TARIFF ORDER

True-up of the FY 2016-17, Annual Performance Review of the FY 2020-21, Aggregate Revenue Requirements (ARR) and Determination of Retail Tariff for the FY 2021-22

Petition No. 39/2020

For

Electricity Department, Government of Goa (EDG)

30th March 2021

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

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List of abbreviations

Abbreviation	Full Form
A&G	Administration & 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 of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
Ckt. Km	Circuit Kilometer
COD	Commercial Operation Date
Commission/JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
Cr	Crore
DELP	Domestic Efficient Lightening Program
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
EDG	Electricity Department, Govt. of Goa
ED	Electricity Duty
EDF	Electricity Development Fund
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
GGPP	Gandhar Gas based Power Plant
HP	Horse Power
HT	High Tension
IEX	Indian Energy Exchange Limited
INR	Indian Rupee
IPDS	Integrated Power Development Scheme

Abbreviation	Full Form
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
KAPS	Kakrapar Atomic Power Station
KGPP	Kawas Gas based Power Plant
KSTPS	Kota Super Thermal Power Station
KVA	Kilo Volt Ampere
KWh	Kilo Watt Hour
LT	Low Tension
MOD	Merit Order Dispatch
MU	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
NFA	Net Fixed Assets
NPCIL	Nuclear Power Corporation of India Limited
NTPC	National Thermal Power Corporation
NVVNL	NTPC Vidyut Vyapar Nigam Limited
O&M	Operation and Maintenance
PF	Power Factor
PGCIL	Power Grid Corporation of India Ltd.
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RSTPS	Ramagundam Coal Based Thermal Power Stations
RTC	Round the Clock
SBI PLR	SBI Prime Lending Rate
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

Abbreviation	Full Form
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
VSTPS	Vindhyachal Super Thermal Power Station
WART	Weighted Average Retail Tariff
WRPC	Western Region Power Committee

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Shri. M. K. Goel, Chairperson

Petition No. 39/2020

In the matter of

Approval for the True-up of the FY 2016-17, Annual Performance Review of the FY 2020-21, Aggregate Revenue Requirements (ARR) and determination of retail tariff for the FY 2021-22

And in the matter of

Electricity Department, Government of Goa (EDG)..Petitioner

ORDER

Dated: 30th March 2021

1) This Order is passed in respect of a 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 of the FY 2016-17, Annual Performance Review of the FY 2020-21, Aggregate Revenue Requirement (ARR) and Tariff Proposal for the FY 2021-22 before the Joint Electricity Regulatory Commission (hereinafter 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 2020. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/comments/views and objections were invited from the Stakeholders and Electricity Consumers. Further, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually. The virtual Public Hearing was held on 25th January 2021 and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) In order to mitigate the hardship of Electricity Consumers and DISCOMs/EDs in view of nationwide lockdown due to COVID-19, the Commission had issued SUO MOTU ORDER NO. JERC/LEGAL/SMP/27/2020 on 10th April 2020 wherein the Commission provided relief to industrial and commercial consumers and acknowledged the need for additional working capital requirement by the Distribution Licensees. Further, the Commission viewed that the lockdown will also impact certain other parameters of ARR like sales/sales mix, power purchase quantum and cost and revenue. The Commission opined that it will consider all such additional costs and variations in parameters appropriately while evaluating the True-up of FY 2020-21.

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4) The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the True-up of FY 2016-17 and ARR along with the Retail Tariff for FY 2021-22.

5) Since, the Petitioner has not submitted the audited accounts for FY 2017-18, FY 2018-19 and FY 2019-20, the Commission has decided not to take up True-up for the FY 2017-18, FY 2018-19 and FY 2019-20 in the current Order as detailed in Chapter 4.

6) The Commission for the purpose of APR of FY 2020-21 sought the information of historical sales, number of consumers and connected load of the previous 5 years till FY 2020-21 (till H1) from the Petitioner along with the month-wise information for the last 3 years from FY 2016-17 to FY 2018-19 in the first Deficiency Note dated December 18, 2020. However, various anomalies and gaps are observed in the data provided as detailed in Chapter 5. In addition to these issues, the Commission also observed that due to the unavailability of audited annual accounts for FY 2017-18, FY 2018-19 and FY 2019-20, it is difficult to ascertain the accuracy of the data in respect of capital expenditure and capitalisation during this period thereby leading to unreliable estimates of ARR parameters. Therefore, the Commission believes that it is not prudent to approve the revised power purchase requirement and revenue from retail sale on the basis of the unreliable information presently available and decided not to undertake the Annual Performance Review of the FY 2020-21.

7) A summary has been provided as follows:

(a) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2016-17:

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2016-17 (In INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Net Revenue Requirement	1,677.41	1,515.05
2	Revenue from Retail Sales at Existing Tariff	1,468.81	1,467.52
	Net Gap /(Surplus)	**208.59**	**47.54**

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

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	2,222.53	2,301.04
2	Revenue from sale of power at proposed tariff	2,043.88	1,922.23
3	Gap / (Surplus) for the year	178.65	378.81
4	Upfront assurance of Budgetary support from Govt.	178.65	378.81
	Net Revenue Gap/ (Surplus)	**0.00**	**0.00**

(c) The Petitioner has submitted a standalone revenue gap of INR 301.40 Cr at existing tariff and INR 178.65 Cr at proposed tariff for FY 2021-22. The Petitioner has proposed that an additional revenue of INR 122.75 Cr (301.40 – 178.65) for FY 2021-22 shall be recovered through rationalization of tariff such as kVAh based tariff for HT consumers and non-telescopic billing for LT Domestic (for consumption above 200 units) & LT Commercial categories. The remaining amount of Rs. 178.65 Cr. is proposed to be recovered through budgetary support assurance from the Govt. of Goa vide their letter no.1/14/2019-FIN (BUD)/ 57 dated 07th January, 2021.

(d) The Commission has not accepted the Petitioner's proposal for introducing non-telescopic billing for LT Domestic (for consumption above 200 units) and LT Commercial categories as it believes that

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telescoping billing is an essential element for consumers in managing their energy consumption prudently and doing away with telescopic billing would also lead to a tariff shock for many consumers.

(e) The Commission has, however, accepted the Petitioner's proposal to move towards kVAh based tariff for HT/EHT consumers only. The Commission has considered the kVAh tariff for HT/EHT consumers to be the same as kWh tariff approved in the previous Tariff Order, which translates to an average tariff hike of 3.18%.

(f) The Commission has approved the Average Billing Rate (ABR) of INR 4.70/kWh against the approved Average Cost of Supply (ACoS) of INR 5.63/kWh. The per unit gap of INR 0.93/kWh shall be met through the budgetary support as per assurance letter of the Govt. of Goa dated 07th January 2021. The Commission acknowledges this letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2021-22, and hence the revenue gap for FY 2021-22 has been considered as nil.

(g) The ABR without the Government Budgetary support has been calculated considering the same per unit Gap of INR 0.93/kWh (Difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support) allocated equally among all consumer categories. The table below provides the average tariff increase and ABR with and without Govt. budgetary support:

Table 3: Cost of Supply and tariff increase with and without Govt. Budgetary support

Category	ACoS (Rs/kwh)	ABR at Approved Tariff with Govt. Budgetary Support (Rs/kwh)	Increase with Budgetary Support (%)	ABR without Govt. Budgetary Support (Rs/kwh)	Additional Increase in case Govt. budgetary support would not have been provided (%)
Domestic	5.63	2.66	0.00%	3.59	34.85%
Commercial	5.63	5.69	1.35%	6.62	16.29%
Industrial	5.63	5.71	4.68%	6.64	16.24%
Agriculture	5.63	2.18	3.25%	3.11	42.50%
Military Engineering Services	5.63	5.95	5.30%	6.88	15.58%
Public Lighting	5.63	4.24	0.00%	5.17	21.87%
Hoardings/ Signboards	5.63	12.71	0.00%	13.64	7.29%
Temporary	5.63	8.37	4.54%	9.29	11.08%
Single Point Supply	5.63	6.46	0.83%	7.38	14.36%
Total	**5.63**	**4.70**	**3.18%**	**5.63**	**19.71%**

8) This Order shall come into force with effect from 1st April 2021 and shall, unless amended or revoked, continue to be in force till further orders of the Commission.

9) 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.

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

-Sd-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 30th March 2021

Certified Copy

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

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

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

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

1.2. About Goa

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

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

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

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

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

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

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

1.4. Multi-Year Distribution Tariff Regulations, 2014

The Petitioner has filed the petition for the true-up of FY 2016-17 which shall be done in accordance with the MYT Regulations 2014. The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as 'JERC MYT Regulations, 2014') on 30th June 2014 applicable for a three year Control period starting from FY 2016-17 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10th August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi-Year Tariff Regulations, 2018

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (hereinafter referred to as 'JERC MYT Regulations, 2018') on 10th August 2018. These Regulations are applicable for the 2nd MYT Control Period comprising of three financial years from FY 2019- 20 to FY 2021-22. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.6. Filing and Admission of the Present Petition

As per Clause 9.1 of the JERC MYT Regulations, 2018 the Petitioner was required to file for approval of the Commission, the application for approval of Aggregate Revenue Requirement and tariff proposal for FY 2021-22.

EDG submitted the current Petition for approval of 'True-up of the FY 2016-17, Annual Performance Review of the FY 2020-21, Aggregate Revenue Requirement and Tariff Proposal for the FY 2021-22 vide Letter No. 120/03/MYT 19-20 to 21-22/CEE/Tech/1580 dated 1st December 2020. After initial scrutiny/analysis, the Petition was admitted on 18th December 2020 and was marked as Petition No. 39/2020.

1.7. 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 Petitioner and key data gaps, which included Energy Sales, revenue from retail tariff, capitalisation, tariff proposal etc. The Petitioner submitted its response on the issue through various letters.

The Commission conducted the Technical Validation Session (TVS) 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 4: Timelines of the interaction with the Petitioner

S. No	Subject	Date
1	Issue of First Deficiency Note	18th December 2020
2	Reply received from Petitioner	14th January 2021
3	Technical Validation Session	18th January 2021
4	Issue of Second Deficiency Note	19th February 2021
5	Reply received from Petitioner	22nd February 2021
6	Public Hearing	25th January 2021

1.8. Notice for Public Hearing

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

Table 5: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1.	29th December 2020	Gomantak	Konkani	Goa
		Times of India	English	Goa
		The Navhind times	English	Goa
		oHeraldo	English	Goa
2.	20th January 2021	Gomantak	Konkani	Goa
		Times of India	English	Goa
		The Navhind times	English	Goa
		oHeraldo	English	Goa

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

Table 6: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1.	7th January 2021	Times of India	English	Goa
2.		oHeraldo	English	Goa
3.		Tarun Bharat	Marathi	Goa
4.	9th January 2021	Goan Varta	Marathi	Goa

1.9. Public Hearing

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

Accordingly, the Virtual Public Hearing was held on 25th January 2020 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

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

2.1. Regulatory Process

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

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

Accordingly, the Virtual Public Hearing was held on 25th January 2021 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I.

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

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/ observations to make the process responsive and efficient. The relevant observations of the stakeholders have been suitably considered by the Commission while finalizing this Tariff Order. The submissions of the stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Substantial increase in A&G expenses, employee expenses and interest on working capital

Stakeholder's Comment:

The A&G expenses has increased by more than 150% and interest on working capital has increased by 65% for FY 2016-17 (over FY 2015-16). The employee expenses have increased by 13% for FY 2020-21 which is more than double the rate of inflation for the said period.

Petitioner's Response:

A&G expenses claimed for FY 2016-17 is according to the audited accounts. Further ED-Goa submits that the actual and audited A&G expenses for FY 2012-13 were Rs. 22.27 Cr., FY 2013-14 was Rs. 18.54 Cr., FY 2014-15 was Rs. 22.40 Cr. and FY 2015-16 was Rs. 23.50 Cr. Hence EDG submits that, in line with A&G expenses for FY 2012-13, FY 2013-14, FY 2014-15 and FY 2015-16, A&G expenses for FY 2016-17 of Rs. 23.51 Cr. be justified.

Interest on working capital is determined on a normative basis, in line with the JERC MYT Regulations, 2014.

Actual employee expense for FY 2020-21 H1 is Rs. 188.29 Cr. including pension/DA and other provisions of Rs. 7.43 Cr. EDG has projected normative employee expenses for FY 2020-21 at 340.26 Cr. based on relevant regulations and methodology adopted by the Commission in MYT Order dated 20 May 2019.

Commission's View:

The A&G expenses, employee expenses and interest on working capital are not allowed as per actuals and are allowed on normative basis, in line with the relevant JERC MYT Regulations.

2.2.2. Publication of Manpower Study report in lieu of high employee expenses

Stakeholder's Comment:

In view of the increase in Employee expenses, we request the Commission to direct ED-Goa to implement the recommendation as may be suggested in the Manpower Study report. This will help rationalise and optimise the organisation structure and reduce employee cost. This is important since ED-Goa has been claiming very high employee cost compared to any other distribution licensee in India. It is also requested that the Commission direct ED-Goa to publish the final Manpower Study report on its website.

Petitioner's Response:

ED-Goa submits that all the activities/ works like release of connection, testing of meters, meter reading, generation of bills, testing of transformer and regular maintenance of network are done by the employees of the ED-Goa and not outsourced to any agency. Hence employee expenses are on higher side compared with other utilities of the country where all the above activities are outsourced, and such expenditure are not accounted under employee expenses.

Further ED-Goa submits that once the manpower study report is finalised the same will be submitted to the Commission and accordingly rationalisation of manpower will be done.

Commission's View:

The Commission has reiterated its directive in this matter in the Chapter on Directives.

2.2.3. Lack of technical and commercial infrastructure to allow Open Access procurement

Stakeholder's Comment:

On several occasions during the past few years, member industries of ASMA, Goa have approached ED, Goa for allowing open access to buy better priced power from sources outside Goa. However, ED, Goa has not responded to such request and claimed lack of technical and commercial infrastructure and competency to allow open access.

Petitioner's Response:

ED-Goa submits that it has notified the Open Access procedures in the State of Goa in accordance with the JERC Open Access Regulations, 2017. Further it is submitted that none of the members of ASMA, Goa had approached ED-Goa for Open Access after notification of Open Access procedures in the State of Goa.

Commission's View:

The stakeholder may apply as per Open Access procedure approved in line with JERC Open Access Regulations, 2017. The Petitioner may provide them the necessary guidance if desired by them.

2.2.4. Operationalising SLDC

Stakeholder's Comment:

We request the Commission to direct ED-Goa to submit an action plan for making the SLDC fully functional as mandated in the EA, 2003

Petitioner's Response:

ED-Goa submits that that the SLDC is fully functional 24x7.

Commission's View:

The Commission has issued a directive in this matter to the Petitioner to submit a detailed status report in the Chapter on Directives.

2.2.5. Optimisation of Time of Day (ToD) Tariff

Stakeholder's Comment:

The ToD tariff design needs rationalisation and optimisation to encourage consumption of electricity during the night off peak hours. This allows optimised use of generation capacity and optimises loading on transmission and distribution system. We request the Commission to implement ToD tariff as suggested below:

- 22:00 Hrs -06:00 Hrs-70% of Normal rate of Energy Charge
- 06:00 Hrs- 18:00 Hrs- Normal rate of Energy Charge
- 18:00 Hrs-22:00 Hrs-110% of Normal rate of Energy Charge

Petitioner's Response:

ED-Goa submits that the evening peak load is from 18:00 Hrs to 23:00 Hrs and during that ED-Goa has proposed to increase the Energy Charges to 130% of normal rate. Further ED-Goa also proposes to reduce the energy charges to 70% of normal rate during off peak period i.e. 23:00 Hrs to 07:00 Hrs. This will encourage the consumers to shift the load to off peak period, thereby reduces the peak load and power purchase cost.

Commission's View:

The stakeholder may refer to Chapter 11 for the details on ToD tariff. The Commission opines that the current ToD tariff is adequate to optimize the load curve. The same shall be reconsidered while issuing the next Tariff Order. The Petitioner is directed to submit average hour-wise load data for FY 2020-21 along with the next tariff petition.

2.2.6. Avoid increase in tariff for industrial consumers

Stakeholder's Comment:

We request the Commission and ED-Goa to avoid increase in tariff for industries as this will have multiplying effect on the economy of the state. The State needs to promote industrialization in addition to tax benefits, electricity tariff also a major factor contributing to the growth of industry in the state.

Petitioner's Response:

ED-Goa submits it has proposed rationalisation of tariff for all the category of consumers for FY 2021-22 as per the instant petition.

Commission's View:

The Commission has determined the Revenue gap for the FY 2021-22 based on the revised ARR. The Commission believes that the tariff should progressively reflect the cost of supply. The Commission while determining the tariff for FY 2021-22 has considered the prudent cost of the Petitioner and has accordingly determined the tariff for each consumer category. The stakeholder may refer to Chapter 7 for the detailed rationale.

2.2.7. Implementation of kVAh based tariff

Stakeholder's Comment:

With the implementation of kVAh billing and with drawl of power factor incentive, the average electricity bill of HT & EHT Consumers will increase. In view of Covid-19 pandemic and sluggish economic activity which has impacted cash flow of the industry, we request Hon'ble Commission to implement the kVAh billing from FY 2022-23. This will also provide enough time to ED, Goa to complete the kVAh metering and modify the billing system. The HT & EHT Consumers will get time to prepare for kVAh metering & billing for setting up accurate power factor management equipment in their premises.

Petitioner's Response:

ED-Goa submits that in compliance to directive of the Commission, the proposal for implementation of kVAh based Tariff for all HT/EHT categories for FY 2021-22 is filed in the instant petition. The kVAh tariff will ensure 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 ED-Goa does not have to buy the additional power in order to compensate for the reactive power which goes unaccounted.

Commission's View:

The Commission believes that kVAh based tariff is essential for HT/EHT consumers in order to incentivize the consumers to maintain power factor in a more prudent manner. Accordingly, the Commission has introduced kVAh based tariff for FY 2021-22.

2.2.8. Non-telescopic tariff for FY 2021-22

Stakeholder's Comment:

ED-Goa has proposed new tariff rates for FY 2021-22 where if the Domestic consumer exceeds 200 Units then such consumer will be charged the rate of slab for the entire consumption. In this regard we suggest to raise the limit to at least 300 or 350 Units so there will be no financial burden for most of Goan families whose consumption falls around 240-260 units per month.

Petitioner's Response:

ED-Goa submits that the Commission may like to take appropriate decision in this matter.

Commission's View:

The Commission while designing retail tariffs for the FY 2021-22 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. Hence, the Commission has kept the approach of telescopic tariff for all the applicable categories.

2.2.9. Lack of support and promotion for installation of Solar power at village level

Stakeholder's Comment:

No support and promotion for installation of Solar power at village level.

Petitioner's Response:

Net-Metering is applicable in the state and grid connectivity is given to solar prosumers under the JERC Net-metering Regulations, 2019 for Roof top solar and ground mounted solar within the premises. Further the Government of Goa has given the subsidy of 50% on the benchmark cost as per the Goa Solar Policy 2017.

Commission's View:

The stakeholder may note the response of the Petitioner. Further, the Commission has formulated the necessary Regulatory Framework for net-metering and ground mounted solar projects in the State. The Govt. of Goa also provides a subsidy to consumers opting for Rooftop Solar. The Commission has been time and again emphasizing on the need to procure physical power rather than purchase of REC's for RPO fulfillment. The Commission in the ARR of FY 2021-22 has also approved procurement of physical power for RPO fulfillment. The consumer is advised to avail the benefits of the policy applicable in the State that would promote solar power procurement.

2.2.10. Higher tariff hikes for LT AG Allied and HT AG Allied categories

Stakeholder's Comment:

ED-Goa has subjected LT AG Allied and HT AG Allied to maximum tariff hike by proposing a steep increase of 5.88% and 10.52% in energy charges respectively

We humbly submit to The Commission that subjecting one category to such increase is unjustified and request that the tariff should be maintained at present level as done for Agriculture category.

Such increase in tariff for Agriculture Allied category will result in larger difference between agriculture and agriculture allied category. To promote large high technology agriculture ventures in Goa, we request The Commission to maintain tariff for this category in line with the tariff for agriculture.

Petitioner's Response:

ED-Goa submits that for HT Allied Agricultural category, the tariff in neighbouring state is on much higher side and the said category is not being charged with Electricity duty and FPPCA charges. Therefore the hike proposed is by 15 paisa than existing charges. However Hon'ble Commission may take appropriate decision.

Commission's View:

The Commission while designing retail tariffs for the FY 2021-22 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The stakeholder may refer to Chapter 7 for the detailed rationale.

2.2.11. Third party independent assessment of agriculture connection and consumption

Stakeholder's Comment:

To avoid selective targeting of few allied agriculture consumers, we suggest The Commission to carry out a third-party independent assessment of agriculture connection and consumption in the state of Goa. This study will provide information on the total agriculture consumption and whether correct tariff and consumer category is applied for all agriculture connection in Goa. This will also help optimise the revenue of ED-Goa from agriculture sector.

Petitioner's Response:

ED-Goa submits that the Commission may like to take appropriate decision in this matter.

Commission's View:

The suggestion of the stakeholder is noted.

2.2.12. Exclusion of expenses of transmission and system operation functions from Wires Business and Retail Supply Business

Stakeholder's Comment:

It is suggested that ED-Goa should not include any assets & expenses of transmission and system operation functions in the wires and supply functions of the distribution licensee.

Petitioner's Response:

ED-Goa submits that as on date the transmission, Distribution and SLDC functions are part of Electricity Department of Goa under one umbrella and all the cost and expenses towards above functions are part of the ARR filed by ED-Goa.

Commission's View:

The Petitioner has been directed by Directive 10.1.8 to unbundle the Electricity Department, Goa for segregation of functions of SLDC, Transmission and Distribution.

2.2.13. Notification of Power Quality Regulations

Stakeholder's Comment:

The Commission is requested to issue Power Quality Regulations on the basis of model Regulations of Forum of Regulators and direct ED-Goa to implement the same as improving power quality will increase revenue of ED-Goa and reduce T&D losses.

Petitioner's Response:

ED-Goa submits that continuous efforts have been put by Electricity Department-Goa for maintaining the power quality by undertaking various schemes and capital expenditure to improve the reliability of the system and reduce the interruptions. ED-Goa is installing underground cabling of 33kV and 11 kV network. Moreover ED-Goa does not have own generation within the state and power is procured from central generating station so any disturbance in the grid and variation in the voltages effects the state grid. However ED-Goa has put OLTC in operations at various substations and voltages are controlled by operating the OLTCs at various substations.

Further it is submitted that The Commission may take appropriate decision in this matter.

Commission's View:

The suggestion of the Stakeholder and the comments of Petitioner is noted. The Commission has already notified SOP Regulations providing limits/timelines for various individual /overall Standard of Performance.

2.2.14. Formation of District Co-ordination Committees

Stakeholder's Comment:

In accordance with Section 166 (5)(b) of the Electricity Act 2003 it is requested to The Commission to direct ED-Goa to form District Co-ordination Committees for two Districts (North & South Goa) in order ;

1. To coordinate and review the extension of electrification and distribution in each district
2. To review quality of power supply and consumer satisfaction; and
3. To promote energy efficiency and its conservation.

Petitioner's Response:

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

Commission's View:

The suggestion of the Stakeholder is noted. However, the said Committee can only be constituted by appropriate Government, this may be taken up with the Government of Goa.

2.2.15. Adoption of Central Electricity Authority (CEA) Measures relating to Safety and Electric Supply Regulations 2010

Stakeholder's Comment:

Central Electricity Authority (CEA) issued regulations concerning Measures relating to Safety and Electric Supply Regulations 2010 as required by section 177(3) of E.A 2003 which superseded the age old Indian Electricity rules, 1956. The Commission is requested to direct ED-Goa to adopt CEA safety regulations as amended up to date and also to develop a SOP for communication and training of all latest developments to all engineers in the department.

Petitioner's Response:

ED-Goa submits that CEA Safety and Electric Supply Regulations 2010 automatically superseded the Indian Electricity Rules, 1956. EDG is bound to adhere to the latest safety Regulations issued by CEA.

Commission's View:

The Commission agrees with the Petitioner that it is bound to adhere to the CEA Safety and Electric Supply Regulations 2010.

2.2.16. Increase in intra-state T&D losses to 20.38% for FY 2016-17 with respect to approved losses of 11.25%

Stakeholder's Comment:

There is an increase of intra state T&D losses Distribution Losses for FY 2016-17 over audited losses of 20.38% with respect to approved Losses of 11.25% without any explanation for such a huge deviation.

Petitioner's Response:

ED-Goa submits that the Inter State Losses are uncontrollable for the state. ED-Goa submits that it has made several efforts to reduce the distribution losses. However, in FY 2016-17, ED-Goa was going through transition in billing and collection agencies, which might have contributed to increase in losses.

Commission's View:

The intra-state T&D losses are not allowed as per actuals and are allowed on a normative basis, in line with the relevant JERC MYT Regulations, 2014. Therefore, the Commission has retained the intra-state T&D loss target of 11.25% for FY 2016-17. The loss due to under-achievement is borne by the Petitioner and not passed on to the Consumers through tariff.

2.2.17. Computation of RPO for FY 2021-22

Stakeholder's Comment:

The petitioner in its submission while computing the Renewable Purchase Obligation (RPO) has computed the quantum of RPO for FY 2021-22 by multiplying the RPO percentage with the difference of sale of power within state and power purchase from hydro, thereby not considered the losses within the distribution area- an approach which is not in line with the JERC (Procurement of Renewable Energy) Regulations – 2010 which prescribes for the computation of RPO quantum as a percentage of total energy mix of consumption, excluding Hydro Power in the area of a distribution licensee (which will include the network losses as well).

Petitioner's Response:

ED-Goa submits that it has considered the computation and methodology in line with The Commission tariff order dated 19th May 2020. Further in accordance with the Regulation 1 (i) of JERC (Procurement of Renewable Energy) Regulations, 2010 prescribes that the renewable energy shall be purchased at the defined minimum percentage of the total sales during the year.

Commission's View:

The Commission has determined the RPO for FY 2021-22 in line with the applicable Regulations.

2.2.18. Computation of Cross Subsidy Surcharge (CSS)

Stakeholder's Comment:

It is submitted that the petitioner while computing the cross-subsidy surcharge has considered hiked Average Billing Rate (ABR) compared to the ABR approved by The Commission in the Tariff order for FY 2020-21, which was computed basis the electricity tariff approved for FY 2020-21. The Commission is requested to consider the impact of the proposed decrease in electricity tariff on the computation of ABR while determining the cross-subsidy surcharge

Petitioner's Response:

ED-Goa submits that the cross-subsidy surcharge is calculated based on the methodology adopted by The Commission in the previous tariff orders for FY 2019-20 and FY 2020-21.

Commission's View:

The Commission has determined the CSS for the FY 2021-22 based on the revised ARR. The Commission believes that the tariff should progressively reflect the cost of supply. The Commission while determining the tariff for FY 2021-22 has considered the prudent cost of the Petitioner and has accordingly determined the Open Access charges and tariff for each consumer category. The stakeholder may refer to Chapter 8 for the detailed rationale.

2.2.19. Computation of Additional Surcharge

Stakeholder's Comment:

The Commission may propose a methodology for additional surcharge which is scientific and legally valid in line with the Tariff policy and Discoms should be asked to conclusively demonstrate stranded capacity on account of open access.

Petitioner's Response:

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

Commission's View:

The suggestion of the Stakeholder is noted. The Petitioner has been directed to submit the quarterly details of power stranded in Section 8.2 of this Order.

2.2.20. Creation of appropriate framework for by which the STOA/Power Exchange rates can be considered as a part of the merit order of Discom

Stakeholder's Comment:

The Commission may consider evolving appropriate framework by which the STOA/Power Exchange rates can be considered as a part of the merit order of Discom. This proposal will not cause any loss to the Discom in any circumstances since the bids are cleared on the Power Exchange only when the prices are less than quoted price and in case if bids are not cleared at the desired rates, they can always call upon the despatches from their tied-up stations under long term PPA. This will be a win-win situation for the Discom as well as the consumers of the state.

Petitioner's Response:

ED-Goa submits that it ensures Merit Order despatch for CGS as ordered in the Tariff Order of the while procuring power from its tied-up sources.

Commission's View:

The suggestion of the Stakeholder is noted and directs the Petitioner to schedule power strictly as per the Merit Order so that only the cheaper power is scheduled.

2.2.21. Explicit provision for Renewable Energy (RE) power purchase through Green Term Ahead (GTAM) platform

Stakeholder's Comment:

The Commission may allow an explicit provision of RE power purchase through GTAM market to the Discom.

Petitioner's Response:

ED-Goa submits that there is insufficient quantum of renewable power available at GTAM platform compared to the target set for the RPO compliance also ED-Goa is not sure of clearing all the bids placed in GTAM. Hence ED-Goa procures RE power through tied –up sources and short-term market, however we are also utilising the Green Term Ahead (GTAM) platform available at IEX for procuring renewable power in order to fulfil the RPO.

Commission's View:

The Petitioner is directed to explore all available options for procurement of renewable power in order to optimize the cost and to ensure the fulfillment of RPO.

3. Chapter 3: True-up of FY 2016-17

3.1. Applicable Provisions and Background

The Commission issued the Order on Aggregate Revenue Requirement (ARR) for 1st MYT Control Period (FY 2016-17 to FY 2018-19), and Retail Tariff for FY 2016-17 on 18th April 2016 (hereinafter referred to as the "ARR Order").

The True up for the FY 2016-17 is being carried out in accordance with Regulation 8(2) of the MYT Regulations, 2014, stated as following:

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

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

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

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

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

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

3.2. Approach for True-up for FY 2016-17

The Petitioner has requested for True-up of FY 2016-17 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 ARR Order.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2016-17 based on the audited accounts submitted by the Petitioner and has carried out the True-up exercise in accordance with the principles laid down in the JERC MYT Regulations, 2014 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2016-17 as 3091.98 MU as against approved energy sales quantum of 3,352.17 MU in the ARR Order.

Commission's Analysis

The Commission, after going through the submissions of the Petitioner including the audited accounts, has considered the energy sales as 3091.98 MU as submitted by the Petitioner for the purpose of True-up of the FY 2016-17 as shown in the following table:

Table 7: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	866.96	1038.36	1038.36
2	LTD/L.I.G.	1.10	2.86	2.86
3	LTD Domestic Mixed	12.27	5.71	5.71
4	LTC/Commercial	295.17	382.00	382.00
5	LTP/Motive Power	111.96	96.63	96.63
6	LTP Mixed (Hotel Industries)	4.39	4.23	4.23
7	LTP Ice Manufacturing	7.87	1.70	1.70
8	LTAG/Agriculture	23.86	26.52	26.52
9	LTPL (Public lighting)	36.95	30.27	30.27
10	LTPWW/Public Water works	5.56	8.26	8.26
11	LT Temporary	22.08	36.88	36.88
12	Hoardings/Signboards	0.35	0.29	0.29
	Sub-Total	**1388.52**	**1633.71**	**1633.71**
	B. HIGH TENSION SUPPLY			
13	HT (Mixed)	226.54	161.62	161.62
14	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	503.82	294.56	294.56
15	HTI Industrial	638.66	707.16	707.16
16	HTAG (Agriculture)	6.08	8.79	8.79
17	EHTI (Industrial)	179.45	159.85	159.85
18	HT P.W.W. & Sewage system	153.24	84.18	84.18
19	HT. M.E.'s Defence Estt.	26.89	25.19	25.19
20	HTI (Steel Rolling)	57.37	10.90	10.90
21	HTI / IT High Tech	22.38	1.16	1.16
22	HTI/Ice Manufacturing	1.23	0.52	0.52
23	Sale from EDG to GSPL (Div. VII)	0.00	3.41	3.41
24	Sale from EDG to GEPL (Div. V)	0.00	0.00	0.00
25	Sale from EDG to REL (Div. XIV)	0.00	0.00	0.00
26	Sale to MSEDCL (Div. VI)	0.00	0.00	0.00
27	HTI Hotel Industry	147.99	0.00	0.00
28	HT Temporary	0.00	0.93	0.93
	Sub-Total	**1963.65**	**1458.27**	**1458.27**
29	**Trading of surplus Power Div. III**	**-**	**0.00**	**0.00**
	Total	**3352.17**	**3091.98**	**3091.98**

The Commission approves the energy sales as 3091.98 MU in the True-up of FY 2016-17.

3.4. Open Access Sales and Purchase

The Petitioner has not submitted any energy sales under Open Access sales and purchase.

The Commission approves nil energy sales and purchase under Open Access in the True-up of the FY 2016-17.

3.5. Inter-State Transmission loss

Petitioner's submission

Petitioner has submitted the Inter-State transmission loss of 3.82% against a loss of 4.14% approved in the ARR Order.

Commission's analysis

The Commission in this regard directed the Petitioner to submit the supporting documentary evidence to verify the loss levels. The Petitioner has submitted the required documents based on which the inter-state loss level is determined as 3.82% for FY 2016-17. The Commission accordingly trues-up the Inter-State Losses as shown in the following table.

Table 8: Inter-State transmission loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	4.14%	3.82%	3.82%

The Commission trues-up weighted average Inter-State Transmission Loss as 3.82% in the True-up of the FY 2016-17.

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

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 20.38% in the FY 2016-17 against an approved loss of 11.25%.

Commission's analysis

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2016-17. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawal at State periphery, available on the Western and Southern Region Power Committee websites and the energy sales as approved above. Therefore, in accordance with the information available in the public domain and the audited accounts, the Commission has determined the Intra-State T&D loss of 20.38% for the FY 2016-17 against an approved loss of 11.25% in the ARR Order.

The Petitioner in the Technical Validation Session (TVS) held at the Commission's office submitted that due to change in billing agencies, EDG has witnessed a transitional change in energy accounting and billing in the past few years upto FY 2017-18 which has resulted in distortion in energy sales. The impact of the same can be observed in FY 2016-17 as well. The Intra-State T&D Loss figure determined above seem to be misleading on account of distorted data. The Commission approves the Intra-State T&D Loss as per the information provided but reiterates the direction to Petitioner to maintain and provide reliable data in the tariff proceedings of next year. The dis-incentive for the under-achievement of T&D Loss target in the FY 2016-17 is dealt with in Section 3.19.1 of this Order.

The table below provides the Intra-State T&D loss approved in the APR of FY 2016-17, Petitioner's submission and as trued-up by the Commission now.

Table 9: Intra-State transmission and distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.25%	20.38%	20.38%

The Commission, while Truing up for FY 2016-17, has considered the actual Intra-State T&D loss of 20.38% for the FY 2016-17. However, the dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been detailed in Section 3.19 and has been deducted from the trued-up ARR.

3.7. Power Purchase Quantum & Cost

Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and Co-generating Companies like Vedanta Plant 1, Vedanta Plant 2 and Goa Sponge & Power Ltd. Energy requirement is also met through NVVNL, traders and power exchanges. The Power Purchase Cost has been submitted as incurred by the Petitioner in FY 2016-17. The Power Purchase cost also includes ED, Cess, Incentive etc. and supplementary charges considered on actual basis.

The transmission charges comprise of transmission charges of Western Region, Southern Region, KPTCL and other Licensees.

The Petitioner has also submitted the cost towards compliance of RPO along with the Power Purchase cost.

The power purchase quantum and cost for FY 2016-17, as submitted by the Petitioner has been shown in the following table:

Table 10: Power Purchase cost submitted by the Petitioner (in INR Cr)

S. No	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Sector Power Stations**						
I	**NTPC**	**3,375.62**	**242.10**	**544.06**	**26.54**	**65.12**	**877.82**
	KSTPS	*1,590.99*	*79.46*	*214.81*	*16.39*	*55.97*	*366.62*
	VSTPS - I	*267.34*	*16.12*	*46.16*	*1.84*	*11.29*	*75.41*
	VSTPS - II	*90.91*	*5.80*	*14.91*	*0.59*	*2.28*	*23.58*
	VSTPS -III	*88.25*	*8.44*	*14.38*	*0.61*	*2.82*	*26.24*
	VSTPS-IV	*103.48*	*13.66*	*17.11*	*0.71*	*1.70*	*33.18*
	VSTPS-V	*46.58*	*6.14*	*7.61*	*0.55*	*0.33*	*14.64*
	KGPP	*36.40*	*7.28*	*7.46*	*(0.01)*	*2.54*	*17.26*
	GGPP	*53.29*	*8.55*	*10.85*	*(0.05)*	*1.76*	*21.11*
	SIPAT- I	*180.80*	*22.09*	*23.34*	*1.87*	*3.06*	*50.36*
	KSTPS-III	*44.58*	*5.65*	*5.95*	*0.66*	*0.04*	*12.30*
	TSTPS	-	-	-	-	*0.00*	*0.00*
	KHSTPS-I	-	-	-	-	-	-
	RSTPS	*765.46*	*40.94*	*164.94*	*3.10*	*10.83*	*219.80*
	SIPAT- II	*89.18*	*9.69*	*11.84*	*1.08*	*3.15*	*25.75*
	Mauda II	*1.19*	*1.34*	*0.29*	*(0.16)*	*(0.00)*	*1.47*
	Mouda I	*17.16*	*16.96*	*4.42*	*(0.64)*	*(0.48)*	*20.26*

S. No	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
	Add/ Less: Other Adjustments					*(30.17)*	*(30.17)*
II	**RGPPL**	**-**	**-**	**-**	**-**		**-**
					-		
III	**NPCIL**	**91.89**	**-**	**28.08**	**-**	**(0.66)**	**27.42**
	KAPS	-	-	*0.28*	-	-	*0.28*
	TAPS	*91.89*	-	*27.79*	-	*(0.66)*	*27.14*
					-		-
IV	**Traders**	**75.76**	**-**	**29.81**	**-**	**(0.28)**	**29.54**
	IEX Purchase and Sales	*30.23*	-	*16.05*	-	-	*16.05*
	Traders	*45.53*	-	*13.76*	-	*(0.28)*	*13.49*
					-		-
V	**OVER-DRAWAL**	***185.39***	**-**	***46.35***	**-**	**-**	***46.35***
					-		
	Banking	*(14.35)*	-	-	-	-	-
B	**Within State Generations**				-		
I	**CO- GENERATION**	**177.49**	**-**	**40.87**	**-**	**(0.37)**	**40.51**
	Vedanta Plant-1	*96.28*	-	*23.13*	-	*(0.04)*	*23.09*
	Vedanta Plant -2 (Sesa Goa Limited)	*75.21*	-	*16.30*	-	*(0.33)*	*15.97*
	Goa Sponge & Power Limited	*6.00*	-	*1.44*	-	-	*1.44*
					-		
C	**RPO Obligations**	***138.42***	**-**	***74.71***	**-**	***(0.84)***	***73.87***
	NVVNL Solar	*11.73*	-	*10.00*	-	*(0.19)*	*9.82*
	SECI Solar	*53.81*	-	*31.98*	-	-	*31.98*
	NVVNL Hydro (Non-Solar)	*72.88*	-	*32.72*	-	*(0.65)*	*32.07*
D	**REC Certificates**	-	-	-	-	*(0.10)*	*(0.10)*
					-		
E	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**189.35**	**189.35**
	PGCIL Transmission Charges	-	-	-	-	***189.35***	*189.35*
F	**Total**	**4,030.22**	**242.10**	**763.88**	**26.54**	**252.22**	**1,284.75**

Commission's analysis

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, Co-Generating Plants, IPP's, Exchange etc. The Petitioner has submitted the overall Power Purchase cost as INR 1,284.75 Cr inclusive of transmission charges. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc. The Petitioner has also included an adjustment of (14.35) MUs on account of banking adjustment. However, no expenses have been claimed under the banking adjustment as it pertains to an in kind transaction of power.

The Commission has verified the power purchase details as submitted by the Petitioner in its Petition with the publicly available information from the Regional Energy Accounts (REA) maintained by Western Region Power

Committee (WRPC) for the Central Generating Stations (CGS). Apart from Western Region, the Petitioner also gets supply from the Southern Region from the NTPC's Ramagundam Thermal Power Station. The Commission has validated the power purchase details pertaining to this station from the publicly available information from the Regional Energy Accounts (REA) maintained by Southern Region Power Committee (SRPC). The Commission has verified the power purchase quantum and cost as per the station-wise monthly bills submitted by the Petitioner.

The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2016-17 has adjusted the Income from UI Under-drawal in the Power Purchase cost approved now. Transmission Charges and the Other Charges submitted have been considered as Other Expenses as per actuals incurred by the Petitioner.

The Commission has considered the cost incurred towards the compliance of Renewable Purchase Obligation (RPO) in FY 2016-17 along with the Power Purchase cost. The compliance status of RPO has been discussed in detail in the subsequent section. The table below provides the summary of the power purchase quantum and the cost approved by the Commission for FY 2016-17.

Table 11: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

S. No	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Sector Power Stations**						
I	**NTPC**	**3,375.62**	**242.10**	**544.06**	**26.54**	**65.12**	**877.82**
	KSTPS	*1,590.99*	*79.46*	*214.81*	*16.39*	*55.97*	*366.62*
	VSTPS - I	*267.34*	*16.12*	*46.16*	*1.84*	*11.29*	*75.41*
	VSTPS - II	*90.91*	*5.80*	*14.91*	*0.59*	*2.28*	*23.58*
	VSTPS -III	*88.25*	*8.44*	*14.38*	*0.61*	*2.82*	*26.24*
	VSTPS-IV	*103.48*	*13.66*	*17.11*	*0.71*	*1.70*	*33.18*
	VSTPS-V	*46.58*	*6.14*	*7.61*	*0.55*	*0.33*	*14.64*
	KGPP	*36.40*	*7.28*	*7.46*	*(0.01)*	*2.54*	*17.26*
	GGPP	*53.29*	*8.55*	*10.85*	*(0.05)*	*1.76*	*21.11*
	SIPAT- I	*180.80*	*22.09*	*23.34*	*1.87*	*3.06*	*50.36*
	KSTPS-III	*44.58*	*5.65*	*5.95*	*0.66*	*0.04*	*12.30*
	TSTPS	-	-	-	-	*0.00*	*0.00*
	KHSTPS-I	-	-	-	-	-	-
	RSTPS	*765.46*	*40.94*	*164.94*	*3.10*	*10.83*	*219.80*
	SIPAT- II	*89.18*	*9.69*	*11.84*	*1.08*	*3.15*	*25.75*
	Mauda II	*1.19*	*1.34*	*0.29*	*(0.16)*	*(0.00)*	*1.47*
	Mouda I	*17.16*	*16.96*	*4.42*	*(0.64)*	*(0.48)*	*20.26*
	Add/ Less: Other Adjustments					*(30.17)*	*(30.17)*
II	**RGPPL**	**-**	**-**	**-**	**-**		**-**
					-		
III	**NPCIL**	**91.89**	**-**	**28.08**	**-**	**(0.66)**	**27.42**
	KAPS	-	-	*0.28*	-	-	*0.28*
	TAPS	*91.89*	-	*27.79*	-	*(0.66)*	*27.14*
					-		-
IV	**Traders**	**75.76**	**-**	**29.81**	**-**	**(0.28)**	**29.54**
	IEX Purchase and Sales	*30.23*	-	*16.05*	-	-	*16.05*
	Traders	*45.53*	-	*13.76*	-	*(0.28)*	*13.49*

S. No	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
					-		-
V	**OVER-DRAWAL**	***185.39***	**-**	***48.08***	**-**	**-**	***48.08***
					-		
	Banking	*(14.35)*	-	-	-	-	-
B	**Within State Generations**				-		
I	**CO- GENERATION**	**177.49**	**-**	**40.87**	**-**	**(0.37)**	**40.51**
	Vedanta Plant-1	*96.28*	-	*23.13*	-	*(0.04)*	*23.09*
	Vedanta Plant -2 (Sesa Goa Limited)	*75.21*	-	*16.30*	-	*(0.33)*	*15.97*
	Goa Sponge & Power Limited	*6.00*	-	*1.44*	-	-	*1.44*
					-		
C	**RPO Obligations**	***138.42***	**-**	***74.71***	**-**	***(0.84)***	***73.87***
	NVVNL Solar	*11.73*	-	*10.00*	-	*(0.19)*	*9.82*
	SECI Solar	*53.81*	-	*31.98*	-	-	*31.98*
	NVVNL Hydro (Non-Solar)	*72.88*	-	*32.72*	-	*(0.65)*	*32.07*
D	**REC Certificates**	-	-	-	-	*(0.10)*	*(0.10)*
					-		
E	**OTHER CHARGES**	**-**	**189.35**	**-**	**-**	-	**189.35**
	PGCIL Transmission Charges	-	*189.35*	-	-	-	*189.35*
F	**Total**	**4,030.22**	**431.45**	**765.61**	**26.54**	**62.87**	**1,286.48**

The Commission approves power purchase quantum of 4,030.22 MU and cost of INR 1,286.48 Cr in the True-up of the FY 2016-17.

3.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner has not made any submission towards Renewable Purchase Obligation (RPO) in the Petition.

Commission's analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets. Accordingly, the cumulative obligation and fulfillment till FY 2016-17 has been determined in the following table:

Table 12: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Sales within State (MU) (A)	2182.48	2880.11	2925.24	3070.56	3439.99	3420.90	3091.98
Hydro Power available at State Periphery (MU) (B)	0.00	0.00	0.00	0.00	0.00	12.62	72.88
T&D Loss (%) (C)	13.50%	9.46%	13.15%	11.16%	8.23%	15.36%	20.38%
T&D Loss (MU) (D = B * C)	0.00	0.00	0.00	0.00	0.00	1.94	14.85
Hydro Power Consumed (E = B - D)	0.00	0.00	0.00	0.00	0.00	10.68	58.03
Conventional Power Consumed (F = A - E)	**2182.48**	**2880.11**	**2925.24**	**3070.56**	**3439.99**	**3410.21**	**3033.95**
RPO (%)	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**
Solar (G)	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%
Non-Solar (H)	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%
RPO for the year (MU)	**21.82**	**57.60**	**87.76**	**92.12**	**113.52**	**121.06**	**147.15**
Solar (F * G)	5.46	8.64	11.70	12.28	20.64	28.99	50.06
Non-Solar (F * H)	16.37	48.96	76.06	79.83	92.88	92.08	97.09
Cumulative RPO (MU)	**21.82**	**79.43**	**167.18**	**259.30**	**372.82**	**493.88**	**641.03**
Solar	5.46	14.10	25.80	38.08	58.72	87.71	137.77
Non-Solar	16.37	65.33	141.39	221.22	314.10	406.18	503.26
RPO Compliance for the Year (Physical Power+ REC's) (MU)	**0.00**	**128.14**	**71.80**	**29.20**	**152.56**	**167.52**	**65.54**
Solar	0.00	0.00	0.00	0.00	6.58	79.90	65.54
Non-Solar	0.00	128.14	71.80	29.20	145.98	87.62	0.00
Cumulative RPO Compliance (MU)	**0.00**	**128.14**	**199.94**	**229.14**	**381.70**	**549.23**	**614.76**
Solar	0.00	0.00	0.00	0.00	6.58	86.48	152.02
Non-Solar	0.00	128.14	199.94	229.14	375.13	462.75	462.75
Cumulative RPO Shortfall (MU)	**21.82**	**14.10**	**30.05**	**92.97**	**53.93**	**7.47**	**103.32**
Solar	5.46	14.10	25.80	38.08	52.14	1.23	-
Non-Solar	16.37	-	4.25	54.89	1.78	6.24	103.32

As can be seen from the table as earlier, a cumulative gap of 103.32 MU is pending till the end of FY 2016-17. The same has to be carried forward to subsequent years and shall be taken up in the True ups of respective years.

3.9. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2016-17 as shown in the following table.

Table 13: Energy Balance (MU) submitted by Petitioner

S. No	Particulars	Petitioner's Submission
1	**Energy Input at Goa Periphery**	**3,705.70**

S. No	Particulars	Petitioner's Submission
2	**Total Power Scheduled/ Purchased at Goa Periphery**	
	Total Schedule Billed Drawal – CGS	**3,467.51**
	Add: Overdrawal	**211.41**
	Add: Power purchase from NVVN / Banking	**(14.35)**
	Add: Power purchase from Traders/ Open Market	**75.76**
	Add : Hydro Power	
	Less: Underdrawal	**26.01**
	Add: Renewable Power	**138.42**
	Less: Power diverted to Exchange	**-**
	Total	**3,852.72**
3	**PGCIL Losses – MUs**	**147.03**
	PGCIL Losses - %	**3.82%**
4	**Total Power Purchased within Goa State**	
	Add: Co-generation	**177.49**
	Add: Independent Power Producers (IPP)	**-**
	Total	**177.49**
5	**Total Power Purchase availability after PGCIL Losses**	**3,883.19**
	Less: Retail Sales to Consumers	3,091.98
	Distribution Losses – MUs	791.21
6	**Distribution Losses - %**	**20.38%**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for FY 2016-17 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by WRPC and SRPC and documentary evidence submitted by the Petitioner against the Inter-State Transmission Loss, the Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance as submitted by the Petitioner and now trued-up by the Commission.

Table 14: Energy Balance (MU) approved by Commission

S. No	Particulars	Petitioner's Submission	Trued-up by Commission
1	Sales within the State	3,091.98	3,091.98
	Sales to common pool consumers/Banking Return		
	Intra-State T&D Loss (%)	20.38%	20.38%
	Intra-State T&D Loss	791.21	791.21
	Less: Total Power Purchased within Goa State (Co-Generation)	177.49	177.49
	Energy Requirement at Periphery	**3,705.70**	**3,705.70**
2	**Total Power Scheduled/ Purchased at Goa Periphery**		

S. No	Particulars	Petitioner's Submission	Trued-up by Commission
	Total Schedule Billed Drawal - CGS	3,453.16	3,453.16
	Add: Over-drawal	211.41	211.41
	Add: Power purchase from Traders/ Open Market	75.76	75.76
	Less: Under-drawal	26.01	26.01
	Add: Renewable Power	138.42	138.42
	Less: Power diverted to Exchange	-	-
	Total	**3,852.72**	**3,852.72**
3	PGCIL Losses - MUs	147.03	147.03
	PGCIL Losses - %	3.82%	3.82%
4	**Energy Available at Periphery**	**3,705.70**	**3,705.70**

3.10. Operation & Maintenance (O&M) Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The MYT Regulations, 2014 consider the variation of O&M Expenses to be controllable. Regulation 9.2 of the MYT Regulation, 2014 states the following:

"9.2 Some illustrative variations or expected variations in the performance of the applicant, which may be attributed by the Commission to controllable factors include, but are not limited to the following:

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

(b)Variations in Transmission and Distribution Losses (T&D) losses in case of bundled utilities and Distribution losses in case of unbundled utilities which shall be measured as the difference between the units input into the distribution system and the units supplied and billed;

(c)Depreciation and working capital requirements;

(d)Failure to meet the standards specified in the Joint Electricity Regulatory Commission (Standards of Performance) Regulations, 2009 except where exempted;

(e)Variation in operation & maintenance expenses, except those attributable to directions of the Commission;

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

3.10.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of INR 217.47 Cr against the approved expenses of INR 239.21 Cr in the ARR of FY 2016-17, which included INR 28.20 Cr. allowed separately as provision for impact of 7th Pay Commission.

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

Table 15: Employee Expenses submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Salary	217.47
2	Wages	
3	Stipend	
4	Transport Allowance	
5	Overtime allowance	
6	Total	217.47
7	Less: Add/Deduct share of others	-
8	Total	217.47
9	Less: Amount capitalized	-
	Total Employee Expenses	**217.47**

The Petitioner, in its reply to the deficiency note issued by the Commission further submitted that the arears of INR 0.16 Cr. were paid in FY 2016-17 on account of 7th Pay Commission.

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2016-17 are reflected as INR 217.47 Cr. However, in accordance with the JERC MYT Regulations, 2014, the Employee expenses are controllable and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative employee expenses as INR 211.01 Cr. and INR 28.20 Cr. was allowed separately as provision for impact of 7th Pay Commission. As the normative employee expenses approved in the ARR Order are lesser than the actual employee expenses, the Commission considers the normative expenses of INR 211.01 Cr. Further, the arears of INR 0.16 Cr. paid in FY 2016-17 on account of 7th Pay Commission have been considered on actual basis.

The following table provides the employee expenses approved in the ARR Order, submitted by the Petitioner and now approved by the Commission.

Table 16: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Employee Expenses**	**239.21**	**217.47**	**211.17**

The Commission approves Employee Expenses of INR 211.17 (211.01+0.16) Cr in the True-up of FY 2016-17.

3.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of INR 23.51 Cr in FY 2016-17. The following table provides the A&G expenses as submitted by the Petitioner:

Table 17: A&G Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Travelling Expenses	0.27
2	Office Expenses	14.23
3	Regulatory Expenses (License + Petition Fees)	

S. No.	Particulars	Petitioner's Submission
4	Petrol, Oil, Lubricant (P.O.L)	0.01
5	Rent, Rates & Taxes	0.39
6	Advertisement & Publicity	0.12
7	Professional & Special Services	0.59
8	Other A&G Charges	6.05
9	Overtime Allowance	0.00
10	Minor Works	1.75
11	Legal, Professional & Special Service Charges	0.10
12	Other material related expenses (Other charges)	
13	**Total**	**23.51**
14	Add/Deduct share of others (to be specified)	
15	**Total expenses**	**23.51**
16	Less: Capitalized	
17	**Net expenses**	**23.51**
18	Add: Prior period	
19	**Total A&G Expenses**	**23.51**

Commission's analysis

Similar to the approach followed while approving the Employee Expenses, the A&G expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative A&G expenses as INR 9.48 Cr. As the normative A&G expenses approved in the ARR Order are lesser than the actual A&G expenses, the Commission considers the normative expenses of INR 9.48 Cr.

The following table provides the A&G expenses approved in the ARR Order, submitted by the Petitioner and now approved by the Commission:

Table 18: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Administration & General Expenses (A&G)**	**9.48**	**23.51**	**9.48**

The Commission approves the Administrative & General (A&G) expenses of INR 9.48 Cr in the True-up of FY 2016-17.

3.10.3. Repair & Maintenance (R&M) Expenses

Petitioner's submission

The Petitioner has incurred R&M expenses of INR 25.14 Cr against the approved expenses of INR 27.86 Cr in the ARR Order. The following table provides the R&M expenses as submitted by the Petitioner:

Table 19: R&M Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Plant & machinery	25.14
2	Building	
3	Hydraulic works & civil works	

S. No.	Particulars	Petitioner's Submission
4	Line cable & network	
5	Vehicles	
6	Furnitures & Fixtures	
7	Office Equipment	
8	Operating Expenses	
9	Minor R&M works	
10	**Total**	**25.14**
11	Add/Deduct share of others	
12	**Total expenses**	25.14
13	Less : Capitalized	
14	**Net expenses**	25.14
15	Add: prior period	
16	**Total R&M expenses**	**25.14**

Commission's analysis

The R&M expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved K_b (percentage point as per the norm) as 2.92% and inflation index as 7.33%. The same have been considered for determining the normative R&M expenses for FY 2016-17. The opening GFA has been considered as Rs. 1,117.45 Cr. as per the annual audited accounts. Accordingly, the normative R&M expenses have been worked out as follows:

Table 20: Normative R&M Expenses worked out by the Commission (In INR Cr)

S. No.	Particulars	Petitioner's Submission
A	Opening GFA as per the annual audited accounts	1,117.45
B	K_b approved in the ARR Order	2.92%
C	Inflation index approved in the ARR Order	7.33%
D	**Total Normative R&M Expenses (D=A*B*(1+C))**	**35.02**

As the normative R&M expenses are higher than the actual R&M expenses of INR 25.14 Cr, the Commission considers the actual R&M expenses of INR 25.14 Cr. The sharing of gains on account of over-achievement of norms is dealt with in Section 3.19.2.

The following table provides the R&M expenses approved in the ARR Order, submitted by the Petitioner and now approved by the Commission:

Table 21: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Repair & Maintenance Expenses (R&M)**	**27.86**	**25.14**	**25.14**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 25.14 Cr in the True-up of FY 2016-17.

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

The following table provides the O&M Expenses approved in the ARR of FY 2016-17, Petitioner's submission and O&M now trued-up by the Commission.

Table 22: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	239.21	217.47	211.17
2	Administrative & General Expenses (A&G)	9.48	23.51	9.48
3	Repair & Maintenance Expenses	27.86	25.14	25.14
	Total Operation & Maintenance Expenses	**276.55**	**266.12**	**245.79**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 245.79 Cr in the True-up of FY 2016-17.

3.11. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation for the FY 2016-17 as INR 101.44 Cr against an approved capitalization of INR 182.55 Cr

Commission's analysis:

The Commission with regards to capitalisation submitted by the Petitioner, sought details of the assets created out of Loan/ Equity/ Govt. Grant/ Consumer Contribution etc. In reply, the Petitioner submitted that majority of capital assets are created out of the equity contribution from Govt. of Goa and the actual borrowing of loan is only to the extent of the R-APDRP scheme. The capitalization is inclusive of assets created out of the Electricity Development Fund which is treated as Government Grant. The Petitioner has further submitted that there are no assets created out of Consumer Contribution.

It is observed that the capital expenditure and capitalisation achieved by the Petitioner is lower than approved by the Commission in the ARR Order. Lower capital expenditure signifies that enough efforts have not been undertaken in enhancing the reliability of supply to consumers. It also signifies that sufficient measures aren't being taken to provide electricity supply to un-electrified areas and equipping the distribution infrastructure with the growing demand. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for improving the service quality and targeting 24x7 supply to all consumers.

The Commission has examined the Fixed Asset Register (FAR) for FY 2016-17 as submitted by the Petitioner in detail and accordingly approves the capitalisation as shown in the following table.

Table 23: Capitalisation approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	*Assets created from RAPDRP Scheme*		32.99	32.99
2	*Assets created from Electricity Development Fund (EDF)*	182.55	29.91	29.91
3	*Assets created from Other Schemes*		38.54	38.54
	Total Capitalisation	**182.55**	**101.44**	**101.44**

The Commission approves Capitalisation of INR 101.44 Cr in the True-up of FY 2016-17.

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2016-17 excluding depreciation on assets created out of grants. The depreciation is arrived in annual accounts for FY 2016-17 based on the rates specified in the relevant CERC Tariff Regulations, 2014.

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

Table 24: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	976.42
2	Addition During the FY	101.44
3	Less: Capitalisation through Grants	49.70
4	Adjustment/Retirement During the FY	1.98
5	Closing Gross Fixed Assets	1026.18
6	Average Gross Fixed Assets	1001.30
7	Rate of Depreciation	5.19%
	Depreciation	**51.99**

Commission's analysis

Regulation 23 of the JERC MYT Regulations, 2014 states the following:

"

(a) *Depreciation shall be calculated for each year of the control period on the original cost of the fixed assets of the corresponding year.*

(b) *Depreciation shall not be allowed on assets funded by capital subsidies, consumer contributions or grants.*

(c) *Depreciation shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation. The same shall be as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. (The same may vary as notified by CERC from time to time.)*

(d) *The residual value of assets shall be considered as 10% and depreciation shall be allowed to a maximum of 90% of the original cost of the asset.*
Provided that Land shall not be treated as a depreciable asset and its cost shall be excluded while computing 90% of the original cost of the asset.

(e) *Depreciation shall be charged from the first year of operation of the asset.*
Provided that in case the operation of the asset is for a part of the year, depreciation shall be charged on proportionate basis.

(f) *A provision of replacement of assets shall be made in the capital investment plan."*

As per the norms specified in the JERC MYT Regulations, 2014 the Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2014, provided in the table below:

Table 25: Depreciation Rate (%)

Description	Rate	Opening Depreciable GFA (Less: Land & Land Rights)	Net Asset Addition/Deletion	Closing Depreciable GFA (Less: Land & Land Rights)	Average Depreciable GFA (Less: Land & Land Rights)	Effective Rate
Plant & Machinery	5.28%	1,049.48	71.28	1,120.76	1,085.12	
Buildings	3.34%	12.44	-	12.44	12.44	
Vehicles	9.50%	3.42	0.01	3.43	3.43	
Furniture & Fixtures	6.33%	2.97	0.08	3.04	3.00	
Computers & Others	15.00%	42.84	28.10	70.93	56.88	
Total		**1,111.15**	**99.46**	**1,210.61**	**1,160.88**	**5.75%**

The weighted average depreciation rate is computed as 5.75% against a rate of 5.28% approved in the ARR Order.

The Petitioner, while determining the opening RoE has worked out the opening GFA by deducting the capitalisation of INR 201.11 Cr. through Electricity Duty Fund (INR 63.95 Cr. from FY 2008-09 to FY 2010-11 and INR 137.16 Cr. from FY 2011-12 to FY 2015-16) from the opening GFA of INR 1,117.45 Cr. as per audited annual accounts. The Commission had approved a closing GFA of INR 1,055.45 Cr for calculation of depreciation during the True-up of FY 2015-16. However, it observes that the Petitioner has now submitted additional information in respect of cumulative capitalisation through Electricity Duty Fund from FY 2008-09 onwards, some of which were not deducted from the GFA in the earlier Tariff Orders as the aforesaid information was not available to the Commission at the time of issuance of these Tariff Orders. Accordingly, the Commission has considered the opening GFA as INR 916.34 Cr for calculation of depreciation for FY 2016-17, determine as follows:

Table 26: Opening GFA (net of capitalisation through EDF/Govt. Grants) approved by the Commission for FY 2016-17 (In INR Cr)

S. No	Particulars	Trued-up by Commission
1	Opening GFA as per Audited Annual Accounts	1117.45
2	Less: Assets capitalized through EDF from FY 2008-09 to FY 2010-11	63.95
3	Less: Assets capitalized through EDF from FY 2011-12 to FY 2015-16	137.16
4	**Opening GFA (net of capitalisation through EDF/Govt. Grants)**	**916.34**

In respect of addition of GFA during the FY, the Commission has not considered depreciation on assets created from the Electricity Duty Fund, as the same has been treated as a Grant from the Government of Goa, in line with the approach adopted in the True-up of FY 2015-16, last year. The following table provides the calculation of depreciation during the FY 2016-17:

Table 27: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	888.87	976.42	916.34
2	Addition During the FY	182.55	101.44	101.44
3	Less: Capitalisation through EDF	-		29.91
4	Less: Capitalisation through Grants	96.00	49.70	32.99

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
5	Net Addition During the FY	86.55	51.74	38.54
6	Less: Retirement During the FY	-	1.98	1.98
7	Closing Gross Fixed Assets	975.42	1,026.18	952.90
8	Average Gross Fixed Assets	932.15	1,001.30	934.62
9	Average Gross Fixed Assets (Net of Land and Land Rights)			928.32
10	Weighted average Rate of Depreciation (%)	5.28%	5.19%	5.75%
11	Depreciation	**49.22**	**51.99**	**53.38**

The Commission approves depreciation of INR 53.38 Cr in the True-up of FY 2016-17.

3.13. Interest and Finance Charges

Petitioner's submission

Interest on Loan has been estimated based on the normative loan calculation whereby 70% of the capitalization (net of capitalisation from grants) during the year have been considered as normative debt addition during the year. Opening balance of normative loan for FY 2016-17 is considered as per the approved closing normative loan in truing up of FY 2015-16. Further, the rate of interest has been considered as State Bank of India Prime Lending Rate (SBI PLR) of 14.05% (rate as on 1st April 2016). Further, the Petitioner has considered finance charges of INR 2.25 Cr. as per audited annual accounts.

Commission's analysis:

Regulation 24 of the JERC MYT Regulations, 2014 provides as below:

"

(a) *The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans*

(b) *If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.*

Provided that where equity actually deployed is less than 30% of the capital cost, the actual loan shall be considered for determination of interest on loans.

(c) *Actual loan or normative loan, if any, shall be referred as gross normative loan in this Regulation.*

(d) *The normative loan outstanding as of 1st April of control period shall be computed by deducting the cumulative repayment as approved by the Commission (basis as mentioned below) up to 31st March of current period (a year before control period) from the gross normative loan.*

(e) *The repayment for the control period shall be deemed to be equal to the depreciation allowed for the year.*

(f) *Notwithstanding any moratorium period availed by the Distribution Licensee, the repayment of the loan shall be considered from the first year of the control period as per annual depreciation allowed.*

(g) *The rate of interest shall be the weighted average rate of interest calculated on the basis of actual loan portfolio at the beginning of each year of the control period, in accordance with terms and conditions of relevant loan agreements, or bonds or non-convertible debentures.*

Provided that if no actual loan is outstanding but normative loan is still outstanding, the last available weighted average rate of interest shall be applicable.

Provided further that the interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.

Provided also that exception shall be made for the existing loans which may have different terms as per the agreements already executed if the Commission is satisfied that the loan has been contracted for and applied to identifiable and approved projects.

(i) *The Distribution Licensee shall make every effort to refinance the loan as long as it results in net benefit to the consumers.*

Provided that the cost associated with such refinancing shall be eligible to be passed through in tariffs and the benefit on account of refinancing of loan and interest on loan shall be shared in the ratio of 50:50 between the Distribution Licensee and the consumers.

Provided further that the Distribution Licensee shall submit the calculation of such benefit to the Commission for its approval. •

(ii) *(The Distribution Licensee shall enable tracking of the loans converted into grants under schemes, like APDRP by providing information and data regularly to the Commission and for ensuring that the interest on these loans which has been passed on to the consumers inappropriately in the earlier years shall be recovered from the Distribution Licensee."*

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete capitalisation during the year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% shall be considered as normative loan. Further, the Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt:equity ratio of 70:30.

The Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on 1st April 2016. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average normative loan during the year with the opening loan considered equivalent to the closing loan approved in the truing up of FY 2015-16. The addition in loan has been considered as explained above and the repayment is considered the same as depreciation during the year. Further, the Commission has considered finance charges of INR 2.25 Cr. as per audited annual accounts.

The following table provides the Interest on Loan, approved by the Commission in the ARR Order, Petitioners submission and now trued-up by the Commission.

Table 28: Interest and Finance charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	491.11	268.62	268.62
2	Add: Normative Loan During the year	60.59	36.22	26.98
3	Less: Normative Repayment	49.22	51.99	53.38
4	Closing Normative Loan	502.48	252.85	242.21
5	Average Normative Loan	496.79	260.73	255.42
6	Rate of Interest (%)	11.60%	14.05%	14.05%
7	**Interest on Loan**	**57.63**	**36.63**	**35.89**
8	Financing Charges	0.00	2.25	2.25
9	**Interest and Finance Charges**	**57.63**	**38.88**	**38.13**

The Commission approves Interest and Finance Charges of INR 38.13 Cr in the True-up of the FY 2016-17.

3.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations, 2014. Opening equity has been considered as 30% of GFA computed by the Petitioner for FY 2016-17 (Net of assets funded by consumer contribution, capital subsidies and grants). The equity addition has been considered to the tune of 30% of assets capitalized (net of capitalisation from grants) during the year. The rate of RoE has been considered as 16% on post tax basis as per JERC MYT Regulations, 2014.

Commission's analysis:

Regulation 27 of the MYT Regulations, 2014 provides as follows:

"

(a) *the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower:*

Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.

(b) *The return on the equity invested in working capital shall be allowed from the date of start of commercial operation.*

(c) *16% post-tax return on equity shall be considered irrespective of whether the Distribution Licensee has claimed return on equity in the ARR Petition"*

The opening equity has been considered as 30% of the opening GFA considered for computation of Depreciation. As the complete asset capitalisation during the year has been funded through equity, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalisation (net of capitalisation through ED and Government Grants) in line with the JERC MYT Regulations, 2014. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% on post-tax basis.

Table 29: Return on Capital Base approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	266.66	274.90	274.90
2	Additions on account of new capitalisation	25.97	15.52	11.56
3	Closing Equity	292.63	290.42	286.46
4	Average Equity	**279.64**	**282.66**	**280.68**
5	Return on Equity (%)	**16%**	**16%**	**16%**
6	**Return on Equity**	**44.74**	**45.23**	**44.91**

The Commission approves a Return on Equity as INR 44.91 Cr in the True-up of FY 2016-17.

3.15. Interest on Consumer Security Deposits

Petitioner's submission

The Petitioner has considered the actual Interest on Security Deposit of INR 3.81 Cr. paid as per the annual audited accounts.

Table 30: Interest on Consumer Security Deposits submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Security Deposit	25.25
2	Add: Deposits During the year	7.32
3	Less: Deposits refunded	2.33
4	Closing Security Deposit	30.24
5	Average Security Deposit	27.75
6	Rate of Interest (%)	7.75%
7	**Interest on Security Deposit**	**2.15**
8	**Interest paid to consumers**	**3.81**

The Petitioner has determined the Interest on Security Deposits on normative basis as per Tariff Regulations, 2009, but has not considered the same in the ARR as no interest has been paid to consumers in the FY 2016-17.

Commission's analysis:

The Petitioner has computed the normative Interest on Security Deposit as per Tariff Regulations, 2009, however, the true-up of FY 2016-17 is being done in accordance with the provisions of JERC MYT Regulations, 2014. Accordingly, the Commission has considered the interest on consumer security deposits as per audited annual accounts as follows:

Table 31: Interest on Consumer Security Deposits as per Audited Annual Accounts (In INR Cr)

S. No	Particulars	As per Annual Audited Accounts
1	Opening Security Deposit	25.25
2	Add: Deposits During the year	7.32
3	Less: Deposits refunded	2.33
4	Closing Security Deposit	30.24
5	Average Security Deposit	27.75
5	**Interest on Security Deposit**	**3.81**

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

Table 32: Interest on Consumer Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**6.82**	**3.81**	**3.81**

The Commission approves Interest on Security Deposit as INR 3.81 Cr. in the True-up of FY 2016-17.

3.16. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2014.

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

(a) Receivables of two months of billing

(b) Less: power purchase cost of one month

(c) Less: consumer security deposit but excluding Bank Guarantee/Fixed Deposit

(d) Inventory for two months based on annual requirement for previous year

The interest on working capital is computed at 9.30% (SBI base rate as on 1st April 2016) as has been shown in the table below:

Table 33: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Receivables of two months of billing	279.57
2	Less: Power Purchase Cost for one month	107.06
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.00
4	Total Working Capital Requirement	172.50
5	Less: Security Deposit excluding BG/FDR	25.25
6	Net Working Capital Requirement	147.25
7	Rate of Interest (%)	9.30%
8	**Interest on Working Capital**	**13.69**

Commission's analysis:

The computation of working capital requirements and the rate of interest to be considered are stipulated in the JERC MYT Regulations, 2014. Regulation 25 of the JERC MYT Regulations, 2014 states the following:

"Working capital for retail supply activity of the licensee shall consist of:

(i) Receivables of two months of billing
(ii) Less power purchase cost of one month
(iii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt
(iv) Inventory for two months based on annual requirement for previous year.

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be 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 worked out on the normative figures."

The Commission, for determination of working capital requirement of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the average consumer security deposit as above and the inventory for two months as per the audited accounts of FY 2016-17.

The Commission has considered the SBI Base rate as on 1st April 2016 in line with the JERC MYT Regulations, 2014.

Accordingly, the Interest on Working Capital is approved shown in the following table:

Table 34: Interest on Working Capital approved by Commission (In INR Cr)

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Approved by Commission
1	Receivables of two months of billing	282.36	279.57	244.59
2	Less: Power Purchase Cost for one month	104.47	107.06	107.21
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.00	0.00	0.00
4	Total Working Capital Requirement	177.89	172.50	137.38
5	Less: Security Deposit excluding BG/FDR	87.97	25.25	27.75
6	Net Working Capital Requirement	89.92	147.25	109.63
7	Rate of Interest (%)	9.30%	9.30%	9.30%
8	**Interest on Working Capital**	**8.36**	**13.69**	**10.20**

The Commission approves the Interest on Working Capital as INR 10.20 Cr. in the True- up of FY 2016-17.

3.17. Provision for Bad & Doubtful Debts

Petitioner's submission

As no bad and doubtful debts have actually been written off during FY 2016-17, the Petitioner has considered provision for bad and doubtful debt for FY 2016-17 as NIL.

Commission's analysis:

As per Regulation 32 of the JERC MYT Regulations, 2014:

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

It is observed that as per the audited accounts, the licensee has not actually written off any bad and doubtful debts for the FY 2016-17.

The Commission therefore has not considered any bad and doubtful debts in the True-up of FY 2016-17.

3.18. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted NTI of INR 27.08 Cr. in the True-Up of FY 2016-17 against INR 6.74 Cr approved by the Commission in the ARR for FY 2016-17. The Non–Tariff Income as submitted by the Petitioner has been shown in the following table:

Table 35: Non- Tariff Income submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Miscellaneous Revenue	20.25
2	Meter Rent	6.83

S. No	Particulars	Petitioner's Submission
	Total	**27.08**

Commission's analysis:

The Commission after prudence check from the annual audited accounts has observed discrepancies in the submission of the Petitioner. The Petitioner has considered INR 6.83 Cr. as meter rent whereas the same is observed to be INR 30.20 Crore in the audited annual accounts. Further, the Petitioner has not considered Sundry Charges of INR (4.54) Cr. either as revenue from sale of power or as NTI. The Petitioner has also not considered revenue from Delayed Payment Charges (DPC) as part of NTI. The Commission observes that only 50% of DPC charged has been considered as revenue from sale of power in the audited annual accounts and the remaining 50% has been paid to the Govt. of Goa as Electricity Duty. Accordingly, the Commission has only considered the DPC included in revenue from sale of power as part of NTI. Further, the Commission as discussed while truing up the Power Purchase Cost in the earlier section, has considered the revenue from UI Sales and Income from trading as a part of the Power Purchase Cost due to their inherent nature

Accordingly, the Commission approves the Non-Tariff Income as shown in the following table:

Table 36: Non- Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Miscellaneous Revenue	-	20.25	20.25
2	Meter Rent	-	6.83	30.20
3	Sundry Charges	-	-	(4.54)
4	Delayed Payment Charges	-	-	19.72
5	**Total**	**6.74**	**27.08**	**65.63**

The Commission approves Non-Tariff Income of INR 65.63 Cr in the True-up of FY 2016-17.

3.19. Incentive/Disincentive towards over/under achievement of norms

The Commission, in accordance with Regulation 10 and Regulation 11 of the JERC MYT Regulations, 2014 (reproduced below) has considered the sharing of gains and losses on account of over/under achievement of norms as follows:

"10. Mechanism for Sharing of Gains with Respect to Norms and Targets

Mechanism for pass through of gains or losses:

10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.

...

11. Mechanism for Sharing of Losses with Respect to Norms and Targets

(1) The licensee shall bear the entire loss on account of its failure to achieve the norms laid down by the Commission or targets set by the Commission from time to time."

3.19.1. Dis-incentive on account of under-achievement of Intra- State Transmission & Distribution (T&D) loss

The Commission had approved the T&D loss target of 11.25% in the ARR Order. The Petitioner has achieved T&D loss of 20.38% as explained in Section 3.6. The dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been considered at INR 2.63/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The excess purchase of power has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (3,091.98 MU) with the actual Intra-State T&D Loss (20.38%).

The assessment of dis-incentive on account of under-achievement of T&D loss target is shown in the following table:

Table 37: Dis-incentive on account of under-achievement of Intra-State Distribution Loss target

S. No	Particulars	As per Approved Intra-State T&D Loss	Approved by the Commission
1	Retail Sales (MU)	3,091.98	3,091.98
2	T&D Loss (%)	11.25%	20.38%
3	Power Purchase at State/UT Periphery (MU)	3,483.92	3,883.19
4	Excess Power Purchase (MU)		(399.27)
5	Average Power Purchase Cost (APPC) (INR/kWh)		2.63
6	Gain/ (Loss) (INR Cr.)		(104.99)
7	**Sharing of 100% of Loss with the Petitioner (INR Cr.)**		(104.99)

The Commission determines and approves INR 104.99 Cr. as dis-incentive on account of under-achievement of T&D loss target for the FY 2016-17.

3.19.2. Incentive on account of over-achievement of norms for Repair & Maintenance (R&M) Expenses

The Commission has determined the normative R&M expenses for FY 2016-17 as INR 35.02 Crore, as explained in Section 3.10.3 of this Order, against the actual R&M expenses of INR 25.14 Cr. as per audited annual accounts.

The assessment of incentive on account of over-achievement of norms for R&M expenses is shown in the following table:

Table 38: Incentive on account of over-achievement of norms for R&M expenses (In INR Cr)

S. No	Particulars	Approved by the Commission
1	Normative R&M Expenses	35.02
2	Actual R&M Expenses as per Audited Annual Accounts	25.14
3	Gain/ (Loss)	9.88
4	**Sharing of 30% of Gains with the Petitioner (INR Cr.)**	**2.96**

The Commission approves INR 2.96 Cr. as incentive for FY 2016-17 on account of over-achievement of norms for R&M expenses. Further, the Commission approves (Rs. 102.03 Cr.) ((104.99)+2.96) as incentive/(dis-incentive) towards over/under achievement of norms.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,677.41 Cr is submitted for approval in the True-up of FY 2016-17.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2016-17 as given in the following table:

Table 39: Aggregate Revenue Requirement approved by Commission for FY 2016-17 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost inclusive of cost towards compliance of RPO	1,253.58	1,284.75	1,286.48
2	Operation & Maintenance Expenses	276.55	266.12	245.79
3	Depreciation	49.22	51.99	53.38
4	Interest and Finance charges	57.63	38.88	38.13
5	Interest on Working Capital	8.36	13.69	10.20
6	Interest on Security Deposit	6.82	3.81	3.81
7	Return on Equity	44.74	45.23	44.91
8	Provision for Bad Debt	0.00	0.00	0.00
9	Other Expenses	3.98	0.00	0.00
10	Incentive/ (Disincentive) on achievement of norms	0.00	0.00	(102.03)
11	**Total Revenue Requirement**	**1,700.87**	**1,704.47**	**1,580.68**
10	Less: Non-Tariff Income	6.74	27.08	65.63
11	**Net Revenue Requirement**	**1,694.13**	**1,677.41**	**1,515.05**

The Commission approves net Aggregate Revenue Requirement of INR 1,515.05 Cr. in the True-up of FY 2016-17.

3.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2016-17 as INR 1,370.88 Cr against revenue of 1,322.62 Cr approved by the Commission in the ARR Order. The following table provides the revenue at existing tariff as submitted by the Petitioner:

Table 40: Revenue at existing tariff submitted by the Petitioner for FY 2016-17

S. No	Category	Sales (MU)	Revenue from FC (Rs. Cr.)	Revenue from EC (Rs. Cr.)	Revenue from FPPCA (Rs. Cr.)	Total Revenue (Rs. Cr.)
	A. LOW TENSION SUPPLY					
1	LTD/Domestic	1038.36	15.93	197.83	11.63	225.39
2	LTD/L.I.G.	2.86	0.12	8.59	0.46	9.17

S. No	Category	Sales (MU)	Revenue from FC (Rs. Cr.)	Revenue from EC (Rs. Cr.)	Revenue from FPPCA (Rs. Cr.)	Total Revenue (Rs. Cr.)
3	LTD Domestic Mixed	5.71	0.27	2.69	0.14	3.10
4	LTC/Commercial	382.00	7.76	149.63	8.58	165.98
5	LTP/Motive Power	96.63	4.90	26.95	2.03	33.88
6	LTP Mixed (Hotel Industries)	4.23	0.18	2.94	0.15	3.28
7	LTP Ice Manufacturing	1.70	0.05	0.67	0.05	0.77
8	LTAG/Agriculture	26.52	0.43	2.10	0.02	2.54
9	LTPL (Public lighting)	30.27	1.11	12.50	0.56	14.17
10	LTPWW/Public Water works	8.26	0.21	2.48	0.22	2.91
11	LT Temporary	36.88	2.23	19.20	0.97	22.40
12	Hoardings/Signboards	0.29	0.08	0.60	0.05	0.73
	Sub-Total	**1633.71**	**33.26**	**426.18**	**24.88**	**484.32**
	B. HIGH TENSION SUPPLY					
13	HT (Mixed)	161.62	22.36	62.59	6.28	91.22
14	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	294.56	46.03	226.13	20.25	292.41
15	HTI Industrial	707.16	59.18	305.25	27.87	392.30
16	HTAG (Agriculture)	8.79	0.54	1.49	0.00	2.02
17	EHTI (Industrial)	159.85	10.53	78.61	8.83	97.96
18	HT P.W.W. & Sewage system	84.18	6.91	58.85	4.79	70.55
19	HT. M.E.'s Defence Estt.	25.19	1.17	13.05	1.05	15.28
20	HTI (Steel Rolling)	10.90	3.69	13.10	1.39	18.19
21	HTI / IT High Tech	1.16	0.15	0.54	0.04	0.74
22	HTI/Ice Manufacturing	0.52	0.05	0.24	0.02	0.30
23	Sale from EDG to GSPL (Div. VII)	3.41	0.00	1.82	0.13	1.96
24	Sale from EDG to GEPL (Div. V)	0.00	0.00	0.00	0.00	0.00
25	Sale from EDG to REL (Div. XIV)	0.00	0.00	0.00	0.00	0.00
26	Sale to MSEDCL (Div. VI)	0.00	0.00	0.06	0.00	0.06
27	HTI Hotel Industry	0.00	0.00	0.00	0.00	0.00
28	HT Temporary	0.93	0.05	0.16	0.00	0.21
	Sub-Total	**1458.27**	**150.65**	**761.89**	**70.66**	**983.19**
29	**Trading of surplus Power Div. III**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
30	**Arrears**	**47.71**	**0.00**	**1.30**	**0.00**	**1.30**
	Total	**3139.69**	**183.91**	**1189.37**	**95.54**	**1468.81**

Commission's analysis

The Commission has verified revenue from sale of power within the State in the FY 2016-17 from the audited accounts. However, the Commission has not considered the energy sales and revenue from Arrears as the same does not pertain to the current FY. The category-wise revenue now Trued-up by the Commission is shown in the following table:

Table 41: Revenue at existing tariff approved by Commission for FY 2016-17

S. No	Category	Sales (MU)	Revenue from FC (Rs. Cr.)	Revenue from EC (Rs. Cr.)	Revenue from FPPCA (Rs. Cr.)	Total Revenue (Rs. Cr.)
	A. LOW TENSION SUPPLY					
1	LTD/Domestic	1038.36	15.93	197.83	11.63	225.39
2	LTD/L.I.G.	2.86	0.12	8.59	0.46	9.17
3	LTD Domestic Mixed	5.71	0.27	2.69	0.14	3.10
4	LTC/Commercial	382.00	7.76	149.63	8.58	165.98
5	LTP/Motive Power	96.63	4.90	26.95	2.03	33.88
6	LTP Mixed (Hotel Industries)	4.23	0.18	2.94	0.15	3.28
7	LTP Ice Manufacturing	1.70	0.05	0.67	0.05	0.77
8	LTAG/Agriculture	26.52	0.43	2.10	0.02	2.54
9	LTPL (Public lighting)	30.27	1.11	12.50	0.56	14.17
10	LTPWW/Public Water works	8.26	0.21	2.48	0.22	2.91
11	LT Temporary	36.88	2.23	19.20	0.97	22.40
12	Hoardings/Signboards	0.29	0.08	0.60	0.05	0.73
	Sub-Total	**1633.71**	**33.26**	**426.18**	**24.88**	**484.32**
	B. HIGH TENSION SUPPLY					
13	HT (Mixed)	161.62	22.36	62.59	6.28	91.22
14	HTI (Industrial) Ferro Metallurgical/ Steel Melting/Power Intensive.	294.56	46.03	226.13	20.25	292.41
15	HTI Industrial	707.16	59.18	305.25	27.87	392.30
16	HTAG (Agriculture)	8.79	0.54	1.49	0.00	2.02
17	EHTI (Industrial)	159.85	10.53	78.61	8.83	97.96
18	HT P.W.W. & Sewage system	84.18	6.91	58.85	4.79	70.55
19	HT. M.E.'s Defence Estt.	25.19	1.17	13.05	1.05	15.28
20	HTI (Steel Rolling)	10.90	3.69	13.10	1.39	18.19
21	HTI / IT High Tech	1.16	0.15	0.54	0.04	0.74
22	HTI/Ice Manufacturing	0.52	0.05	0.24	0.02	0.30
23	Sale from EDG to GSPL (Div. VII)	3.41	0.00	1.82	0.13	1.96
24	Sale from EDG to GEPL (Div. V)	0.00	0.00	0.00	0.00	0.00
25	Sale from EDG to REL (Div. XIV)	0.00	0.00	0.00	0.00	0.00
26	Sale to MSEDCL (Div. VI)	0.00	0.00	0.06	0.00	0.06
27	HTI Hotel Industry	0.00	0.00	0.00	0.00	0.00
28	HT Temporary	0.93	0.05	0.16	0.00	0.21
	Sub-Total	**1458.27**	**150.65**	**761.89**	**70.66**	**983.19**
29	**Trading of surplus Power Div. III**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Total	**3091.98**	**183.91**	**1188.07**	**95.54**	**1467.52**

The Commission approves the revenue from the sale of power as INR 1467.52 Cr. in the True-up of the FY 2016-17.

3.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 208.58 Cr is arrived at in the True-up of FY 2016-17.

Commission's analysis

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

Table 42: Standalone Revenue Gap/ (Surplus) determined by Commission for FY 2016-17 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1,694.13	1,677.41	1,515.05
2	Total Revenue	1,511.12	1,468.81	1,467.52
	Net Gap / (Surplus)	**183.02**	**208.59**	**47.54**

The Commission, in the True-up of FY 2016-17 approves a standalone gap of INR 47.54 Cr. The Petitioner has submitted that the entire gap for the FY 2016-17 is committed to be funded by the Government of Goa by way of budgetary support. The Petitioner in this regard has submitted the letter dated 11th February 2016 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2016-17. Accordingly, no revenue gap is carried forward in the future years.

4. Chapter 4: True-up of the FY 2017-18, FY 2018-19 and FY 2019-20

4.1. Applicable provisions

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

*"**8. Annual Review of Performance and True-up***

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

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

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

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

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

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

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

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

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

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

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

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

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

……….”

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

Petitioner's submission:

The Petitioner has not submitted the True-Up Petition for FY 2017-18, FY 2018-19 and FY 2019-20. Further, the Petitioner has submitted that the preparation of financial statements for FY 2017-18 and FY 2018-19 are under progress post which the audit shall be undertaken, and the financial statements for FY 2019-20 are yet to be prepared.

Commission's analysis:

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

The Commission reiterates its direction to the Petitioner to prepare and submit the audited accounts for FY 2017-18, FY 2018-19 and FY 2019-20 based on commercial principles along with the True-up Petitions by 30th November 2021.

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

5. Chapter 5: Annual Performance Review of FY 2020-21

5.1. Applicable Provisions and Background

The MYT Order for each year of the Control Period for the FY 2019-20 to FY 2021-22 was issued by the Commission on 20th May 2019 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2019-20. The Annual Performance Review for the FY 2020-21 is to be carried out in accordance with the Regulation 11 of the JERC MYT Regulations 2018:

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

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

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

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

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

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;*

………"

5.2. Approach for the Review for the FY 2020-21

Petitioner's submission:

The Petitioner has submitted the APR of FY 2020-21 based on the actual performance during the H1 (April-September 2020) of the year and the revised estimates for H2 (October - March 2021) of the year. The projections for H2 of FY 2020-21 are arrived at by expected escalation over performance of H1.

Commission's analysis:

The Commission for the purpose of estimating the energy demand of the State sought the information of historical sales, number of consumers and connected load of the previous 5 years till FY 2020-21 (till H1) from the Petitioner. Month-wise information for the last 3 years from FY 2016-17 to FY 2018-19 were also sought from the

Petitioner in the first Deficiency Note dated December 18, 2020. Various anomalies and gaps are observed in the data provided, which are listed as follows:

- In the data on Energy sales provided for FY 2017-18 and FY 2018-19, a decrease is observed in categories such as LT Domestic, LT Low Income Group (LIG), LT Commercial, LT Industrial, LT Mixed/Hotel Industries, LT Agriculture, LT Agriculture (Allied Activities) etc. in FY 2018-19 over FY 2017-18. These categories constitute majority of consumption of the Petitioner.

- Even though in categories listed above a decreasing trend has been observed in FY 2018-19 over FY 2017-18, a significant increase has been observed in FY 2019-20 for most of these categories. For instance, in LT Domestic category, a Year-on-Year (YoY) decrease of 1.86% has been observed in FY 2018-19, however an increase of 10.31% has been observed in FY 2019-20. Such significant variation in energy sales is unlikely and cannot be considered for projections in energy sales for FY 2020-21.

- Month-wise segregation of data in respect of power purchase for FY 2020-21 (H1) has not been submitted

In addition to the issues in respect of commercial data such as sales, number of consumers, connected load and power purchase, the Commission observes that due to the unavailability of audited annual accounts for FY 2017-18, FY 2018-19 and FY 2019-20, it is difficult to ascertain the accuracy of the data in respect of capital expenditure and capitalisation during this period thereby leading to unreliable estimates of ARR parameters. Further, the Commission also observes that due to the Covid-19 pandemic, the estimates provided for H1 of FY 2020-21 are not reliable and would not be appropriate to make the estimates for H2 of FY 2020-21 using the data of H1.

Therefore, the Commission believes that it is not prudent to approve the revised power purchase requirement and revenue from retail sale on the basis of the unreliable information presently available. Therefore, the Commission shall consider the actual performance at the time of the True-up of the FY 2020-21 once the audited accounts are submitted by the Petitioner.

Accordingly, the Commission has decided not to undertake the Annual Performance Review of the FY 2020-21. The Commission directs the Petitioner to submit the True-up of FY 2020-21 and the APR of FY 2021-22 based on reliable data by 30th November 2021.

6. Chapter 6: Determination of Aggregate Revenue Requirement for the FY 2021-22

6.1. Background

The ARR for FY 2021-22 was approved in the MYT Order issued for the 2nd Control Period (FY 2019-20 to FY 2021-22). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2021-22 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, 2018.

6.2. Approach for determination of ARR for the FY 2021-22

The Petitioner has determined the ARR for the FY 2021-22 in accordance with the JERC MYT Regulations, 2018. The Petitioner has computed revenue from the sale of power on the basis of the Retail Tariff approved by the Commission in the Tariff Order for FY 2020-21. The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2021-22 based on figures approved in the MYT Order dated 20th May 2019. Subsequently, the revenue at existing tariff is determined to arrive at the revenue gap/surplus for the FY 2021-22.

As the Commission is not undertaking the APR of FY 2020-21 for the reasons discussed in the previous chapter, the Commission is retaining the projections and consequently costs for the FY 2021-22 at the same level as approved in the MYT Order dated 20th May 2019 excluding the sales, power purchase cost and O&M Expenses.

The Commission believes that the projections of sales Power Purchase Cost approved in the MYT Order were based on historical trends and figures. Since the latest cost trends for fixed and variable components of the power purchase costs are now available, it is prudent to revise the Power Purchase Cost. Further, energy sales has been revised due to significant slowdown in growth observed in recent years nationally and further due to the Covid-19 pandemic. Accordingly, the Commission has determined the revised Power Purchase Cost based on the revised energy sales and the same Intra-State T&D loss as approved in the MYT Order for FY 2021-22. Resultantly, the Commission has also determined the Renewable Purchase Obligation (RPO) and the Interest on Working Capital which are dependent on the Power Purchase Cost. Further, the O&M expenses as per the latest inflation numbers have been computed and approved. The Commission has determined the revenue from sale of power based on the approved energy sales, number of consumers and connected load in the FY 2021-22 to calculate the revenue gap for the year.

6.3. Projection of Number of Consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner has considered the same number of consumers and connected load as approved by the Commission in the MYT Order. However, the Petitioner has revised the energy sales downward primarily owing to the impacts of Covid-19 pandemic on energy demand.

Table 43: No. of Consumer, Connected Load and Energy Sales submitted by Petitioner

Category	No. of Consumers	Connected Load (kW)	Energy Sales (MU)
LTD/Domestic	564,396	1,630,297	1,271.03

Category	No. of Consumers	Connected Load (kW)	Energy Sales (MU)
LT-LIG/Low Income Group	1,835	231	1.40
LTC/Commercial	104,480	351,975	468.87
LTI/Industrial	5,963	140,551	82.53
LT Mixed/ LT-P Hotel Industries	156	2,868	4.56
Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	12,210	47,903	18.19
Low Tension-AG/LT-AGA (Allied Activities)	200	1,662	0.84
LT Temporary	5,181	20,684	2.58
HTD Domestic	3	300	0.42
HTC Commercial	251	74,374	128.27
HTI Industrial	930	585,240	1470.41
High Tension-Ferro/SM/PI/SR	29	98,700	530.76
High Tension-AG/HT-AGP (Pump Sets/Irrigation)	41	8,240	4.98
High Tension-AG/HT-AG (Allied Activities)	3	1,310	7.59
Military Engineering Services/defense Establishments	12	7,095	26.58
Public Lighting	215	1,600	30.21
Hoardings/Signboards	63	619	0.16
HT Temporary	1	350	2.58
Single Point Supply	1	4,035	5.79
Total	**695,970**	**2,978,033**	**4,057.74**

Commission's Analysis

In view of anomalies/gaps in information, the Commission decides to retain the same number of consumers and connected load as approved in the Business Plan Order. However, energy sales have been revised for reasons explained in Section 6.2 by considering FY 2019-20 as base year and escalating the same based on historical trends. The number of consumers, connected load and energy sales approved by the Commission for FY 2021-22 is as follows:

Table 44: No. of Consumer, Connected Load and Energy Sales approved by Commission

Category	No. of Consumers	Connected Load (kW)	Energy Sales (MU)
LTD/Domestic	564,396	1,630,297	1,301.53
LT-LIG/Low Income Group	1,835	231	1.37
LTC/Commercial	104,480	351,975	460.24
LTI/Industrial	5,963	140,551	80.91
LT Mixed/ LT-P Hotel Industries	156	2,868	4.48
Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	12,210	47,903	18.18
Low Tension-AG/LT-AGA (Allied Activities)	200	1,662	0.83
LT Temporary	5,181	20,684	9.77
HTD Domestic	3	300	0.49
HTC Commercial	251	74,374	128.26
HTI Industrial	930	585,240	1,469.88
High Tension-Ferro/SM/PI/SR	29	98,700	530.73

Category	No. of Consumers	Connected Load (kW)	Energy Sales (MU)
High Tension-AG/HT-AGP (Pump Sets/Irrigation)	41	8,240	4.81
High Tension-AG/HT-AG (Allied Activities)	3	1,310	10.48
Military Engineering Services/defense Establishments	12	7,095	26.06
Public Lighting	215	1,600	29.61
Hoardings/Signboards	63	619	0.16
HT Temporary	1	350	2.33
Single Point Supply	1	4,035	5.65
Total	**695,970**	**2,978,033**	**4,085.77**

The Commission approves Number of consumers as 695,970, Connected Load as 2,978,033 kW and Energy Sales as 4,085.77 MU in the ARR of FY 2021-22.

6.4. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has considered the same Inter- State Transmission Loss as approved by the Commission in the MYT Order.

Commission's analysis

The Commission considers the transmission loss levels for FY 2021-22 at the same levels as approved in the MYT Order

Table 45: Inter-State Transmission Loss approved by the Commission (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	For Stations in Western Region (WRPC)	3.26%	3.26%	3.26%
2	For Stations in Southern Region (SRPC)	9.87%	9.87%	9.87%

The Commission approves Inter–State Transmission Loss of 3.26% for power received from stations of Western Region and 9.87% for power received from stations of Southern Region for FY 2021-22.

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

Petitioner's Submission

The Petitioner has considered the same Intra-State T&D Loss as approved in the MYT Order.

Commission's analysis

The Commission approves the Intra-State T&D loss for the FY 2021-22 at the same level as approved in the MYT Order. The following table provides the Intra-State T&D loss approved for FY 2021-22.

Table 46: Intra-State T&D loss approved by the Commission (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State T&D loss	10.25%	10.25%	10.25%

The Commission approves the Intra-State Distribution Loss of 10.25% for FY 2021-22.

6.6. Power Purchase Quantum & Cost

Petitioner's Submission

The Petitioner has considered the power purchase quantum based on the revised allocation of power as per WRPC Letter dated 15th October 2020.

With regards to the Power purchase Cost, the main assumptions made by the Petitioner are listed below:

- The Fixed Cost and variable cost per unit has been considered the same as approved in the MYT Order.
- Cost of power purchase from Co-generation stations has been estimated based on the rate approved by the Commission in the MYT Order
- For fulfillment of RPO, the Petitioner has been procuring power from the Renewable Sources such as SECI Solar, NVVNL Solar Hindustan Waste Energy Ltd. to meet its RPO obligations in line with that approved by the Commission in the MYT Order.
- A new Power Sale Agreement (PSA) executed on 16th August 2019 with SECI for Procurement of 50 MW Wind Power (Tranche VI) for 25 years at a fixed tariff for INR 2.83/kWh plus trading margin of INR 0.07/kWh has also been considered for fulfilment of Non-Solar RPO
- Additionally, the Petitioner has proposed to purchase power from short term market at a rate of 3.77 INR/kWh for FY 2021-22, as approved in the Business Plan Order.
- PPA of Kameng Hydro Station considered in the MYT Order has been withdrawn and the same has not been considered
- Transmission charges have been estimated by escalating the per unit transmission charges derived in H2 of FY 2020-21 by 2% y-o-y.

The projected power purchase quantum and cost for FY 2021-22 is as illustrated in the following table:

Table 47: Power Purchase cost submitted by the Petitioner for FY 2021-22 (in INR Cr)

S. No.	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Sector Power Stations**				
I	NTPC	**3,678.73**	**340.04**	**721.91**	**1,061.95**
1	KSTPS	*1,554.25*	*107.71*	*222.63*	*330.34*
2	VSTPS - I	*262.81*	*23.23*	*43.95*	*67.18*
3	VSTPS - II	*100.68*	*7.25*	*16.99*	*24.24*
4	VSTPS -III	*89.18*	*9.38*	*14.91*	*24.29*
5	VSTPS-IV	*106.40*	*16.42*	*18.00*	*34.42*

S. No.	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)
6	VSTPS-V	50.41	8.17	8.71	16.88
7	KGPP	44.32	8.15	11.53	19.68
8	GGPP	58.43	10.33	13.15	23.48
9	SIPAT- I	201.64	24.78	29.59	54.37
10	KSTPS-III	49.87	6.49	7.50	13.99
11	RSTPS	705.75	53.63	180.74	234.37
12	SIPAT- II	91.15	11.01	13.52	24.53
13	Solapur	67.40	18.54	17.04	35.58
14	Gadarwara	78.45	-	49.65	49.65
15	Lara	26.16	-	12.47	12.47
16	Khargone	63.18	-	31.60	31.60
17	Mouda I	55.87	19.61	18.21	37.82
18	Mouda II	72.79	15.34	11.72	27.06
					-
II	**RGPPL**	**-**	**-**	**-**	**-**
III	**NPCIL**	**207.63**	**-**	**56.68**	**56.68**
1	KAPS	107.04	-	23.66	23.66
2	TAPS	100.59	-	33.01	33.01
					-
IV	**Traders**	**9.46**		**3.57**	**3.57**
1	IEX Purchase	9.46		3.57	3.57
2	IEX Sales	-	-	-	-
B	**Within State Generations**				
I	**CO- GENERATION**	**168.19**	**-**	**40.37**	**40.37**
1	Vedanta Plant-1	92.90		22.30	22.30
2	Goa Sponge Private Limited	5.40		1.30	1.30
3	Vedanta Plant-2	69.89		16.77	16.77
C	**RPO Obligation**	**689.82**	**-**	**275.40**	**275.40**
1	NVVNL Solar	12.40		6.82	6.82
2	SECI Solar	47.62		26.19	26.19
3	*Solar STOA*	264.60		124.36	124.36
4	Short Term Tender DEEP portal - Solar Power	-		-	-
5	Non-Solar - SECI Wind Tranche II LTOA	120.00		33.48	33.48
6	Non-Solar - SECI Wind Tranche III LTOA	100.00		25.20	25.20

S. No.	Source	Power Purchase (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)
7	Non-Solar - SECI Wind Tranche VI LTOA	*50.00*		*14.45*	14.45
8	Hindustan waste treatment plant Goa	*2.00*		*1.10*	1.10
9	Non-Solar STOA	*93.20*		*43.80*	43.80
					-
E	**Transmission Charges**	**-**	**-**	**187.53**	**187.53**
	PGCIL Transmission Charges			*187.53*	187.53
	Total	**4,716.00**	**340.04**	**1,285.46**	**1,625.50**

Commission's Analysis

The Commission has considered the same power purchase quantum for FY 2021-22 as approved in the MYT Order.

The source wise methodology followed for projecting the cost of power procurement has been detailed as follows:

1. **Variable Charges:**

- The per unit variable costs for various power stations has been computed by taking the average of the actual per unit variable cost during the months of April- September 2019. An y-o-y escalation of 5% has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for FY 2021-22.
- For procurement of power from the Open Market, the Average Round the Clock (RTC) rate for the Western Region for FY 2020-21 (till date) has been considered.
- For Co-generation and Renewable Energy Stations, the tariff has been considered as per the PPA's and Tariff Orders of respective stations.
- For new stations, the variable costs have been considered as per the submission of the Petitioner

2. **Fixed Charges:**

The fixed costs for CGS have been considered based on the Tariff Orders issued by the CERC for the respective Central Generating Stations. Since the Fixed Cost is available only till FY 2019-20, an y-o-y escalation of 2% has been considered twice over cost of FY 2019-20 to arrive at the fixed cost for FY 2021-22.

3. **Other Charges:**

No other charges have been considered for FY 2021-22. The same shall be considered as per actuals during the True-up of each year.

6.6.1. Transmission Charges

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

6.6.2. Total Power Purchase Quantum and Cost

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

Table 48: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2021-22

Details of the stations	Power Purchase at State periphery (after adjusting ISTS Losses) (MU)	Variable Charges (INR Cr)	Fixed Charges (INR Cr)	Total Charges (INR Cr)
NTPC				
KSTPS	1561.91	223.29	105.60	328.89
VSTPS - I	258.91	45.62	22.78	68.41
VSTPS - II	107.06	18.17	7.11	25.28
VSTPS -III	93.76	15.75	9.19	24.94
VSTPS-IV	113.05	18.81	16.09	34.90
VSTPS-V	53.86	9.23	8.01	17.24
KGPP	40.58	8.97	7.99	16.96
GGPP	49.76	10.65	10.13	20.78
SIPAT- I	215.11	32.90	24.29	57.19
KSTPS-III	53.49	7.51	6.36	13.87
RSTPS	705.75	185.21	52.58	237.78
SIPAT- II	94.97	15.01	10.80	25.81
Mouda II	35.96	10.97	19.05	30.02
Mouda I	53.43	16.27	19.56	35.83
Solapur	38.46	11.56	18.18	29.74
Subtotal - NTPC	**3,476.07**	**629.92**	**337.72**	**967.64**
RGPPL	**0.00**	**0.00**	**0.00**	**0.00**
NPCIL				
KAPS	107.04	28.20	0.00	28.20
TAPS	82.95	52.04	0.00	52.04
Sub Total NPCIL	**190.00**	**80.24**	**0.00**	**80.24**
Within State Generations				
Vedanta Plant-1- Co-Gen	92.90	22.30	0.00	22.30
Vedanta Plant -2- Co-Gen	69.89	16.77	0.00	16.77
Goa Sponge and private limited	5.40	1.30	0.00	1.30
Sub Total - Within State Generation	**168.19**	**40.37**	**0.00**	**40.37**
RPO				
NVVNL Solar	12.40	6.17	0.00	6.17
SECI Solar	51.10	27.19	0.00	27.19
SECI Wind (Non Solar)	306.60	80.68	0.00	80.68
Hindustan waste treatment plant Goa	2.00	1.00	0.00	1.00
Solar-REC	-	26.34	0.00	26.34
Non Solar- REC	-	5.91	0.00	5.91
Sub Total - RPO	**372.10**	**147.29**	**0.00**	**147.29**
Open Market	**305.61**	**83.03**	**0.00**	**83.03**

Details of the stations	Power Purchase at State periphery (after adjusting ISTS Losses) (MU)	Variable Charges (INR Cr)	Fixed Charges (INR Cr)	Total Charges (INR Cr)
New Stations				
Gadarwara	102.65	26.71	16.53	43.24
Lara STPP – I & II	51.57	11.04	5.81	16.85
Khargone STPP	82.90	23.87	2.28	26.15
Sub Total - New Stations	**237.12**	**61.62**	**24.62**	**86.23**
Transmission Charges			**185.60**	**185.60**
PGCIL Charges			185.60	185.60
Total	**4,749.09**	**1,042.46**	**547.94**	**1,590.40**

The Commission approves the quantum of power purchase as 4,749.09 MU at the State Periphery with a total cost of INR 1,590.4 Cr for the FY 2021-22.

The Average Power Purchase Cost (APPC) for FY 2021-22 has been determined as provided in the table below. The APPC has been computed at the State Periphery excluding the transmission charges and cost of purchase of renewable energy. The same shall be used for the purpose of compensation / payment of surplus power at the end of each settlement period in case of Net-metering consumers by the Petitioner.

Table 49: Average Power Purchase Cost (APPC) for FY 2021-22

Particular	FY 2021-22
Total Power Purchase Cost (INR Cr)	1590.40
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	332.89
Net Power Purchase Cost (INR Cr) (A)	1257.51
Total Power Purchase quantum (MU)	4749.09
Less: Quantum from renewable energy sources (MU)	372.10
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	**4376.99**
APPC (INR/kWh) (A/B)	**2.87**

The Commission approves the Average Power Purchase Cost (APPC) as INR 2.87/ kWh for the FY 2021-22 for purpose of compensation/payment to prosumer for surplus generation.

6.7. Renewable Purchase Obligation (RPO)

Petitioner's Submission

The Petitioner is required to procure power from renewable sources for meeting the RPO. The RPO requirement for FY 2021-22 as submitted by the Petitioner has been provided in the following table:

Table 50: RPO and compliance for FY 2021-22 as submitted by Petitioner

Particulars	Petitioner's Submission
Sales within State (MU)	**4,057.74**
Hydro Power available at State Periphery (MU)	-
T&D Loss (%)	10.25%

Particulars	Petitioner's Submission
Resultant Energy Sales for calculation of RPO (after adjustment of power from hydro sources) (MU)	**4,057.74**
RPO obligation (in %)	**17.00%**
Solar	8.00%
Non-Solar	9.00%
RPO obligation for the year (in MU)	**689.82**
Solar	324.62
Non-Solar	365.20
RPO compliance (Physical Power + REC Certificates)	**689.82**
Solar	324.62
Non-Solar	365.20

The Petitioner has proposed to fulfill the RPO for FY 2021-22 by way of procuring physical power from open market and bilateral agreements.

Commission's analysis:

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets. The quantum as per the revised target has to be determined on the effective energy sales i.e. effective of hydro generation.

The Petitioner is procuring physical power from solar and non-solar sources. However, the physical power is not enough to fulfill the standalone RPO for FY 2021-22. Therefore, the Commission has considered the remaining RPO to be fulfilled by the purchase of Renewable Energy Certificate (REC). The Commission has assumed the rate of purchase for both solar and non-solar REC as INR 1.00/ kWh (IEX Floor Price). The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2021-22. The following table provides the RPO as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 51: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Sales within State (MU) (A)	4,391.31	4,057.74	4,085.77
Hydro Power available at State Periphery (MU) (B)	10.88	-	-
T&D Loss (%) (C)	10.25%	10.25%	10.25%
T&D Loss (MU) (D = B * C)	1.12	-	-
Hydro Power Consumed (E = B - D)	9.77	-	-
Conventional Power Consumed (F = A - E)	**4,381.55**	**4,057.74**	**4,085.77**
RPO obligation (%)	**17.00%**	**17.00%**	**17.00%**

Description	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Solar (G)	8.00%	8.00%	8.00%
Non-Solar (H)	9.00%	9.00%	9.00%
RPO obligation for the year (MU)	**744.86**	**689.82**	**694.58**
Solar (F * G)	350.52	324.62	326.86
Non-Solar (F * H)	394.34	365.20	367.72
RPO Compliance (Physical Power) (MU)	**612.86**	**689.82**	**372.10**
Solar	314.26	324.62	63.50
Non-Solar	298.60	365.20	308.60
RPO Compliance (REC certificate purchase) (MU)	**132.00**	**-**	**322.48**
Solar	36.26	-	263.36
Non-Solar	95.73	-	59.12

The cost towards compliance of RPO computed by the Commission has been shown in the following table:

Table 52: Cost towards compliance of Renewable Purchase Obligation (RPO) (In INR Cr)

Source	RPO Quantum (MU)	Total Cost (INR Cr)
NVVNL Solar	12.40	6.17
SECI Solar	51.10	27.19
SECI Wind (Non Solar)	306.60	80.68
Hindustan waste treatment plant Goa	2.00	1.00
Solar-REC	263.36	26.34
Non-Solar- REC	59.12	5.91
Sub Total - RPO	**694.58**	**147.29**

The cost towards RPO has been considered in the power purchase cost approved by the Commission in the previous section.

6.8. Energy Balance

Petitioner's submission

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

Table 53: Energy Balance submitted by Petitioner (MU)

S. No.	Particulars	Petitioner's Submission
1	**Energy Input at Goa Periphery**	**4,352.97**
2	**Total Power Scheduled/ Purchased at Goa Periphery**	
	Total Schedule Billed Drawal - CGS	3,886.36
	Add: Power purchase from NVVN / Banking	(37.83)
	Add: Power purchase from Traders/ Open Market	9.46
	Add : Hydro Power	-
	Add: Renewable Power	689.82

S. No.	Particulars	Petitioner's Submission
	Total	**4,547.81**
3	**PGCIL Losses - MUs**	**194.84**
	PGCIL Losses - %	**4.28%**
4	**Total Power Purchased within Goa State**	
	Add: Co-generation	168.19
	Total	**168.19**
5	**Total Power Purchase availability after PGCIL Losses**	**4,521.16**
	Less: Retail Sales to Consumers	4,057.74
	Distribution Losses - MUs	463.42
6	**Distribution Losses - %**	**10.25%**

Commission's analysis

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

Table 54: Energy Balance approved by Commission at State Periphery (MU)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement			
Energy sales within the State/UT (a)	4,391.31	4,057.74	4085.77
Distribution losses (b)			
%	10.25%	10.25%	10.25%
MU	501.51	463.42	466.62
Energy required at State Periphery (c=a/(1-b))	4,892.83	4,521.16	4552.39
Energy Availability			
Availability from firm sources (d)	4,417.68	4,521.16	4256.74
Deficit/(Surplus) to be procured from Open Market (c-d)	**475.15**	**-**	**295.65**

The Commission estimates a deficit of 295.65 MU for FY 2021-22 to be procured from Open Market by the Petitioner. The cost of procuring deficit power has been included by the Commission in power procurement cost approved in the earlier section.

6.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

$R\&M_n = K \times GFA_{n-1} \times (WPI_{inflation})$

$EMP_n = (EMP_{n-1}) \times (1+G_n) \times (CPI_{inflation})$

$A\&G_n = (A\&G_{n-1}) \times (CPI_{inflation})$

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

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

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

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

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

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

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

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

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

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

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

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

6.9.1. Employee Expenses

Petitioner's submission

The Petitioner has adopted the same approach for projecting employee cost for FY 2021-22 as followed by the Commission in the MYT Order. The Petitioner has computed the employee expenses for the base year FY 2018-19 based on the available audited data for FY 2014-15, FY 2015-16 and FY 2016-17. The average value of employee expenses has been considered as the employee expenses for FY 2015-16 (Median year). Further the computed employee expenses for median year has been escalated y-o-y with CPI Inflation (4.22%) up to the base year of FY 2018-19. An impact of 7th Pay Commission of Rs. 69.27 Crore has been added to the employee expenses of the base year FY 2018-19. Thereafter the resultant employee expenses have been escalated by growth rate and annual CPI Inflation to arrive at the employee expenses for FY 2021-22.

Table 55: Employee Expenses submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Employee Cost for n-1 year	INR Cr		318.92	323.20	332.93
Growth Factor (Gn)	In %		-2.76%	-2.22%	-1.98%
CPI Inflation	In %		4.22%	5.35%	5.35%
Projected Employee Cost	**INR. Cr.**	**318.92**	**323.20**	**332.93**	**343.81**

Commission's analysis

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

"6. Values for Base Year

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

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

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

The MYT Regulations, 2018 stipulate that the values for the Base Year of the Control Period have to be determined based on the audited accounts of last three years. As submitted by the Petitioner, the audited accounts are only available latest for FY 2016-17. Further, the Petitioner has submitted that the accounts for FY 2017-18, FY 2018-19 and FY 2019-20 are under preparation and finalisation. The Commission believes that use of audited information is important in order to accurately determine the employee expenses for the Control Period (FY 2019-20 to FY 2021-22). The Commission further believes that the employee expenses for the base year have to be sacrosanct and therefore have to be determined only on the basis of audited data. The Commission in the MYT Order had determined the Employee expenses as per a certain methodology as discussed in the MYT Order. Since the Petitioner has still not been able to submit the audited accounts till FY 2018-19, the Commission finds no reason to revise the Employee expenses for the Base Year i.e. FY 2018-19. Hence, the Commission in absence of the actual audited data retains the same base year employee expenses as approved in the MYT Order for FY 2018-9. Further, as per JERC MYT Regulation, 2018, the Commission has considered the actual values for CPI. Growth Factor (Gn) has been considered as per MYT Order. Moreover, the Commission had already considered the impact of 7th Pay Commission while setting the trajectory for each year of the MYT period.

The CPI for FY 2019-20 is considered as per the actual CPI during FY 2019-20 i.e. 7.53%. The CPI for FY 2020-21 and FY 2021-22 has been considered based on average increase in CPI Index over 3 years, computed as follows:

Table 56: Computation of CPI (%)

FY	Increase in CPI Index	Average increase in CPI Index over 3 years
2017-18	3.08%	5.35%
2018-19	5.45%	
2019-20	7.53%	

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

Table 57: Employee Expenses approved by Commission (In INR Cr)

Particular	Unit	FY 2018-19 (As per MYT Order dated May 20, 2019)	FY 2019-20	FY 2020-21	FY 2021-22
Employee Cost for n-1 year	INR Cr		287.45	303.24	312.88
Growth Factor (Gn)	In %		-1.89%	-2.06%	-2.35%
CPI Inflation	In %		7.53%	5.35%	5.35%
Projected Employee Cost	**INR. Cr.**	**287.45**	**303.24**	**312.88**	**311.98**

The Commission approves Employee Expenses of INR 311.98 Cr. for FY 2021-22.

6.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner similar to methodology followed for projection of A&G Expenses in the MYT Order has computed the A&G expenses for the base year FY 2018-19 based on the available audited data for FY 2014-15, FY 2015-16 & FY 2016-17. The average value for the median year is calculated and is escalated y-o-y with annual CPI Inflation. The table below provides the A&G expenses projected for FY 2021-22 along with various parameters considered.

Table 58: A&G submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
A&G Expenses for n-1 year	INR Cr		26.87	28.00	29.50
CPI Inflation	In %		4.22%	5.35%	5.35%
Projected A&G expenses	**INR. Cr.**	**26.87**	**28.00**	**29.50**	**31.08**

Commission's analysis

Similar to the methodology followed while approving the Employee expenses, in absence of audited data available the A&G expenses for the base year cannot be revised. Hence, the Commission determines the A&G expenses for FY 2021-22 with FY 2018-19 as base expenses approved in the MYT Order and latest CPI Inflation trends. The following table provides the A&G expenses approved by the Commission for FY 2021-22:

Table 59: A&G Expenses approved by Commission (In INR Cr)

Particular	Unit	FY 2018-19 (As per MYT Order dated May 20, 2019)	FY 2019-20	FY 2020-21	FY 2021-22
A&G Expenses for n-1 year	INR Cr		25.99	27.95	29.44
CPI Inflation	In %		7.53%	5.35%	5.35%

Particular	Unit	FY 2018-19 (As per MYT Order dated May 20, 2019)	FY 2019-20	FY 2020-21	FY 2021-22
Projected A&G expenses	**INR. Cr.**	**25.99**	**27.95**	**29.44**	**31.02**

The Commission approves the Administrative & General (A&G) expenses of INR 31.02 Cr for FY 2021-22.

6.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has adopted the same methodology as followed while projecting the Employee and A&G expenses. The Petitioner has used the latest audited data and based on the norms specified in the JERC MYT Regulations, 2018 computed the R&M Expenses for FY 2021-22. K factor is calculated as the ratio of R&M over GFA for FY 2014-15, FY 2015-16 and FY 2016-17, averaged for three years. The resultant 'K' factor is then multiplied with average GFA based on revised capitalisation for FY 2021-22. Thereafter, the resultant value has been escalated by average increase in Wholesale Price Index (WPI) for FY 2017-18, FY 2018-19 and FY 2019-20 to determine the R&M expense for FY 2021-22.

The table below provides the R&M expenses proposed for FY 2021-22 along with various parameters considered.

Table 60: R&M expenses submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2021-22
Average GFA	INR. Cr.	1,731.35
K Factor	%	2.41%
WPI Inflation	%	2.96%
Projected R&M Expenses	**INR. Cr.**	**42.97**

Commission's analysis

Similar to the methodology adopted for estimating the Employee and A&G Expenses, the Commission has computed the R&M expenses for FY 2021-22 based on the revised WPI Inflation factor with 'K' factor and Opening GFA considered to be the same as approved by the Commission in the MYT Order.

The WPI for FY 2019-20 is considered as per the actual WPI during FY 2019-20 i.e. 1.68%. The WPI for FY 2020-21 and FY 2021-22 has been considered based on average increase in WPI Index over 3 years, computed as follows:

Table 61: Computation of WPI (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2017-18	2.92%	**2.96%**
2018-19	4.28%	
2019-20	1.68%	

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

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

S. No	Particulars	FY 2021-22
1	GFA (GFA_{n-1})	2760.58

S. No	Particulars	FY 2021-22
2	K factor approved for FY 2018-19 (As per MYT Order dated May 20, 2019) (K)	2.91%
3	WPI (FY 2019-20)	1.68%
	WPI (FY 2020-21)	2.96%
	WPI (FY 2021-22)	2.96%
	R&M Expenses = (K x (GFA $_{n-1}$) x (1+WPI$_{inflation}$)	**86.58**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 86.58 Cr for FY 2021-22.

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

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

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	305.87	343.81	311.98
2	Administrative & General Expenses (A&G)	29.47	31.08	31.02
3	Repair & Maintenance Expenses (R&M)	64.83	42.97	86.58
	Total Operation & Maintenance Expenses	**400.16**	**417.86**	**429.58**

The Commission approves Operation & Maintenance (O&M) expenses of INR 429.58 Cr in FY 2021-22.

6.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's Submission

The Petitioner has projected the Capex and Capitalisation for FY 2021-22 as INR 1049.00 Cr and INR 638.55 Cr respectively as against the approved Capex and Capitalisation of INR 225.00 Cr and INR 345.00 Cr. by Commission vide order dated 20th May 2019.

Table 64: Capital Expenditure and Capitalisation submitted by the Petitioner (In INR Cr)

S. No	Particulars	FY 2021-22
1	Capital Expenditure	1049.00
2	Capitalisation	638.55

Commission's analysis:

The Regulation 8.5 (d) of the MYT Regulation, 2018 stipulates the following:

"d) In case, during the annual performance review, the cumulative (starting from first Year of the Control Period up to the current Year) actual capital expenditure incurred is less than 50% of the cumulative approved capital expenditure, the Commission shall true-up the ARR elements relevant to actual capital expenditure in the current Year and remaining Years of the Control Period;"

The Petitioner as per the petition has submitted some additional schemes to be taken up during FY 2021-22. The Commission in this regard sought justification from the Petitioner for substantially higher capital expenditure and capitalisation submitted compared to the approval in the Business Plan Order. The Petitioner in its reply submitted that it will not be able to achieve the proposed capital expenditure and capitalisation since the works which were anticipated to be completed during FY 2020-21 have not yet been completed and have been deferred for FY 2021-22. Hence the capital expenditure and capitalisation for FY 2021-22 will also get deferred but did not submit any revised submission. The Commission believes that the purpose of the Business Plan Order is to plan the investments towards upgradation of infrastructure to be undertaken during the Control Period that in turn provides an overview of the costs to be incurred by the utility corresponding to the investments made. The Commission believes that at this point deviating from the plan approved in the Business Plan Order would defeat the very purpose of the Business Plan Order and MYT Regime in general. Hence, the Commission disallows any additional capital expenditure during FY 2021-22 and maintains the capital expenditure and capitalisation at the same levels as approved in the Business Plan Order. The same shall be trued-up as per actuals at the end of the current MYT Control Period.

The following table provides the capex and capitalisation as approved in the MYT Order, Petitioner's submission and now approved by the Commission:

Table 65: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	225.00	1049.00	225.00
1	Capitalisation	345.00	638.55	345.00

The Commission approves capital expenditure of INR 225.00 Cr and capitalisation of INR 345.00 Cr for FY 2021-22.

6.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the capitalisation during the FY 2021-22 shall be funded through Electricity Duty Fund, government grants for R-APDRP and through Equity infused by the State Government.

Commission's analysis

The Regulation 26 of the JERC MYT Regulations, 2018 specifies the following

"26. Debt to Equity Ratio

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

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

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

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

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

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

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

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

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

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

The Commission has considered capitalisation through electricity duty fund and R-APDRP grant as approved in the MYT and Business Plan Order. The remaining capitalisation has been proposed to be funded from Petitioner's equity which is provided by the Government of Goa in the form of equity. The equity addition has been considered on normative basis with equity higher than 30% of capitalisation considered as normative loan.

In the previous chapter the Commission has provided the reasons for not carrying out the True-up of FY 2017-18, FY 2018-19 and FY 2019-20 due to non-submission of the audited accounts for the respective years by the Petitioner. Further, the Commission has also not been able to carry out the APR of FY 2020-21 due to reasons as discussed in the Chapter 5 of this Order. Since the Petitioner has been unable to submit the audited accounts for the FY 2017-18, FY 2018-19 and FY 2019-20 and the provisional accounts till September for the FY 2020-21, the Commission has considered the opening GFA for FY 2021-22 same as closing GFA of FY 2020-21 as approved in the MYT Order. The same approach is followed for opening equity and loan considered for FY 2021-22. The same shall be revised in the True-up of the respective years based on audited accounts.

The table below provides the funding plan / capital structure as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 66: Funding Plan approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Total Capitalisation	345.00	638.55	345.00
2	Less: Capitalisation through Grant	270.00	256.62	270.00
(a)	*Electricity Duty Fund*	*120.00*	*218.50*	*120.00*
(b)	*RAPDRP Grant*	*150.00*	*38.12*	*150.00*
3	Net Capitalisation excluding grant	75.00	381.93	75.00
4	Debt (%)	70%	70%	70%
5	Equity (%)	30%	30%	30%
6	Normative Loan	52.50	267.35	52.50
7	Equity	22.50	114.58	22.50

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	2,760.58	1,965.52	2,760.58

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
2	Addition During the FY	345.00	638.55	345.00
3	Adjustment/Retirement During the FY	-	-	-
4	**Closing Gross Fixed Assets**	**3,105.58**	**2,604.07**	**3,105.58**

Table 68: Normative Loan addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	1,094.72	215.24	1,094.72
2	Add: Normative Loan During the year	52.50	267.35	52.50
3	Less: Normative Repayment	83.92	59.43	88.18
4	**Closing Normative Loan**	**1,063.25**	**423.16**	**1,059.04**

Table 69: Normative Equity addition approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	681.11	365.42	681.11
2	Additions on account of new capitalisation	22.50	114.58	22.50
3	**Closing Equity**	**703.61**	**480.00**	**703.61**

6.12. Depreciation

Petitioner's Submission

The Petitioner has determined the Opening GFA for FY 2021-22 based on the closing GFA as per the audited accounts of FY 2016-17. For each year since then, the addition in assets has been considered based on the provisional data available for capitalisation. The Petitioner has determined the weighted average rate of depreciation based on asset wise rates specified by the Commission in the JERC MYT Regulations, 2018.

The following table provides the depreciation projected by the Petitioner for FY 2021-22.

Table 70: Depreciation submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	1,276.16
2	Addition During the FY	638.55
3	Less: Capitalization through grants/ED	256.62
4	Closing Gross Fixed Assets	**1,658.08**
5	Average Gross Fixed Assets	1,467.12
6	Weighted Average Depreciation rate (%)	4.05%
	Depreciation	**59.43**

Commission's analysis:

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

"30. Depreciation

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

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

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

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

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

30.4 In case of existing assets, the balance depreciable value as on April 1, 2019, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2018, from the gross depreciable value of the assets.

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

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

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

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

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

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure, subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

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

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

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

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

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in MYT Regulations, 2018, provided in the table below:

Table 71: Depreciation Rate (%)

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

The depreciable Opening GFA considered for FY 2021-22 has been discussed in the section of Capital Structure above. Further, in accordance with the JERC MYT Regulations, 2018, no depreciation has been considered for assets created out of Grants and EDF hence the same have been deducted from the GFA approved above to arrive at the Depreciable Opening GFA as shown in the following table. The funding plan has also been provided in detail in the Capital Structure section. The depreciation has been considered on average loan during each year.

The following table provides the calculation of depreciation as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 72: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
	Opening Gross Fixed Assets	-	-	2,760.58
	Less: Assets created from Grants	-	-	490.22
1	Opening Depreciable Gross Fixed Assets	2270.36	1,276.16	2270.36
2	Addition During the FY	75.00	381.93	75.00
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	2,345.36	1,658.08	2345.36
5	Average Gross Fixed Assets	2,307.86	1,467.12	2307.86
6	Rate of Depreciation (%)	3.64%	4.05%	3.82%
	Depreciation	**83.92**	**59.43**	**88.18**

The Commission approves a depreciation of INR 88.18 Cr for FY 2021-22.

6.13. Interest on Loan

Petitioner's Submission

The Petitioner, similar to the methodology followed in determining the opening GFA for FY 2021-22 above has determined the opening loan for FY 2021-22 considering the closing loan of FY 2016-17. The addition in loan for each year has been considered on normative basis assuming the provisional data available for the respective years. The addition in loan for FY 2021-22 has been considered on normative basis with 70% of the net addition excluding grant and electricity duty as normative loan. The Rate of Interest for long term loan has been considered at the rate of 8.75% including 100 basis points as per one-year SBI MCLR Interest rate applicable on the 1st April 2020.

The following table provides the Interest on Loan as submitted by the Petitioner

Table 73: Interest on Loan as submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Normative Loan	215.24
2	Add: Normative Loan during the Year	267.35

S. No	Particulars	Petitioner's Submission
3	Less: Normative Repayment	59.43
4	**Closing Normative Loan**	**423.16**
4	Average Normative Loan	319.20
5	Rate of Interest (@SBAR rate)	8.75%
6	**Interest on Normative Loan**	**27.93**
7	Other Finance Charges	-
8	**Total Interest & Finance Charges**	**27.93**

Commission's analysis:

The Regulation 28 of the JERC MYT Regulations, 2018 specifies the following:

"28. Interest on Loan

28.1 The loans arrived at in the manner indicated in Regulation 26 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

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

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

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

28.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 30.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Opening Loan and loan addition have been considered as discussed in the section of Capital Structure.

The Petitioner does not have any loan and receives the entire financing in form of equity from Govt. of Goa excluding for schemes capitalized through Grants. In absence of any actual loans, the Commission has considered the SBI MCLR rate as on 10.01.2021 plus 100 basis points as Rate of Interest. The Interest on Loan has been calculated on the average loan during the year.

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

Table 74: Interest on loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	1,094.72	215.24	1094.72
2	Add: Normative Loan During the year	52.50	267.35	52.50
3	Less: Normative Repayment equal to Depreciation	83.92	59.43	88.18
4	Closing Normative Loan	**1,063.25**	**423.16**	1059.04

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
5	Average Normative Loan	1,078.96	319.20	1076.88
6	Rate of Interest (%)	9.55%	8.75%	8.00%
	Interest on Loan	**103.04**	**27.93**	**86.15**

The Commission approves Interest on Loan as INR 86.15 Cr for FY 2021-22.

6.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, wherein RoE is computed on 30% of the capital base. The opening equity for the Control Period has been determined similar to the approach followed in determining the Opening GFA and Opening Loan above. Equity addition is considered to the tune of 30% of assets capitalized during the year excluding assets created out of Grants. Accordingly, the Petitioner has computed the Return on Equity separately for Wires and Distribution Business in accordance with the methodology followed by the Commission in the MYT Order . The following table provides the RoE submitted by the Petitioner for the MYT Control Period.

Table 75: RoE submitted by the Petitioner (In INR Cr)

Particulars	Petitioner's Submission
Opening Equity	365.42
Additions on account of new capitalisation	114.58
Closing Equity	480.00
Average Equity	422.71
Average Equity (Wires Business)	380.44
Average Equity (Retail Supply Business) Business)	42.27
Return on Equity for Wires Business (%)	15.50%
Return on Equity for Retail Supply Business (%)	16.00%
Return on Equity for Wires Business	58.97
Return on Equity for Retail Supply Business	6.76
Return on Equity	**65.73**

Commission's analysis:

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

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

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

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up of the respective years. The following table provides the total return on equity as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 76: RoE approved by Commission (In INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Opening Equity	681.11	365.42	681.11
Additions on account of new capitalisation	22.50	114.58	22.50
Closing Equity	**703.61**	**480.00**	**703.61**
Average Equity	692.36	422.71	692.36
Average Equity (Wires Business) (90%)	623.12	380.44	623.12
Average Equity (Retail Supply Business) Business) (10%)	69.24	42.27	69.24
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	96.58	58.97	96.58
Return on Equity for Retail Supply Business	11.08	6.76	11.08
Return on Equity	**107.66**	**65.73**	**107.66**

The Commission approves Return on Equity of INR 107.66 Cr for FY 2021-22. Any Income Tax, paid by the EDG on return on equity, shall be allowed by the Commission at the time of true up based on actual figures.

6.15. Interest on Consumer Security Deposits

Petitioner's submission:

The Petitioner has projected the Interest on Security deposit on normative basis with opening Security Deposit considered equivalent to revised closing of FY 2020-21 derived on the basis of provisional data. Addition/ reduction during each year has been considered on lumpsum basis based on new consumers to be added. However, the Petitioner has claimed the actual interest on consumer security deposit proposed to be paid during the FY 2021-22.

The following table provides the calculation of interest on consumer security deposits proposed for FY 2021-22 and the actual amount claimed in the ARR.

Table 77: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Opening Security Deposit	86.22
2	Add: Deposits during the Year	23.41
3	Less: Deposits refunded	6.60
4	Closing Security Deposit	103.03
5	Average Security Deposit	94.62
6	Bank Rate	4.65%
7	**Interest on Security Deposit on normative basis**	**4.40**
8	**Interest on Security Deposit to be paid and claimed in ARR**	**16.60**

Commission's analysis:

Regulation 28.11 of the JERC MYT Regulations, 2018 stipulates the following:

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

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. The Commission has considered the net addition same as approved in the MYT Order. The Opening amount of Security Deposit has been considered equivalent to the closing amount of FY 2020-21 as approved in the MYT Order.

The Commission has considered the prevalent RBI Bank Rate for determination of the interest however the same shall be considered in accordance with the JERC MYT Regulations, 2018 during the True-Up/APR of FY 2021-22.

With regards to the interest claimed by the Petitioner, the Commission will consider the interest paid on consumer security deposits on actual basis as and when paid to consumers during the time of True-up. The table below provides the interest on consumer security deposits as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 78: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	163.19	86.22	163.19
2	Net Additions during the year	51.10	23.41	51.10
	Less: Deposits Refunded	0.00	6.60	0.00
3	Closing Security Deposit	214.29	103.03	214.29
4	Average Security Deposit	188.74	94.62	188.74
5	Rate of Interest (%)	6.25%	4.65%	4.65%
	Interest on Security Deposit	**11.80**	**4.40**	**8.78**
	Interest on Security Deposit to be paid and claimed in ARR	**11.80**	**16.60**	**8.78**

The Commission approves Interest on Security Deposit as INR 8.78 Cr for FY 2021-22.

6.16. Interest on Working Capital

Petitioner's Submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2018.

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

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

The SBI 1 Year MCLR as on 1st April 2020 plus 200 basis points i.e. 9.75% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for each year of the Control Period.

Table 79: Interest on Working Capital submitted by the Petitioner (In INR Cr)

Particular	Petitioner's Submission
Two Months Receivable	370.42
O&M expense 1 month	34.82
Maintenance spares at 40% of R&M expenses for one (1) month;	1.43
Total working Capital requirement	**406.68**
Less: Security Deposit	94.62
Net working Capital requirement	**312.05**
Interest Rate	9.75%
Interest on working capital	**30.43**

Commission's analysis:

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

"52. Norms of Working Capital for Distribution Wires Business

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

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

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

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

Less:

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

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

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

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

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

In accordance with the JERC MYT Regulations, 2018, the Commission has computed the Interest on Working Capital for FY 2021-22. The following table provides the Interest on Working Capital as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22.

Table 80: Interest on Working Capital approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	33.35	33.56	35.80
2	Maintenance spares at 40% of R&M expenses for one (1) month;	2.16	2.46	2.89
3	Receivables equivalent to two (2) months of the expected revenue from charges at the prevailing tariff	420.73	370.42	320.37
4	Less: Amount, held as security deposits	188.74	94.62	188.74
5	Net Working Capital	267.50	312.05	170.32
6	Rate of Interest (%)	10.15%	9.75%	9.75%
	Interest on Working Capital	**27.15**	**30.43**	**16.61**

The Commission approves the Interest on Working Capital as INR 16.61 Cr for FY 2021-22.

6.17. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has considered the NTI as shown in the table below:

Table 81: Non -tariff Income submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	**Non-Tariff Income**	**20.95**

Commission's analysis:

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

"64. Non-Tariff Income

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

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

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

(a) Income from rent of land or buildings;
(b) Income from sale of scrap;
(c) Income from statutory investments;
(d) Interest on advances to suppliers/contractors;
(e) Rental from staff quarters;
(f) Rental from contractors;
(g) Income from hire charges from contactors and others;

(h) Income from advertisements, etc.;
(i) Meter/metering equipment/service line rentals;
(j) Service charges;
(k) Consumer charges;
(l) Recovery for theft and pilferage of energy;
(m) Rebate availed on account of timely payment of bills;
(n) Miscellaneous receipts;
(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
(p) Prior period income, etc.:

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

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

The Commission considers the same NTI as approved in the MYT Order. The same shall be considered on actual basis during True-up/ APR of FY 2021-22. The following table provides the NTI as approved in the MYT Order, Petitioner's submission and now approved by the Commission for FY 2021-22:

Table 82: Non -tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Non- Tariff Income**	**26.32**	**20.95**	**26.32**

The Commission approves the Non-Tariff Income as INR 26.32 Cr for FY 2021-22.

6.18. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement for FY 2021-22 as shown in the following table:

Table 83: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Cost of power purchase along with Provision for RPO Compliance	1,625.50
2	Employee Expenses	343.81
3	Repair & Maintenance expenses (R&M)	31.08
4	Administration and General expenses (A&G)	42.97
5	Depreciation	59.43
6	Interest on Loan	27.93
7	Interest on Working Capital	30.43
8	Return on Equity	65.73
9	Interest on Consumer Security Deposit	16.60
10	**Total Revenue Requirement**	**2,243.48**
11	Less: Non-Tariff Income	20.95
12	**Net Revenue Requirement**	**2,222.53**

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for FY 2021-22 is approved as provided in the following table:

Table 84: Aggregate Revenue Requirement approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1,816.99	1,625.50	1,590.40
2	Operation & Maintenance Expenses	400.17	417.86	429.58
3	Depreciation	83.92	59.43	88.18
4	Interest on Loan	103.04	27.93	86.15
5	Interest on Working Capital	27.15	30.43	16.61
6	Interest on Consumer Security Deposit	11.80	16.60	8.78
7	Return on Equity	107.66	65.73	107.66
8	**Total Revenue Requirement**	**2,550.73**	**2,243.48**	**2,327.36**
9	Less: Non-Tariff Income	26.32	20.95	26.32
10	**Net Revenue Requirement**	**2,524.41**	**2,222.53**	**2,301.04**

The Commission approves net ARR of INR 2,301.04 Cr for FY 2021-22.

6.19. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 1,921.13 Cr. considering energy sales of 4,057.74 MU for FY 2021-22.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable tariff rates and as per existing slab mix of energy sales. 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 Commission has not determined revenue from Electric Vehicle Charging System Category as no sales have been observed till the month of September in FY 2020-21. The Commission shall approve the energy sales and revenue booked in this category, if any, as per actuals in the True-Up of FY 2021-22. Further, the Commission has also considered the net revenue from Power Factor incentives/penalty as per the actual realization in FY 2019-20. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2021-22 has been shown in the following table:

Table 85: Revenue at existing tariff computed by Commission for FY 2021-22

S. No.	Category	Energy Sales (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Revenue from Power Factor Incentives/ Penalty (INR Cr.)	Total Charges (INR Cr)
1	**Domestic**	**1303.39**	**25.07**	**321.67**	**0.00**	**346.73**
(i)	LT-D Domestic					
	0-100 units	512.11	6.90	76.82		83.72
	101-200 units	311.65	5.03	70.12		75.15
	201-300 units	164.71	6.65	46.94		53.59
	301-400 units	90.71	2.98	33.11		36.09

S. No.	Category	Energy Sales (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Revenue from Power Factor Incentives/ Penalty (INR Cr.)	Total Charges (INR Cr)
	Above 400 units	222.35	3.36	94.50		97.85
(ii)	Low Income Group	1.37	0.11	-		0.11
(iii)	HT-D Domestic	0.49	0.03	0.18	0.00	0.21
2	**Commercial**	**588.50**	**39.55**	**292.72**	**-1.72**	**330.56**
(i)	LT-C Commercial					
	0-100 units	75.96	3.49	26.97		30.46
	101-200 units	46.56	0.93	20.25		21.19
	201-400 units	58.56	2.55	28.40		30.95
	Above 400 units	279.16	13.62	146.56		160.18
(ii)	HT-C Commercial	128.26	18.97	70.54	-1.72	87.79
3	**Industrial**	**2086.00**	**181.30**	**991.12**	**-34.72**	**1137.70**
(i)	LT-I Industrial					
	0-500 units	16.18	3.25	5.50		8.75
	Above 500 units	64.73	3.50	25.57		29.07
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.48	0.15	2.22		2.36
(iii)	High Tension-I/HT-I					
	Connected at 11/33 kV	1223.60	127.78	587.33	-18.21	696.89
	Connected at 110 kV	246.28	21.46	115.75	-5.62	131.59
(iv)	High Tension-Ferro/SM/PI/SR	530.73	25.17	254.75	-10.88	269.04
4	**Agriculture**	**34.30**	**1.51**	**5.69**	**0.05**	**7.25**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	18.18	1.03	2.73		3.76
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.83	0.05	0.14		0.19
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.81	0.34	0.77	0.10	1.20
(iv)	High Tension-AG/HT-AG (Allied Activities)	10.48	0.09	2.04	-0.05	2.09
5	**Military Engineering Services/defense Establishments**	**26.06**	**1.45**	**13.55**	**-0.27**	**14.72**
6	**Public Lighting**	**29.61**	**0.11**	**12.44**		**12.55**
7	**Hoardings/Signboards**	**0.16**	**0.04**	**0.16**		**0.21**
8	**Temporary**	**12.10**	**0.00**	**9.90**	**-0.21**	**9.68**
(i)	LT					
	LT Domestic	0.69	0.00	0.27	-0.15	0.12
	LT Commercial	9.08	0.00	7.65		7.65
(ii)	HT	2.33	0.00	1.97	-0.06	1.91
9	**Single Point Supply**	**5.65**	**0.91**	**2.71**	**0.00**	**3.62**

S. No.	Category	Energy Sales (MU)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Revenue from Power Factor Incentives/ Penalty (INR Cr.)	Total Charges (INR Cr)
(i)	Residential Complexes	0.00	0.00	0.00		0.00
(ii)	Commercial Complexes	5.65	0.91	2.71		3.62
(iii)	Industrial Complexes	0.00	0.00	0.00		0.00
	TOTAL	**4085.77**	**249.94**	**1649.95**	**-36.88**	**1863.01**

The Commission has determined revenue from sale of power at existing tariff as INR 1,863.01 Cr. in the FY 2021-22.

6.20. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, a standalone revenue gap of INR 301.40 Cr has been determined by the Petitioner for FY 2021-22.

Commission analysis

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

Table 86: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2021-22 (In INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Net Revenue Requirement	2,222.53	2,301.04
2	Revenue from Retail Sales at Existing Tariff	1,921.13	1,863.01
	Net Gap /(Surplus)	**301.40**	**438.02**

The standalone gap at existing retail tariff is INR 438.02 Cr for FY 2021-22. This estimated gap is considered while determining the retail tariff for FY 2021-22, as discussed in the subsequent Chapter.

7. Chapter 7: Tariff Principles and Design

7.1. Overall Approach

The Commission while designing retail tariffs for the FY 2021-22 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change.

7.2. Applicable Regulations

Regulation 19 of the JERC MYT Regulations, 2018 states the following:

"***19. Annual determination of tariff***

19.1 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 17, 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 67 of the JERC MYT Regulations, 2018 states the following:

"

67. Determination of Tariff

67.1 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.

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

67.3 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.

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

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

(b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;
(c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of supply for respective categories of Consumers;
(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;
(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers."

7.3. Revenue Gap/ (Surplus) at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a standalone revenue gap at existing tariff for FY 2021-22 as shown in the table below. The Petitioner has submitted that the cumulative revenue gap for previous years from FY 2016-17 to FY 2020-21 is not being claimed as it is proposed to be recovered through budgetary support from the Govt. of Goa. However, the Petitioner has proposed to recover the Revenue Gap for FY 2021-22 partially through rationalization of tariff like kVAh based tariff for HT consumers, non-telescopic billing for LT Domestic (for consumption above 200 units), LT Commercial, LT Domestic and partially through budgetary support from the Government of Goa. The standalone revenue gap as submitted by the Petitioner has been tabulated below:

Table 87: Standalone Revenue Gap/ Surplus submitted by Petitioner (In Rs Cr)

Particulars	FY 2021-22
Net Revenue Requirement	2,222.53
Revenue from Retail Sales at Existing Tariff	1,921.13
Standalone Gap /(Surplus) for the year	**301.40**
Less: From Budgetary Support	178.65
Additional revenue from Tariff Rationalisation	122.75
Net Standalone Gap/(Surplus) for the year	0.00

Commission's analysis

The Commission in the True-up of FY 2016-17 approved the revenue gap/surplus as nil. Further, the Commission has not approved any revenue gap for FY 2017-18 to FY 2019-20 due to non –availability of audited annual accounts and for FY 2020-21 due to unreliable data. The Commission has determined the tariff for FY 2021-22 as part of this Order. Therefore, the Commission approves the standalone revenue gap for FY 2021-22 as follows:

Table 88: Standalone Revenue Gap/ (Surplus) determined by Commission (In INR Cr)

Particulars	FY 2021-22
Net Revenue Requirement	2,301.04
Revenue from Retail Sales at Existing Tariff	1,863.01
Standalone Gap /(Surplus) for the year	**438.02**

The Commission has computed a standalone revenue gap of INR 438.02 Cr in the FY 2021-22 at the existing tariff.

7.4. Treatment of the Revenue Gap/ (Surplus) and Tariff Design

The revenue gap of INR 438.02 Cr typically signifies that the revenue from the existing tariff is not commensurate with the costs incurred by the Petitioner. However, it is observed that due to unavailability of audited annual accounts for FY 2017-18, FY 2018-19 and FY 2019-20, it is difficult to ascertain the accuracy of the data in respect of capital expenditure, capitalisation, power purchase, energy sales etc. during this period thereby leading to unreliable estimates of ARR parameters for FY 2021-22. Further, the Commission also does not have verified figures for revenue from sale of power during this period. Therefore, the Commission does not have an accurate picture of standalone revenue gap at existing tariff for FY 2021-22. The Commission has accordingly dealt with this issue in the following section.

7.4.1. Designing of Tariff

Petitioner's Submission

The Petitioner has proposed to recover the revenue gap of INR 301.40 Cr. partly from moving towards kVAh based tariff for HT/EHT consumers and non-telescopic billing for LT Domestic (for consumption above 200 units) and LT Commercial categories. The Petitioner has proposed that these changes will result in an additional revenue of INR 122.75 Cr (after considering the reduction in revenue from the proposed reduction in tariff across various categories). The remaining gap of INR 178.65 Cr is proposed to be met from budgetary support from the Government of Goa. However, the Petitioner vide its letter No. 1/14/2019-FIN (BUD)/57 dated 7th January 2021 has submitted a statement from the Government of Goa that any net revenue gap ascertained by the Commission shall be completely met through budgetary support. Further, the Petitioner has proposed reduction in tariff across various categories. The category wise existing and proposed tariff submitted by the Petitioner is as under:

Table 89: Retail Tariff proposed by Petitioner

S. No	Category	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**Domestic**				
A	**Low Tension-D/LT-D**				
	0-100 units	Single Phase INR 25/Con/Month Three Phase INR 65/Con/Month	1.50 INR/kWh	Single Phase INR 25/Con/Month Three Phase INR 60/Con/Month	1.40 INR/kWh
	101-200 units		2.25 INR/kWh		2.10 INR/kWh
	201 to 300 units		2.85 INR/kWh		2.65 INR/kWh
	301 to 400 units		3.65 INR/kWh		3.45 INR/kWh
	Above 400 units		4.25 INR/kWh		4.00 INR/kWh
B	**Low Tension-LIG/LT-LIG**	INR 50/Con/Month	-	INR 40/Con/Month	-
C	**High Tension-D/HT-D**				
	All Units	INR 110/kVA/Month	3.65 INR/kWh	INR 100/kVA/Month	3.55 INR/kVAh
2	**Commercial**				
A	**Low Tension-C/LT-C**				
	0-100 units	For consumers with Load upto 20 kW INR 50/Con/Month	3.55 INR/kWh	For consumers with Load upto 20 kW INR 50/Con/Month	3.50 INR/kWh
	101-200 units		4.35 INR/kWh		4.20 INR/kWh
	201 units- 400 units	For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	4.85 INR/kWh	For consumers with Load more than 20 kW and upto 90 kW INR 55/kW/Month	4.70 INR/kWh
	Above 400 units		5.25 INR/kWh		5.10 INR/kWh
B	**High Tension-C/HT-C**				
	All Units	INR 250/kVA/month	5.50 INR/kWh	INR 250/kVA/month	5.50 INR/kVAh
3	**Industrial**				

S. No	Category	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
A	**Low Tension-I/LT-I**				
	0-500 units	INR 40/HP/Month	3.40 INR/kWh	INR 35/HP/Month	3.40 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh	INR 35/HP/Month	3.90 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**				
	All Units	INR 50/kW/Month	4.95 INR/kWh	INR 40/kW/Month	4.80 INR/kWh
C	**High Tension-I/HT-I**				
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kWh	INR 250/kVA/Month	4.60 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kWh	INR 250/kVA/Month	4.50 INR/kVAh
D	**High Tension-Ferro/SM/PI/SR**				
	All Units	INR 250/kVA/Month	4.80 INR/kWh	INR 250/kVA/Month	4.60 INR/kVAh
4	**Agricultural**				
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 18/HP/Month	1.50 INR/kWh	INR 15/HP/Month	1.40 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**				
	All Units	INR 25/HP/Month	1.75 INR/kWh	INR 20/HP/Month	1.80 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 40/kVA/Month	1.60 INR/kWh	INR 35/kVA/Month	1.50 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**				
	All Units	INR 70/kVA/Month	1.95 INR/kWh	INR 60/kVA/Month	2.10 INR/kVAh
5	**Military Engineering Services/defense Establishments**				
	All Units	INR 200/kVA/Month	5.20 INR/kWh	INR 175/kVA/Month	5.10 INR/kVAh
6	**Public Lighting**				
	All Units	INR 70/kW/Month	4.20 INR/kWh	INR 50/kW/Month	4.20 INR/kWh
7	**Hoardings/Signboards**				
	All Units	INR 70/kVA/Month	10.00 INR/kWh	INR 60/kVA/Month	10.00 INR/kWh
8	**Temporary Supply**				
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
B	LT Temporary Commercial				
C	HT Temporary				
9	**Single Point Supply**				
A	Residential Complexes	INR 110 per kVA per month or part thereof	3.55 INR/kWh	INR 100 per kVA per month or part thereof	3.55 INR/kVAh
B	Commercial Complexes	INR 220 per kVA per month or part thereof	4.80 INR/kWh	INR 200 per kVA per month or part thereof	4.70 INR/kVAh
C	Industrial Complexes	INR 220 per kVA per month or part thereof	4.40 INR/kWh	INR 200 per kVA per month or part thereof	4.30 INR/kVAh

S. No	Category	Existing Tariff		Proposed Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
10	**Electric Vehicle Charging Station**	-	3.50 INR/kWh	-	3.50 INR/kWh

Commission's analysis

As discussed above, the Commission has determined the retail tariff for the FY 2021-22 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the JERC MYT Regulations, 2018. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers
3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.
4. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs
5. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges
6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs
7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs
8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small-scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

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

1. Cost of Supply

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Discom. For example, in order to ensure that tariffs are kept in check for residential consumers, while still allowing cost recovery for Discoms, cross subsidy is 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 twofold – uncompetitive industries owing to higher input costs and inability of Discoms 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 utilities 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 Discom. By determining consumer category wise costs of supply, the Discom would be in a better position to allocate costs where relevant and determine how tariffs can be levied fairly on each category.

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

b) Approach:

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 ATE 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 Residential consumer. Thus, it believes that the most progressive way forward for EDG is to accurately determine the cost of supply is to attempt to determine Cost of Supply at various category level. The Commission notes that States like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and EDG 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 the Category wise Cost of Supply methodology is an appropriate starting point. The embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Discom’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. 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 as part of this Order has determined the tariff according to the Average Cost of Supply (ACoS) due to lack of requisite data. 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 CoS in this Order but directs the Petitioner to start maintaining this data and submit the same in the tariff proceedings of next year.

2. Tariff Affordability

a) Context

The Commission understands that the consumer base of EDG is varied and covers a wide spectrum of socio-economic backgrounds, specially the domestic category consumers. It is 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 Discom has to undergo 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 Discom across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Discom's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholder's 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.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, the Commission has approved the retail tariff for FY 2021-22 as follows:

1. The Petitioner vide its letter No. 1/14/2019-FIN (BUD)/57 dated 7th January 2021 has submitted a letter of assurance from the Government of Goa that any net revenue gap ascertained by the Commission shall be completely met through budgetary support. The Commission acknowledges the letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2021-22.

2. The Commission has not accepted the Petitioner's proposal for introducing non-telescopic billing for LT Domestic (for consumption above 200 units) and LT Commercial categories as it believes that telescoping billing is an essential element for consumers in managing their energy consumption prudently and doing away with telescopic billing would also lead to a tariff shock for many consumers.

3. The Commission has accepted the Petitioner's proposal to move towards kVAh based tariff for HT/EHT consumers. The Commission has considered the kVAh tariff for HT/EHT consumers to be the same as kWh tariff approved in the previous Tariff Order, which translates to an average tariff hike of 3.18%. However, the Commission has not approved any hike for LT consumers.

7.4.2. Tariff Adjustment and Schedule:

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

Table 90: Existing and approved tariff

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

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
	0-100 units	For consumers with Load upto 20 kW INR 50/Con/Month	3.55 INR/kWh	For consumers with Load upto 20 kW INR 50/Con/Month	3.55 INR/kWh
	101-200 units		4.35 INR/kWh		4.35 INR/kWh
	201 units- 400 units		4.85 INR/kWh		4.85 INR/kWh
	Above 400 units	For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	5.25 INR/kWh	For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	5.25 INR/kWh
B	**High Tension-C/HT-C**				
	All Units	INR 250/kVA/month	5.50 INR/kWh	INR 250/kVA/month	5.50 INR/kVAh
3	**Industrial**				
A	**Low Tension-I/LT-I**				
	0-500 units	INR 40/HP/Month	3.40 INR/kWh	INR 40/HP/Month	3.40 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh	INR 40/HP/Month	3.95 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**				
	All Units	INR 50/kW/Month	4.95 INR/kWh	INR 50/kW/Month	4.95 INR/kWh
C	**High Tension-I/HT-I**				
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kWh	INR 250/kVA/Month	4.80 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kWh	INR 250/kVA/Month	4.70 INR/kVAh
D	**High Tension- Ferro/SM/ PI/ SR**				
	All Units	INR 250/kVA/Month	4.80 INR/kWh	INR 250/kVA/Month	4.80 INR/kVAh
4	**Agricultural**				
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 18/HP/Month	1.50 INR/kWh	INR 18/HP/Month	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**				
	All Units	INR 25/HP/Month	1.75 INR/kWh	INR 25/HP/Month	1.75 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 40/kVA/Month	1.60 INR/kWh	INR 40/kVA/Month	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**				
	All Units	INR 70/kVA/Month	1.95 INR/kWh	INR 70/kVA/Month	1.95 INR/kVAh
5	**Military Engineering Services/defense Establishments**				
	All Units	INR 200/kVA/Month	5.20 INR/kWh	INR 200/kVA/Month	5.20 INR/kVAh
6	**Public Lighting**				
	All Units	INR 70/kW/Month	4.20 INR/kWh	INR 70/kW/Month	4.20 INR/kWh
7	**Hoardings/Signboards**				
	All Units	INR 70/kVA/Month	10.00 INR/kWh	INR 70/kVA/Month	10.00 INR/kWh
8	**Temporary Supply**				
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.	
B	LT Temporary Commercial				
C	HT Temporary				

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

7.4.3. Revenue from Approved Retail Tariff for FY 2021-22

Based on the retail tariff approved above, the Revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station, Residential Complexes and Industrial Complexes categories as no sales have been booked under the respective categories. the Commission as of now approves the k factor for the category as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under these categories. Further, as shown in the above table, the Commission has approved the same kVAh tariff as the existing kWh tariff for HT/EHT categories. The Power Factors (PF) for these categories have been considered based on the actual average PF submitted by the Petitioner for each of the applicable categories for FY 2019-20. Further, the provision of PF incentives/penalty is no longer applicable as per the 'General Terms and Conditions' of the Tariff Schedule (Chapter 11) due to the introduction of kVAh based tariff. The introduction of kVAh based tariff, as described above, has resulted in an additional revenue of INR 59.21 Cr vis-à-vis the revenue from existing tariff. Accordingly, the revenue from approved retail tariff is determined as follows:

Table 91: Revenue from approved retail tariff determined by Commission for FY 2021-22 (In INR Cr)

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
1	**Domestic**	**1303.39**	**25.07**	**321.68**	**346.74**	**2.66**	**0.57**
(i)	LT-D Domestic	**1301.53**	**24.92**	**321.49**	**346.41**	**2.66**	**0.57**
	0-100 units	512.11	6.90	76.82	83.72	1.63	0.35
	101-200 units	311.65	5.03	70.12	75.15	2.41	0.51
	201-300 units	164.71	6.65	46.94	53.59	3.25	0.69
	301-400 units	90.71	2.98	33.11	36.09	3.98	0.85
	Above 400 units	222.35	3.36	94.50	97.85	4.40	0.94
(ii)	Low Income Group	1.37	0.11	-	0.11	0.80	-
(iii)	HT-D Domestic	0.49	0.03	0.19	0.22	4.55	0.97
2	**Commercial**	**588.50**	**39.55**	**295.47**	**335.02**	**5.69**	**1.21**
(i)	LT-C Commercial	**460.24**	**20.59**	**222.18**	**242.77**	**5.27**	**1.12**
	0-100 units	75.96	3.49	26.97	30.46	4.01	0.85
	101-200 units	46.56	0.93	20.25	21.19	4.55	0.97
	201-400 units	58.56	2.55	28.40	30.95	5.29	1.12
	Above 400 units	279.16	13.62	146.56	160.18	5.74	1.22

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
(ii)	HT-C Commercial	128.26	18.97	73.29	92.25	7.19	1.53
3	**Industrial**	**2086.00**	**181.30**	**1009.65**	**1190.94**	**5.71**	**1.21**
(i)	LT-I Industrial	**80.91**	**6.75**	**31.07**	**37.82**	**4.67**	**0.99**
	0-500 units	16.18	3.25	5.50	8.75	5.41	1.15
	Above 500 units	64.73	3.50	25.57	29.07	4.49	0.95
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.48	0.15	2.22	2.36	5.28	1.12
(iii)	High Tension-I/HT-I	1469.88	149.24	720.35	869.58	5.92	1.26
	Connected at 11/33 kV	1223.60	127.78	604.14	731.92	5.98	1.27
	Connected at 110 kV	246.28	21.46	116.21	137.67	5.59	1.19
(iv)	High Tension-Ferro/SM/PI/SR	530.73	25.17	256.01	281.18	5.30	1.13
4	**Agriculture**	**34.30**	**1.51**	**5.97**	**7.48**	**2.18**	-
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	18.18	1.03	2.73	3.76	2.07	-
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.83	0.05	0.14	0.19	2.35	-
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.81	0.34	1.01	1.35	2.80	-
(iv)	High Tension-AG/HT-AG (Allied Activities)	10.48	0.09	2.08	2.18	2.08	-
5	**Military Engineering Services/ defense Establishments**	**26.06**	**1.45**	14.06	**15.51**	**5.95**	**1.26**
6	**Public Lighting**	**29.61**	**0.11**	**12.44**	**12.55**	**4.24**	**0.90**
7	**Hoardings/Signboards**	**0.16**	**0.04**	**0.16**	**0.21**	**12.71**	**2.70**
8	**Temporary**	**12.10**	**0.00**	**10.12**	**10.12**	**8.37**	**1.50***
(i)	LT	**9.77**	**0.00**	**8.03**	**8.03**	**8.22**	1.50*
	LT Domestic	0.69	0.00	0.27	0.27	3.99	
	LT Commercial	9.08	0.00	7.75	7.75	8.54	
(ii)	HT	**2.33**	0.00	2.09	2.09	8.98	
9	**Single Point Supply**	**5.65**	**0.91**	**2.74**	**3.65**	**6.46**	**1.37**
(i)	Residential Complexes	0.00	0.00	0.00	0.00		0.00
(ii)	Commercial Complexes	5.65	0.91	2.74	3.65	6.46	1.37
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00		0.00

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
10	**Electric Vehicle Charging Station**	-	-	-	-	-	0.74
	TOTAL	**4085.77**	**249.94**	**1672.28**	**1922.23**	**4.70**	**1.00**

**1.50 times the k factor of the relevant category in which the connection falls*

The Commission approves revenue from approved Retail Tariff of INR 1,922.23 Cr. for the FY 2021-22

The average increase in the retail tariff now approved by the Commission vis-à-vis the prevailing tariff is 3.18%. The table below provides the category wise Average Cost of Supply (ACoS), existing Average Billing Rate (ABR), Approved ABR and category wise increase in tariff approved by Commission.

Table 92: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)
Domestic	5.63	2.66	2.66	0.00%
Commercial	5.63	5.62	5.69	1.35%
Industrial	5.63	5.45	5.71	4.68%
Agriculture	5.63	2.11	2.18	3.25%
Military Engineering Services	5.63	5.65	5.95	5.30%
Public Lighting	5.63	4.24	4.24	0.00%
Hoardings/ Signboards	5.63	12.71	12.71	0.00%
Temporary	5.63	8.00	8.37	4.54%
Single Point Supply	5.63	6.40	6.46	0.83%
Total	**5.63**	**4.56**	**4.70**	**3.18%**

7.4.4. Revenue Gap/ (Surplus) at Approved Tariff

The Govt. of Goa vide its letter No. 1/14/2019-FIN (BUD)/57 dated 7th January 2021 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission. Moreover, no gap is carried forward from previous years to FY 2021-22 as the Govt. of Goa had provided an upfront budgetary support for the entire gap in FY 2020-21.

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

Table 93: Revenue Gap/ (Surplus) approved by Commission for FY 2021-22 (In INR Cr)

S. No.	Particulars	FY 2021-22
1	Net Revenue Requirement	**2,301.04**
2	Revenue from Retail Sales at Existing Tariff	1,863.01
3	Revenue from Retail Sales at Approved Tariff	1,922.23
4	Revenue Gap/ (Surplus) at Existing Tariff	438.02
5	Revenue Gap/ (Surplus) at Approved Tariff	378.81
6	Gap/(Surplus) for the previous year	-
7	Total Gap/ (Surplus)	378.81
8	Budgetary support from Govt. of Goa	378.81
9	**Final Gap/ (Surplus) for FY 2021-22**	-

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.

7.4.5. Government Budgetary Support

The Commission has approved an overall revenue gap of INR 378.81 Cr at approved tariff in FY 2021-22. The Govt. of Goa 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 same per unit Gap of INR 0.93/kWh (Difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support) loaded equally among all consumer categories. The table below provides the average tariff increase and ABR with and without Govt. budgetary support.

Table 94: Cost of Supply and tariff increase with and without Govt. Budgetary support

Category	ACoS (Rs/kwh)	ABR at Approved Tariff with Govt. Budgetary Support (Rs/kwh)	Increase with Budgetary Support (%)	ABR without Govt. Budgetary Support (Rs/kwh)	Additional Increase in case Govt. budgetary support would not have been provided (%)
Domestic	5.63	2.66	0.00%	3.59	34.85%
Commercial	5.63	5.69	1.35%	6.62	16.29%
Industrial	5.63	5.71	4.68%	6.64	16.24%
Agriculture	5.63	2.18	3.25%	3.11	42.50%
Military Engineering Services	5.63	5.95	5.30%	6.88	15.58%
Public Lighting	5.63	4.24	0.00%	5.17	21.87%
Hoardings/ Signboards	5.63	12.71	0.00%	13.64	7.29%
Temporary	5.63	8.37	4.54%	9.29	11.08%
Single Point Supply	5.63	6.46	0.83%	7.38	14.36%
Total	**5.63**	**4.70**	**3.18%**	**5.63**	**19.71%**

In case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an additional average tariff increase of 19.71%.

7.4.6. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2021-22 are as follows:

1. The Petitioner has proposed to recover the Revenue Gap for FY 2021-22 partially through rationalization of tariff like kVAh based tariff for HT consumers, non-telescopic billing for LT Domestic (for consumption above 200 units) & LT Commercial categories and partially through budgetary support from the Government of Goa.

2. The Petitioner vide its letter No. 1/14/2019-FIN (BUD)/57 dated 7th January 2021 has submitted a letter of assurance from the Government of Goa that any net revenue gap ascertained by the Commission shall

be completely met through budgetary support. The Commission acknowledges the letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2021-22.

3. The Commission has not accepted the Petitioner's proposal for introducing non-telescopic billing for LT Domestic (for consumption above 200 units) and LT Commercial categories as it believes that telescoping billing is an essential element for consumers in managing their energy consumption prudently and doing away with telescopic billing would also lead to a tariff shock for many consumers.

4. The Commission has, however, accepted the Petitioner's proposal to move towards kVAh based tariff for HT/EHT consumers only. The Commission has considered the kVAh tariff for HT/EHT consumers to be the same as kWh tariff approved in the previous Tariff Order, which translates to an average tariff hike of 3.18%.

8. Chapter 8. Open Access Charges for the FY 2021-22

8.1. Wheeling Charges

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

Petitioner's submission:

The Petitioner has adopted similar methodology as followed by the Commission in the MYT Order in line with the MYT Regulations 2018. The Petitioner has used the same allocation matrix as approved by the Commission in the MYT Order and stipulated in the MYT Regulations 2018. The allocation statement as submitted by the Petitioner has been provided below:

Table 95: Allocation Statement Wheeling and Retail Supply as submitted by Petitioner

Particulars	Allocation (%)		FY 2021-22		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (INR Cr)	Retail Supply Business (INR Cr)	Total ARR (INR Cr)
Cost of Power Purchase along with RPO compliance	0%	100%	-	1,625.50	1,625.50
Employee costs	40%	60%	137.53	206.29	343.81
Repair and Maintenance Expenses	90%	10%	38.67	4.30	42.97
Administration and General Expenses	50%	50%	15.54	15.54	31.08
Depreciation	90%	10%	53.49	5.94	59.43
Interest and Finance Charges	90%	10%	25.14	2.79	27.93
Interest on Working Capital	10%	90%	3.04	27.38	30.43
Return on Equity	90%	10%	59.16	6.57	65.73
Interest on consumer security deposit	10%	90%	1.66	14.94	16.60
Provision of Bad & Doubtful Debt	0%	100%	-	-	-
Total Revenue Requirement			**334.22**	**1,909.26**	**2,243.48**
Less: Non-Tariff Income	10%	90%	2.09	18.85	20.95
Net Revenue Requirement			**332.13**	**1,890.41**	**2,222.53**

Further, in line with the Commission's approach in the MYT Order, the Petitioner has determined the wheeling charges for relevant categories as shown in the table below:

Table 96: Wheeling Charges as submitted by the Petitioner

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	191.56	112.30	303.86	1,880.36	1.62
High Tension (HT)/ Extra High Tension (EHT) Level	0.18	28.09	28.27	2,177.38	0.13
Total	**191.73**	**140.39**	**332.13**	**4,057.74**	

Commission's analysis:

The Commission has a firm view that there has to be a proper bifurcation of all the expenses pertaining to the Petitioner between the functions of the wheeling business (wire business) and the retail supply business. The Regulation 48 of the JERC MYT Regulations, 2018 stipulates the following:

"48. Separation of Accounts of Distribution Licensee

48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable:

Table 1: Allocation Statement for segregation of Distribution Wires Business and Retail Supply Business

Particulars	***Wires Business (%)***	***Retail Supply Business (%)***
Power Purchase Expenses	*0%*	*100%*
Inter-State Transmission Charges	*0%*	*100%*
Intra-State Transmission Charges	*0%*	*100%*
Employee Expenses	*40%*	*60%*
Administration & General Expenses	*50%*	*50%*
Repair & Maintenance Expenses	*90%*	*10%*
Capital Cost	*90%*	*10%*
Depreciation	*90%*	*10%*
Interest on Long-term Loan Capital	*90%*	*10%*
Interest on working capital and on consumer security deposits	*10%*	*90%*
Bad Debts Written off	*0%*	*100%*
Income Tax	*90%*	*10%*
Non-Tariff Income	*10%*	*90%*
Income from Other Business	*50%*	*50%*

"

Therefore, in absence of segregated accounts, the Commission has considered the allocation matrix as provided in the JERC MYT Regulations, 2018

The allocation between wheeling and retail supply business for the FY 2021-22 as per the ARR approved in this Order is provided in the following table:

Table 97: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2021-22		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (Rs Cr)	Retail Supply Business (Rs Cr)	Total ARR (Rs Cr)
Power purchase expenses inclusive of Inter-State Transmission expenses	*0%*	*100%*	0.00	1590.40	1590.40
Employee costs	*40%*	*60%*	124.79	187.19	311.98
Administration and General Expenses	*50%*	*50%*	15.51	15.51	31.02

Particulars	Allocation (%)		FY 2021-22		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (Rs Cr)	Retail Supply Business (Rs Cr)	Total ARR (Rs Cr)
Repair and Maintenance Expenses	*90%*	*10%*	77.93	8.66	86.58
Depreciation	*90%*	*10%*	79.36	8.82	88.18
Interest on Loan	*90%*	*10%*	77.54	8.62	86.15
Interest on Working Capital	*10%*	*90%*	1.66	14.95	16.61
Interest on consumer security deposit	*10%*	*90%*	0.88	7.90	8.78
Return on Equity	*90%*	*10%*	96.58	11.08	107.66
Bad & Doubtful Debt written off	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**474.25**	**1853.11**	**2327.36**
Less: Non-Tariff Income	*10%*	*90%*	2.63	23.69	26.32
Net Revenue Requirement			**471.62**	**1829.42**	**2301.04**

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

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

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers
- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.
- The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.
- The energy input has been determined assuming the cumulative loss level of HT/EHT voltage as 3.64%, which is the same as approved in the MYT Order for FY 2020-21. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 10.25% as approved in the ARR of FY 2021-22.

Table 98: Parameters assumed for voltage wise allocation of wheeling costs

Category	No. of Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)
Low Tension (LT) Level	694,699	60.00%	1,907.08	16.77%
High Tension (HT)/ Extra High Tension (EHT) Level	1,271	40.00%	2,178.69	3.64%
Total	**695,970**	**100.00%**	**4,085.77**	**10.25%**

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

Table 99: Allocation of costs based on voltage level

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)
Low Tension (LT) Level	218.03	203.05	421.08	1,907.08
High Tension (HT)/ Extra High Tension(EHT) Level	0.20	50.34	50.54	2,178.69
Total	**218.23**	**253.39**	**471.62**	**4,085.77**

Table 100: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	218.03	203.05	421.08	1,907.08	2.21
High Tension (HT)/ Extra High Tension (EHT) Level	0.20	50.34	50.54	2,178.69	0.23
Total	**218.23**	**253.39**	**471.62**	**4,085.77**	

The Commission approves wheeling charge of INR 2.21/kWh at LT voltage level and INR 0.23/kWh at HT/EHT voltage level

8.2. Additional Surcharge

Petitioner's submission:

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

Table 101: Additional Surcharge calculation as submitted by Petitioner

Particulars	FY 2021-22
Total Power Purchase cost approved	1,625.50
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	340.04
Energy Sales (MU)	4,057.74
Additional Surcharge (INR/kWh)	**0.84**

Commission's analysis:

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

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

Regulation 4.5 (2) of the said Regulations stipulates:

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

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

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

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

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

Table 102: Additional Surcharge approved by Commission

Particulars	2020-21
Total Power Purchase cost approved	1,590.40
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	362.34
Energy Sales (MU)	4085.77
Additional Surcharge (INR/kWh)	**0.89**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 0.89/kwh for FY 2021-22.

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

8.3. Cross-Subsidy Surcharge

Petitioner's submission:

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

Table 103: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.31	3.98	-
High Tension (HT)/ Extra High Tension(EHT) Level	3.90	5.95	2.05

Commission's analysis:

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

- Voltage Wise losses are assumed for HT/EHT voltage level. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 10.25%, as approved in the ARR for FY 2021-22. Voltage wise losses assumed at each level have been shown in the table below:

Table 104: Voltage wise losses assumed by Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	13.63%	16.77%
High Tension (HT)/ Extra High Tension(EHT) Level	3.64%	3.64%
Total	**10.25%**	**10.25%**

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

Table 105: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1,907.08	16.77%	2,291.40
High Tension (HT)/ Extra High Tension(EHT) Level	2,178.69	3.64%	2,260.99
Total	**4,085.77**	**10.25%**	**4,552.39**

Now the overall ARR approved for FY 2021-22 is divided into variable and fixed ARR with variable ARR comprising of variable component of the power purchase cost and fixed ARR comprising of all the other costs.

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

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated between HT/EHT and LT level on the basis of input energy, as the HT/EHT network is utilized by both LT and HT/EHT network consumers.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 106: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
Low Tension (LT) Level	2,291.40	60.00%	694,699
High Tension (HT)/ Extra High Tension(EHT) Level	2,260.99	40.00%	1,271
Total	**4,552.39**	**100.00%**	**695,970**

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 107: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (INR/kwh)
Low Tension (LT) Level	930.21	524.71	1,454.92	1,907.08	7.63
High Tension (HT)/ Extra High Tension(EHT) Level	328.36	517.75	846.11	2,178.69	3.88
Total	**1,258.58**	**1,042.46**	**2,301.04**	**4,085.77**	

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

Table 108: Cross-Subsidy Surcharge approved by Commission (INR/kWh)

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.63	3.43	-
High Tension (HT)/ Extra High Tension(EHT) Level	3.88	5.82	1.94

The Commission approves nil Cross-Subsidy Surcharge at LT Voltage level and INR 1.94/kWh at HT/EHT Voltage level, in FY 2021-22.

9. Chapter 9. Fuel and Power Purchase Adjustment Mechanism

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

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

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

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of the FY 2018-19 will be undertaken by the Commission once the audited accounts of the FY 2018-19 are available. If the audited accounts for the FY 2018-19 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2021-22, 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.

9.1. Legal Provisions

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

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

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

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

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

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

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

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

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

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

9.2. Formula

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

1. Periodicity for recovery (Cycle)

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

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

2. Chargeability

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

3. Formula

The FPPCA formula shall contain the following three components:

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

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

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

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

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

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

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

Where:

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

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

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

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

4. Other Terms and conditions

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

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

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

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

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

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

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

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

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

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.39/kWh for the FY 2021-22.

Table 109: $R_{approved}$ determined by Commission for FY 2021-22

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	1,404.79
Transmission Charges (INR Cr), T_{app}	185.60
Power Purchase Quantum from CGS Stations at Ex-Bus Periphery (NTPC, NPCIL) (MU), PPO_{app}	4,273.28
Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	4.37%
Power Purchase Quantum from sources within State/ Open Market (Own Gen and Open Market) (MU), PPI_{app}	465.84
Quantum of Sale of Surplus Power (MU), PSO_{app}	-
Approved Intra-State T&D Loss (%), DL_{app}	10.25%
Energy Sales for LIG/BPL and Agriculture consumer category (MU), Z_{app} (MU)	35.67
R_{app} (INR/kWh)	**3.93**

10. Chapter 10: Directives

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

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

10.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate necessary action under Section 142 of the Electricity Act 2003 read with other provisions of the Act, and Regulations made there under.

10.1.1. Annual Statement of Accounts

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission has undertaken the True-up for the FY 2015-16 in this Order, even though in normal course and as per the provisions of Tariff Regulations 2009 and MYT Regulations, 2014, the True-up upto FY 2018-19 should have been done in this Order.* *The Commission has taken a serious note of this and directs the Petitioner to submit the true up petition along with the audited accounts for FY 2016-17 and FY 2017-18 within two months of issuance of this order and those of FY 2018-19 and FY 2020-21 by 30th November 2020.*
Petitioner's Response in the Present Tariff Petition *The audit for Financial Year 2016-17 is completed and CAG Certificate is awaited, the same will be submitted on or before Public hearing. The true-up for FY 2016-17 is filed vide this petition.* *The finalization of account for FY 2017-18 is under progress.* *Further, the collection of DCB statements for FY 2018-19 are completed and once the accounts for FY 2017-18 are finalised, the accounts for FY 2018-19 and FY 2019-20 will be prepared and subsequently after the audit, the true-up petitions shall be filed.*
Commission's Response *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner has failed to comply with the directive every year since the issuance of Tariff Order dated 27th June 2012. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 by November 2021 so that the appropriate base year values for 3rd MYT Control Period can be considered.*

10.1.2. Preparation of Fixed Asset Register

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Petitioner has although submitted the Fixed Asset Register, the information with regards to type, nature and value of assets depreciated upto 90% in the relevant year has not been provided the purpose for which FAR is prepared. The Petitioner is directed to submit the information upto FY 2019-20 in the next tariff petition.*
Petitioner's Response in the Present Tariff Petition *The Draft FAR report for FY 2019-20 (containing details regarding type, nature and value of assets depreciated upto 90%) is completed and the final FAR report shall be submitted on or before public hearing.*
Commission's Response *The Commission reiterates that the information with regards to type, nature and value of assets depreciated upto 90% in the relevant year has not been provided, the purpose for which FAR is prepared. The Petitioner is directed to submit the information upto FY 2020-21 in the next tariff petition.*

10.1.3. Energy Audit Reports

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission has noted with serious concern that the Petitioner is yet to submit the Energy Audit Reports for previous years despite repeated directions. The Commission directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority.*
Petitioner's Response in the Present Tariff Petition *The Energy Audit for 174 Nos. of 11 kV feeders out of 304 Nos. is completed and the energy audit of balance feeders are pending due to delay in procurement and replacement of faulty metering equipment as the State government has imposed some financial restriction due to Ongoing COVID-19 pandemic.*
Commission's Response *The Commission reiterates that it has noted with serious concern that the Petitioner is yet to submit the Energy Audit Reports for previous years despite repeated directions. The Commission directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority.*

10.1.4. Employee Cost / Manpower study

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission has noted with serious concern that the Petitioner is yet to submit a systematic manpower study report with a specific focus on manpower rationalization. The Commission directs the Petitioner to finalise the draft report and submit the same for the decision of the State Govt. with the next quarterly progress report*
Petitioner's Response in the Present Tariff Petition *The Manpower Study report shall be submitted on or before February 2021.*
Commission's Response

The Commission is yet to receive the Manpower Study report from the Petitioner. The Commission directs the Petitioner to submit the same along with the next quarterly progress report without further delay.

10.1.5. Interest on Consumer Security Deposit

Originally Issued in Tariff Order dated 31st March 2013
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission observes that while the Petitioner has undertaken some efforts towards compliance of this directive, a substantial payment is yet to be credited to the consumers. The Commission is of the view that adequate time has already been given to the Petitioner. The Commission directs the Petitioner to ensure payment of interest on security deposit upto FY 2019-20 latest by 31st August 2020 in accordance with the JERC MYT Regulations, 2018.*
Petitioner's Response in the Present Tariff Petition *The Interest on consumer security deposit for FY 2018-19 has been passed on to the consumers and the disbursement of interest on consumer security deposit for FY 2019-20 is under process.*
Commission's Response *The Commission acknowledges the efforts made by the Petitioner. The Commission directs the Petitioner to ensure payment of interest on security deposit upto FY 2020-21 as per the provisions of Supply Code, 2018.*

10.1.6. Sub-Divisions as Strategic Business Units

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission is reviewing the information submitted by the Petitioner. The Petitioner is required to provide the action plan for increasing collection in these two divisions and an overall strategic plan to implement the same in the entire area/ all subdivisions of Petitioner's serving area.*
Petitioner's Response in the Present Tariff Petition *Compilation of Data for Strategic Business Unit for Sub-Division of Division –VII Curchorem and Division XIV Verna is completed and the same is provided herewith with this Tariff petition as Annexure 4*
Commission's Response *The Commission is yet to receive the above compiled data. The Petitioner is directed to submit the same within one month of the issuance of this Order.*

10.1.7. Installation of Pre-Paid Meters

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission directs the Petitioner to expedite the process and submit an updated status by 1 month of issue of this Order.*
Petitioner's Response in the Present Tariff Petition *Because of the financial restriction imposed by the Govt. of Goa due to ongoing COVID-19 pandemic, it is not in a condition to purchase the pre-paid meters.* *However, EDG is in discussion to hire the pre-paid meters and install the same at consumer's premises.*
Commission's Response

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

10.1.8. Unbundling of Electricity Department

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission directs the Petitioner to submit the proposal to the State Govt. even if no directive is given by the Govt. by June 30th 2020. Further, it is directed that the Petitioner should submit the updated status and increase its efforts towards making the State Load Dispatch Center (SLDC) fully operational.*
Petitioner's Response in the Present Tariff Petition *It has not yet submitted any proposal to the Government for conveying the In-Principle approval for unbundling of Electricity Department as strategies for the same is under discussion with the Government.*
Commission's Response *The Commission reiterates that the Petitioner should submit the proposal to the State Govt. at the earliest and provide a status on the same along with the next quarterly progress report.*

10.1.9. Renewable Purchase Obligation

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 19th May 2020 *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 obligation is fulfilled.*
Petitioner's Response in the Present Tariff Petition *EDG submits that it has fulfilled 50% of the total RPO Obligation for FY 2020-21 and is making continuous efforts to fulfil the RPO Target for FY 2021-22.*
Commission's Response *The Commission reiterates its directive to the Petitioner that it must continue its efforts towards fulfillment of RPO and ensure yearly obligation is fulfilled.*

10.1.10. Billing and Collection Efficiency

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 19th May 2020 *The Commission notes with serious concern that the billing and collection efficiency in the State is very low The Commission in the MYT Order had approved the collection efficiency of 100% for FY 2019-20 and T&D loss level of 10.75%. The Commission directs the Petitioner to take all necessary actions on priority to settle all pending dues from the Govt Departments and to resolve all the issues pertaining to billing and collection and report the status in the next Tariff Filing.*
Petitioner's Response in the Present Tariff Petition *The Government of Goa has approved one-time Settlement scheme. The notification for registration by the consumers under this scheme shall be issued during 1st Dec 2020 to 31st Dec 2020*
Commission's Response

The Commission directs the Petitioner to submit a detailed status report along with the next quarterly progress report.

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

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 19th May 2020 *The Petitioner is directed to expedite the process of energy audit and submit the requisite data and the proposal along with the next tariff petition.*
Petitioner's Response in the Present Tariff Petition *The surveyors are already deployed at every division for GIS mapping of 11kV/33 kV assets and the entire exercise is likely to be completed by 31st March 2021.*
Commission's Response *The Petitioner is directed to expedite the process of energy audit and submit the requisite data and the proposal along with the next tariff petition.*

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

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 19th May 2020 *Despite of repeated directive by the Commission, the Petitioner is failed to meet the deadlines for submission of true-up Petitions. The Commission has taken a serious note of this and directs the Petitioner to submit the true up petition along with the audited accounts for FY 2016-17 and FY 2017-18 within two months of issuance of this order and those of FY 2018-19 and FY 2019-20 by 30th November 2020*
Petitioner's Response in the Present Tariff Petition *The audit for Financial Year 2016-17 is completed and CAG Certificate is awaited, the same will be submitted on or before Public hearing. The true-up for FY 2016-17 is filed vide this petition.* *EDG further submits that the required data for finalization of financial accounts for FY 2017-18 is completed and finalization of account is under preparation.* *EDG also submits that the process of collection of DCB statements for FY 2018-19 has been completed and once the accounts for FY 2017-18 are finalised, the accounts for FY 2018-19 and FY 2019-20 will be finalized.*
Commission's Response *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 by 30th November 2021 so that the appropriate base year values for 3rd MYT Control Period can be considered.*

10.1.13. Collection of data based on consumer type

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 19th May 2020

The Petitioner is hereby directed to start collecting information of energy sales, connected load, number of consumers, power factor, ToD sales etc., wherever applicable, for different type of consumers such as Hotel Industries, Govt./Private educational institutions, Govt./Private hospitals etc. within the existing categories and submit the same by 30th September 2020.

Petitioner's Response in the Present Tariff Petition

EDG submits that it is in the process of bifurcating the information from the consumer category and the requisite information shall submitted within 3 months of filing of this petition.

Commission's Response

The Petitioner is directed to submit the requisite information along with the next quarterly progress report.

10.2. New Directives issued in this Order

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

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

10.3. Directives discontinued in this Order

10.3.1. kVAh based tariff

The Commission has discontinued its directive to the Petitioner to submit a proposal for kVA/kVAh based tariff for all HT/EHT categories as the same has been proposed by the Petitioner for FY 2021-22 along with the submission of requisite data. Accordingly, the Commission has introduced kVAh based tariff for all HT/EHT categories in FY 2021-22. The same is discussed in detail in Chapter 7 of this Order.

10.3.2. Creation of SLDC

The Petitioner has submitted that the SLDC is fully operational round the clock since 5th December 2019. The Commission acknowledges the efforts made by the Petitioner and accordingly, drops this directive.

11. Chapter 11: Tariff Schedule

11.1. Tariff Schedule

Table 110: Tariff Schedule

	Category	Approved Tariff	
		Fixed/Demand Charges	Energy Charges
1	**Domestic**		
A	**Low Tension-D/LT-D**		
	0-100 units	Single Phase INR 25/Con/Month Three Phase INR 65/Con/Month	1.50 INR/kWh
	101-200 units		2.25 INR/kWh
	201 to 300 units		2.85 INR/kWh
	301 to 400 units		3.65 INR/kWh
	Above 400 units		4.25 INR/kWh
B	**Low Tension-LIG/LT-LIG**	INR 50/Con/Month	-
C	**High Tension-D/HT-D**		
	All Units	INR 110/kVA/Month	3.65 INR/kVAh
2	**Commercial**		
A	**Low Tension-C/LT-C**		
	0-100 units	For consumers with Load upto 20 kW INR 50/Con/Month For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	3.55 INR/kWh
	101-200 units		4.35 INR/kWh
	201 units- 400 units		4.85 INR/kWh
	Above 400 units		5.25 INR/kWh
B	**High Tension-C/HT-C**		
	All Units	INR 250/kVA/month	5.50 INR/kVAh
3	**Industrial**		
A	**Low Tension-I/LT-I**		
	0-500 units	INR 40/HP/Month	3.40 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**		
	All Units	INR 50/kW/Month	4.95 INR/kWh
C	**High Tension-I/HT-I**		
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kVAh
D	**High Tension- Ferro/SM/ PI/ SR**		
	All Units	INR 250/kVA/Month	4.80 INR/kVAh
4	**Agricultural**		
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 18/HP/Month	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**		
	All Units	INR 25/HP/Month	1.75 INR/kWh

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	Category	Approved Tariff	
		Fixed/Demand Charges	Energy Charges
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 40/kVA/Month	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**		
	All Units	INR 70/kVA/Month	1.95 INR/kVAh
5	**Military Engineering Services/defense Establishments**		
	All Units	INR 200/kVA/Month	5.20 INR/kVAh
6	**Public Lighting**		
	All Units	INR 70/kW/Month	4.20 INR/kWh
7	**Hoardings/Signboards**		
	All Units	INR 70/kVA/Month	10.00 INR/kWh
8	**Temporary Supply**		
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
B	LT Temporary Commercial		
C	HT Temporary		
9	**Single Point Supply**		
A	Residential Complexes	INR 110 per kVA per month or part thereof	3.55 INR/kVAh
B	Commercial Complexes	INR 220 per kVA per month or part thereof	4.80 INR/kVAh
C	Industrial Complexes	INR 220 per kVA per month or part thereof	4.40 INR/kVAh
10	**Electric Vehicle Charging Station**	-	3.50 INR/kWh

11.2. Applicability

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

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

Table 111: 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	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

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Category	Applicability	Point of Supply/Notes
	consumption of energy using normal domestic appliances. Professionals such as Doctors, Engineers, Lawyers, CAs, Journalists and Consultants practicing from their residence irrespective of location provided that such use shall not exceed 25% of the area of the premises or as specified in the rules/regulations of their respective State or Union Territory.	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	This schedule shall apply to consumers of Low Income Group who have a sanctioned load of up to 0.25 kW and who consume up to 50 units per month only.	The applicability of the Low Income Group category will be assessed at the end of each month and in case the consumption exceeds 50 units per month, the entire consumption would be billed at the rate of LTD-/Domestic for that particular month.
4. Commercial – LT and HT	This tariff is applicable to any activity not specifically covered in any other consumer categories, or although covered in another activity, the use is made for a commercial category. It would include electricity used in all non- residential, non-industrial premises and/or commercial premises for commercial consumption meant for operating various appliances. It would include the following categories but not limited to: • Houses with rent back facilities • Government hospitals • Professionals not covered in domestic category. • Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops; • Combined lighting and power services for Entertainment including film studios, cinemas and theatres, including multiplexes, Race Course, Meeting/Town Halls, Clubs, all types of Guest houses; • Offices including Government Offices, Commercial Establishments; • Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private hospitals, private messes, Internet /	Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture Allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged commercial tariff.

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

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Category	Applicability	Point of Supply/Notes
	• Garment Manufacturing units, • LPG/ CNG Bottling plants etc; • Sewage Water Treatment Plants/ Common Effluent Treatment Plants owned, operated and managed by Industrial Associations and situated within industrial area. • Pumping of water for public water supply, Sewage Treatment Plants, activities related with public water Supply Schemes and Sewage Pumping Stations. • Use of electricity / power supply for activities/ facilities exclusively meant for employees of the industry within the premises of the Industry. • IT Industry, IT parks etc.	
6. LT Mixed – Hotel Industries	This schedule shall apply to Hotels/ restaurants with lodging and boarding facilities.	Hotel Industry consumers intending to avail the facility of this tariff should produce a certificate from the Tourism Department stating that the intending applicant is registered under Goa Registration of Tourist Trade Act, 1982 and in the Hotel business on a regular basis. On receipt of the certificate, such tariff shall be made effective from the date of original validity of the certificate. In case of failure to produce the certificate, the same shall be considered under Commercial category.
7. HT Industrial	This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories: • Bulk Supply of power at 11 KV, 33 kV /110 KV and above for industries, factories and other industrial purposes. • Bulk supply of power at 11 KV and above for educational institutions owned or aided by Government, non-industrial establishments, • Industrial units engaged in Ice Manufacturing Units; • Hotels with lodging and boarding facilities etc • Use of electricity / power supply by an establishment such as IT Industries, IT Parks, IT Units • Pumping of water, public water supply, public water treatment plant, activities related with Supply Schemes and Sewage Treatment Plants, Sewage Pumping Stations etc	

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<table>
<tr><th>Category</th><th>Applicability</th><th>Point of Supply/Notes</th></tr>
<tr><td>8. HT Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive</td><td>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.</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>9. LT and HT Agriculture Pump sets</td><td>This schedule shall apply to establishments for Irrigation pumping, De-watering and Lift Irrigation for cultivation of food crops such as cereals, pulses, vegetables and fruits etc and Cane crusher and/or fodder cutter for self-use for Agricultural purposes.</td><td rowspan="2">This tariff shall be applicable from the date of production of a certificate from the Directorate of Animal Husbandry or Agriculture Department of Government of Goa to the effect that the consumer carried on the said activity on regular basis. In case of failure to produce the certificate, the same shall be considered under Commercial category.
Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged Commercial Tariff.</td></tr>
<tr><td>10. LT and HT Agriculture Allied Activities</td><td>This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to:
• Poultry farms, Livestock farms, Combination of livestock farms with dairy, Piggery etc
• Horticulture, Green Houses, Plantations, all types of nurseries etc.
• Fish farms including ornamental fish farms, prawn farms, other aqua farms etc
• Tissue culture, Mushroom activities, Aquaculture, Floriculture, Fisheries, Sericulture, Floricultural nurseries, hatcheries etc
• Any other agricultural activity not falling under HT-Agriculture (A) shall be covered under this category</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>11. MES/Defense Establishments</td><td>This schedule shall apply to supply of power for defense installation establishments, having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load.</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>12. LT Public Lighting</td><td>This schedule shall apply to public lighting systems. It would include the following categories but not limited to:
• Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/ Panchayats/ Government;
• Lighting in Public Gardens;
• Traffic Signals and Traffic Islands;
• State Transport Bus Shelters;
• Public Sanitary Conveniences; and
• Public Water Fountains and such other Public Places open for general public free of charge.</td><td></td></tr>
</table>

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Category	Applicability	Point of Supply/Notes
	• Street lighting in the colony of a factory which is situated separately from the main factory. • This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments	
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.	i. The temporary connection shall be released through a proper meter ii. The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations notified by JERC.
15. HT SPS Single Point Supply	This schedule shall apply to a group of consumers who desire to take a HT connection at single point for consumption of energy within a Residential Complex – Group Housing Societies, Residential Housing Colonies, Cooperative Group Housing Societies, Township Areas; Commercial Complexes, including Malls; Industrial Complexes, including IT Parks, Bio-Parks or other entities classified as industries by the Government of Goa.	In case of a dispute on whether the complex can be classified as an industrial complex, a certificate from Industries Department, Government of Goa will be required. The following shall be the different combinations for SPS in a defined area: i. All LT consumer mix area ii. All HT consumer mix area iii. HT+LT consumer mix area a. The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories. b. Based on technical and administrative feasibility, the ED-Goa may consider providing SPS power supply at HV/ EHV level to a complex at a mutually agreed injection point. c. The SPS arrangement would be applicable for the application received from a Residential

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Category	Applicability	Point of Supply/Notes
		complex / Association of Persons (AOP) / Developer of the complex or any other such similar person. d. The SPS arrangement would be considered by ED-Goa only if the minimum sanctioned cumulative contracted demand of the complex (group of consumers) is 1.15 MVA/ 1 MW. e. The complete cost of erection and O&M for the sub-transmission and distribution infrastructure within such complex would need to be borne by the said SPS applicant. f. The SPS applicant would be required to develop and maintain an efficient, coordinated and quality sub-transmission and distribution system in its area of electricity supply. Further, the applicant would be responsible to comply with Standards of Performance and Supply Code Regulation as laid down under JERC Regulations and guidelines of Goa Electricity Department, if any. The network within the complex will need to be certified by the Chief Electrical Inspector. g. For Residential Complexes, SPS application shall be entertained for groups of LT consumers only. The loads of common amenities for such group may include pumps for pumping water supply, lifts and lighting of common area. However, the consumption of energy for common services shall be separately metered with meters installed by the consumer and tested and sealed by licensee. The consumption of such energy over and above 10% of the total consumption of energy shall be billed at LT Commercial Tariff. The user shall inform the details of every non-domestic activity within the residential complex, such as commercial complex, industrial activity, and recreation club, along with the connected load to the licensee at the time of seeking the connection or at the time of enhancement in contract demand, and shall seek a separate connection for the same in case the common load is more than 10%.

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Category	Applicability	Point of Supply/Notes
		h. Individual Domestic HT consumers in a residential complex that opt for SPS shall need to apply separately under HT Domestic category. i. The SPS applicant shall not charge tariff to the downstream consumers higher than stipulated. j. The applicant shall be obliged to pay the total tariff (total billed amount) due to ED-Goa, as measured at HT end of SPS. However, to cover energy transformation losses and other O&M expenses, such applicant would be eligible to get rebates from ED-Goa on full bill payment, within the due time: i. 5% on the overall billed amount in all cases of LT and HT consumers ii. Any other loss would be to the account of the applicant. k. For CC and IC applicant, any LT / HT Consumer in the area should have minimum 80% pre-dominant load of their appropriate category i.e. mix load is allowed only upto 20%. For e.g. If a HT/ LT Industry Consumer has Factory, Residential Colony for its workers and also some Commercial facilities for his staff and the total of Residential and Commercial load is say around 30%, then separate Individual SPD connection may be taken for each such group as per activity. l. The implementation of SPS arrangement should be in accordance with the Electricity Act, 2003 and APTEL judgement dated 11th July 2011 in appeal no. 155 and 156 of 2010 in this regard.
16. Electric Vehicle Charging Stations	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	

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11.3. 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. E.g. in case of HTI/Industrial category, excess demand and consumption will be billed at the rate of INR 500 per kVA per month and INR 9.00/kWh respectively. Connections drawing more than 120 kVA shall be disconnected immediately.

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

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

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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 two percent (2%) (computed on a daily basis on the outstanding bill from the due date till the date of payment) shall be levied on the bill amount. However, if a consumer makes part payment of a bill (in exceptional circumstances, with prior approval of the Chief Electrical Engineer), within the due date, then the delayed payment charges shall be applicable only on the amount which was not paid within the due date.

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

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

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

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

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

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

Table 112: Applicability of ToD Tariff

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

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iii. Applicability and Terms and Conditions of TOD tariff:

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

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

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

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

11.4. Schedule of Miscellaneous Charges

Table 113: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges(as per provisions of Supply Code Regulations notified by JERC)	
Single Phase LT meter	INR 15/month
Three Phase LT meter	INR 25/month
Three Phase LT meter with CTs	INR 75/month
LT Meter with MD Indicator	INR 30/month
LT Tri-vector meter with CT's	INR 75/month
Tri-vector Meter	INR 1200/month
Bi- directional meter	INR 1,500/month
Temporary Supply	Shall be twice as applicable in above meter types
Changing or moving a Meter board	Actual Cost + 15%
Note: a. For all domestic and other LT loads less than 50 kW loads in Urban and Rural areas - Static single phase / three phase meters b. For LT (contracted load ≥ 50 KW) / HT / EHT consumer – Static, 3 Phase Tri-vector meters with MDI (MD Display)	
Reconnection Charges (as per provisions of Supply Code Regulations notified by JERC)	
LT Services – At Cut outs	
• Single Phase	INR 25/-
• Three Phase	INR 50/-
LT Services – At Overhead Mains	
• Single Phase	INR 30/-
• Three Phase	INR 50/-
LT Services – At Underground Mains	
• Single Phase	INR 75/-

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Description	Approved Charges
• 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 ϕ	INR 250
Three Phase 3 ϕ	
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

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Description	Approved Charges
Extra Length for 1 ϕ (beyond 30 meters)	INR 50 /meter
Extra Length for 1 ϕ for agricultural consumers (beyond 300 meters)	INR 25 /meter
Extra Length for 3 ϕ (beyond 30 meters)	INR 100 /meter
Extra Length for 3 ϕ 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/-

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Description	Approved Charges
• 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

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Description	Approved Charges
3 Phase through underground service cable	Rs.300/meter
Extra Length for 3Phase for Agriculture consumers (beyond 300meters) through underground service cable	Rs.100/meter
At location where overhead network exist and consumer desires to avail power through Underground service cable	Actual charges+15%

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

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Annexures

Annexure 1: List of Stakeholders who attended the Public hearing on 25th January 2021 in Goa

Table 114: List of Stakeholders

S. No.	Name of Person (Mr/Ms)	Organization/ Address
1	A.K.Banerjee	Goa Chamber of Commerce & Industry
2	Mr. Gerard DMello	Goa Chamber of Commerce & Industry
3	Mr.P.N. Lotlikar	Goa Chamber of Commerce & Industry
4	Mr. Joseph D'Souza	Goa Chamber of Commerce & Industry
5	Mr. M. Durairaj	Goa Chamber of Commerce & Industry
6	Dr. Sangam Kurade	Zuari Foods & Farms Pvt. Ltd Tropical Mushrooms (Goa) Pvt. Ltd.
7	Martin Rodrigues	Secretary, Raia Civic and Consumer Forum.
8	Apoorva Gadre	
9	Ciriaco D'Souza.	