80 | 0.76 | 0.00 | 0.04 |
| 82.55 | 82.12 | 0.00 | 0.43 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 84.66 | 84.24 | 0.00 | 0.42 | 0.00 | 0.01 | -0.01 | 0.00 |
| 83.42 | 82.85 | 0.00 | 0.57 | 0.00 | 0.00 | 0.00 | 0.00 |
| 89.77 | 89.22 | 0.00 | 0.55 | 0.00 | 0.06 | -0.06 | 0.00 |
| 82.46 | 81.65 | 0.00 | 0.81 | 9.58 | 9.55 | 0.00 | 0.02 |
| 75.89 | 74.95 | 0.00 | 0.94 | 15.82 | 16.14 | -0.32 | 0.00 |
| 75.87 | 75.03 | 0.00 | 0.84 | 19.35 | 18.70 | 0.00 | 0.65 |
| 76.79 | 76.28 | 0.00 | 0.51 | 16.50 | 16.43 | 0.00 | 0.06 |
| 76.52 | 75.24 | 0.00 | 1.28 | 16.72 | 16.59 | 0.00 | 0.12 |
| 81.20 | 81.35 | -0.15 | 0.00 | 17.92 | 17.69 | 0.00 | 0.23 |
| 80.12 | 79.97 | 0.00 | 0.15 | 16.47 | 16.00 | 0.00 | 0.47 |
| 55.12 | 55.13 | -0.01 | 0.00 | 10.43 | 10.27 | 0.00 | 0.16 |
| **3976.83** | **3943.19** | **-1.66** | **35.30** | **689.77** | **672.99** | **-3.47** | **20.25** |

**Table 20 Energy Balance (MUs) approved by Commission for FY 2022-23**

| Item | Approved in TO dated 31 March 2022 | Trued-up by the Commission |
|---|---|---|
| Energy Requirement | | |
| Sales Within Territory | 4241.87 | 4438.06 |
| Distribution losses (%) | 10.25% | 7.41% |
| T&D loss (MU) | | 355.02 |
| **Energy Requirement @ Goa periphery** | **4576.53** | **4793.08** |
| **Energy Schedule bus bar** | | |
| Energy Scheduled at Ex-Bus | 3660.55 | 4209.64 |
| Power Purchase from NVVN/ Banking | | 23.28 |
| Power Purchase from traders/ Open market | 139.59 | 205.72 (IEX Purchase 164.37+ Traders Drawal 41.35) |
| Add. Renewable Power | 776.40 | 669.67 |
| Less: Power diverted to exchange | | 312.72 |
| Less: Power Sell though Trader | | 9.65 |
| **Total Power Scheduled/ Purchased at Ex Bus** | **4576.53** | **4785.94*** |
| Transmission loss | | 169.76 |
| Transmission loss % | | 3.55 % |
| Energy Input (schedule) at state periphery | | 4616.18 |
| Add: Overdrawal | | 55.55 |
| Less: Underdrawal | | (5.13) |
| Total Power Purchased (actual) at Goa Periphery | | 4666.60 |

| | | |
|---|---|---|
| Within state generation (Cogen) | 149.79 | 126.48 |
| **Total Energy availability** | **4576.53** | **4793.08** |

* (4785.94+50.42+123.04=4959.40 and 4959.40-26.76=4932.63 matched with Table No- 16)

### 3.10 Operation & Maintenance (O&M) Expenses

Regulation 61 of JERC MYT Regulations, 2021 provides the following:

*"61 Operation and Maintenance (O&M) expenses for Retail Supply Business*

*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;*

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

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

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

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

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

*GFAn-1 – Gross Fixed Asset of the 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 foreach 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 – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation 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."*

Accordingly, the various components of O&M expenses have been dealt with in subsequent sections.

## 3.11 Employee Expenses

### Petitioner's Submission

The Petitioner has submitted that the employee cost incurred during the year for FY 2022-23 is Rs 348.35 Crore. The following table provides the employee expenses as submitted by the Petitioner:

**Table 21 Employee expenses submitted by the Petitioner (Rs. Cr)**

| S/ No | Particulars | Approved in T.O dated 31st March, 2022 | Actual FY 22-23 |
|---|---|---|---|
| A. | Employee Cost (Other than covered in 'C'&'D') | - | 372.01 |
| | - Salaries | - | 372.01 |
| | Total (A+B+C) | 340.57 | 372.01 |
| B. | Contribution to Terminal Benefits | 3.99 | 2.66 |
| | - Pension | - | 2.66 |
| C. | Grand Total (A+B+C+D) | 344.56 | 374.68 |
| D. | Less : Salary Payable at the beginning of the year | - | (26.32) |
| | **Net Employee Expenses (E)-(F)** | **344.56** | **348.35** |

### Commission's analysis

The Commission notes that Regulation 6 of the JERC MYT Regulations, 2021 stipulates the following:

*"6. Values for Base Year*

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

The Commission has considered the approved figure of employee expenses for FY 2021-22 (under true-up) as a base figure to determine the normative employee expenses for FY 2022-23. The base year expenses have been escalated by Growth Rate determined based on the manpower plan as submitted by the Petitioner and CPI Inflation to arrive upon the normative employee expenses of FY 2022-23. The details are provided below:

**Table 22 CPI Inflation Index**

| FY | Average of (Apr-Mar) | Increase (%) | Average Increase in CPI Index over 3 years |
|---|---|---|---|
| 2019-20 | 322.50 | | |
| 2020-21 | 338.70 | 5.02 % | |
| 2021-22 | 356.10 | 5.13 % | |
| 2022-23 | 377.60 | 6.05 % | 5.40 % |

**Table 23 Growth Factor**

| FY | Employees | Increase/(Decrease) in employees |
|---|---|---|
| 2021-22 | 5920 | |
| 2022-23 | 6189 | 4.54 % |

**Table 24 Computation of employee expenses for FY 2022-23 (Rs Cr)**

| S. No | Particulars | Trued Up |
|---|---|---|
| | | FY 2022-23 |
| | Normative approved expenses for FY 21-22 in true-up (Base Expenses) | **330.60** |
| 1 | Gn (Growth factor) | 4.54 % |
| 2 | CPI (Actuals for FY 2022-23) (in %) | 5.40% |
| 4 | Expenses with inflation and growth | 364.29 |
| **5** | **Total Employee Expenses** | **364.29** |

**Table 25 Employee expenses approved by Commission for FY 2022-23 (Rs Cr)**

| S. No | Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Normative employee expenses approved by Commission |
|---|---|---|---|---|
| 1 | Employee Expenses | 344.56 | 348.35 | 364.29 |

The Commission approves employee expenses of Rs. 364.29 Cr in the true-up of the FY 2022-23.

## 3.12 Repair and Maintenance Expenses

### Petitioner's Submission

The Petitioner has claimed R&M expense of Rs 24.36 Crore as per expenses actually incurred during FY 2022- 23, against R&M expense of Rs 55.33 Crore approved by the Commission. The Petitioner further submitted that R&M expenses are necessary for maintenance of infrastructure and for ensuring proper Standard of Performance of the utility.

### Commission's analysis

The Commission has considered the audited account of FY 2022-23 which is submitted by the Petitioner. Further, the Commission had determined the K factor as 2.39 % which was already approved in the 3rd MYT Tariff Order dated 31.03.2022. While deriving the normative R&M expenses, the Commission has considered the said 'K' and the factor is multiplied with the opening GFA approved for the (n-1) th year (i.e FY 2021-22). The resultant amount is then escalated by 3 years average WPI Inflation for FY 2022-23 to arrive upon the normative R&M Expenses for the FY 2022-23. The WPI Inflation has been computed as follows:

**Table 26 WPI Index**

| FY | Average of (Apr-Mar) | Yearly increase | Average WPI increased over 3 years |
|---|---|---|---|
| 2019-20 | 121.80 | | |
| 2020-21 | 123.40 | 1.31 % | |
| 2021-22 | 139.40 | 12.97 % | |
| **2022-23** | 152.50 | 9.40 % | **7.89%** |

The Commission has computed the R&M Expenses as given in the following table:

**Table 27 Computation of R&M Expenses approved by the Commission for FY 2022-23 (Rs Cr)**

| S. No | Particulars | FY 2022-23 |
|---|---|---|
| **1** | Opening GFA ($GFA_{n-1}$) | 1152.26 |
| **2** | K factor approved (K) (%) | 2.39 % |
| **3** | WPI Inflation (Actuals for FY 2022-23) (%) | 7.89 % |
| **4** | R&M Expenses = **$K \times (GFA_{n-1}) \times (1+WPI_{inflation})$** | 29.71 |

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

**Table 28 R&M Expenses approved by the Commission (Rs Cr) for FY 2022-23**

| S. No | Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Normative R&M expenses approved by Commission |
|---|---|---|---|---|
| 1 | Repair & Maintenance Expenses (R&M) | 55.33 | 24.36 | 29.71 |

The Commission approves the normative Repair & Maintenance (R&M) expenses of Rs. 29.71 Cr in the true-up of FY 2022-23.

### 3.13 Administrative and General (A&G) Expenses

### Petitioner's Submission

The Petitioner has incurred A&G expenses of Rs. 41.87 Crore in the true-up against the approved expenses of Rs. 34.06 Crore in the MYT order dated 31.03.2022.

**Table 29 A&G submitted by the petitioner (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 31st March, 2022 | Actual FY 22-23 |
|---|---|---|---|
| A | | | |
| 1. | Lease/ Rent | - | 1.55 |
| 8. | Other Professional Charges | - | 0.71 |
| 9. | Conveyance and Travelling Expenses | - | 11.87 |
| | Sub-Total 'A' (1 to 12) | - | 14.13 |

| S/No | Particulars | Approved in T.O dated 31st March, 2022 | Actual FY 22-23 |
|---|---|---|---|
| 3. | Advertisement Expenses (Other than Purchase Related) Exhibition & Demo. | - | 0.25 |
| | -Wages | - | 0.11 |
| 9. | Office Expenses | - | 7.53 |
| 10. | Other Charges | - | 19.76 |
| 11. | Minor works | - | - |
| | Sub-Total 'B' (1 to 11) | - | 27.64 |
| D | Auditor's Fee | - | 0.10 |
| | **Grand Total (A to G)** | **34.06** | **41.87** |

### Commission's analysis

The Commission has considered the approved figure of FY 2021-22 (under true-up) as a base figure to determine the normative A&G expenses for FY 2022-23. The base year expenses have been escalated by 3 years average CPI Inflation to arrive upon the normative A&G expenses of FY 2022-23. The details are given below.

**Table 30 Computation of A&G expenses (Rs Cr)**

| S. No | Particulars | Trued Up |
|---|---|---|
| | | FY 2022-23 |
| | Approved A&G expenses of FY 2021-22 (base value) | 30.86 |
| 1 | CPI (in %) | 5.40% |
| 2 | A&G Expenses | 32.53 |

**Table 31 A&G Expenses approved by Commission for FY 2022-23 (Rs Cr)**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Normative A&G expenses approved by Commission |
|---|---|---|---|---|
| 1 | A&G Expenses | 34.06 | 41.87 | 32.53 |

The Commission approves the normative Administrative & General (A&G) expenses of Rs. 32.53 Cr in the True-up of FY 2022-23.

### 3.14 Total Operation and Maintenance (O&M) Expenses

The Following table provides the O&M expenses, approved by the Commission, Petitioner's submission and O&M expenses now trued up by the Commission

**Table 32 O&M Expenses approved by the Commission for FY 2022-23 (Rs Cr)**

| Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| A&G Costs | 34.06 | 41.87 | 32.53 |
| R&M Expenses | 55.33 | 24.36 | 24.36 |
| Employee Cost | 344.56 | 348.35 | 348.35 |

| | | | |
|---|---|---|---|
| **Total O&M Expenses for the purpose of after sharing of Gains/Losses** | **433.95** | **414.58** | **405.24** |

The Commission approves the Operation & Maintenance (O&M) expenses, of Rs. 405.24 Cr in the true-up of FY 2022-23. The sharing gain/(loss) on account of O&M expenses is calculated at para no. 3.24 of this order

## 3.15 Capitalisation

### Petitioner's Submission

The petitioner submitted that addition during the year of FY 2022-23 as under:

**Table 33 GFA for FY 2022-23 submitted by the Petitioner (Rs Cr)**

| S. No. | Particulars | Approved by commission in MYT order | Actuals (FY 2022-23) |
|---|---|---|---|
| 1 | Additions during the year | 950.92 | 228.32 |

### Commission's analysis:

The Commission has considered the audited account and approved the Capitalization as reflected in the audited accounts of FY 2022-23 and submitted by the petitioner. The scheme wise details are as given below:

**Table 34 The scheme wise capitalisation approved by the Commission (Rs Cr)**

| Name of the Scheme | Equity | grant | Total |
|---|---|---|---|
| Schedule Tribe Development Scheme (P) | 0.54 | 0.00 | 0.54 |
| Schedule Caste Development Scheme | 1.14 | 0.00 | 1.14 |
| Infrastructure development through Electricity Duty (Plan) | 0.00 | 66.65 | 66.65 |
| Normal Development Schemes (Plan) | 84.18 | 0.00 | 84.18 |
| System Improvement Schemes (Plan) | 12.74 | 0.00 | 12.74 |
| Strengthening of 220 KV Transmission Network | 0.17 | 0.00 | 0.17 |
| Underground Cabling | 8.85 | 0.00 | 8.85 |
| R-APDRP Part B / IPDS | 4.16 | 6.25 | 10.41 |
| Public Lighting Scheme | 0.04 | 0.00 | 0.04 |
| New Schemes | | | |
| Projects with Administrative approval | | | |
| Estimate for re-conductoring of existing O/H ACSR Raccon Conductor to HTLS Conductor of 33KV double circuit line from 110/33KV Kadamba S/S to 33/11KV Bambolim S/S. | 6.45 | 0.00 | 6.45 |

| | | | |
|---|---|---|---|
| Tender No. 22(2020-21)/CSC: Work of conversion of 11KV S/C OH St. Cruz feeder to UG network by laying 11KV, 3Core 300sq.mm. aluminium armoured XLPE cable for a distance of 14.5 Kms along with associated equipments. | 0.00 | 6.04 | 6.04 |
| Tender No. 26 (2020-21)/CSC: Work of conversion of 11KV S/C O/H Merces feeder to UG network by laying 11KV, 3Core 300sq.mm. Aluminium Armoured XLPE cable for a distance of 13Kms along with associated equipments. | 0.00 | 6.55 | 6.55 |
| Deposit works | | | 24.56 |
| **Total** | **118.27** | **85.49** | **228.32** |

The table below provides the capitalisation approved in the MYT Order, the Petitioner's Submission and the capitalisation approved by the Commission now, under true-up**:**

**Table 35 Capitalisation (with grant) approved by the Commission (In Rs Cr) for FY 2022-23**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|---|
| 1 | Capitalisation | 950.92 | 228.32 | 228.32 |

The Commission approves the Capitalisation of Rs. 228.32 Cr during the year in the True-up of FY 2022-23.

## 3.16 Capital Structure

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

**Commission's analysis**

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

*"27. Debt to Equity Ratio*

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

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

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

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

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

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

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

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

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

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

The Commission has reviewed the capital structure submitted by the Petitioner for capitalization during FY 2022-23. The Commission has considered the capitalisation funded through various grants. As submitted by the Petitioner, the remaining capitalisation (non-grant) has been 100% funded through equity. However, in accordance with the JERC MYT Regulations, 2021, 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. Hence, the Commission approves 70:30 ratio as normative loan: equity with respective to non-grant capitalisation. Hence, the Commission has determined the Capital Structure for FY 2022-23 as follows:

**Table 36 GFA addition approved by Commission for FY 2022-23 (Rs Cr)**

| Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|
| Opening Gross Fixed Assets (non-grant) (1) | 1,261.89 | 1,192.04 | 1,152.26 |
| Addition During the FY 2022-23 (2) | 231.55 | 228.32 | 228.32 |
| Less: Capitalization through grants and ED (3) | | 79.24 | 79.24 |
| Less: Grant component of APDRP part-B/IPDS Scheme (4) | | 6.25 | 6.25 |
| Less: Value of assets sold/disposed off (5) | | 9.65 | 9.65 |
| Less: Deposit Works (6) | | 24.56 | 24.56 |
| Addition During the FY (non-grant) (7) = (2-3-4-5) | | **108.62** | **108.62** |
| **Closing Gross Fixed Assets (non-grant) (8) = (1+7)** | **1493.44** | **1300.66** | **1260.88** |

**Table 37 Capital Structure approved by Commission (Rs Cr) for FY 2022-23**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|
| Capitalisation during the FY 2022-23 | 231.55 | 228.32 | 228.32 |
| Less: Grant | | | 110.05 |
| Capitalisation (net of grant) | | | 118.27 |
| Normative loan addition During the FY @70% of GFA addition during year | 162.08 | 159.82 | 82.79 |
| Equity addition on account of new Capitalisation @30% of GFA addition during the year | 69.46 | 68.49 | 35.48 |

## 3.17 Depreciation

### Petitioner's Submission

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

**Table 38 Depreciation rate submitted by Petitioner**

| 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 | 6.00% |
| Testing & Measuring Equipment | 6.00% |

| Description of Assets | Rate of Depreciation |
|---|---|
| SCADA P&M | 6.00% |
| SCADA building | 6.00% |

The depreciation as claimed by the Petitioner has been provided in the table below:

**Table 39 Depreciation submitted by the petitioner (Rs Cr)**

| Particulars | Approved in MYT order 31st March, 2022 | Actual FY 22-23 |
|---|---|---|
| Opening Gross Fixed Assets (excluding grants) | 1261.89 | 1192.04 |
| Additions During the Fiscal Year | 231.55 | 228.32 |
| Less: Capitalization through grants and Electricity duty | - | 79.24 |
| Less: Grant Component of APDRP Part-B / IPDS scheme | - | 6.25 |
| Less: Value of assets sold/disposed off | - | 9.65 |
| Less: Deposit Works | - | 24.56 |
| Closing Gross Fixed Assets | 1493.43 | 1,300.67 |
| Average Gross Fixed Assets | 1377.66 | 1,246.36 |
| Weighted Average Rate of Depreciation | 3.82% | 5.47% |
| **Depreciation** | **52.64** | **68.14** |

**Commission's analysis**

Regulation 31 of the JERC MYT Regulations, 2021 stipulates the following with respect to depreciation:

*"31. Depreciation*

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

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

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

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

*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, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.*

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

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

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

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

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

*AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated 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 computed the weighted average rate of depreciation based on the asset wise opening balance as per the closing balance of FY 2021-22 and assets capitalized during the year excluding grant and the depreciation as per the audited account for FY 2022-23. The same has been computed as 5.47 %.

**Table 40 approved Depreciation for true- up of FY 2022-23 (Rs Cr)**

| Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | approved by the Commission |
|---|---|---|---|
| Opening Gross Fixed Assets (excluding grants) | 1261.89 | 1192.04 | 1152.26 |
| Additions During the Fiscal Year | 231.55 | 228.32 | 228.32 |
| Less: Capitalization through grants and Electricity duty | - | 79.24 | 79.24 |
| Less: Grant Component of APDRP Part-B / IPDS scheme | - | 6.25 | 6.25 |
| Less: Value of assets sold/disposed off | - | 9.65 | 9.65 |
| Less: Deposit Works | - | 24.56 | 24.56 |
| Closing Gross Fixed Assets | 1493.43 | 1,300.67 | 1260.88 |
| Average Gross Fixed Assets | 1377.66 | 1,246.36 | 1206.57 |
| Weighted Average Rate of Depreciation | 3.82% | 5.47% | 5.47 % |
| **Depreciation** | **52.64** | **68.14** | **66.00** |

The Commission approves depreciation of Rs. 66.00 Cr in the True-up of FY 2022-23.

## 3.18 Interest and Finance Charges

### Petitioner's Submission

The Petitioner has referred the Regulation 29, which deals with Interest and Finance Charges on loans. The Petitioner has claimed the interest expenses based on normative loan calculation whereby closing GFA for FY 2021-22 has been considered as opening GFA for FY 2022-23 and 70% of capitalisation (after deducting the assets created through Electricity Duty fund available as grants) during FY 2022-23 has been considered as normative debt addition during the financial year. Computation of the addition of normative loan during FY 2022-23 is shown below.

**Table 41 Interest & Finance Charges for FY 2022-23 (Rs. Cr) submitted by the Petitioner**

| S. No. | Particulars | Approved in tariff order | Actuals |
|---|---|---|---|
| 1 | Opening Normative Loan | 223.50 | 263.10 |
| 2 | Add: Normative Loan during the Year | 162.08 | 82.80 |
| 3 | Less: Normative Repayment | 52.64 | 91.61 |
| 4 | Closing Normative Loan | **332.94** | **254.28** |
| 5 | Average Normative Loan | 278.22 | 258.69 |
| 6 | Rate of Interest(@SBAR) | 8.00% | 8.00% |
| 7 | Interest on Normative Loan | 223.50 | 263.10 |

| S. No. | Particulars | Approved in tariff order | Actuals |
|---|---|---|---|
| 8 | Other Finance Charges | 0.00 | 3.07 |
| 9 | Total Interest and Finance Charges | 22.26 | 23.77 |

EDG has requested the Commission to approve the Interest & Finance Charges of Rs. 23.77 Cr for FY 2022-23.

**Commission's analysis**

Regulation 29 of the JERC MYT Regulations, 2021 stipulates the following:

*"29. Interest on Loan*

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

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

*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 capitalization approved by the Commission for the Year.*

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

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

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

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

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

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

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

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

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

The Commission has approved the normative loan and equity amount for FY 2022-23 in the earlier section of this chapter and the same amount is considered here. The Commission has considered the SBI 1 Year MCLR rate i.e. rate applicable as on 01.04.2022 (7.00%) plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2021. The opening normative loan for FY 2022-23 has been considered as the approved closing normative loan of FY 2021-22 (approved under true-up).

The Commission has also considered the finance charges of Rs. 3.07 Crore as claimed by the Petitioner in its audited account of FY 2022-23 and approves the same.

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

**Table 42 Interest and Finance charges approved by Commission (Rs Cr) for FY 2022-23**

| Particulars | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|
| Opening Normative Loan | 223.50 | 263.10 | 134.85 |
| Add: Normative Loan During the year | 162.08 | 82.80 | 82.79 |
| Less: Normative Repayment= Depreciation | 52.64 | 91.61 | 66.00 |
| Closing Normative Loan | 332.94 | 254.29 | 151.64 |
| Average Normative Loan | 278.22 | 258.70 | 143.24 |
| Rate of Interest (%) | 8.00% | 8.00% | 8.00% |
| Interest on Loan | **22.26** | **20.70** | **11.46** |
| Financing Charges | | 3.07 | 3.07 |
| Interest and Finance Charges | **22.26** | **23.77** | **14.53** |

The Commission approves the Interest and Finance Charges of Rs. 14.53 Cr in the True-up of the FY 2022-23.

## 3.19 Return on Equity (RoE)

### Petitioner's Submission

RoE is computed on equity, which is 30% of the capital base. RoE for FY 2022-23 is calculated based on the average of opening and closing equity at a 15.5

% and16% rate (on post-tax basis). EDG has claimed the Return on Equity as outlined in the following table for FY 2022-23:

**Table 43 Return on Equity for FY 2022-23 (Rs. Cr), submitted by the Petitioner**

| S. No. | Particulars | Approved in tariff order | Actuals |
|---|---|---|---|
| 1 | Opening Equity Amount | 379.16 | 342.33 |
| 2 | Equity Addition during year (30% of Capitalization) | 69.46 | 35.48 |
| 3 | Closing Equity Amount | 448.62 | 377.82 |
| 4 | Average Equity Amount | 413.89 | 360.07 |
| 5 | Average Equity-Wires Business | 372.50 | 324.07 |
| 6 | Average Equity (Retail Supply Business) | 41.39 | 36.01 |
| 7 | Return on Equity for Wires Business (%) | 15.50% | 15.50% |
| 8 | Return on Equity for Retail Supply Business (%) | 16.00% | 16.00% |
| 9 | Return on Equity for Wires Business | 57.74 | 50.23 |
| 10 | Return on Equity for Retail Supply Business | 6.62 | 5.76 |
| 11 | Total Return on Equity | **64.36** | **55.99** |

In view of above, the Petitioner requested to allow the above Return on Equity of Rs.55.99 Cr for FY 2022-23.

**Commission's analysis:**

The Regulations 28.2 and 28.3 of the JERC MYT Regulations, 2021 stipulate the following with respect to RoE:

*"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."*

The equity addition (corresponding to non-grant capitalization) during FY 2022-23 is already approved by the Commission in the capitalization section and the same equity has been considered here. RoE has been calculated on normative basis on the average of opening and closing of equity during the year at the rate of 16% (for retail supply) and 15.50% (for wire business), as applicable, (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2021-22 as approved in the True-up of FY 2021-22. Further, the Commission considers 90% of average equity correspond to the wire business and remaining for retail supply. The following table provides the RoE approved in the MYT Tariff Order dated 31.03.2022, the Petitioner's Submission and RoE now approved by the Commission under true-up for FY 2022-23.

**Table 44 RoE approved by Commission for FY 2022-23 (Rs Cr)**

| S. No | Particulars | | Approved in MYT order 31st March, 2022 | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|---|---|
| 1 | Opening Equity Amount | A | 379.16 | 342.33 | 336.22 |
| 2 | Equity Addition during year | B | 69.46 | 35.48 | 35.48 |
| 3 | Closing Equity Amount | C | 448.62 | 377.81 | 371.70 |
| 4 | Average Equity Amount | D = (A+B)/2 | 413.89 | 360.07 | 353.96 |
| 5 | Average Equity-Wires Business | E = D*90% | 372.50 | 324.06 | 318.56 |
| 6 | Average Equity (Retail Supply Business) | F=D*10% | 41.39 | 36.01 | 35.40 |
| 7 | Return on Equity for Wires Business (%) | G | 15.50% | 15.50% | 15.50% |
| 8 | Return on Equity for Retail Supply Business (%) | H | 16.00% | 16.00% | 16.00% |
| 9 | Return on Equity for WiresBusiness | I=G*E | 57.74 | 50.23 | 49.38 |
| 10 | Return on Equity for Retail Supply Business | J=H*F | 6.62 | 5.76 | 5.66 |
| 11 | Total Return on Equity | K=I+J | **64.36** | **55.99** | **55.04** |

The Commission approves Return on Equity of Rs. 55.04 Cr in the True-up of FY 2022-23.

## 3.20 Interest on Security Deposits

### Petitioner's Submission

The Petitioner submitted that Interest on Security Deposits has been calculated as per JERC MYT Regulations, 2021 using average consumer security deposit amount. Further, it is mentioned that in the earlier submission there were some errors in the addition of consumer security deposits during the previous year and the same has been rectified in this submission. As per the provisional annual accounts, the provision for actual Interest on Security Deposit to be paid by EDG during FY 2022-23 was Rs. 6.43 Cr. And the same has been considered as Interest on Security Deposit for the purpose of True-up.

**Table 45 Interest on Security Deposit for FY 2022-23 (Rs. Cr) submitted by the Petitioner**

| S. No. | Particulars | Approved in tariff order | Actuals |
|---|---|---|---|
| 1 | Opening Security Deposit | 77.02 | 178.56 |
| 2 | Add: Deposits during the year | *15.65* | *13.33* |
| 3 | Less: Deposits refunded | *0.37* | *2.24* |
| 4 | Closing Security Deposit | 92.31 | 189.65 |
| 5 | Average Security Deposit | 84.67 | 184.10 |
| 6 | Bank Rate | 4.25% | 4.25% |
| 7 | Interest on Security Deposit | **3.60** | **7.82** |
| 8 | Interest on Security Paid to Consumers | **-** | **6.43** |

The Interest on Security Deposit for FY 2022-23 is Rs. 7.82 Cr, but only Rs.6.43 Cr has been paid to consumers and the Petitioner has requested to allow the said amount.

**Commission's analysis:**

Regulation 29.11 of the JERC MYT Regulations, 2021 stipulates the following about security deposit:

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

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

The opening security deposit has been considered in line with the petitioner's submission for FY 2022-23. The Petitioner has submitted that there was some error from the Petitioner's end while submitting the opening secuirity deposit in the true-up of FY 2021-22 which was duly approved by the Commission as it is. The same error has now been corrected in the present true-up petition for FY 2022-23. The addition during the year has been considered as per the audited account submitted by the Petitioner. The rate of interest has been considered equivalent to the prevailing RBI Bank rate as on 01.04.2022.

The table below provides the calculation of interest on consumer security deposits for the year:

**Table 46 Interest on Consumer Security Deposits approved by Commission (Rs Cr) for FY 2022-23**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|---|
| 1 | Opening Security Deposit | 77.02 | 178.56 | 178.56 |
| 2 | Add: Deposits During the | 15.65 | 13.33 | 13.33 |

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|---|
| | year | | | |
| 3 | Less: Deposits refunded | 0.37 | 2.24 | 2.24 |
| 5 | Closing Security Deposit | 92.31 | 189.65 | 189.65 |
| 6 | Average Security Deposit | 84.67 | 184.10 | 184.10 |
| 7 | Rate of Interest (%) | 4.25% | 4.25% | 4.25% |
| **8** | **Interest on Security Deposit on normative basis** | **3.60** | **7.82** | **7.82** |
| **9** | **Interest on Security Deposit paid to consumers** | **-** | **6.43** | **6.43** |

As actual interest paid on security deposit is lesser than normative value, the Commission approves interest on security deposit as Rs. 6.43 Cr in the True-up of FY 2022-23.

### 3.21 Interest on Working Capital

**Petitioner's Submission**

The Petitioner has computed the Interest on Working Capital at rate of 9.00% and is claimed as under:

**Table 47 Interest on Working Capital submitted by Petitioner for FY 2022-23 (Rs Cr)**

| S. No. | Particulars | Approved in MYT order | Actuals |
|---|---|---|---|
| 1 | Two Months Receivable | 401.36 | 400.75 |
| 2 | O&M Expense - 1 month | 36.16 | 34.55 |
| 3 | Maintenance Spare @ 40% of R&M Expenses of one month | 1.84 | 0.81 |
| 4 | Less: Amount held as Security Deposit | 84.67 | 184.10 |
| 5 | Less: Power Purchase cost for one (1) month | 153.29 | 190.82 |
| 6 | Total | 201.41 | 61.19 |
| 7 | Interest Rate | 9.00 % | 9.00 % |
| **8** | **Interest on working capital** | **18.13** | **5.51** |

**Commission's analysis:**

The Commission observed that Regulation 53 of the JERC MYT Regulations, 2021 stipulates the following regarding norms of working capital requirement:

*"53. Norms of Working Capital for Distribution Wires Business*

*53.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:*

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

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

*(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;*

***Less:***

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

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

Further, Regulation 64 of the JERC MYT Regulation, 2021 stipulates 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 re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."*

Further, Regulation 32.3 of the JERC MYT Regulation, 2021 stipulates the following:

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

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

The Commission has observed that for determining the working capital requirement for retail supply business, one month power purchase cost has to be reduced along with amount of security deposit held by the Petitioner. The Commission considers the approved power purchase cost and average security deposit during the year, to determine working capital requirement. The Commission has considered the SBI Base rate as on 1st April 2022 for calculation of interest plus 200 basis points i.e. 9.00% (7.00% + 200 basis points).

Accordingly, the Interest on Working Capital has been determined by the Commission, as shown in the table below:

**Table 48 Interest on Working Capital approved by Commission (Rs Cr) for FY 2022-23**

| S. No. | Particulars | Approved in MYT order | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|---|
| 1 | Two Months Receivable | 401.36 | 400.75 | 417.75 |
| 2 | O&M Expense - 1 month | 36.16 | 34.55 | 33.77 |
| 3 | Maintenance Spare @ 40% of R&M Expenses of one month | 1.84 | 0.81 | 0.81 |
| 4 | Less: Amount held as Security Deposit | 84.67 | 184.10 | 184.11 |
| 5 | Less: Power Purchase cost for one (1) month | 153.29 | 190.82 | 190.82 |
| 6 | Total | 201.41 | 61.19 | 77.40 |
| 7 | Interest Rate | 9.00 % | 9.00 % | 9.00 % |
| **8** | **Interest on working capital** | **18.13** | **5.51** | **6.97** |

Accordingly, the Commission approves Rs. 6.97 Cr. as Interest on Working Capital in the True-up of FY 2022-23.

## 3.22 Provision for Bad & Doubtful Debts

### Petitioner's Submission

EDG has considered the provision for bad and doubtful debts for FY 2022-23 is Rs. 7.71 Cr.

**Commission's analysis:**

The Commission noted the provisions given under Regulation 63 of the JERC MYT Regulations, 2021, which are as follows:

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

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

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

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

Accordingly, the Commission shall true up the bad debts written off in the ARR, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to the provision that the bad and doubtful debts shall be limited to 1% of the Annual Revenue Requirement of the Distribution Licensee. The submission of the Petitioner has been reviewed by the Commission and the same reveals that the claimed bad and doubtful debts has been written off as per the audited account for FY 2022-23. Therefore, the Commission approved actual Bad debts written off as Rs. 7.71 Cr. for true-up of FY 2022-23.

### 3.23 Non-Tariff Income (NTI)

**Petitioner's Submission**

The Non-Tariff Income approved by the Commission in the ARR for FY 2022-23 was Rs. 26.32 Cr. Actual rebates received for early/prompt payment of the bills from the generators are considered as incentive and the same is taken under 'Rebates from Generators' in the Non-Tariff Income for true-up of FY 2022-23. Therefore, EDG has claimed the NTI as Rs. 56.53 Cr. as per the audited account of FY 2022-23.

**Commission's analysis:**

Regulation 65 of JERC MYT Regulation, 2021 states the following about 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 in excess of 10% of the salvage value;*

*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 has considered the submission of the Petitioner in its audited accounts and accordingly, approved NTI for FY 2022-23 as shown in the following table:

**Table 49 Non- Tariff Income approved by Commission (Rs Cr) for FY 2022-23**

| **Particulars** | **Approved in T.O dated 31st March, 2022** | **Petitioner's Submission** | **Approved by the Commission** |
|---|---|---|---|
| Meter/service rent | 26.32 | 7.65 | 7.65 |
| UI Sales / Sales to Exchange | | | |
| Wheeling charges under open access | | | |
| Sale Proceeds of dead stock, wastepaper etc. | | | |
| Rebates from Generators | | 29.82 | 29.82 |
| Miscellaneous Receipts | | 16.92 | 16.92 |
| Deferred Income (Electricity Development fund) | | | |
| Income from trading | | | |
| Income (Application fee, Cross Subsidy Surcharge, Additional Surcharge, Transmission and/or Wheeling Charges, Scheduling Charges etc. | | 2.13 | 2.13 |
| Total income | 26.32 | 56.53 | 56.53 |
| Add: prior period income | | | |
| **Total Non-tariff income** | **26.32** | **56.53** | **56.53** |

The Commission approves Non-Tariff Income of Rs. 56.53 Cr in the True-up of FY 2022-23.

## 3.24 Incentive/Disincentive towards over/under-achievement of norms

### 3.24.1 Incentive/Disincentive towards over/under-achievement of norms for T&D Loss

**Petitioner's Submission:**

No submission has been made in this regard.

**Commission's analysis:**

In the MYT order for FY 2022-23 dated 31.03.2022, the Commission had approved the distribution loss level of 10.25 % for the FY 2022-23. As discussed earlier in the approval of T&D Losses section, the Petitioner has been able to achieve an Intra-State T&D Loss of 7.41 %. Thus, there is an over achievement of the loss target. In accordance with the JERC MYT Regulations, 2021, the Commission has determined the sharing of gains/losse on account of controllable factors, i.e. distribution loss. The Regulation 15 of the JERC MYT Regulations, 2018 stipulates the following:

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

*15.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers:*

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

The incentive has been derived by calculating the saving in cost of power procured due to over-achievement of the stipulated Intra-State T&D loss target by the Petitioner, at the Average Power Purchase cost (APPC). The APPC has been derived as follows:

**Table 50 Average Power Purchase Cost (APPC) for the FY 2022-23**

| Particulars | | Amount |
|---|---|---|
| Total Power Purchase Cost (Rs Cr) | A | 2289.14 |
| Less: Transmission charges and Power Purchase cost from renewable energy sources (Rs Cr) | B | 638.29 |
| Net Power Purchase Cost (Rs Cr) | C=A-B | 1651.55 |
| Quantum of Ex-bus Power Purchase (MU) | D | 4932.64 |
| Quantum of energy at UT Periphery excluding from renewable energy sources (MU) | E | 4262.97 |
| APPC (RS /kWh) | F=C/E*10 | **3.87** |

**Table 51 Approved Incentive towards overachievement of T&D loss (Rs Cr) for FY 2022-23**

| Particulars | | Approved in Tariff Order | Approved under true-up |
|---|---|---|---|
| Retail Sales | A | 4,438.06 | 4,438.06 |
| T&D Loss | B | 10.25% | 7.41% |
| Energy purchase at Periphery | C=A-B | 4,944.91 | 4,793.08 |
| Gain/(Loss) in terms of MU | D | | 151.84 (*4,944.91 - 4,793.08*) |
| APPC (Rs /kWh) | E | | 3.87 |
| Gain/(Loss) in Rs Cr | F=D*E/10 | | 58.82 |
| Sharing (50% to Licensee in case of gain and 100% in case of loss) in Rs Cr | | | **29.41** |

The Commission determines and approves Rs. 29.25 Cr as an incentive for over-achieving the Intra-State Distribution Loss target in the True-up of FY 2022-23.

### 3.24.2 Sharing of gains/(loss) for O&M Expenses

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the sharing of gains/losses on account of controllable factors. The Regulation 15 of the JERC MYT Regulations, 2021 stipulates the following:

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

*15.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers:*

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

Considering the above provisions, the Commission has carried out the gain and loss of O&M expenses, which are controllable parameters. The Details are provided below.

**Table 52 Sharing Gain/ (Loss) approved by the Commission for FY 2022-23 (Rs Cr)**

| Particulars | Normative | Actual | Gain/(loss) | Sharing of gain/(loss) | Trued-up by the Commission |
|---|---|---|---|---|---|
| Total Employee Expenses | 364.29 | 348.35 | 15.94 | 7.97 | 348.35 |
| Administration & General Expenses (A&G) | 32.53 | 41.87 | (9.34) | 0.00 | 32.53 |
| Repair & Maintenance Expenses (R&M) | 29.71 | 24.36 | 5.34 | 2.67 | 24.36 |
| **Total** | **428.03** | **414.59** | | **10.64** | **405.24** |

## 3.25 Aggregate Revenue Requirement (ARR)

### Petitioner's Submission

The Aggregate Revenue Requirement for FY 2022-23 as approved by the Commission was Rs. 2408.15 Cr in the MYT order against which the ARR for FY 2022-23 on basis of actuals is Rs. 2816.84 Cr. The submission of the Petitioner for Aggregate Revenue Requirement on the basis of actuals for FY 2022-23 is shown below:

**Table 53 Calculation of ARR for FY 2022-23 (Rs. Cr) submitted by the Petitioner**

| S. No. | Particulars | Approved by Commission in APR order | Claimed in True-up |
|---|---|---|---|
| 1 | Cost of power purchase | 1839.53 | 2289.14 |
| 2 | Operation & Maintenance Expenses | 433.95 | 414.58 |
| 3 | Depreciation | 52.63 | 68.18 |

| S. No. | Particulars | Approved by Commission in APR order | Claimed in True-up |
|---|---|---|---|
| 4 | Interest & Finance Charges | 22.26 | 23.77 |
| 5 | Interest on CSD | 3.60 | 7.82 |
| 6 | Interest on Working Capital | 18.13 | 5.51 |
| 7 | Return on Equity | 64.36 | 55.99 |
| 8 | Provision for Bad Debt | 0.00 | 7.71 |
| 10 | Total Revenue Requirement | 2434.47 | 2873.37 |
| 11 | Less: Non- Tariff Income | 26.32 | 56.53 |
| **12** | **Net Aggregate Revenue Requirement** | **2408.15** | **2816.84** |

## Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has approved the revenue requirement for the True-up of FY 2022-23 as given in the following table:

**Table 54 Aggregate Revenue Requirement approved by Commission for FY 2022-23 (Rs Cr)**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Trued-up by Commission |
|---|---|---|---|---|
| 1 | Power Purchase Cost | 1839.53 | 2289.84 | 2289.84 |
| 2 | Operation & Maintenance Expenses | 433.95 | 414.58 | 405.24 |
| 3 | Depreciation | 52.63 | 68.18 | 66.00 |
| 4 | Interest and Finance charges | 22.26 | 23.77 | 14.53 |
| 5 | Return on Equity | 64.36 | 55.99 | 55.04 |
| 6 | Interest on Security Deposit | 3.60 | 7.82 | 6.43 |
| 7 | Interest on Working Capital | 18.13 | 5.51 | 6.97 |
| 8 | Bad debts | 0.00 | 7.71 | 7.71 |
| 9 | Add: Incentive/ (Disincentive) on achievement of norms (distribution loss) | | | 29.41 |
| 10 | On Account of sharing gain and (loss) for O&M Expenses | | | 10.64 |
| 11 | Total Revenue Requirement | 2434.47 | 2873.37 | **2891.81** |
| 12 | Less: Non-Tariff Income | 26.32 | 56.53 | 56.52 |
| 13 | Net Revenue Requirement | **2408.15** | **2816.84** | **2835.29** |

The Commission approves net Aggregate Revenue Requirement of Rs. 2835.29 Cr in the True-up of the FY 2022-23.

## 3.26 Revenue at existing Retail Tariff

### Petitioner's Submission

The Petitioner submitted the actual revenue earned from tariffs for FY 2022-23, which is shown in the table below:

**Table 55 Revenue from Tariff for FY 2022-23 submitted by the Petitioner (Rs Cr)**

| Particulars | Actual FY 2022-23 (Rs. Crore) | | | | |
|---|---|---|---|---|---|
| | Revenue from Fixed Charges | Revenue from Demand Charges | Revenue from Energy Charges | Revenue from FPPCA | total |
| A. LOW TENSION SUPPLY | | | | | |
| LTD/Domestic | 42.48 | - | 349.72 | 67.39 | 459.60 |
| LT-LIG (Low Income Group) | 0.00 | - | 0.20 | 0.04 | 0.25 |
| LTC/Commercial | 25.09 | - | 225.94 | 44.94 | 295.97 |
| LT Mixed Hotel Industries | 0.14 | - | 2.01 | 0.38 | 2.52 |
| LTI/ Industrial | 6.84 | - | 34.23 | 7.50 | 48.57 |
| LTAG/Agriculture (Pump sets/Irrigation) | 1.08 | - | 2.42 | 0.00 | 3.49 |
| LTAG/Agriculture (Allied Activities) | 0.06 | - | 0.21 | 0.00 | 0.28 |
| LTPL Public Lighting | 1.46 | - | 22.73 | 3.59 | 27.79 |
| LT Hoardings/Signboards | 0.04 | - | 0.24 | 0.05 | 0.34 |
| B. HIGH TENSION SUPPLY | | | | | |
| HTD Domestic | - | 0.05 | 0.17 | 0.03 | 0.25 |
| HT- Commercial | - | 26.96 | 82.72 | 19.90 | 129.58 |
| HTI / Industrial - Connected at 11/33kV | - | 119.80 | 705.46 | 152.06 | 977.33 |
| HTI / Industrial - Connected at 110 kV | - | 16.62 | 122.13 | 24.67 | 163.41 |
| HT-Industrial (F/M, Steel Melt, Power Intensive) | - | 28.93 | 255.30 | 47.39 | 331.62 |
| HTAG/Agriculture (Pump sets/Irrigation) | - | 0.39 | 1.11 | 0.00 | 1.50 |
| HTAG/Agriculture (Allied Activities) | - | 0.18 | 2.57 | 0.00 | 2.74 |
| HTMES / Defence Establishment | - | 1.78 | 15.92 | 3.32 | 21.02 |
| C. TEMPORARY SUPPLY | | | | | |
| LT Temporary Domestic | 0.13 | - | 1.25 | 0.24 | 1.63 |
| LT Temporary Commercial | 0.67 | - | 16.95 | 3.40 | 21.02 |
| HT Temporary | - | 1.59 | 4.18 | 0.95 | 6.72 |
| D. SINGLE POINT SUPPLY | | | | | |
| Residential Complexes | - | - | - | - | - |
| Commercial Complexes | - | 0.56 | 2.77 | 0.64 | 3.97 |
| Industrial Complexes | - | - | - | - | - |

| Particulars | Actual FY 2022-23 (Rs. Crore) | | | | |
|---|---|---|---|---|---|
| | **Revenue from Fixed Charges** | **Revenue from Demand Charges** | **Revenue from Energy Charges** | **Revenue from FPPCA** | **total** |
| E. OTHER CATEGORIES | | | | | |
| EV Charging Stations | 0.00 | - | 1.88 | 0.35 | 2.23 |
| RRC Reffered | 0.04 | - | 4.59 | 0.02 | 4.65 |
| | | | | | |
| **Total** | **78.04** | **196.86** | **1,854.70** | **376.87** | **2,506.47** |

### Commission's analysis

The Commission has considered the audited account, as submitted by the Petitioner. Accordingly, the revenue now Trued-up by the Commission is shown in the following table:

**Table 56 Revenue at existing tariff approved by Commission for FY 2022-23 (Rs Cr)**

| Particulars | Petitioner's Submission | | Trued- up by the Commission | |
|---|---|---|---|---|
| | **Sales (MUs)** | **Revenue (Rs. Crore)** | **Sales (MUs)** | **Revenue (Rs. Crore)** |
| Total Revenue | 4438.06 | 2506.47 | 4438.06 | 2506.47* |

* This includes Rs. 376.87 Cr from FPPCA recovery of charges.

The Commission approves the revenue from the sale of power including FPPCA income as Rs. 2506.47 Cr in the True-up of the FY 2022-23.

## 3.27 Standalone Revenue Gap/ (Surplus)

### Petitioner's Submission

The Petitioner has submitted that the Commission approved a revenue Gap of Rs. 415.62 Cr for FY 2022-23 in the tariff order for FY 2022-23. EDG requests approval for a net revenue gap of Rs. 310.37 Cr. The table below provides the revenue at existing tariff as submitted by the Petitioner:

**Table 57 Revenue at existing tariff submitted by the Petitioner for FY 2022-23 (Rs Cr)**

| S. No. | Particulars | Approved | Actuals |
|---|---|---|---|
| 1 | Aggregate Revenue Requirement | 2408.15 | 2816.84 |
| 2 | Revenue from Sale of Power | 1992.53 | 2506.47 |
| **3** | **Revenue Gap/ (Surplus)** | **415.62** | **310.37** |

### Commission's analysis

The Commission considered their audited account and approved the standalone Revenue Gap/Surplus as follows:

**Table 58 Standalone Revenue Gap/ (Surplus) for FY 2022-23 (Rs Cr)**

| **Particulars** | **Approved in Tariff Order** | **Petitioner's Submission** | **Trued-up by Commission** |
|---|---|---|---|
| Net Revenue Requirement | 2408.15 | 2816.84 | 2835.29 |
| Total Revenue | 1992.53 | 2506.47 | 2506.47 |
| Net Gap / (Surplus) | **415.62** | **310.37** | **328.82** |

The Commission, in the True-up of FY 2022-23 approves a standalone gap of Rs. 328.82 Cr. The Petitioner has submitted that the entire gap for the FY 2022-23 is committed to be funded by the Government of Goa by way of budgetary support. The Petitioner in this regard has submitted the letter with Reference No. 1/14/2021-FIN (BUD)/300 dated 29.12.2021 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit for the FY 2022-23. Accordingly, no revenue gap is carried forward in the future years.

# CHAPTER 4: Annual Performance Review of FY 2023-24

## 4.1. Background

This Chapter covers the Annual Performance Review (APR) of FY 2023-24 vis-à-vis the cost parameters approved by the Commission in the Tariff Order for FY 2023-24 in its order dated $30^{th}$ March, 2023. The Annual Performance Review for the FY 2023-24 is to be carried out as per the provisions of Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021, hereinafter referred to as the JERC MYT Regulations, 2021.

## 4.2. Applicable Provisions and Background

The Annual Performance Review for the FY 2022-23 is to be carried out in accordance with the Regulation 12 of the JERC MYT Regulations 2021:

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

*12.1 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.*

*12.2 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.*

*12.3 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 estimates of 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;*

*……….”*

## 4.3. Approach for the Review for the FY 2023-24

The review of the Aggregate Revenue Requirement for FY 2023-24 requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M Expenses, interest on long-term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2023-24 has been done based on the 6 months' actual data as provided by the Petitioner for the FY 2023-24 of the Power Purchase Quantum and the Cost, Energy Sales, Capitalisation etc. Based on such data, the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual informations submitted by the Petitioner, in accordance with the JERC MYT Regulations, 2021 and on the basis of the norms approved in the MYT Order dated 31st March 2022

## 4.4. Energy Sales

### Petitioner's Submission

The petitioner submitted that the energy sales for H1 (April to September) of FY 2023-24 is 2374.11 MUs. For the purpose of Annual Performance Review for FY 2023-24, the figures of sales during first half (H1) of FY 2023-24 was considered from SAP System, and EDG has extrapolated the sales in second half (H2) of FY 2023-24 with respect to actual sales during H1 of FY 2023-24 to arrive at the projections of FY 2023-24. The Petitioner estimated the sales for FY 2023-24 as 4661.14 MU.

The following table shows the overall Sales considered by EDG for APR of FY 2023-24 vis-à-vis Sales approved in Tariff Order dated 30th March 2023.

**Table 59 Projected Sales for APR of FY 2023-24 (MUs), submitted by the Petitioner**

| S/ No | Category of Consumer | Approved in Tariff order dated 30th March, 2023 | Actual Sales for H1 | Projected Sales for H2 | Estimated Total Sales FY 2023-24 |
|---|---|---|---|---|---|
| A. LOW TENSION SUPPLY | | | | | |
| 1. | LTD/Domestic | 1,468.06 | 741.72 | 627.56 | 1,369.28 |
| 2. | LT-LIG (Low income Group) | 0.93 | 0.50 | 0.43 | 0.93 |
| 3. | LTC/Commercial | 474.02 | 267.18 | 253.00 | 520.18 |
| 4. | LTI/ Industrial | 86.77 | 44.09 | 44.76 | 88.85 |
| 5. | LT Mixed/ LT-P Hotel Industries | 3.90 | 1.59 | 1.50 | 3.09 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 14.86 | 7.87 | 11.06 | 18.93 |
| 7. | LTAG/LT-AGA (Allied | | 0.64 | 0.90 | 1.54 |

| S/ No | Category of Consumer | Approved in Tariff order dated 30th March, 2023 | Actual Sales for H1 | Projected Sales for H2 | Estimated Total Sales FY 2023-24 |
|---|---|---|---|---|---|
| | Activities) | | | | |
| 8. | LTPL Public lighting | 46.27 | 29.32 | 20.81 | 50.13 |
| 9. | LT Hoarding /Sign Board | 0.27 | 0.08 | 0.05 | 0.14 |
| B. HIGH TENSION SUPPLY | | | | | |
| 10. | HTD Domestic | 0.37 | 0.20 | 0.20 | 0.40 |
| 11. | HTC Commercial | 154.98 | 96.51 | 97.08 | 193.59 |
| 12. | HTI/Industrial - Connected at 11/33 kV | 1,756.68 | 716.56 | 741.74 | 1,458.30 |
| 13. | HTI/Industrial - Connected at 110 kV | | 151.74 | 157.07 | 308.81 |
| 14. | High Tension-Ferro/SM/PI/SR | 494.55 | 267.27 | 276.67 | 543.94 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 20.61 | 2.68 | 3.45 | 6.14 |
| 16. | HTAG/HT-AGA (Allied Activities) | | 7.05 | 9.07 | 16.12 |
| 17. | Military Engineering Services/ Defense Establishments | 33.55 | 17.98 | 17.76 | 35.74 |
| C. TEMPORARY SUPPLY | | | | | |
| 18. | LT. Temporary Domestic | 3.60 | 1.52 | 1.76 | 3.28 |
| 19. | LT. Temporary Commercial | | 11.26 | 12.97 | 24.23 |
| 20. | HT. Temporary | 5.20 | 2.29 | 2.64 | 4.93 |
| D. SINGLE POINT SUPPLY | | | | | |
| 21. | Residential Complexes | 5.38 | | | |
| 22. | Commercial Complexes | | 3.31 | 3.66 | 6.97 |
| 23. | Industrial Complexes | | | | |
| E. OTHER CATEGORIES | | | | | |
| 24. | EV Charging Stations | - | 2.73 | 2.90 | 5.63 |
| **TOTAL** | | **4,570.01** | **2,374.11** | **2,287.03** | **4,661.14** |

The Petitioner has requested to approve the revised sales of 4661.14 MUs for FY 2023-24.

**Commission's analysis**

The Commission has reviewed the data submitted by the Petitioner and observed that the Petitioner has projected the sales for H2 in line with the actual sales of H1. Further, the Commission sought the details of actual sales of initial 6 months in the deficiency note. The Commission has also determined the compound annual growth rate (CAGR) based on past actual sales as shown in the subsequent chapter (ARR for FY 2024-25). Based on the analysis of the actual sales information for FY 2022-23 (immediate past year) and the provisional information provided by the Petitioner for the initial 6 months of the FY 2023-24, the Commission has projected the sales for FY 2023-24 by extrapolating the actual sales data of FY 2022-23 with 5-year CAGR figure. In case of negative growth rate of sales, the Commission has unchanged the sales figure of FY 2022-23 for the relevant consumer category.

**Table 60 Energy Sales (MU) approved by the Commission for APR of FY 2023-24**

| **Consumer category** | **ARR approved for FY 2023-24 in Tariff Order dt. 31.03.2023** | **Petitioner's Submission** | **Approved By Commission** |
|---|---|---|---|
| A. Low Tension Supply | | | |
| LTD/ Domestic | 1,468.06 | 1,369.28 | 1,422.91 |
| LT-LIG/ Low Income Group | 0.93 | 0.93 | 0.94 |
| LTC/ Commercial | 474.02 | 520.18 | 490.08 |
| LTI/ Industrial | 86.77 | 88.85 | 89.98 |
| LT Mixed/ LT -P Hotel Industry | 3.90 | 3.09 | 4.07 |
| LTAG/LT-AGP (Pump Sets/Irrigation) | 14.86 | 20.47 | 17.63 |
| LTPL Public lighting | 46.27 | 50.13 | 71.15 |
| LT Hoarding /Sign Board | 0.27 | 0.14 | 0.24 |
| B. HIGH TENSION SUPPLY | | | |
| HTD Domestic | 0.37 | 0.40 | 0.37 |
| HTI/Commercial | 154.98 | 193.59 | 181.94 |
| HTI/Industrial – Connected at 11/33 kV | 1,756.68 | 1,767.11 | 1,722.33 |
| HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling) | 494.55 | 543.94 | 532.29 |
| HTAG/HT-AGP (Pump Sets/Irrigation) | 20.61 | 22.26 | 22.66 |
| HTMES/Defence Establishment | 33.55 | 35.74 | 32.43 |
| C. TEMPORARY SUPPLY | | | |
| LT-Temporary | 3.60 | 27.51 | 28.28 |
| HT-Temporary | 5.20 | 4.93 | 9.14 |
| D. SINGLE POINT SUPPLY | 5.38 | 6.97 | 5.48 |
| EV Charging Stations | | 5.63 | 5.04 |
| **Total** | **4570.01** | **4661.15** | **4636.95** |

The Commission approves 4636.95 MUs as energy sales in the APR of the FY 2023-24.

## 4.5. Open Access Sales and Purchase

**Petitioner's Submission**

The Petitioner has not projected or scheduled any energy sales/purchase under Open Access in the FY 2023-24.

**Commission's analysis**

The Commission in this regard considers the Petitioner's submission and approves NIL Open Access Sale and Purchase accordingly. The Commission now approves NIL open access sales and purchase in the APR of FY 2023-24.

## 4.6. Inter-State Transmission Loss

**Petitioner's Submission**

The petitioner submitted that PGCIL losses are on account of two regions, Western region (WR) and Southern Region (SR). The Petitioner has considered the actual Transmission Losses of FY 2023-24 (H1) for projecting the loss under APR of FY 2023-24. Accordingly, Inter-State Transmission Losses for FY 2023-24 have been submitted by the Petitioner is given below, as under:

**Table 61 Inter-State Transmission Loss submitted by the Petitioner**

| Particulars | Approved in T.O dated 30th March, 2023 | | Actual H1 (April-September) | | FY 2023-24 (Revised Estimate) |
|---|---|---|---|---|---|
| | WR | SR | WR | SR | Total |
| Inter-State Transmission Loss (%) | 2.89 | 6.97 | 3.11 | 4.21 | 3.29 |

**Commission's analysis**

The Commission in the APR of FY 2023-24 considers the transmission loss levels same as approved in the MYT Order dated 31st March 2022. The table below provides the Inter-State Transmission Losses submitted by the Petitioner and now approved by the Commission.

**Table 62 Approved Inter-State Transmission Loss (%) for FY 2023-24**

| Particulars | Approved in T.O dated 30th March, 2023 | | Actual H1 (April-September) | | Approved by the Commission | |
|---|---|---|---|---|---|---|
| | WR | SR | WR | SR | WR | SR |
| Inter-State Transmission Loss (%) | 2.89 | 6.97 | 3.11 | 4.21 | 2.89 | 6.97 |
| Total | 3.55 % | | 3.29 % | | 3.55 % | |

The Commission approves the Inter-State Transmission Loss as 3.55 % in the APR of FY 2023-24.

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

### Petitioner's Submission

The petitioner submitted that the Commission has approved distribution loss of 8.20% for FY 2023-24 in the Tariff Order dated 30th March 2023. For H1 of FY 2023-24, the actual distribution loss was 8.37%. However, for the projections for FY 2023-24, the actual Distribution loss of 7.41 % arrived for FY 2022-23 has been considered by the Petitioner.

### Commission's analysis

The Commission in the APR of FY 2022-23 considered the T&D loss levels in line with the T&D loss levels approved in the previous tariff Order dated 30th March 2023. The Commission continues to approve the T&D loss for APR of FY 2023-24 as per the same. The table below provides the T&D Losses submitted by the Petitioner and now approved by the Commission.

**Table 63 Approved Intra-State distribution loss (%) for FY 2023-24**

| S. No | Particulars | Approved in MYT Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | Intra-State distribution loss | 8.20 % | 7.41 % | 8.20 % |

The Commission approves Intra-State T&D loss of 8.20 % in the APR of FY 2023-24.

## 4.8. Energy Balance

### Petitioner's Submission

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

**Table 64 Energy Balance (MUs) submitted by Petitioner**

| S/No | Particulars | FY 2023-24 (APR) | | |
|---|---|---|---|---|
| | | (H1) | (H2) | (H1+H2) |
| **A** | **ENERGY REQUIREMENT** | | | |
| 1. | Energy sales to metered category within the State | 2,374.11 | 2,287.03 | 4,661.14 |
| 2. | Total sales within the State | 2,374.11 | 2,287.03 | 4,661.14 |
| 3. | Distribution Losses (MU) | 216.83 | 156.30 | 373.13 |
| 4. | Distribution Losses (%) | 8.37% | 6.40% | 7.41% |
| 5. | Energy required at DISCOM Periphery | 2,590.94 | 2,443.33 | 5,034.27 |
| 6. | Intra-State Transmission Losses | - | - | - |
| 7. | Energy Required at State Periphery for own sale | 2,590.94 | 2,443.33 | 5,034.27 |
| 8. | Sales to common pool consumers | 5.88 | - | 5.88 |
| 9. | Sales outside state | 104.21 | 89.07 | 193.28 |
| 10. | Total Energy Requirement at State Periphery | 2,480.85 | 2,354.26 | 4,835.11 |
| | | | | |
| **B** | **ENERGY AVAILABILITY** | | | |
| 1. | Availability from firm sources outside state | 2,454.99 | 2,545.95 | 5,000.94 |

| S/No | Particulars | FY 2023-24 (APR) | | |
|---|---|---|---|---|
| | | (H1) | (H2) | (H1+H2) |
| 2. | Availability from UI Over-drawal/ Under-drawal | 25.01 | - | 25.01 |
| 3. | Net Purchase from open market | 134.22 | (89.07) | 45.15 |
| 4. | Total Availability of Energy from outside the state | 2,614.22 | 2,456.88 | 5,071.10 |
| 5. | PGCIL Losses – Mus | 86.06 | 83.81 | 169.87 |
| 6. | PGCIL Losses - % | 3.29% | 3.29% | 3.29% |
| 7. | Total Availability of Energy at State Periphery from outside state after Interstate Losses | 2,528.17 | 2,373.07 | 4,901.23 |
| 8. | Availability from firm sources inside the state | 62.78 | 70.26 | 133.04 |
| 9. | Total Availability of Energy for the State | 2,590.94 | 2,443.33 | 5,034.27 |
| 10. | Surplus / (Deficit) | - | - | - |

**Commission's analysis**

The JERC MYT Regulations, 2021 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 13.1 of the JERC MYT Regulations, 2021 in this regard stipulates the following:

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

*a) Force Majeure events;*

*b) Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;*

*c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;*

*d) Inter- State Transmission loss;*

*e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;*

*f) Variation in fuel cost;*

*g) Change in power purchase mix;*

*h) Inflation;*

*i) Transmission Charges for a Distribution Licensee;*

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

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

*l) Taxes and Statutory levies;*

*m) Taxes on income;*

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

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

The Commission has determined the energy requirement under Energy Balance based on the revised estimates of energy sales and approved loss as discussed above. The rational for finalising the approved availability from various sources, as considered under energy balance by the Commission, is discussed in subsequent section. The following table provides the Energy Balance now approved by the Commission for FY 2023-24.

**Table 65 Energy Balance (MUs) approved by the Commission for FY 2023-24**

| **Item** | **ARR approved for FY 2023-24 in Tariff Order dt. 31.03.2023** | **Approved By Commission** |
|---|---|---|
| Energy Requirement | | |
| Energy sales to metered category within the State | 4,570.01 | 4636.95 |
| Total sales within the State | 4,570.01 | 4636.95 |
| Distribution Losses (MU) | | 414.19 |
| Distribution Losses (%) | 8.20% | 8.20% |
| Energy required at DISCOM Periphery | 4,978.22 | 5051.14 |
| Availability from firm sources inside the state | | 123.04 |
| Banking | | (72.39) |
| Overdrawal/ Underdrawal | | 25.01 |
| Traders (Drawal) | | 51.83 |
| **Energy Required at State Periphery for own sale** | **4,797.85** | **4778.88** |
| ENERGY AVAILABILITY | | |
| Availability from firm sources outside state | 3,945.04 | 4108.87 |
| PGCIL Losses - % | 3.55% | 3.55% |

| | | |
|---|---|---|
| Energy Scheduled at state periphery through CGS | | 3963.01 |
| Renewable | 852.81 | 815.87 |
| **Energy availability at state periphery** | | **4778.88** |
| Open market (sale)/ purchase | | 0.00 |
| **Net Energy availability** | **4,797.85** | **4778.88*** |

* (4108.87+815.87+123.04+25.01+51.83-72.39 = 5052.23) is matched with power purchase table 67

In the APR of FY 2023-24, the Commission has approved energy requirement at state periphery of 4778.88 MUs.

## 4.9. Power Purchase Quantum & Cost

### Petitioner's Submission

The petitioner submitted that it has considered auxiliary consumption for each of the central generating station as per the CERC Tariff Order.

Inter-State Transmission Loss of 3.11% and 4.21% has been considered for power purchase through Western and Southern region, respectively, as per actuals. The below table shows the summary of Power Purchase (at Goa periphery) from various sources along with their costs.

**Table 66 Power Purchase Quantum and cost submitted by the petitioner**

| Particulars | Approved in T.O dated 30th March, 2023 | | | Revised Projections for FY 2023-24 | | |
|---|---|---|---|---|---|---|
| | Gross Purchase (MUs) | Cost (Rs. Cr.) | Rate (Rs./kWh) | Gross Purchase (MUs) | Cost (Rs. Cr.) | Rate (Rs./kWh) |
| NTPC | 3,832.96 | 1,291.96 | 3.37 | 3,974.08 | 1,350.19 | 3.40 |
| NPCIL | 224.80 | 66.01 | 2.94 | 235.32 | 146.27 | 6.22 |
| IEX (Net of Purchase and Sales) | (105.41) | (46.45) | - | (6.68) | 48.59 | - |
| IEX Purchase (Peak Hrs) | - | - | - | 186.60 | 119.82 | 6.42 |
| IEX Sale (Off Peak Hrs) | 105.41 | 46.45 | 4.41 | 193.28 | 71.24 | 3.69 |
| Traders (Net of Drawal & Injection) | - | - | | 51.83 | 54.44 | 10.50 |
| UI (Net Over-drawal) | - | - | | 25.01 | 27.85 | 11.13 |
| Co-Generation | 180.37 | 43.29 | 2.40 | 123.04 | 29.43 | 2.39 |
| Renewable | 852.81 | 355.32 | 4.17 | 873.93 | 375.22 | 4.29 |
| Transmission Charges | - | 303.70 | - | - | 305.48 | - |
| Banking of Power (Net) | (7.32) | 0.35 | - | (72.39) | 0.25 | - |
| **TOTAL** | **4,978.22** | **2,027.60** | **4.07** | **5,204.13** | **2,337.72** | **4.49** |

The Petitioner requested the Commission to approve the revised estimate of power purchase cost of Rs. 2337.72 Cr for FY 2023-24 as submitted above.

**Commission's analysis:**

The Commission while estimating the power purchase quantum and cost for FY 2023-24 has reviewed the actual quantum and cost of power for first six-months, as submitted by the Petitioner. The Commission has projected the quantum of energy and corresponding cost for the remaining six-months of the FY 2023-24, as per the total energy availability approved for FY 2023-24. The methodology followed for projecting the quantum and cost for the remaining months has been discussed as follows:

**Must-run plants (nuclear and Renewable):**

For Nuclear and renewable projects, energy availability estimation as submitted by the Petitioner is considered after verifying actual H1 data and H2 data projected by the Petitioner.

**Availability of energy from Vedanta and Goa Sponge Stations:** The Commission analysed the energy availability from within state Power Stations as submitted by the Petitioner and found it prudent to accept the Petitioner's projections for FY 2023-24.

**Availability of energy from NTPC Stations:** The Commission has analysed the total energy requirement, availability from various projects, as approved above, and decides the remaining power requirement from NTPC Power Stations. The plant wise requirement from NTPC projects is derived based on merit order principle. For merit order, the Commission refers the actual variable cost data submitted by the Petitioner. Initially, the plant wise availability (of NTPC) is derived based on last three-year average PLF. In the second step, the merit order is applied to finalise the exact requirement from NTPC projects for FY 2023-24.

Further, the banking quantum has been considered as per the Petitioner's submission.

b) **Power Purchase Cost**

The Commission has computed the power purchase cost for the FY 2023-24 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 initial 6 months of FY 2023-24. The Commission has considered the latest months per unit variable cost in line with per unit cost submitted by the Petitioner for FY 2023-24.

**Fixed Charges:** The fixed charges for the existing plants as submitted by the Petitioner has been reviewed based on the actual bills submitted by the Petitioner for H1 of FY 2023-24 and accordingly fixed cost has been approved by the Commission for FY 2023-24.

**Renewable energy & Co-generation:** The Commission has reviewed the actual bill related to renewable and co-generation for FY 2023-24 and approved the cost as per recent bill submitted by the Petitioner in this regard.

**Transmission Charges:** The Commission has approved the transmission charges payable to PGCIL based on the projected cost submitted by the Petitioner for FY 2023-24.

c) **Total power purchase quantum and cost**

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

**Table 67 Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission for FY 2023-24**

| Particulars | Power Purchase Quantum (MU) | Fixed Charges | Energy Charges | Total Charges |
|---|---|---|---|---|
| NTPC | **3,885.57** | **425.33** | **792.88** | **1,218.21** |
| KSTPS | 1,747.91 | 112.94 | 223.73 | 336.68 |
| KSTPS-3 | 55.82 | 5.43 | 7.03 | 12.47 |
| VSTPS-1 | 190.62 | 24.18 | 30.94 | 55.12 |
| VSTPS-2 | 119.47 | 8.43 | 18.67 | 27.10 |
| VSTPS-3 | 103.76 | 8.61 | 16.08 | 24.69 |
| VSTPS-4 | 123.04 | 18.62 | 18.82 | 37.44 |
| VSTPS-5 | 58.58 | 9.06 | 9.28 | 18.35 |
| MSTPS-1 (mouda) | 77.09 | 17.34 | 22.59 | 39.92 |
| MSTPS-2 | 100.48 | 23.16 | 29.64 | 52.80 |
| KGPP | 59.75 | 7.78 | 69.25 | 77.04 |
| GGPP | 61.13 | 9.46 | - | 9.46 |
| SIPAT-1 | 217.52 | 24.21 | 28.28 | 52.49 |
| SIPAT-2 | 97.77 | 9.13 | 13.10 | 22.23 |
| Solapur | 103.66 | 24.33 | 42.50 | 66.83 |
| Gadarwara | 107.15 | 32.31 | 29.15 | 61.46 |
| Lara | 98.26 | 17.34 | 13.85 | 31.19 |
| RSTPS | 481.61 | 50.00 | 191.20 | 241.19 |
| Khargone | 84.95 | 22.99 | 29.22 | 52.22 |
| **NPC** | - |  | - |  |
| **NPCIL** | **223.30** | **-** | **83.44** | **83.44** |
| KAPS (1&2) | 112.30 | - | 40.99 | 40.99 |
| KAPS (3&4) | 44.48 | - | 19.57 | 19.57 |
| TAPS | 66.52 | - | 22.88 | 22.88 |
| **Banking of Power (Net)** | **(72.39)** | **0.25** | - | **0.25** |
| Drawal | - |  | - | - |
| Injection | - |  | - | - |
| **OVER/ UNDER** | **25.01** | **27.85** | - | **27.85** |

| | | | | |
|---|---|---|---|---|
| **DRAWAL** | | | | |
| OVER DRAWAL | | | - | - |
| UNDER DRAWAL | | | - | - |
| Traders (Drawal) | **51.83** | **54.44** | - | **54.44** |
| Traders (Injection) | - | | - | - |
| **Within State Generations** | **-** | **-** | **29.17** | **29.17** |
| **CO- GENERATION** | **123.04** | | - | - |
| Vedanta Plant-1 | 57.98 | | 13.86 | 13.86 |
| Vedanta Plant-2 | 59.88 | | 14.07 | 14.07 |
| Goa Sponge and private limited | 5.18 | | 1.24 | 1.24 |
| **Renewable** | **815.87** | **-** | **353.46** | **353.46** |
| **Solar** | **278.56** | | **146.68** | **146.68** |
| NVVNL Solar | 13.42 | | 7.38 | 7.38 |
| SECI Solar | 50.33 | | 29.74 | 29.74 |
| Solar STOA | 214.81 | | 109.55 | 109.55 |
| **Non Solar** | **537.31** | **-** | **206.78** | **206.78** |
| Non Solar - SECI Wind Tranche II LTOA | 129.52 | | 35.10 | 35.10 |
| Non Solar - SECI Wind Tranche VI LTOA | 158.46 | | 45.79 | 45.79 |
| SECI 150 MW | - | | - | - |
| Hindustan waste treatment plant Goa (As per Power Purchase bills)* | 4.52 | | 2.26 | 2.26 |
| Non Solar STOA | 244.81 | | 123.63 | 123.63 |
| **OTHER CHARGES** | - | | | - |
| **PGCIL Charges** | **-** | **305.48** | **-** | **305.48** |
| Additional Power Purchase Cost recovered from Industrial Consumers | - | | - | - |
| **Total Power Purchase** | **5052.23** | **813.35** | **1,258.96** | **2,072.30** |

The Commission approves the revised quantum of power purchase as 5052.23 MUs at ex-bus with total cost of Rs. 2072.30 Cr in the APR of FY 2023-24.

### 4.10. Renewable Purchase Obligations (RPOs)

**Petitioner's Submission:**

EDG is also expecting the consumers to go for solar rooftops under the Net Metering/ Gross Metering arrangement. The total Cumulative installed capacity including all types of rooftop solar and ground mounted solar as on 30th November 2023 within Goa is 52.12 MW of which, Rooftop is 36.75 MW and Ground Mounted is 15.37 MW. Here, based on the past performances of the Consumers most of the consumers having Net-Metering setup has consumed the entire generation and further drawn power from EDG Network. In this regard, EDG has considered 63.08 MUs of energy from the Net Metering Consumers in the RPO for self-consumption without injecting into the grid. The details of the Solar and Non-Solar RPO Status for FY 2023-24 as per the Power Purchase considered are given in the table below:

**Table 68 RPO and REC Status for FY 2023-24**

| **Particulars** | **Approved in T.O dated 30th March, 2023** | **Revised Projections FY 2023-24** | |
|---|---|---|---|
| | | **Without REC** | **With REC** |
| Sales within State (MU) | 4,540.30 | 4,661.14 | 4,661.14 |
| Hydro Power available at State Periphery (MU) | - | - | - |
| Distribution Loss | 8.20% | 7.41% | 7.41% |
| Resultant Energy Sales for calculation of RPO (after adjustment of power from hydro sources) (MU) | 4,540.30 | 4,661.14 | 4,661.14 |
| RPO (in %) | 19.91% | 19.91% | 19.91% |
| Solar | 10.00% | 10.00% | 10.00% |
| Non-Solar | 9.91% | 9.25% | 9.25% |
| HPO | - | 0.66% | 0.66% |
| RPO for the year (in MU) | 903.97 | 928.03 | 928.03 |
| Solar | 454.03 | 466.11 | 466.11 |
| Non-Solar | 449.94 | 431.16 | 431.16 |
| HPO | - | 30.76 | 30.76 |
| Backlog RPO from previous year (in MU) | - | 103.91 | 103.91 |
| Solar | - | 95.76 | 95.76 |
| Non-Solar | - | 8.29 | 8.29 |
| HPO | - | (0.14) | (0.14) |
| Cumulative RPO Target for the year (in MU) | - | 1031.94 | 1031.94 |
| Solar | - | 561.88 | 561.88 |
| Non-Solar | - | 439.44 | 439.44 |
| HPO | - | 30.62 | 30.62 |
| RPO Compliance from Physical Power (MU) | 852.81 | 977.11 | 1,106.77 |
| Solar | 322.69 | 347.94 | 477.60 |
| Non-Solar | 530.13 | 601.24 | 601.24 |
| HPO | - | 27.93 | 27.93 |
| Standalone RPO Compliance Backlog (MU) | 51.16 | 54.83 | (74.82) |
| Solar | 131.34 | 213.94 | 84.28 |
| Non-Solar | (80.18) | (161.79) | (161.79) |
| HPO | - | 2.69 | 2.69 |
| Cumulative RPO Compliance Backlog (MU) | 318.22 | 54.83 | (74.82) |
| Solar | 307.51 | 213.94 | 84.28 |
| Non-Solar | 10.71 | (161.79) | (161.79) |
| HPO | - | 2.69 | 2.69 |

**Commission Analysis:**

As per Regulation 3, Sub-regulation (1) of the JERC (Procurement of Renewable Energy) Regulations, 2010:

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

The Commission notified the JERC (Procurement of Renewable Energy), (Fourth Amendment) Regulations, 2022 on 24th March 2022 and revised the RPO targets, according to which for FY 2023-24 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 19.91% of its total annual consumption, out of which 10.00% must be from Solar Power.

The Commission has approved the Renewable Purchase Obligation (RPO) for FY 2023-24 considering the JERC (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time. Further, the cumulative backlog of solar and non-solar compliance up to FY 2022-23 has been considered as per the true-up for FY 2022- 23. Accordingly, the RPO approved by the Commission in the APR of FY 2023-24 is as follows:

**Table 69 Renewable Purchase Obligation (RPO) (MUs) approved by the Commission for FY 2023-24**

| **Description** | **Approved in T.O dated 31st March, 2022** | **Petitioner's Submission** | **Approved by the Commission** |
|---|---|---|---|
| **Sales within State (MU) (A)** | **4540.30** | **4661.14** | **4,636.95** |
| **Hydro Power available at State Periphery (MU) (B)** | | | - |
| T&D Loss (%) (C) | 8.20 % | 7.41% | 8.20% |
| T&D Loss (MU) (D = B * C) | | | - |
| Hydro Power Consumed (E = B - D) | | | - |
| **Conventional Power Consumed (F = A - E)** | **4540.30** | **4661.14** | **4,636.95** |
| RPO obligation (%) | 19.91 % | **19.91%** | **19.91%** |
| Solar (G) | 10.00% | 10.00% | 10.00% |
| Non-Solar (H) | 9.91% | 9.25% | 9.25% |
| HPO | | 0.66% | 0.66% |
| **RPO obligation for the year (MU)** | **903.97** | **928.03** | **923.22** |
| Solar (F * G) | 454.03 | 466.11 | 463.70 |
| Non-Solar (F * H) | 449.94 | 431.16 | 428.92 |
| HPO (F*I) | - | 30.76 | 30.60 |
| **RPO Compliance (Physical Power + Certificates) (MU)** | **852.81** | 977.11 | 977.11 |
| Solar | 322.69 | 347.94 | 347.94 |

| | | | |
|---|---|---|---|
| Non-Solar | 530.13 | 601.24 | 601.24 |
| HPO | - | 27.93 | 27.93 |
| **Cumulative RPO Shortfall (MU)** | **318.22** | **54.83** | **66.68** |
| Solar | 307.51 | 213.94 | 228.40 |
| Non-Solar | 10.71 | (161.79) | (164.25) |
| HPO | - | 2.69 | 2.53 |
| **Cumulative RPO Compliance (MU)** | | **54.83** | **4619.82** |
| Solar | | 213.94 | 1747.71 |
| Non-Solar | | (161.79) | 2828.50 |
| HPO | | 2.69 | 43.61 |

The Commission notes that there is a net shortfall in RPO compliance till the FY 2023-24 of 66.68 MUs. The same has to be carried forward to subsequent years.

### 4.11. Operation & Maintenance Expenses

As per Regulation 61 of JERC MYT Regulations, 2021, the Commission shall stipulate separate trajectory of norms for each component of O&M expenses.

"*61 Operation and Maintenance (O&M) expenses for Retail Supply Business*

*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;*

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

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

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

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

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

*GFAn-1 – Gross Fixed Asset of the 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 foreach 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 – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation 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."*

Accordingly, the various components of O&M expenses have been dealt with in subsequent sections.

### 4.11.1. Employee Expenses

**Petitioner's Submission**

The petitioner submitted that the actual employee expenses for FY 2023-24 H1 is Rs. 242.14 Cr. The petitioner has projected normative Employee Expenses for FY 2023-24 H2 at Rs. 180.35 Cr. The estimated Employee expenses for FY 2023-24 are shown in the following Table:

**Table 70 Computation of Employee Expenses for FY 2023-24 (Rs Cr)**

| Particulars | FY 2023-24 | |
|---|---|---|
| | Approved in T.O dated 30th March, 2023 | Estimated APR FY 2023-24 |
| Employee Cost (Other than covered in 'C'&'D') | | |
| Salaries | - | 243.88 |
| Dearness Allowance (DA) | - | 95.57 |
| Other Allowances+ HRA | - | 41.07 |
| Sub Total | - | 380.52 |
| Medical Expenses Reimbursement | - | 0.27 |
| Travelling Allowance (Conveyance Allowance) | - | 12.76 |
| Sub Total | - | 13.03 |
| Total (A+B+C) | 443.52 | 393.55 |
| Provident Fund Contribution (NPS) | - | 28.94 |
| Sub Total | 3.73 | 28.94 |
| Grand Total (A+B+C+D) | 447.25 | 422.49 |
| **Net Employee Expenses (E)-(F)** | **447.25** | **422.49** |

**Commission's analysis**

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for the FY 2023-24. 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."*

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the employee expenses trajectory on provisional basis. The Commission in the ARR order for FY 2023-24, derived the base value (i.e. for FY 2021-22) on the basis of true-up value of past period. Therefore, the Commission revised the employee expenses for FY 2023-24 based on the base value, manpower plan and CPI of respective year. In the present order, the Commission has finalised the true-up expenses of FY 2022-23 and finds its prudent to consider the normative expense for FY 2022-23 as base for APR of FY 2023-24.

The employee expenses of the Base Year have been escalated by Growth Rate as per manpower submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2023-24. The CPI inflation has been computed as follows:

**Table 71 CPI Inflation Index**

| **FY** | **Average of (April – March)** | **Increase in CPI Index** | **Average increase In CPI indices over 3 year** |
|---|---|---|---|
| FY 2019-20 | 322.50 | | |
| FY 2020-21 | 338.70 | 5.02 % | 5.40 % |
| FY 2021-22 | 356.10 | 5.13 % | |
| FY 2022-23 | 377.60 | 6.05 % | |

Further, the Petitioner has provided the details of manpower details including the recruitment and retirement for FY 2022-23 and FY 2023-24. The Commission has considered the same while approving the normative expense for FY 2023-24. The details are given below:

**Table 72 Computation of Employee expenses (Rs Cr)**

| **Particulars** | **Approved** |
|---|---|
| | **FY 2023-24** |
| Base Employee Expenses | 364.29 |
| Gn (Growth factor) | -1.62 %* |
| CPI (Actuals for FY 2023-24) (in %) | 5.40 % |
| Total Employee Expenses | 377.76 |

* For FY 2022-23 the total employee is 6189 and for FY 2023-24 is 6089.

Accordingly, the employee expenses approved by the Commission in the APR of FY 2023-24 have been provided in the following table:

**Table 73 Approved Employee expenses for FY 2023-24 (Rs Cr)**

| **Particulars** | **Approved in Tariff Order** | **Petitioner's Submission** | **Approved in APR** |
|---|---|---|---|
| Employee Expenses | 443.52 | 393.55 | 377.76 |

| | | | |
|---|---|---|---|
| Terminal Benefit | 3.73 | 28.94 | |
| Total Employee Expenses | **447.25** | **422.49** | **377.76** |

The Commission approves Employee Expenses Rs. 377.76 Cr. in APR for the FY 2023-24.

### 4.11.2. Repair and Maintenance Expenses (R&M)

**Petitioner's Submission**

The petitioner submitted that the provisional actual Repair and Maintenance expenses of FY 2023-24 H1 is Rs. 33.66 Cr. The estimated R&M expenses for FY 2023-24 are shown in the following Table:

**Table 74 R&M expenses for FY 2023-24 as submitted by the Petitioner (Rs Cr)**

| S/No | Particulars | FY 2023-24 | |
|---|---|---|---|
| | | Approved in T.O dated 30th March, 2023 | Estimated APR FY 2023-24 |
| 1. | Plant and Machinery | - | 38.06 |
| 2. | Building | - | 4.92 |
| | - Maintenance & repairs of electrical residential and non-residential buildings. | - | 4.92 |
| 3. | Vehicles | - | 19.06 |
| 4. | Metering Equipment | - | 0.23 |
| 5 | Gross R&M Expenses | 48.93 | 62.27 |
| 6 | R&M Expenses Capitalised | - | - |
| 7. | Net R&M Expenses | 48.93 | 62.27 |

**Commission's analysis**

The Commission has considered the K factor as 2.39% as approved in the MYT order dated 31st March 2022. The R&M expenses approved in FY 2022-23 has been escalated by 3 years' average WPI Inflation to arrive upon the R&M Expenses for FY 2023-24. The WPI Inflation has been computed as follows:

**Table 75 Computation of WPI Inflation**

| FY | Average of (Apr-Mar) | Increase in (%) | Average increase in WPI indices over 3 years |
|---|---|---|---|
| 2019-20 | 121.80 | | |
| 2020-21 | 123.40 | 1.31% | 7.89% |
| 2021-22 | 139.40 | 12.97% | |
| 2022-23 | 152.50 | 9.40 % | |

The R&M expenses approved by the Commission for FY 2023-24 have been provided in the following table:

**Table 76 Computation for R&M Expenses for FY 2023-24 (Rs Cr)**

| Particulars | Values |
|---|---|
| Opening GFA ($GFA_{n-1}$) | 1260.88 |
| K factor approved (K) (%) | 2.39% |
| WPI Inflation (Actuals for FY 2023-24) (%) | 7.89% |
| R&M Expenses = K x ($GFA_{n-1}$) x ($1+WPI_{inflation}$) | 32.51 |

**Table 77 R&M Expenses approved by the Commission for FY 2023-24 (Rs Cr)**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | Repair & Maintenance Expenses (R&M) | 48.93 | 62.27 | 32.51 |

The Commission estimates the Repair & Maintenance (R&M) expenses of Rs. 32.51 Cr in the APR of FY 2023-24.

### 4.11.3. Administrative and General (A&G) Expenses

**Petitioner's Submission**

The petitioner submitted that the provisional actual A&G expenses of FY 2023-24 H1 is Rs. 11 Cr. The estimated A&G expenses for FY 2023-24 are shown in the following table:

**Table 78 A&G Expenses for FY 2023-24 (Rs. Cr)**

| S/ No | Particulars | FY 2023-24 | |
|---|---|---|---|
| | | Approved in T.O dated 30th March, 2023 | Estimated APR FY 2023-24 |
| A. | | | |
| 1. | Lease/ Rent | - | 1.30 |
| 2. | Insurance | - | - |
| 3. | Revenue Stamp Expenses Account | - | - |
| 4. | Telephone, Postage, Telegram & Telex Charges | - | 0.14 |
| 5. | Incentive & Award to Employees/Outsiders | - | - |
| 6. | Consultancy Charges | - | - |
| 7. | Technical Fees | - | - |
| 8. | Other Professional Charges | - | 3.28 |
| 9. | Conveyance and Travelling Expenses | - | 0.26 |
| | | - | 4.98 |
| 10. | Printing and Stationery Expenses | - | 1.47 |
| 11. | Advertisement Expenses (Other than Purchase Related) Exhibition & Demo. | - | 0.56 |
| 12. | Electricity Charges of Offices | - | 0.87 |
| 13. | Water Charges | - | 0.22 |
| 14. | Entertainment Charges | - | 0.005 |
| 15. | Miscellaneous Expenses (Sub Total '8') | - | 2.55 |
| 16. | *i. Wages* | - | *0.36* |
| 17. | *iii. Outsourcing of utility attendant* | - | *0.95* |
| 18. | *iv. Maintenance of IT equipments/machinery* | - | *0.47* |
| 19. | *viii. Procurement of IT expenses* | - | *0.14* |
| 20. | *ix. Exhibition /flair expenses* | - | |
| 21. | *x. Furniture expenses* | - | *0.64* |
| 22. | Office expenses | - | 21.87 |

| S/ No | Particulars | | FY 2023-24 | |
|---|---|---|---|---|
| | | | Approved in T.O dated 30th March, 2023 | Estimated APR FY 2023-24 |
| 23. | Other Charges | | - | 9.73 |
| 24. | Minor works | | - | 0.02 |
| Sub-Total 'B' (1 To 11) | | | - | 37.30 |
| **Grand Total (A To G)** | | **Total Charges** | **33.61** | **42.30** |

**Commission's analysis**

As explained under employee expenses, the Commission has considered the base value as normative expense for FY 2022-23, as derived under true-up. Therefore, the Commission finds it prudent to revise the A&G expenses for FY 2023-24 by considering FY 2022-23 normative expenses with escalation by the average CPI Inflation of the last three years. The A&G expenses approved by the Commission for FY 2023-24 (under APR) have been provided in the following table:

**Table 79 Computation of A&G expenses (Rs Cr)**

| S. No | Particulars | Approved |
|---|---|---|
| | | FY 2023-24 |
| 1 | Base A&G Expenses | 32.53 |
| 2 | CPI (in %) | 5.40% |
| 3 | A&G Expenses | 34.28 |

**Table 80 A&G Expenses approved by Commission (Rs Cr) for FY 2023-24**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | A&G Expenses | 33.61 | 42.30 | 34.28 |

The Commission estimates the Administrative & General (A&G) expenses of Rs. 34.28 Cr in the APR of FY 2023-24.

### 4.11.4. Total Operation and Maintenance Expenses (O&M)

The following table provides the O&M expenses approved in the APR of FY 2023-24, Petitioner's Submission and now approved by the Commission.

**Table 81 Total O&M Expenses approved by the Commission for FY 2023-24 (Rs Cr)**

| Particulars | Approved in Tariff Order | Petitioner's Submission (actual) | Approved in APR |
|---|---|---|---|
| A&G Costs | 33.61 | 42.30 | 34.28 |
| R&M Expenses | 48.93 | 62.27 | 32.51 |
| Employee Cost | 447.25 | 422.49 | 377.76 |
| **Total O&M Expenses** | **529.79** | **527.06** | **444.56** |

The Commission approves the Operation & Maintenance (O&M) Expenses of Rs. 444.56 Cr in the APR of FY 2023-24.

### 4.12. Capital Expenditure & Capitalization

#### Petitioner's Submission

EDG has estimated the net additional capitalisation of Rs.1389.26 Cr during FY 2023-24. Thus, the Petitioner requested to the commission to approve the net additions to GFA for FY 2023-24 as provided in the table below:

**Table 82 GFA Revised Estimates for FY 2023-24 (Rs. Cr)**

| Particulars | FY 2023-24 |
|---|---|
| Opening GFA (Excl. Grant & ED) | 1325.23 |
| GFA Addition during the year | 1,389.26 |
| Less: 60% and 75% Grant Component of APDRP Part-B / IPDS Scheme | - |
| Less: Revamped Scheme (15% Grant Prepaid Meter; 100% for DBM, billing modules etc; 60% for SCADA) | 145.00 |
| Less: Schemes out of ED Fund | 528.24 |
| Less: Deposit Works | - |
| Net GFA addition during the year | 716.02 |
| Less: Retirement | - |
| Opening Net GFA (Excl. Grant & ED) | 2,041.25 |

#### Commission's analysis:

The Commission has noted that the Petitioner has claimed for capitalization of 74 new schemes with associated capital cost of Rs. 36.35 Cr. Apart from this, the Petitioner has also claimed higher capitalized amount to the tune of Rs. 629.32 Cr. for the schemes already approved in previous tariff order dated 30th March, 2023. The Commission sought the details for additional capital expenditure in the deficiency note against which the Petitioner responded that apart from the schemes approved by the Commission, the petitioner has undertaken some new schemes. However, the Petitioner has not replied with respect to the overcapitalization against the approved schemes. The Commission is of the firm opinion that such excess expenditure is nothing but on account of cost overrun and/or time-over-run and the same needs to be filed in a separate petition before the Commission for approval of additional costs incurred on account of cost overrun and/or time-over-run giving proper justification. for time-over-run/cost-over-run. Further, the Commission does not find prudent to consider aforesaid 74 new schemes at this juncture without Commission's prior approval. The Petitioner is directed to take prior approval of such capitalization along with associated capex. In view of the above, the Capital Structure approved by the Commission for FY 2023-24 is shown in the following tables:

**Table 83 Capitalisation approved by the Commission (Rs Cr) for FY 2023-24**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | Capitalisation | 723.59 | 1389.26 | 723.59 |

The Commission approves capitalization including grant of Rs. 723.59 Cr in the APR of FY 2023-24. The same will be taken up at the time of True-up.

### 4.13. Capital Structure

**Petitioner's Submission**

The petitioner submitted that the opening and closing balance of GFA for FY 2023-24 onwards has been arrived at after considering the actual capitalization for the FY 2022-23 and estimated capitalization for FY 2023-24.

**Commission's analysis**

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

*"27. Debt to Equity Ratio*

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

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

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

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

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

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

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

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

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

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

Accordingly, the capital structure for capitalization of Rs. 723.59 Cr. as approved in previous order dated 30th March, 2023 is given in the following table:

**Table 84 Capital Structure (With Grant) approved by Commission (Rs Cr) for FY 2023-24**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|
| Capitalization during the year (With grant) | | 1,389.25 | 723.59 |
| Less: Grant and consumer contribution | | | 473.35 |
| Capitalization during the year (Net of grant) | 250.24 | | 250.24 |
| Normative loan addition During the FY @70% of GFA addition during year | 175.16 | 972.47 | 175.16 |
| Equity addition on account of new Capitalisation @30% of GFA addition during the year | 75.07 | 416.77 | 75.07 |

## 4.14. Depreciation

The Petitioner estimated the depreciation Rs. 72.95 Cr. in proportion with GFA excluding grant and electricity duty to total average GFA. The table below shows the working of Depreciation considered in ARR for FY 2023-24:

**Table 85 Depreciation for FY 2023-24 (Rs. Cr)**

| Particulars | Revised Projections FY 2023-24 |
|---|---|
| Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 1325.23 |
| Add: Gross Asset Addition | 1389.26 |
| Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution | 673.24 |
| Value of Asset eligible for depreciation | 716.02 |
| Add: Addition During the Year | 716.02 |
| Less: Decapitalisation | |
| Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 2041.25 |
| Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 1683.24 |
| **Depreciation** | **73.05** |
| Weighted Average Rate of Depreciation | 4.34% |

### Commission's Analysis

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

*"31. Depreciation*

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

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

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

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

*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, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.*

*31.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the*

*Year, depreciation shall be computed based on the average of opening and closing value of assets:*

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

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

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

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

*AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated 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 opening GFA of the FY 2023-24 is considered as discussed in previous section 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 the year has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved during the year. The GFA of assets that have completed 90% of depreciation cannot be identified due to lack of data and therefore, GFA of such assets have not been excluded for the computation of Depreciation. Accordingly, the Commission shall consider the same during the True-up of the respective years. The approved depreciation for APR of FY 2023-24 is given below.

**Table 86 Depreciation approved by Commission (Rs Cr) for FY 2023-24**

| Particulars | Approved in MYT Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|
| Opening Gross Fixed Assets | 1,428.34 | 1,325.26 | 1,260.88 |
| Addition During the FY | 250.24 | 1,389.26 | 723.59 |
| Less: Grant | - | 673.24 | 473.35 |
| Closing Gross Fixed Assets | 1,678.58 | 2,041.25 | 1511.12 |
| Average Gross Fixed Assets | 1,553.46 | 1,683.24 | 1386.00 |
| Weighted Average Depreciation rate (%) | 3.82% | 4.34% | 4.34% |
| Depreciation | 59.36 | 73.05 | 60.15 |

The Commission now approves depreciation of Rs. 60.15 Cr in the APR of the FY 2023-24.

## 4.15. Interest and Finance Charges

### Petitioner's Submission

The Petitioner has considered the closing balance of normative loan in the True-up for FY 2022-23 has been considered as the opening normative loan for FY 2023-24. Further during FY 2023-24, addition of net GFA (excluding grant and electricity duty) is considered. Normative loan repayments are considered same as depreciation amount excluding the estimated proportion of grant and electricity duty for FY 2023-23. The rate of Interest for long term Interest rate has been considered at the rate of 8.50% as per one-year SBI MCLR Interest rate applicable as on 1st April 2023 plus 100 basis points, which works out to be 9.50%. It is requested to the Commission to approve Interest on Loan on normative principles.

**Table 87 Interest & Finance Charges for FY 2023-24, Petitioner submission (Rs. Cr)**

| S. No. | Particulars | Approved | Revised Estimates |
|---|---|---|---|
| 1 | Opening Normative Loan | 281.11 | 254.28 |
| 2 | Add: Normative Loan during the Year | 175.17 | 501.21 |
| 3 | Less: Normative Repayment | 59.36 | 73.05 |
| 4 | Closing Normative Loan | 396.92 | 682.45 |
| 5 | Average Normative Loan | 339.01 | 468.36 |
| 6 | Rate of Interest (@SBI 1 Year MCLR rate+100 Basis Points) | 8.00% | 9.50% |
| **7** | **Interest on Normative Loan** | **27.12** | **44.49** |

**Commission's analysis**

Regulation 29 of the JERC MYT Regulations, 2021 stipulates the following:

*"29. Interest on Loan*

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

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

*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 capitalization approved by the Commission for the Year.*

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

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

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

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

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

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

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

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

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

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 2023, 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 basis of average loan during the year. The detailed approved interest on loan is given below.

**Table 88 Interest and Finance charges approved by Commission (Rs Cr) for FY 2023-24**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|
| Opening Normative Loan | 281.11 | 254.28 | 151.64 |
| Add: Normative Loan During the year | 175.17 | 501.21 | 175.17 |
| Less: Normative Repayment= Depreciation | 59.36 | 73.05 | 60.15 |
| Closing Normative Loan | 396.92 | 682.45 | **266.66** |
| Average Normative Loan | 339.01 | 468.36 | **209.15** |
| Rate of Interest (%) | 8.00% | 9.50% | 9.50% |
| **Interest on Loan** | **27.12** | **44.49** | **19.87** |

The Commission approves Interest and Finance Charges of Rs. 19.87 Cr in the APR of the FY 2023-24.

## 4.16. Return on Equity (RoE)

EDG has calculated the Return on Equity. The opening balance of assets and accumulated depreciation are considered as per provisional annual accounts of FY 2022-23 to arrive at the opening balance for FY 2023-24. Further, normative equity addition during the year is considered at 30% of the net GFA addition excluding proportion of grant and electricity duty. The table below shows calculation of Return on equity for FY 2023-24:

**Table 89 Return on Equity for FY 2023-24, Petitioner submission (Rs. Cr)**

| S. No. | Particulars | Approved | Revised Estimates |
|---|---|---|---|
| 1 | Opening Equity Amount | 421.69 | 377.82 |
| 2 | Equity Addition during year (30% of Capitalization) | 75.07 | 214.81 |
| 3 | Closing Equity Amount | 496.76 | 592.62 |
| 4 | Average Equity Amount | 459.22 | 485.22 |
| 5 | Average Equity-Wires Business | 413.30 | 436.70 |
| 6 | Average Equity (Retail Supply Business) | 45.92 | 48.52 |
| 7 | Return on Equity for Wires Business (%) | 15.50% | 15.50% |
| 8 | Return on Equity for Retail Supply Business (%) | 64.06 | 67.69 |
| 9 | Return on Equity for Wires Business | 16.00% | 16.00% |
| 10 | Return on Equity for Retail Supply Business | 7.35 | 7.76 |

| S. No. | Particulars | Approved | Revised Estimates |
|---|---|---|---|
| 11 | Total Return on Equity | **71.41** | **75.45** |

**Commission's analysis:**

The Regulations 28.2 and 28.3 of the JERC MYT Regulations, 2021 stipulate the following:

*"28.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 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."*

The Commission has approved the addition in GFA during the year and corresponding equity for FY 2023-24, under APR, by considering 30% of the GFA as equity. The opening equity is considered as approved value of closing equity for FY 2022-23, under true-up. Further, 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 details of approved RoE for FY 2023-24 are given below.

**Table 90 ROE approved by the Commission for FY 2023-24 (Rs Cr)**

| S. No. | Particulars | Approved | Revised Estimate | Approved by the Commission |
|---|---|---|---|---|
| 1 | Opening Equity Amount | 421.69 | 377.82 | 371.70 |
| 2 | Equity Addition during year (30% of Capitalization) | 75.07 | 214.81 | 75.07 |
| 3 | Closing Equity Amount | 496.76 | 592.62 | 446.77 |
| 4 | Average Equity Amount | 459.22 | 485.22 | 409.24 |
| 5 | Average Equity-Wires Business | 413.30 | 436.70 | 368.31 |
| 6 | Average Equity (Retail Supply Business) | 45.92 | 48.52 | 40.92 |
| 7 | Return on Equity for Wires Business (%) | 15.50% | 15.50% | 15.50% |
| 8 | Return on Equity for Retail Supply Business (%) | 64.06 | 67.69 | 57.09 |
| 9 | Return on Equity for Wires | 16.00% | 16.00% | 16.00 % |

| S. No. | Particulars | Approved | Revised Estimate | Approved by the Commission |
|---|---|---|---|---|
| | Business | | | |
| 10 | Return on Equity for Retail Supply Business | 7.35 | 7.76 | 6.55 |
| **11** | **Total Return on Equity** | **71.41** | **75.45** | **63.64** |

The Commission approves the Return on Equity of Rs. 63.64 Cr in the APR of the FY 2023-24.

### 4.17. Interest On Security Deposit

Interest on Security Deposit is calculated at Rs. 14.02 Cr. for FY 2023-24 on cash security deposit amounts excluding Bank Guarantee and Fixed Deposit Receipts based on the above Regulation.

The table below shows details of Interest on Security Deposit for FY 2023-24:

**Table 91 Interest on Security Deposit for FY 2023-24, Petitioner submission (Rs. Cr)**

| S. No. | Particulars | Approved | Revised Estimates |
|---|---|---|---|
| 1 | Opening Security Deposit | 112.57 | 189.65 |
| 2 | Add: Deposits during the year | 27.55 | 36.88 |
| 3 | Less: Deposits refunded | *0.00* | *0.80* |
| 4 | Closing Security Deposit | **140.12** | **225.73** |
| | Average Secuirity Deposit | 126.35 | 207.69 |
| 5 | Bank Rate | 4.25% | 6.75% |
| 6 | Interest on Security Deposit | **5.37** | **14.02** |
| 78 | Cumulative Interest on Security Deposit including Past Years | - | 136.00 |
| 9 | Interest on Security Deposit Paid | - | 0.94 |
| 10 | Balance Interest on Security Deposit to be Paid during Control Period | - | 135.06 |

The petitioner has requested to allow the Interest on Security Deposit for FY 2023-24 is Rs.14.02 Cr.

**Commission's analysis:**

Interest on Security Deposits has been calculated in accordance with the JERC MYT Regulations, 2021 based on the average of opening and closing consumer security deposits during the year. Regulation 29.11 of the JERC MYT Regulations, 2021 stipulates the following:

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

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

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, based on the average of the opening and closing consumer security deposits during the year. The opening security deposit is considered as per closing security deposit approved for FY 2022-23 under true-up in this order. The addition during the year (FY 2023-24) has been considered as escalation of 10% on the approved value of addition in security deposit during the year approve for FY 2022-23. The same shall be trued up by the Commission. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The following table provides the calculation of interest on consumer security deposits approved for the FY 2023- 24:

**Table 92 Interest on Consumer Security Deposits approved by Commission (Rs Cr) for FY 2023-24**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | Opening Security Deposit | 112.57 | 189.65 | 189.65 |
| 2 | Add: Deposits During the year | 27.55 | 36.88 | 14.66 |
| 3 | Less: Deposits refunded | - | 0.80 | - |
| 5 | Closing Security Deposit | 140.12 | 225.73 | 204.31 |
| 6 | Average Security Deposit | 126.35 | 207.69 | 196.98 |
| 7 | Rate of Interest (%) | 4.25% | 6.75% | 6.75% |
| 8 | Interest on Security Deposit on normative basis | **5.37** | **14.02** | **13.30** |

The Commission approves Interest on Security Deposit as Rs. 13.30 Cr in the APR of the FY 2023-24.

### 4.18. Interest on Working Capital

The Interest Rate is considered by the Petitioner equivalent to the SBI Base MCLR available as on 1st April 2023, which is at 8.50%, plus 200 basis points, which works out to be 10.50%.

In line with the aforesaid Regulation, the detailed computation of Interest on Working Capital for FY 2023-24, as submitted by the Petitioner, is provided in the table below:

**Table 93 Interest on Working Capital for FY 2023-24 for Wire Business (Rs. Cr.), submitted by the Petitioner**

| For Wheeling Business | | |
|---|---|---|
| S/No | Particulars | APR FY 2023-24 |
| A. | O&M Expenses for Wire Business | 20.52 |
| B. | Maintenance Spares (@ 40% of R&M Expenses) | 1.87 |
| C. | Receivables equivalent to two (2) months of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs. | 56.01 |
| D. | Less: Amount, if any, held as security deposits from Distribution System Users | 20.77 |

| **For Wheeling Business** | | |
|---|---|---|
| **S/No** | **Particulars** | **APR** |
| | | **FY 2023-24** |
| E. | Total Working Capital (A +B+C-D) | 57.62 |
| F. | Rate of Interest | 10.50% |
| **G.** | **Interest on Working Capital (Wheeling Business)** | **6.05** |

**Table 94 Interest on Working Capital for FY 2023-24 for Supply Business (Rs. Cr.), submitted by the Petitioner**

| **For Retail Supply Business** | | |
|---|---|---|
| **S/No** | **Particulars** | **APR** |
| | | **FY 2023-24** |
| A. | O&M Expenses for Retail Supply Business | 23.41 |
| B. | Maintenance Spares (@40% of R&M Expenses for Retail Supply Business) | 0.21 |
| C. | Receivables equivalent to 2 months of average of total revenue from sale of energy, approved by Commission in the ARR | 391.27 |
| D. | Less: Consumer Security Deposit | 186.92 |
| E. | Less: One month of power procurement cost | 194.81 |
| F. | Total Working Capital (A + B + C - D -E) | 33.16 |
| G. | Rate of Interest | 10.50% |
| **H.** | **Interest on Working Capital (Retail Supply Business)** | **3.48** |

**Commission's analysis:**

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

*"53. Norms of Working Capital for Distribution Wires Business*

*53.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:*

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

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

*(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;*

***Less:***

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

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

*Further, Regulation 64 of the JERC MYT Regulation, 2021 stipulates 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 re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."*

*Further, Regulation 32.3 of the JERC MYT Regulation, 2021 stipulates the following:*

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

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

The Commission has computed the Interest on Working Capital for FY 2023-24 of the Control Period in accordance with the JERC MYT Regulations, 2021. The components of working capital is derived based on the approved values given in APR of FY 2023-24 by the Commission. The interest rate has been considered as 10.50% (1year MCLR as on 1st April 2023 i.e., 8.50% + 200 basis points). The following table provides the Interest on working Capital considered for the FY 2023-24.

**Table 95 Interest on Working Capital approved by Commission (Rs Cr) for FY 2023-24**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Approved in APR |
|---|---|---|---|
| O&M Expense for 1 month | 44.15 | | 37.05 |
| Maintenance spares at 40% of R&M expenses for one (1) month; | 1.63 | | 1.08 |
| Receivables equivalent to two (2) months of the expected revenue at prevailing tariff | 383.86 | | 402.90 |
| Total Working Capital Requirement | 429.64 | | 441.03 |
| Less: Amount held as security deposits | 126.35 | | 196.98 |
| Less: Power Purchase Cost | 168.97 | | 172.69 |
| Net Working Capital | 134.32 | | 70.28 |
| Rate of Interest (%) | 9.00% | | 10.50% |
| Interest on Working Capital | **12.09** | **9.53** | **7.49** |

Accordingly, the Commission approves the Rs. 7.49 Cr. Interest on Working Capital in the APR of FY 2023-24, after deducting one month power purchase expenses from working capital requirement.

### 4.19. Provisional for Bad & Doubtful Debts

**Petitioner's Submission**

The Petitioner has not claimed any amount towards bad and doubtful debts for FY 2023-24.

**Commission's analysis:**

As per Regulation 63 of the JERC MYT Regulations, 2021:

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

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

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

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

The Commission also has not considered any provision towards bad and doubtful debts for APR of FY 2023-24. The same shall be accounted for as per actuals in the True-up of FY 2023-24.

### 4.20. Non-Tariff Income (NTI)

**Petitioner's Submission**

Actual rebates received for early/prompt payment of the bills from the generators are considered as incentive and the same is considered in the Non-Tariff Income in H1. Since the actual values are to be considered, the rebates from power purchase of H2 cannot be projected for FY 2023-24. The Non-Tariff Income for FY 2023-24 is estimated to be Rs. 52.06 Cr by the Petitioner.

**Table 96 NTI submitted by the Petitioner (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 30th March, 2023 | Provisional for FY 2023-24 |
|---|---|---|---|
| 1. | Rebates from Generators | 20.28 | 28.36 |
| 2. | Miscellaneous Receipts | 29.39 | 23.70 |
| | **Total** | **50.21** | **52.06** |

**Commission's analysis:**

Regulation 65 of JERC MYT Regulation, 2021 states the following:

*"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 in excess of 10% of the salvage value;*

*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 projected by the Petitioner. The same shall be Trued-up on actual basis. Further, the Commission has computed the rebate on power purchase @1% and the same has been considered as part of NTI. Therefore, the NTI approved for the FY 2023-24 has been shown in the following table:

**Table 97 Non-Tariff Income approved by Commission (Rs Cr) for FY 2023-24**

| S/No | Particulars | Approved in T.O dated 30th March, 2023 | Provisional for FY 2023-24 | Approved by the Commission |
|---|---|---|---|---|
| 1. | Rebates from Generators | 20.28 | 28.36 | 20.72 |
| 2. | Miscellaneous Receipts | 29.39 | 23.70 | 23.70 |
| | **Total** | **50.21** | **52.06** | **44.42** |

The Commission approves Non-Tariff Income of Rs. 44.42 Cr in the APR of the FY 2023-24. The same shall be considered at actuals at the time of True-up.

### 4.21. Aggregate Revenue Requirement (ARR)

**Petitioner's Submission**

The petitioner submitted that based on the submissions made in the foregoing paragraphs, the net Aggregate Revenue Requirement for FY 2023-24 is shown in the table below:

**Table 98 ARR submitted by the Petitioner for FY 2023-24 (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 30th March, 2023 | Estimated FY 2023-24 |
|---|---|---|---|
| A | Receipts | | |
| 1. | Revenue from Sale of Power | 2,027.60 | 2,795.08 |
| B | Expenditure | | |
| 1. | Cost of Power Purchase from own Generating Stations | - | - |
| 2. | Cost of Power Purchase from other Generating Stations | 1,723.90 | 2,032.24 |
| 3. | Inter State Transmission Charges | 303.70 | 305.48 |
| 4. | Intra State Transmission Charges | - | - |
| 5. | SLDC Fees & Charges | - | - |
| 6. | O&M Expenses (Gross) | 529.79 | 527.06 |
| | a) R&M Expenses | 48.93 | 62.27 |
| | b) Employee Cost | 447.24 | 422.49 |
| | c) A&G Expenses | 33.61 | 42.30 |
| 7. | Depreciation | 59.36 | 73.05 |
| 8. | Interest and Finance Charges | 27.12 | 44.49 |
| 9. | Interest on Working Capital | 12.09 | 9.53 |
| 10. | Prior Period Expenses | - | - |
| 11. | Interest on Consumer Security Deposit | 5.37 | 14.02 |
| 12. | Extraordinary Items | - | - |
| 13. | Bad and Doubtful Debts | - | - |
| 14. | Other Debts and Write-offs | - | - |
| 15. | Statutory Levies and Taxes, if any | - | - |
| 16. | Less: Expenses Capitalised | - | - |
| | a) Interest Charges Capitalized | - | - |
| | b) R&M Expenses Capitalized | - | - |
| | c) A&G Expenses Capitalized | - | - |
| | d) Employee Cost Capitalized | - | - |
| | Sub Total (a+b+c+d) | - | - |
| | Sub Total Expenditure (1 to 15-16) | 2,661.32 | 3,005.88 |
| C | Return on Equity | 71.41 | 75.45 |
| D | Less: Non-Tariff and other Income | 50.21 | 52.06 |
| E | Less: Any Grant/ Subventions, other subsidy provided by the Government | - | - |
| **F** | **Annual Revenue Requirement (B+C-D-E)** | **2,682.53** | **3,029.27** |

## Commission’s analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the APR of FY 2023-24 as given in the following table:

**Table 99 Approved APR of FY 2023-24 (Rs Cr)**

| Particulars | ARR approved for FY 2023-24 in Tariff Order dt. 31.03.2023 | Petitioner's Submission | Approved By Commission |
|---|---|---|---|
| Power Purchase Cost | 2,027.60 | 2,337.73 | 2,072.30 |
| Operation & Maintenance Expenses | 529.79 | 527.06 | 444.56 |

| | | | |
|---|---|---|---|
| Depreciation | 59.36 | 73.05 | 60.15 |
| Interest and Finance charges | 27.12 | 44.49 | 19.87 |
| Return on Equity | 71.41 | 75.45 | 63.64 |
| Interest on Security Deposit | 5.37 | 14.02 | 13.30 |
| Interest on Working Capital | 12.09 | 9.53 | 7.49 |
| Provision for Bad Debt | | | - |
| Total Revenue Requirement | 2,732.74 | 3,081.33 | 2,681.31 |
| Less: Non-Tariff Income | 50.21 | 52.06 | 44.42 |
| **Net Revenue Requirement** | **2,682.53** | **3,029.27** | **2,636.89** |

The Commission approves net Aggregate Revenue Requirement of Rs. 2636.89 Cr in the APR of FY 2023-24.

### 4.22. Revenue at existing Retail Tariff

#### Petitioner's Submission

The petitioner submitted that it has billed the consumers based on the tariff approved for FY 2023-24. The revenue for H1 (April to September) is Rs. 1,190.56 Cr. against sale of 2,374.11 MU. The overall revenue from sale of power for FY 2023-24 is estimated at Rs. 2,795.08 Cr. (including FPPCA of Rs. 409.14 Cr.) for sale of 4,661.14 MU and the Hon'ble Commission is requested to approve the same. The category-wise computation of revenue is presented in the table given below:

**Table 100 Revenue at existing tariff submitted by Petitioner (Rs Cr) for FY 2023-24**

| Category | Approved Revenue for FY 2023-24 from Retail Tariff determined by Commission (In INR Cr) FY 2023-24 | | | | | Actual Revenue for FY 2023-24 from the existing retail tariff determined by Commission (in INR Cr) FY 2023-24 | | |
|---|---|---|---|---|---|---|---|---|
| | Full year revenue (Rs. Crore) | | | | Average Billing Rate (Rs/kWh) | Full year revenue (Rs. Crore) | | Average Billing Rate (Rs/kWh) |
| | Sales in MU | Revenue from Fixed Charges | Revenue from Energy Charges | Total | | Sales in MU | Total | |
| Domestic | 1,469.35 | 46.46 | 383.20 | 429.66 | 2.92 | 1,370.61 | 459.93 | 3.36 |
| LT-D Domestic | 1,468.06 | 46.41 | 383.02 | 429.43 | 2.93 | 1,369.28 | 459.56 | 3.36 |
| 0-100 units | 564.39 | 14.17 | 90.30 | 104.47 | 1.85 | 519.41 | 48.98 | 0.94 |
| 101-200 units | 358.16 | 10.22 | 84.17 | 94.39 | 2.64 | 331.72 | 45.11 | 1.36 |
| 201-300 units | 196.18 | 8.02 | 57.87 | 65.89 | 3.36 | 183.40 | 31.69 | 1.73 |
| 301-400 units | 108.71 | 4.80 | 42.40 | 47.19 | 4.34 | 102.94 | 22.91 | 2.23 |
| Above 400 units | 240.62 | 9.21 | 108.28 | 117.49 | 4.88 | 231.81 | 57.85 | 2.50 |
| Low Income Group | 0.93 | 0.00 | - | 0.00 | 0.00 | 0.93 | 0.13 | 1.40 |
| HT-D Domestic | 0.37 | 0.05 | 0.18 | 0.22 | 5.95 | 0.40 | 0.24 | 6.00 |
| Commercial | 629.00 | 50.40 | 311.43 | 361.83 | 5.75 | 713.77 | 422.99 | 5.93 |

| Category | Approved Revenue for FY 2023-24 from Retail Tariff determined by Commission (In INR Cr) FY 2023-24 | | | | | Actual Revenue for FY 2023-24 from the existing retail tariff determined by Commission (in INR Cr) FY 2023-24 | | |
|---|---|---|---|---|---|---|---|---|
| | Full year revenue (Rs. Crore) | | | | Average Billing Rate (Rs/kWh) | Full year revenue (Rs. Crore) | | Average Billing Rate (Rs/kWh) |
| | Sales in MU | Revenue from Fixed Charges | Revenue from Energy Charges | Total | | Sales in MU | Total | |
| LT-C Commercial | 474.02 | 24.36 | 227.11 | 251.47 | 5.31 | 520.18 | 286.81 | 5.51 |
| 0-100 units | 85.68 | 6.79 | 30.43 | 37.21 | 4.34 | 83.40 | 38.70 | 4.64 |
| 101-200 units | 51.35 | 2.15 | 22.35 | 24.50 | 4.77 | 53.03 | 26.40 | 4.98 |
| 201-400 units | 63.74 | 2.75 | 30.93 | 33.68 | 5.28 | 68.30 | 37.93 | 5.55 |
| Above 400 units | 273.06 | 12.67 | 143.41 | 156.09 | 5.72 | 315.46 | 183.78 | 5.83 |
| HT-C Commercial | 154.98 | 26.04 | 84.31 | 110.35 | 7.12 | 193.59 | 136.18 | 7.03 |
| Industrial | 2,341.91 | 193.15 | 1,140.27 | 1,333.42 | 5.69 | 2,402.99 | 1,431.65 | 5.96 |
| LT-I Industrial | 86.77 | 5.65 | 33.35 | 39.00 | 4.49 | 88.85 | 45.55 | 5.13 |
| 0-500 units | 16.91 | 2.61 | 5.75 | 8.36 | 4.94 | 16.07 | 9.89 | 6.15 |
| Above 500 units | 69.86 | 3.04 | 27.59 | 30.64 | 4.39 | 72.77 | 35.66 | 4.90 |
| Low Tension-Mixed/LT-P (Hotel Industries) | 3.90 | 0.14 | 2.05 | 2.19 | 5.62 | 3.09 | 1.91 | 6.18 |
| High Tension-I/HT-I | 1,756.68 | 156.34 | 866.31 | 1,022.64 | 5.82 | 1,767.11 | 1,062.19 | 6.01 |
| Connected at 11/33 kV | 1,467.02 | 133.76 | 729.52 | 863.28 | 5.88 | 1,458.30 | 886.46 | 6.08 |
| Connected at 110 kV | 289.66 | 22.58 | 136.78 | 159.36 | 5.50 | 308.81 | 175.73 | 5.69 |
| High Tension-Ferro/SM/PI/SR | 494.55 | 31.03 | 238.57 | 269.60 | 5.45 | 543.94 | 322.00 | 5.92 |
| Agriculture | 35.47 | 1.35 | 6.64 | 7.99 | 2.25 | 42.72 | 10.30 | 2.41 |
| Low Tension-AG/LT-AGP (Pump Sets/Irrigation) | 14.22 | 0.81 | 2.13 | 2.94 | 2.07 | 18.93 | 4.86 | 2.57 |
| Low Tension-AG/LT-AGA (Allied Activities) | 0.65 | 0.04 | 0.11 | 0.15 | 2.31 | 1.54 | 0.34 | 2.21 |
| High Tension-AG/HT-AGP (Pump Sets/Irrigation) | 6.48 | 0.39 | 1.62 | 2.01 | 3.10 | 6.14 | 1.60 | 2.61 |
| High Tension-AG/HT-AG (Allied Activities) | 14.12 | 0.11 | 2.77 | 2.88 | 2.04 | 16.12 | 3.50 | 2.17 |
| Military Engineering Services/ Defense Establishments | 33.55 | 1.65 | 16.78 | 18.43 | 5.49 | 35.74 | 16.10 | 4.50 |
| Public Lighting | 46.27 | 0.92 | 26.14 | 27.06 | 5.85 | 50.13 | 13.87 | 2.77 |
| Hoardings/ Signboards | 0.27 | 0.04 | 0.27 | 0.30 | 11.11 | 0.14 | 0.21 | 15.00 |
| Temporary | 8.80 | 0.00 | 7.70 | 7.70 | 8.75 | 32.44 | 24.19 | 7.46 |
| LT | 3.60 | 0.00 | 3.01 | 3.01 | 8.36 | 27.51 | 18.76 | 6.82 |
| LT Domestic | 0.25 | 0.00 | 0.11 | 0.11 | 4.40 | 3.28 | 1.42 | 4.33 |
| LT Commercial | 3.35 | 0.00 | 2.90 | 2.90 | 8.66 | 24.23 | 17.34 | 7.16 |
| HT | 5.20 | 0.00 | 4.69 | 4.69 | 9.02 | 4.93 | 5.43 | 11.01 |
| Single Point Supply | 5.38 | 0.56 | 2.67 | 3.23 | 6.00 | 6.97 | 4.38 | 6.28 |
| Residential Complexes | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | - |
| Commercial Complexes | 5.38 | 0.56 | 2.67 | 3.23 | 6.00 | 6.97 | 4.38 | 6.28 |
| Industrial Complexes | 0.00 | 0.00 | 0.00 | 0.00 | - | 0.00 | 0.00 | - |
| Other Categories | - | - | - | - | - | 5.63 | 2.33 | 4.14 |

| Category | Approved Revenue for FY 2023-24 from Retail Tariff determined by Commission (In INR Cr) FY 2023-24 | | | | | Actual Revenue for FY 2023-24 from the existing retail tariff determined by Commission (in INR Cr) FY 2023-24 | | |
|---|---|---|---|---|---|---|---|---|
| | Full year revenue (Rs. Crore) | | | | Average Billing Rate (Rs/kWh) | Full year revenue (Rs. Crore) | | Average Billing Rate (Rs/kWh) |
| | Sales in MU | Revenue from Fixed Charges | Revenue from Energy Charges | Total | | Sales in MU | Total | |
| EV Charging Stations | - | - | - | - | - | 5.63 | 2.33 | 4.14 |
| | | | | | | | | |
| **TOTAL** | **4,570.01** | **294.53** | **1,895.08** | **2,189.60** | **4.79** | **4,661.14** | **2,385.94** | **5.12** |

### Commission's Analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff for FY 2023-24, under APR, 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 suitable assumptions wherever necessary. The revenue at existing tariff, as computed by the Commission for the FY 2023-24 has been shown in the following table:

**Table 101 Revenue at existing tariff approved by Commission (Rs Cr) for FY 2023-24**

| DOMESTIC | Sales (MUs) | Revenue from Energy Charges (Rs Cr.) | Revenue from Fixed charges (Rs Cr.) | Total (Rs. Cr.) | ABR (Rs. /unit) |
|---|---|---|---|---|---|
| Tariff LTD/Domestic and Non-Commercial | 1422.91 | 416.90 | 45.29 | 462.19 | 3.25 |
| 0-100 units | 539.75 | | | | |
| 101-200 units | 344.71 | | | | |
| 201 to 300 units | 190.58 | | | | |
| 301 to 400 units | 106.97 | | | | |
| Above 400 units | 240.89 | | | | |
| Tariff LTD/Low Income Group | 0.94 | 0.00 | 0.00 | 0.00 | 0.03 |
| Tariff-LTC/Commercial | 490.08 | 239.96 | 61.60 | 301.56 | 6.15 |
| 0-20 KW/Commercial Consumers | | | | | |
| 0-100 Units | 74.78 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 101-200 units | 46.33 | | | | |
| 201-400 Units | 57.47 | | | | |
| Above 400 units | 177.91 | | | | |
| >20-90Kw Commercial Consumers | | 69.62 | 37.50 | 107.12 | |
| 0-100 Units | 3.79 | | | | |
| 101-200 units | 3.63 | | | | |
| 201-400 Units | 6.88 | | | | |
| Above 400 units | 119.29 | | | | |
| LTI-Industry | 89.98 | 37.18 | 5.14 | 42.32 | 4.70 |
| 0-500 Units | 16.28 | | | | |
| Above 500 units | 73.70 | | | | |
| Tariff-LTP/Mixed (Hotel Industries) | 4.07 | 2.28 | 0.17 | 2.45 | 6.01 |
| LT-Agriculture | 17.63 | 2.68 | 1.46 | 4.13 | 2.34 |
| Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A) | 16.40 | | | | |
| Tariff-LTAG/Agriculture Allied (B) | 1.23 | | | | |
| Tariff-LTPL/Public Lighting | 71.15 | 40.20 | 2.08 | 42.28 | 5.94 |
| Tariff-LT Hoarding and Sign Board | 0.24 | 0.24 | 0.05 | 0.29 | 11.91 |
| High Tension Supply | | | | | |
| Tariff HTD/Domestic | 0.37 | 0.17 | 0.06 | 0.23 | 6.21 |
| Tariff HT-Commercial | 181.94 | 95.52 | 39.96 | 135.48 | 7.45 |
| Tariff HTI/Industrial | 1722.33 | 851.25 | 208.90 | 1060.15 | 6.16 |
| Connected at 11/33 kV | 1461.97 | | | | |
| Connected at 110 kV | 260.36 | | | | |
| H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive) | 532.29 | 263.48 | 41.09 | 304.58 | 5.72 |
| HT-Agriculture | 22.66 | 4.15 | 2.02 | 6.17 | 2.72 |
| Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A) | 7.75 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Tariff-HTAG/Agriculture (Allied Activities) (B) | 14.92 | | | | |
| H.T. MES/Defence Establishments | 32.43 | 16.54 | 2.31 | 18.85 | 5.81 |
| Tariff-LT/Temporary Domestic | 3.53 | 0.93 | 0.97 | 1.90 | 5.38 |
| 0-100 Units | 3.53 | | | | |
| Tariff-LT/Temporary Commercial | 25.14 | 13.58 | 2.19 | 15.77 | 6.27 |
| Tariff-HTTS/Temporary Supply | 9.14 | 7.19 | 4.66 | 11.86 | 12.98 |
| Single Point Supply | 5.48 | 2.88 | 2.03 | 4.91 | 8.96 |
| EV Charging Stations | 5.04 | 2.27 | | 2.27 | |
| **Total** | **4636.95** | **1997.38** | **419.99** | **2417.37** | **5.21** |

The Commission has determined revenue from sale of power at existing tariff as Rs. 2417.37 Cr in the FY 2023-24 without considering FPPCA income. The Tariff with FPPCA income will be approve by the Commission in true-up after obtaining actual FPPCA income data from its audited account.

## 4.23. Revenue at existing Retail Tariff

### Petitioner's Submission

The petitioner submitted that it has estimated the Net Revenue Gap for FY 2023-24 after considering the budgetary support from the Government of Goa and the same is presented in the table given below.

**Table 102 Revenue Gap/(Surplus)for FY 2023-24, Petitioner submission (Rs. Cr)**

| S. No. | Particulars | Approved | Revised Estimates |
|---|---|---|---|
| 1 | Aggregate Revenue Requirement | 2,682.53 | 3,029.27 |
| 2 | Revenue from Sale of Power (with FPPCA income) | 2,189.60 | 2,795.08 |
| **3** | **Revenue Gap/ (Surplus)** | **492.93** | **234.20** |
| 4 | Less: Budgetary Support for State Govt. | 492.93 | 234.20 |
| 5 | Net Revenue to be carried forward | - | - |

### Commission's Analysis

The Commission based on the approved ARR and existing retail tariff (without FPPCA income) has derived the following Revenue Gap/(Surplus):

**Table 103 Standalone gap/ (surplus) approved by the Commission (Rs Cr)**

| S. No. | Particulars | Approved | Petitioner's Submission | Approved in APR |
|---|---|---|---|---|
| 1 | Aggregate Revenue Requirement | 2,682.53 | 3,029.27 | 2636.89 |
| 2 | Revenue from Sale of Power | 2,189.60 | 2,795.08 | 2417.37 |
| **3** | **Revenue Gap/ (Surplus)** | **492.93** | **234.20** | **219.51** |

The Commission, in the APR of FY 2023-24 approves standalone gap of Rs 219.51 Cr. The Petitioner in this regard has submitted the letter with Reference No. 1/14/2021-FIN (BUD)/618 dated 24.01.2023 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit for the FY 2022-23. Hence, under APR of FY 2023-24, no revenue gap is considered to be carry forward in FY 2024-25.

# CHAPTER 5: Determination of Aggregate Revenue Requirement for the FY 2024-25

## 5.1. Background

The ARR for FY 2024-25 was approved in the MYT Order dated 31st March 2022 (herein referred as "MYT Order") issued for the 3rd Control Period (FY 2022-23 to FY 2024-25). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2024-25 based on the information made available for the previous years and the various norms defined in the MYT Order. 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 the FY 2024-25

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2024-25 based on figures approved in the Business Plan and MYT Order, the actual information available of various parameters for the FY 2022-2023 and FY 2023-24. The ARR and revenue at existing tariff has been determined for FY 2024-25 to arrive at the revenue gap/surplus for the FY 2024-25.

## 5.3. Projection of Number of Consumer, Connected Load and Energy Sales for the FY 2024-25

### Petitioner's Submission

The petitioner submitted that the Hon'ble Commission had approved the sales for FY 2024-25 as 5,021.76 MU. The actual sales for FY 2022-23 was 4,438.06 MU and the actual sales during first half of FY 2023-24 was 2,374.11 MU. EDG has considered the actual sales, Consumer Number and Connected Load during FY 2022-23 and first half of FY 2023-24 for projecting the category-wise for FY 2024-25. For the purpose of ARR for FY 2024-25, EDG has extrapolated the figures of sales, Consumer Number and Connected Load determined for APR of FY 2023-24 with 2,3,4, & 5-year CAGR along with certain assumptions and in case of (-) negative CAGR, assumption of 3% is considered. The following table shows the category-wise sales, Consumer Number and Connected Load considered by EDG for FY 2024-25 vis-à-vis Sales approved in the JERC MYT Business Plan Order dated 31st March, 2022.

**Table 104 Energy Sales proposed by the petitioner for FY 2024-25 (MU)**

| S/ No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| A. LOW TENSION SUPPLY | | | |
| 1. | LTD/Domestic | 1,521.28 | 1,454.18 |

| S/ No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| 2. | LT-LIG (Low Income Group) | 1.37 | 0.99 |
| 3. | LTC/Commercial | 498.09 | 545.61 |
| 4. | LTI/ Industrial | 80.91 | 96.23 |
| 5. | LT Mixed/ LT-P Hotel Industries | 4.48 | 3.24 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 18.08 | 19.37 |
| 7. | LTAG/LT-AGA (Allied Activities) | | 1.57 |
| 8. | LTPL Public lighting | 29.61 | 55.14 |
| 9. | LT Hoarding /Signboard | 0.16 | 0.16 |
| B. HIGH TENSION SUPPLY | | | |
| 10. | HTD Domestic | 0.38 | 0.41 |
| 11. | HTC Commercial | 149.62 | 215.76 |
| 12. | HTI/Industrial – Connected at 11/33 kV | 1,559.37 | 1,574.96 |
| 13. | HTI/Industrial – Connected at 110 kV | | 333.52 |
| 14. | HTSF Industrial (Ferro/SM/PI/SR) | 608.08 | 587.45 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 18.79 | 6.26 |
| 16. | HTAG/HT-AG (Allied Activities) | | 16.44 |
| 17. | HTMES /Defense Establishments | 27.58 | 36.45 |
| C. TEMPORARY SUPPLY | | | |
| 18. | LT-Temporary Domestic | 9.77 | 3.74 |
| 19. | LT-Temporary Commercial | | 27.62 |
| 20. | HT-Temporary | 2.33 | 5.62 |
| D. SINGLE POINT SUPPLY | | | |
| 21. | Residential Complexes | - | - |
| 22. | Commercial Complexes | 5.79 | 7.00 |
| 23. | Industrial Complexes | - | - |
| E. OTHER CATEGORIES | | | |
| 24. | EV Charging Stations | - | 30.03 |
| **Total** | | **4,535.68** | **5,021.76** |

**Table 105 Consumer Number proposed by the petitioner for FY 2024-25**

| S/No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| A. LOW TENSION SUPPLY | | | |
| 1. | LTD/Domestic | 6,37,065 | 5,81,033 |
| 2. | LT-LIG (Low-income Group) | 1,314 | 843 |
| 3. | LTC/Commercial | 1,13,989 | 1,13,153 |
| 4. | LTI/ Industrial | 5,799 | 5,933 |
| 5. | LT Mixed/ LT-P Hotel Industries | 125 | 118 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 13,111 | 13,317 |
| 7. | LTAG/LT-AGA (Allied Activities) | | 335 |

| S/No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| 8. | LTPL Public lighting | 1,097 | 7,149 |
| 9. | LT Hoarding /Signboard | 47 | 81 |
| B. HIGH TENSION SUPPLY | | | |
| 10. | HTD Domestic | 3 | 5 |
| 11. | HTC Commercial | 341 | 373 |
| 12. | HTI/Industrial – Connected at 11/33 kV | 1,046 | 836 |
| 13. | HTI/Industrial – Connected at 110 kV | | 7 |
| 14. | High Tension-Ferro/SM/PI/SR | 26 | 24 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 49 | 46 |
| 16. | HTAG/HT-AG (Allied Activities) | | 3 |
| 17. | HTMES /Defense Establishments | 15 | 15 |
| C. TEMPORARY SUPPLY | | | |
| 18. | LT-Temporary Domestic | 2,609 | 1,943 |
| 19. | LT-Temporary Commercial | | 3,460 |
| 20. | HT-Temporary | 11 | 17 |
| D. SINGLE POINT SUPPLY | | | |
| 21. | Residential Complexes | - | - |
| 22. | Commercial Complexes | 1 | 1 |
| 23. | Industrial Complexes | - | - |
| E. OTHER CATEGORIES | | | |
| 24. | EV Charging Stations | - | 48 |
| **Total** | | **7,76,648** | **7,28,741** |

**Table 106 Connected Load proposed by the Petitioner for FY 2024-25 (KW)**

| S/ No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| A. LOW TENSION SUPPLY | | | |
| 1. | LTD/Domestic | 20,13,980 | 19,91,172 |
| 2. | LT-LIG (Low-income Group) | 117 | 93 |
| 3. | LTC/Commercial | 4,47,305 | 4,72,324 |
| 4. | LTI/ Industrial | 1,51,598 | 1,21,714 |
| 5. | LT Mixed/ LT-P Hotel Industries | 2,757 | 2,555 |
| 6. | LTAG/LT-AGP (Pump Sets/Irrigation) | 55,942 | 38,193 |
| 7. | LTAG/LT-AGA (Allied Activities) | | 1,984 |
| 8. | LTPL Public lighting | 3,212 | 15,690 |
| 9. | LT Hoarding /Signboard | 567 | 634 |
| B. HIGH TENSION SUPPLY | | | |
| 10. | HTD Domestic | 300 | 481 |

| S/ No | Category of Consumer | Approved in MYT Order dated 31st March, 2022 | Projections for FY 2024-25 |
|---|---|---|---|
| 11. | HTC Commercial | 95,681 | 1,30,875 |
| 12. | HTI/Industrial – Connected at 11/33 kV | 6,83,619 | 5,03,761 |
| 13. | HTI/Industrial – Connected at 110 kV | | 72,186 |
| 14. | HTSF Industrial (Ferro/SM/PI/SR) | 95,340 | 1,11,067 |
| 15. | HTAG/HT-AGP (Pump Sets/Irrigation) | 13,579 | 11,684 |
| 16. | HTAG/HT-AG (Allied Activities) | | 2,370 |
| 17. | HTMES /Defense Establishments | 9,045 | 9,431 |
| C. TEMPORARY SUPPLY | | | |
| 18. | LT-Temporary Domestic | 9,107 | 4,758 |
| 19. | LT-Temporary Commercial | | 20,098 |
| 20. | HT-Temporary | 2,468 | 3,300 |
| D. Single Point Supply | | | |
| 21. | Residential Complexes | - | - |
| 22. | Commercial Complexes | 4,035 | 2,400 |
| 23. | Industrial Complexes | - | - |
| E. OTHER CATEGORIES | | | |
| 24. | EV Charging Stations | - | 1,871 |
| **Total** | | **35,88,653** | **35,18,641** |

**Commission's analysis**

The Commission has examined the petitioner's submission. Based on the past period data on consumer number, load and energy sales, the Commission considers it prudent to determine the Energy Sales, Consumer No and Connected Load on the basis of CAGR. Considering the values approved in APR of FY 2023-24, the same has been escalated with 5 year's CAGR of respective consumer category. In case of negative growth rate of sales, the Commission has unchanged the sales figure of FY 2023-24 for the relevant consumer category.

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

**Table 107 Energy Sales approved by the Commission for FY 2024-25**

| Particulars | ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022 | Petitioner's Submission | CAGR for 5 years | Approved by the Commission |
|---|---|---|---|---|
| A. Low Tension Supply | | | | |

| | | | | |
|---|---|---|---|---|
| LTD/ Domestic | 1,521.28 | 1,454.18 | 4.00% | 1,479.76 |
| LT-LIG (Low Income Group) | 1.37 | 0.99 | 0.00% | 0.94 |
| LTC/ Commercial | 498.09 | 545.61 | 2.73% | 503.47 |
| LTI/ Industrial | 80.91 | 96.23 | 0.00% | 89.98 |
| LT Mixed/ LT -P Hotel Industry | 4.48 | 3.24 | 8.83% | 4.43 |
| LTAG/LT-AGP (Pump Sets/Irrigation)<br>LTAG/LT-AGA (Allied Activities) | 18.08 | 20.94 | 0.00 % | 17.63 |
| LTPL Public lighting | 29.61 | 55.14 | 56.04 % | 111.02 |
| LT Hoarding /Sign Board | 0.16 | 0.16 | 0.85 % | 0.24 |
| B. HIGH TENSION SUPPLY | | | | |
| HTD Domestic | 0.38 | 0.41 | 2.38 % | 0.38 |
| HT Commercial | 149.62 | 215.76 | 9.44 % | 199.10 |
| HTI/Industrial – Connected at 11/33 kV<br>HTI/Industrial – Connected at 110 kV | 1,559.37 | 1,908.48 | 3.84 % | 1,788.40 |
| HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling) | 608.08 | 587.45 | 3.14 % | 549.01 |
| HTAG/HT-AGP (Pump Sets/Irrigation)<br>HTAG/HT-AG (Allied Activities) | 18.79 | 22.70 | 15.92 % | 26.27 |
| HTMES/Defence Establishment | 27.58 | 36.45 | 1.96 % | 33.07 |
| C. TEMPORARY SUPPLY | | | | |
| LT-Temporary Domestic<br>LT-Temporary Commercial | 9.77 | 31.36 | 7.85 % | 30.50 |
| HT-Temporary | 2.33 | 5.62 | 76.72 % | 16.15 |
| D. SINGLE POINT SUPPLY | 5.79 | 7.00 | 0.00 % | 5.48 |
| EV Charging Stations | | 30.03 | | 5.04 |
| **Total** | **4535.69** | **5021.75** | | **4860.87** |

**Table 108 Consumer No. Approved by the Commission**

<table>
<tr><th>Particulars</th><th>ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022</th><th>Petitioner's Submission</th><th>CAGR for 5 years</th><th>Approved by the Commission</th></tr>
<tr><td>A. Low Tension Supply</td><td></td><td></td><td></td><td></td></tr>
<tr><td>LTD/ Domestic</td><td>6,37,065.00</td><td>5,81,033.00</td><td>2.22 %</td><td>581458.52</td></tr>
<tr><td>LT-LIG (Lower Income)</td><td>1,314.00</td><td>843.00</td><td>0.00 %</td><td>873.00</td></tr>
<tr><td>LTC/ Commercial</td><td>1,13,989.00</td><td>1,13,153.00</td><td>2.56 %</td><td>113166.31</td></tr>
<tr><td>LTI/ Industrial</td><td>5,799.00</td><td>5,933.00</td><td>0.00 %</td><td>5592.00</td></tr>
<tr><td>LT Mixed/ LT -P Hotel Industry</td><td>125.00</td><td>118.00</td><td>0.00 %</td><td>116.00</td></tr>
<tr><td>LTAG/LT-AGP (Pump Sets/Irrigation)</td><td rowspan="2">13,111.00</td><td rowspan="2">13,652.00</td><td rowspan="2">2.39 %</td><td rowspan="2">13492.69</td></tr>
<tr><td>LTAG/LT-AGA (Allied Activities)</td></tr>
<tr><td>LTPL Public lighting</td><td>1,097.00</td><td>7,149.00</td><td>99.17 %</td><td>26733.65</td></tr>
<tr><td>LT Hoarding /Sign Board</td><td>47.00</td><td>81.00</td><td>0.93 %</td><td>67.24</td></tr>
<tr><td>B. HIGH TENSION SUPPLY</td><td></td><td></td><td></td><td></td></tr>
<tr><td>HTD Domestic</td><td>3.00</td><td>5.00</td><td>5.92 %</td><td>4.49</td></tr>
<tr><td>HTD Commercial</td><td>341.00</td><td>373.00</td><td>8.62 %</td><td>372.82</td></tr>
<tr><td>HTI/Industrial – Connected at 11/33 kV</td><td rowspan="2">1,046.00</td><td rowspan="2">843.00</td><td rowspan="2">2.94 %</td><td rowspan="2">847.78</td></tr>
<tr><td>HTI/Industrial – Connected at 110 kV</td></tr>
<tr><td>HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling)</td><td>26.00</td><td>24.00</td><td>0.00 %</td><td>23.00</td></tr>
<tr><td>HTAG/HT-AGP (Pump Sets/Irrigation)</td><td rowspan="2">49.00</td><td rowspan="2">49.00</td><td rowspan="2">1.79 %</td><td rowspan="2">48.70</td></tr>
<tr><td>HTAG/HT-AG (Allied Activities)</td></tr>
<tr><td>HTMES/Defence Establishment</td><td>15.00</td><td>15.00</td><td>3.13 %</td><td>14.89</td></tr>
<tr><td>C. TEMPORARY SUPPLY</td><td></td><td></td><td></td><td></td></tr>
<tr><td>LT-Temporary Domestic</td><td rowspan="2">2,609.00</td><td rowspan="2">5,403.00</td><td rowspan="2">4.06 %</td><td rowspan="2">5852.65</td></tr>
<tr><td>LT-Temporary Commercial</td></tr>
</table>

| | | | | |
|---|---|---|---|---|
| HT-Temporary | 11.00 | 17.00 | | 44.31 |
| D. SINGLE POINT SUPPLY | 1.00 | 1.00 | 0.00 % | 1.00 |
| EV Charging Stations | | 48.00 | | 4.00 |
| **Total** | **776648** | **728741** | | **748713** |

**Table 109 Connected Load approved by the Commission for FY 2024-25 (KW)**

| Particulars | ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022 | Petitioner's Submission | CAGR for 5 years | Approved by the Commission |
|---|---|---|---|---|
| A. Low Tension Supply | | | | |
| LTD/ Domestic | 20,13,980.00 | 19,91,172.00 | 5.33 % | 19,87,816.64 |
| LT-LIG (Lower Income) | 117.00 | 93.00 | 0.00 % | 100.00 |
| LTC/ Commercial | 4,47,305.00 | 4,72,324.00 | 6.32 % | 4,74,613.96 |
| LTI/ Industrial | 1,51,598.00 | 1,21,714.00 | 0.00 % | 1,14,727.00 |
| LT Mixed/ LT -P Hotel Industry | 2,757.00 | 2,555.00 | 0.00 % | 2,328.00 |
| LTAG/LT-AGP (Pump Sets/Irrigation)<br>LTAG/LT-AGA (Allied Activities) | 55,942.00 | 40,177.00 | 0.00 % | 37,871.00 |
| LTPL Public lighting | 3,212.00 | 15,690.00 | 56.02 % | 36,000.41 |
| LT Hoarding /Sign Board | 567.00 | 634.00 | 0.00 % | 496.00 |
| B. HIGH TENSION SUPPLY | | | | |
| HTD Domestic | 300.00 | 481.00 | 5.06 % | 423.85 |
| HTD Commercial | 95,681.00 | 1,30,875.00 | 9.17 % | 1,30,874.78 |
| HTI/Industrial – Connected at 11/33 kV<br>HTI/Industrial – Connected at 110 kV | 6,83,619.00 | 5,75,947.00 | 3.19 % | 5,87,938.13 |
| HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/Steel Rolling) | 95,340.00 | 1,11,067.00 | 2.14 % | 1,14,476.83 |
| HTAG/HT-AGP (Pump Sets/Irrigation)<br>HTAG/HT-AG (Allied Activities) | 13,579.00 | 14,054.00 | 6.74 % | 14,700.77 |
| HTMES/Defence Establishment | 9,045.00 | 9,431.00 | 2.12 % | 8,053.44 |

| | | | | |
|---|---|---|---|---|
| C. TEMPORARY SUPPLY | | | | |
| LT-Temporary Domestic | 9,107.00 | 24,856.00 | 4.53 % | 28,284.43 |
| LT-Temporary Commercial | | | | |
| HT-Temporary | 2,468.00 | 3,300.00 | 62.63 % | 10,532.09 |
| D. SINGLE POINT SUPPLY | 4,035.00 | 2,400.00 | 0.00 % | 2,400.00 |
| E. OTHER CATEGORIES | | | | |
| EV Charging Stations | | 1871.00 | | 209.60 |
| **Total** | **3588653.00** | **3518641.00** | | **3551846.92** |

### 5.4. Inter- State Transmission Loss

**Petitioner's Submission**

The Petitioner has submitted Inter-State Transmission Losses of 3.29% in its petition for FY 2024-25.

**Commission's analysis**

The Commission in the ARR of FY 2024-25 considers the weighted average transmission loss levels in line with the approved transmission loss in MYT order dated 31st March, 2022. The table below provides the Inter-State Transmission Losses submitted and now approved by the Commission.

**Table 110 Approved Inter-State Transmission Loss (%) for FY 2024-25**

| Particulars | Approved in T.O dated 30th March, 2023 | | Petitioners Submission | Approved by the Commission |
|---|---|---|---|---|
| | **WR** | **SR** | | |
| Inter-State Transmission Loss (%) | 3.29 % | 7.80 % | 3.29 % | 4.02* % |

* Power from western region 3194.98 Mus and Power from southern region is 618.12 MUs

The Commission approves the Inter-State Transmission Loss as 4.02 % in the ARR of FY 2024-25.

### 5.5. Transmission and Distribution (T&D) Loss

**Petitioner's Submission**

EDG has submitted the T&D losses observed for FY 2024-25 are 7.41%.

**Commission's analysis**

The Commission in the ARR of FY 2024-25 considers the T & D loss levels in line with distribution loss levels approved in the previous Order dated 30th March 2023. The Commission considers it prudent to consider the T&D loss (intra-state) for FY 2024-25. The table below provides the T&D Losses submitted and now approved by the Commission.

**Table 111 Approved Intra-State T&D loss (%) for FY 2024-25**

| S. No | Particulars | Approved in MYT Order | Petitioner's Submission | Now Approved by Commission |
|---|---|---|---|---|
| 1 | Intra-State T&D loss | 7.95 % | 7.41 % | 7.95 % |

The Commission approves Intra-State T&D loss of 7.95 % in the ARR of FY 2024-25.

## 5.6. Energy Balance

### Petitioner's Submission

The petitioner submitted that based on the Sales and distribution loss, and PGCIL losses for FY 2023-24 and FY 2024-25, the energy requirement has been projected by EDG. The Energy balance for FY 2023-24 and FY 2024-25 is shown in the following table:

**Table 112 Energy Balance submitted by the petitioner for FY 2024-25**

| Particulars | Estimated FY 2023-24 | Projected FY 2024-25 |
|---|---|---|
| | Total | Total |
| Energy Input at Goa Periphery | 4,901.23 | 5,224.15 |
| | | |
| Total Power Scheduled/ Purchased at Goa Periphery | | |
| Total Schedule Billed Drawal - CGS | 4,209.40 | 4,266.14 |
| Add: Overdrawal | 30.89 | - |
| Add: Power purchase from NVVN / Banking | (72.39) | 43.28 |
| Add: Power purchase from Traders/ Open Market | 238.43 | 43.80 |
| Add : Hydro Power | - | - |
| Less: Underdrawal | 5.88 | - |
| Add: Renewable Power | 863.93 | 1,047.26 |
| Less: Power diverted to Exchange | 193.28 | - |
| | | |
| Total | 5,071.10 | 5,400.49 |
| | | |
| PGCIL Losses - MUs | 169.87 | 176.33 |
| PGCIL Losses - % | 3.29% | 3.29% |
| | | |
| Total Power Purchased within Goa State | | |
| Add: Co-generation | 123.04 | 139.61 |
| Add: Independent Power Producers (IPP) | - | - |
| Add: Net Metering | - | - |
| Add: PM KUSUM | - | 50.00 |
| Add: Hindustan Waste Treatment Plant | 10.00 | 10.00 |
| | | |
| Total | 133.04 | 199.61 |
| Total Power Purchase availability after PGCIL Losses | 5,034.27 | 5,423.76 |
| Power Purchase required (MU) | 5,034.27 | 5,423.76 |
| Less: Retail Sales to Consumers | 4,661.14 | 5,021.76 |
| Distribution Losses - MUs | 373.13 | 402.00 |
| Distribution Losses - % | 7.41% | 7.41% |

**Commission's analysis**

The JERC MYT Regulations, 2021 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 13.1 of the JERC MYT Regulations, 2021 in this regard stipulates the following:

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

*a) Force Majeure events;*

*b) Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;*

*c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;*

*d) Inter- State Transmission loss;*

*e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;*

*f) Variation in fuel cost;*

*g) Change in power purchase mix;*

*h) Inflation;*

*i) Transmission Charges for a Distribution Licensee;*

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

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

*l) Taxes and Statutory levies;*

*m) Taxes on income;*

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

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

The Commission has determined the energy requirement under Energy Balance based on the revised estimates of energy sales and approved loss as discussed above. The rational for finalising the approved availability from various sources, as considered under energy balance by the Commission, is discussed in next section. The following table provides the Energy Balance now approved by the Commission for FY 2024-25.

**Table 113 Energy Balance Approved by the Commission for FY 2024-25**

| Item | ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Energy Requirement | | | |
| Energy sales to metered category within the State | 4,535.68 | 5,021.76 | 4860.87 |
| Total sales within the State | 4,535.68 | 5,021.76 | 4860.87 |
| Distribution Losses (MU) | 490.00 | 402.00 | 419.81 |
| Distribution Losses (%) | 9.75% | 7.41% | 7.95% |
| **Energy required at DISCOM Periphery** | **5025.68** | **5423.76** | **5280.69** |
| Availability from firm sources inside the state | 149.79 | 139.40 | 129.18 |
| Energy Required at State Periphery from outside | 4875.89 | 5284.25 | 5151.50 |
| | | | |
| ENERGY AVAILABILIT Y | | | |
| Availability from firm sources outside state | 3,662.94 | 4,266.14 | 4213.64 |
| PGCIL Losses - % | | 3.29% | 4.02 % |
| Total Availability of Energy at State Periphery from outside state after Interstate Losses | | 4125.78 | 4044.25 |
| Renewable Sources | 1,190.52 | 1107.25 | 1107.25 |

| | | | |
|---|---|---|---|
| Total Availability of Energy for the State | | | 5151.50 |
| Open market (sale)/ purchase | 22.44 | | 0.00 |
| **Net Energy availability** | **4875.90** | **5,284.25** | **5151.50*** |

* (4213.64+1107.25+129.18) = 5450.07 matched with power purchase table 116)

In the ARR of FY 2024-25, the Commission has approved energy requirement at state periphery of 5151.50 MUs.

### 5.7. Power Purchase Quantum & Cost

**Petitioner's Submission**

EDG would be procuring non-solar Renewable power for meeting the RPO in FY 2024-25 through short-term market. ED-Goa has procured 2.26 MUs (for FY 2023-24 H1) and it is projected to receive 7.74 MUs in FY 2023-24 H2 from Hindustan Waste Energy Ltd as it has increased the capacity of the project. Accordingly, it is projected that 10 MUs will be supplied by Hindustan Waste Energy Ltd for FY 2024-25. In this regard, EDG has considered 75.69 MUs of energy from the Net Metering Consumers in the RPO for self-consumption without injecting into the grid. The EDG is receiving power from 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 since August 2022. The actual energy delivered by SECI Tranche II 50 MW, for FY 2023-24 H1 is 64.76 MU. Accordingly for FY 2024-25, it is projected as 139.46 MUs based on the Energy flow of Wind Power in the past.

Further, the EDG is receiving power from 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 since August 2022. The actual energy delivered by SECI Tranche II 50 MW, for FY 2023-24 H1 is 64.76 MU. Accordingly for FY 2024-25, it is projected as 139.46 MUs based on the Energy flow of Wind Power in the past. However, the petitioner estimated the power purchase cost for FY 2024-25 as given below.

**Table 114 Power Purchase Quantum and Cost submitted by the Petitioner**

| Source | Energy Received by the Licensee | Variable Charges | Fixed Cost (FC) | Variable Cost (VC) | Total Cost | Per Unit Cost |
|---|---|---|---|---|---|---|
| | (MU) | Paise/unit | ₹ crore | ₹ crore | ₹ crore | ₹/unit |
| **Central Generating Stations** | | | | | | |
| Thermal | | | | | | |
| NTPC | 3,813.10 | | 425.33 | 844.80 | 1,270.13 | 3.33 |
| KSTPS | 1,602.94 | 142.47 | 112.94 | 236.14 | 349.08 | 2.18 |
| VSTPS - I | 263.17 | 158.77 | 24.18 | 43.21 | 67.39 | 2.56 |

| Source | Energy Received by the Licensee | Variable Charges | Fixed Cost (FC) | Variable Cost (VC) | Total Cost | Per Unit Cost |
|---|---|---|---|---|---|---|
| | (MU) | Paise/unit | ₹ crore | ₹ crore | ₹ crore | ₹/unit |
| VSTPS - II | 112.51 | 153.08 | 8.43 | 17.81 | 26.24 | 2.33 |
| VSTPS -III | 94.83 | 151.83 | 8.61 | 14.89 | 23.50 | 2.48 |
| VSTPS-IV | 125.06 | 149.80 | 18.62 | 19.37 | 37.99 | 3.04 |
| VSTPS-V | 56.30 | 155.05 | 9.06 | 9.03 | 18.09 | 3.21 |
| KGPP | 0.00 | 1,159.20 | 7.78 | 0.00 | 7.78 | - |
| GGPP | - | - | 9.46 | - | 9.46 | - |
| SIPAT- I | 195.75 | 135.19 | 24.21 | 27.36 | 51.58 | 2.63 |
| KSTPS-VII | 46.79 | 139.51 | 5.43 | 6.75 | 12.18 | 2.60 |
| RSTPS | 618.12 | 372.01 | 50.00 | 249.40 | 299.40 | 4.84 |
| SIPAT- II | 95.69 | 139.38 | 9.13 | 13.79 | 22.92 | 2.40 |
| Solapur | 73.60 | 445.72 | 24.33 | 33.92 | 58.25 | 7.91 |
| Gadarwara | 123.91 | 359.62 | 32.31 | 46.07 | 78.39 | 6.33 |
| Lara | 106.62 | 136.40 | 17.34 | 15.04 | 32.38 | 3.04 |
| Khargone | 65.94 | 392.22 | 22.99 | 26.74 | 49.74 | 7.54 |
| Mouda I | 99.80 | 352.75 | 17.34 | 36.40 | 53.74 | 5.38 |
| Mouda II | 132.07 | 357.90 | 23.16 | 48.87 | 72.03 | 5.45 |
| Add/ Less: Other Adjustments | - | - | - | - | - | - |
| | | | | | | |
| NPCIL | 282.45 | | | 117.24 | 117.24 | 4.15 |
| KAPS 1&2 | 116.55 | 342.26 | - | 41.25 | 41.25 | 3.54 |
| KAPS 3&4 | 54.64 | 440.00 | - | 24.86 | 24.86 | 4.55 |
| KAPS 1&2 (Adjustment) | - | - | - | 11.40 | 11.40 | - |
| TAPS | 111.26 | 345.36 | - | 39.73 | 39.73 | 3.57 |
| | | | | | | |
| Banking of Power | 43.28 | - | - | - | - | - |
| Drawal | 59.24 | - | - | - | - | - |
| Injection | 15.96 | - | - | - | - | - |
| | | | | | | |
| Short- Term Power | | | | | | |
| Traders | 42.36 | | | 28.01 | 28.01 | |
| IEX Purchase & Sales | 42.36 | - | - | 28.01 | 28.01 | - |
| IEX Purchase | 42.36 | 639.55 | - | 28.01 | 28.01 | 6.61 |
| IEX Sales | - | - | - | - | - | - |
| Traders Drawal | - | - | - | - | - | - |
| Traders Injection | - | - | - | - | - | - |
| | | | | | | |
| Within State Generations | | | | | | |
| CO-GENERATION | 139.61 | | | 33.51 | 33.51 | 2.40 |
| Vedanta Plant-1 | 63.97 | 240.00 | - | 15.35 | 15.35 | 2.40 |
| Vedanta Plant-2 | 69.89 | 240.00 | - | 16.77 | 16.77 | 2.40 |
| Goa Sponge and private | 5.75 | 240.00 | - | 1.38 | 1.38 | 2.40 |

| Source | Energy Received by the Licensee | Variable Charges | Fixed Cost (FC) | Variable Cost (VC) | Total Cost | Per Unit Cost |
|---|---|---|---|---|---|---|
| | (MU) | Paise/unit | ₹ crore | ₹ crore | ₹ crore | ₹/unit |
| limited | | | | | | |
| | | | | | | |
| RPO Obligation | 1,041.84 | | | | 469.59 | 4.51 |
| Solar | 275.26 | | | 169.27 | 169.27 | 6.15 |
| NVVNL Solar | 13.43 | 565.56 | - | 7.59 | 7.59 | 5.66 |
| Solar STOA | 211.50 | 510.00 | - | 111.54 | 111.54 | 5.27 |
| SECI Solar | 50.33 | 591.00 | - | 29.75 | 29.75 | 5.91 |
| Net Metering | - | - | - | 0.00 | 0.00 | - |
| PM KUSUM | 50.00 | 408.00 | - | 20.40 | 20.40 | 4.08 |
| Non-Solar | 766.58 | | | 300.32 | 300.32 | 3.92 |
| SECI Wind Tranche II LTOA | 139.46 | 271.00 | - | 37.79 | 37.79 | 2.71 |
| STOA (non-Solar) | 241.78 | 505.00 | - | 126.25 | 126.25 | 5.22 |
| SECI Tranche-VI | 175.34 | 289.00 | - | 50.67 | 50.67 | 2.89 |
| SECI 150 MW | 200.00 | 403.00 | - | 80.60 | 80.60 | 4.03 |
| Hindustan waste treatment plant Goa | 10.00 | 500.00 | - | 5.00 | 5.00 | 5.00 |
| | | | | | | |
| REC Certificates | - | - | - | - | - | - |
| Solar-REC | - | - | - | - | - | - |
| Non-Solar- REC | - | - | - | - | - | - |
| | | | | | | |
| UI (Net Overdrawal) | - | - | - | - | - | - |
| OVER DRAWAL | - | - | - | - | - | - |
| UNDER DRAWAL | - | - | - | - | - | - |
| | | | | | | |
| OTHER CHARGES | | | 305.48 | | 305.48 | |
| PGCIL Charges | - | - | 305.48 | | 305.48 | - |
| | | | | | | |
| **Total Power Purchase** | **5,362.64** | **-** | **730.81** | **1,493.15** | **2,223.96** | **3.97** |

**Commission's analysis:**

The methodology followed for projecting the quantum and cost for FY 2024-25 has been discussed as follows:

**Must-run plants (nuclear and Renewable):**

For Nuclear projects, approved energy availability for APR of FY 2023-24 is considered to estimate the availability for FY 2024-25.

For renewable projects, the Commission has estimated to approve the Renewable Energy Quantum in line with the Petitioner's Submission.

**Availability of energy from Vedanta and Goa Sponge Stations:** The Commission approved the energy availability from within state Power Stations as submitted by the Petitioner for FY 2023-24 and found it prudent to estimate for FY 2024-25.

**Availability of energy from NTPC Stations:** The Commission has analysed the total energy requirement, availability from various projects, as approved above, and decides the remaining power requirement from NTPC Power Stations. The plant wise requirement from NTPC projects is derived based on merit order principle. For merit order, the Commission refers the actual variable cost data submitted by the Petitioner. Initially, the plant wise availability (of NTPC) is derived based on last three-year average PLF. In the second step, the merit order is applied to finalise the exact requirement from NTPC projects for FY 2024-25.

b) **Power Purchase Cost**

The Commission has computed the power purchase cost for the FY 2024-25 based on the following assumptions:

**Variable Charges:** The variable charges for the existing plants have been considered based on the 3 % escalation on the approved per unit variable cost of FY 2023-24 to estimate for FY 2024-25.

**Fixed Charges:** The fixed charges for the existing plants have been considered based on the 3 % escalation on the approved per unit cost of FY 2023-24 to estimate for FY 2024-25.

**Renewable energy & Co-generation:** The Commission has approved the same cost of APR to estimate the cost of Renewable energy for FY 2024-25.

The Commission has considered, based on the 3 % escalation on the approved per unit cost of FY 2023-24, to estimate for FY 2024-25.

**Transmission Charges:** The Commission has considered the transmission charges payable to PGCIL charges same as submitted by the Petitioner for FY 2024-25.

c) **Total power purchase quantum and cost**

The power purchase cost approved by the Commission for the FY 2024-25 has been shown in the following tables:

**Table 115 Power Purchase Quantum and Cost Approved by the Commission for FY 2024-25**

| Particulars | Power Purchase Quantum (MU) | Fixed Charges | Energy Charges | Total Charges |
|---|---|---|---|---|
| **NTPC** | **3990.34** | **438.09** | **834.17** | **1,272.25** |

| | | | | |
|---|---|---|---|---|
| KSTPS | 1,747.91 | 116.33 | 230.44 | 346.78 |
| KSTPS-3 | 55.82 | 5.60 | 7.24 | 12.84 |
| VSTPS-1 | 292.39 | 24.91 | 48.88 | 73.79 |
| VSTPS-2 | 119.47 | 8.68 | 19.23 | 27.91 |
| VSTPS-3 | 103.76 | 8.87 | 16.57 | 25.43 |
| VSTPS-4 | 123.04 | 19.18 | 19.39 | 38.57 |
| VSTPS-5 | 58.58 | 9.33 | 9.56 | 18.90 |
| MSTPS-1 (mouda) | 77.09 | 17.86 | 23.26 | 41.12 |
| MSTPS-2 | 100.48 | 23.85 | 30.53 | 54.39 |
| KGPP | 59.75 | 8.02 | 71.33 | 79.35 |
| GGPP | 61.13 | 9.75 | - | 9.75 |
| SIPAT-1 | 217.52 | 24.94 | 29.13 | 54.07 |
| SIPAT-2 | 97.77 | 9.40 | 13.49 | 22.90 |
| Solapur | 103.66 | 25.06 | 43.78 | 68.84 |
| Gadarwara | 107.15 | 33.28 | 30.02 | 63.30 |
| Lara | 98.26 | 17.86 | 14.27 | 32.13 |
| RSTPS | 481.61 | 51.50 | 196.93 | 248.43 |
| Khargone | 84.95 | 23.68 | 30.10 | 53.78 |
| **NPC** | - | | | - |
| **NPCIL** | **223.30** | **-** | **85.95** | **85.95** |
| KAPS (1&2) | 112.30 | - | 42.22 | 42.22 |
| KAPS (3&4) | 44.48 | - | 20.16 | 20.16 |
| TAPS | 66.52 | - | 23.57 | 23.57 |
| **Banking of Power** | **-** | - | - | - |
| Drawal | - | | | - |
| Injection | - | | | - |
| **OVER/ UNDER DRAWAL** | - | - | - | - |
| OVER DRAWAL | - | | | - |
| UNDER DRAWAL | - | | | - |
| **Short- Term Power** | | | | |
| IEX Purchase and Sales | | | | - |
| IEX Purchase | | | | - |
| IEX Sales | | | | - |
| Traders (Drawal) | | | | - |
| Traders (Injection) | | | | - |
| **Within State Generations** | | **-** | | |
| **CO- GENERATION** | **129.18** | | **31.53** | **31.53** |
| Vedanta Plant-1 | 57.98 | | 14.27 | 14.27 |
| Vedanta Plant-2 | 66.03 | | 15.98 | 15.98 |
| Goa Sponge and private limited | 5.18 | | 1.28 | 1.28 |
| **Renewable** | **1107.25** | **-** | **386.33** | **386.33** |
| **Solar** | **332.45** | | **166.61** | **166.61** |
| NVVNL Solar | 13.42 | | 7.38 | 7.38 |
| SECI Solar | 50.33 | | 29.74 | 29.74 |

| | | | | |
|---|---|---|---|---|
| Solar STOA | 218.70 | | 111.54 | 111.54 |
| PM Kusum | 50.00 | | 17.95 | 17.95 |
| **Non-Solar** | **774.80** | | **219.72** | **219.72** |
| Non-Solar - SECI Wind Tranche II LTOA | 139.46 | | 37.79 | 37.79 |
| Non-Solar - SECI Wind Tranche VI LTOA | 175.34 | | 50.67 | 50.67 |
| SECI 150 MW | 200 | - | - | - |
| Hindustan waste treatment plant Goa (As per Power Purchase bills) * | 10.00 | | 5.00 | 5.00 |
| Non-Solar STOA | 250.00 | | 126.25 | 126.25 |
| **OTHER CHARGES** | | | | |
| **PGCIL Charges** | | 305.48 | | **305.48** |
| **Total Power Purchase** | **5450.07** | **743.57** | **1337.98** | **2081.55** |

The Commission approves the quantum of power purchase as 5450.07 MUs at ex-bus with total cost of Rs. 2081.55 Cr in the ARR of FY 2024-25.

The Average Power Purchase Cost (APPC) for the FY 2024-25 has been determined as provided in the table below. The APPC has been computed at the Goa 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 116 APPC Approved by the Commission for FY 2024-25**

| Particulars | | Amount |
|---|---|---|
| Total Power Purchase Cost (INR Cr) | A | 2081.55 |
| Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr) | B | 472.09 |
| Net Power Purchase Cost (INR Cr) | C=A-B | 1609.45 |
| Quantum of Ex-bus Power Purchase (MU) | D | 5450.07 |
| Quantum of energy at UT Periphery excluding from renewable energy sources (MU) | E | 4342.82 |

| | | |
|---|---|---|
| **APPC (INR /kWh)** | **F=C/E*10** | **3.71** |

## 5.8. Renewable Purchase Obligation (RPOs)

**Petitioner's Submission:**

The RPO compliance projections for FY 2024-25 with and without considering the purchase of REC is given in the table below:

**Table 117 RPO & REC projections for FY 2024-25**

| Particulars | Projections FY 2024-25 | |
|---|---|---|
| | Without REC | With REC |
| Sales within State (MU) | 5,021.76 | 5,021.76 |
| RPO (in %) | 29.91% | 29.91% |
| Wind RPO | 2.46% | 2.46% |
| Other RPO | 26.37% | 26.37% |
| HPO | 1.08% | 1.08% |
| RPO for the year (in MU) | 1,502.01 | 1,502.01 |
| Wind RPO | 123.54 | 123.54 |
| Other RPO | 1,324.24 | 1,324.24 |
| HPO | 54.24 | 54.24 |
| Backlog RPO from previous year (in MU) | 54.83 | (74.82) |
| Wind RPO | - | - |
| Other RPO | 54.83 | (74.82) |
| HPO | - | - |
| Cumulative RPO Target for the year (in MU) | 1556.84 | 1427.18 |
| Wind RPO | 123.54 | 123.54 |
| Other RPO | 1379.07 | 1249.41 |
| HPO | 54.24 | 54.24 |
| RPO Compliance (MU) | 1,182.95 | 1,182.95 |
| Wind RPO | 375.34 | 375.34 |
| Other RPO | 807.61 | 807.61 |
| HPO | 0.00 | 0.00 |
| Cumulative RPO Shortfall (MU) | 373.89 | 244.23 |
| Wind RPO | (251.81) | (251.81) |
| Other RPO | 571.46 | 441.80 |
| HPO | 54.24 | 54.24 |

**Commission's Analysis:**

Regulation 3, Sub-regulation (1) of the JERC (Procurement of Renewable Energy) Regulations, 2010 mentioned that:

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

The Commission notified the JERC (Procurement of Renewable Energy), (Fifth Amendment) Regulations, 2024 on 06.06.2024 and revised the RPO targets, according to which for FY 2024-25 the Petitioner is obligated to purchase power from renewable sources at minimum percentage of 29.91 % of its total annual consumption.

As per 15 of the "Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Solar PV Grid Interactive System based on Net Metering) Regulations, 2019" mentioned that:

*"15 Renewable Purchase Obligation and Eligibility to Participate under REC Mechanism*

*15.1. The quantum of electricity consumed by the Eligible Consumer from the Solar Project under the Net Metering Arrangement shall qualify towards his compliance of Solar RPO, if such Consumer is an Obligated Entity.*

*15.2. The quantum of electricity consumed by the Eligible Consumer from the Solar Project owned and installed under the Net Metering arrangement shall, if such Consumer is not an Obligated Entity, qualify towards meeting the Solar RPO of the Distribution Licensee:*

*Provided that the Distribution Licensee shall, with the consent of the Eligible Consumer, make all the necessary arrangements, including for additional metering, as may be required for the accounting of the Solar energy generated and consumed by the Eligible Consumer.*

*15.3. The unadjusted surplus units of Solar energy purchased by the Distribution Licensee under the provisions of Regulation 11.3 shall also qualify towards meeting its Solar RPO."*

Further, as per regulation 3.11 of Joint Electricity Regulatory Commission for the State of Goa & Union Territories (Procurement of Renewable Energy) (Fifth Amendment), Regulations 2024 stated that:

*"The following shall be inserted after Regulation 3.10 of the Principal Regulations:*

*(3.11) The distributed renewable energy component (Distributed renewable energy RPO) shall be met only from the energy generated from renewable energy projects that are less than 10 MW in size and shall include solar installations under all configurations (net metering, gross metering, virtual net metering, group net metering, behind the meter installations and any other configuration) notified by the Central Government………"*

Therefore, the Commission has noted that the quantum of electricity consumed by the Eligible Consumer from the Solar Project under the Net Metering Arrangement shall qualify towards his compliance of Solar RPO. However, the Commission has considered 75.69 MUs of energy from the Net Metering Consumers in the RPO for self-consumption without injecting into the grid segregated in Distributed renewable energy RPO. In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time, the table below provides the Renewable Purchase Obligation for the FY 2024-25 as determined by the Commission based on the revised estimate of energy sales:

**Table 118 Renewable Purchase Obligation (RPO) (MUs) approved by the Commission for FY 2024-25**

| Sl No. | Description | FY 2024-25 |
|---|---|---|
| 1. | Sales within State (MU) (A) | 4860.87 |
| **2** | **RPO obligation (%)** | **29.91 %** |
| 3 | Wind RPO | 0.67% |
| 4 | Other RPO | 27.35% |
| 5 | HPO | 0.38% |
| 6 | Distributed renewable energy RPO | 1.50% |
| **7** | **RPO obligation for the year (MU)** | **1453.40** |
| 8 | Wind RPO | 32.57 |
| 9 | Other RPO | 1329.45 |
| 10 | HPO | 18.47 |
| 11 | Distributed renewable energy RPO | 72.91 |

In view of the above, the Commission directs the Petitioner to comply with the RPO targets as provided above in accordance with the JERC (Procurement of Renewable Energy) (Fifth Amendment) Regulations, 2024 for the next true-up.

## 5.9. Energy Storage Obligation (ESO):

### Petitioner's submission

The petitioner submitted that Energy Storage Obligation (ESO) has been introduced in the draft Regulations mentioned in the RPO section. EDG envisages a Battery Energy Storage System with wind generated energy source in FY 2024-25 for the fulfilment of the same. ESO compliance projection for FY 2024-25 has been given in table below:

**Table 119 ESO compliance projection for FY 2024-25**

| S/No | Particulars | FY 2024-25 |
|---|---|---|
| 1. | Sales within State (MU) (A) | 5021.76 |
| 2. | Hydro Power available at State Periphery (MU) (B) | 0 |
| 3. | Distribution Loss (%) (C) | 7.41% |
| 4. | Distribution Loss (MU) (D = B * C) | 0 |
| 5. | Hydro Power Consumed (E = B - D) | 0 |
| 6. | Conventional Power Consumed (F = A - E) | 5021.76 |
| 7. | ESO (%) | 1.50% |
| 8. | BESS (G) | 1.50% |
| 9. | ESO for the YEAR (MU) | 75.33 |
| 10. | BESS (F * G) | 75.33 |
| 11. | ESO Compliance (Physical Power + Certificates) (MU) | 200.00 |
| 12. | BESS | 200.00 |
| 13. | ESO Shortfall (+)/Excess (-) (MU) | (124.67) |
| 14. | BESS | (124.67) |
| 15. | ESO Compliance (MU) | 75.33 |
| 16. | BESS | 265.51% |

**Commission's Analysis**

The Commission has noted that the Petitioner has submitted that they have proposed to meet the ESO Obligation through Battery Energy Storage System (BESS). The Petitioner submitted that ESO will be fulfilled through SECI 150 MW Wind dominated Solar Hybrid Power with BESS. They have projected that 200 MUs of Power will be delivered in FY 2024-25 to meet the ESO obligation. However, in the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Procurement of Renewable Energy) (Fifth Amendment) Regulations, 2024 notified on dated 06.06.2024, no ESO obligation has been specified. Therefore, the Commission has not considered the Petitioner's Submission.

### 5.10. Operation & Maintenances Expenses

Regulation 61 of JERC MYT Regulations, 2021 provides the following:

"*61 Operation and Maintenance (O&M) expenses for Retail Supply Business*

*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;*

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

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

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

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

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

*GFAn-1 – Gross Fixed Asset of the 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 foreach 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 – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation 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."*

Accordingly, the various components of O&M expenses have been dealt with in subsequent sections.

### 5.9.1 Employee Expenses

**Petitioner's Submission**

EDG has estimated For FY 2023-24 (base year), employee expenses are arrived by escalating the average of FY 2021-22 by considering the average of FY 2020-21, FY 2021-22, FY 2022-23 by Consumer Price Index (CPI). As per Regulations, average CPI of three preceding years is to be considered. Hence, EDG has considered average of CPI for FY 2020-21 to FY 2022-23. Working of the same is provided as under: -

**Table 120 Employee expenses submitted by the petitioner for FY 24-25 (Rs Cr)**

| Particulars | Projections |
|---|---|
| | FY 2024-25 |
| Employee Cost for (n-1)th year (A) | 422.49 |
| Gn Factor (Y-O-Y) (B) | 4.19% |
| CPI Inflation (C) | 5.40% |
| Employee Cost for nth year D= A*(1+B)*(1+C) | 463.96 |

**Commission's analysis**

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for the FY 2023-24. 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."*

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the employee expenses trajectory on provisional basis. The Commission in the ARR order for FY 2023-24, derived the base value (i.e. for FY 2021-22) on the basis of true-up value of past period. Therefore, the Commission revised the employee expenses for FY 2024-25 based on the base value, manpower plan and CPI of respective year. In the present order, the Commission has finalised the APR expenses of FY 2023-24 and finds its prudent to consider the same as base year employee expenses for FY 2024-25.

The employee expenses of the Base Year have been escalated by Growth Rate as per manpower submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2024-25. The CPI inflation has been computed as follows:

**Table 121 CPI Inflation Index**

| FY | Average of (April – March) | Increase in CPI Index | Average increase In CPI indices over 3 year |
|---|---|---|---|
| FY 2019-20 | 322.50 | | 5.40 % |
| FY 2020-21 | 338.70 | 5.02 % | |
| FY 2021-22 | 356.10 | 5.13 % | |
| FY 2022-23 | 377.60 | 6.05 % | |

**Table 122 Computation of Employee Expenses for FY 2024-25 (Rs Cr)**

| Particulars | Approved |
|---|---|
| | FY 2024-25 |
| Base year expenses | 377.76 |
| Gn (Growth factor) | 4.19% |
| CPI (Actuals for FY 2024-25) (in %) | 5.40% |
| **Total Employee Expenses** | **414.84** |

* Based on Petitioner submission, Manpower for FY 23-24 is 6089 Manpower for FY 24-25 is projected as 6344

**Table 123 Approved Employee Expenses for FY 2024-25 (Rs Cr)**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Employee Expenses | 365.69 | 463.96 | 414.84 |

The Commission has approved Rs. 414.84 Cr. as employee expenses for ARR of the FY 2024-25.

### 5.9.2 Repair and Maintenance Expenses

### Petitioner's Submission

The petitioner submitted that in line with MYT Regulations, 2021, R&M expenses for FY 2024-25 is calculated by considering FY 2023-24 as base year. It is submitted that the last available provisional annual accounts are of FY 2022-23. Accordingly, EDG has considered the provisional actual values of FY 2022-23 to compute the base year values for FY 2023-24.

**Table 124 R&M Expenses submitted by the petitioner (Rs Cr)**

| Particulars | Projections |
|---|---|
| | FY 2024-25 |
| GFA for nth-1 year (A) | 1,784.89 |

| Particulars | Projections |
|---|---|
| | FY 2024-25 |
| K factor (B) | 2.22% |
| WPI Inflation (C) | 7.90% |
| R&M Cost for nth year D= A*B*(1+C) | 42.73 |
| Considered for ARR | 62.27 |

### Commission's Analysis

The Commission has considered the K factor as 2.39% as approved in the MYT order dated 31st March 2022. The R&M expenses approved in FY 2023-24 has been escalated by 3 years' average WPI Inflation to arrive upon the R&M Expenses for FY 2024-25. The WPI Inflation has been computed as follows:

**Table 125 WPI Index**

| FY | Average of (Apr-Mar) | Yearly increase |
|---|---|---|
| 2020-21 | 123.40 | 7.89% |
| 2021-22 | 139.40 | |
| 2022-23 | 152.50 | |

The R&M expenses approved by the Commission for FY 2024-25 have been provided in the following table:

**Table 126 Computation for R&M Expenses for FY 2024-25 (Rs Cr)**

| Particulars | FY 2024-25 |
|---|---|
| Opening GFA ($GFA_{n-1}$) | 1511.12 |
| K factor approved (K) (%) | 2.39% |
| WPI Inflation (Actuals for FY 2023-24) (%) | 7.89% |
| **R&M Expenses = K x (GFA $_{n-1}$) x (1+$WPI_{inflation}$)** | **38.97** |

**Table 127 R&M Expenses approved by the commission for FY 2024-25 (Rs Cr)**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|---|
| 1 | Repair & Maintenance Expenses (R&M) | 104.23 | 62.27 | 38.97 |

The Commission estimates the Repair & Maintenance (R&M) expenses of Rs. 38.97 Cr in the ARR of FY 2024-25.

### 5.9.3 Administrative and General Expenses

### Petitioner's Submission

A&G expenses for FY 2024-25 is projected based on the methodology specified in the Regulations. For FY 2023-24 (base year), A&G expenses are arrived by escalating the average (FY 2020-21 to FY 2022-23) by CPI.

**Table 128 A&G Expenses submitted by the petitioner for FY 2024-25 (Rs Cr)**

| Particulars | Projections |
|---|---|
| | FY 2024-25 |
| A&G Cost for nth-1 year (A) | 42.30 |
| CPI Inflation (B) | 5.40% |
| **A&G Cost for nth year [D= A*(1+B)]** | **44.58** |

## Commission's Analysis

As explained under employee expenses, the Commission has considered the base value as normative expense for FY 2023-24, as derived under APR. Therefore, the Commission finds it prudent to revise the A&G expenses for FY 2024-25 by considering FY 2023-24 normative expenses with escalation by the average CPI Inflation of the last three years. The A&G expenses approved by the Commission for FY 2024-25 (under ARR) have been provided in the following table:

**Table 129 Computation of A&G expenses (Rs Cr)**

| S. No | Particulars | Approved |
|---|---|---|
| | | FY 2024-25 |
| 1 | Base A&G expenses | 34.28 |
| 2 | CPI (in %) | 5.40% |
| 3 | A&G Expenses | 36.14 |

**Table 130 A&G Expenses approved by Commission (Rs Cr) for FY 2024-25**

| S. No | Particulars | Approved in Tariff Order | Petitioner's Submission | Trued Up by Commission |
|---|---|---|---|---|
| 1 | A&G Expenses | 38.27 | 44.58 | 36.14 |

The Commission estimates the Administrative & General (A&G) expenses of Rs. 36.14 Cr in the ARR of FY 2024-25.

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

The following table provides the O&M expenses approved in the MYT order of FY 2024-25, Petitioner's Submission and now approved by the Commission.

**Table 131 Total O&M Expenses approved by the Commission for FY 2024-25 (Rs Cr)**

| Particulars | Approved in Tariff Order | Petitioner's Submission (actual) | Approved by the Commission |
|---|---|---|---|
| A&G Costs | 38.27 | 44.58 | 36.14 |
| R&M Expenses | 104.23 | 62.27 | 38.97 |
| Employee Cost | 365.69 | 463.96 | 414.84 |
| **Total O&M Expenses** | **508.19** | **570.81** | **489.94** |

The Commission approves the Operation & Maintenance (O&M) Expenses of Rs. 489.94 Cr in the ARR of FY 2024-25.

## 5.11. Gross Fixed Assets (GFA) and Capitalization

**Petitioner's Submission**

The Petitioner has proposed Capitalization of Rs 1848.65 Cr for the FY 2024-25.

**Commission's Analysis**

The Commission has noted that the Petitioner has claimed for capitalization of 74 new schemes with associated capital cost of Rs. 374.52 Cr. Apart from this, the Petitioner has also claimed higher capitalized amount to the tune of Rs. 1442.40 Cr. for the schemes already approved in MYT order dated 31st March, 2022. The Commission sought the details for additional capital expenditure in the deficiency note against which the Petitioner responded that apart from the schemes approved by the Commission, the petitioner has undertaken some new schemes. However, the Petitioner has not replied with respect to the overcapitalization against the approved schemes. The Commission is of the firm opinion that such excess expenditure is nothing but on account of cost overrun and/or time-over-run and the same needs to be filed in a separate petition before the Commission for approval of additional costs incurred on account of cost overrun and/or time-over-run giving proper justification for time-over-run/cost-over-run. Further, the Commission does not find prudent to consider aforesaid 74 new schemes at this juncture without Commission's prior approval. The Petitioner is directed to take prior approval of such capitalization along with associated capex. In view of the above, the Capital Structure approved by the Commission for FY 2024-25 is shown in the following tables:

In accordance with the submission of the Petitioner, the Capitalisation approved by the Commission for FY 2024-25 is shown in the following tables:

**Table 132 Capitalization (with grant) now approved by the Commission (Rs Cr)**

| Particulars | Approved in MYT Order | Petitioner's Submission | Now Approved by Commission |
|---|---|---|---|
| Capitalization | 406.25 | 1848.65 | 406.25 |

The Commission approves Capitalization of Rs. 406.25 Cr for the FY 2024-25.

## 5.12. Capital Structure

**Petitioner's Submission**

The estimates of capitalization have been shown in tables below:

**Table 133 GFA and capital structure for FY 2024-25 as submitted by the Petitioner (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|---|
| 1 | Additions to GFA | 406.25 | 1,848.65 |
| 2 | Less: 60% and 75% Grant Component of APDRP Part-B / IPDS scheme | 225.25 | - |
| 3 | Less: Revamped Scheme (15% Grant Prepaid Meter; 100% for DBM, billing modules etc.; 60% for SCADA) | | 152.90 |
| 4 | Less: Schemes out of ED Fund | 12.70 | 1,080.01 |
| 5 | Net Additions to GFA | 168.30 | 615.74 |
| 6 | Debt (%) | 70% | 70% |
| 7 | Equity (%) | 30% | 30% |
| 8 | Normative Debt addition (INR Cr) | 117.81 | 431.02 |
| 9 | Equity addition (INR Cr) | 50.49 | 184.72 |

**Commission's analysis:**

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

*"27. Debt to Equity Ratio*

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

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

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

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

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

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

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

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

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

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

Accordingly, the capital structure for capitalization of Rs. 406.25 Cr. as approved in MYT order dated 31st March, 2022 and approved for FY 2024-25 is given in the following table:

**Table 134 Capital Structure approved by Commission (Rs Cr)**

| Particulars | Approved by Commission |
|---|---|
| Capitalisation during the year | 406.25 |
| Less: Grant | 237.95 |
| Capitalisation during the year (net of grant) | 168.30 |
| Normative loan addition During the FY @70% of GFA addition during year | 117.81 |
| Equity addition on account of new Capitalisation @30% of GFA addition during the year | 50.49 |

## 5.13. Depreciation

**Petitioner's Submission**

The Petitioner estimated depreciation for FY 2024-25 as Rs 101.95 Cr. as given below:

**Table 135 Depreciation submitted by the Petitioner for FY 2024-25 (Rs Cr)**

| Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|
| Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 1,743.67 | 2041.25 |
| Add: Gross Asset Addition | 168.30 | 1848.65 |
| Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution | - | 1232.91 |
| Value of Asset eligible for depreciation | - | 615.74 |
| Add: Addition During the Year | - | 615.74 |
| Less: Decapitalisation | - | - |
| Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 1,911.97 | 2,656.99 |
| Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.) | 1,827.82 | 2,349.12 |
| Depreciation | 69.84 | 101.95 |
| Weighted Average Rate of Depreciation | 3.82% | 4.34% |

**Commission's analysis**

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

*"31. Depreciation*

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

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

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

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

*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, 2019, shall be worked out by deducting the cumulative depreciation as* *admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.*

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

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

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

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

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

*AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated 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 opening GFA of the FY 2024-25 is considered as discussed in previous section 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 the year has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved during the year.

Accordingly, the Commission shall consider the same during the True-up of the respective years. The approved depreciation for ARR of FY 2024-25 is given below.

**Table 136 Depreciation approved by the Commission for FY 2024-25 (Rs Cr)**

| Particulars | Approved in MYT Order | Petitioner's Submission | Now Approved by Commission |
|---|---|---|---|
| Opening Gross Fixed Assets | 1743.67 | 2041.25 | 1511.12 |
| Addition During the FY | 168.30 | 615.74 | 168.30 |
| Closing Gross Fixed Assets | 1911.97 | 2656.99 | 1679.42 |
| Average Gross Fixed Assets | 1827.82 | 2349.12 | 1595.27 |
| Weighted Average Depreciation rate (%) | 3.82% | 4.34% | 4.34% |
| **Depreciation** | **69.82** | **101.95** | **69.23** |

The Commission now approves depreciation of Rs. 69.23 Cr in the ARR of the FY 2024-25.

## 5.14. Interest on Loan

### Petitioner's Submission

EDG has considered the closing normative loan base for FY 2023-24 as opening normative loan base for FY 2024-25 and the normative debt addition due to asset addition for the year as discussed in the above section. Further, the normative repayment has been considered equal to the depreciation projected for FY 2024-25.

In line with above methodology, following is calculation of the normative interest on loan:

**Table 137 Interest on Loan submitted by the Petitioner for FY 2024-25 (Rs Cr)**

| Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|
| Opening Normative Loan | 446.27 | 682.45 |
| Add: Normative Loan during the year/GFA during the year | 117.81 | 431.02 |
| Less: Normative Repayment for the year | 69.84 | 101.95 |
| Closing Normative Loan | 494.24 | 1011.51 |
| Average Normative Loan | 470.25 | 846.98 |
| Rate of Interest | 8.00% | 9.50% |
| **Interest on Normative Loan** | **37.26** | **80.46** |

### Commission's Analysis

Regulation 29 of the JERC MYT Regulations, 2021 stipulates the following:

*"29. Interest on Loan*

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

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

*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 capitalization approved by the Commission for the Year.*

*29.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India*

*(SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.*

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

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

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

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

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

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

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

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

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 2024, plus 100 basis points (8.50%+1.00%) as Rate of Interest, in accordance with the JERC MYT Regulations, 2021. The Interest on Loan has been calculated on the basis of average loan during the year. The detailed approved interest on loan is given below.

**Table 138 Interest on Loan approved by the Commission for FY 2024-25 (Rs Cr)**

| Particulars | Approved in MYT Order dated 31st March 2022 | Submitted by the petitioner | Approved by the Commission |
|---|---|---|---|
| Opening Normative Loan | 446.27 | 682.45 | 266.66 |
| Add: Normative Loan during the Year | 117.81 | 431.02 | 117.81 |
| Less: Normative Repayment | 69.84 | 101.95 | 69.23 |
| Closing Normative Loan | 494.24 | 1011.51 | 315.23 |
| Average Normative Loan | 470.25 | 846.98 | 290.94 |
| Rate of Interest (@SBI 1 Year MCLR rate+100 Basis Points) | 8.00% | 9.50% | 9.50% |
| **Interest on Normative Loan** | **37.62** | **80.46** | **27.64** |

The Commission approves Interest and Finance Charges of Rs. 27.64 Cr in the ARR of the FY 2024-25.

## 5.15. Return on Equity (ROE)

### Petitioner's Submission

The petitioner has estimated ROE as Rs. 106.51 Cr for FY 2024-25.

**Table 139 RoE submitted by the Petitioner (Rs Cr)**

| Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|
| Opening Balance of Equity | 523.70 | 592.62 |
| Net Additions during the Year | 50.49 | 184.72 |
| Closing Balance of Equity | 574.18 | 777.34 |
| Average Equity | 548.94 | 684.98 |
| Average Equity (Wires Business) | 494.05 | 616.48 |
| Average Equity (Retail Supply Business) | 54.89 | 68.50 |
| Rate of Return on Equity for Wire Business (%) | 15.50% | 15.50% |
| RoE Wire Business | 76.58 | 95.56 |
| Rate of Return on Equity for Retail Supply Business (%) | 16.00% | 16.00% |
| RoE on Retail Supply business | 8.78 | 10.96 |
| **Total RoE (Wire and Retail Supply business)** | **85.36** | **106.51** |

**Commission's Analysis**

The Regulations 28.2 and 28.3 of the JERC MYT Regulations, 2021 stipulate the following:

*"28.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 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."*

The Commission has approved the addition in GFA during the year and corresponding equity for FY 2024-25, by considering 30% of the GFA as equity. The opening equity for FY 2024-25 is considered as approved value of closing equity for FY 2023-24. Further, 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 details of approved RoE for FY 2024-25 are given below.

**Table 140 ROE Approved by the Commission for FY 2024-25 (Rs Cr)**

| Particulars | ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Opening Equity | 523.70 | 592.62 | 446.77 |
| Additions on account of new capitalisation | 50.49 | 184.72 | 50.49 |
| Closing Equity | 574.18 | 777.34 | 497.26 |
| Average Equity | 548.94 | 684.98 | 472.02 |
| Average Equity (Wires Business) | 494.05 | 616.48 | 424.82 |
| Average Equity (Retail Supply Business) Business) | 54.89 | 68.50 | 47.20 |

| | | | |
|---|---|---|---|
| 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 | 76.58 | 95.56 | 65.85 |
| Return on Equity for Retail Supply Business | 8.78 | 10.96 | 7.55 |
| **Return on Equity** | **85.36** | **106.51** | **73.40** |

The Commission approves the Return on Equity of Rs. 73.40 Cr in the ARR of the FY 2024-25.

### 5.16. Interest On Security Deposit

#### Petitioner's Submission

The Petitioner submitted that the prevailing Bank rate is considered as notified by Reserve Bank of India with effect from 1st April of the relevant financial year for estimating the normative interest on Security Deposits as Rs.16.51 Cr. for FY 2024-25.

**Table 141 Interest on Consumer Security Deposit submitted by the Petitioner for FY 2024-25 (Rs Cr)**

| Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|
| Opening Security Deposit | 108.09 | 225.73 |
| Additions during the year | 16.69 | 37.71 |
| Less: Deposits Refunded | 0.39 | - |
| Closing Security Deposit | 124.40 | 263.44 |
| Average Security Deposit | 116.24 | 244.58 |
| Rate of Interest (%) | 4.25% | 6.75% |
| **Interest on Security Deposit to be paid for the Year** | **4.94** | **16.51** |

#### Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the JERC MYT Regulations, 2021 based on the average of opening and closing consumer security deposits during the year. Regulation 29.11 of the JERC MYT Regulations, 2021 stipulates the following:

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

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

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, based on the average of the opening and closing consumer security deposits during the year. The opening security deposit is considered as per closing security deposit approved for FY 2023-24 under APR in this order. The addition during the year has been considered as escalation of 10% on the approved value for FY 2023-24. The same shall be trued up by the Commission for the respective years. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The following table provides the calculation of interest on consumer security deposits approved for the FY 2024-25:

**Table 142 Interest on Consumer Security Deposit approved by the commission for FY 2024-25 (Rs Cr)**

| Particulars | Approved in MYT Order dated 31st March 2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Opening Security Deposit | 108.99 | 225.73 | 204.31 |
| Add: Deposits during the Year | 16.69 | 37.71 | 16.13 |
| Less: Deposits refunded | 0.39 | 0.00 | 0.00 |
| Closing Security Deposit | 124.40 | 263.44 | 220.44 |
| Average Security Deposit | 116.24 | 244.58 | 212.38 |
| Bank Rate | 4.25% | 6.75 | 6.75% |
| Interest on Security Deposit | **4.94** | **16.51** | **14.34** |

The Commission approves Interest on Security Deposit as Rs. 14.34 Cr in the ARR of the FY 2024-25.

### 5.17. Interest On Working Capital

**Petitioner's Submission**

The Interest Rate is considered by the Petitioner equivalent to the SBI Base MCLR available as on 1st April 2023, which is at 8.50%, plus 200 basis points, which works out to be 10.50%.

In line with the aforesaid Regulation, the detailed computation of Interest on Working Capital for FY 2023-24, as submitted by the Petitioner, is provided in the table below:

**Table 143 Interest on Working Capital for FY 2023-24 for Wire Business (Rs. Cr.), submitted by the Petitioner**

| For Wheeling Business | | |
|---|---|---|
| **S/No** | **Particulars** | **Projections FY 2024-25** |
| A. | O&M Expenses for Wire Business | |
| i) | *R&M Expenses* | 56.05 |
| ii) | *A&G Expenses* | 22.29 |
| iii) | *Employee Cost* | 185.58 |
| | Total O&M Expenses | 263.92 |
| | O&M Expenses for wire business for 1 month | 21.99 |
| | | |
| B. | Maintenance Spares (@ 40% of R&M Expenses) | 1.87 |
| C. | Receivables equivalent to two (2) month of the expected revenue from charges for use of Distribution Wires at the prevailing tariffs. | 62.51 |
| D. | Less: Amount, if any, held as security deposits from Distribution System Users | 24.46 |
| E. | Total Working Capital (A (v)+B+C-D) | 61.91 |
| | | |
| F. | Rate of Interest | 10.50% |
| | | |
| G. | Interest on Working Capital (Wheeling Business) | 6.50 |

**Table 144 Working Capital Interest for Retail Supply Business for FY 2024-25 (Rs. Cr.)**

| For Retail Supply Business | | |
|---|---|---|
| **S/No** | **Particulars** | **Projections FY 2024-25** |
| A. | O&M Expenses for Retail Supply Business | |
| i) | *R&M Expenses* | 6.23 |
| ii) | *A&G Expenses* | 22.29 |
| iii) | *Employee Cost* | 278.38 |
| | Total O&M Expenses | 306.89 |
| | O&M Expenses for wire business for 1 month | 25.57 |
| | | |
| B. | Maintenance Spares (@40% of R&M Expenses for Retail Supply Business) | 0.21 |
| C. | Receivables equivalent to 2 months of average of total revenue from sale of energy, approved by Commission in the ARR | 407.28 |
| D. | Less: Consumer Security Deposit | |
| E. | Less: One month of power procurement cost | 220.13 |
| | | 185.33 |
| F. | Total Working Capital (A (v)+B+C-D-E) | 27.42 |
| | | |
| G. | Rate of Interest | 10.50% |
| | | |
| **H.** | **Interest on Working Capital (Retail Supply Business)** | **2.88** |

## Commission’s Analysis

The Commission observes that the Regulation 53 of the JERC MYT Regulations, 2021 stipulates the following regarding interest on working capital:

*"53. Norms of Working Capital for Distribution Wires Business*

*53.1 The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Distribution Wires Business for the Financial Year, computed as follows:*

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

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

*(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution wires at the prevailing tariff;*

***Less:***

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

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

Further, Regulation 64 of the JERC MYT Regulation, 2021 stipulates 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 re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up."*

Further, Regulation 32.3 of the JERC MYT Regulation, 2021 stipulates the following:

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

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

The Commission has computed the Interest on Working Capital for FY 2024-25 of the Control Period in accordance with the JERC MYT Regulations, 2021. The components of working capital is derived based on the approved values given in ARR of FY 2024-25 by the Commission. The interest rate has been considered as 10.50 % (1year MCLR as on 1st April 2024 i.e., 8.50% + 200 basis points). The following table provides the Interest on working Capital considered for the FY 2024-25.

**Table 145 Interest on Working Capital approved by Commission (Rs Cr) for FY 2024-25**

| Particulars | Approved in MYT Order dated 31st March 2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Two Months Receivable | 449.88 | | 418.35 |
| O&M Expense - 1 month | 42.35 | | 40.83 |
| Maintenance Spare @ 40% of R&M Exp - one month | 3.47 | | 1.30 |
| Less: Amount held as Security Deposit | 116.24 | | 212.38 |
| Less: Power Purchase for one month | 166.71 | | 173.46 |
| Total | 212.75 | | 74.64 |
| Interest Rate | 9.00% | | 10.50% |
| Interest on Working Capital | **19.15** | **9.38** | **7.84** |

Accordingly, the Commission approves Rs. 7.84 Cr. Interest on Working Capital in the ARR of FY 2024-25.

### 5.18. Income Tax

**Petitioner's Submission**

The Petitioner has not made any submission in this regard.

**Commission's analysis:**

Regulation 33 of MYT Regulations, 2021 stipulates the following:

*"33. Tax on Income*

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

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

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

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

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

Since the Petitioner has paid no Income tax in the previous years, no income tax liability is computed for the FY 2024-25 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

## 5.19. Provision for Bad & Doubtful Debts

**Petitioner's Submission**

The Petitioner has not proposed any provision for bad and doubtful debts during the FY 2024-25.

**Commission's analysis**

Regulation 63 of the MYT Regulations, 2021 stipulates the following:

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

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

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

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

The Commission also has not considered any Provision for Bad & Doubtful Debts for the FY 2024-25. The same shall be accounted for as per actuals during the True-up of respective years.

### 5.20. Non-Tariff Income

EDG has submitted that for FY 2024-25, the Non-Tariff income has been projected based upon the actual and estimated values of FY 2023-24. As EDG pays the bills upfront or promptly to avail the rebates, the anticipated rebate from the generators has been considered as per the actual based on FY 2023-24 H1 figures and the miscellaneous receipts considered proportionately with the estimated figures of FY 2023-24.

**Table 146 Non-Tariff Income Submitted by the Petitioner (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|---|
| 1. | Anticipated Rebates from Generators | - | 28.36 |
| 2. | Miscellaneous Receipts | - | 23.70 |
| | **Total** | **26.32** | **52.06** |

**Commission's analysis:**

Regulation 65 of JERC MYT Regulation, 2021 states the following:

*"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 in excess of 10% of the salvage value;*

*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 projected by the Petitioner. The same shall be Trued-up on actual basis. Further, the Commission has computed the rebate on power purchase @1% and the same has been considered as part of NTI. Therefore, the NTI approved for the FY 2024-25 has been shown in the following table:

**Table 147 Non-Tariff Income Approved by the Commission for FY 2024-25 (Rs Cr)**

| Particulars | Approved in Tariff Order | Petitioner's Submission | Approved by Commission |
|---|---|---|---|
| Misc/Other Receipts | | 23.70 | 23.70 |
| Normative Rebate | | 28.36 | 20.82 |
| **Non-Tariff Income** | **26.32** | **52.06** | **44.52** |

The Commission approves Non-Tariff Income of Rs. 44.52 Cr in the ARR of the FY 2024-25. The same shall be considered at actuals at the time of True-up.

## 5.21. Aggregate Revenue Requirement (ARR)

### Petitioner's Submission

Based on the expenses as submitted above, the Petitioner submitted the net aggregate revenue requirement as Rs. 3057.54 Cr as shown in the following table:

**Table 148 ARR submitted by the Petitioner (Rs Cr)**

| S/No | Particulars | Approved in T.O dated 31st March, 2022 | Projections FY 2024-25 |
|---|---|---|---|
| A | Expenditure | | |
| 1. | Cost of Power Purchase from own Generating Stations | - | - |
| 2. | Cost of Power Purchase from other Generating Stations | 2,000.48 | 2,223.96 |
| 6. | O&M Expenses (Gross) | 508.20 | 570.81 |
| | *a) R&M Expenses* | *104.23* | *62.27* |
| | *b) Employee Cost* | *365.69* | *463.96* |
| | *c) A&G Expenses* | *38.27* | *44.58* |
| 7. | Depreciation | 69.84 | 101.95 |
| 8. | Interest and Finance Charges | 37.62 | 80.46 |
| 9. | Interest on Working Capital | 19.15 | 9.38 |
| 10. | Prior Period Expenses | - | - |
| 11. | Interest on Consumer Security Deposit | 4.94 | 16.51 |
| | Sub Total Expenditure (1 to 15-16) | 2,640.23 | 3,003.08 |
| | | | |
| B | Return on Equity | 85.36 | 106.51 |
| C | Less: Non-Tariff and other Income | 26.32 | 52.06 |
| D | Less: Any Grant/ Subventions, other subsidy provided by the Government | - | - |
| **E** | **Annual Revenue Requirement (A+B-C-D)** | **2,699.27** | **3,057.54** |

### Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the APR of FY 2024-25 as given in the following table:

**Table 149 Approved ARR od FY 2024-25 (Rs Cr)**

| Particulars | ARR approved for FY 2024-25 in Tariff Order dt. 31.03.2022 | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| Power Purchase Cost | 2000.48 | 2223.98 | 2081.55 |
| Operation & Maintenance Expenses | 508.20 | 570.81 | 489.94 |
| Depreciation | 69.84 | 101.95 | 69.23 |
| Interest and Finance charges | 37.62 | 80.46 | 27.64 |
| Interest on Working Capital | 19.15 | 9.38 | 7.84 |

| | | | |
|---|---|---|---|
| Return on Equity | 85.36 | 106.51 | 73.40 |
| Interest on Security Deposit | 4.94 | 16.51 | 14.34 |
| Provision for Bad Debt | | | 0.00 |
| **Total Revenue Requirement** | **2725.59** | **3109.60** | **2763.93** |
| Less: Non-Tariff Income | 26.32 | 52.06 | 44.52 |
| **Net Revenue Requirement** | **2699.27** | **3057.54** | **2719.41** |

The Commission approves net Aggregate Revenue Requirement of Rs. 2719.41 Cr in the ARR of FY 2024-25.

### 5.22. Revenue at existing Retail Tariff

#### Petitioner's Submission

The petitioner has submitted the revenue with existing tariff. The following Table provides the category wise revenue for FY 2024-25:

**Table 150 Revenue from Sale of Power at existing tariff for FY 2024-25 submitted by the Petitioner**

| **Category** | **Revenue for FY 2024-25 from existing retail tariff (Rs Cr)** | | | | |
|---|---|---|---|---|---|
| | **Full year revenue (Rs. Cr.)** | | | | **Average Billing Rate (Rs. /kWh)** |
| | **Sales in MU** | **Revenue from Fixed Charges** | **Revenue from Energy Charges** | **Total** | |
| Domestic | 1,455.58 | 47.86 | 426.24 | 474.09 | 3.26 |
| LT-D Domestic | 1454.18 | 47.79 | 426.06 | 473.85 | 3.26 |
| *0-100 units* | *551.62* | *15.43* | *96.53* | *111.97* | *2.03* |
| *101-200 units* | *352.29* | *11.77* | *91.59* | *103.36* | *2.93* |
| *201-300 units* | *194.77* | *8.33* | *64.27* | *72.60* | *3.73* |
| *301-400 units* | *109.32* | *4.53* | *48.10* | *52.63* | *4.81* |
| *Above 400 units* | *246.19* | *7.73* | *125.56* | *133.28* | *5.41* |
| Low Income Group | 0.99 | 0.00 | 0.00 | 0.00 | 0.02 |
| HT-D Domestic | 0.41 | 0.07 | 0.18 | 0.24 | 5.92 |
| Commercial | 786.25 | 70.70 | 375.48 | 446.18 | 5.86 |
| LT-C Commercial | 570.49 | 29.80 | 267.15 | 296.95 | 5.44 |
| *0-100 units* | *91.46* | *8.50* | *31.49* | *39.99* | *4.57* |
| *101-200 units* | *58.16* | *2.85* | *24.47* | *27.33* | *4.91* |
| *201-400 units* | *74.91* | *3.46* | *35.82* | *39.28* | *5.48* |
| *Above 400 units* | *345.97* | *14.98* | *175.36* | *190.35* | *5.75* |
| HT-C Commercial | 215.76 | 40.90 | 108.33 | 149.23 | 6.92 |
| Industrial | 2,593.50 | 246.13 | 1180.97 | 1427.10 | 5.50 |

| Category | Revenue for FY 2024-25 from existing retail tariff (Rs Cr) | | | | |
|---|---|---|---|---|---|
| | Full year revenue (Rs. Cr.) | | | | Average Billing Rate (Rs. /kWh) |
| | **Sales in MU** | **Revenue from Fixed Charges** | **Revenue from Energy Charges** | **Total** | |
| LT-I Industrial | 94.18 | 9.79 | 39.76 | 49.55 | 5.15 |
| *0-500 units* | *17.04* | *4.40* | *6.27* | *10.66* | *6.13* |
| *Above 500 units* | *77.14* | *5.39* | *33.50* | *38.89* | *4.93* |
| Low Tension-Mixed/LT-P (Hotel Industries) | 3.39 | 0.18 | 1.82 | 2.00 | 6.17 |
| High Tension-I/HT-I | 1,908.48 | 197.98 | 833.82 | 1031.80 | 5.41 |
| *Connected at 11/33 kV* | *1,574.96* | *173.17* | *669.37* | *842.54* | *5.35* |
| *Connected at 110 kV* | *333.52* | *24.81* | *164.45* | *189.27* | *5.67* |
| High Tension-Ferro/SM/PI/SR | 587.45 | 38.18 | 305.56 | 343.74 | 5.85 |
| Agriculture | 43.64 | 2.20 | 7.46 | 9.66 | 2.21 |
| Low Tension-AG/LT-AGP (Pump Sets/Irrigation) | 19.37 | 1.11 | 2.91 | 4.01 | 2.07 |
| Low Tension-AG/LT-AGA (Allied Activities) | 1.57 | 0.08 | 0.28 | 0.36 | 2.26 |
| High Tension-AG/HT-AGP (Pump Sets/Irrigation) | 6.26 | 0.75 | 1.01 | 1.76 | 2.82 |
| High Tension-AG/HT-AG (Allied Activities) | 16.44 | 0.27 | 3.27 | 3.53 | 2.15 |
| Military Engineering Services/ Defence Establishments | 36.45 | 2.59 | 8.97 | 11.57 | 3.17 |
| Public Lighting | 55.14 | 1.41 | 31.15 | 32.57 | 5.91 |
| Hoardings/Signboards | 0.16 | 0.06 | 0.16 | 0.22 | 13.39 |
| Temporary | 36.98 | 3.35 | 20.13 | 23.47 | 6.35 |
| LT | 31.36 | 1.80 | 15.90 | 17.70 | 5.64 |
| *LT Domestic* | *3.74* | *0.17* | *0.98* | *1.15* | *3.08* |
| *LT Commercial* | *27.62* | *1.63* | *14.91* | *16.54* | *5.99* |
| HT | 5.62 | 1.55 | 4.23 | 5.78 | 10.28 |
| Single Point Supply | 7.00 | 0.75 | 3.47 | 4.22 | 6.02 |
| *Residential* | 0.00 | *0.00* | *0.00* | *0.00* | *0.00* |

| Category | Revenue for FY 2024-25 from existing retail tariff (Rs Cr) | | | | |
|---|---|---|---|---|---|
| | Full year revenue (Rs. Cr.) | | | | Average Billing Rate (Rs. /kWh) |
| | Sales in MU | Revenue from Fixed Charges | Revenue from Energy Charges | Total | |
| *Complexes* | | | | | |
| *Commercial Complexes* | *7.00* | *0.75* | *3.47* | *4.22* | *6.02* |
| *Industrial Complexes* | 0.00 | *0.00* | *0.00* | *0.00* | *0.00* |
| Other Categories | 7.04 | 0.00 | 13.51 | 13.51 | 4.50 |
| *EV Charging Stations* | *7.04* | *0.00* | *13.51* | *13.51* | *4.50* |
| **TOTAL** | **5,021.76** | **375.05** | **2,067.54** | **2,442.60** | **4.86** |

## 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 i.e tariff applicable for FY 2024-25. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab-wise. The total revenue from existing tariff as computed by the Commission for the FY 2024-25 has been shown in the following table:

**Table 151 Revenue from Sale of Power at existing tariff for FY 2024-25 approved by the Commission**

| DOMESTIC | Sales (MUs) | Revenue from Energy Charges (Rs Cr.) | Revenue from Fixed charges (Rs Cr.) | Total (Rs. Cr.) | ABR (Rs./unit) |
|---|---|---|---|---|---|
| Tariff LTD/Domestic and Non-Commercial | 1479.76 | 433.55 | 47.71 | 481.26 | 3.25 |
| 0-100 units | 561.32 | | | | |
| 101-200 units | 358.48 | | | | |
| 201 to 300 units | 198.19 | | | | |
| 301 to 400 units | 111.25 | | | | |
| Above 400 units | 250.52 | | | | |
| Tariff LTD/Low Income Group | 0.94 | 0.00 | 0.00 | 0.00 | 0.03 |
| COMMERCIAL | 702.57 | | 76.37 | 427.42 | 6.08 |

| | | | | | |
|---|---|---|---|---|---|
| Tariff-LTC/Commercial | 503.47 | 246.51 | 32.75 | 279.26 | 5.55 |
| 0-20 KW/Commercial Consumers | | | | | |
| 0-100 Units | 76.82 | | | | |
| 101-200 units | 47.60 | | | | |
| 201-400 Units | 59.04 | | | | |
| Above 400 units | 182.77 | | | | |
| >20-90Kw Commercial Consumers | | | | | |
| 0-100 Units | 3.90 | | | | |
| 101-200 units | 3.72 | | | | |
| 201-400 Units | 7.07 | | | | |
| Above 400 units | 122.55 | | | | |
| LTI-Industry | 89.98 | 37.18 | 5.14 | 42.32 | 4.70 |
| 0-500 Units | 16.28 | | | | |
| Above 500 units | 73.70 | | | | |
| Tariff-LTP/Mixed (Hotel Industries) | 4.43 | 2.48 | 0.17 | 2.65 | 5.98 |
| LT-Agriculture | 17.63 | 2.68 | 1.46 | 4.13 | 2.34 |
| Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A) | 16.40 | | | | |
| Tariff-LTAG/Agriculture Allied (B) | 1.23 | | | | |
| Tariff-LTPL/Public Lighting | 111.02 | 62.73 | 3.24 | 65.97 | 5.94 |
| Tariff-LT Hoarding and SignBoard | 0.24 | 0.24 | 0.05 | 0.29 | 11.90 |
| High Tension Supply | | | | | |
| Tariff HTD/Domestic | 0.38 | 0.17 | 0.06 | 0.24 | 6.25 |
| Tariff HT-Commercial | 199.10 | 104.53 | 43.62 | 148.15 | 7.44 |
| Tariff HTI/Industrial | 1788.40 | 883.91 | 215.58 | 1099.48 | 6.15 |
| Connected at 11/33 kV | 1518.05 | | | | |
| Connected at 110 kV | 270.35 | | | | |
| H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive) | 549.01 | 271.76 | 41.97 | 313.74 | 5.71 |

| | | | | | |
|---|---|---|---|---|---|
| HT-Agriculture | 26.27 | 4.81 | 2.16 | 6.96 | 2.65 |
| Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A) | 8.98 | | | | |
| Tariff-HTAG/Agriculture (Allied Activities) (B) | 17.29 | | | | |
| H.T. MES/Defence Establishments | 33.07 | 16.86 | 2.36 | 19.23 | 5.81 |
| Temporary Supply | 30.50 | 15.64 | 3.31 | 18.95 | 6.21 |
| Tariff-LT/Temporary Domestic | 3.81 | | | 2.02 | 5.30 |
| 0-100 Units | 3.81 | | | | |
| Tariff-LT/Temporary Commercial | 27.11 | 14.64 | 2.29 | 16.93 | 6.25 |
| Tariff-HTTS/Temporary Supply | 16.15 | 12.71 | 7.58 | 20.30 | 12.57 |
| Single Point Supply | 5.48 | 2.88 | 2.03 | 4.91 | 8.96 |
| EV Charging Stations | 5.04 | 2.27 | | 2.27 | |
| **Total** | **4860.87** | **2101.92** | **409.19** | **2510.11** | **5.16** |

The Commission has determined revenue from sale of power at existing tariff as Rs. 2510.11 Cr in the FY 2024-25.

## 5.23. Standalone Revenue Gap/ (Surplus) for FY 2024-25

### Petitioner's Submission

The petitioner estimated the revenue gap based on the ARR and the revenue from Retail tariff and Open Access sales, the standalone revenue gap of Rs. 614.94 Cr is arrived at in FY 2024-25.

**Table 152 Revenue Gap/(Surplus) for FY 2024-25 (Rs. Cr)**

| Particulars | FY 2024-25 |
|---|---|
| Net Revenue Requirement | 3,057.54 |
| Revenue from Sale of Power | 2,442.60 |
| Revenue Gap during the Year | 614.94 |

### Commission's Analysis

The Commission based on the approved ARR and existing retail tariff (excluding FPPCA) has derived the following Revenue Gap/(Surplus) for FY 2024-25:

**Table 153 Revenue Gap/(Surplus)for FY 2024-25 (Rs. Cr) Approved by the Commission**

| S. No. | Particulars | Petitioner's Submission | Approved by the Commission |
|---|---|---|---|
| 1 | Aggregate Revenue Requirement | 3,057.54 | 2719.42 |
| 2 | Revenue from Sale of Power | 2,442.60 | 2510.11 |
| **3** | **Revenue Gap/ (Surplus)** | **614.94** | **209.31** |

The standalone gap at existing retail tariff is Rs. 209.31 Cr. for FY 2024-25. Further, as Government of Goa has agreed to provide the budgetary support for any Revenue Gap for FY 2024-25, the resultant revenue gap and budgetary support of Government of Goa will be decided at the time of true-up of FY 2024-25.

# CHAPTER 6: Tariff Principles and Design

## 6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2024-25 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 endeavour to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also mandates the Commission to strike a fine balance between the interests of various stakeholders including Utilities and consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

## 6.2. Applicable Regulations

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

*"20. Annual determination of tariff*

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

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

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

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

*"68. Determination of Tariff*

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

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

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

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

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

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

### Petitioner's Submission

The Petitioner has proposed a standalone revenue gap of Rs 614.94 Cr for FY 2024-25. Further, the Petitioner has proposed that the gap of FY 2024-25 is proposed to be bridged partially through tariff hike and remaining through budgetary support. Further, the revenue gap may be provisionally recognized by the Hon'ble Commission and due treatment be given for recovery at a later date when petition for True-ups are filed based on actual accounts / figures of revenue gap. However, revenue gap on account of True-ups of FY 2022-23 will not be passed over to the Consumers of EDG on account of Budgetary Support letters issued by Government of Goa from time to time.

**Table 154 Standalone Revenue Gap/ (Surplus) at existing tariff (Rs. Cr) submitted by the petitioner**

| Particulars | FY 2024-25 |
|---|---|
| Aggregate Revenue Requirement | 3057.54 |
| Revenue from Sale of Power | 2442.60 |
| Revenue Gap/ (Surplus) | 614.94 |

### Commission's analysis

The Commission approves the standalone revenue gap for FY 2024-25 as follows:

**Table 155 Revenue Gap/(Surplus)for FY 2024-25 (Rs. Cr) Approved by the Commission**

| Particulars | FY 2024-25 |
|---|---|
| Net Revenue Requirement | 2719.41 |
| Revenue from Sale of Power | 2510.11 |
| **Revenue Gap during the Year** | **209.31** |

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

The revenue gap of Rs. 209.31 Crore typically signifies that the revenue from the existing tariff is not commensurate with the costs incurred by the Petitioner. In order to cover this revenue deficit and to be financially sustainable, the retail consumer tariffs demand a tariff increase. However, the revenue gap being substantial, recovering this entirely from increase in consumer tariffs may lead to a tariff shock. The Commission has accordingly dealt with this issue in the following section.

### 6.4.1.Tariff Design

**Petitioner's Submission**

The petitioner submitted that gap of FY 2024-25 is proposed to be bridged partially through tariff hike on the Consumers of LT Category, increase in the Tariff Slab for the Evening Peak Load Period (6:00 PM to 11:00 PM) from 120% to 140% of normal rate of energy charge (for HT/EHT Category of Consumers) and remaining through budgetary support. Further, the Revenue Gap may be provisionally recognized by the Hon'ble Commission and due treatment be given for recovery at a later date when petition for true-ups are filed based on actual accounts / figures of Revenue Gap. However, Revenue Gap on account of True-ups of FY 2022-23 will not be passed on to the Consumers of EDG on account of Budgetary Support letters issued by Government of Goa from time to time. For FY 2024-25, the Government of Goa has decided to increase the tariff for the consumers as mentioned above. Accordingly, to partially bridge the huge revenue gap and to avoid the tariff shock to consumers, EDG has proposed increase in current Tariff.

Further, EDG has requested the Commission to introduce a new tariff category as "Railway Traction" for the current 2 nos of consumers (and any future consumer that might come up in state), giving rationale that presently the aforesaid connections are being billed under HT commercial Tariff which is higher than the industrial tariff and accordingly has proposed a tariff for railway traction having lower than commercial tariff. EDG has proposed for the aforesaid new category of Railway Traction at 220kV or 110 kV or 66 kV or 11 kV.

As stated above, EDG proposed the retail tariff for FY 2024-25 and the same is tabulated below:

**Table 156 Tariff schedule proposed by the petitioner**

| S/No | Category | Tariff approved by JERC in T.O. dated 30th March 2023 w.e.f. 01st April 2023 | | | Proposed Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| 1. | Domestic | | | | | | |
| A | Low Tension-D/LT-D | | | | | | |
| | 0-100 units | | Rs./kWh | 1.75 | | Rs./kWh | 1.88 |

<table>
<tr><th rowspan="3">S/No</th><th rowspan="3">Category</th><th colspan="3">Tariff approved by JERC in T.O. dated 30th March 2023 w.e.f. 01st April 2023</th><th colspan="3">Proposed Tariff for FY 2024-25</th></tr>
<tr><th rowspan="2">Fixed Charges</th><th colspan="2">Energy Charges</th><th rowspan="2">Fixed Charges</th><th colspan="2">Energy Charges</th></tr>
<tr><th>Units</th><th>Rate</th><th>Units</th><th>Rate</th></tr>
<tr><td rowspan="4"></td><td>101-200 units</td><td rowspan="4">INR 20/kW/Month or part thereof</td><td>Rs./kWh</td><td>2.60</td><td rowspan="4">INR 20/kW/Month or part thereof</td><td>Rs./kWh</td><td>2.79</td></tr>
<tr><td>201 to 300 units</td><td>Rs./kWh</td><td>3.30</td><td>Rs./kWh</td><td>3.70</td></tr>
<tr><td>301 to 400 units</td><td>Rs./kWh</td><td>4.40</td><td>Rs./kWh</td><td>4.90</td></tr>
<tr><td>Above 400 units</td><td>Rs./kWh</td><td>5.10</td><td>Rs./kWh</td><td>5.80</td></tr>
<tr><td rowspan="2">B</td><td colspan="7">Low Tension-LIG/LT-LIG</td></tr>
<tr><td>Consumption up to 50 Units/Month</td><td>INR 20/kW/Month or part thereof</td><td>Rs./kWh</td><td>-</td><td>INR 20/kW/Month or part thereof</td><td>Rs./kWh</td><td>-</td></tr>
<tr><td rowspan="2">C</td><td colspan="7">High Tension-D/HT-D</td></tr>
<tr><td>All Units</td><td>INR 110/kVA/Month or part thereof</td><td>Rs./kVAh</td><td>4.60</td><td>INR 110/kVA/Month or part thereof</td><td>Rs./kVAh</td><td>4.60</td></tr>
<tr><td>2.</td><td colspan="7">Commercial</td></tr>
<tr><td rowspan="5">A</td><td colspan="7">Low Tension-C/LT-C</td></tr>
<tr><td>0-100 units</td><td rowspan="4">For consumers with Load up to 20 kW INR 45/kW/Month or part thereof<br><br>For consumers with Load more than 20 kW and up to 90 kW INR 70/kW/Month or part thereof</td><td>Rs./kWh</td><td>3.60</td><td rowspan="4">For consumers with Load up to 20 kW INR 45/kW/Month or part thereof<br><br>For consumers with Load more than 20 kW and up to 90 kW INR 70/kW/Month or part thereof</td><td>Rs./kWh</td><td>3.97</td></tr>
<tr><td>101-200 units</td><td>Rs./kWh</td><td>4.40</td><td>Rs./kWh</td><td>4.80</td></tr>
<tr><td>201 units-400 units</td><td>Rs./kWh</td><td>5.00</td><td>Rs./kWh</td><td>5.56</td></tr>
<tr><td>Above 400 units</td><td>Rs./kWh</td><td>5.30</td><td>Rs./kWh</td><td>6.00</td></tr>
</table>

| S/No | Category | Tariff approved by JERC in T.O. dated 30th March 2023 w.e.f. 01st April 2023 | | | Proposed Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| B | High Tension-C/HT-C | | | | | | |
| | All Units | INR 250/kVA/month or part thereof | Rs./kVAh | 5.25 | INR 250/kVA/month or part thereof | Rs./kVAh | 5.25 |
| **3.** | **Industrial** | | | | | | |
| A | **Low Tension-I/LT-I** | | | | | | |
| | 0-500 units | INR 50/HP/Month or part thereof | Rs./kWh | 3.60 | INR 50/HP/Month or part thereof | Rs./kWh | 3.98 |
| | Above 500 units | INR 50/HP/Month or part thereof | Rs./kWh | 4.25 | INR 50/HP/Month or part thereof | Rs./kWh | 4.65 |
| B | **Low Tension-Mixed/LT-P (Hotel Industries)** | | | | | | |
| | All Units | INR 60/kW/Month or part thereof | Rs./kWh | 5.60 | INR 60/kW/Month or part thereof | Rs./kWh | 6.00 |
| C | **High Tension-I/HT-I** | | | | | | |
| | Connected at 11/33 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 |
| | Connected at 110 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.90 | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.90 |
| D | **High Tension- Ferro/SM/ PI/ SR** | | | | | | |
| | All Units | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 |
| **4.** | **Agricultural** | | | | | | |
| A | **Low Tension-AG/LT-AGP (Pump Sets/Irrigation)** | | | | | | |
| | All Units | INR 18/HP/Month or part thereof | Rs./kWh | 1.50 | INR 18/HP/Month or part thereof | Rs./kWh | 1.55 |

| S/No | Category | Tariff approved by JERC in T.O. dated 30th March 2023 w.e.f. 01st April 2023 | | | Proposed Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| B | **Low Tension-AG/LT-AGA (Allied Activities)** | | | | | | |
| | All Units | INR 25/HP/Month or part thereof | Rs./kWh | 1.75 | INR 25/HP/Month or part thereof | Rs./kWh | 1.85 |
| C | **High Tension-AG/HT-AGP (Pump Sets/Irrigation)** | | | | | | |
| | All Units | INR 40/kVA/Month or part thereof | Rs./kVAh | 1.60 | INR 40/kVA/Month or part thereof | Rs./kVAh | 1.60 |
| D | **High Tension-AG/HT-AG (Allied Activities)** | | | | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kVAh | 1.95 | INR 70/kVA/Month or part thereof | Rs./kVAh | 1.95 |
| **5.** | **Military Engineering Services/ Defense Establishments** | | | | | | |
| | All Units | INR 220/kVA/Month or part thereof | Rs./kVAh | 5.10 | INR 220/kVA/Month or part thereof | Rs./kVAh | 5.10 |
| **6.** | **Public Lighting** | | | | | | |
| | All Units | INR 75/kW/Month or part thereof | Rs./kWh | 5.65 | INR 75/kW/Month or part thereof | Rs./kWh | 6.00 |
| **7.** | **Hoardings/Signboards** | | | | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kWh | 10.00 | INR 70/kVA/Month or part thereof | Rs./kWh | 11.15 |
| **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 | | | 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 | | |
| B | LT Temporary Commercial | | | | | | |
| C | HT Temporary | | | | | | |

| S/No | Category | Tariff approved by JERC in T.O. dated 30th March 2023 w.e.f. 01st April 2023 | | | Proposed Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| | | commercial category for permanent supply. | | | commercial category for permanent supply. | | |
| 9. | Single Point Supply | | | | | | |
| A | Residential Complexes | INR 110 per kVA per month or part thereof | Rs./kVAh | 4.60 | INR 110 per kVA per month or part thereof | Rs./kVAh | 4.60 |
| B | Commercial Complexes | INR 250 per kVA per month or part thereof | Rs./kVAh | 5.25 | INR 250 per kVA per month or part thereof | Rs./kVAh | 5.25 |
| C | Industrial Complexes | INR 275 per kVA per month or part thereof | Rs./kVAh | 4.95 | INR 275 per kVA per month or part thereof | Rs./kVAh | 4.95 |
| High Tension Railway Traction/HT-R | | | | | | | |
| | 11/33 lV | | | | 250 Rs./kVA/Month or part thereof | Rs./kVAh | 5.25 |
| | 110/220 kV | | | | 250 Rs./kVA/Month or part thereof | Rs./kVAh | 5.15 |
| 10. | Electric Vehicle Charging Station | | | | | | |
| | All Units | - | Rs./kVAh | 4.50* | - | Rs./kVAh | 4.60* |
| *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. | | | | | | | |

### Commission's analysis

The Commission has determined the retail tariff for the FY 2024-25 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:

- Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
- 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
- o 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.
- o Affordability: Assessing affordability of electricity for Domestic and Commercial consumers for defining slab ranges and setting tariffs
- o Revenue stability: Tariff should ensure adequate fixed cost recovery for utilities from fixed/demand charges
- o Avoiding tariff shocks: Tariff shocks should be avoided and stakeholders should be able to predict the future trends in tariffs
- o Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs
- o Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
- o Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small-scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

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

**Cost of Supply**

**a) Context**

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

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

**b) Approach:**

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

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

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels. A simplified version of the same was suggested by Hon'ble APTEL in 2010, to determine VCoS in the absence of all necessary data. In this method, the power purchase costs and other costs (such as network costs, wheeling costs etc.) are allocated to various consumer categories based on energy input or energy sales (as considered appropriate by the State Commission). This approach factors in the voltage level differentiation based on losses, however, it does not factor in asset utilization at different voltage levels.

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

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

On studying the existing methodologies followed internationally, among developing nations with energy access situations like India's, the Commission is of the opinion that for determination of the Category wise Cost of Supply, the embedded cost methodology is an appropriate starting point.

The embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Distribution Licensee's revenue requirement to all categories and sub-categories of consumers. This method involves three steps:

- Cost Functionalization
- Cost Classification
- Cost Allocation

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

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

Commission as part of this Tariff Order has determined the tariff according to the Average Cost of Supply (ACoS).

**Tariff Affordability**

**a) Context**

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

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

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

**b) Approach**

On reviewing methodologies adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

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

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Distribution

Licensee across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Distribution Licensee's domestic consumer base.

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

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

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

**Cross Subsidy**

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

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

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

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

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

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

Accordingly, in this Tariff Order, the Commission has designed tariff for various consumer categories considering the Average Cost of supply in line with the provisions of the Tariff Policy, 2016. While designing the tariff for FY 2024-25, the Commission has reduced the cross-subsidy levels with an endeavor to bring the same within range specified in Tariff Policy 2016. To achieve this objective, the Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and either reduced/maintained the tariff levels or increased tariff at lower-than-average tariff hike for cross-subsidizing categories.

### 6.4.2. Approved Final Tariff Schedule

As described in earlier section, the current tariff is not covering the entire cost of the Petitioner for FY 2024-25. The adoption of kW-based billings for Domestic consumer category is being continued while designing the tariff schedule.

Further, the Commission has examined the proposal of EDG to create a separate category (Railway Traction) at 220/110 and 33/11 voltage level with lower than commercial tariff. The Commission, having interacted with the officials of EDG, found that presently there are 2 nos of traction connections at 110 kV. The Commission also gone through tariff structure of railway traction across the country and came to know that generally railway traction connections are at 110kV or above voltage levels and having tariff equivalent to industrial category. Accordingly, the Commission, introduces a new tariff category as “Railway Traction” at only 220/110 kV keeping tariff same as that of HT-I which is lower than HT commercial tariff as may be seen at table no 161.

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

**Table 157 Tariff schedule approved by the commission for FY 2024-25**

| S/No | Category | Proposed Tariff for FY 2024-25 | | | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| 1. | Domestic | | | | | | |
| A | Low Tension-D/LT-D | | | | | | |
| | 0-100 units | INR 20/kW/Month or part thereof | Rs./kWh | 1.88 | INR 20/kW/Month or part thereof | Rs./kWh | 1.90 |
| | 101-200 units | | Rs./kWh | 2.79 | | Rs./kWh | 2.80 |

| S/No | Category | Proposed Tariff for FY 2024-25 | | | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| | 201 to 300 units | | Rs./kWh | 3.70 | | Rs./kWh | 3.70 |
| | 301 to 400 units | | Rs./kWh | 4.90 | | Rs./kWh | 4.90 |
| | Above 400 units | | Rs./kWh | 5.80 | | Rs./kWh | 5.80 |
| **B** | **Low Tension-LIG/LT-LIG** | | | | | | |
| | Consumption up to 50 Units/Month | INR 20/kW/Month or part thereof | Rs./kWh | - | INR 20/kW/Month or part thereof | Rs./kWh | - |
| **C** | **High Tension-D/HT-D** | | | | | | |
| | All Units | INR 110/kVA/Month or part thereof | Rs./kVAh | 4.60 | INR 110/kVA/Month or part thereof | Rs./kVAh | 4.80 |
| **2.** | **Commercial** | | | | | | |
| **A** | **Low Tension-C/LT-C** | | | | | | |
| | 0-100 units | **For consumers with Load up to 20 kW INR 45/kW/Month or part thereof** | Rs./kWh | 3.97 | **For consumers with Load up to 20 kW INR 45/kW/Month or part thereof** | Rs./kWh | 3.75 |
| | 101-200 units | | Rs./kWh | 4.80 | | Rs./kWh | 4.60 |
| | 201 units-400 units | | Rs./kWh | 5.56 | | Rs./kWh | 5.30 |
| | Above 400 units | **For consumers with Load more than 20 kW and up to 90 kW INR 70/kW/Month or part thereof** | Rs./kWh | 6.00 | **For consumers with Load more than 20 kW and up to 90 kW INR 70/kW/Month or part thereof** | Rs./kWh | 5.75 |
| **B** | **High Tension-C/HT-C** | | | | | | |
| | All Units | INR 250/kVA/month or part thereof | Rs./kVAh | 5.25 | INR 250/kVA/month or part thereof | Rs./kVAh | 5.30 |

| S/No | Category | Proposed Tariff for FY 2024-25 | | | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| **3.** | **Industrial** | | | | | | |
| **A** | **Low Tension-I/LT-I** | | | | | | |
| | 0-500 units | INR 50/HP/Month or part thereof | Rs./kWh | 3.98 | INR 50/HP/Month or part thereof | Rs./kWh | 4.00 |
| | Above 500 units | INR 50/HP/Month or part thereof | Rs./kWh | 4.65 | INR 50/HP/Month or part thereof | Rs./kWh | 4.65 |
| **B** | **Low Tension-Mixed/LT-P (Hotel Industries)** | | | | | | |
| | All Units | INR 60/kW/Month or part thereof | Rs./kWh | 6.00 | INR 60/kW/Month or part thereof | Rs./kWh | 6.00 |
| **C** | **High Tension-I/HT-I** | | | | | | |
| | Connected at 11/33 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.10 |
| | Connected at 110/220 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.90 | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.00 |
| **D** | **High Tension- Ferro/SM/ PI/ SR** | | | | | | |
| | All Units | INR 275/kVA/Month or part thereof | Rs./kVAh | 4.95 | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.10 |
| **4.** | **Agricultural** | | | | | | |
| **A** | **Low Tension-AG/LT-AGP (Pump Sets/Irrigation)** | | | | | | |
| | All Units | INR 18/HP/Month or part thereof | Rs./kWh | 1.55 | INR 18/HP/Month or part thereof | Rs./kWh | 1.55 |
| **B** | **Low Tension-AG/LT-AGA (Allied Activities)** | | | | | | |
| | All Units | INR 25/HP/Month or part thereof | Rs./kWh | 1.85 | INR 25/HP/Month or part thereof | Rs./kWh | 1.85 |

| S/No | Category | Proposed Tariff for FY 2024-25 | | | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| C | High Tension-AG/HT-AGP (Pump Sets/Irrigation) | | | | | | |
| | All Units | INR 40/kVA/Month or part thereof | Rs./kVAh | 1.60 | INR 40/kVA/Month or part thereof | Rs./kVAh | 1.65 |
| D | High Tension-AG/HT-AG (Allied Activities) | | | | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kVAh | 1.95 | INR 70/kVA/Month or part thereof | Rs./kVAh | 2.00 |
| 5. | Military Engineering Services/ Defense Establishments | | | | | | |
| | All Units | INR 220/kVA/Month or part thereof | Rs./kVAh | 5.10 | INR 220/kVA/Month or part thereof | Rs./kVAh | 5.20 |
| 6. | Public Lighting | | | | | | |
| | All Units | INR 75/kW/Month or part thereof | Rs./kWh | 6.00 | INR 75/kW/Month or part thereof | Rs./kWh | 6.00 |
| 7. | Hoardings/Signboards | | | | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kWh | 11.15 | INR 70/kVA/Month or part thereof | Rs./kWh | 10.00 |
| 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. | | | 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 | Rs./kVAh | 4.60 | INR 110 per kVA per month or part thereof | Rs./kVAh | 4.70 |

| S/No | Category | Proposed Tariff for FY 2024-25 | | | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | | Fixed Charges | Energy Charges | |
| | | | Units | Rate | | Units | Rate |
| B | Commercial Complexes | INR 250 per kVA per month or part thereof | Rs./kVAh | 5.25 | INR 250 per kVA per month or part thereof | Rs./kVAh | 5.30 |
| C | Industrial Complexes | INR 275 per kVA per month or part thereof | Rs./kVAh | 4.95 | INR 275 per kVA per month or part thereof | Rs./kVAh | 5.00 |
| | **High Tension Railway Traction/HT-R** | | | | | | |
| | 11/33 Kv | 250 Rs./kVA/Month or part thereof | Rs./kVAh | 5.25 | - | - | - |
| | 110/220 kV | 250 Rs./kVA/Month or part thereof | Rs./kVAh | 5.15 | 275 Rs./kVA/Month or part thereof | Rs./kVAh | 5.00 |
| **10.** | **Electric Vehicle Charging Station** | | | | | | |
| | All Units | - | Rs. /kVAh | 4.60* | - | Rs. /kVAh | 4.75* |
| *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 2024-25

The approved tariff shall be applicable from 16th June 2024. Therefore, the revenue for full 12 months of FY 2024-25, based on the retail tariff approved above, the total revenue from sales based on the approved tariff would be 2.5 months with existing tariff and 9.5 months with approved tariff. The details are shown in the table below:

**Table 158 Revenue from Approved Retail Tariff determined by the Commission for FY 2024-25**

| DOMESTIC | Sales (MUs) | Revenue from Energy Charges for 2.5 months existing (Rs Cr.) | Revenue from Fixed charges 2.5 months existing (Rs Cr.) | Revenue from Energy Charges 9.5 months existing (Rs Cr.) | Revenue from Fixed charges 9.5 months existing (Rs Cr.) | Total (Rs. Cr.) | ABR (Rs./unit) |
|---|---|---|---|---|---|---|---|
| Tariff LTD/Domestic and Non-Commercial | 1479.76 | 90.32 | 9.94 | 380.13 | 37.77 | 518.16 | 3.50 |
| 0-100 units | 561.32 | | | | | | |
| 101-200 units | 358.48 | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 201 to 300 units | 198.19 | | | | | | |
| 301 to 400 units | 111.25 | | | | | | |
| Above 400 units | 250.52 | | | | | | |
| Tariff LTD/Low Income Group | 0.94 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 |
| Tariff-LTC/Commercial | 503.47 | 51.36 | 6.82 | 211.41 | 25.93 | 295.52 | 5.87 |
| 0-20 KW/Commercial Consumers | | | | | | | |
| 0-100 Units | 76.82 | | | | | | |
| 101-200 units | 47.60 | | | | | | |
| 201-400 Units | 59.04 | | | | | | |
| Above 400 units | 182.77 | | | | | | |
| >20-90Kw Commercial Consumers | | | | | | | |
| 0-100 Units | 3.90 | | | | | | |
| 101-200 units | 3.72 | | | | | | |
| 201-400 Units | 7.07 | | | | | | |
| Above 400 units | 122.55 | | | | | | |
| LTI-Industry | 89.98 | 7.75 | 1.07 | 32.29 | 4.07 | 45.17 | 5.02 |
| 0-500 Units | 16.28 | | | | | | |
| Above 500 units | 73.70 | | | | | | |
| Tariff-LTP/Mixed (Hotel Industries) | 4.43 | 0.52 | 0.03 | 2.10 | 0.13 | 2.79 | 6.30 |
| LT-Agriculture | 17.63 | 0.56 | 0.30 | 2.19 | 1.15 | 4.21 | 2.39 |
| Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A) | 16.40 | | | | | | |
| Tariff-LTAG/Agriculture Allied (B) | 1.23 | | | | | | |
| Tariff-LTPL/Public Lighting | 111.02 | 13.07 | 0.68 | 52.74 | 2.57 | 69.04 | 6.22 |
| Tariff-LT Hoarding and Sign Board | 0.24 | 0.05 | 0.01 | 0.19 | 0.04 | 0.29 | 11.90 |
| High Tension Supply | | | | | | | |
| Tariff HTD/Domestic | 0.38 | 0.04 | 0.01 | 0.14 | 0.05 | 0.24 | 6.41 |
| Tariff HT-Commercial | 199.10 | 21.78 | 9.09 | 83.54 | 34.54 | 148.94 | 7.48 |
| Tariff HTI/Industrial | 1788.40 | 184.15 | 44.91 | 719.93 | 170.67 | 1119.65 | 6.26 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Connected at 11/33 kV | 1518.05 | | | | | | |
| Connected at 110 kV | 270.35 | | | | | | |
| H.T.Industrial (Ferro Mettallurgical/ Steel Melting/ Power Intensive) | 549.01 | 56.62 | 8.74 | 221.66 | 33.23 | 320.26 | 5.83 |
| HT-Agriculture | 26.27 | 1.00 | 0.45 | 3.91 | 1.71 | 7.07 | 2.69 |
| Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A) | 8.98 | | | | | | |
| Tariff-HTAG/Agriculture (Allied Activities) (B) | 17.29 | | | | | | |
| H.T. MES/Defence Establishments | 33.07 | 3.51 | 0.49 | 13.61 | 1.87 | 19.49 | 5.89 |
| Temporary Supply | 30.50 | 3.26 | 0.69 | 12.38 | 2.62 | 18.95 | 6.21 |
| Tariff-LT/Temporary Domestic | 3.81 | 0.21 | 0.21 | | | | |
| 0-100 Units | 3.81 | | | | | | |
| Tariff-LT/Temporary Commercial | 27.11 | 3.05 | 0.48 | 11.59 | 1.81 | 16.93 | 6.25 |
| Tariff-HTTS/Temporary Supply | 16.15 | 2.65 | 1.58 | 10.07 | 6.00 | 20.30 | 12.57 |
| Single Point Supply | 5.48 | 0.60 | 0.42 | 2.30 | 1.61 | 4.93 | 9.00 |
| EV Charging Stations | 5.04 | 0.47 | | 1.90 | | 2.37 | 5.66 |
| **Total** | **4860.87** | **437.69** | **85.25** | **1750.50** | **323.94** | **2597.38** | **5.34** |

The Commission approves revenue from approved Retail Tariff of Rs 2597.38 Cr for the FY 2024-25.

The percentage recovery of cost of supply for various consumer categories at existing and approved tariff are shown in the table below:

**Table 159 Percentage recovery of cost of supply for consumer categories at existing and approved tariff for the FY 2024-25**

| Category | ABR at Existing Tariff (Rs/kwh) | ACoS (Rs/kwh) | % recovery of cost of supply at existing tariff | ABR at Approved Tariff (Rs/kwh) | % recovery of cost of supply at approved tariff |
|---|---|---|---|---|---|
| Domestic | 3.25 | 5.59 | 58.11% | 3.50 | 62.57% |

| | | | | | |
|---|---|---|---|---|---|
| Commercial | 6.08 | 5.59 | 108.74% | 6.34 | 113.08% |
| Industrial | 6.00 | 5.59 | 107.18% | 6.12 | 109.36% |
| Agriculture | 2.53 | 5.59 | 45.19% | 2.57 | 45.91% |
| Tariff-LTPL/Public Lighting | 5.94 | 5.59 | 106.21% | 6.22 | 111.16% |
| Tariff-LT Hoarding and Sign Board | 11.90 | 5.59 | 212.64% | 11.90 | 212.64% |
| H.T. MES/Defence Establishments | 5.81 | 5.59 | 103.93% | 5.89 | 105.35% |
| TEMPORARY SUPPLY | 8.41 | 5.59 | 150.40% | 8.41 | 150.40% |
| Single Point Supply | 8.96 | 5.59 | 160.12% | 9.00 | 160.83% |

### 6.4.4.Average Cost of Supply (ACoS) and Average Billing Rate (ABR)

The Commission based on the approved ARR and approved retail tariff has derived the ACoS and overall ABR, as given below:

**Table 160 ACoS at approved tariff for the FY 2024-25 (Rs Cr)**

| S. No | Particulars | Now Approved |
|---|---|---|
| 1 | Annual Revenue Requirement | 2719.41 |
| 2 | Sales (MUs) | 4860.87 |
| 3 | ACoS (RS/kWh) | 5.59 |
| 4 | ABR at Approved Tariff | 5.34 |
| 5 | ABR at existing tariff | 5.16 |
| **6** | **Average Tariff increase approved** | **3.50 %** |

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 3.50 %.

### 6.4.5. Revenue Gap/ (Surplus) at Approved Tariff

The Govt. of Goa vide its No. 1/14/2021-FIN (BUD)/928 dated 11/12/2023 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 2024-25 as the Govt. of Goa had provided an upfront budgetary support for the entire gap in FY 2024-25.

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

**Table 161 Revenue Gap/ (Surplus) at revised tariff approved by Commission (Rs Cr)**

| Particulars | FY 2024-25 |
|---|---|
| Net Revenue Requirement | 2719.41 |
| Revenue from Sale of Power at approved tariff | 2597.38 |
| Revenue Gap during the Year | 122.04 |

| | |
|---|---|
| Budgetary support from Govt. of Goa | 122.04 |
| **Final Gap/ (Surplus) for FY 2024-25** | **0.00** |

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

### 6.4.6.Government Budgetary Support

The Commission has approved an overall revenue gap of Rs. 122.04 Crore at approved tariff in FY 2024-25. The Govt. of Goa vide its No. 1/14/2021-FIN (BUD)/928 dated 11/12/2023 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 0.45/kWh (difference between ACoS and ABR at Approved Tariff).

### 6.4.7. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2024-25 are as follows:

a. The Govt. of Goa vide its No. 1/14/2021-FIN (BUD)/928 dated 11/12/2023 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 2024-25.
b. The Petitioner has proposed a tariff hike of 3.48 % in the tariff schedule of FY 2024-25.
c. The Commission has approved an average tariff hike of 3.50 % to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa.
d. The Commission has rationalised the tariff levels for cross-subsidized categories by marginally higher than the average hike and has reduced/maintained the tariff levels at lower-than-average tariff hike for cross-subsidizing categories.

# CHAPTER 7: Open Access and Green Energy Open Access Charges for the FY 2024-25

## 7.1. Wheeling Charges Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

**Petitioner's Submission:**

The petitioner submitted that the bifurcation of all expenses of FY 2024-25 between the functions of wheeling business (wire business) and retail supply business based on Regulation 49 of the MYT Regulations, 2021. The summary of the allocation statement and the segregation of ARR into wheeling and retail supply business for FY 2024-25 is given in the table below:

**Table 162 Allocation Statement Wheeling and Retail Supply for FY 2024-25 submitted by the petitioner**

| S/No | Particulars | Wires Business | Retail Supply Business | Total | Wheeling Business (Rs cr) | Retail Supply Business (Rs cr) |
|---|---|---|---|---|---|---|
| | | % | % | Projection FY 2024-25 | Projection FY 2024-25 | Projection FY 2024-25 |
| A | Receipts | | | | | |
| 1 | Revenue from Sale of Power | - | - | 2,442.60 | - | - |
| | | | | | | |
| B | Expenditure | | | | | |
| 1 | Cost of Power Purchase from Own Generating Stations | - | - | - | - | - |
| 2 | Cost of Power Purchase from other Generating Stations | 0% | 100% | 2,223.96 | 0.00 | 2,223.96 |
| 3 | Inter-State Transmission Charges | 0% | 100% | - | - | - |
| 4 | Intra-State Transmission Charges | 0% | 100% | - | - | - |
| 5 | SLDC Fees & Charges | | | | | |
| 6 | O&M Expenses (Gross) | - | - | 570.81 | 263.92 | 306.89 |
| | *a) R&M Expenses* | *90%* | *10%* | *62.27* | *56.05* | *6.23* |
| | *b) Employee Cost* | *40%* | *60%* | *463.96* | *185.58* | *278.38* |
| | *c) A&G Expenses* | *50%* | *50%* | *44.58* | *22.29* | *22.29* |
| 7 | Depreciation | 90% | 10% | 101.95 | 91.76 | 10.20 |
| 8 | Interest and Finance Charges | 90% | 10% | 80.46 | 72.42 | 8.05 |
| 9 | Interest on Working Capital | 10% | 90% | 9.38 | 6.50 | 2.88 |
| 10 | Prior Period Expenses | | | | | |
| | Interest on Consumer Security Deposit | 10% | 90% | 16.51 | 1.65 | 14.86 |
| 11 | Extraordinary Items | | | | | |
| 12 | Bad and Doubtful Debts | 0% | 100% | - | - | - |
| 13 | Other Debts and | - | - | - | - | - |

| S/No | Particulars | Wires Business | Retail Supply Business | Total | Wheeling Business (Rs cr) | Retail Supply Business (Rs cr) |
|---|---|---|---|---|---|---|
| | | | | Projection | Projection | Projection |
| | | % | % | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | 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 | - | - | - | - | - |
| | d) Employee Cost Capitalized | - | - | - | - | - |
| | Sub Total (a+b+c+d) | - | - | - | - | - |
| | Sub Total Expenditure (1 to 14-15) | - | - | 3,003.08 | 436.25 | 2566.83 |
| | | | | | | |
| C | Return on Equity | 90% | 10% | 106.51 | 95.86 | 10.65 |
| D | Less: Non-Tariff and other Income | 10% | 90% | 52.06 | 5.21 | 46.85 |
| E | Less: Any Grant/ Subventions, other subsidy provided by the Government | - | - | - | - | - |
| **F** | **Annual Revenue Requirement (B+C-D-E)** | **-** | **-** | **3,057.54** | **526.90** | **2530.63** |

The petitioner submitted that in line with methodology, adopted by Hon'ble Commission in previous tariff orders for FY 2022-23 and FY 2023-24 and based on above mentioned projections for Wheeling ARR for FY 2024-25, EDG has calculated wheeling charges for LT and HT/EHT level. Following methodology has been adopted:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level based on number of consumers.
- All expenses other than the O&M expenses are allocated to each voltage level based on 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.

EDG submitted that parameters assumed for allocation of wheeling cost at LT and HT/EHT level are tabulated below:

**Table 163 Wheeling Charge calculation as submitted by Petitioner**

| Category | O&M Expenses (Rs.Cr) | Other Expenses (Rs.Cr) | Total Expenses (Rs.Cr) | Sales (MU) | Wheeling Charges (Rs./kWh) |
|---|---|---|---|---|---|
| Low Tension (LT) Level | 263.45 | 157.79 | 421.24 | 2,228.87 | 1.89 |
| High Tension (HT)/ Extra High Tension (EHT)Level | 0.47 | 105.20 | 105.67 | 2,792.89 | 0.38 |
| Total | 263.92 | 262.98 | 526.90 | 5,021.76 | 1.05 |

**Commission's analysis:**

The allocation between wheeling and retail supply business for the FY 2024-25 as per the ARR approved in this Order and allocation statement given in the JERC MYT Regulations, 2021, is provided in the table below:

**Table 164 Allocation Statement Wheeling and Retail Supply for FY 2024-25 approved by the petitioner**

| Item of expense | Wheeling Business | Retail Supply Business | FY 2024-25 | | |
|---|---|---|---|---|---|
| | % | % | Wheeling Business (Rs. Cr) | Retail Supply Business (Rs. Cr) | Total (Rs. Cr) |
| Cost of power purchase | 0% | 100% | - | 2081.55 | 2081.55 |
| Employee costs | 40% | 60% | 165.93 | 248.90 | 414.84 |
| R&M expenses | 90% | 10% | 35.07 | 3.90 | 38.97 |
| Administration and General expenses | 50% | 50% | 18.07 | 18.07 | 36.14 |
| Depreciation | 90% | 10% | 62.31 | 6.92 | 69.23 |
| Interest & Financial charges | 90% | 10% | 24.88 | 2.76 | 27.64 |
| Interest on Working Capital | 10% | 90% | 0.78 | 7.05 | 7.84 |
| Return on NFA /Equity | 90% | 10% | 66.06 | 7.34 | 73.40 |
| Provision for Bad Debt | 0% | 100% | 0.00 | 0.00 | 0.00 |
| Interest on Consumer Security Deposit | 10% | 90% | 1.43 | 12.90 | 14.34 |
| Total Revenue Requirement | | | 374.53 | 2389.40 | 2763.93 |
| Less: Non-Tariff Income | 10% | 90% | 4.45 | 40.06 | 44.52 |
| **Net Revenue Requirement** | | | **370.08** | **2349.33** | **2719.41** |

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

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

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers.

- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation shown in the table below.

- The energy input has been determined assuming the cumulative loss level of HT/EHT voltage as 3.55%, which is the same as considered by the Petitioner. 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 7.95 % as approved in the MYT trajectory

- The resultant cost at EHT voltage level is divided among LT, HT and EHT voltage levels on the basis of input energy at respective voltage levels as the EHT network is used by consumers at all voltage levels. Similarly, allocated cost at HT voltage level is divided between HT and LT voltage levels. The cost at LT voltage level is allocated completely to LT voltage levels.

The Parameters assumed for voltage wise allocation of wheeling charges as given below:

**Table 165 Parameters assumed for voltage wise allocation of wheeling charges approved by the commission**

| Input | Consumers | Asset Allocation (%) | Sales (MU) | Cumulative Voltage Wise Losses (%) | Energy Input (MU) |
|---|---|---|---|---|---|
| Low Tension (LT) Level | 747289 | 60% | 2242.77 | 12.60 % | 2566.22 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 1424 | 40% | 2618.10 | 3.55% | 2714.47 |
| **Total** | **748713** | **100%** | **4860.87** | **7.95 %** | **5280.69** |

Accordingly, the Commission approves the Wheeling Charges as follows:

**Table 166 Wheeling Charges approved by Commission**

| Category | O&M Expenses (Rs.Cr) | Other Expenses (Rs.Cr) | Total Expenses (Rs.Cr) | Sales (MU) | Wheeling Charges (Rs./kWh) |
|---|---|---|---|---|---|
| Low Tension (LT) Level | 489.01 | 88.76 | 577.76 | 2242.77 | 2.58 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 0.93 | 59.17 | 60.10 | 2618.10 | 0.23 |
| **Total** | **489.94** | **147.93** | **637.87** | **4860.87** | **1.31** |

The Commission approves wheeling charge of Rs. 2.58 /kWh at LT voltage level and Rs. 0.23/kWh at HT/EHT voltage level.

## 7.2. Additional Surcharge

**Petitioner's Submission:**

The Petitioner had proposed an Additional Surcharge of Rs 0.85/kWh in the pleading. The Petitioner has proposed additional charges as follows:

**Table 167 Additional Surcharge submitted by the petitioner**

| Category | FY 2024-25 | |
|---|---|---|
| | Approved in T.O FY 2023-24 | Projection for FY 2024-25 |
| Total Power Purchase Cost for FY 2022-23 (Rs. Cr) | 2027.60 | 2,223.96 |
| Fixed Cost Component in Power Purchase Cost (excluding transmission charges) (Rs. Cr) | 425.19 | 425.33 |
| Energy Sales (MU) | 4,570.01 | 5,021.76 |
| **Additional Surcharge (INR/kWh)** | **0.93** | **0.85** |

**Commission's analysis:**

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

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

Regulation 4.5 (2) of the said Regulations stipulate:

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

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

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

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

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

**Table 168 Additional Surcharge approved by the Commission**

| Particulars | FY 2024-25 |
|---|---|
| Total Power Purchase Cost | 2081.55 |
| Fixed cost component in Power Purchase Cost (excluding transmission charges) | 438.09 |
| Energy Sales (MU) | 4860.87 |
| **Additional Surcharge (Rs/kWh)** | **0.90** |

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.

**As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the Regulation. The Commission approves an Additional Surcharge of Rs 0.90/kWh for the FY 2024-25.**

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

## 7.3. Cross-Subsidy Surcharge

**Petitioner's Submission:**

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

**Table 169 Voltage wise Energy Input for FY 2024-25**

| Category | Sales (MU) | Cumulative Loss up to that voltage level (%) | Energy Input (MU) |
|---|---|---|---|
| Low Tension (LT) Level | 2228.87 | 13.42% | 2528.07 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 2792.89 | 3.55% | 2895.68 |
| **Total** | **5021.76** | **7.41%** | **5423.76** |

**Table 170 Parameters used for allocation of Fixed Costs for FY 2024-25**

| Category | Energy Input (MU) | Voltage Wise Allocation (%) | Number of Consumers |
|---|---|---|---|
| Low Tension (LT) Level | 2,528.07 | 60% | 7,27,399 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 2,895.68 | 40% | 1,342 |
| **Total** | **5,423.76** | **100%** | **7,28,741** |

**Table 171 Voltage Wise Cost of Supply (VCoS) for FY 2024-25**

| Category | Allocated Fixed Cost (Rs.Cr.) | Allocated Variable Cost (Rs.Cr.) | Total Cost (Rs.Cr.) | Energy Sales (MU) | VCoS (Rs./kWh) |
|---|---|---|---|---|---|
| Low Tension (LT) Level | 902.00 | 695.97 | 1,597.97 | 2,528.07 | 6.32 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 662.39 | 797.18 | 1,459.57 | 2,895.68 | 5.04 |
| **Total** | **1,564.39** | **1,493.15** | **3,057.54** | **5,423.76** | **5.64** |

**Table 172 Cross-Subsidy Surcharge as proposed by the Petitioner**

| Category | VCoS (Rs./kWh) | | ABR (Rs./kWh) | | Cross Subsidy Surcharge (Rs./kWh) | |
|---|---|---|---|---|---|---|
| | Approved in T.O FY 2023-24 | Projection for FY 2024-25 | Approved in T.O FY 2023-24 | Projection for FY 2024-25 | Approved in T.O FY 2023-24 | Projection for FY 2024-25 |
| Low Tension (LT) Level | 7.68 | 6.32 | 6.03 | 3.52 | - | - |
| High Tension (HT)/ Extra | 4.33 | 5.04 | 3.87 | 5.36 | - | 0.32 |

| Category | VCoS (Rs./kWh) | | ABR (Rs./kWh) | | Cross Subsidy Surcharge (Rs./kWh) | |
|---|---|---|---|---|---|---|
| | Approved in T.O FY 2023-24 | Projection for FY 2024-25 | Approved in T.O FY 2023-24 | Projection for FY 2024-25 | Approved in T.O FY 2023-24 | Projection for FY 2024-25 |
| High Tension (EHT) Level | | | | | | |

**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:

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

**Table 173 Energy Input at each voltage level (MU) approved by the Commission**

| Category | Sales (MU) | Cumulative Loss up to that voltage level (%) | Energy Input (MU) |
|---|---|---|---|
| Low Tension (LT) Level | 2242.77 | 12.60 % | 2566.22 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 2618.10 | 3.55% | 2714.47 |
| **Total** | **4860.87** | **7.95 %** | **5280.69** |

Now the overall ARR approved for FY 2024-25 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

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

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

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

- 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 174 Parameters used for allocation of fixed costs approved by the Commission**

| Category | Energy Input (MU) | Voltage Wise Allocation (%) | Number of Consumers |
|---|---|---|---|
| Low Tension (LT) Level | 2566.22 | 60% | 747289 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 2714.47 | 40% | 1424 |
| Total | **5280.69** | **100%** | **748713** |

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 175 Voltage Wise Cost of Supply (VCoS) approved by the Commission**

| Category | Allocated Fixed Cost (Rs.Cr.) | Allocated Variable Cost (Rs.Cr.) | Total Cost (Rs.Cr.) | Energy Sales (MU) | VCoS (Rs./kWh) |
|---|---|---|---|---|---|
| Low Tension (LT) Level | 760.24 | 725.62 | 1485.85 | 2242.77 | 6.63 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 804.15 | 767.53 | 1571.69 | 2618.10 | 6.00 |
| **Total** | **1564.39** | **1493.15** | **3057.54** | **4860.87** | **6.29** |

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

**Table 176 Cross Subsidy Surcharge Approved by the Commission**

| Category | VCoS (Rs/kWh) | ABR (Rs/kWh) | Cross-Subsidy (Rs/kWh) |
|---|---|---|---|
| Low Tension (LT) Level | 6.63 | 4.25 | -2.37 |
| High Tension (HT)/ Extra High Tension (EHT) Level | 6.00 | 6.28 | 0.28 |

The Cross-Subsidy Surcharge is coming out to be negative for LT voltage level, Rs 0.24/kWh for HT voltage levels.

**Therefore, the Commission approves nil Cross-Subsidy Surcharge at LT Voltage level, Rs 0.28/kWh for HT voltage levels for FY 2024-25.**

**The same Open Access Charges will also be applicable for Green Energy open Access Consumers.**

# CHAPTER 8: Fuel and Power Price Adjustment Mechanism

The State of Goa and Union Territories of Chandigarh, Dadra & Nagar Haveli and Daman & Diu, and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producers (IPPs) through the long-term power purchase agreements and short-term-purchase through exchange, bilateral purchases etc. However, the Union Territories of Andaman & Nicobar Islands and Lakshadweep Islands receive power from Intra-State generation as these two Islands are not connected with the national grid. 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 is the substantial component 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 as the case may be, 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 (other than Andaman & Nicobar Islands and Lakshadweep Islands) (for example NTPC, NHPC etc.), and by JERC for the power plants located within the regions under jurisdiction of this Commission (for IPP's, licensees own generation and other State/UT generating sources).

While determining retail tariff for the ensuing year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. The 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 projected by the distribution licensee after accounting for the distribution losses, which is purely a projection for the ensuing year. Hence, a likely 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, the True-up of the FY 2024-25 will be undertaken by the Commission once the audited accounts of the FY 2024-25 are available. If the audited accounts for the FY 2024-25 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2027-28, 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 Relevant Provisions

The relevant provisions of the Electricity Act, Tariff Policy, 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."

**(e) The Electricity (Amendment) Rules, 2022 - Schedule-II**

The Ministry of Power vide notification dated 29th December, 2022 notified the Electricity (Amendment) Rules, 2022 which prescribes the Fuel and Power Purchase Cost Adjustment (FPPCA) Surcharge mechanism.

## 8.2 Mechanism for Fuel and Power Purchase Cost Adjustment (FPPCA) Surcharge

The following mechanism shall be followed for calculation and adjusting variations on account of Fuel and Power Purchase Cost Adjustment (FPPCA) Surcharge in the end consumer tariff, which shall come into force w.e.f. the implementation of this tariff order.

### 8.2.1 Periodicity for Recovery (Cycle), Chargeability and related Terms & Conditions

i. Fuel and Power Purchase Cost Adjustment (FPPCA) surcharge shall be calculated and billed to consumers automatically, without going through the regulatory approval process, on a monthly basis, according to the formula specified at 8.2.2 subject to true-up, on an annual basis.

   Provided that the automatic pass-through shall be adjusted in the monthly billing as mentioned below.

ii. FPPCA surcharge shall be computed and charged by the distribution licensee, in (n+2) th month, on the basis of actual variation, in the cost of fuel and power purchase and Inter-State Transmission Charges for the power procured during the nth month. (For example, the FPPCA surcharge on account of changes in tariff for power supplied during the month of April of any financial year shall be computed and billed in the month of June of the same financial year):

   Provided that in case the distribution licensee fails to compute and charge fuel and power purchase cost adjustment surcharge within the timeline as specified above, except in case of any force majeure condition, its right for recovery of costs on account of fuel and power purchase adjustment surcharge shall be forfeited and, in such cases, the right to recover the FPPCA surcharge determined during true-up shall also be forfeited.

iii. The distribution licensee shall submit detailed computation, on monthly basis, of the variation between expenses incurred and the fuel and power purchase cost adjustment surcharge/billed, along with supporting documents to the Commission, for verification/examination of the fuel and power purchase cost adjustment surcharge billed/to be billed.

iv. Upon verification/examination, if any discrepancies are found by the Commission, in the computation of fuel and power purchase cost adjustment surcharge, the Commission shall inform the Distribution Licensee, of such discrepancy, directing it for counter adjustment in the subsequent month's fuel and power purchase cost adjustment surcharge to be charged.

v. The revenue recovered on account of pass-through fuel and power purchase cost adjustment surcharge by the distribution licensee, shall be trued up while truing up the expenses of the relevant financial year.

vi. To ensure smooth implementation of the fuel and power purchase cost adjustment surcharge mechanism and its recovery, the distribution licensee shall ensure that the licensee billing system is updated to take this into account and a unified billing system shall be implemented to ensure that there is a uniform billing system irrespective of the billing and metering vendor through interoperability or use of open-source software as available.

vii. The distribution licensee shall publish all details including the fuel and power purchase cost adjustment surcharge formula, calculation of monthly fuel and power purchase cost adjustment surcharge, and recovery of fuel and power purchase cost adjustment surcharge on its website and archive the same through a dedicated web address.

### 8.2.2 Fuel and Power Purchase Cost Adjustment Surcharge Formula

$$\textbf{Monthly FPPAS for nth Month (\%)} = \frac{(\mathbf{A}-\mathbf{B})*\mathbf{C}+(\mathbf{D}-\mathbf{E})}{\{\mathbf{Z}*(\mathbf{1}-\textbf{Distribution losses in }\%/\mathbf{100})\}*\mathbf{ABR}}$$

where,

$n^{th}$ month = the month in which billing of fuel and power purchase adjustment surcharge component is done. This fuel and power purchase adjustment surcharge is due to changes in tariff for the power supplied in $(n\text{-}2)^{th}$ month

A (in kWh) = Total units procured in $(n\text{-}2)^{th}$ Month from all sources including Long-term, medium-term–term and Short-term Power purchases

B (in kWh) = Bulk sale of power from all Sources in $(n\text{-}2)^{th}$ Month

C (in Rs. /kWh) = Incremental Average Power Purchase Cost = Actual Average Power Purchase Cost (APPC) from all Sources in (n-2) month - Approved Average Power Purchase Cost (APPC) from all Sources

D (in Rs.) = Actual Inter-State and Intra-State Transmission Charges in the (n-2) $^{th}$ Month

E (in Rs.) = Approved Cost of Transmission Charges for (n-2) $^{th}$ Month = (Approved Transmission Charges (in Rs.)/12)

Z (in kWh) = [{Actual Power purchased from all the sources outside the State in (n-2) $^{th}$ Month. (in kWh) * (1 – Approved Inter-State transmission losses in % /100) + Power purchased from all sources within the State (in kWh)} *(1 – Approved Intra state losses in %) – B]/100

ABR (in Rs. /kWh) = Approved Average Billing Rate for the year

Distribution Losses (in %) = Approved Distribution Losses

# 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 within 1 month of the issuance of this Order.

• The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 10 days of the end of each quarter of the calendar year.

## 9.1 Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate appropriate action under the Electricity Act, 2003 and Regulations made there under.

### 9.1.1 Energy Audit Reports

| |
|---|
| **Originally Issued in Tariff Order dated 27th June 2012** |
| **Commission's Latest Directive in Tariff Order dated 31st March 2022**<br>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 next Tariff Petition. |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>The Commission has noted the Petitioner submission and directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority, and positively submit the same along within three months of issuance of this order. |
| **Petitioner's Response in the Present Tariff Petition**<br>EDG has prepared the Energy Audit Report for the FY 2022-23 and Quarterly Energy Audit Report for FY 2023-24 and submitted the same before Bureau of Energy Efficiency. The relevant documents are submitted along with this petition. |

| **Commission's Response** |
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| The Commission has noted the Petitioner submission and accordingly drops this directive. |

### 9.1.2 Sub-Divisions as Strategic Business Units

| **Originally Issued in Tariff Order dated 06th April 2015** |
|---|
| **Commission's Latest Directive in Tariff Order dated 31st March 2022**<br>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 |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>The Commission is yet to receive the compiled data as stated by the Petitioner. The Petitioner is directed to submit the same within three months of the issuance of this Order |
| **Petitioner's Response in the Present Tariff Petition**<br>Collection and validation data for Strategic Business Unit for Sub-Division of Division - 17 is completed and the same is submitted. Further the Collection of Data for SBU-4 is in process and the same will be completed by March-2024. |
| **Commission's Response**<br>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. |

### 9.1.3 Installation of Pre-Paid Meters

| **Originally Issued in Tariff Order dated 06th April 2015** |
|---|
| **Commission's Latest Directive in Tariff Order dated 31st March 2022**<br>The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report. |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>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**<br>The Tender for Prepaid Smart meters was issued on 21/01/2023 and date of opening of Tender was scheduled on 15/02/2023. However, the tender was cancelled on 18/05/2023 due to technical issues and re-floated on 14/06/2023. The tender was cancelled again as no bidders had quoted for the tender. The tender has been re-floated on 06/11/2023 and the technical opening of tender is on 27//11/2023. The timelines for installation of all Prepaid Smart Meters as per scheme guidelines is March, 2025 |
| **Commission's Response**<br>The Commission directs the Petitioner to expedite the process and submit a detailed updated status within 60 days of the issue of the order. |

### 9.1.4 Unbundling of Electricity Department

| **Originally Issued in Tariff Order dated 06th April 2015** |
|---|
| **Commission's Latest Directive in Tariff Order dated 31st March 2022**<br>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. |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>The Commission directs the Petitioner to pursue the matter on priority and submit the documentary evidence for the decision of the Govt. of Goa to the Commission within three month of the issuance of this Order. |
| **Petitioner's Response in the Present Tariff Petition**<br>The Govt of Goa has now intimated the Electricity Department to streamline the process and functions of various sections. Further, various Central Government and State Government schemes are in initiation phase. Hence, the Government doesn't want these schemes to get hampered. So, Govt of Goa is not interested in the Unbundling and the same will be reviewed after 3 years. |
| **Commission's Response**<br>The Petitioner has complied the directive and hence is dropped. |

### 9.1.5 Renewable Purchase Obligation

| **Originally Issued in Tariff Order dated 06th April 2015** |
|---|
| **Commission's Latest Directive in Tariff Order dated 31st March 2022**<br>The Commission appreciates the efforts undertaken by the Petitioner towards fulfilment 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 fulfilment of RPO and ensure yearly compliance are achieved. |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>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. |
| **Petitioner's Response in the Present Tariff Petition**<br>ED-Goa has fulfilled 51.78% (FY 2023-24 April to September) considering the projected sales position on the individual yearly target along with the Backlog from previous years. Further EDG will try to fulfil the RPO target of the Hon'ble JERC. |
| **Commission's Response**<br>The Commission appreciates the efforts undertaken by the Petitioner towards fulfillment of RPO. The Petitioner is directed to continue its efforts towards fulfillment of RPO and ensure yearly compliance are achieved as targeted. |

### 9.1.6 Determination of Category wise/ Voltage wise Cost of supply

| **Originally Issued in Tariff Order dated 06th April 2015** |
|---|
| **Commission's Directive in Tariff Order dated 31st March 2022**<br>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 next Tariff Petition. |
| **Commission's Response in previous Tariff order dated 30.03.2023**<br>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 within six months of issuance of this order. |
| **Petitioner's Response in the Present Tariff Petition**<br>EDG was trying finalize energy audit and voltage wise energy accounting, however, the same got delayed due to communication issues in modem of feeder & DT meters, which has been resolved now. However, now, EDG is in the process initiating the works to implement the Smart Meters. Further, EDG would be implementing a Pilot Project to determine the Voltage wise Cost of Supply at Division and Sub-Division Level. If determined to be viable, EDG will undertake the same for the State of Goa. |
| **Commission's Response**<br>The Petitioner is directed to submit voltage-wise and category-wise details of assets for last 3 years along with filing tariff petitions for FY 2025-26. |

### 9.1.7 New Directive

| **(a) Regarding for the new schemes to be filed before the Commission** |
|---|
| The Petitioner is directed to submit the appropriate petition for approval of new schemes; otherwise, the same shall be disallowed at the time of true-up. The Petitioner should note that from next true-up for FY 2024-25, only approved schemes will be considered by the Commission and such casual approach of the Petitioner will not be entertained. |

# CHAPTER 10: Tariff Schedule

## 10.1 Tariff Schedule

**Table 177 Tariff Schedule approved by the Commission**

| S/No | Category | Approved Tariff for FY 2024-25 | | |
|---|---|---|---|---|
| | | Fixed Charges | Energy Charges | |
| | | | Units | Rate |
| **1.** | **Domestic** | | | |
| **A** | **Low Tension-D/LT-D** | | | |
| | 0-100 units | INR 20/kW/Month or part thereof | Rs./kWh | 1.90 |
| | 101-200 units | | Rs./kWh | 2.80 |
| | 201 to 300 units | | Rs./kWh | 3.70 |
| | 301 to 400 units | | Rs./kWh | 4.90 |
| | Above 400 units | | Rs./kWh | 5.80 |
| **B** | **Low Tension-LIG/LT-LIG** | | | |
| | Consumption up to 50 Units/Month | INR 20/kW/Month or part thereof | Rs./kWh | - |
| **C** | **High Tension-D/HT-D** | | | |
| | All Units | INR 110/kVA/Month or part thereof | Rs./kVAh | 4.80 |
| **2.** | **Commercial** | | | |
| **A** | **Low Tension-C/LT-C** | | | |
| | 0-100 units | For consumers with Load up to 20 kW INR 45/kW/Month or part thereof | Rs./kWh | 3.75 |
| | 101-200 units | | Rs./kWh | 4.60 |
| | 201 units-400 units | | Rs./kWh | 5.30 |
| | Above 400 units | For consumers with Load more than 20 kW and up to 90 kW INR 70/kW/Month or part thereof | Rs./kWh | 5.75 |

| | | | | |
|---|---|---|---|---|
| **B** | **High Tension-C/HT-C** | | | |
| | All Units | INR 250/kVA/month or part thereof | Rs./kVAh | 5.30 |
| **3.** | **Industrial** | | | |
| **A** | **Low Tension-I/LT-I** | | | |
| | 0-500 units | INR 50/HP/Month or part thereof | Rs./kWh | 4.00 |
| | Above 500 units | INR 50/HP/Month or part thereof | Rs./kWh | 4.65 |
| **B** | **Low Tension-Mixed/LT-P (Hotel Industries)** | | | |
| | All Units | INR 60/kW/Month or part thereof | Rs./kWh | 6.00 |
| **C** | **High Tension-I/HT-I** | | | |
| | Connected at 11/33 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.10 |
| | Connected at 110 kV | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.00 |
| **D** | **High Tension- Ferro/SM/ PI/ SR** | | | |
| | All Units | INR 275/kVA/Month or part thereof | Rs./kVAh | 5.10 |
| **4.** | **Agricultural** | | | |
| **A** | **Low Tension-AG/LT-AGP (Pump Sets/Irrigation)** | | | |
| | All Units | INR 18/HP/Month or part thereof | Rs./kWh | 1.55 |
| **B** | **Low Tension-AG/LT-AGA (Allied Activities)** | | | |
| | All Units | INR 25/HP/Month or part thereof | Rs./kWh | 1.85 |
| **C** | **High Tension-AG/HT-AGP (Pump Sets/Irrigation)** | | | |
| | All Units | INR 40/kVA/Month or part thereof | Rs./kVAh | 1.65 |
| **D** | **High Tension-AG/HT-AG (Allied Activities)** | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kVAh | 2.00 |
| **5.** | **Military Engineering Services/ Defense Establishments** | | | |
| | All Units | INR 220/kVA/Month or part thereof | Rs./kVAh | 5.20 |

| | | | | |
|---|---|---|---|---|
| **6.** | **Public Lighting** | | | |
| | All Units | INR 75/kW/Month or part thereof | Rs./kWh | 6.00 |
| **7.** | **Hoardings/Signboards** | | | |
| | All Units | INR 70/kVA/Month or part thereof | Rs./kWh | 10.00 |
| **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.<br>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 | Rs./kVAh | 4.70 |
| B | Commercial Complexes | INR 250 per kVA per month or part thereof | Rs./kVAh | 5.30 |
| C | Industrial Complexes | INR 275 per kVA per month or part thereof | Rs./kVAh | 5.00 |
| **High Tension Railway Traction/HT-R** | | | | |
| A | 110/220 kV | 275 Rs./kVA/Month or part thereof | Rs./kVAh | 5.00 |
| **10.** | **Electric Vehicle Charging Station** | | | |
| | All Units | - | Rs./kVAh | 4.75* |
| *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 of Tariff Schedule

**Low Tension Category -** Aspplicable 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 phases.

**Table 178 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.<br><br>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 specified in the rules/regulations of their respective State or Union Territory. | 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/- . |
| 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. |
| | 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:<br>Houses with rent back facilities | |

| | | |
|---|---|---|
| 4. Commercial – LT and HT | Government hospitals<br>Professionals not covered in domestic category.<br>Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops;<br>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;<br>Offices including Government Offices, Commercial Establishments;<br>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 Studios, Laundries, Beauty Parlours and Saloons, dry cleaners etc<br>• 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;<br>• Banks, Telephone Exchanges, TV Station, Micro Wave Stations, All India Radio (AIR) Stations, ATM Centres etc;<br>• For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes;<br>• Sports Clubs, Health Clubs, Gymnasium, Swimming Pools;<br>• Research and Development units situated outside Industrial premises;<br>• Airports, Railway Stations, Bus stands of KTC etc;<br>• Educational institutions excluding Government Schools and related facilities | 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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| 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:<br>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.<br>Ice Factories, Ice Cream Manufacturing units/ Plants, Dairy Testing Process, Milk Dairies, Milk Processing/ Chilling Plants (Dairy) etc;<br>Engineering workshops, Engineering Goods Manufacturing units, Printing Presses, Transformer repairing Workshops, Tyre retreading units, Motive Power Loads etc;<br>Mining, Quarry and Stone Crushing units etc;<br>Garment Manufacturing units,<br>LPG/ CNG Bottling plants etc;<br>Sewage Water Treatment Plants/ Common Effluent Treatment Plants owned, operated and managed by Industrial Associations and situated within industrial area.<br>Pumping of water for public water supply, Sewage Treatment Plants, activities related with public water Supply Schemes and Sewage Pumping Stations.<br>• Use of electricity / power supply for activities/ facilities exclusively meant for employees of the industry within the premises of the Industry.<br>• IT Industry, IT parks etc. | The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage. |
| 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. |

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| 7. HT Industrial | This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories:<br>Bulk Supply of power at 11 KV, 33 kV /110 KV and above for industries, factories and other industrial purposes.<br>Bulk supply of power at 11 KV and above for educational institutions owned or aided by Government, non-industrial establishments,<br>Industrial units engaged in Ice Manufacturing Units;<br>Hotels with lodging and boarding facilities etc<br>Use of electricity / power supply by an establishment such as IT Industries, IT Parks, IT Units<br>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. | |
| 9. LT and HT Agriculture Pump sets | 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. | 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.<br>Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture allied |

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| 10. LT and HT Agriculture Allied Activities | 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<br>Horticulture, Green Houses, Plantations, all types of nurseries etc.<br>Fish farms including ornamental fish farms, prawn farms, other aqua farms etc<br>Tissue culture, Mushroom activities, Aquaculture, Floriculture, Fisheries, Sericulture, Floricultural nurseries, hatcheries etc<br>Any other agricultural activity not falling under HT-Agriculture (A) shall be covered under this category | activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged Commercial Tariff. |
| 11. MES/Defense Establishments | 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. | |
| 12. LT Public Lighting | This schedule shall apply to public lighting systems. It would include the following categories but not limited to:<br>Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/ Panchayats/ Government;<br>Lighting in Public Gardens;<br>Traffic Signals and Traffic Islands;<br>State Transport Bus Shelters;<br>Public Sanitary Conveniences; and<br>Public Water Fountains and such other Public Places open for general public free of charge.<br>Street lighting in the colony of a factory which is situated separately from the main factory.<br>This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments | |

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| 13. LT Hoardings/ Sign Boards | This schedule shall apply to lighting advertisements, hoardings and displays at 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. | The temporary connection shall be released through a proper meter<br>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.<br>The following shall be the different combinations for SPS in a defined area:<br>All LT consumer mix area<br>All HT consumer mix area<br>HT+LT consumer mix area<br>The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories.<br>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.<br>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 |

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|---|---|---|
| | | similar person.<br>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.<br>The complete cost of erection and<br>O&M for the sub-transmission and distribution infrastructure within |
| | | such complex would need to be borne by the said SPS applicant.<br>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.<br>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 |

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| | | 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%.<br>h. Individual Domestic HT consumers in a residential complex that opt for SPS shall need to apply separately under HT Domestic category.<br>i. The SPS applicant shall not charge tariff to the downstream consumers higher than stipulated.<br>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.<br>However, to cover energy transformation losses and other O&M expenses, such applicant would be eligible to get rebates from ED-Goa on full bill payment, within the due time:<br>i. 5% on the overall billed amount in all cases of LT and HT consumers<br>ii. Any other loss would be to the account of the applicant.<br>k. For CC and IC applicant, any LT / HT Consumer in the area should have minimum 80% pre-dominant load of their appropriate category<br>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.<br>l. The implementation of SPS arrangement should be in accordance with the Electricity Act, 2003 and APTEL judgement<br>dated 11th July 2011 in appeal no. 155 and 156 of 2010 in this regard. |

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|---|---|---|
| 16. Railway Traction | This tariff category is applicable to supply of power at 110 KV/ 220 kV for Railway Tractions. | |
| 17. Electric Vehicle Charging Stations | This tariff schedule shall apply to the Public Charging Stations (PCS) and Captive Charging Stations (CCS) as defined below in accordance with the Ministry of Power, GoI revised consolidated guidelines, and standards for charging infrastructures for Electric Vehicles dated 14th January, 2022.<br><br>Public Charging Stations (PCS) shall mean an EV charging station where any electric vehicle can get its battery recharged.<br><br>Captive Charging Stations (CCS) shall mean an electric vehicle charging station exclusively for the electric vehicles owned or under the control of the owner of the charging station e.g., Government Departments, Corporate houses, Bus Depots, charging stations owned by the fleet owners etc. shall not be used for commercial purpose of charging other vehicles on paid basis.<br><br>The tariff for respective consumption shall be applicable for respective 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.

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 specified in the order. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA chapter of this 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.

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 (TOD) Tariff

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

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

**Table 179 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 | 130% of normal rate of energy charges |
| Off-peak load period (11:00 p.m. to 7:00 a.m.) | Normal Rate | 80% of normal rate of energy charges |

(c) Applicability and Terms and Conditions of TOD tariff:

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

ii. 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.

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

iv. In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply. Schedule of Other Charges

## 10.4 Schedule of Miscellaneous Charges

**Table 180 Schedule Charges for other charges**

| Description | Approved Charges |
|---|---|
| **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)** | |
| 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)** | |
| 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/- |
| **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% |

**Note: The meter rent has been abolished by the Commission vide its tariff order dated 30.03.2023.**

# Annexures

## Annexure 1: List of Stakeholders

**Table 181 List of Stakeholders**

| Sr. No. | Name of Person | Organization/Address |
|---|---|---|
| **List of Stakeholders at Panaji** | | |
| 1 | Gerard D'mello | GCCI |
| 2 | Nancy Fernandes | Aldona Civic & Consumer Forum |
| 3 | Q. C. Dias | Penha De Franca |
| 4 | Kiran Ballikar | GCCI |
| 5 | Datta Murgaonkar | Panjim |
| 6 | Upendra Naik | Herald TV |
| 7 | Raju Dhawaskar | Mandovi Pellets (MRDDL) |
| 8 | Joseph D'souza | GCCI |
| 9 | Mahendra Khandeparkar | Panjim |
| 10 | Durgadas Kamat | Panaji |
| 11 | Tukaram Marathe | Prime TV |
| 12 | Durai raj | -------- |
| 13 | Lotlikar | -------- |
| 14 | Nitin Golatkar | -------- |
| 15 | Neil de Souza | Deccan Fine Chemical |
| 16 | Paresh J. K. | Deccan Fine Chemical |
| 17 | Dilip Sahakari | I.E.I |
| 18 | Santosh Sawant | Mayem Gaonkarwada |
| 19 | Ashley Vaz | Birla |
| 20 | Dilip Prabhudesai | -------- |
| 21 | Nikhil Narvekar | Duler Mapusa |
| 22 | Sanjay V. Barde | |
| 23 | Prakash Shinde | Mapusa |
| 24 | Anil Kerkar | Mapusa |
| 25 | Vincent Rosario | Panaji |
| 26 | Sameer Narvekar | Panaji |
| 27 | Roland Martins | Mapusa |
| 28 | Sanjay Y. Amonkar | Panaji |
| 29 | Amit Patkar | President Goa CongressPanaji |
| 30 | Sameer PR | Secretary Goa Congress Panaji |

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|---|---|---|
| 31 | Pooja Naik | Lokmat Panaji |
| 32 | Swapnil Tari | Prudent Panaji |
| 33 | Claude Alvares | Mapusa |
| 34 | Valentine Coutinho | Calangute |
| 35 | Shoma Patnaik | Panaji |
| 36 | Ketan Golatkar | Panaji |
| 37 | Anil S. Kenkare | Dattawadi Mapusa |
| 38 | Pinak K Pundhir | St, Inez Panaji |
| 39 | Prakash Lotlikat | Porvorim |
| 40 | Anthony S. Lobo | Calangute |
| 41 | Anthony C de souza | Calangute |
| 42 | Ganesh Shetkar | Lokmat Panaji |
| 43 | Vitthal Gawade | Panaji |
| 44 | Samil A. Volvoikar | Panaji |
| 45 | Dhiraj Harmalkar | Gomantak panaji |
| 46 | Sandeep Kamble | Tarun Bharat Panaji |
| 47 | Babuso B. Gaonkar | Ex. Sarpanch Shirigao |
| 48 | Vijay L. Bhise | Panaji Goa |
| 49 | Virendra Shirodkar | Margao |
| 50 | John Nazareth | Block President Congress |
| 51 | Ganesh Jawalkar | St. Cruze |
| 52 | A. K. | Mapusa |
| 53 | Jeetendra R. Fadte | Ribandar goa |
| 54 | Capt. Venz Veigas | MLA Benaulim |
| 55 | Dr. Amit Palekar | -------- |
| 56 | Sarfraz Anbaly | Panaji |
| 57 | Narayan Khorjuvenkar | Mapusa |
| 58 | Nandesh Kanle | Navhind |
| **List of Stakeholders at Margao** | | |
| 59 | Judith Almeida | Salcete, South-Goa |
| 60 | Kim Miranda | Orlim, South-Goa |
| 61 | Shri M.R. Borkar | Gomantak |
| 62 | Martin Rodrigues | Raia Civil & Consumer Forum |
| 63 | Silvestre Niasso | Davorlim Margao |
| 64 | Jack Mascarenhas | Margao |

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|---|---|---|
| 65 | Deepak A. Ghatge | Vasco |
| 66 | Lorna Fernandes | Cuncolim CIVC Consumer Forum |
| 67 | Sanjy Monteiro | Raia |
| 68 | Sayed Iftiyaz | Maddel Margao |
| 69 | Druv Prabhudessai | Margao |
| 70 | Surel D. Tilve | Ponda |
| 71 | Zarina Da Cunha | Nuvem Salcet Goa |
| 72 | Savio Coutinho | Navelim Margao Goa |
| 73 | Hemant Samant | Ponda |
| 74 | Domnic Savio Coutinho | Gogol Margao |
| 75 | Maria Do Colaco | Gogol Margao |
| 76 | Adv. Nicky Colaco | Margao Goa |
| 77 | Carlos Gracias | Borda Margao |
| 78 | Franco Noronita | Raia Margao |
| 79 | Ashray Dessai | Quepem |
| 80 | Camilo Camera | Margao |
| 81 | Joycee V. Dias | Sao Jose De Areal |
| 82 | sandeep Tuenkar | Margao |
| 83 | Akshay Sawardekar | Prime TV |
| 84 | Thomas A. Da Costa | Varca, Salcete-Goa. |
| 85 | Chals D Silva | Benaulim, Margao |
| 86 | Aditya Bidre | SAC TV |
| 87 | Tukaram Govekar | Lokmat |
| 88 | Harold Pinto | Navelim Margao |
| 89 | Vijay Kavle | MSME DFO |
| 90 | Lalan Parsekar | Aquem Margao |
| 91 | Croydon Medeira | Margao |
| 92 | Domnic Noronha | Sirlim |
| 93 | Anthony Pereira | Margao |
| 94 | Joseph L.R. vaz | Navelim Margao |
| 95 | Jose Gracias | Navelim Margao |
| 96 | Dr. Aashish Kamat | Margao |
| 97 | Ramona Almeida | Velim |
| 98 | Ernesto Morais | Nuvem |
| 99 | Anwar Khan | Raia |