

BEFORE

JOINT ELECTRICITY REGULATORY COMMISSION

FOR THE STATE OF GOA AND UNION TERRITORIES

GURUGRAM

PETITION

FOR

APPROVAL OF

ANNUAL PERFORMANCE REVIEW OF FY 2021-22, AND AGGREGATE REVENUE

REQUIREMENT FOR FY 2022-23 TO FY 2024-25 & TARIFF PROPOSAL FOR FY 2022-23

BY



ELECTRICITY DEPARTMENT
Government of GOA

NOVEMBER 2021

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA, & UNION
TERRITORIES, GURUGRAM



Filing No.....

Case No.....

IN THE MATTER OF: Petition for approval of APR for FY 2021-22, ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23.

AND

IN THE MATTER OF: Electricity Department, Government of Goa,
Vidyut Bhavan, Panaji, Goa

.....Petitioner

Electricity Department, Government of Goa (hereinafter referred to as "EDG"), files petition for approval of APR for FY 2021-22, of ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23 for the Electricity Department of Goa under section 45, 46, 61, 62, 64 and 86 of the Electricity Act, 2003 (EA 2003).

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA, & UNION TERRITORIES, GURUGRAM

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IN THE MATTER OF: Electricity Department, Government of Goa
Vidyut Bhavan, Panaji, Goa

.....Petitioner

AFFIDAVIT VERIFYING THE PETITION

I, Shri. Raghuvir Keni, son of Shri. Giridhar Keni aged 61 years, the deponent named above do hereby solemnly affirm and state on oath as under:

1. That I am Chief Electrical Engineer and Head of Electricity Department, Government of Goa and am authorised to sign and submit the said petition and am acquainted with the facts deposed to below.
2. I say that on behalf of EDG, I am now filing this Petition under The Electricity Act, 2003, Petition for approval of APR for FY 2021-22, ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23.
3. I further say that the statements made, and financial data presented in the aforesaid Petition are as per records of the Department and believe that to be true to the best of my knowledge.

4. Further, to my knowledge and belief, no material information has been concealed in the aforesaid Petition.



Place: Panaji, Goa

Dated: 30th November 2021



The Electricity Department,
Government of Goa

[Signature]
DEPONENT

SOLEMNLY AFFIRMED AND VERIFIED
BEFORE ME BY John. Raghuvir
Konichap Electrical Engineer
REG. No. 8274 DATED 30/11/21 Goa

SHIVPRASAD V. MANERKER
NOTARY AT PANAJI
ENTIRE STATE OF GOA

VERIFICATION

I, Shri Adv. Shivprasad V. Manerker. Advocate and Notary
having office at Panaji-Goa, do hereby declare that the person making this affidavit is known to
me through the perusal of records and I am satisfied that he is the same person alleging to be
deponent himself.

Advocate

Solemnly affirmed before me on this 30th day of November 2021 by the deponent who has been
identified by the aforesaid Advocate. I have satisfied myself by examining the deponent that he
understood the contents of the affidavit which has been read over and explained to him. He has
also been explained about section 193 of Indian Penal Code that whoever intentionally gives
false evidence in any of the proceedings of the Commission or fabricates evidence for purpose of
being used in any of the proceedings shall be liable for punishment as per law.

BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA, & UNION TERRITORIES, GURUGRAM

Filing No.....

Case No.....

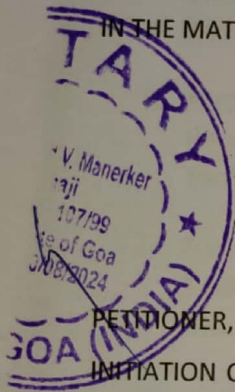
IN THE MATTER OF: Petition for approval of APR for FY 2021-22, ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23.

AND

IN THE MATTER OF: Electricity Department, Government of Goa

Vidyut Bhavan, Panaji, Goa

.....Petitioner



PETITIONER, UNDER SECTIONS 45, 46, 61, 62 AND 64 OF THE ELECTRICITY ACT, 2003 FILES FOR INITIATION OF PROCEEDINGS BY THE HON'BLE COMMISSION FOR DECIDING ON THE MATTERS CONCERNING THE PETITION FOR APPROVAL OF APR FOR FY 2021-22, ARR FOR MYT CONTROL PERIOD FY 2022-23 TO FY 2024-25 AND TARIFF PROPOSAL FOR FY 2022-23.

The Petitioner respectfully submits as under: -

1. The Petitioner, Electricity Department – Goa (EDG) is deemed Distribution Licensee for the State of Goa.
2. Pursuant to the enactment of the Electricity Act, 2003, EDG is required to submit its Annual Revenue Requirement and Tariff Petition as per the procedures outlined in section 61, 62 & 64 of EA 2003, and Regulation 9 of JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (MYT Regulations, 2018) and JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 (MYT Regulations, 2021)
3. EDG hereby submits the present Petition for approval of APR for FY 2021-22 based on the principles outlined in the JERC MYT Regulations 2018, and ARR for MYT Control period FY

2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23 based on the principles outlined in the JERC MYT Regulations 2021 notified by the Hon'ble Commission.

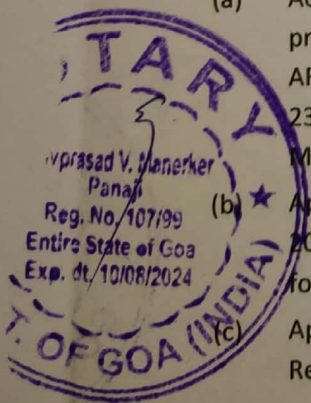
4. EDG hereby submits that the documents of Budgetary Support assurance from the Government of Goa for FY 2021-22 and FY 2022-23 shall be submitted after issuance of the same by Government of Goa.
5. EDG prays to the Hon'ble Commission to admit the attached petition for APR for FY 2021-22, ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23.

Prayers to the Hon'ble Commission:

- A. The petition provides, inter-alia, EDG's approach for formulating the present petition, the broad basis for projections used, performance of EDG in the recent past, and certain issues impacting the performance of EDG in the Licensed Area.
- B. Formulating the APR for FY 2021-22, the principles specified by the Joint Electricity Regulatory Commission in JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 has been considered as the basis.
- C. Formulating Aggregate Revenue Requirement for FY 2022-23, FY 2023-24 and FY 2024-25 based on the principles specified in JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021.
- D. In order to align the thoughts and principles behind the ARR and Tariff Petition, EDG respectfully seeks an opportunity to present its case prior to the finalization of the Tariff Order. EDG believes that such an approach would go a long way towards providing a fair treatment to all the stakeholders and may eliminate the need for a review or clarification.

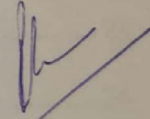
The Petitioner respectfully prays that the Hon'ble Commission may:

- (a) Accept and admit the Petition for APR for FY 2021-22 which is in line with the principles laid by the Hon'ble Commission contained in MYT Tariff Regulations 2018, ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23 which is in line with the principles laid by the Hon'ble Commission contained in MYT Tariff Regulations 2021.
- (b) ★ Approve the total recovery and revenue gap for Annual Performance Review for FY 2021-22 and ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Proposal for FY 2022-23 and other claims as proposed by EDG;
- (c) Approve the Revenue gap of Rs. 164.87 Cr for FY 2021-22 as per APR and standalone Revenue Gap considering revenue from proposed tariff amounting to Rs. 360.13 Cr.



- for FY 2022-23 on provisional basis and the revenue gap as may be approved by the Hon'ble Commission during the process of finalising tariff petition;
- (d) To consider the Tariff Design Philosophy and grant approval for proposed changes in Tariff Schedule (changes in applicability clauses), charges for services, miscellaneous charges and general terms & condition of the tariff order for FY 2022-23;
 - (e) Approve the revenue at the proposed tariff for FY 2022-23 and the gap of Rs. 360.13 Cr. till FY 2022-23. The revenue gap of Rs. 360.13 Cr. is proposed to be met through the budgetary support by the Government of Goa. The letter for Budgetary Support shall be submitted after issuance of the same by Government of Goa;
 - (f) Pass suitable orders with respect to APR for FY 2021-22 and ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23 for the expenses to be incurred by EDG for serving its consumers;
 - (g) Grant any other relief as the Hon'ble Commission may consider appropriate;
 - (h) The Petitioner craves leave of the Hon'ble Commission to allow further submission, addition and alteration to this petition as may be necessary from time to time;
 - (i) Condone any inadvertent omissions/errors/shortcomings and permit EDG to add/change/ modify/ alter this filing and make further submissions as may be required at a future date;
 - (j) To pass any other Order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

Electricity Department,
Government of Goa



Petitioner

Place: Panaji

Dated: 30th November 2021

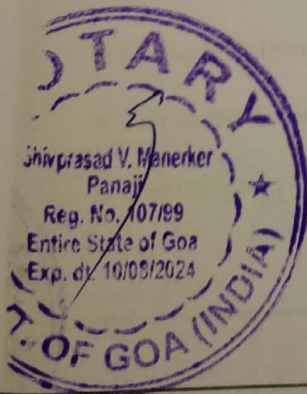




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1 INTRODUCTION

1.1 Preamble

1.1.1 The Hon'ble Commission has notified JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 and JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021. In line with the same, EDG submits this Petition for APR for FY 2021-22 as per the provisions of the MYT Tariff Regulations, 2018 and ARR for MYT Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23 as per the provisions of MYT Tariff Regulations, 2021

1.2 Background: Electricity Department of Goa

1.2.1 The Electricity Department was formed in January 1963 under the Government of Goa, Daman & Diu. It is the only licensee operating in the State of Goa for transmission and distribution of Electrical Energy. The Electricity Department of Goa does not have its own generation. Most of the power requirement for the State of Goa is met through its share from Central Sector Power Stations of NTPC Ltd as allocated by the Central Government.

1.2.2 ED-Goa came into regulatory regime w.e.f. FY 2011-12 i.e. the first tariff filing year. The Electricity Department 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, co-ordinated and economical distribution system;
- To supply electricity on an application of the consumer in accordance with the provisions specified in the Electricity Act 2003;
- To provide non-discriminatory open access to the consumers;
- To establish a forum for redressal of grievances of the consumers.

1.2.3 The main purpose is to undertake the transmission, distribution and retail supply of electricity in its license area and for this purpose to plan, acquire, establish, construct, erect, lay, operate, run, manage, maintain, enlarge, alter, renovate, modernize, automate, work and use a power system network in all its aspects and also to carry on the business of purchasing, selling, importing of electrical energy, including



formulation of tariff, billing and collection thereof and then to study, investigate, collect information and data, review operations, plan, research, design and prepare project reports, diagnose operational difficulties and weaknesses and advise on the remedial measures to improve and modernize existing sub-transmission and supply lines and sub-stations.

- 1.2.4 The Electricity Department of Goa caters 6.51 Lakh consumers (as on 30th September 2021) with an annual energy consumption of approx. 3575.63 MU for FY 2020-21. The Consumers of the Electricity Department of Goa are classified as under:

Particulars	FY 2020-21		FY 2020-21	
	No.of Consumers	%	Sales	%
Domestic	526544.00	80.83%	1265.27	35.39%
Commercial	103066.00	15.82%	369.45	10.33%
Industrial	6619.00	1.02%	1791.68	50.11%
Agriculture	12322.00	1.89%	111.38	3.11%
Temporary	2899.00	0.45%	28.87	0.81%
Defence Establishment	3.00	0.00%	8.98	0.25%
Total	651453.00	100.00%	3575.63	100.00%

- 1.2.5 The peak demand of Goa during FY 2020-21 was around 690 MW (March 2021). As per CEA LGBR report, for FY 2020-21, the Energy Deficit and the peak deficit for the State of Goa were 0.00% (NIL) and 0.00% (NIL) respectively. The peak demand in FY 2021-22 (April to September) recorded in April was 685 MW. EDG is currently receiving 418 MW of power from the Western Region (WR) and 100 MW from the Southern Region (SR). The total firm allocation of power from central sector is approx 518 MW. In addition, the department also purchases power from Co-generation stations within state and short-term power procurement from the market, Traders, DEEP portal.

1.3 Filing in the current Petition

- 1.3.1 EDG hereby submits that that audit works is in progress for FY 2017-18 by CAG. The accounts for FY 2018-19 and FY 2019-20 are completed and submitted to CAG, the process is yet to start. Further the accounts of FY 2020-21 will be finalised by ED-Goa by 31th December 2021 and the same will be submitted to CAG for auditing purposes. Accordingly, EDG has considered provisional actual numbers for FY 2017-18 to FY 2019-20 in this petition, however, the True-up petition for FY 2017-18, FY 2018-19 and FY 2019-20 will be submitted separately once the accounts are audited by CAG.



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

- 1.3.2 EDG also submits that for APR of the year 2021-22, the provisional actual figures for H1 and projected figures of ARR components for H2 have been considered. EDG also submits that the Revenue for FY 2021-22 has been calculated as per the existing Tariff approved by the Hon'ble Commission.
- 1.3.3 EDG further submits that for FY 2022-23 the ARR has been projected considering the number of Consumers and Connected Load and Energy Sales for FY 2022-23 is as per the Business Plan Petition filed. It has been projected based on the historical trends and current realistic scenario. All other components have been considered as per MYT Regulations 2021. Further, EDG has proposed a new tariff for FY 2022-23 to be levied on the consumers.



2 OVERALL APPROACH FOR PRESENT FILING

The Hon'ble Commission had notified JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 on 10th August 2018 and also JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 on 22nd March 2021.

In line with the above Regulations, EDG is filing the APR petitions and ARR petitions for consideration of the Hon'ble Commission in the formats laid down for providing information relating to past, present and future performance.

2.1 Annual Performance Review for FY 2021-22

2.1.1 EDG is filing this Annual Performance Review petition for the year FY 2021-22 based on the provisional actual performance during the 1st half of the year and revised estimated for the 2nd half of the year taking into considering the approved figures by the Hon'ble Commission vide its Tariff Order dated 30th March, 2021.

2.2 Determination of ARR for the MYT Control Period FY 2022-23 to FY 2024-25 and Tariff for FY 2022-23.

2.2.1 The Hon'ble Commission has issued Business Plan order of EDG on 16th November 2018 for the MYT control period FY 2019-20 to FY 2021-22. Further, the Hon'ble Commission has issued the ARR for the MYT control period FY 2019-20 to FY 2021-22 vide order dated 20th May 2019. In the said Tariff Order; Capex, capitalisation, power purchase requirement and sales have been approved by the Hon'ble Commission for the base year FY 2018-19 and MYT period FY 2019-20 to FY 2021-22. Further, considering the same as well as revised projections based on the realistic scenario, EDG is submitted the ARR and tariff proposal for FY 2021-22. The Commission in its Tariff order FY 2021-22 has hiked the tariff on average by 3.18%. As per the Commission's MYT Regulations, 2021, for the purpose of filing ARR for the new MYT Control period from FY 2022-23 to FY 2024-25 the ED-Goa has worked out the projections as per the Business Plan Petition submitted on November 11, 2021.



3 TRUE-UP

- (a) The Commission through its directives has directed the Petitioner 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.
- (b) Complying the directives, the EDG hereby submits that that audit works is in progress for FY 2017-18 by CAG. The accounts for FY 2018-19 and FY 2019-20 are completed and submitted to CAG, the process is yet to start. Further the accounts of FY 2020-21 will be finalised by ED-Goa by 31th December, 2021 and the same will be submitted to CAG for auditing purposes.
- (c) For the purpose of this Petition, EDG has considered provisional actual numbers for FY 2017-18 to FY 2019-20 & FY 2020-21, however, the True-up Petition for FY 2017-18, FY 2018-19 and FY 2019-20 will be submitted separately once the audit by CAG is finalised for the financial years.
- (d) The ED-Goa considered the provisional actual numbers for FY 2017-18 to FY 2019-20 & FY 2020-21 for the purpose of the Annual performance Review (APR) of FY 2021-22 and ARR for the Control Period FY 2022-23 to FY 2024-25.



4 ANNUAL PERFORMANCE REVIEW FOR FY 2021-22

4.1 Background to FY 2021-22 Petition

4.1.1 EDG in this chapter submits the performance of each parameter of ARR of FY 2021-22 against the values approved by the Hon'ble Commission in the Tariff Order dated 30th March 2021. This chapter summarizes each component of ARR for FY 2021-22 and requests the Hon'ble Commission to review the performance for FY 2021-22.

4.2 Performance Review for FY 2021-22

4.2.1 Regulation 11 of the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 states that,

"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."

4.2.2 The Hon'ble Commission had issued the Tariff Order for FY 2021-22 on 30th March 2021. For the purpose of ease of reference; the summary of approved ARR vis-a-vis submitted by EDG for FY 2021-22 submitted in the previous filing is reproduced hereunder:



Table 4-1: ARR approved by JERC for FY 2021-22 (Rs. Cr.) in Tariff Oder dt. 30th March 2021

S. No.	Particulars	Approved in MYT Order dt. 20 th May 2019	Submitted by EDG	Approved in Order dt. 30 th March 2021
1.	Power Purchase Cost	1,816.99	1625.50	1,590.40
2.	O&M 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.	Return on Equity	27.15	30.43	16.61
6.	Interest on Security Deposit	11.8	16.60	8.78
7.	Interest on Working Capital	11.8	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

4.2.3 EDG would now discuss each of the elements of review in detail for the revised estimates for FY 2021-22 for determination of ARR and its gap for FY 2021-22.

4.3 Energy Sales

4.3.1 The energy sales for H1 (April to September) of FY 2021-22 is 2038.51 MU. It is submitted that the Hon'ble Commission had approved the estimated sales for FY 2021-22. For the purpose of Annual Performance Review for FY 2021-22, the figures of H1 sales of FY 2021-22 are taken from SAP accounts, and ED-Goa has extrapolated these to arrive at the projections of FY 2021-22 i.e. the base year. For FY 2021-22, as there has been lockdown till September end and lockdowns have been relaxed from October onwards, ED-Goa expects demand to reach back to normal in FY 2021-22 H2, accordingly, ED-Goa has considered the category-wise demand of FY 2019-20 H2 as FY 2021-22 H2.

4.3.2 The following table shows the overall sales considered by EDG for APR of FY 2021-22 vis-à-vis Sales approved in Tariff Order dated 30th March 2021.



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Table 4-2: Sales for FY 2021-22 (MUs)

Sr. No.	Category of Consumer	Approved in Order dt. 30-03-2021	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22 (Estimated in APR)
A. LOW TENSION SUPPLY		1,897.31	957.35	871.15	1,828.50
1	LTD/Domestic	1,301.53	687.82	586.17	1,273.99
2	LT-L.I.G (Low income Group)	1.37	0.58	0.69	1.27
3	LTC/Commercial	460.24	190.35	216.64	406.99
4	LT/ Industrial	80.91	39.46	38.76	78.23
5	LT Mixed/ LT-P Hotel Industries	4.48	1.49	2.18	3.67
6	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	18.18	7.74	7.45	15.19
7	Low Tension-AG/LT-AGA (Allied Activities)	0.83	0.62	0.37	0.99
8	LTPL Public lighting	29.61	29.22	18.79	48.01
9	LT Hoarding /Sign Board	0.16	0.07	0.08	0.16
B. HIGH TENSION SUPPLY		2,170.71	1,076.06	1,016.35	2,092.40
10	HTD Domestic	0.49	0.17	0.24	0.41
11	HT Commercial	128.26	53.14	58.05	111.19
	HTI Industrial	1,469.88	765.71	688.68	1,454.39
12	High Tension-Ferro/SM.PI/SR	530.73	233.59	250.76	484.34
13	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.81	3.12	2.18	5.30
14	High Tension-AG/HT-AG (Allied Activities)	10.48	5.22	3.70	8.91
15	Military Engineering Services/defense Establishments	26.06	15.12	12.74	27.86
C. TEMPORARY SUPPLY		12.10	3.49	3.04	6.53
16	L.T. Temporary	9.77	1.47	1.71	3.18
17	H.T. Temporary	2.33	2.02	1.32	3.34
D. Single Point Supply		5.65	1.62	2.66	4.27
18	Residential Complexes	-	-	-	-
19	Commercial Complexes	5.65	1.62	2.66	4.27
20	Industrial Complexes	-	-	-	-
Total		4,085.77	2,038.51	1,893.18	3,931.70

4.3.3 The Hon'ble Commission is requested to approve the sales figures considered in the table above for APR of FY 2021-22. The figures for energy sales for FY 2021-22 are



provided in Format 1 of Tariff Filing Formats.

4.4 Number of Consumers

4.4.1 The consumer base of Goa comprises of HT Industry, LT Industry, Commercial and Domestic consumers with the maximum number of consumers attributable to the domestic category. For H1 of FY 2021-22, EDG is submitting actual number of consumers in format 26 of this petition. Accordingly, for H2 of FY 2021-22 & for entire Financial Year, EDG has considered same number of consumers as actual number of consumers considered in FY 2021-22 H1. The table below shows category wise number of consumers considered for FY 2021-22 vis-à-vis number of consumers approved by the Hon'ble Commission in tariff order for FY 2021-22.

Table 4-3: Number of Consumers for FY 2021-22 (Nos)

S. No.	Category of Consumer	Approved in Order dt. 30-03-2021	FY 2021-22 (Estimated in APR)
A. LOW TENSION SUPPLY		6,89,518	6,62,620.00
1	LTD/Domestic	5,64,396	5,36,227.00
2	LT-L.I.G (Low income Group)	1,835	877.00
3	LTC/Commercial	1,04,480	1,01,893.00
4	LTI/ Industrial	5,963	5,649.00
5	LT Mixed/ LT-P Hotel Industries	156	116.00
6	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	12,210	12,100.00
7	Low Tension-AG/LT-AGA (Allied Activities)	200	244.00
8	LTPL Public lighting	215	5,453.00
9	LT Hoarding /SignBoard	63	61.00
B. HIGH TENSION SUPPLY		1,269	1,142.00
10	HTD Domestic	3	4.00
11	HT Commercial	251	275.00
	HTI Industrial	930	782.00
12	High Tension-Ferro/SM.PI/SR	29	22.00
13	High Tension-AG/HT-AGP (Pump Setss/Irrigation)	41	42.00
14	High Tension-AG/HT-AG (Allied Activities)	3	3.00
15	Military Engineering Services/defense Establishments	12	14.00
C. TEMPORARY SUPPLY		5,182	2,741.00



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S. No.	Category of Consumer	Approved in Order dt. 30-03-2021	FY 2021-22 (Estimated in APR)
16	L.T. Temporary	5,181	2,726.00
17	H.T. Temporary	1	15.00
D.Single Point Supply		1	1.00
18	Residential Complexes	-	-
19	Commercial Complexes	1	1.00
20	Industrial Complexes	-	-
Total		6,95,970	6,66,504.00

4.4.2 The Hon'ble Commission is requested to approve number of consumers for APR of FY 2021-22 as submitted in the above table. The figures for number of consumers for FY 2021-22 are provided in Format 1 of Tariff Filing Formats.

4.5 Connected Load

4.5.1 EDG has estimated the Connected Load in line with the principles adopted for the number of consumers for H2 of FY 2021-22 and for entire FY 2021-22. Accordingly, EDG has considered connected load for FY 2021-22 H1 as per actual and the same has been considered for FY 2021-22 (H2) as well as for entire Financial Year. Category wise Connected Load considered for APR of FY 2021-22 vis-à-vis Connected Load approved by the Hon'ble Commission in tariff order for FY 2021-22 dated 30th March 2021 is provided in the table given below.

Table 4-4: Connected Load for FY 2021-22 (KW/ kVA)

S. No.	Category of Consumer	Approved in Order dt. 30-03-2021	FY 2021-22 (Estimated in APR)
A. LOW TENSION SUPPLY		21,77,706.00	22,41,788.67
1	LTD/Domestic	16,30,297.00	16,59,217.00
2	LT-L.I.G (Low income Group)	231.00	85.00
3	LTC/Commercial	3,51,975.00	3,73,956.00
4	LTI/ Industrial	1,40,551.00	1,45,096.00
5	LT Mixed/ LT-P Hotel Industries	2,868.00	2,295.00
6	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	47,903.00	46,815.00
7	Low Tension-AG/LT-AGA (Allied Activities)	1,662.00	2,199.00
8	LTPL Public lighting	1,600.00	11,611.67



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S. No.	Category of Consumer	Approved in Order dt. 30-03-2021	FY 2021-22 (Estimated in APR)
9	LT Hoarding /SignBoard	619.00	514.00
B. HIGH TENSION SUPPLY		7,75,259.00	7,77,765.00
10	HTD Domestic	300.00	400.00
11	HT Commercial	74,374.00	1,03,442.00
	HTI Industrial	5,85,240.00	5,60,918.00
12	High Tension-Ferro/SM.PI/SR	98,700.00	93,250.00
13	High Tension-AG/HT-AGP (Pump Setss/Irrigation)	8,240.00	9,260.00
14	High Tension-AG/HT-AG (Allied Activities)	1,310.00	2,200.00
15	Military Engineering Services/defense Establishments	7,095.00	8,295.00
C. TEMPORARY SUPPLY		21,034.00	14,642.00
16	L.T. Temporary	20,684.00	9,248.00
17	H.T. Temporary	350.00	5,394.00
D. Single Point Supply		4,035.00	4,035.00
18	Residential Complexes	-	-
19	Commercial Complexes	4,035.00	4,035.00
20	Industrial Complexes	-	-
Total		29,78,034.00	30,38,230.67

4.5.2 The Hon'ble Commission is requested to approve the Connected Load for APR of FY 2021-22 as submitted in the above table. The details of Connected Load for FY 2021-22 are provided in Format 1 of Tariff Filing Formats.

4.6 Energy Requirement & T&D Loss for FY 2021-22

4.6.1 Energy Input at Goa Periphery projected FY 2021-22 is as under:

Table 4-5: Energy Input at Periphery for FY 2021-22

Particulars	WR	SR	Total
Energy Input at Periphery (MUs)	3650.59	563.58	4214.18

4.6.2 Inter-State Transmission Losses: PGCIL losses are on account of two regions, Western region (WR) and Southern Region (SR). The Petitioner has considered the actual transmission losses of FY 2020-21 for the base year FY 2021-22. Accordingly, Inter-state



transmission losses for FY 2021-22 have been considered as under:

Table 4-6: Inter-State Transmission Losses for FY 2021-22 (%)

Particulars	FY 2021-22 (Approved)		FY 2021-22 (APR)		FY 2021-22 Revised Estimate
	WR	SR	WR	SR	Total
Inter-State Transmission Loss (%)	3.26%	9.87%	3.35%	7.95%	3.61%

4.6.3 Distribution Loss for overall FY 2021-22: The Hon'ble Commission has approved distribution loss of 10.25% for FY 2021-22 in the Tariff Order dated 30th March 2021. However, for the purpose of projections for FY 2021-22. EDG has projected power purchase requirement for FY 2021-22 considering same Distribution Loss level of 10.25% for entire FY 2021-22.

4.6.4 EDG submits that, for projection of power from tied-up capacity, it has taken into consideration the H1 figures, and since there is no change in capacity. It has considered the total power purchase quantum for FY 2021-22, similar to FY 2020-21 for Central Generating Stations and for Co-generating plants as per capacity tied up. Further, for Renewable Power for FY 2021-22 for the quantum required to fulfil RPO obligation and existing tied up power with SECI (Solar & Wind), NVVNL & APPCL on long term basis and Manikaran Power, APPCPL & Kreate Energy on short term basis based on purchase done in H1 of FY 2021-22.

4.6.5 Further, w.r.t total Power Purchase requirement for FY 2021-22, after considering projected sales and Distribution losses of 10.25%. EDG has also considered the purchase of short-term power from IEX for off peak and peak period as per FY 2021-22 and computed the sale of excess power available, respectively.

- Percentage Allocation of firm as well as of unallocated quota from the CGS has been considered as per the allocation obtained from WRPC/Comml.-I/6/Alloc/2021/7279 dated 13th July 2021 and SRPC Allocation Circular No: SRPC/SE(O)/54/UA/2021-22/ dated 28th June 2021.
- EDG submits that the PLF of CGS station is considered as per the provisional actual figures of FY 2020-21 of PLF for each plant and has considered the same for FY 2021-22.
- EDG submits that it has considered auxiliary consumption for each of the central generating station as per the CERC Tariff Order, (where the same were considered



for the Power Purchase for FY 2021-22 approved by the Hon'ble Commission through the JERC Tariff Order for ED-Goa for the period FY 2021-22).

- Inter-state transmission loss of 3.35% and 7.95% considered for power purchase through western and southern region respectively as per actual.
- Based on the above assumptions, EDG has estimated the power purchase quantum from CGS stations.
- With respect to purchase/ sale of power from IEX/Traders, EDG considered the actual purchase of 104.52 MUs of FY 2020-21 and sale of recomputed accordingly for FY 2021-22.

4.6.6 EDG has also considered the power received through banking from BRPL and Manikaran Power.

4.6.7 To meet any shortfall, if occurs, EDG purchase power through short term (Traders). For FY 2021-22, ED-Goa has envisaged purchase of 104.52 MUs from traders/exchange at a rate of Rs. 3.46/unit depending upon the past rates.

4.6.8 EDG, while computing Energy balance for entire FY 2021-22, has considered the actual over-drawl/under-drawl only during first half of FY 2020-21. Thus, based on the foregoing paragraphs, the Energy Balance for the year FY 2021-22 is shown in the table below.

Table 4-7: Energy Balance for FY 2021-22 (MU)

Particulars	FY 2021-22 Revised Estimated
Energy Input at Goa Periphery	4214.18
Total Power scheduled/ Purchased at Goa Periphery	
Total Schedule Billed Drawal -CGS	3855.14
Add: Over-drawal	28.70
Add: Power Purchase through Banking	18.17
Add: Power Purchase from Open Market (IEX)	104.52
Add: Hydro Power	0.00
Less: Under-drawal	32.53
Add: Renewable Power	651.63
Less: Power diverted to Exchange	253.50
Total	
PGCIL Losses - MUs	157.96
PGCIL Losses - %	3.61%
Total Power Purchased within Goa State	



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Particulars	FY 2021-22 Revised Estimated
Add: Co-generation	149.79
Add: Hindustan Waste Treatment Plant	0.96
Add: Convergence Solar	3.15
Add: Net Metering	12.65
Total	166.55
Total Power Purchase availability after PGCIL Losses	4380.72
Less: Retail Sales to Consumers	3931.51
Distribution Losses - MUs	449.21
Distribution Losses - %	10.25%

4.6.9 The Hon'ble Commission is requested to approve the Energy Balance for the FY 2021-22 as computed in the above table. The energy requirement and source wise power purchase details are discussed in subsequent paragraph. The details of energy Balance for FY 2021-22 (annual) are provided in Format 6 of Tariff Filing Formats.

4.7 Power Purchase Quantum & Cost for FY 2021-22

Power Purchase Cost for FY 2021-22 H1:

4.7.1 EDG meets its total energy requirement from its allocation from the Central Generating Stations (CGS), state-based Co-generation facilities, Power Exchanges etc. EDG receives power from CGS like NTPC and NPCIL as per allocation from time to time. The power purchases from other sources such as Co-generation has been considered as per respective PPAs. Also, Renewable Power has been procured from NVVNL, SECI and Manikaran Power.

4.7.2 The below table shows the summary of Power Purchase (at Goa periphery) from various sources along with their costs for H1 of FY 2021-22 including Transmission Charges, Banking, Over-drawl and purchase from traders:

Particulars	Gross Purchase	Cost	Rate
	MUs	Rs. Cr.	Rs./kWh
NTPC	1844.67	572.11	3.10
NPCIL	107.51	31.26	2.91
IEX (Net of Purchase and Sales)	-83.68	-16.50	1.97



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Particulars	Gross Purchase	Cost	Rate
	MUs	Rs. Cr.	Rs./kWh
IEX Purchase (Peak Hrs)	56.99	24.71	4.34
IEX Sale (Off Peak Hrs)	140.67	41.23	2.93
Net Overdrawal	-12.49	-0.38	0.30
Co-Generation	96.02	23.01	2.40
Renewable	346.31	147.15	4.25
Transmission		129.15	
Banking of Power (Net)	-91.15	0.03	0.00
Total	2207.18	885.82	4.01

4.7.3 The source wise details of Power Purchase Quantum and its cost are covered in Format 4 of the Tariff Filing Formats.

4.7.4 EDG on a real time basis has also overdrawn/ under drawn power from grid. Reactive charges have been adjusted in the over-drawl and under-drawl charges. The details of the same for FY 2021-22 H1 are provided in the table given below:

Table 4-8: DSM Power (Over-drawl & Under-drawl) Charges for H1 of FY 2021-22

Region	Over drawal		Under drawal		Net Drawal	
	Rs. Crore	MUs	Rs. Crore	MUs	Rs. Crore	MUs
April	0.99	2.28	1.34	5.49	-0.35	-3.21
May	0.38	1.06	1.04	8.07	-0.67	-7.02
June	0.30	0.72	0.30	1.96	0.00	-1.24
July	0.29	0.88	0.70	3.07	-0.40	-2.19
August	1.20	1.88	0.56	1.18	0.64	0.70
September	0.56	1.13	0.17	0.67	0.39	0.46
Total	3.72	7.94	4.11	20.43	-0.39	-12.49

4.7.5 **Transmission Charges for FY 2021-22 of H1:** The transmission charges for the H1 of FY 2021-22 comprises of transmission charges for Western Region and Southern Region. The Transmission charge comes to around Rs. 129.15 Cr.

4.7.6 **Power Purchase Fixed Cost for FY 2021-22:** The Fixed costs of FY 2021-22, since CERC has still not issued the Order for the Control Period for most of the Plant, ED-Goa has considered actual fixed charges paid to the plant in Q1 of FY 2021-22 and extrapolated them to arrive at the revised projections of base year FY 2021-22 for respective Central



Generating Stations.

4.7.7 **Power Purchase Variable Cost for FY 2021-22:** The Petitioner has considered the actual per unit variable costs of FY 2021-22 Q1 and has calculated the revised projections of base year FY 2021-22 w.r.t to power purchase projections for respective Central Generating Stations.

Power Purchase from Renewable Energy Sources:

4.7.8 Solar RPO: In order to meet the Solar RPO, EDG in FY 2021-22 would purchase renewable energy from SECI, NVVNL and through STOA from APPCPL & Manikaran.

4.7.9 Non-Solar RPO: To meet Non-Solar RPO, EDG has planned to procure power from SECI, Manikaran and APPCL on short term basis.

4.7.10 EDG submits that it would be able to meet Solar and Non-Solar RPO in FY 2021-22 (as per the Power purchase projections) of the applicable Solar and Non-Solar RPO target. EDG submits shortfall if any, the same shall be met through REC to fulfil its shortfall.

4.7.11 However, the details of the Solar and Non-Solar RPO Status for FY 2021-22 as per the Power Purchase considered w.r.t. FY 2020-21 are given in the table below:

Table 4-9: Solar & Non-Solar RPO Status for FY 2021-22

S.No	Description	Unit	Revised Projections
			FY 2021-22
1	Sales Within State	MUs	3,931.70
2	RPO Obligation	%	
	- Solar	%	8.00%
	- Non Solar	%	9.00%
3	RPO Obligation	MUs	
	- Solar	MUs	314.54
	- Non Solar	MUs	353.85
4	Power Purchase	MUs	
	- Solar	MUs	314.54
	- Non Solar	MUs	354.81

Particulars	Approved in Order dated 30-03-2021	Revised Projections FY 2021-22
Sales within State (MU)	4,085.77	3931.51
Hydro Power available at State Periphery (MU)		



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Particulars	Approved in Order dated 30-03-2021	Revised Projections FY 2021-22
T&D Losses	10.25%	10.25%
Resultant Energy Sales for calculation of RPO (after adjustment of power from hydro sources) (MU)		
RPO Obligation (in %)	17.00%	17.00%
Solar	8.00%	8.00%
Non-Solar	9.00%	9.00%
RPO Obligation for the year (in MU)	694.58	668.36
Solar	326.86	314.52
Non-Solar	367.72	353.84
RPO Compliance (Physical Power available at Consumer Periphery after adjusting Inter-State Transmission and Intra-State T&D Loss)	372.1	669.35
Solar	63.5	314.54
Non-Solar	308.6	353.85
Total RPO compliance (REC Certificates to be purchased)	322.48	0.00
Solar	263.36	0.00
Non-Solar	59.12	0.00
Total RPO compliance (Physical Power Plus REC)	694.58	669.35
Solar	326.86	314.54
Non-Solar	367.72	353.85

Power Purchase Cost for FY 2021-22:

4.7.12 However, the Power purchase cost for FY 2021-22 is considered as per the Business Plan Petition where the FY 2020-21 Power purchase in MU is considered, the fixed and variable charge of Q1 of FY 2021-22 is considered for FY 2021-22.

4.7.13 Summary of Power Purchase Cost for FY 2021-22: In line with the foregoing paragraphs, the total estimated Power Purchase Quantum & Cost for FY 2021-22 as well as that approved by the Hon'ble Commission in Tariff Order dated 30th March 2021 is summarized in the table below:



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Table 4-10: Power Purchase Summary for FY 2021-22

Particulars	Approved in Tariff Order 30-03-2021			Revised Projections for FY 2021-22		
	Gross Purchase	Cost	Rate	Gross Purchase	Cost	Rate
	MUs	Rs.Cr.	Rs./kWh	MUs	Rs.Cr.	Rs./kWh
NTPC	3,476.07	967.64	2.78	3632.51	1028.05	2.83
NPCIL	190.00	80.24	4.22	222.63	59.55	2.67
IEX (Net of Purchase and Sales)	305.61	83.03	2.72	(148.98)	(13.57)	0.91
IEX Purchase (Peak Hrs)				104.52	36.18	3.46
IEX Sale (Off Peak Hrs)				253.50	64.67	2.55
Net Overdrawal				(3.82)	(0.34)	0.88
Co-Generation	168.19	40.37	2.40	149.79	35.81	2.39
Renewable	372.10	147.29	3.96	668.39	293.10	4.39
New Stations	237.12	86.23	3.64			
Transmission		185.6			213.23	
Banking of Power (Net)				18.17	(0.04)	(0.02)
Total	4749.09	1590.40	3.35	4538.68	1615.79	3.56

4.7.14 It is submitted that net power purchase at state periphery after losses is 4,538.68 MU with total power purchase cost of Rs. 1,615.79 Cr. and the average power purchase cost works out to Rs. 3.56/kWh against approved net power purchase cost of Rs. 3.35/kWh for FY 2021-22.

4.7.15 The power purchase details for entire FY 2021-22 are provided in Tariff Filing Format 3.

4.7.16 It is requested to the Hon'ble Commission to approve the power purchase cost including transmission charges for FY 2021-22 as detailed in tables given above.

4.8 Operation & Maintenance Expenses

4.8.1 Operation & Maintenance Expenses consists of three elements viz Employee Expenses, A&G Expense and R&M Expense:

- Employee expenses
- Administrative and General
- Repairs and Maintenance Expenses



4.8.2 Employee Expenses for FY 2021-22:

4.8.2.1 Actual employee expense for FY 2021-22 H1 is Rs. 154.56 Cr. EDG has projected normative Employee Expenses for FY 2021-22 at Rs. 162.41 Cr.

4.8.2.2 EDG also submits that in the previous Tariff Order for FY 2021-22 dated 30th March 2021, the Hon'ble Commission has not approved the revised Employee Expenses for base year i.e. FY 2018-19 and approved the Employee Expenses for FY 2021-22 based on approved Employee Expenses for FY 2019-20 in MYT Order and revised CPI of 5.35% (average CPI for FY 18, FY 19 and FY 20). The relevant extracts of the Tariff Order dated 30th March 2021 is provided below:

“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 2018-19. 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”

4.8.3 Employee Expenses:

4.8.3.1 The Actual Employee expenses of the MYT Control Period FY 2019-20 to FY 2021-22 are provided in the following:

Table 4-11: Actual and Projected Employee expenses of the MYT Control Period FY 2019-20 to FY 2021-22 (Rs. Crore)

S.No	Particulars	Actual	Actual	Projection	Actual	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
	Salaries & Allowances					
1	Salary	336.59	321.21	154.50	161.61	316.11
2	Wages	-	-	0.01	0.35	0.36



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S.No	Particulars	Actual	Actual	Projection	Actual	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
3	Stipend	0.08	0.08	0.05	0.45	0.50
4	Transport Allowance				-	-
5	Overtime allowance				-	-
6	Total	336.67	321.29	154.56	162.41	316.97
7	Less: Add/Deduct share of others					
8	Total	336.67	321.29	154.56	162.41	316.97
9	Less: Amount capitalized					
10	Net amount	336.67	321.29	154.56	162.41	316.97
11	Add: Pension/ DA and other Provision					
12	Total Employee Expenses	336.67	321.29	154.56	162.41	316.97

4.8.4 A&G Expenses:

4.8.4.1 The Actual Employee expenses of the MYT Control Period FY 2019-20 to FY 2021-22 are provided in the following:

Table 4-12: Actual and Projected A&G expenses of the MYT Control Period FY 2019-20 to FY 2021-22 (Rs. Crore)

S. No.	Particulars	Actual	Actual	Actual	Projection	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
1	Travelling Expenses	0.38	0.20	0.10	0.13	0.23
2	Office Expenses	16.61	15.25	5.65	30.75	36.40
3	Regulatory Expenses (License + Petition Fees)				-	
4	Petrol, Oil, Lubricant (P.O.L)	0.01	0.01	0.00	0.01	0.02
5	Rent, Rates & Taxes	0.58	0.61	0.20	0.65	0.85
6	Advertisement & Publicity	0.20	-	0.10	0.15	0.25
7	Professional & Special Services				-	
8	Other A&G Charges				-	
9	Overtime Allowance				-	
10	Minor Works	0.67	0.64	0.15	0.86	1.01
11	Legal, Professional & Special Service Charges	0.68	0.57	0.17	0.78	0.95



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S. No.	Particulars	Actual	Actual	Actual	Projection	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
12	Other material related expenses (Other charges)	3.90	4.19	1.67	12.97	14.64
13	Total	23.03	21.47	8.04	46.31	54.35
14	Add/Deduct share of others (to be specified)					
15	Total expenses	23.03	21.47	8.04	46.31	54.35
16	Less: Capitalized					
17	Net expenses	23.03	21.47	8.04	46.31	54.35
18	Add: Prior period					
19	Total A&G Expenses charged to revenue	23.03	21.47	8.04	46.31	54.35

4.8.5 R&M Expenses:

4.8.6 The Actual Employee expenses of the MYT Control Period FY 2019-20 to FY 2021-22 are provided in the following:

Table 4-13: Actual and Projected R&M expenses of the MYT Control Period FY 2019-20 to FY 2021-22 (Rs. Crore)

S. No	Particulars	Actual	Actual	Actual	Projection	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
1	Plant & machinery	17.64	25.40	11.12	16.38	27.50
2	Building	2.23	1.94	1.28	1.03	2.30
3	Hydraulic works & civil works				-	
4	Line cable & network	13.36	21.09	14.42	33.58	48.00
5	Vehicles	9.20	10.42	6.56	2.35	8.91
6	Furnitures & Fixtures				-	
7	Office Equipments				-	
8	Operating Expenses				-	
9	Minor R&M works	0.78	0.76	0.23	1.05	1.28
10	Total	43.21	59.61	33.62	54.37	87.99
11	Add/Deduct share of others (To be specified)					
12	Total expenses	43.21	59.61	33.62	54.37	87.99
13	Less : Capitalized					



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S. No	Particulars	Actual	Actual	Actual	Projection	Revised projections
		FY 2019-20	FY 2020-21	FY 2021-22 (H1)	FY 2021-22 (H2)	FY 2021-22
14	Net expenses	43.21	59.61	33.62	54.37	87.99
15	Add: prior period					
16	Total expenses charged to revenue as R&M expenses	43.21	59.61	33.62	54.37	87.99

4.8.7 O&M Expenses Summary FY 2021-22:

4.8.8 The O&M expenses submitted for the purpose for Business Plan Petition is considered for FY 2021-22. The O&M Expenses as per the Business Plan is based on the H1 (Actual) and H2 Projection based on the Total expected expenses as per the Accounts dept. The O&M expenses for the FY 2021-22 vis-a-vis that approved by the Hon'ble Commission is shown in the table below:

Table 4-14: O&M Expenses for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Tariff order dated 30-03-2021	H1 Actual	H2 Projection	Revised Projections FY 2021-22
Employee Expenses	311.98	154.56	162.41	316.97
A&G Expenses	31.02	8.04	46.31	54.35
R&M Expenses	86.58	33.62	54.37	87.99
Total O&M Expenses	429.58	196.22	263.09	459.31

4.8.9 The Hon'ble Commission is requested to approve the O&M Expenses as shown in the table above.

4.9 Capital Expenditure and Capitalization

4.9.1 EDG submits that it has considered the capex & capitalization for FY 2021-22 as per revised projection as submitted in formats along with the Petition. The Capital Investment, Capitalization, Capital Work in Progress (CWIP) and Gross Fixed Asset (GFA) for FY 2021-22 are discussed hereunder as:

4.9.2 Capital Investment and Capitalization during FY 2021-22:



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4.9.2.1 EDG submits that the Gross Block considered in FY 2021-22 is based on audited figure of FY 2016-17 and further addition based on the provisional values of capital investment and capitalisation for FY 2017-18, FY 2018-19 and FY 2019-20.

4.9.2.2 EDG hereby submits a gist on the Capital Expenditure & Capitalization for FY 2021-22:

Table 4-15: Capital Expenditure & Capitalisation for FY 2021-22 (Rs. Cr.)

S.No	Name of Schemes	Capex during FY 2021-22	Capitalisation during FY 2021-22
A1	Schedule Tribe Development Scheme (P)	38.60	44.18
A2	Infrastructure development through Electricity Duty (Plan)	176.39	159.07
a)	Design, Supply, installation, Testing and Commissioning of 33/11KV Gas insulated Substation 2x16/20MVA along with associated equipment at Patto Plaza Panaji	14.00	15.79
b)	Work of 2x10 MVA, 33/11KV Indoor type substation along with associated equipment at Karaswado Mapusa.	4.00	9.80
c)	Work of 2x10 MVA, 33/11KV Indoor type substation along with associated equipment's at Sal in the jurisdiction of V.P Sal in Bicholim	7.00	15.00
d)	Work of conversion of existing O/H 11KV & LT line to U/G cabling system at Cacora Curchorem Municipal area in Curchorem constituency	6.00	7.00
e)	Work for conversion of 11KV and LT overhead lines to underground network in the left out parts of Margao Municipal areas in Margao & Fatorda	0.50	3.50
f)	Work of conversion of existing overhead 11 KV line to underground system of feeders namely 11 KV Torda, 11KV Housing Board, 11 KV Pundalik Nagar feeder and associated LT network on transformer of said feeders and bifurcation of 11KV Torda feeder and Chogum road feeder emanating from 33/11KV Porvorim Sub-Station covering major portion of Porvorim Plateau area in Porvorim constituency.	4.00	9.00
g)	Work of laying of 33KV S/C 3 core 400 Sq mm. XLPE underground cable from Naveli Amona 220/33KV Sub-substation to Marcel for a distance of 8.4 kms	0.80	3.80
h)	Work of conversion of existing overhead 11 KV feeders to underground system, erection of new DTCs, augmentation of DTC, erection of additional feeders, conversion single phase to three phase,	4.50	6.00



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S.No	Name of Schemei	Capex during FY 2021-22	Capitalisation during FY 2021-22
	replacement of conductor, providing guarding, DP renovation etc. under Section Office Saligao and Britona		
i)	Change of conductor of 110 KV Ponda -Verna and Ponda -Xeldem with higher current capacity HTLS conductor.	8.18	8.18
j)	Street Light EESL Payment	48.24	48.24
k)	Other than approved works undertaken	79.17	32.76
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)	10.88	14.64
A4	Normal Development Schemes (Plan)	5.00	5.00
A5	System Improvement Schemes (Plan)	33.79	32.52
A6	Construction of staff quarters and office buildings (Plan)	2.00	2.00
A7	Strengthening of 220 KV Transmission Network	10.02	5.02
A9	Restructured Accelerated Power Development and Reforms Programme Part A	23.00	23.00
A10	Underground Cabling	105.31	15.45
A11	R-APDRP Part B / IPDS	41.83	34.83
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes	0.20	0.20
B2	Sub-transmission and distribution improvement scheme	50.00	35.00
	Other Schemes		
	Underground Cabling of Anjuna Feeder (World Bank Funding)	13.43	33.00
	Additional Central Assistance to Tribal Sub-Scheme	6.28	6.28
	Public Lighting Scheme	0.20	0.20
	Total	516.94	410.39

4.9.2.3 As seen from the above table, the total Capital Expenditure and Capitalization estimated for FY 2021-22 as per estimates is Rs. 516.94 Cr. and Rs. 410.39 Cr. respectively. The detail of capital expenditure schemes for FY 2021-22 is provided in the Format (capex & Capitalisation FY21-22) of Tariff Filing Formats.

4.9.2.4 The details of opening Capital Works-in-Progress, investments during the year and investments capitalised for the year are summarised in the table below:



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Table 4-16: CWIP for FY 2021-22 (Rs. Cr.)

Particulars	Revised Projections FY 2021-22
Opening Balance	831.15
Add: New Investments	516.94
Total	1,348.07
Less: Investment Capitalized	410.39
Other Entries in CWIP	0.00
Closing Balance	937.69

4.9.3 Opening and Closing GFA for FY 2021-22

4.9.3.1 EDG submits that the opening and closing balance of GFA for FY 2021-22 onwards has been arrived at after considering the provisional capitalization for the period FY 2017-18 to FY 2020-21 and estimated capitalization for FY 2021-22. The computation of the same is provided in the table given below.

Table 4-17: Opening & Closing GFA for FY 2021-22

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Opening GFA	1216.92	1236.61	1274.13	1478.29	1681.25
Addition	27.55	42.01	204.16	202.96	410.39
Retirement	7.85	4.49	0.00	0.00	0.00
Closing GFA	1236.61	1274.13	1478.29	1681.25	2091.64

4.9.3.2 EDG also submits that Opening and Closing GFA for FY 2021-22 after excluding the assets created from Electricity Duty and Grants in the following table:

Table 4-18: Opening & Closing GFA (excl. ED and Grant) for FY 2021-22

Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Opening GFA (Excl. Grand & ED)	1026.18	1042.87	1068.37	1093.66	1149.56
GFA Addition during the year	27.55	42.01	204.16	202.96	410.39
Less: 60% and 75% Grant Component of APDRP Part-B / IPDS Scheme	0.00	0.00	20.79	16.75	43.37
Less: Schemes out of ED Fund	3.01	12.02	158.08	130.31	159.07



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Particulars	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Net GFA addition during the year	1050.72	1072.86	1093.66	1149.56	1357.51
Less: Retirement	7.85	4.49	0.00	0.00	0.00
Opening GFA (Excl. Grant & ED)	1042.87	1068.37	1093.66	1149.56	1357.51

4.9.3.3 EDG also submits that the Regulation 30.4 of JERC MYT Regulation 2018 states that,

“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.”

4.9.3.4 Accordingly, the opening & closing balance of GFA from FY 2021-22 onwards has been arrived at after reduction of accumulated depreciation as on 1st April 2021 and accordingly, the details of the Net Fixed Assets for FY 2021-22 are provided in the table below:

Table 4-19: Opening & Closing GFA (Net of Accumulated Depreciation) for FY 2021-22

Particulars	FY 2020-21	FY 2021-22
Opening NFA net of Accumulated Depreciation	944.37	1149.56
Addition	202.96	410.39
Retirement	0.00	0.00
Closing GFA	1147.33	1559.95

4.10 Depreciation for FY 2021-22

4.10.1 The Regulation 30.7 of the JERC MYT Regulations, 2018 provides for depreciation to be calculated as specified below:

“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.”

4.10.2 The Regulation 30.1 of the JERC MYT Regulations, 2018 provides for depreciation to be calculated as specified below:

“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.”

4.10.3 As per the above said Regulation, the depreciation shall not be allowed on assets funded through capital subsidies, consumer contribution or grants. Accordingly, average GFA excluding grant and electricity duty works out as Rs. 1,253.53Cr is derived. Hence depreciation towards GFA excluding grant & electricity duty works out as Rs. 50.79 Cr. in proportion with GFA excluding grant & electricity duty to total average GFA. The table below shows the working of Depreciation considered in ARR for FY 2021-22.

Table 4-20: Depreciation for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc)	2,270.36	1149.56
Add: Gross Asset Addition	75	410.39
Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution		202.44
Value of Asset eligible for depreciation		207.95
Add: Addition During the Year		207.95
Less: Decapitalisation		0.00
Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	2,345.36	1357.51
Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	2,307.86	1253.53
Depreciation	88.18	50.79
Wt. Avg Rate of Depreciation	3.82%	4.05%

4.10.4 The detail of GFA & Depreciation for FY 2021-22 is provided in the Format 15 of Tariff Filing Formats respectively. The Hon'ble Commission is requested to approve the depreciation for the year for FY 2021-22.

4.11 Interest & Finance Charge

4.11.1 EDG submits that the Regulations 28.1 & 28.2 of the JERC MYT Regulations, 2018



specifies that:

“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.”

4.11.2 EDG submits that as per Regulation 26.2 of JERC MYT Regulations, 2018, if the actual equity 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. Extract of the relevant Regulation is reproduced as under:

“26 Debt to Equity Ratio

.....

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”

4.11.3 EDG has submitted that most capital assets are created out of the equity contribution from Government of Goa and the actual borrowing of loan is only to the extent of the APDRP schemes. EDG has computed loan balance and interest on loan as per normative principles and methodology adopted by the Hon’ble Commission in past orders.



4.11.4 EDG doesn't have any actual loan in EDG's Books of Accounts, hence normative loan is calculated in line with above mentioned regulations. The Hon'ble Commission has approved normative loan as on 31st March 2017 in final true up of FY 2016-17. The same normative loan balance has considered as opening balance for FY 2017-18, and normative loan addition is calculated at 70% of the GFA excluding grant and electricity duty fund contribution till 31st March 2021. The same balance is carried forward as opening normative loan for FY 2021-22. Further during FY 2021-22, addition of net GFA (excluding grant and electricity duty) is added. Normative loan repayments are considered same as depreciation amount excluding in proportion of grant and electricity duty for FY 2021-22. The rate of Interest for long term Interest rate has been considered at the rate of 7.00% including 100 basis points as per one-year SBI MCLR Interest rate applicable as on 1st April relevant financial year, i.e. 01st April 2021 in this regard. It is requested to Hon'ble Commission to approve Interest on Loan on normative principles.

4.11.5 EDG has not considered the Letter of Credit charges for payment security charges as directed by the Hon'ble Commission, as the same will be considered at the time of true up.

Table 4-21: Interest & Finance Charges for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
Opening Normative Loan	1,094.72	146.97
Add: Normative Loan during the year/GFA during the year	52.50	145.56
Less: Normative Repayment for the year	88.18	50.79
Closing Normative Loan	1,059.04	241.74
Average Normative Loan	1,076.88	194.35
Rate of Interest	8.00%	8.00%
Interest on Normative Loan	86.15	15.55

4.11.6 The Hon'ble Commission is requested to approve the Interest & Finance Charges for FY 2021-22 as shown in the above table. The details of Interest & Finance charges are provided in Format 12 of the Tariff Filing Formats.

4.12 Interest on Working Capital

4.12.1 As per Regulation 63.1 of the JERC MYT Regulations, 2018, Interest on Working Capital



for retail supply activity of the licensee shall consist of:

- O&M Expenses for one (1) month;
- Maintenance spares at 40% of repair and maintenance for one month;
- Receivables equivalent to two (2) months of the expected revenue from consumers at prevailing tariff;
- Less: Consumer security deposit but excluding bank guarantee/ fixed deposit receipt.

4.12.2 Regulation 31.4 of the JERC MYT Regulations, 2018 specifies as below:

“34.1 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.”

4.12.3 The Interest Rate is considered equivalent to the SBI base Rate available as on 01st April 2021 for FY 2021-22 which is at 7.00% plus 200 basis points which works out to be 9.75%.

4.12.4 In line with the aforesaid regulation, the detailed computation of Interest on Working Capital for FY 2021-22 is provided in the table below:

Table 4-22: Interest on Working Capital for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
O&M Expense for 1 month	35.80	38.28
Maintenance spares at 40% of R&M expenses for one (1) month;	2.89	2.93
Receivables equivalent to two (2) months of the expected revenue from charges at the prevailing tariff	320.37	339.52
Less: Amount, held as security deposits	188.74	69.62
Net Working Capital	170.32	311.11
Rate of Interest (%)	9.75%	9.00%
Interest on Working Capital	16.61	28.00

4.12.5 The Hon’ble Commission is requested to approve the Interest on Working Capital as presented in the table above. The details of Interest on Working Capital for FY 2021-



22 are provided in Format 14 of the Tariff Filing Formats.

4.13 Interest on Consumer Security Deposit

4.13.1 As per the Regulation 5.135 of Electricity Supply Code Regulations, 2018 and subsequent amendment dated 25th March 2019:

“The Licensee shall pay interest to the consumer at the Bank Rate declared by the Reserve Bank of India prevailing on the 1st of April for the year, payable annually on the consumer’s security deposit with effect from date of such deposit in case of new connections energized after the date of this notification, or in other cases, from the date of notification of this Supply Code, 2018. The interest accrued during the year shall be adjusted in the consumer’s bill for the first billing cycle of the ensuing financial year. If the Security Deposit is submitted in the form of Bank Guarantee or by providing lien against fixed deposits, no interest shall be payable to the consumer.”

4.13.2 In accordance with Regulation 28.11 of the JERC MYT Regulations, 2018 specifies that,

“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.”

4.13.3 The provision of interest on security deposits is to be made at the bank rate. The interest rate considered is 4.25% which is RBI Bank rate as on 01st April 2021.

4.13.4 In view of the above, Interest on Security Deposit is calculated at Rs. 2.96 Cr. on cash security deposit amounts excluding Bank Guarantee & Fixed Deposit Receipts based on the regulation stated above.

4.13.5 EDG submits that, however, as per the direction of the Hon’ble Commission EDG has started the payment of Interest on Security Deposit to its consumers for previous years as well and accordingly estimated the payment of Interest on Security Deposit to be Rs. 5.43 Cr.

4.13.6 The table below shows details of Interest on Security Deposit for FY 2021-22:



Table 4-23: : Interest on Security Deposit for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
Opening Security Deposit	163.19	62.22
Net Additions during the year	51.10	15.16
Less: Deposits Refunded	0.00	0.35
Closing Security Deposit	214.29	77.02
Average Security Deposit	188.74	69.62
Rate of Interest (%)	4.65%	4.25%
Interest on Security Deposit	8.78	2.96
Interest on Security Deposit to be paid and claimed in ARR	8.78	5.43

4.13.7 The Hon'ble Commission is requested to approve the Interest on Security Deposit for FY 2021-22 as detailed in the above table.

4.14 Return on Equity

4.14.1 Regulation 27.2 & 27.3 of the JERC MYT Regulations, 2018 specifies that:

"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."

4.14.2 In line with the above regulation and the methodology proposed in the JERC MYT Regulations, 2018, EDG has calculated the Return on Equity as outlined in the following table for FY 2021-22.

4.14.3 The opening balance of assets and accumulated depreciation are considered as per audited account of FY 2016-17 and further provisional actual numbers used to arrive at the opening balance for FY 2021-22. Opening equity has been computed by confiscating electricity duty utilised from FY 2008-09 to FY 2014-15 from the opening GFA as on 01st April 2016.



4.14.4 Further normative equity addition during the year is considered 30% of the net GFA addition excluding proportion of grant and electricity duty as computed provided below:

Table 4-24: Opening Balance of Equity as on FY 2021-22 (Rs. Cr.)

Particulars	Amount (Rs. Cr.)
Calculation of Opening Balance of Equity	
Cl.Balance of GFA as on 31st March 2017	1117.45
Electricity Duty utilised from FY 2008-09 to FY 2010-11	63.95
Additional of Electricity Duty Fund from FY 2011-12 to FY 2014-15	137.16
Opening Balance of Equity as on 1st April 2016 = (1-2-3)*30%	274.90
Add. capitalisation in FY 2016-17 = 30% of GFA Excluding grants	15.52
Add. capitalisation in FY 2017-18 = 30% of GFA Excluding grants	7.36
Add. capitalisation in FY 2018-19 = 30% of GFA Excluding grants	9.00
Add. capitalisation in FY 2019-20 = 30% of GFA Excluding grants	7.59
Add. capitalisation in FY 2020-21 = 30% of GFA Excluding grants	16.77
Opening Balance of Equity as on 1st April 2021	331.14

4.14.5 The table below shows calculation of Return on equity for FY 2021-22:

4.14.6 Further normative equity addition during the year is considered 30% of the net GFA addition excluding proportion of grant and electricity duty as computed in format 16.

Table 4-25: Return on Equity for FY 2021-22 (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
Opening Equity Amount	681.11	331.14
Equity Addition during the year (30% of Capitalisation)	22.5	62.38
Closing Equity Amount	703.61	393.53
Average Equity Amount	692.36	362.33
Average Equity (Wire Business)	623.12	326.10
Average Equity (Retail Supply Business)	69.24	36.23
Return on Equity for Wires Business @ 15.50%	96.58	15.50%
Return on Equity for Retail Supply Business @ 16.00%	11.08	16.00%
Return on Equity	107.66	56.34



4.14.7 The Hon'ble Commission is requested to approve the Return on equity for FY 2021-22 as shown in the table above. The details of Return on Equity for FY 2021-22 are provided in Format 16 of the Tariff Filing Formats.

4.15 Non-Tariff Income

4.15.1 Non-Tariff Income comprises of proceeds from sale of dead stock, wastepaper, receipt from State Electrical Inspectorate and other miscellaneous receipts. The Non-Tariff Income for the year FY 2021-22 is estimated to be Rs. 29.20 Cr.

4.15.2 The details of Non-Tariff Income for FY 2021-22 are provided in Format 21 of the Tariff Filing Formats.

4.16 Aggregate Revenue Requirement for FY 2021-22

4.16.1 Based on the submissions made in the foregoing paragraphs, the net Aggregate Revenue Requirement for the year FY 2021-22 and the revenue gap is shown in the table below:

Table 4-26: Aggregate Revenue Requirement for FY 2021-22 (APR) (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	ARR for H1	Revised Projections FY 2021-22
Cost of power purchase along with Provision for RPO Compliance	1,590.40	807.90	1,615.79
Employee Expenses	311.98	154.56	316.97
Repair & Maintenance expenses (R&M)	86.58	33.62	87.99
Administration and General expenses (A&G)	31.02	8.04	54.35
Depreciation	88.18	25.40	50.79
Interest on Loan	86.15	7.77	15.55
Interest on Working Capital	16.61	14.00	28.00
Return on Equity	107.66	28.17	56.34
Interest on Consumer Security Deposit	8.78	0.00	5.43
Total Revenue Requirement	2,327.36	1079.46	2,231.21
Less: Non-Tariff Income	26.32	8.42	29.20
Net Revenue Requirement	2,301.04	1071.04	2,201.01

4.16.2 The Hon'ble Commission is requested to approve the net Aggregate Revenue Requirement for FY 2021-22 as described in the above table.



4.17 Revenue from Retail Sale of Power

- 4.17.1 EDG submits that in the Tariff Order for FY 2021-22 dated 30th March 2021, the Hon'ble Commission had approved the tariff hike of around 3.18% which was to be implemented from 01st April 2021. EDG further submitted that, ongoing COVID-19 pandemic has resulted in lockdown which affected the economic activities which reduced the income for most of the consumers. In such a situation, an increased tariff would have resulted in additional financial impact on the consumers which would have jeopardized the economic revival efforts of the Government of Goa.
- 4.17.2 Hence, in view of the same, the Government of Goa decided to grant subsidy to all the categories of consumers from 1st April, 2021 to 31st March, 2022 to nullify the impact of tariff hike and to continue with the tariff approved for FY 2019-20 in tariff order dated 20th May 2019.
- 4.17.3 Accordingly, EDG has billed the consumers based on the tariff approved for FY 2019-20. However, for the purpose of computation of revenue for FY 2021-22, it has considered the approved tariff as per the tariff order for FY 2021-22 dated 30th March 2021. The loss of revenue due to continuation of tariff of FY 2019-20 would be provided as a subsidy by the Government of Goa and thus has not been considered in the Revenue Gap for FY 2021-22.
- 4.17.4 The revenue for H1 (April to September) is Rs.925.51 Crore against sale of 2038.51 MUs. The overall revenue from sale of power for FY 2021-22 computes to Rs. 2,037.14 Cr. for sale of 3931.70 MU and Hon'ble Commission is requested to approve the same. The category wise computation of revenue is represented in the table given below:

Table 4-27: Revenue from Sale of Power for FY 2021-22

S.No	Category of Consumer	FY 2021-22 (H1)	FY 2021-22 (H2)	Revised Projections FY 2021-22	
		Sales (MUs)	Sales (MUs)	Sales (MUs)	Revenue (Rs. Cr)
A	Low Tension Supply	957.35	871	1,828.50	614.40
1(a)	Tariff LTD/Domestic and Non-Commercial	687.82	586	1,273.99	341.09
	<i>0-100 units</i>	<i>251.68</i>	<i>236.93</i>	<i>488.61</i>	<i>79.71</i>
	<i>101-200 units</i>	<i>164.78</i>	<i>143.03</i>	<i>307.81</i>	<i>73.59</i>
	<i>201 to 300 units</i>	<i>94.47</i>	<i>73.07</i>	<i>167.54</i>	<i>54.52</i>
	<i>301 to 400 units</i>	<i>54.80</i>	<i>38.35</i>	<i>93.15</i>	<i>37.25</i>
	<i>Above 400 units</i>	<i>122.09</i>	<i>94.79</i>	<i>216.88</i>	<i>96.01</i>
1(b)	Tariff LTD/Low Income Group	0.58	0.69	1.27	0.05
2	Tariff-LTC/Commercial	190.35	216.64	406.99	209.45



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S.No	Category of Consumer	FY 2021-22 (H1)	FY 2021-22 (H2)	Revised Projections FY 2021-22	
		Sales (MUs)	Sales (MUs)	Sales (MUs)	Revenue (Rs. Cr)
-	<i>0-20 KW/Commercial Consumers</i>				
	<i>1-100 Units</i>	33.40	34.53	67.93	27.87
	<i>101-200 units</i>	19.24	20.46	39.70	18.10
	<i>201-400 Units</i>	22.81	24.47	47.28	23.60
	<i>Above 400 units</i>	66.35	82.30	148.65	78.73
-	<i>>20-90Kw Commercial Consumers</i>				
	<i>1-100 Units</i>	1.70	1.58	3.28	2.23
	<i>101-200 units</i>	1.60	1.51	3.11	1.71
	<i>201-400 Units</i>	2.97	2.89	5.86	3.50
	<i>Above 400 units</i>	42.28	48.90	91.17	53.72
3	LTI-Industry	39.46	39	78.23	36.98
	<i>0-500 Units</i>	8.07	7.92	15.99	8.66
	<i>Above 500 units</i>	31.39	30.84	62.24	28.32
4	Tariff-LTP/Mixed (Hotel Industries)	1.49	2.18	3.67	1.96
5(a)	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	7.74	7.45	15.19	3.29
5(b)	Tariff-LTAG/Agriculture Allied (B)	0.62	0.37	0.99	0.24
6	Tariff-LTPL/Public Lighting	29.22	18.79	48.01	21.14
7	Tariff-LT Hoarding and SignBoard	0.07	0.08	0.16	0.20
B	High Tension Supply	1,076	1,016	2,092.40	1,414.80
8	Tariff HTD/Domestic	0.17	0.24	0.41	0.21
9	Tariff HT-Commercial	53.14	58.05	111.19	100.86
10	Tariff HTI/Industrial	765.71	689	1,454.39	996.83
	<i>Connected at 11/33 kV</i>	626.17	578.09	1,204.26	839.00
	<i>Connected at 110 kV</i>	139.54	110.59	250.13	157.83
11	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	233.59	250.76	484.34	295.52
12	Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)	3.12	2.18	5.30	1.96
13	Tariff-HTAG/Agriculture (Allied Activities) (B)	5.22	3.70	8.91	1.95
14	H.T. MES/Defence Establishments	15.12	12.74	27.86	17.46
C	Temporary Supply	1.47	1.71	3.18	1.71
15	Tariff-LT/Temporary Domestic	0.33	0.28	0.61	0.18
	<i>0-100 Units</i>	0.33	0.28	0.61	0.18



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S.No	Category of Consumer	FY 2021-22 (H1)	FY 2021-22 (H2)	Revised Projections FY 2021-22	
		Sales (MUs)	Sales (MUs)	Sales (MUs)	Revenue (Rs. Cr)
	101 to 200 Units	-	-	-	-
	201 to 300 Units	-	-	-	-
	301 to 400 Units	-	-	-	-
	Above 400 Units	-	-	-	-
16	Tariff-LT/Temporary Commercial	1.14	1.43	2.57	1.52
	0-20 KW/Commercial Consumers				
	0-100 Units	1.14	1.43	2.57	1.52
	101 - 200 Units	-	-	-	-
	201 - 400 Units	-	-	-	-
	Above 400 Units	-	-	-	-
	>20-90Kw and above Commercial Consumers				
	0 - 100 units	-	-	-	-
	101 - 200 units	-	-	-	-
	201-400 units	-	-	-	-
	Above 400 units	-	-	-	-
17	Tariff-HTTS/Temporary Supply	2.02	1.32	3.34	3.12
	HT Domestic	2.02	1.32	3.34	3.12
	HT Commercial	-	-	-	-
D	Single Point Supply	2	3	4.27	3.12
18	Residential Complexes	-	-	-	-
19	Commercial Complexes	2	2.66	4.27	3.12
20	Industrial Complexes	-	-	-	-
21	Electric Vehicle Charging Station	-	-	-	-
	Total	2,038.51	1,893.18	3,931.70	2,037.14

4.18 Estimated Revenue Gap for FY 2021-22

4.18.1 EDG submits that it has estimated the Net Revenue Gap for FY 2021-22 after considering the budgetary support from the Government of Goa and the same is presented in the table given below.



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Table 4-28: Revenue Gap for FY 2021-22 (APR) (Rs. Cr.)

Particulars	Approved in Order dt. 30-03-2021	Revised Projections FY 2021-22
Net Revenue Requirement	2,301.04	2,202.01
Revenue from Sale of Power	1,922.23	2,037.14
Revenue Gap during the Year	378.81	164.87
Less: Budgetary Support for State Govt.	378.81	164.87
Net Revenue to be carried forward	0.00	0.00

4.18.2 EDG further submits that in APR for FY 2021-22, again the entire revenue gap as computed above is proposed to be met by the Government of Goa as a budgetary support. Thus, the revenue gap carried forward to FY 2022-23 has been considered as NIL.

4.18.3 In view of above, the Hon'ble Commission is requested to allow Revenue Gap for FY 2021-22 as NIL as computed in the above table for the purpose of carrying forward to FY 2022-23.



5 AGGREGATE REVENUE REQUIREMENT FOR CONTROL PERIOD FY 2022-23 TO FY 2024-25

5.1 Preamble

5.1.1 The Hon'ble Joint Electricity Regulatory Commission (JERC) has notified the Regulations, JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 on 22nd March 2021 for the determination of tariff for the MYT control period based on certain norms of operation and financial parameters.

5.1.2 The JERC (Multi Year Distribution Tariff) Regulations, 2021 hereafter referred to as MYT Regulations, 2021 clearly states that the Hon'ble Commission shall determine the tariff under MYT framework with effect from 1st April 2021. The relevant section is quoted below:

"5.1 The Commission shall determine the tariff for matters covered under clauses (a), (b), (c) and (d) of Regulation 3.1, under a Multi Year Tariff framework with effect from April 1, 2022."

5.1.3 The MYT Regulations, 2021 has defined control period in the following manner.

"18. "Control Period" shall mean the period of three (3) Years from April 1, 2022 to March 31, 2025;"

5.1.4 ED accordingly submits Aggregate Revenue Requirement for the MYT control period from FY 2022-23 to FY 2024-25 based on the parameters defined in the MYT Regulations, 2018 which are proposed to be approved by the Hon'ble Commission, along with the proposed Tariff for FY 2022-23.

5.2 Principles for determination of ARR

5.2.1 This chapter summarizes the Aggregate Revenue Requirement (ARR) for the MYT control period FY 2022-23 to FY 2024-25. The projections for the control period have been made based on the parameters specified in the MYT Regulations, norms proposed and approved in business plan and also based on actual data for previous years.

5.2.2 The overall performance parameters proposed for the control period is based on the methodologies discussed in subsequent paragraphs.



5.2.3 While projecting ARR, EDG has considered the parameters which have been proposed/projected in the Business Plan Petition for MYT control period FY 2022-23 to FY 2024-25 submitted to the Hon'ble Commission on 11th November 2021.

5.3 Number of Consumers for FY 2022-23 to FY 2024-25

5.3.1 EDG has submitted number of consumers along with past various CAGR and based on rational for each category of consumers specific CAGR has been used to project category wise consumers in its Business Plan petition. The same has been considered to project the revenue for MYT control period as per the format provided by Hon'ble Commission tabulated below.

Table 5-1: Number of Consumers for FY 2022-23 to FY 2024-25

S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic			
	11 kV Voltage Level			
	Tariff HTD/Domestic	4	4	5
	Tariff-HTTS/Temporary Supply (HT Domestic)	16	17	17
	LT Voltage Level			
	Tariff LTD/Domestic and Non-Commercial	547790	559603	571670
	Tariff LTD/Low Income Group	877	877	877
	Tariff-LT/Temporary Domestic	1014	1014	1014
	Sub-Total	549701	561514	573583
2	Commercial			
	33 kV & 11 kV Voltage Level			
	Tariff HT-Commercial	289	303	318
	LT Voltage Level			
	Tariff-LTC/Commercial	103827	105798	107806
	Tariff-LT/Temporary Commercial	1712	1712	1712
	Sub-Total	105828	107813	109836



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
3	Public Lighting			
	LT Voltage Level			
	Tariff-LTPL/Public Lighting	5726	6012	6313
4	Agricultural Pumpsets			
	HT Voltage Level (33 kV & 11 kV)			
	HT-Agriculture			
	Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)	43	43	44
	Tariff-HTAG/Agriculture (Allied Activities) (B)	3	3	3
	LT Voltage Level			
	LT-Agriculture			
	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	12481	12875	13281
	Tariff-LTAG/Agriculture Allied (B)	256	269	282
	Sub-Total	12783	13190	13610
5	Small Power			
	LT Voltage Level			
	LTI-Industry	5649	5649	5649
	0-500 Units	3982	3982	3982
	Above 500 units	1667	1667	1667
	Tariff-LTP/Mixed (Hotel Industries)	116	116	116
	Sub-Total	5765	5765	5765
6	Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV			
	33 kV / 11 kV & 110 kV Voltage Level			
	Tariff HTI/Industrial	798	814	831
	33 kV/11kV	793	809	826
	110kV	5	5	5
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	22	22	22
	H.T. MES/Defence Establishments	15	15	16
	Sub-Total	835	852	869
8	Bulk Supply			



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
	33 kV Voltage Level			
	Single Point Supply	1	1	1
	<i>Residential Complexes</i>	0	0	0
	<i>Commercial Complexes</i>	1	1	1
	<i>Industrial Complexes</i>	0	0	0
	Sub-Total	1	1	1
9	Other Categories			
	33 kV Voltage Level			
	Electric Vehicle Charging Station			
	11 kV Voltage Level			
	Tariff-LT Hoarding and SignBoard	61	61	61
	Electric Vehicle Charging Station			
	Grand Total	680699	695208	710037

5.3.2 EDG submits that connected load for FY 2022-23 to FY 2024-25 is summarised in the following table is considered for the MYT control period FY 2022-23 to FY 2024-25:

Table 5-2: Connected load for FY 2022-23 to FY 2024-25

S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic			
	11 kV Voltage Level			
	Tariff HTD/Domestic	420	441	463
	Tariff-HTTS/Temporary Supply (HT Domestic)	5664	5947	6244
	LT Voltage Level			
	Tariff LTD/Domestic and Non-Commercial	1722919	1789067	1857755
	Tariff LTD/Low Income Group	85	85	85
	Tariff-LT/Temporary Domestic	1728	1728	1728
	Sub-Total	1730816	1797268	1866275
2	Commercial			
	33 kV & 11 kV Voltage Level			



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
	Tariff HT-Commercial	108614	114045	119747
	LT Voltage Level			
	Tariff-LTC/Commercial	390009	406751	424212
	Tariff-LT/Temporary Commercial	7520	7520	7520
	Sub-Total	506143	528316	551479
3	Public Lighting			
	LT Voltage Level			
	Tariff-LTPL/Public Lighting	12192	12802	13442
4	Agricultural Pumpsets			
	HT Voltage Level (33 kV & 11 kV)			
	HT-Agriculture			
	Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)	9476	9698	9924
	Tariff-HTAG/Agriculture (Allied Activities) (B)	2200	2200	2200
	LT Voltage Level			
	LT-Agriculture			
	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	48596	50444	52363
	Tariff-LTAG/Agriculture Allied (B)	2309	2424	2546
	Sub-Total	62581	64766	67033
5	Small Power			
	LT Voltage Level			
	LTI-Industry			
	0-500 Units	145743	146392	147045
	Above 500 units	67474	67775	68077
		78268	78617	78968
	Tariff-LTP/Mixed (Hotel Industries)	2295	2295	2295
	Sub-Total	148038	148687	149340
6	Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV			
	33 kV / 11 kV & 110 kV Voltage Level			
	Tariff HTI/Industrial	570982	581227	591655
	33 kV/11kV	496367	505273	514339



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
	110kV	74615	75954	77317
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	93250	93250	93250
	H.T. MES/Defence Establishments	8710	9145	9602
	Sub-Total	672942	683622	694508
8	Bulk Supply			
	33 kV Voltage Level			
	Single Point Supply	4035	4035	4035
	Residential Complexes	0	0	0
	Commercial Complexes	4035	4035	4035
	Industrial Complexes	0	0	0
	Sub-Total	4035	4035	4035
9	Other Categories			
	33 kV Voltage Level			
	Electric Vehicle Charging Station			
	11 kV Voltage Level			
	Tariff-LT Hoarding and SignBoard	514	514	514
	Electric Vehicle Charging Station			
	Grand Total	3137261	3240011	3346627

5.4 Sales for FY 2022-23 to FY 2024-25

5.4.1 EDG submits that sales for MYT control period FY 2022-23 to FY 2024-25 is as per the Business Plan Petition submitted with analysis of past data and after analysing various CAGRs.

Table 5-3: Sales (In MUs) for FY 2022-23 to FY 2024-25

S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
1	Domestic			
	11 kV Voltage Level			
	Tariff HTD/Domestic	0.43	0.45	0.47
	Tariff-HTTS/Temporary Supply (HT Domestic)	3.51	3.69	3.87



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
	LT Voltage Level			
	Tariff LTD/Domestic and Non-Commercial	1325.53	1379.16	1434.96
	Tariff LTD/Low Income Group	1.27	1.27	1.27
	Tariff-LT/Temporary Domestic	0.69	0.69	0.69
	Sub-Total	1331.43	1385.25	1441.26
2	Commerical			
	33 kV & 11 kV Voltage Level			
	Tariff HT-Commercial	116.74	122.58	128.71
	LT Voltage Level			
	Tariff-LTC/Commercial	436.59	448.26	460.24
	Tariff-LT/Temporary Commercial	9.08	9.08	9.08
	Sub-Total	562.42	579.92	598.03
3	Public Lighting			
	LT Voltage Level			
	Tariff-LTPL/Public Lighting	50.41	52.93	55.58
4	Agricultural Pumpsets			
	HT Voltage Level (33 kV & 11 kV)			
	HT-Agriculture			
	Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)	5.30	5.30	5.30
	Tariff-HTAG/Agriculture (Allied Activities) (B)	9.36	9.82	10.32
	LT Voltage Level			
	LT-Agriculture			
	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	17.25	17.71	18.18
	Tariff-LTAG/Agriculture Allied (B)	0.99	0.99	0.99
	Sub-Total	32.90	33.83	34.79
5	Small Power			



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S.No.	Category of Consumer	FY 2022-23	FY 2023-24	FY 2024-25
	LT Voltage Level			
	LTI-Industry	80.91	80.91	80.91
	<i>0-500 Units</i>	<i>16.54</i>	<i>16.54</i>	<i>16.54</i>
	<i>Above 500 units</i>	<i>64.37</i>	<i>64.37</i>	<i>64.37</i>
	Tariff-LTP/Mixed (Hotel Industries)	4.48	4.48	4.48
	Sub-Total	85.38	85.38	85.38
6	Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV			
	33 kV / 11 kV & 110 kV Voltage Level			
	Tariff HTI/Industrial	1483.35	1512.88	1543.01
	33 kV/11kV	1228.24	1252.69	1277.63
	110kV	255.11	260.19	265.37
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	506.83	530.35	554.97
	H.T. MES/Defence Establishments	27.86	27.86	27.86
	Sub-Total	2018.04	2071.10	2125.84
8	Bulk Supply			
	33 kV Voltage Level			
	Single Point Supply	5.55	5.60	5.65
	<i>Residential Complexes</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
	<i>Commercial Complexes</i>	<i>5.55</i>	<i>5.60</i>	<i>5.65</i>
	<i>Industrial Complexes</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
	Sub-Total	5.55	5.60	5.65
9	Other Categories			
	33 kV Voltage Level			
	Electric Vehicle Charging Station			
	11 kV Voltage Level			
	Tariff-LT Hoarding and SignBoard	0.16	0.16	0.16
	Electric Vehicle Charging Station			
	Grand Total	4086.29	4214.18	4346.69

5.4.2 The details of Number of Consumers, Connected Load and Sales for MYT control period FY 2022-23 to FY 2024-25 are provided in Format 5 of Tariff Filing Formats.



5.5 T&D Loss for FY 2022-23 to FY 2024-25

5.5.1 EDG has considered the actual transmission losses of H1 of FY 2021-22 as the revised transmission (PGCIL) losses for the base year FY 2021-22. Further, ED-Goa has assumed the transmission losses to slightly reduce over the control period. The following table shows the transmission losses that are considered for energy projection:

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

5.5.2 EDG submits that, EDG has considered same T&D loss trajectory, as submitted in the Business Plan Petition for MYT control period. EDG has been working hard to reduce its Distribution losses to the targets approved by the Hon`ble Commission in the previous Business Plan control period. EDG has reduced some of its Distribution Loss due to implementation of SAP, R-APDRP Part A schemes, by resolving the billing issues, transition of billing and collection agencies and infusion of funds to strengthen and improve the distribution network. As the issues are resolved and data billing etc is done through SAP, the provisional actual distribution losses observed for FY 2020-21 are 11.90%. Further, EDG has considered the distribution loss for target FY 2021-22 of 10.25%, as approved by the Commission. Further, EDG submits that it would further invest in the capital expenditure during the control period to further reduce the technical losses and commercial losses. However, EDG would like to submit, even if commercial losses are reduced to NIL, as EDG has a vastly spread area along with coastal belts, it is very difficult to reduce the technical losses, and after a certain level requires huge technological and capital expenditure.

5.5.3 Accordingly, considering the above constraints, ED-Goa has proposed the T&D Loss trajectory for MYT control period as tabulated below:

Table 5-4: T&D Loss for FY 2022-23 to FY 2024-25

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
	%	%	%
Transmission and Distribution Loss	10.15%	10.00%	9.85%



5.6 Energy Balance

5.6.1 Based on the Business Plan Petition, the Sales and distribution loss, and PGCIL losses for FY 2022-23 to FY 2024-25, the energy requirement has been projected by the EDG. The Energy balance for FY 2022-23 to FY 2024-25 is shown in the following table:

Table 5-5: Energy Balance for FY 2022-23 to FY 2024-25

Sr. No.	Particulars	FY 2021-22	Control Period		
		Estimated	FY 2022-23	FY 2023-24	FY 2024-25
A)	ENERGY REQUIREMENT				
1	Energy sales to metered category within the State	3,931.70	4,086.29	4,214.18	4,346.69
2	Total sales within the State	3,931.70	4,086.29	4,214.18	4,346.69
3	Distribution Losses (MU)	449.02	461.61	468.24	474.93
4	Distribution Losses (%)	10.25%	10.15%	10.00%	9.85%
5	Energy required at Discom Periphery	4,380.72	4,547.90	4,682.42	4,821.62
6	Intra-State Transmission Losses	-	-	-	-
7	Energy Required at State Periphery for own sale	4,380.72	4,547.90	4,682.42	4,821.62
8	Sales to common pool consumers	32.53	-	-	-
9	Sales outside state	253.50	76.55	300.90	219.39
10	Total Energy Requirement at State Periphery	4,094.70	4,471.35	4,381.52	4,602.23
B)	ENERGY AVAILABILITY				
1	Availability from firm sources outside state	4,524.94	4,567.45	4,845.09	4,775.56
2	Net Availability from UI Over-drawal/ Under-drawal	(3.82)	-	-	-
3	Net Purchase from open market	(148.98)	(76.55)	(300.90)	(219.39)
5	Total Availability of Energy from outside the state	4,372.13	4,490.90	4,544.19	4,556.17
6	PGCIL Losses - MUs	157.96	156.86	155.40	154.43
7	PGCIL Losses - %	3.61%	3.49%	3.42%	3.39%
8	Total Availability of Energy at State Periphery from outside state after Interstate Losses	4214.18	4334.04	4388.79	4401.74
9	Availability from firm sources inside the state	166.55	213.87	293.63	419.88
10	Total Availability of Energy for the State	4,380.72	4,547.90	4,682.42	4,821.62
11	Surplus / (Deficit)	-	-	-	-



5.7 Power Purchase quantum and Cost for FY 2022-23 to FY 2024-25

5.7.1 The MYT regulations, 2021 specifies the following provisions with respect to cost of power purchase.

“59 Cost of Power Purchase

59.1 The Distribution Licensee shall be allowed to recover the cost of power generated by the Generating Stations owned by it or purchased from approved sources for supply to Consumers based on the power procurement plan of the Distribution Licensee, approved by the Commission.”

5.7.2 EDG has submitted a detailed power procurement plan in chapter 5 of its Business Plan Petition for the MYT control period FY 2022-23 to FY 2024-25. Following is the Power purchase quantum for FY 2022-23 to FY 2024-25 submitted for the MYT control period FY 2022-23 to FY 2024-25.

Table 5-6: Power Purchase Quantum for FY 2022-23 to FY 2024-25

S. No.	Source	Net Generation (MU)	External Losses (%)				Base Year Projections recorded by Licensee	Projections of Energy recorded by Licensee			
			Base Year (Tariff Order Approved)	Projections				2021-22	2022-23	2023-24	2024-25
				FY 2021-22	2022-23	2023-24					
A	Central Sector Power Stations										
I	NTPC	3,628.75	4.13%				3,482.62	3,483.08	3,484.48	3,485.41	
1	KSTPS	1,627.27	3.35%	3.34%	3.31%	3.29%	1,572.72	1,572.89	1,573.40	1,573.74	
2	VSTPS - I	261.60	3.35%	3.34%	3.31%	3.29%	252.83	252.86	252.94	252.99	
3	VSTPS - II	110.31	3.35%	3.34%	3.31%	3.29%	106.61	106.62	106.66	106.68	
4	VSTPS -III	104.32	3.35%	3.34%	3.31%	3.29%	100.82	100.83	100.87	100.89	
5	VSTPS-IV	112.18	3.35%	3.34%	3.31%	3.29%	108.42	108.44	108.47	108.49	
6	VSTPS-V	56.39	3.35%	3.34%	3.31%	3.29%	54.50	54.50	54.52	54.53	
7	KGPP	17.74	3.35%	3.34%	3.31%	3.29%	17.14	17.15	17.15	17.16	
8	GGPP	13.45	3.35%	3.34%	3.31%	3.29%	13.00	13.00	13.01	13.01	
9	SIPAT- I	223.04	3.35%	3.34%	3.31%	3.29%	215.56	215.58	215.65	215.70	
11	KSTPS-VII	53.48	3.35%	3.34%	3.31%	3.29%	55.33	55.33	55.35	55.36	
14	RSTPS	612.22	7.95%	7.92%	7.85%	7.80%	563.58	563.73	564.19	564.49	
15	SIPAT- II	94.59	3.35%	3.34%	3.31%	3.29%	91.42	91.43	91.46	91.48	



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S. No.	Source	Net Generation (MU)	External Losses (%)				Base Year Projections recorded by Licensee	Projections of Energy recorded by Licensee				
			Base Year (Tariff Order Approved)	Projections				2021-22	2022-23	2023-24	2024-25	
				FY 2021-22	2022-23	2023-24						2024-25
16	Solapur	59.60	3.35%	3.34%	3.31%	3.29%	57.61	57.61	57.63	57.64		
17	Gadarwara	61.30	3.35%	3.34%	3.31%	3.29%	59.25	59.25	59.27	59.28		
18	Lara	53.61	3.35%	3.34%	3.31%	3.29%	51.81	51.82	51.84	51.85		
19	Khargone	65.92	3.35%	3.34%	3.31%	3.29%	63.71	63.71	63.73	63.75		
20	Mouda I	54.85	3.35%	3.34%	3.31%	3.29%	53.01	53.01	53.03	53.04		
21	Mouda II	46.86	3.35%	3.34%	3.31%	3.29%	45.29	45.30	45.31	45.32		
	Add/ Less: Other Adjustments							-				
III	NPCIL	222.63					215	215	215	215		
	KAPS	123.48	3.35%	3.34%	3.31%	3.29%	119.34	119.36	119.39	119.42		
	TAPS	99.15	3.35%	3.34%	3.31%	3.29%	95.83	95.84	95.87	95.89		
IV	Short-Term Purchase						(149)	(77)	(301)	(219)		
	a) IEX PURCHASE AND SALES		3.35%	3.34%	3.31%	3.29%	(148.98)	(76.55)	(300.90)	(219.39)		
	A1) IEX PURCHASE		3.35%				104.52					
	A2) IEX SALES		3.35%				253.50	76.55	300.90	219.39		
	b) Traders		3.35%					-	-	-		
V	OVER/ UNDER DRAWAL						(3.82)					
	OVER DRAWAL		3.35%				27.74					
	UNDER DRAWAL		3.35%				31.44					
VI	Banking of Power		3.35%	3.34%	3.31%	3.29%	17.56					
B	Within State Generations											



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S. No.	Source	Net Generation (MU)	External Losses (%)				Base Year Projections recorded by Licensee	Projections of Energy recorded by Licensee				
			Base Year (Tariff Order Approved)	Projections				2021-22	2022-23	2023-24	2024-25	
				FY 2021-22	2022-23	2023-24						2024-25
I	CO-GENERATION						150	150	150	150		
	Vedanta Plant-1		0.00%				90.88	90.88	90.88	90.88		
	Vedanta Plant -2		0.00%				53.10	53.10	53.10	53.10		
	Goa Sponge and private limited		0.00%				5.81	5.81	5.81	5.81		
C	RPO Obligation						668	776	1,134	1,191		
	Solar						314.54	367.77	421.42	478.14		
	NVVNL Solar						12.00	12.00				
	Solar STOA		3.35%	3.34%	3.31%	3.29%	238.74	244.64	117.53	48.00		
	SECI Solar						48.00	48.00	48.00	48.00		
	CONVERGEN CE SOLAR						3.15	43.36	86.72	173.45		
	Net Metering						12.65	19.76	39.52	79.04		
	PM KUSUM								16.64	16.64		
	SECI Hybrid (Solar)								113.00	113.00		
	Non-Solar						353.85	408.63	712.38	712.38		
	Non Solar - SECI Wind Tranche II LTOA						112.42	112.42	112.42	112.42		
	STOA (Non Solar)		3.35%	3.34%	3.31%	3.29%	240.47	220.25	-	-		
	SECI Tranche-VI							75.00	112.00	112.00		
	Hindustan waste treatment plant Goa						0.96	0.96	0.96	0.96		
	SECI Hybrid (Non-Solar)								487.00	487.00		



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S. No.	Source	Net Generation (MU)	External Losses (%)				Base Year Projections recorded by Licensee	Projections of Energy recorded by Licensee			
			Base Year (Tariff Order Approved)	Projections				2021-22	2022-23	2023-24	2024-25
				FY 2021-22	2022-23	2023-24					
D	REC Certificates										
E	OTHER CHARGES										
	<i>PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges</i>										
F	Total					4,381	4,548	4,682.42	4,821.62		

5.7.3 Power purchase quantum projected above is as submitted in Business Plan order, and additional power from the market/traders/DEEP portal to meet the RPO obligations and to meet energy deficit.

5.7.4 Power purchase cost: - In Business Plan petition, EDG had submitted the power purchase procurement plan along with power purchase cost. However, in Business Plan order, only power procurement quantum has been approved. Parameters assumed while projecting the power purchase cost for MYT period is discussed in upcoming sections.

5.7.5 **Fixed Cost for Central Generating Stations:** - The Fixed costs of FY 2021-22, since CERC has still not issued the Order for the Control Period for most of the Plant, ED-Goa has considered actual fixed charges paid to the plant in Q1 of FY 2021-22 and extrapolated them to arrive at the revised projections of base year FY 2021-22 for respective Central Generating Stations. Further, projection of fixed charged for the Control have been done, considering the CAGR of past 3 yrs of each plant, with a cap of 5% for the control period.



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Table 5-7: Fixed Cost for MYT Control Period FY 2022-23 to FY 2024-25

S. No.	Source	Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)		
		Projections (FC Rs. Crore)		
		2022-23	2023-24	2024-25
A	Central Sector Power Stations			
I	NTPC	422.80	426.62	430.62
1	KSTPS	102.21	102.21	102.21
2	VSTPS - I	22.76	22.76	22.76
3	VSTPS - II	7.35	7.35	7.35
4	VSTPS -III	9.58	9.58	9.58
5	VSTPS-IV	17.50	17.50	17.50
6	VSTPS-V	8.76	8.76	8.76
7	KGPP	7.53	7.53	7.53
8	GGPP	9.71	9.71	9.71
9	SIPAT- I	26.91	26.91	26.91
11	KSTPS-VII	6.69	6.69	6.69
14	RSTPS	47.98	47.98	47.98
15	SIPAT- II	11.52	11.52	11.52
16	Solapur	25.48	25.48	25.48
17	Gadarwara	33.78	35.47	37.25
18	Lara	18.46	19.38	20.35
19	Khargone	24.00	25.20	26.46
20	Mouda I	21.14	21.14	21.14
21	Mouda II	21.43	21.43	21.43
	Add/ Less: Other Adjustments			
III	NPCIL	-	-	-
	KAPS	-	-	-
	TAPS	-	-	-
IV	Traders			
	a) IEX PURCHASE AND SALES	-	-	-
	a) IEX PURCHASE			
	a) IEX SALES			
	b) Traders			
V	OVER/ UNDER DRAWAL	-	-	-
	OVER DRAWAL			
	UNDER DRAWAL			
VI	Banking of Power	-	-	-
B	Within State Generations			
I	CO- GENERATION			
	Vedanta Plant-1	-	-	-



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S. No.	Source	Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)		
		Projections (FC Rs. Crore)		
		2022-23	2023-24	2024-25
	Vedanta Plant -2	-	-	-
	Goa Sponge and private limited	-	-	-
C	RPO Obligation			
	Solar			
	NVVNL Solar	-	-	-
	Solar STOA	-	-	-
	SECI Solar	-	-	-
	CONVERGENCE SOLAR			
	Net Metering			
	PM KUSUM			
	SECI Hybrid (Solar)			
	Non-Solar			
	Non Solar - SECI Wind Tranche II LTOA	-	-	-
	STOA (Non Solar)			
	SECI Tranche-VI			
	Hindustan waste treatment plant Goa	-	-	-
	SECI Hybrid (Non-Solar)			
D	REC Certificates			
E	OTHER CHARGES			
	PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges			
F	Total	423	427	431

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

5.7.7 For Solar and Non-Solar firm power, the rates as per the PPA are considered for the entire Control Period from FY 2022-23 to FY 2024-25 without any escalation.

5.7.8 To fulfil the RPO compliance, the deficit renewable power as per the ED-Goa's obligation is compensated by procuring renewable power (Solar and Non-Solar) from



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the Short-Term Market. The market rates as per the actuals of Q1 FY 2021-22 is considered for the base year FY 2021-22 and also for the entire Control Period from FY 2022-23 to FY 2024-25 without any escalation.

Table 5-8: Variable Cost for MYT Control Period FY 2022-23 to FY 2024-25

S. No.	Source	Power Purchase Cost - Variable Cost (VC)					
		Projections (VC- pc/unit)			Projections (VC- Rs. Crore)		
		2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
A	Central Sector Power Stations						
I	NTPC				612.98	617.33	621.66
1	KSTPS	142.79	145.24	147.74	224.59	228.53	232.51
2	VSTPS - I	157.62	157.62	157.62	39.85	39.87	39.88
3	VSTPS - II	151.36	151.36	151.36	16.14	16.14	16.15
4	VSTPS -III	150.17	150.17	150.17	15.14	15.15	15.15
5	VSTPS-IV	148.87	148.87	148.87	16.14	16.15	16.15
6	VSTPS-V	153.34	153.34	153.34	8.36	8.36	8.36
7	KGPP	153.15	153.15	153.15	2.63	2.63	2.63
8	GGPP	167.71	167.71	167.71	2.18	2.18	2.18
9	SIPAT- I	142.99	142.99	142.99	30.83	30.84	30.84
11	KSTPS-VII	139.68	141.75	143.84	7.73	7.85	7.96
14	RSTPS	253.63	253.63	253.63	142.98	143.10	143.17
15	SIPAT- II	148.80	149.93	151.07	13.60	13.71	13.82
16	Solapur	348.50	348.50	348.50	20.08	20.08	20.09
17	Gadarwara	276.14	276.14	276.14	16.36	16.37	16.37
18	Lara	211.99	211.99	211.99	10.99	10.99	10.99
19	Khargone	272.90	272.90	272.90	17.39	17.39	17.40
20	Mouda I	273.37	273.37	273.37	14.49	14.50	14.50
21	Mouda II	298.16	298.16	298.16	13.51	13.51	13.51
	Add/ Less: Other Adjustments						
III	NPCIL				60.78	62.06	63.39
	KAPS	228.99	228.99	228.99	27.33	27.34	27.35
	TAPS	348.98	362.19	375.91	33.44	34.72	36.04
IV	Traders				(19)	(73)	(52)
	a) IEX PURCHASE AND SALES	249.14	243.30	237.59	(19.07)	(73.21)	(52.13)
	a) IEX PURCHASE						
	a) IEX SALES	249.14	243.30	237.59	19.07	73.21	52.13
	b) Traders	-	-	-			
V	OVER/ UNDER DRAWAL				-	-	-



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S. No.	Source	Power Purchase Cost - Variable Cost (VC)					
		Projections (VC- pc/unit)			Projections (VC- Rs. Crore)		
		2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
	OVER DRAWAL						
	UNDER DRAWAL						
VI	Banking of Power				-	-	-
B	Within State Generations						
I	CO- GENERATION				35.95	35.95	35.95
	<i>Vedanta Plant-1</i>	240.00	240.00	240.00	21.81	21.81	21.81
	<i>Vedanta Plant -2</i>	240.00	240.00	240.00	12.74	12.74	12.74
	<i>Goa Sponge and private limited</i>	240.00	240.00	240.00	1.39	1.39	1.39
C	RPO Obligation				325.64	435.49	447.29
	Solar				168.20	174.91	186.71
	<i>NVVNL Solar</i>	550.00	550.00	550.00	6.60	-	-
	<i>Solar STOA</i>	464.95	464.95	464.95	113.75	54.65	22.32
	<i>SECI Solar</i>	550.00	550.00	550.00	26.40	26.40	26.40
	<i>CONVERGENCE SOLAR</i>	360.00	360.00	360.00	15.61	31.22	62.44
	<i>Net Metering</i>	295.61	304.48	313.61	5.84	12.03	24.79
	<i>PM KUSUM</i>	295.61	304.48	313.61	-	5.07	5.22
	<i>SECI Hybrid (Solar)</i>		403.00	403.00		45.54	45.54
	Non-Solar				157.44	260.59	260.59
	<i>Non Solar - SECI</i>						
	<i>Wind Tranche II LTOA</i>	279.00	279.00	279.00	31.37	31.37	31.37
	<i>STOA (Non Solar)</i>	471.48	471.48	471.48	103.84	-	-
	<i>SECI Tranche-VI</i>	290.00	290.00	290.00	21.75	32.48	32.48
	<i>Hindustan waste treatment plant Goa</i>	500.00	500.00	500.00	0.48	0.48	0.48
	<i>SECI Hybrid (Non-Solar)</i>		403.00	403.00		196.26	196.26
D	REC Certificates						
E	OTHER CHARGES						
	<i>PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges</i>	0.49	0.49	0.49	221.36	227.91	234.69
F	Total	0	0	0	1,238	1,306	1,351



5.7.9 Power Projection within State Generation:

5.7.9.1 ED-Goa has tied up power from three Co-Generating Plants within State namely Vedanta Pvt. Ltd. Plant I, Goa Sponge and Power Limited (GSPL) and Vedanta Pvt. Ltd. Plant II. The total energy projection from above three plants for the entire control period is based on actual energy received in FY 2020-21 i.e 149.79 MUs and at the same rates.

5.7.10 Purchase from Solar:

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

5.7.10.2 Further, ED-Goa has planned the tie-ups of Renewable energy during the control period to meet its RPO obligations and the same has been discussed in the earlier section of Upcoming Power plant. However, the same has been reproduced here below.

5.7.10.3 ED-Goa has signed a Power Supply Agreement (PSA) M/s. Convergence Energy Services Ltd. ("CESL") is a wholly owned subsidiary of Energy Efficiency Services Ltd. ("EESL") (JV of PSUs under Ministry of Power, Govt. of India) for power procurement from a cumulative capacity of 110 MW grid-interactive Solar PV power projects for 25 years. It includes replacement of 11,000 conventional Agricultural pumps by Energy Efficient Agriculture Pumps of capacity ranging from 0.1 HP to 10 HP; and Distribution of 16 lakh 9 Watt LED bulbs. The Tariff is fixed at Rs.3.60/kWh for a period of 25 years. 1 MWp under the project is already Commission and another 3 MWp is expected to come in FY 2021-22. Further, around 55 MWp is expected to be completed in FY 2022-23 and completed 110 MW in H2 of FY 2023-24. Accordingly, it is expected that around 3.15 MUs will be received in FY 2021-22 and 43 MU, 87 MU and 173 MUs in FY 2022-23, FY 2023-24 & FY 2024-25 respectively.

5.7.10.4 ED-Goa is in the final stage of Govt approval for the SECI 150 MW RTC Peak Power from a combined sources of Renewable Power comprising of Solar, Wind and Battery Energy Storage System (BESS) provides assured Peak Power to compensate the Peak Deficit of Goa. The project contributes to Peak Power compensation and



RPO as well. The project envisages the supply to start FY 2023-24 at the rate of Rs 4.03 /unit at Goa periphery.

5.7.10.5 Further, ED-Goa is also expecting the consumers to go for solar rooftops and indulge in more Net Metering/ Gross Metering during the Control Period. The total Cumulative installed capacity including all types of rooftop solar and ground mounted solar as on 30.09.2021 within Goa is 17.423 MW of which, Residential is 1.764 MW and non-Residential is 15.659 MW. ED-Goa expects to receive certain power from rooftop projects during the control period.

5.7.10.6 Apart from above, to meet any shortfall (if any) and to fulfil the Solar RPO obligation, EDG shall purchase power through short term (Traders) through DEEP portal, GTAM.

5.7.11 Purchase from Non-Solar:

5.7.11.1 ED-Goa would be procuring non-solar Renewable power for meeting the RPO during MYT control period through short term on DEEP portal. ED-Goa is also procuring 2 MUs (for FY 2024-25 it is 0.5 MUs) every year from Hindustan Waste Energy Ltd and the same has been envisaged to buy during the entire control period.

5.7.11.2 Further, the petitioner has also tied up with SECI Tranche II 50 MW Wind power and procuring the power at a rate of Rs. 2.72/unit plus trading margin of Rs. 0.07/kWh at goa periphery. The actual energy delivered by SECI Tranche II 50 MW, for FY 2019-20 is 102.70MU, for FY 2020-21 is 112.42 MU and for FY 2021-22 H1 is 82.58 MU. For the purpose of arriving at the base year FY 2021-22, the actual energy delivered during FY 2020-21 is considered for FY 2021-22, and for the entire control period FY 2022-23 to FY 2024-25.

5.7.11.3 EDG submits that it has executed a Power Sale Agreement (PSA) on 16th August 2019 with SECI for Procurement of 50 MW Wind Power (Tranche VI) for 25 years at a fixed tariff for Rs. 2.83/kWh plus trading margin of Rs. 0.07/kWh for fulfilment of Non-Solar RPO. Accordingly, EDG will be submitting a separate petition before the Hon'ble Commission to accord its approval for adoption of said PSA which would enable EDG to meet its commitment towards Non-Solar RPO.

5.7.12 SECI 150 MW Combined Solar, Non-Solar and BESS:

5.7.12.1 ED-Goa is in the final stage of Govt approval for the SECI 150 MW RTC Peak Power from a combined sources of Renewable Power comprising of Solar, Wind and Battery Energy Storage System (BESS) provides assured Peak Power to compensate



the Peak Deficit of Goa. The said project contributes to Peak Power compensation and RPO as well. The project envisages the supply to start from FY 2023-24 at the rate of Rs 4.03 /unit at goa periphery.

5.7.13 Renewable Purchase Obligation:

5.7.13.1 As discussed above, ED-Goa envisages to meet its RPO obligation through purchase of physical renewable power and may even exceed the RPO obligations as cheap power is available in the market, in comparison to the conventional sources. Further, for the Control Period, since Hon`ble Commission has not yet approved any trajectory, ED-Goa has assumed a 1% increase in Solar and Non-Solar RPO every year and has accordingly considered the projections for RPO fulfilment. Further, after considering all the proposed tied-up renewable energy, ED-Goa proposes to meet any shortfall to fulfil the RPO obligation, through purchase from short term (Traders) through DEEP portal, GTAM. For projection of ED-Goa does not plan to buy and REC during the control period.

5.7.13.2 The following table shows the Renewable Purchase Obligation for Solar and Non Solar for ED-Goa for the respective years.

Table 5-9: RPO obligation and compliance for FY 2022-23 to FY 2024-25

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

5.7.14 Power Purchase from Traders/ Short Term:

5.7.14.1 ED-Goa also expects to purchase power in Short-term from exchanges or Traders or DEEP portal to fulfil its peak or shortfall requirements. Further, ED-Goa also expects some surplus to be available during off-peak hours and would indulge in banking or sale of power in exchanges in the real time basis.



5.7.14.2 To meet any shortfall, if occurs, EDG purchase power through short term (Traders). For FY 2021-22, ED-Goa has envisaged purchase of 104.52 MUs from traders/exchange at a rate of Rs. 3.46/unit depending upon the past rates.

5.7.14.3 However, for the entire control period, ED-Goa does not envisage to buy any power from the traders/exchange/short term.

5.7.15 Power Purchase from New/Upcoming Stations:

5.7.15.1 ED-Goa has no upcoming power purchase planned from the thermal generating stations. ED-Goa has planned the tie-ups of Renewable energy both outside and within the state during the control period to meet its RPO obligations. Accordingly, ED-Goa has also considered the upcoming power stations of during the control period. The same is as under:

5.7.15.2 Department of New & Renewable Energy, Goa has signed a MoU with M/s. Convergence Energy Services Ltd. ("CESL") is a wholly owned subsidiary of Energy Efficiency Services Ltd. ("EESL") (JV of PSUs under Ministry of Power, Govt. of India), under which ED-Goa will sign a PPA with CESL for power procurement from a cumulative capacity of 110 MW grid-interactive Solar PV power projects for 25 years. It includes replacement of 11,000 conventional Agricultural pumps by Energy Efficient Agriculture Pumps of capacity ranging from 0.1 HP to 10 HP; and Distribution of 16 lakh 9 Watt LED bulbs. The Tariff is fixed at Rs.3.60/kWh for a period of 25 years. The Government of Goa shall approach the Hon`ble Commission for approval of the PPA & Tariff separately.

5.7.15.3 Further, ED-Goa has signed a PPA with SECI to procure Wind power at 50 MW on Long Term basis on 16th August 2019 at a fixed tariff of Rs. 2.83/kWh plus trading margin of Rs. 0.07/kWh at goa periphery. The power flow is expected to start in FY 2022-23. As per the directions of Hon`ble JERC, ED-Goa is filing a separate petition for adoption of the same.

5.7.15.4 Further, ED-Goa is in the final stage of Govt approval for purchase of power from the SECI 150 MW RTC Peak Power from a combined sources of Renewable Power comprising of Solar, Wind and Battery Energy Storage System (BESS), which provides assured Peak Power to compensate the Peak Deficit of Goa. The project contributes to Peak Power compensation and RPO as well. The project envisages the supply to start from FY 2023-24 at the rate of Rs 4.03 /unit at goa periphery. ED-Goa shall approach the Hon`ble Commission for approval of the PSA of the same, separately.



5.7.15.5 PM KUSUM Scheme issued by MNRE on 08.03.2019. The Scheme consists of three components:

- Component A: 10,000 MW of Grid Connected Solar or any other RE Plants (500 kW to 2 MW capacity)
- Component B: 17.50 lakh standalone Solar Ag Pumps (up to 7.5 HP)
- Component C: Solarisation of 10 Lakh grid-connected Ag Pumps (up to 7.5 HP)

The main Objective of the Scheme are as follows:

- Water security to farmers through reliable Solar power
- Utilization of degraded/un-used land of farmers.
- Additional income to farmers by selling surplus power to DISCOM.
- Water conservation.
- Promotion of decentralized Solar power generation.
- Reduction of burden of subsidy to agriculture sector

5.7.15.6 ED-Goa will:

- Notify sub-station wise capacity feasible for injection
- Invite applications from interested beneficiaries for setting up the renewable energy plants
- Ensure “must-run” status to solar plants and keep feeders ‘ON’ during day.
- Power generated will be purchased by DISCOMs at pre-fixed tariff or tariff arrived through bidding with pre-fixed tariff as ceiling tariff
- Duration of PPA will be 25 years from Commercial Operation Date (COD)
- In case of project set up by a developer: – Lease rent to farmers by developers on basis of per acre per year or per unit energy generated per acre per year – Lease rent payment directly to the farmers by DISCOM.
- DISCOM obliged to buy the entire power within the contract capacity
- Extension of the PPA period beyond 25 years through mutual agreements between the generator and DISCOM
- DISCOM to maintain LC and Escrow Arrangement
- Plant to be commissioned within nine months from issued of LoA
- Two months extension permitted with penalties
- No penalties if delay beyond control of RPG
- DISCOM to get PBI on submission of documentary evidence:
- Timely payment of monthly lease rent to the land owner, if applicable



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- Payment made to RPG for power supplied to DISCOM.
- Assess and notify capacity that can be injected in to identified distribution substation of rural areas - 31 October 2019
- Registration of farmers willing to lease out their land for development of RE plants near above notified substations - 15 October 2019
- Advertise on the capacity available and call for RfS from interested farmers/ Developers - 30 November 2019
- Determination of pre-fixed tariff for purchase of power from these plants - 30 November 2019
- Finalisation of successful farmers/developers - 31 January 2020.
- Organising State level PPA signing ceremony - 1 March 2020.
- SNAs to help farmers/developers in getting all necessary clearances, finance from Banks/FIs, technical support for preparation of DPR, tendering and contracting for EPC, project execution, etc. They will get Rs. 25,000 per MW as service charges.

5.7.15.7 The proposal was sent to Ministry of New and Renewable Energy (MNRE) accordingly, the sanction is obtained as below:

Sr. no	Component	Capacity allocated	Approval letter no & date. by MNRE, GOI
1.	Component A - Small RE plants (MW)	50 MW	F.No. 32/54/2018-SPV division dated 05/03/2021
2	Component B - Stand alone solar water pumps for agricultural purpose	200 nos.	F.No. 32/54/2018-SPV division dated 13/01/2021
3	Component C - Solarisation of grid connected pumps	7000 nos.	F.No. 32/54/2018-SPV division dated 13/01/2021

5.7.15.8 ED-Goa expects approx. 10 MW from PM KUSUM to come up in this Control Period starting FY 2023-24.

5.7.15.9 Apart from the above sources, ED-Goa also expects to purchase power in Short-term from exchanges or Traders or DEEP portal to fulfil its peak requirements. Further, ED-Goa also expects some surplus to be available during off-peak hours and would indulge in banking or sale of power in exchanges in the real time basis.

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

5.7.15.11 Based on the above assumptions, power purchase quantum for Central Generating Stations is derived for entire control period.



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5.7.16 As discussed in forgoing paras, following is the station wise power purchase quantum and cost for the MYT control period

Table 5-10: Power purchase quantum and cost for FY 2022-23 to FY 2024-25 Rs. Crore

S. No.	Source	Net Generation (MU)	Projections of Energy recorded by Licensee			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
			Projections (FC Rs. Crore)			Projections (VC- Rs. Crore)			Projections (FC+VC) Rs. Crore					
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
A	Central Sector Power Stations													
1	NTPC	3,628.75	3,483.08	3,484.48	3,485.41	422.80	426.62	430.62	612.98	617.33	621.66	1,035.79	1,043.95	1,052.28
1	<i>KSTPS</i>	1,627.27	1,572.89	1,573.40	1,573.74	102.21	102.21	102.21	224.59	228.53	232.51	326.8	330.74	334.72
2	<i>VSTPS - I</i>	261.6	252.86	252.94	252.99	22.76	22.76	22.76	39.85	39.87	39.88	62.62	62.63	62.64
3	<i>VSTPS - II</i>	110.31	106.62	106.66	106.68	7.35	7.35	7.35	16.14	16.14	16.15	23.49	23.49	23.5
4	<i>VSTPS -III</i>	104.32	100.83	100.87	100.89	9.58	9.58	9.58	15.14	15.15	15.15	24.72	24.73	24.73
5	<i>VSTPS-IV</i>	112.18	108.44	108.47	108.49	17.5	17.5	17.5	16.14	16.15	16.15	33.64	33.64	33.65
6	<i>VSTPS-V</i>	56.39	54.5	54.52	54.53	8.76	8.76	8.76	8.36	8.36	8.36	17.12	17.12	17.12
7	<i>KGPP</i>	17.74	17.15	17.15	17.16	7.53	7.53	7.53	2.63	2.63	2.63	10.15	10.16	10.16
8	<i>GGPP</i>	13.45	13	13.01	13.01	9.71	9.71	9.71	2.18	2.18	2.18	11.89	11.89	11.89
9	<i>SIPAT- I</i>	223.04	215.58	215.65	215.7	26.91	26.91	26.91	30.83	30.84	30.84	57.74	57.75	57.76
11	<i>KSTPS-VII</i>	53.48	55.33	55.35	55.36	6.69	6.69	6.69	7.73	7.85	7.96	14.41	14.53	14.65
14	<i>RSTPS</i>	612.22	563.73	564.19	564.49	47.98	47.98	47.98	142.98	143.1	143.17	190.96	191.08	191.15
15	<i>SIPAT- II</i>	94.59	91.43	91.46	91.48	11.52	11.52	11.52	13.6	13.71	13.82	25.13	25.24	25.34
16	<i>Solapur</i>	59.6	57.61	57.63	57.64	25.48	25.48	25.48	20.08	20.08	20.09	45.56	45.57	45.57
17	<i>Gadarwara</i>	61.3	59.25	59.27	59.28	33.78	35.47	37.25	16.36	16.37	16.37	50.15	51.84	53.62
18	<i>Lara</i>	53.61	51.82	51.84	51.85	18.46	19.38	20.35	10.99	10.99	10.99	29.45	30.37	31.34
19	<i>Khargone</i>	65.92	63.71	63.73	63.75	24	25.2	26.46	17.39	17.39	17.4	41.39	42.59	43.85
20	<i>Mouda I</i>	54.85	53.01	53.03	53.04	21.14	21.14	21.14	14.49	14.5	14.5	35.63	35.64	35.64



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S. No.	Source	Net Generation (MU)	Projections of Energy recorded by Licensee			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Crore)			Projections (VC- Rs. Crore)			Projections (FC+VC) Rs. Crore		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
21	Mouda II	46.86	45.3	45.31	45.32	21.43	21.43	21.43	13.51	13.51	13.51	34.94	34.94	34.95
	Add/ Less: Other Adjustments		-											
III	NPCIL	222.63	215	215	215	-	-	-	60.78	62.06	63.39	60.78	62.06	63.39
	KAPS	123.48	119.36	119.39	119.42	-	-	-	27.33	27.34	27.35	27.33	27.34	27.35
	TAPS	99.15	95.84	95.87	95.89	-	-	-	33.44	34.72	36.04	33.44	34.72	36.04
IV	Short-Term Purchase		-77	-301	-219.39				-19	-73	-52	-19	-73	-52
	a) IEX PURCHASE AND SALES		-76.55	-300.90	-219.39	-	-	-	-19.07	-73.21	-52.13	-19.07	-73.21	-52.13
	A1) IEX PURCHASE													
	A2) IEX SALES		76.55	300.90	219.39				19.07	73.21	52.13	19.07	73.21	52.13
	b) Traders		-	-	-							-	-	-
V	OVER/ UNDER DRAWAL					-	-	-	-	-	-	-	-	-
	OVER DRAWAL													
	UNDER DRAWAL													
												-	-	-



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S. No.	Source	Net Generation (MU)	Projections of Energy recorded by Licensee			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Crore)			Projections (VC- Rs. Crore)			Projections (FC+VC) Rs. Crore		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
VI	Banking of Power					-	-	-	-	-	-	-	-	-
												-	-	-
B	Within State Generations											-	-	-
I	CO- GENERATION		150	150	150				35.95	35.95	35.95	35.95	35.95	35.95
	Vedanta Plant-1		90.88	90.88	90.88		-	-	21.81	21.81	21.81	21.81	21.81	21.81
	Vedanta Plant -2		53.10	53.10	53.10		-	-	12.74	12.74	12.74	12.74	12.74	12.74
	Goa Sponge and private limited		5.81	5.81	5.81		-	-	1.39	1.39	1.39	1.39	1.39	1.39
												-	-	-
C	RPO Obligation		776	1,134	1,191				325.64	435.49	447.29	325.64	435.49	447.29
												-	-	-
	Solar		367.77	421.42	478.14				168.2	174.91	186.71	168.2	174.91	186.71
	NVVNL Solar		12				-	-	6.6	-	-	6.6	-	-
	Solar STOA		244.64	117.53	48		-	-	113.75	54.65	22.32	113.75	54.65	22.32
	SECI Solar		48	48	48		-	-	26.4	26.4	26.4	26.4	26.4	26.4
	CONVERGENCE SOLAR		43.36	86.72	173.45				15.61	31.22	62.44	15.61	31.22	62.44
	Net Metering		19.76	39.52	79.04				5.84	12.03	24.79	5.84	12.03	24.79
	PM KUSUM			16.64	16.64				-	5.07	5.22	-	5.07	5.22
	SECI Hybrid (Solar)			113	113					45.54	45.54		45.54	45.54



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S. No.	Source	Net Generation (MU)	Projections of Energy recorded by Licensee			Power Purchase Cost - Fixed Cost (FC) (Rs. Cr)			Power Purchase Cost - Variable Cost (VC)			Total Power Purchase Cost - (Rs. Cr)		
						Projections (FC Rs. Crore)			Projections (VC- Rs. Crore)			Projections (FC+VC) Rs. Crore		
			2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
	Non-Solar		408.63	712.38	712.38				157.44	260.59	260.59	157.44	260.59	260.59
	Non Solar - SECI Wind Tranche II LTOA		112.42	112.42	112.42	-	-	-	31.37	31.37	31.37	31.37	31.37	31.37
	STOA (Non Solar)		220.25	-	-				103.84	-	-	103.84	-	-
	SECI Tranche-VI		75	112	112				21.75	32.48	32.48	21.75	32.48	32.48
	Hindustan waste treatment plant Goa		0.96	0.96	0.96	-	-	-	0.48	0.48	0.48	0.48	0.48	0.48
	SECI Hybrid (Non-Solar)			487	487					196.26	196.26		196.26	196.26
D	REC Certificates											-	-	-
												-	-	-
E	OTHER CHARGES											-	-	-
	PGCIL Transmission Charges, Wheeling, Oen Access & Trading Margin & Other Charges								221.36	227.91	234.69	221.36	227.91	234.69
												-	-	-
F	Total		4,548	4,682	4,822	423	427	431	1,238	1,306	1,351	1,660	1,732	1,781

5.7.17 The Hon'ble Commission is kindly requested to approve the total power purchase cost of for the control period as stated in the table above. The details of the Power Purchase Expenses for FY 2022-23 to FY 2024-25 are provided in Format 3 of Tariff Filing Formats.



5.8 Operation and Maintenance (O&M Expenses)

5.8.1 Operation & Maintenance expenses comprise of the following heads of expenditure viz.

- Employee Expenses
- Administration & General Expenses
- Repairs & Maintenance Expenses

5.8.2 As per Regulation 52 of JERC MYT regulations, 2021, licensee required to submit O&M expenses for the control period as a part of MYT tariff petition. O&M expense for the base year shall be approved by Hon'ble Commission taking in to 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.

5.8.3 The JERC MYT regulations, 2021 notifies formula based on the same O&M expense for the nth year of the control period shall be approved by Hon'ble Commission. The relevant extract of the Regulation is mentioned as follows.

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

52.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

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

Where,

$$R\&M_n = K \times GFAn-1 \times (1+WPIinflation)$$

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

$$A\&G_n = (A\&G_{n-1}) \times (1+CPIinflation)$$

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on



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Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

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

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

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

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

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

GFA_{n-1} – Gross Fixed Asset of the Distribution Licensee for the n-1th Year;

X_n is an efficiency factor for nth Year. Value of X_n 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;

G_n is a growth factor for the nth Year. Value of G_n 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."

- 5.8.4 **Employee Expenses:** - While projecting employee cost for the MYT control period FY 2022-23 to FY 2024-25, EDG has considered FY 2021-22 as base year. It is submitted that the last available audited accounts are of FY 2016-17 and the accounts of FY 2017-18 to FY 2019-20 are under finalization. Accordingly, EDG has considered the provisional actual values of FY 2017-18 to FY 2020-21 to compute the base year FY 2021-22. Employee expenses for FY 2022-23 to FY 2024-25 is projected based on the methodology as provided in the Regulations. For FY 2021-22 (base year), employee



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expenses are arrived are arrived by escalating the average (FY 2019-20) by CPI inflation. As per regulation, CPI inflation of three preceding years to be considered. Hence EDG has considered average of CPI inflation for FY 2019-20 to FY 2021-22. Working of the same is provided as under:-

Table 5-11: Calculation of CPI rate considered for Employee Cost projection

Particulars	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
CPI based on Industrial Workers, All India	284.42	299.92	323.50	338.69	351.12
YoY	3.08%	5.45%	7.53%	5.02%	3.67%
3 years average					5.41%

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

5.8.5 Further, as per Regulation 52 of JERC MYT Regulation, 2021, Gn factor is a growth factor which will be approved by Hon'ble Commission to meet the additional manpower requirement proposed MYT tariff filing. EDG submits that on calculation of Gn factor for MYT control period by considering the employee strength in the past few years, provide a negative growth trend. Accordingly, for the purpose of projection for the MYT Control Period, the Petitioner has considered the growth factor Gn as NIL.

5.8.6 Computation of employee cost for MYT control period FY 2019-20 to 2021-22 is provided as under:

Table 5-12: Calculation of Employee cost for FY 2019-20 to FY 2021-22

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



5.8.7 **Repairs and Maintenance Expense:** - In line with JERC MYT regulations, 2021, R&M expense for MYT control period is calculated considering FY 2021-22 as base year. It is submitted that the last available audited accounts are of FY 2016-17 and the accounts of FY 2017-18 to FY 2019-20 are under finalization. Accordingly, EDG has considered the provisional actual values of FY 2017-18 to FY 2020-21 to compute the base year FY 2021-22.

5.8.8 As per JERC MYT regulations, 2021, average of preceding three years of WPI considered in above calculation of R&M expense. Calculation of average rate of WPI of 4.13% is shown below.

Table 5-13: Calculation of R&M Expense for MYT Control period

Escalation rate working	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
WPI based on Office of Economic Advisor, Gol	114.88	119.79	121.80	123.38	134.99
YoY	2.92%	4.28%	1.68%	1.29%	9.41%
3 years average					4.13%

S. No.	Particulars	Provisional Actual O&M Expenses			3-Year Average	3-Year Average	FY 2021-22 (Base Year)
		FY 2018-19	FY 2019-20	FY 2020-21			
		(a)	(b)	(c)	(d) = [(a)+(b)+(c)]/3	WPI Inflation (%)	(e)
1	R & M Expenses	39.46	43.21	59.62	47.43	4.13%	38.70

5.8.9 K factor is calculated as ratio of actual R&M over GFA. The K factor considered is as under:

R&M Expenses	FY 2018-19	FY 2019-20	FY 2020-21
R&M exp	39.46	43.21	59.62
Opening GFA	1,236.61	1,274.13	1,478.29
K factor	3.19%	3.39%	4.03%
Avg of K factor			3.54%

5.8.10 Accordingly, R&M expense projected for MYT control period, as per Regulations is as under:



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Table 5-14: Calculation of R&M Expense for MYT Control period

Particulars	Units	MYT Control period		
		FY 2022-23	FY 2023-24	FY 2024-25
GFA for nth-1 year (A)	Rs.Crs	1681.25	2091.64	3410.25
K factor (R&M Cost/GFA) (B)	%	3.54%	3.54%	3.54%
WPI Inflation (C)	%	4.13%	4.13%	4.13%
R&M Cost for nth year $D = A * B * (1 + C)$	Rs.Crs	61.94	77.07	125.65

5.8.1 **Administrative and General Expenses:** - In line with JERC MYT regulations, 2018, A&G expense are projected as per formula stated in previous para. EDG has considered FY 2021-22 as base year. It is submitted that the last available audited accounts are of FY 2016-17 and the accounts of FY 2017-18 to FY 2019-20 are under finalization. Accordingly, EDG has considered the provisional actual values of FY 2017-18 to FY 2020-21 to compute the base year FY 2021-22. A&G expenses for FY 2022-23 to FY 2024-25 is projected based on the methodology as provided in the Regulations. For FY 2021-22 (base year), A&G expenses are arrived by escalating the average (FY 2019-20) by CPI inflation. As per regulation, CPI inflation of three preceding years to be considered. Hence EDG has considered average of CPI inflation for FY 2019-20 to FY 2021-22. Working of the same is provided as under:-

Table 5-15: Calculation of CPI rate considered for Employee Cost projection

Particulars	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
CPI based on Industrial Workers, All India	284.42	299.92	323	338.69	351.12
YoY	3.08%	5.45%	7.53%	5.02%	3.67%
3 years average					5.41%

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

5.8.2 Accordingly, calculation of A&G expense for MYT control period is provided below:-



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Table 5-16: Calculation of A&G Expense for MYT Control period

Particulars	Units	MYT Control period		
		FY 2022-23	FY 2023-24	FY 2024-25
A&G Cost for nth-1 year (A)	Rs.Crs	26.63	28.07	29.59
CPI Inflation (B)	%	5.41%	5.41%	5.41%
A&G Cost for nth year D= A*(1+B)	Rs.Crs	28.07	29.59	31.19

5.8.3 Total O&M expenses projected for the Control period are as under:

S. No.	Particulars	MYT Control Period		
		FY 2022-23	FY 2023-24	FY 2024-25
		Projected	Projected	Projected
1	Employee Expenses	384.01	404.77	426.65
2	A&G Expenses	28.07	29.59	31.19
3	R & M Expenses	61.94	77.07	125.65
4	Total O&M Expenses	474.02	511.43	583.49

5.9 Capital expenditure and Capitalisation

5.9.1 The MYT Regulations, 2021 specifies the following provisions for projection of capital expenditure.

“8.5 Capital Investment Plan

a) The Capital Investment Plan to be submitted as part of Business Plan shall include details of New Projects planned during the Control Period, purpose of investment, capital structure, implementation schedule, quarter-wise capital expenditure and capitalisation schedule, financing plan, cost-benefit analysis, improvement in operational efficiency envisaged in the Control Period owing to proposed investment and such details for ongoing projects that will spill over into the Control Period under review along with justification;

b) The Capital Investment Plan proposed by the Transmission Licensee shall be in conformity with the plans made by the Authority/Central Transmission Utility and with the Capital Investment Plan of the Distribution Licensee;



c) During the Annual Performance Review, the Commission shall monitor the progress of the actual capital expenditure incurred by the Licensee vis-à-vis the approved capital expenditure. The Licensees shall submit the actual capital expenditure incurred along with the annual performance review, true-up and determination of tariff filing;

d) The truing up of the capital cost incurred for the new projects and additional capital cost for the existing projects shall be done on yearly basis based on the actual capital cost incurred.:

Provided if the actual capital cost incurred on year to year basis is lesser than the capital cost approved for determination of tariff by the Commission on the basis of the projected capital cost as on the date of commercial operation or on the basis of the projected additional capital cost, by twenty (20) percent or more, the excess tariff/revenue realized corresponding to excess capital cost as approved by the Commission, along with interest at 1.10 times of the Carrying Cost, as prevalent on the first day of April of the respective financial year, shall be adjusted from the annual revenue requirement of the respective year at the time of true-up.

Provided if the actual capital cost incurred on year to year basis is higher than the capital cost approved for determination of tariff by the Commission on the basis of the projected capital cost as on the date of commercial operation or on the basis of the projected additional capital cost, by twenty (20) percent or more, the shortfall in tariff/revenue realized corresponding to excess capital cost as incurred by the licensee vis-à-vis approved by the Commission, along with interest at 0.9 times of the Carrying Cost, as prevalent on the first day of April of the respective financial year, shall be allowed in the annual revenue requirement of the respective year at the time of true-up.

e) In case the capital expenditure is required for emergency work which has not been approved in the Capital Investment Plan, the Licensee shall submit an application containing all relevant information along with reasons justifying emergency nature of the proposed work seeking approval of the Commission:

Provided that in case capital expenditure is required for emergency work or unforeseen situation to mitigate threat to life and property and if prior intimation thereof to the Commission shall cause any irreparable loss or injury, the Licensee may undertake that capital expenditure and submit the details along with adequate justification for post facto approval of the Commission:



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Provided further that for the purpose of Regulation 8.5(e) above, such approved capital expenditure shall be treated as a part of both the actual capital expenditure incurred by the Licensee and approved capital expenditure by the Commission;

f) The Licensee shall **submit a report for every quarter** detailing the progress of the capital expenditure and capitalisation undertaken against that proposed in the Capital Investment Plan, on or before the last Day of the month succeeding the respective quarter for review by the Commission.”

5.9.2 As per above provisions of Capital investment plan, EDG has submitted the proposed plan of Capex and capitalisation in chapter 6 of the Business Plan petition for approval of Hon`ble Commission. EDG has considered the same for projection of ARR for the MYT control period. Summary of the Capex and Capitalisation submitting for MYT control period is tabulated as under:

Table 5-17: Capital Expenditure for MYT Control period

S.No	Name of scheme	CAPEX		
		BUSINESS PLAN FY 2022-23 TO FY 2024-25		
		Capital expenditure		
		FY 2022-23	FY 2022-23	FY 2022-23
		Projected	Projected	Projected
Existing Schemes				
A1	Schedule Tribe Development Scheme (P)	55.86	28.83	-
A2	Infrastructure development through Electricity Duty (Plan)	107.78	39.01	-
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)	5.00	5.00	5.00
A4	Normal Development Schemes (Plan)	6.00	6.00	6.00
A5	System Improvement Schemes (Plan)	17.23	3.00	3.00
A6	Construction of staff quarters and office buildings (Plan)	21.00	26.00	15.00
A7	Strengthening of 220 KV Transmission Network	15.00	-	-
A8	Erection of 220/110/33/11 KV Sub-Station at Verna (New)	-	-	-
A9	Restructured Accelerated Power Development and Reforms Programme Part A	18.00	18.00	18.00
A10	Underground Cabling	141.50	57.00	-
A11	R-APDRP Part B / IPDS	15.00	-	-
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes	-	-	-
B1	Smart grid Development of existing network	-	-	-
B2	Sub-transmission and distribution improvement scheme	57.00	2.00	-
	Other Schemes			
	Public Lighting Scheme	0.10	-	-
	Sub- Total (existing schemes)	459.47	184.84	47.00



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S.No	Name of scheme	CAPEX		
		BUSINESS PLAN FY 2022-23 TO FY 2024-25		
		Capital expenditure		
		FY 2022-23 Projected	FY 2022-23 Projected	FY 2022-23 Projected
New Schemes				
A	Projects with Administrative approval	93.37	77.73	19.25
B	Projects Approved by EFC	414.72	103.68	-
C	Projects tendered (To start next year)	103.94	62.00	6.00
D	New EHV Works	90.86	163.34	270.00
E	REVAMPED Distribution Projects	255.00	450.00	225.00
F	Sub-Total New Schemes	957.90	856.75	520.25
G	DEPOSIT WORKS	35.37	-	-
	Sub- Total (New Schemes)	993.27	856.75	520.25
	GRAND TOTAL	1,452.74	1,041.59	567.25

Table 5-18: Capitalization for MYT Control period

S.No	Name of scheme	Project Details		
		Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
A1	Schedule Tribe Development Scheme (P)	68.36	34.83	-
A2	Infrastructure development through Electricity Duty (Plan)	156.78	39.01	-
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)	5.00	5.00	5.00
A4	Normal Development Schemes (Plan)	11.00	6.00	6.00
A5	System Improvement Schemes (Plan)	31.23	3.00	3.00
A6	Construction of staff quarters and office buildings (Plan)	3.00	24.00	35.00
A7	Strengthening of 220 KV Transmission Network	20.00	-	-
A8	Erection of 220/110/33/11 KV Sub-Station at Verna (New)			
A9	Restructured Accelerated Power Development and Reforms Programme Part A	18.00	18.00	18.00
A10	Underground Cabling	166.50	122.00	-
A11	R-APDRP Part B / IPDS	22.00	-	-
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes			



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
B1	Smart grid Development of existing network			
B2	Sub-transmission and distribution improvement scheme	72.00	2.00	-
	Other Schemes			
	Public Lighting Scheme	0.20	0.10	-
	Sub- Total (existing Schemes)	574.07	253.94	67.00
	New Schemes			
	A- Projects with Administrative approval			
	Estimate for the work of providing U/G cabling network for ring feeding 11KV Barazan feeder emanating from 1 x 6.3MVA Xelpem S/S under the jurisdiction of S/D-III, Sanguem, Div-VII, Curchorem in Sanguem Constituency.	11.09	11.09	5.55
	Estimate for the work of Design, Supply, Erection, Testing and Commissioning of new Outdoor Gas Insulated Hybrid Switchgears of 220KV Incomer line bays KP-I and TP-II at 220/110/33KV Ponda Sub-Station.	0.94	3.78	-
	Estimate for the work of conversion of existing 11 KV overhead lines to underground system, coming under the jurisdiction of Sub Division-III, Division XIV Verna of areas under Cortalim Constituency and Nuvem Constituency.	13.41	13.41	6.70
	Estimate for the work of S.E.T.C. of 1 no. of 50MVA, 110KV/ 33KV Power transformer at 110KV/ 33KV Verna S/S.	4.43	1.90	-
	Estimate for the work of conversion of existing 11KV O/H network to U/G cabling network of 11KV Bhati feeder emanating from 1 x 3.15 MVA, 33/11KV Waddem S/S under the jurisdiction of S/D-III Sanguem, Div-VII, Curchorem in Sanguem Constituency.	5.20	2.23	-
	Estimate for the work of conversion of existing 11KV O/H network to U/G cabling network of 11KV Sanguem feeder emanating from 1 x 6.3MVA, 33/11KV Xelpem S/S under the jurisdiction of S/D-III, Div-VII, Curchorem in Sanguem Constituency.	6.87	2.94	-
	Estimate for the work of conversion of existing 11KV overhead network to underground cabling network of 11KV Ponsamol feeder emanating from 1x6.3MVA, Xelpem Sub-Station under the jurisdiction of Sub Division-III, Sanguem, Division-VII, Curchorem in Sanguem Constituency.	14.00	14.00	7.00
	Estimate for the work of supply, erection, testing & commissioning of 11KV, 3Core XLPE armoured cable of size 300sq.mm. for conversion of existing O/H 11KV Mandrem feeder emanating from 33/11KV Tuem S/S to U/G System	10.54	10.54	-



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
	under the jurisdiction of S/D-III, Agarwada, Pernem, Div-XVII, Mapusa in Mandrem Constituency.			
	Estimate for the work of supply, erection, testing & commissioning of 11KV, 3Core XLPE armoured cable of size 300sq.mm. for conversion of existing O/H 11KV Sodiem feeder emanating from 33/11KV Mapusa S/S to U/G System under the jurisdiction of S/D-III, Agarwada, Pernem, Div-XVII, Mapusa.	6.95	2.98	-
	Estimate for the work of improvement of 11KV HT network of Undir & Durbhat feeder in Village Wadi Talaulim, Durbhat, Bandora, pert of Curti & part of Borim inhabited by the Scheduled Tribes population under Tribal Sub-Plan by converting 11KV HT O/H lines to U/G cable under the jurisdiction of S/D-I, Div-X, Ponda	8.88	3.80	-
	Estimate for the work of conversion of 11KV HT electrical network of Khadpabandh, Ponda-I, Bazar and part of Durbhat, Farmagudi & Curti feeders by converting 11KV HT O/H lines to U/G cable, under the jurisdiction of S/D-I, Div-X, Curti-Ponda.	11.06	11.06	-
	Total	93.37	77.73	19.25
	B-Projects Approved by EFC			
	Conversion of existing O/H 11KV HT network to underground (U/G) cabling for Vasco Town under the Jurisdiction of Sub Division-I(U), Vasco,	37.64	9.41	-
	Work of conversion of O/H HT network to underground HT network of 33KV Xeldem - Xelpem feeder in order to provide uninterrupted m power supply to Salaulim water works and Domestic consumers of Bhati, Uguem, Kalay V.P. areas and Sanguem Municipal areas in Sanguem Constituency.	29.71	7.43	-
	Work of conversion of existing overhead ACSR Racoon conductor to HTLS conductor of 33 KV Nessai-1 and Nessai-11 feeder from 220/33 KV Xeldem Sub-Station to 33/11KV KRC Sub-Station and Benaulim Sub-Station.	23.07	5.77	-
	Work of conversion of existing overhead ACSR Racoon conductor to HTLS conductor of 33 KV Nessai-111 and Nessai-IV feeder from 220/33 KV Xeldem Sub-Station to 33/11KV KRC Sub-Station and Benaulim Sub-Station.	22.92	5.73	-
	Work of supply, erection, testing and commissioning of 33/11kV, 2x 10 MVA, Indoor type Sub-Station (Electrical	36.62	9.16	-



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
	and Civil Works) at Mandrem under Sub Division-III Agarwada, Div XVII Mapusa.			
	Conversion of existing O/H 11 kV Balli feeder into underground cabling system emerging from 33/11 kV Cuncolim Substation under the jurisdiction of Elect. O&M Sub. Div-IV, Div-XVI, Cuncolim.	44.49	11.12	-
	Work of conversion of O/H HT network to underground HT network in Chinchinum, Dharmapur & Sarzora area of Velim Constituency under the jurisdiction of Subdivision-II Chinchinum, Division-XVI Margao, in South Goa District.	26.73	6.68	-
	Worth of Design, Supply, Erection & Commissioning of 33 kV, 2x3 Core, 400 Sq.mm XLPE Cable from Cable from Ponda Sub-Station to Banastarim for a distance of 185 kms and 1x3 Core 185 Sq.mm XLPE Cable for a distance of 1.95 kms for providing reliable supply to kundaim, Marcel area and Industries of Kundaim Industrial Estate.	20.12	5.03	-
	Work of conversion of Existing 11 KV (HT) overhead lines to underground cabling network for 11 KV Mandop feeder, 11 KV MES feeder, 11 KV Navelim feeder, emanating from 33/11 KRC Substation and provision for additional 11 KV Navelim Express feeder under Subdivision III, Navelim, Division IV, Margao Goa under Infrastructure Development Fund.	52.26	13.07	-
	Work of upgrading of 220 KV PXR line by replacement of existing ACSR Drake Conductor with HTLS ACCC DRAKE Conductor from Ponda 220KV Ponda Sub-Station to 220KV Xeldem Sub-Station and replacement of polymer suspension insulator of 220KV AP-II Circuit from Ponda S/S to Kardi point.	38.74	9.69	-
	Work of conversion of the existing overhead 11 KV line of Bicholim City, Assonora, Bordem and Bicholim IDC feeder emanating from 33/11 kV Bicholim Sub-station to underground cable system in the jurisdiction of Sub Division-I(U), Bicholim-Goa.	23.22	5.80	-
	Work of conversion of existing LT O/H line of 11KV Kakoda Feeder & 11 KV Town-II feeder into underground cabling system in Curchorem Constituency.	31.82	7.95	-
	Work of conversion of existing 33KV SC overhead Viridi II feeder to Double Circuit line with HTLS Conductor from 220 KV Amona Sub Station, under Sub Division – I(U), Bicholim.	27.38	6.85	-
	Total	414.72	103.68	-



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
C- Projects tendered (To start next year)				
	Tender No. 19(2020-21)/CSC: Tender for the Work of conversion of 11KV overhead network of Torla feeder to 11KV underground system along the road side from 33/11KV Shiroda substation under Sub Division II, Div. X, Ponda in Shiroda constituency	3.00	1.00	-
	Tender No. 22(2020-21)/CSC: Work of conversion of 11KV S/C OH St. Cruz feeder to UG network by laying 11KV, 3Core 300sq.mm. aluminium armoured XLPE cable for a distance of 14.5 Kms along with associated equipments.	6.00	2.00	-
	Tender No. 23(2020-21)/CSC: Work for conversion of 11KV SC OH Diwar feeder, Diwar and Chora section in the jurisdiction of Sub Division-I, Division-I, Panaji.	12.00	7.00	-
	Tender No. 24(2020-21)/CSC: Work of Supply, Laying, Testing & Commissioning of 33KV Core 400 sq.mm. XLPE U/G cable from 220/33KV Amona S/S for providing alternate power supply to 33/11KV Sankhali S/S.	8.00	2.00	-
	Tender No. 25(2020-21)/CSC: Work of Supply and Laying of 33KV, 3C X 400sq.mm. XLPE Aluminium cable from Sonshi to Amona S/S.	2.00	-	-
	Tender No. 26 (2020-21)/CSC: Work of conversion of 11KV S/C O/H Mercedes feeder to UG network by laying 11KV, 3Core 300sq.mm. Aluminium Armoured XLPE cable for a distance of 13Kms along with associated equipments.	6.00	1.50	-
	Tender No. 27(2020-21)/CSC: Work of conversion of existing 11KV overhead Industry feeder, 11KV cable Industry feeder and 33KV Unichem feeder to underground system and providing new 11KV feeder at Pilerne Industrial Estate, Pilerne under Sub Division-II, Porvorim.	5.00	2.50	-
	Tender No. 29(2020-21)/CSC: Work of conversion of overhead 11KV Industry-IV feeder to 11KV underground system along the road from 33/11KV Kundai Sub-Station in Priol Constituency under Sub Division-III, Division-X, Ponda.	2.30	-	-
	Tender No. 30(2020-21)/CSC: Work of conversion of overhead 11KV of Shiroda feeder to 11KV underground system along the road side from 33/11KV Bethora Sub-Station in Shiroda Constituency under Sub Division-II, Division-X, Ponda.	2.74	-	-
	Tender No. 33(20-21)/CSC: Tender for the work of conversion of 11KV Industry-I/II/III feeder to 11KV underground system along the road from 33/11KV Kundai	2.00	3.00	-



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
	Sub-Station in Priol Constituency under Sub Division-III, Division-X, Ponda.			
	Tender No. 37(20-21)/CSC: Tender for the work of conversion of overhead 11KV Sulcorna feeder to underground network from 33/11KVQuinamol, Rivona Sub-Station to Devrem transformer center under the jurisdiction of Sub Division-II, Division-VII, Curchorem.	-	12.00	-
	Tender No. 38(20-21)/CSC: Tender for the work of conversion of overhead 11KV Mollem feeder to underground network under the jurisdiction of Sub Division-IV, Division-VII, Curchorem.	8.00	5.00	-
	Tender No. 39(20-21)/CSC: Tender for the work of conversion of overhead 11KV Dhat feeder to underground network under the jurisdiction of Sub Division-IV, Division-VII, Curchorem.	7.00	4.00	-
	Tender No. 40(20-21)/CSC: Tender for the work of conversion of overhead 11KV Panchawadi feeder to underground network under the jurisdiction of Sub Division-IV, Division-VII, Curchorem.	6.00	4.00	-
	Tender No. 07(2021-22)/CSC: Tender for the Work of conversion of existing 33KV MES single circuit line to double circuit line emanating from 220/33KV Cuncolim substation to 33/11KV KRC substation under Div. IV, Margao	3.40	-	-
	Tender No. 10(2021-22)/CSC: Work of Supply, Erection, Testing and Commissioning 11KV 3Core, XLPE armoured Cable of size 300 Sq. mm. for conversion of existing overhead 11KV Morjim Feeder to underground system under the jurisdiction of Sub-Division-III, Agarwada, Div XVII - Mapusa.	8.00	8.00	-
	Tender No. 12(2021-22)/CSC: Supply, Laying, Testing and Commissioning of 33KV, 3 Core, 400 Sq.mm. XLPE cable double circuits (Velim-I & Velim-II) from 220/33KV Cuncolim substation to 33/11KV Velim substation	-	20.00	6.00
	Tender No. 34(20-21)/CSC: Tender for the work of conversion of 11KV overhead network of Borim feeder to 11KV underground system along the road side from 33/11KV Shiroda Sub-Station in Shiroda Constituency under Sub Division-II, Division-X, Ponda.	-	10.00	-
	Tender No. 35(20-21)/CSC: Tender for the work of conversion of 11KV overhead network of Nirankal feeder to 11KV underground system along the road side from	2.50	-	-



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S.No	Project Details			
	Name of scheme	Projections		
		FY 2022-23	FY 2023-24	FY 2024-25
	33/11KV Bethora Sub-Station in Shiroda Constituency under Sub Division-II, Division-X, Ponda.			
	TOTAL	83.94	82.00	6.00
	REVAMPED Distribution Projects			
	Smart Meter and AMI	10.00	35.00	35.00
	SCADA upgradation, cabling connection, infra developement, mordernization	100.00	350.00	300.00
	Training and Placement	20.00	40.00	40.00
	Total	130.00	425.00	375.00
	New EHV Works			
	Saligao 3/63 MVA 2X33 kV S/s at Saligao & Associated D/C Lines	-	-	250.00
	Verna 2 x 63 MVA 220/33 KV S/s and associated D/C Lines.	-	-	200.00
	Upgradation of PONDA EHV S/s project	-	29.00	-
	Tuem Project	22.50	22.50	-
	Total	22.50	51.50	450.00
	Sub-Total	1,318.61	993.85	917.25
	DEPOSIT WORKS	53.37	-	-
	GRAND TOTAL	1,371.98	993.85	917.25

5.9.3 It is submitted that the scheme wise details of capital expenditure and capitalization for each of the year during the control period has also been provided in Format 7 & Format 10 of Tariff Filing Formats. Further, the financing plan of CAPEX is as under:

S.No	Sources of Funds	FY 2022-23	FY 2023-24	FY 2024-25	Total
A	Total Capital Expenditure (without deposit works)	1417.37	1041.59	567.25	3026.21
B	Electricity Duty Fund	638.05	345.79	282.70	1266.54
C	Grant	165.50	270.25	135.25	571.00
D	Total Capital Expenditure (excluding Electricity Duty Fund and Grant) (A-B-C)	613.82	425.55	149.30	1188.67
E	Debt (%)	70%	70%	70%	70%
F	Equity (%)	30%	30%	30%	30%
G	Normative Debt (D x E)	429.67	297.89	104.51	832.07



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S.No	Sources of Funds	FY 2022-23	FY 2023-24	FY 2024-25	Total
H	Equity (INR Cr) (D x F)	184.15	127.67	44.79	356.60

5.9.1 In terms of above, the financing of the capitalization i.e. GFA addition during the Control period has also been projected by EDG. EDG further submits that, since depreciation, Interest on loan and return on equity is not allowed on the assets created through grants and electricity duty fund or any subsidy.

5.9.2 Following is the calculation of net GFA/Capitalisation after removal of grant and electricity duty portion.

Table 5-19: Net addition to GFA for MYT Control period

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

5.10 Depreciation

5.10.1 The MYT Regulations, 2021 specifies the following provisions for projection of Depreciation.

“31 Depreciation

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

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



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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

5.10.2 As stated in the above Regulation and as per the MYT formats provided by the Hon`ble Commission, EDG has computed depreciation as per new depreciation rate specified in the MYT regulations 2021. Further, total depreciation is calculated asset block wise on the total GFA. However, since depreciation on assets created through grants, electricity duty fund or subsidies are not allowed as per regulations. Hence Depreciation for the GFA excluding grant and electricity duty fund has been arrived in Format 15 of the MYT Tariff formats.

5.10.3 In line with above, the following table shows the depreciation projected by EDG for the MYT control period FY 2022-23 to FY 2024-25

Table 5-20: Depreciation for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc)	1,357.51	2,392.63	2,968.22
Add: Gross Asset Addition	1,318.61	993.85	917.25
Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution	283.48	418.26	329.25
Value of Asset eligible for depreciation	1,035.13	575.59	588.00
Add: Addition During the Year	1035.13	575.59	588.00
Less: Decapitalisation	0.00	0.00	0.00



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Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Closing Gross Fixed Assets (excluding Grants/consumers Contribution etc.)	2,392.63	2,968.22	3,556.22
Average Gross Fixed Assets (excluding Grants/consumers Contribution etc.)	1,875.07	2,680.43	3,262.22
Depreciation	85.51	122.24	148.77
Wt. Avg Rate of Depreciation	4.56%	4.56%	4.56%

5.11 Interest on Loan

5.11.1 The MYT Regulations, 2021 specifies the following provisions for projection of Interest on Loan.

“29 Interest on Loan

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

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

Provided further that in case of De-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 decapitalised or retired or replaced assets, based on documentary evidence.

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

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

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



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

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

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

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

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

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

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

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

29.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account



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of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission: Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission or Distribution Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost: Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

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

29.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed: Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission.”

5.11.1 EDG doesn't have any actual loan in EDG's books, hence normative loan has been calculated in line with above regulations. Accordingly, the Interest rate charged has been considered as then one (1) Year State Bank of India (SBI) MCLR plus 100 basis points, which works out to be 8.00%. Further, EDG has considered the closing normative loan base for FY 2021-22 (arrived by considering provisional actual figures from FY 2017-18 to FY 2020-21 & APR of FY 2021-22), as opening normative loan base for FY 2021-22 and the normative debt addition due to asset addition for the year as discussed in the above section. Further, the normative repayment has been considered the depreciation projected for the particular year.

5.11.2 In line with above methodology, following is calculation of the normative interest on loan shown:



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Table 5-21: Normative Interest on Loan for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Normative Loan	241.74	880.82	1161.49
Add: Normative Loan during the year/GFA during the year	724.59	402.91	411.60
Less: Normative Repayment for the year	85.51	122.24	148.77
Closing Normative Loan	880.82	1161.49	1424.32
Average Normative Loan	561.28	1021.15	1292.91
Rate of Interest	8.00%	8.00%	8.00%
Interest on Normative Loan	44.90	81.69	103.43

5.11.3 The detailed calculation has been provided in Format 12 of Tariff Filing Formats filed along with this Petition. The Hon'ble Commission is requested to approve the interest on loan as shown in the table above.

5.12 Return on Equity

5.12.1 The MYT Regulations, 2021 specifies the following provisions for projection of Return on Equity.

"28 Return on Equity

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

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

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



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

5.12.2 Further, provision of debt to equity ratio specified in the MYT regulation 2021 as under:-

“27 Debt to Equity Ratio

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

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

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

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

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

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

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

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



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

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

5.12.3 Opening equity for FY 2022-23 is taken as per closing normative equity for FY 2021-22 calculated in previous chapter, further equity addition during the year is considered 30% of the capitalisation (excluding capitalisation through grant and electricity duty fund) in line with above specified regulations.

5.12.4 The following table shows the calculation of return on equity for the control period.

Table 5-22: Return on equity for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Balance of Equity	393.53	704.06	876.74
Net Additions during the Year	310.54	172.68	176.40
Closing Balance of Equity	704.06	876.74	1053.14
Average Equity	548.80	790.40	964.94
Average Equity (Wires Business)	493.92	711.36	868.45
Average Equity (Retail Supply Business)	54.88	79.04	96.49
Rate of Return on Equity for Wire Business %	15.50%	15.50%	15.50%
RoE Wire Business	76.56	110.26	134.61
Rate of Return on Equity for Retail Supply Business %	16.00%	16.00%	16.00%
RoE on Retail Supply business	8.78	12.65	15.44
Total RoE (Wire and Retail Supply business)	85.34	122.91	150.05

5.12.5 The detailed calculation has been provided in Format 16 of Tariff Filing Formats filed along with this Petition. The Hon'ble Commission is requested to approve the return on equity as shown in the table above.



5.13 Interest on Security Deposit

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

5.13.2 The following table shows the interest on security deposit for FY 2022-23 to FY 2024-25.

Table 5-23: Interest on Security Deposit for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Security Deposit	77.02	92.31	108.09
Additions during the year	15.65	16.16	16.69
Less: Deposits Refunded	0.37	0.38	0.39
Closing Security Deposit	92.31	108.09	124.40
Average Security Deposit	84.67	100.20	116.24
Rate of Interest (%)	4.25%	4.25%	4.25%
Interest on Security Deposit	3.60	4.26	4.94
Interest on Security Deposit to be paid and claimed in ARR	5.58	4.26	4.94

5.13.3 The detailed calculation has been provided in Format 22B of Tariff Filing Formats filed along with this Petition. The Hon'ble Commission is requested to approve the interest on security deposit as shown in the table above.

5.14 Interest on Working Capital

5.14.1 The MYT Regulations, 2021 specifies the following provisions for projection of Interest on Working Capital.

"32 Interest on Working Capital

32.1 The norms for working capital for Transmission Licensee shall be as specified in Chapter 5 of these Regulations.



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32.2 The norms for working capital for Distribution Wires Business and Retail Supply Business shall be as specified in Chapter 6 and Chapter 7 of these Regulations respectively.

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

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

5.14.2 In line with above provisions stated in MYT Regulations, 2021. EDG has calculated the working capital requirement. As on 1st April 2021, MCLR rate is at 7.00% plus 200 basis point. Hence Interest rate of 9.00% is considered to calculate the Interest on working capital loan for the MYT control period.

5.14.3 Following table shows the Interest on working capital loan for MYT control period:

Table 5-24: Interest on working capital for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

S.No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
A	O&M Expenses			
i)	R&M Expenses	61.94	77.07	125.65
ii)	A&G Expenses	28.07	29.59	31.19
iii)	Employee Cost	384.01	404.77	426.65
iv)	Total O&M Expenses	474.02	511.43	583.49
v)	O&M Expenses for retail supply business for 1 month	39.50	42.62	48.62
B	Maintenance Spares (@40% of R&M Expenses)	2.06	2.57	4.19
C	Receivables equivalent to 2 months of average of total revenue from sale of energy, approved by Commission in the ARR	333.51	342.96	352.72
D	Less: Consumer Security Deposit	84.67	100.20	116.24
E	Total Working Capital (A (v)+B+C-D)	290.41	287.94	289.29
F	Rate of Interest	9.00%	9.00%	9.00%
G	Interest on Working Capital	26.14	25.91	26.04

5.14.4 The detailed calculation has been provided in Format 14 of Tariff Filing Formats filed along with this Petition. The Hon'ble Commission is requested to approve the interest



on working capital shown in the table above as per MYT Regulation 2021. Further, IWC for wire and supply business has been computed based on the allocation provided in the Regulations.

5.15 Non-Tariff Income

5.15.1 The Regulatory provisions for Non-Tariff Income have been stated below.

“54 Non-Tariff Income

54.1 The amount of Non-Tariff Income relating to the Distribution Wires Business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining the wheeling charges of Distribution Wires Business of 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 wheeling charges.

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

- a) Income from rent of land or buildings;*
- b) Income from sale of scrap in excess of 10% of the salvage value;*
- c) Income from statutory investments;*
- d) Income from interest on contingency reserve investment;*
- e) Interest on advances to suppliers/contractors;*
- f) Rental from staff quarters;*
- g) Rental from contractors;*
- h) Income from hire charges from contactors and others;*
- i) Income from advertisements, etc.;*
- j) Miscellaneous receipts;*
- k) Excess found on physical verification;*
- l) Deferred Income from grant, subsidy, etc., as per Annual Accounts;*
- m) Prior period income, etc.:*



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

5.15.2 The following table shows the Non-tariff Income for the control period as projected by EDG.

Table 5-25: Non-Tariff Income for MYT Control period FY 2022-23 to FY 2024-25 (Rs. Crore)

S. No.	Particulars	MYT Control Period		
		Projection		
		FY 2022-23	FY 2023-24	FY 2024-25
1	Meter/metering equipment/service line rentals	12.91	13.41	13.93
2	Service Charges	-	-	-
3	Customer Charges	-	-	-
4	Revenue from Late Payment Surcharge	-	-	-
5	Miscellaneous Charges	-	-	-
6	Incentives from CGSs	-	-	-
7	Miscellaneous Receipts	11.71	12.16	12.63
8	Interest on advances to suppliers/contractors	-	-	-
9	Interest on Staff Loans and Advances	-	-	-
10	Income from Trading	-	-	-
11	Income from Staff Welfare Activities	-	-	-
12	Excess found on Physical Verification	-	-	-
13	Interest on Investments, Fixed and Call Deposits and Bank Balances	-	-	-
14	Prior Period Income	-	-	-
15	Income from Open Access Charges (Application fee, Cross Subsidy Surcharge, Additional Surcharge, Transmission and/or Wheeling Charges, Scheduling Charges etc.	-	-	-
16	Sale Proceeds of dead stock, waste paper etc	5.71	5.93	6.16
16	Any other Income not included above	-	-	-
	Total	30.33	31.50	32.72

5.15.3 EDG request Hon'ble Commission to approve above mentioned Non-tariff income for the MYT control period

5.16 Aggregate Revenue Requirement for FY 2022-23 to FY 2024-25

5.16.1 The Net Revenue Requirement derived for the control period based on the expenses discussed in the previous sections is shown in the table below.



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**Table 5-26: Net Aggregate Revenue Requirement for MYT Control period FY 2022-23 to FY 2024-25
(Rs. Crore)**

S.No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	Cost of Power Purchase from Own Generating Stations	0.00	0.00	0.00
2	Cost of Power Purchase from other Generating Stations	1,439.07	1,504.24	1,546.79
3	Inter State Transmission Charges	221.36	227.91	234.69
4	Intra State Transmission Charges	0.00	0.00	0.00
5	SLDC Fees & Charges	0.00	0.00	0.00
6	O&M Expenses (Gross)	474.02	511.43	583.49
	a) R&M Expenses	61.94	77.07	125.65
	b) Employee Cost	384.01	404.77	426.65
	c) A&G Expenses	28.07	29.59	31.19
7	Depreciation	85.51	122.24	148.77
8	Interest and Finance Charges	44.90	81.69	103.43
9	Interest on Working Capital	26.14	25.91	26.04
10	Prior Period Expenses	0.00	0.00	0.00
11	Interest on Consumer Security Deposit	5.58	4.26	4.94
12	Extraordinary Items	0.00	0.00	0.00
13	Bad and Doubtful Debts	0.00	0.00	0.00
14	Other Debts and Write-offs	0.00	0.00	0.00
15	Statutory Levies and Taxes, if any	0.00	0.00	0.00
16	Less: Expenses Capitalised	0.00	0.00	0.00
	a) Interest Charges Capitalized	0.00	0.00	0.00
	b) R&M Expenses Capitalized	0.00	0.00	0.00
	c) A&G Expenses Capitalized	0.00	0.00	0.00
	d) Employee Cost Capitalized	0.00	0.00	0.00
	Sub Total Expenditure (1 to 15-16)	2,296.59	2,477.68	2,648.14
17	Return on Equity	85.34	122.91	150.05
18	Less: Non-Tariff and other Income	20.78	29.20	30.33
19	Less: Any Grant/ Subventions, other subsidy provided by the Government	0.00	0.00	0.00
20	Annual Revenue Requirement (B+C-D-E)	2,361.15	2,571.38	2,767.86

5.16.2 EDG request Hon'ble Commission to approve net Revenue requirement of Rs. 2,361.15 Cr, Rs. 2,571.38 Cr and Rs. 2,767.86 Cr for FY 2022-23, FY 2023-24 and FY 2024-25 respectively.



5.17 Revenue from Sale of Power at Existing Tariff

5.17.1 The Revenue from sale of power at existing tariff rates (approved by Hon`ble Commission for FY 2021-22) by ED-Goa for MYT control period is outlined below. The detailed computation has been provided in Format F 23 of the MYT Tariff Formats.

Table 5-27: Revenue from Sale of Power at existing Tariff from FY 2022-23 (Rs. Cr.)

Sl. No.	Category	No. of consumers	Relevant sales & load/demand data for revenue calculation			pf Considered	Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
			sanctioned Load in kW	Contract Demand in KVA/MVA	Sales in MU		Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total	
1	Domestic										
	11 kV Voltage Level										
	Tariff HTD/Domestic	4		420	0.43	0.93	0.06		0.17	0.22	5.23
	Tariff-HTTS/Temporary Supply (HT Domestic)	16		5663.70	3.51	0.89	1.12		2.15	3.27	9.31
	LT Voltage Level										
	Tariff LTD/Domestic and Non-Commercial	547790	1722919.38		1325.53		25.15	0.00	329.27	354.42	2.67
	0-100 units	218628	566858.76		508.38		6.56		76.26		
	101-200 units	147656	361265.24		320.26		4.43		72.06		
	201 to 300 units	88693	287891.35		174.32		6.92		49.68		
	301 to 400 units	42537	182514.19		96.92		3.32		35.37		
	Above 400 units	50276	324389.83		225.65		3.92		95.90		
	Tariff LTD/Low Income Group	877	85.00		1.27		0.05		-	0.05	0.42
	Tariff-LT/Temporary Domestic	2028	3456.00		0.69		0.09		0.15	0.20	2.91
	0-100 Units	1014	1728.00		0.69		0.05		0.15	0.20	2.91
	101 to 200 Units	1014	1728.00		0.00		0.05		-		
	201 to 300 Units	0	0.00		0.00		0.00		-		
	301 to 400 Units	0	0.00		0.00		0.00		-		
	Above 400 Units	0	0.00		0.00		0.00		-		
	Sub-Total	550715.05	1726460.38	6083.70	1331.43		26.47	0.00	331.75	358.17	2.69
2	Commerical										
	33 kV & 11 kV Voltage Level										
	Tariff HT-Commercial	289		108614.10	116.74	0.88	32.58		73.32	105.91	9.07
	33 kV Voltage Level										
	Tariff HT-Commercial	0									
	11 kV Voltage Level										
	Tariff HT-Commercial	0									



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Sl. No.	Category	No. of consumers	Relevant sales & load/demand data for revenue calculation			pf Considered	Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
			sanctioned Load in kW	Contract Demand in KVA/MVA	Sales in MU		Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total	
	Tariff-HTTS/Temporary Supply (HT Commercial)	0									
	LT Voltage Level										
	Tariff-LTC/Commercial	103827	3,90,009.09		436.59		14.32		209.81	224.13	5.13
	<i>0-20 KW/Commercial Consumers</i>										
	<i>1-100 Units</i>	63726	124225		72.87		3.82		25.87	29.69	
	<i>101-200 units</i>	14005	36041		42.59		0.84		18.53	19.37	
	<i>201-400 Units</i>	11332	38846		50.72		0.68		24.60	25.28	
	<i>Above 400 units</i>	11726	76025		159.46		0.70		83.72	84.42	
	<i>>20-90Kw Commercial Consumers</i>										
	<i>1-100 Units</i>	458	15476		3.52		1.11		1.25	2.36	
	<i>101-200 units</i>	145	5162		3.34		0.37		1.45	1.82	
	<i>201-400 Units</i>	279	9454		6.29		0.68		3.05	3.73	
	<i>Above 400 units</i>	2156	84779		97.80		6.10		51.35	57.45	
	Tariff-LT/Temporary Commercial	1712	7520		9.08		0.15		4.84	4.99	5.49
	<i>0-20 KW/Commercial Consumers</i>										
	<i>0-100 Units</i>	1712	7520		9.08		0.15		4.84	4.99	
	<i>101 - 200 Units</i>	0					0.00		-	0.00	
	<i>201 - 400 Units</i>	0					0.00		-	0.00	
	<i>Above 400 Units</i>	0					0.00		-	0.00	
	<i>>20-90Kw and above Commercial Consumers</i>										
	<i>0 - 100 units</i>	0					0.00		-	0.00	
	<i>101 - 200 units</i>	0					0.00		-	0.00	
	<i>201-400 units</i>	0					0.00		-	0.00	
	<i>Above 400 units</i>	0					0.00		-	0.00	
	Sub-Total	105827.84	397529.09	108614.10	562.42		47.06		287.97	335.02	5.96
3	Public Lighting										
	LT Voltage Level										
	Tariff-LTPL/Public Lighting	5726	12192.25		50		1.02		21.17	22.20	4.40
4	Agricultural Pumpsets										
	HT Voltage Level (33 kV & 11 kV)										
	HT-Agriculture										
	<i>Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)</i>	43		9476.30	5	0.56	0.45		1.51	1.97	3.71
	<i>Tariff-HTAG/Agriculture (Allied Activities) (B)</i>	3		2200	9	0.98	0.18		1.86	2.04	2.18



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Sl. No.	Category	No. of consumers	Relevant sales & load/demand data for revenue calculation			pf Considered	Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
			sanctioned Load in kW	Contract Demand in KVA/MVA	Sales in MU		Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total	
	LT Voltage Level										
	LT-Agriculture										
	Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)	12481	48595.81		17		1.05		2.59	3.64	2.11
	Tariff-LTAG/Agriculture Allied (B)	256	2308.95		1		0.07		0.17	0.24	2.45
	Sub-Total	12783.08	50904.76	11676.30	32.90		1.76		6.13	7.89	2.40
5	Small Power										
	LT Voltage Level										
	LTI-Industry	5649	145742.80		81		7		31	38	4.70
	0-500 Units		67474.45		17		3.24		5.62	8.86	
	Above 500 units		78268.35		64		3.76		25.43	29.18	
	Tariff-LTP/Mixed (Hotel Industries)	116	2295.00		4		0.14		2.22	2.35	5.26
	Sub-Total	5765.00	148037.80	0.00	85.38		7.13		33.27	40.40	
6	Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV										
	33 kV / 11 kV & 110 kV Voltage Level										
	Tariff HTI/Industrial	798		570982	1483		171		845	1016.35	6.85
	33 kV/11kV	793		496366.97	1228	0.83	148.91		706.51	855.42	6.96
	110kV	5		74615.17	255	0.87	22.38		138.54	160.93	6.31
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	22		93250	507	0.87	27.98		279.96	307.94	6.08
	H.T. MES/Defence Establishments	15		8709.75	28	0.94	2.09		15.47	17.56	6.30
	Sub-Total	834.61		672941.89	2018.04		201.36		1140.48	1341.84	6.65
7	Bulk Supply										
	33 kV Voltage Level										
	Single Point Supply	1		4,035	5.55		1.07	0.00	2.67	3.74	6.73
	Residential Complexes						0.00		0.00	0.00	
	Commercial Complexes	1		4035	5.55	1.00	1.07		2.67	3.74	6.73
	Industrial Complexes						0.00		0.00	0.00	
	Sub-Total	1.00		4035.00	5.55		1.07	0.00	2.67	3.74	6.73
8	Other Categories										
	33 kV Voltage Level										



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Sl. No.	Category	No. of consumers	Relevant sales & load/demand data for revenue calculation			pf Considered	Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
			sanctioned Load in kW	Contract Demand in KVA/MVA	Sales in MU		Revenue from Fixed Charges	Revenue from Demand Charges	Revenue from Energy Charges	Total	
	Electric Vehicle Charging Station										
	11 kV Voltage Level										
	Tariff-LT Hoarding and Sign Board	61	514		0		0.04		0.16	0.21	12.65
	Electric Vehicle Charging Station										
	Grand Total	681713	2335638.28	803350.99	4086.29		285.91	0.00	1823.60	2109.47	5.16

5.17.2 Based on the aggregate revenue requirement and revenue calculation based on the existing tariff, the revenue gap/ (surplus) for the control period has been computed. The revenue gap for FY 2022-23 is as shown in the table below:

Table 5-28: Revenue Gap at existing Tariff for FY 2022-23 (Rs. Cr.)

Particulars	FY 2022-23
Net Revenue Requirement	2,361.15
Revenue from Sale of Power	2,109.47
Revenue Gap during the Year	251.69

5.17.3 Further, EDG submits that the total gap for FY 2022-23 will be bridged through Government of Goa by providing budgetary support for the same.



6 TARIFF PHILOSOPHY

6.1 Preamble

6.1.1 This Chapter elucidates the proposed retail tariff and miscellaneous charges to be applicable for FY 2022-23. EDG prays to the Hon'ble Commission to approve the proposed retail tariff for FY 2022-23 as proposed for different categories of consumers, applicable from 1st April 2022.

6.2 Tariff Design Principles

6.2.1 Over the years, Hon'ble Commission has been guided by the Electricity Act, 2003 and the National Tariff Policy while determining retail tariffs across the Goa. Hon'ble Commission has always laid emphasis on adoption of factors that encourages economy, efficiency, effective performance and improved conditions of supply. On these lines, the Hon'ble Commission, in this order too, may apply similar principles keeping in view the ground realities.

6.3 Implementation of kVAh based tariff for HT consumers

6.3.1 EDG submits that as per the Tariff Order 30-03-2021, the EDG has implemented the kVAh billing on HT and EHT Consumers for FY 2021-22. On account of implementation, EDG received an additional revenue of Rs. 97.90 Crore for the months from April 2021 to October 2021 (7months). The monthly revenue details are provided in the following table:

Months	Revenue through kVAh Billing	Revenue through kWh Billing	Difference
	Rs. Crore	Rs. Crore	Rs. Crore
	A	B	C=B-A
April	89.01	77.60	11.41
May	85.41	69.59	15.82
June	72.01	62.15	9.86
July	78.24	66.50	11.74
August	82.66	70.45	12.21
September	87.87	68.40	19.47
October	79.38	62.00	17.38
Total	574.59	476.69	97.90



6.3.2 Based on the above, the incremental revenue to be billed for balance 5 months (November-2021 to March-2022) is approx. Rs. 69.93 Crore. The anticipated kVAh revenue for FY 2021-22 is Rs. 167 Crore.

6.4 Philosophy of Tariff Design

6.4.1 EDG submits that gap of FY 2022-23 is proposed to be bridged through budgetary support.

6.4.2 EDG submits that the Implementation of kVAh billing for HT and EHT Consumers has fetched with additional revenue of Rs. 97.90 for the months from April 2021 to October 2021. Accordingly, the incremental revenue over the existing tariff comes out to be Rs. 167 Cr.

6.4.3 The EDG proposes for maintaining the Tariff approved in FY 2019-20 by Hon'ble JERC based on the following:

- (a) On Account of incremental revenue received due to implementation of kVAh billing for HT and EHT Consumers.
- (b) Considering the prevalence of the ongoing COVID-19 pandemic and its effects on people of goa, increase in Tariff may impact the revival efforts of the public (especially the LT Consumers).

6.4.4 Also, EDG submits that the auditing by CAG is in process for finalization of accounts of FY 2017-18, FY 2018-19 and FY 2019-20 and the certificate for the same is awaited. Further, the revenue gap may be provisionally recognized by the Hon'ble Commission and due treatment be given for recovery at a later date when petition for true-ups are filed based on actual accounts / figures of revenue gap. However, revenue gap on account of True-ups of all the above years will not be passed over to the Consumers of EDG on account of Budgetary Support letters issued by Government of Goa from time to time.

6.4.5 EDG would like to submit before Hon`ble Commission that due to the COVID-19 pandemic, in order to boost the economic activity is the State, Government of Goa vide Cabinet decisions taken in the Cabinet Meeting of the Council of Ministers held on 25/08/2021, has approved the following:

The Council of Ministers resolved to keep the Tariff Order for FY 2021-22 in abeyance for the period from 1st April, 2021 till 31st March, 2022 (12 months) except for levy of Tariff of Rs.3.50/Unit as per Tariff Order for FY 2021-22 to Consumer Category "Electric Vehicle Charging Station" and implementation of kVAh based tariff for HT/EHT



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Categories and to grant of subsidy to all categories of Consumers to nullify the impact of hike in Tariff Order for FY 2021-22 issued vide Petition No: 39/2020 by the joint Electricity Regulatory Commission for the State of Goa and Union Territories.

- 6.4.6 Post issuance of above-mentioned order by the Government of Goa, the Electricity Department, in FY 2021-22 has been levying the Tariff approved by JERC for FY 2019-20 on all consumers except for EV Charging Stations, and implementation of kVAh based tariff for HT/EHT Categories. The difference in the revenue was considered as subsidy from the Government to each category of consumer during FY 2021-22, in addition, the Government would provide budgetary support to take over any revenue gap remaining for the year.
- 6.4.7 For the FY 2022-23, the Government of Goa has decided to keep the same tariff for consumers as is being levied on them currently. **Accordingly, for the benefit of the consumers and to fully revive the industry in the area, EDG proposes reduction in current Tariff i.e. reduction from existing Commission approved Tariff of FY 2021-22 to Commission approved Tariff of FY 2019-20 and implementation of kVAh based tariff for HT/EHT Categories.**
- 6.4.8 As stated above, EDG proposes the revised retail tariff for FY 2022-23 and the same is tabulated below as:



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Table 6-1: Proposed Tariff Structure for FY 2022-23

S. No.	Category	Tariff approved for FY 2019-20 in T.O. dated 20 th May 2019 (Continued for FY 2021-22 in view of cabinet decision dt. 25.08.2021 due to COVID Pandemic)		Tariff approved by JERC in T.O. dated 30 th March 2021 w.e.f. 01 st April 2021 (Not implemented due to COVID Pandemic)		Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	
							Units	Rate
1	Domestic							
	Low Tension-D/LT-D							
A	0-100 units	Single Phase INR 25/Con/Month	1.40	Single Phase INR 25/Con/Month	1.50	Single Phase INR 25/Con/Month	Rs/kWh	1.40
	101-200 units		2.10		2.25		Rs/kWh	2.10
	201 to 300 units		2.65		2.85		Rs/kWh	2.65
	301 to 400 units		3.45		3.65		Rs/kWh	3.45
	Above 400 units	Three Phase INR 60/Con/Month	4.00	Three Phase INR 65/Con/Month	4.25	Three Phase INR 60/Con/Month	Rs/kWh	4.00
B	Low Tension-LIG/LT-LIG							
	All Units	INR 40/Con/Month	-	INR 50/Con/Month	-	INR 40/Con/Month	Rs/kWh	-
C	High Tension-D/HT-D							
	All Units	INR 100/kVA/Month	3.45	INR 110/kVA/Month	3.65	INR 100/kVA/Month	Rs/kVAh	3.45
2	Commercial							
	Low Tension-C/LT-C							
A	0-100 units	For consumers with Load upto 20 kW INR 50/Con/Month	3.40	For consumers with Load upto 20 kW INR 50/Con/Month	3.55	For consumers with Load upto 20 kW INR 50/Con/Month	Rs/kWh	3.40
	101-200 units		4.10		4.35		Rs/kWh	4.10
	201 units- 400 units		4.60		4.85		Rs/kWh	4.60
	Above 400 units	For consumers with Load more than 20 kW and upto 90 kW INR 55/kW/Month	5.00	For consumers with Load more than 20 kW and upto 90 kW	5.25	For consumers with Load more than 20 kW and upto 90 kW	Rs/kWh	5.00



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S. No.	Category	Tariff approved for FY 2019-20 in T.O. dated 20 th May 2019 (Continued for FY 2021-22 in view of cabinet decision dt. 25.08.2021 due to COVID Pandemic)		Tariff approved by JERC in T.O. dated 30 th March 2021 w.e.f. 01 st April 2021 (Not implemented due to COVID Pandemic)		Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	
							Units	Rate
				INR 60/kW/Month		INR 55/kW/Month		
B	High Tension-C/HT-C							
	All Units	INR 250/kVA/month	5.50	INR 250/kVA/month	5.50	INR 250/kVA/month	Rs/kVAh	5.50
3	Industrial							
	Low Tension-I/LT-I							
A	0-500 units	INR 35/HP/Month	3.30	INR 40/HP/Month	3.40	INR 35/HP/Month	Rs/kWh	3.30
	Above 500 units	INR 35/HP/Month	3.80	INR 40/HP/Month	3.95	INR 35/HP/Month	Rs/kWh	3.80
B	Low Tension-Mixed/LT-P (Hotel Industries)							
	All Units	INR 40/kW/Month	4.70	INR 50/kW/Month	4.95	INR 40/kW/Month	Rs/kWh	4.70
C	High Tension-I/HT-I							
	Connected at 11/33 kV	INR 250/kVA/Month	4.50	INR 250/kVA/Month	4.80	INR 250/kVA/Month	Rs/kVAh	4.50
	Connected at 110 kV	INR 250/kVA/Month	4.40	INR 250/kVA/Month	4.70	INR 250/kVA/Month	Rs/kVAh	4.40
D	High Tension- Ferro/SM/ PI/ SR							
	All Units	INR 250/kVA/Month	4.50	INR 250/kVA/Month	4.80	INR 250/kVA/Month	Rs/kVAh	4.50
4	Agricultural							
A	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)							
	All Units	INR 15/HP/Month	1.40	INR 18/HP/Month	1.50	INR 15/HP/Month	Rs/kWh	1.40
B	Low Tension-AG/LT-AGA (Allied Activities)							



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S. No.	Category	Tariff approved for FY 2019-20 in T.O. dated 20 th May 2019 (Continued for FY 2021-22 in view of cabinet decision dt. 25.08.2021 due to COVID Pandemic)		Tariff approved by JERC in T.O. dated 30 th March 2021 w.e.f. 01 st April 2021 (Not implemented due to COVID Pandemic)		Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	
							Units	Rate
	All Units	INR 20/HP/Month	1.70	INR 25/HP/Month	1.75	INR 20/HP/Month	Rs/kWh	1.70
High Tension-AG/HT-AGP (Pump Sets/Irrigation)								
C	All Units	INR 35/kVA/Month	1.50	INR 40/kVA/Month	1.60	INR 35/kVA/Month	Rs/kVAh	1.50
High Tension-AG/HT-AG (Allied Activities)								
D	All Units	INR 60/kVA/Month	1.90	INR 70/kVA/Month	1.95	INR 60/kVA/Month	Rs/kVAh	1.90
5 Military Engineering Services/ defense Establishments								
	All Units	INR 175/kVA/Month	5.00	INR 200/kVA/Month	5.20	INR 175/kVA/Month	Rs/kVAh	5.00
6 Public Lighting								
	All Units	INR 50/kW/Month	4.10	INR 70/kW/Month	4.20	INR 50/kW/Month	Rs/kWh	4.10
7 Hoardings/Signboards								
	All Units	INR 60/kVA/Month	9.90	INR 70/kVA/Month	10.00	INR 60/kVA/Month	Rs/kWh	9.90
8 Temporary Supply								
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		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		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							



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

S. No.	Category	Tariff approved for FY 2019-20 in T.O. dated 20 th May 2019 (Continued for FY 2021-22 in view of cabinet decision dt. 25.08.2021 due to COVID Pandemic)		Tariff approved by JERC in T.O. dated 30 th March 2021 w.e.f. 01 st April 2021 (Not implemented due to COVID Pandemic)		Proposed Tariff for FY 2022-23		
		Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	Fixed Charges	Energy Charges (INR/kWh)	
							Units	Rate
				to that of commercial category for permanent supply.				
9	Single Point Supply							
A	Residential Complexes	INR 100 per kVA per month or part thereof	3.45	INR 110 per kVA per month or part thereof	3.55	INR 100 per kVA per month or part thereof	Rs/kVAh	3.45
B	Commercial Complexes	INR 200 per kVA per month or part thereof	4.60	INR 220 per kVA per month or part thereof	4.80	INR 200 per kVA per month or part thereof	Rs/kVAh	4.60
C	Industrial Complexes	INR 200 per kVA per month or part thereof	4.20	INR 220 per kVA per month or part thereof	4.40	INR 200 per kVA per month or part thereof	Rs/kVAh	4.20
10	Electric Vehicle Charging Station							
	All Units	INR 100 per kVA per month	4.20	-	3.50	-	Rs/kWh	3.50



6.5 General Conditions and Definitions

- (a) These tariffs are proposed to be made applicable from 1st April 2022 and shall remain valid till further Orders of the Commission. Tariffs are subject to revision and/or surcharge that may be levied by ED-Goa from time to time as per the directives of the Commission.
- (b) 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.
- (c) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- (d) Unless specifically stated to the contrary the figures of energy charges relate to rupee per unit (kWh for LT consumers and kVAh for HT & EHT Consumers) charge for energy consumed and fixed charge relates to a month.
- (e) 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 2018 notified by the JERC.
- (f) If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.
- (g) 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.
- (h) 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.
- (i) Supply of power in all cases shall be subject to the execution of Agreement between the Electricity Department, Goa and consumers and as per the JERC (Electricity Supply Code) Regulation 2018. The other 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.
- (j) 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 JERC (Electricity Supply Code) Regulations, 2018. If such over-drawl 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 ($12000 \times 100 / 120$) 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 at 11/33 kV, excess demand and consumption will be billed at the rate of Rs 500 per kVA per month and Rs 9.60/kWh respectively. Connections drawing more than 120 kVA shall be disconnected immediately.

6.6 Miscellaneous and General Charges

6.6.1 Fuel & Power Purchase Cost Adjustment (FPPCA) Formula:

6.6.1.1 The adjustment because of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula separately notified by the Commission. The FPPCA charge will be determined based on the formula approved by Hon'ble Commission vide order date 30th March, 2021 and relevant directions, as may be given by the Hon'ble Commission from time to time and will be applicable to all consumer categories except for Below Poverty Line (BPL) and Agriculture consumers for their consumption.

6.6.1.2 The details for each quarter shall be available on Electricity Department, Government of Goa website at <http://www.goaelectricity.gov.in/>

6.6.1.3 The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in the respective Tariff Order. FPPCA charges so worked out shall be recovered/ refunded in accordance with the terms and conditions specified in the FPPCA formula.

6.6.2 Electricity Duty:



6.6.2.1 The Electricity Duty will be charged as per Government guidelines from time to time in addition to charges as per the Commission approved tariffs mentioned hereunder. However, the rate and the reference number of the Government Resolution/ Order vide which the Electricity Duty is made effective, shall be stated in the bill. A copy of the said Resolution/Order shall be made available on Electricity Department, Government of Goa website at <http://www.goaelectricity.gov.in/>

6.6.3 Power Factor Calculation.

(Applicable for all HT, EHT categories and LT categories wherever approved by Commission in terms of Supply Code Regulations 2018)

6.6.3.1 Wherever, the average power factor measurement is not possible through the installed meter, the following method for calculating the average power factor during the billing period shall be adopted-

$$\text{Average Power Factor} = \frac{\text{Total (kWh)}}{\text{Total (kVAh)}}$$

Wherein the kVAh is = $\sqrt{\sum (\text{kWh})^2 + \sum (\text{RkVAh})^2}$

(i.e., Square Root of the summation of the squares of kWh and RkVAh)

6.6.4 Power Factor Penalty:

6.6.4.1 EDG submits that in compliance to the Tariff Order FY 2021-22 of the Hon'ble Commission, ED-Goa the implemented the kVAh based tariff for HT & EHT categories. EDG further submits that since, kVAh based billing has an inbuilt incentive/penalty mechanism, separate mechanism for Power Factor Penalty is no more required for HT & EHT consumers.

6.6.4.2 The following are the provisions for Power Factor Penalty shall be applicable only for LT consumers:

6.6.4.3 The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (lagging), If the monthly average power factor of (a) consumer falls below 90% (0.90 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 1% in power factor upto 70% (lagging).



- 6.6.4.4 If the monthly average power factor falls below 70%, such consumer shall pay a surcharge in addition to his normal tariff @ 1.5% on billed demand and energy charges, FPPCA, and fixed/ Demand Charges but excluding Taxes and duties for each fall of 1% in power factor below 70% (lagging)
- 6.6.4.5 If the average power factor falls below 0.70 (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.
- 6.6.4.6 The power factor shall be rounded off to two decimal places. For example, 0.886 shall be treated as 0.89 and 0.884 shall be treated as 0.88.
- 6.6.5 Power Factor Incentive:
- 6.6.5.1 EDG submits that in compliance to the Tariff Order FY 2021-22 of the Hon'ble Commission, ED-Goa has implemented the kVAh based tariff for HT & EHT categories. EDG further submits that since, kVAh based billing has an inbuilt incentive/penalty mechanism, separate mechanism for Power Factor Penalty is no more required for HT & EHT consumers.
- 6.6.5.2 The following are the provisions for Power Factor Incentive which shall be applicable only for LT consumers:
- 6.6.5.3 In case the monthly average power factor of the consumer is more than 95% (0.95 lagging), a power factor incentive shall be given to the consumer as 1 % of monthly bill including energy charges, FPPCA, and fixed/ Demand Charges but excluding Taxes and duties for each increase of 0.01 in power factor above 0.95 (lagging)
- 6.6.5.4 The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95.
- 6.6.5.5 **Payment Rebates:**
- 6.6.5.6 **Advance Payment Rebate:** If payment is made in advance well before commencement of consumption period for which bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding 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.
- 6.6.5.7 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.

6.6.5.8 **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. Those consumers having arrears shall not be entitled for such rebate and the amount paid will first be used to set off past liabilities.

6.6.5.9 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.

6.6.6 Delayed Payment Charges (DPC):

6.6.6.1 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 daily basis on outstanding bill from the due date till 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.

6.6.6.2 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 next rupee.

6.6.6.3 If the consumer fails to pay the energy bill presented to him by the due date the department shall have the right to disconnect the supply after giving 15 days' notice as per provision of the Electricity Act 2003 and Supply Code Regulations 2018.

6.6.6.4 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.

6.6.7 Time of Day tariff (ToD):

6.6.7.1 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.



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

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

6.6.7.3 Applicability and Terms and Conditions of TOD tariff:

- TOD tariff is mandatory for HT/EHT consumers and shall be optional for LT industrial and commercial consumers.
- 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 EDG through wheeling of power.
- The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff
- In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

6.7 Schedule of Miscellaneous Charges

6.7.1 There is no change proposed in the schedule of Miscellaneous charges for FY 2022-23 and are proposed to be retained as approved by the Hon'ble Commission vide its order dated 30th March 2021.

Table 6-2: Schedule of Miscellaneous Charges

Description	Miscellaneous Charges
Monthly Meter Rental Charges (As per provisions of (Electricity Supply Code) Regulations 2018)	
Single Phase LT meter	Rs 15/month
Three Phase LT meter	Rs 25/month
Three Phase LT meter with CTs	Rs 75/month
LT Meter with MD Indicator	Rs 30/month
LT Trivector meter with CT's	Rs 75/month
Tri-vector Meter	Rs 1200/month
Bi-directional meter	Rs.1500/month



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Description	Miscellaneous Charges
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 \geq 50 KW) / HT / EHT consumer – Static, 3 Phase Tri-vector meters with MDI (MD Display)	
Reconnection Charges (As per provisions of (Electricity Supply Code) Regulations 2018)	
LT Services – At Cut outs	
Single Phase	Rs 25/-
Three Phase	Rs 50/-
LT Services – At Overhead Mains	
Single Phase	Rs 30/-
Three Phase	Rs 50/-
LT Services – At Underground Mains	
Single Phase	Rs 75/-
Three Phase	Rs 125/-
HT Services	
HT Services	Rs 200/-
<i>Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges</i>	
Re-Rating of Installations	
Lighting Installation	Rs. 50/-
Motive Power Installation	Rs. 100/-
HT	Rs. 500/-
Testing Fee for Various Metering Equipment's (As per provisions (Electricity Supply Code) Regulations 2018)	
Single phase LT	Rs 25/energy meter
Poly Phase LT without CT	Rs 50/energy meter
L.T. meter with CTs/Demand or Special Type Meters	Rs 150/energy meter
H.T and E.H.T. metering equipment	Rs 10,000/- at site
Transformer Oil	Rs 200/- per sample



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Description	Miscellaneous Charges
LT Current Transformer at lab	Rs.50/- per Sample
Three Phase Tri-vector Meter Industrial LT Consumer	Rs 1,000/- for laboratory testing
Three Phase Tri-vector Meter 11 KV and 33kV HT Consumer	Rs 5,000/- at site
Three Phase Tri-Vector Meter 110 KV EHT Consumers	Rs 1,000/-at site
Combined CTPT Unit for 11kV and 33kV Consumer	Rs 2,500/-
110 KV CT / PT Unit	Rs 10,000/-
Single Phase CT	Rs 150/ unit
Three Phase TT Block	Rs 500/unit
Distribution Transformer Testing (HT consumer)	Rs 6,000
Power Transformer Testing (EHT consumer)	Rs 20,000
Service Connection Charges (As per provisions of (Electricity Supply Code) Regulations 2018)	
Single Phase 1 ϕ	Rs 250
Three Phase 3 ϕ	
up to 5 HP	Rs 500
5 HP to 20 HP	Rs 800
Above 20 HP	Rs 1,200
HT (First 500 KVA)	Rs 10,000
HT (Beyond 500 KVA)	Rs 20,000
HT Additional load	Rs.500/- for every addition of 100 KVA
Extra Length for 1 ϕ (beyond 30 meters)	Rs 50 /meter
Extra Length for 1 ϕ for agricultural consumers (beyond 300 meters)	Rs 25 /meter
Extra Length for 3 ϕ (beyond 30 meters)	Rs 100 /meter
Extra Length for 3 ϕ for agricultural consumers (beyond 300 meters)	Rs 50 /meter
Underground Service Cable	Actual charges +15%
Shunt Capacitor- 20 kW to 50 kW	Rs 2,000
Shunt Capacitor- above 50kW	Rs 5,000
Testing Consumer's installation (As per provisions of (Electricity Supply Code) Regulations 2018)	



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Description	Miscellaneous Charges
For first test of the new installation on or off an extension to an existing installation if the installation is found to be defective.	NIL
For Subsequent test of the new installation or of an existing installation if the installation is found to be defective	
Single phase LT	Rs 100/-
Three phase	Rs 200/-
MS/BS loads upto70kW	Rs 4,000 + GST
LS/BS/RT (loads Above 70kW)	Rs 8,000 + GST
Shunt Capacitor- 20 kW to 50 kW	Rs 1,000 + GST
Shunt Capacitor- above 50kW	Rs 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 (Electricity Supply Code) Regulations 2018)	
Single phase	Rs 100/-
3-phase without C.Ts	Rs 200/-
L.T. meter with C.T.s	Rs 500/-
H.T and E.H.T. metering equipment	Rs 8000 + 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	Rs 50/-
Where cut-out is independently sealed	Rs 50/-
Meter cover or Meter Terminal cover	Rs 50/-
Meter cover of Meter Terminal cover (3 phase).	Rs 50/-
Maximum demand Indicator or C.T.s chamber	Rs 50/-
Service Charges	
General Supply	
• Single Phase	Rs 10/-
• Three phase below 70kW	Rs 20/-
• Three phase above 70kW	Rs 50/-
Industrial/bulk/ agriculture /Street Lightning Supply	
• Upto70kW	Rs 25/-
• Above 70kW	Rs 50/-
Replacement of broken glass	



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Description	Miscellaneous Charges
Replacement of broken glass of meter cupboard (When there is default on Consumer Side)	Rs 50/-
Replacement of broken Glass of single-phase meter if the consumer has broken or tamper and with meter.	Rs 50/-
Replacement of broken Glass of three phase meter if the consumer has broken or tamper and with meter	Rs 50/-
Supply of duplicate copies of electricity bills	
Domestic Consumers	Rs 5 per bill
Non-Domestic consumers	Rs 10 per bill
LT Industrial upto 20kW and AP Consumer	Rs 5 per bill
H.T Industrial and Bulk supply consumer	Rs 10 per bill
Stand by meter	
HT	Rs. 10,000
EHT	Rs. 20,000
Check Meter	
HT	Rs. 10,000
EHT	Rs. 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 of pre-paid meters) (To be adjusted in bills)	
• Single phase LT	Rs. 2,000
• Three phase	Rs. 5,000
• HT	Rs. 20,000
• EHT	Rs. 20,000
<i>Note: this shall be adjusted in bills</i>	
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



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Description	Miscellaneous Charges
Extra Length 1 phase for Agriculture consumer (beyond 300 meters) through underground service cable	Rs.25/meter
3 Phase through underground service cable	Rs.300/meter
Extra Length for 3Phase for Agriculture consumers (beyond 300meters) through underground service cable	Rs.100/meter
At location where overhead network exist and consumer desires to avail power through Underground service cable	Actual charges+15%

- 6.7.2 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 Rs. 25/metre for single phase and Rs. 50/meter for Three phase as approved under Schedule of General and Miscellaneous Charges.



7 TARIFF SCHEDULE FOR FY 2022-23

This Chapter highlights the tariff schedule.

7.1 Tariff Schedule - LT Consumers

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.

7.1.1 LT Domestic/LT-D

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<p>This schedule shall apply to private residential houses, government residential quarters, Government schools and related facilities, charitable institutions, religious institutions etc. for consumption of energy using normal domestic appliances.</p> <p>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.</p>	<p>For the premises or flats which are closed or locked for a continuous period of more than three months and having sanctioned / connected load more than 10 kW, the monthly minimum charges would be Rs 1000/-</p>	<p>Following applicability is proposed to be included: <i>"This schedule also applies to Street-lights operating within the premises of private establishments/villas"</i></p>

➤ Tariff for LT Domestic/ LT-D:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
0-100 units	Rs/Conn/ Month - Single Phase	25	1.50	25	1.40
101-200 units		25	2.25	25	2.10
201 to 300 units	Rs/Conn/ Month - Three Phase	60	2.85	60	2.65
301 to 400 units		60	3.65	60	3.45



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Above 400 units		60	4.25	60	4.00

7.1.2 Low Income Group/ LT-LIG:

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
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.	No change Proposed

➤ Tariff for LT-LIG/Low Income Group:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Consumption up to 30 Units p.m.	Rs. /Conn/ Month	50	-	40	-

7.1.3 Low Tension Commercial/ LT-C:

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of 	For the following applicability clause, "For common facilities, like Water Pumping / Street Lighting / Lifts / Fire



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Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<p>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:</p> <ul style="list-style-type: none"> • Houses with rent back facilities • Government hospitals • Professionals not covered in domestic category. • Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops; • Combined lighting and power services for Entertainment including film studios, cinemas and theatres, including multiplexes, Race-course, Meeting/Town Halls, Clubs, all types of Guest houses; • Offices including Government Offices, Commercial Establishments; • Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private hospitals, private messes, Internet / Cyber Cafes, Mobile Towers, Micro-wave 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 	<p>Agriculture Allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged commercial tariff.</p>	<p>For the following applicability clause, <i>“For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes;”</i></p> <p>EDG proposed to amend the aforementioned clause as given below: <i>“For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc.—in Commercial Complexes;”</i></p>



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Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
Charging Units, Tyre vulcanizing centres etc; <ul style="list-style-type: none"> • Banks, Telephone Exchanges, TV Station, Microwave 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 		

➤ Tariff for LT Commercial/ LT-C:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
1-100 Units	0-20 kW- Rs./Conn/Month	0-20 kW- Rs.50/Conn/Month	3.55	0-20 kW- Rs.50/Conn/Month	3.40
101-200 units			4.35		4.10
201-400 Units	Above 20kW and upto 90 kW Rs./KW/month	Above 20kW and upto 90 kW Rs. 60/KW/month	4.85	Above 20kW and upto 90 kW Rs. 55/KW/month	4.60
Above 400 units			5.25		5.00



7.1.4 Low Tension Industrial/ LT-I

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<p>This tariff shall apply to industrial units engaged in industrial activities, manufacturing process etc. It would include the following categories but not limited to:</p> <ul style="list-style-type: none"> • Flour Mills, wet grinding, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw-Mills, Power looms including other allied activities like Warping, Doubling, Twisting, etc. • Ice Factories, Ice Cream Manufacturing units/ Plants, Dairy Testing Process, Milk Dairies, Milk Processing/ Chilling Plants (Dairy) etc.; • Engineering workshops, Engineering Goods Manufacturing units, Printing Presses, Transformer repairing Workshops, Tyre retreading units, Motive Power Loads etc.; • Mining, Quarry and Stone Crushing units etc.; • Garment Manufacturing units, • LPG/ CNG Bottling plants etc.; • Sewage Water Treatment Plants/ Common Effluent Treatment Plants owned, operated and managed by Industrial Associations and situated within industrial area. • Pumping of water for public water supply, Sewage Treatment Plants, 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. 	<p>The above-mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.</p>	<p>No change Proposed</p>



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

➤ Tariff for Low Tension Industrial/ LT-I:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
0-500 Units	Rs/HP/Month	40	3.40	35	3.30
Above 500 units		40	3.95	35	3.80

7.1.5 Low Tension-Mixed/LT-P (Hotel Industries)

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
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.	No change Proposed

➤ Tariff for LTP Mixed (Hotel Industries):

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	Rs/kW/Month	50	4.95	40	4.70

7.1.6 LT 4: LT Agriculture/ LTAG/ Agriculture and other Allied Activities

a. Low Tension-Agriculture/ LT-AGP (Pump Sets/ Irrigation)



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
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.	<p>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.</p> <p>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.</p>	<p>Existing applicability clause is proposed to be amended as follows:</p> <p>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., Cane crusher and/or fodder cutter <u>and peeling of areca nut/ coconut for self-use</u> for Agricultural purposes.</p>

➤ Tariff for LT-AGP (Pump Sets/ Irrigation):

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	Rs/HP/Month	18	1.50	15	1.40



b. Low Tension-Agriculture/ LT-AGA (Allied Activities)

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<p>This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to:</p> <ul style="list-style-type: none"> • 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 LT-Agriculture (A) shall be covered under this category 	<p>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.</p> <p>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.</p>	<p>No change Proposed</p>

➤ Tariff for LT-AGA (Allied Activities):

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	Rs/HP/Month	25	1.75	20	1.70



7.1.7 Public Lighting

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<p>This schedule shall apply to public lighting systems. It would include the following categories but not limited to:</p> <ul style="list-style-type: none"> • Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/ Panchayats/ Government; • Lighting in Public Gardens; • Traffic Signals and Traffic Islands; • State Transport Bus Shelters; • Public Sanitary Conveniences; and • Public Water Fountains and such other Public Places open for general public free of charge. • Street lighting in the colony of a factory which is situated separately from the main factory. • This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments. 		<p>Following applicability clause <i>"This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments.</i></p> <p>is proposed to be amended as follows:</p> <p><i>"This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments/ villas."</i></p>

➤ Tariff for Public Lighting:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	Rs/kW/Month	70	4.20	50	4.10



7.1.8 LT (7): Hoarding & Sign Boards

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
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.		No change Proposed

➤ Tariff for Hoarding & Sign Boards:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)	Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	Rs/kVA/Month	70	10	60	9.90

7.1.9 LT (8): Low Tension Temporary Supply/ LTTS

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
This schedule shall apply to usage of electricity for all temporary purposes.	<ul style="list-style-type: none"> The Temporary connection shall be released through a proper meter. The Temporary tariff is applicable for temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provision of Supply Code Regulations notified by JERC. 	No change Proposed



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

➤ Tariff for LT Temporary Supply:

Consumption Slab	Existing Tariff (Approved in T.O. dated 30.03.21) & Proposed Tariff for FY 2022-23	
	Fixed Charges	Energy Charges
LT Temporary	<p>The 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.</p> <p>For multi activity pursuit, applicable tariff for temporary connection shall be with reference to that of commercial category for permanent supply.</p>	

7.2 Tariff Schedule – HT Consumers

High Tension/ Extra High-Tension Category - Applicable to Power Supply of Voltages at 11KV/ 33KV/ 110KV 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.

7.2.1 High Tension-Domestic/HT-D

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
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.		<p>Following applicability is proposed to be included:</p> <p><i>“This schedule also applies to Street-lights operating within the premises of private establishments/ villas”</i></p>

➤ Tariff for High Tension/Domestic:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	110	3.65	100	3.45

7.2.2 High Tension Industrial/ HT-I



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories: <ul style="list-style-type: none"> 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 		No change Proposed

➤ Tariff for HT-I:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
11/ 33 kV	Rs/kVA/Month	250	4.80	250	4.50
110 kV	Rs/kVA/Month	250	4.70	250	4.40

7.2.3 High Tension Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> 	No change Proposed

➤ Tariff Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	250	4.80	250	4.50

7.2.4 High Tension Commercial/ HT-C

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Houses with rent back facilities 	<ul style="list-style-type: none"> 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 	For the following applicability clause, "For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes;"



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> • Government hospitals • Professionals not covered in domestic category. • Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops; • Combined lighting and power services for Entertainment including film studios, cinemas and theatres, including multiplexes, Race-Course, Meeting/Town Halls, Clubs, all types of Guest houses; • Offices including Government Offices, Commercial Establishments; • Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private hospitals, private messes, Internet / Cyber Cafes, Mobile Towers, Microwave Towers, Satellite Antennas used for telecommunication activity, Telephone Booths, Fax / Xerox Shops, X-ray installations, bars and cold drink houses, Tailoring Shops, Computer Training Schools, Typing Institutes, Photo Laboratories, Photo 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 	<p>charged commercial tariff.</p>	<p>EDG proposed to amend the aforementioned clause as given below: <i>“For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc.—in Commercial Complexes;”</i></p>



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes; <ul style="list-style-type: none"> • 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 		

➤ Tariff for HT Commercial:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21) & Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	250	5.50

7.2.5 High Tension MES/Defence Establishments

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> • This schedule shall apply to supply of power for defence installation establishments, having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load. 	<ul style="list-style-type: none"> • 	No change Proposed

➤ Tariff for MES/Defense Establishments:



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	200	5.20	175	5.00

7.2.6 High Tension Agriculture / Agriculture and other Allied Activities

a. HT-Agriculture Pump Sets (A)

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> 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. 	<p>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.</p> <p>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.</p>	<p>Existing applicability clause is proposed to be amended as follows:</p> <p>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., Cane crusher and/or fodder cutter <u>and peeling of areca nut/ coconut for self-use</u> for Agricultural purposes.</p>



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

➤ Tariff for Agriculture Pump Sets:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	40	1.60	35	1.50

b. HT-Agriculture Allied Activities (B)

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to: <ul style="list-style-type: none"> 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 	<p>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.</p> <p>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.</p>	No change Proposed



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

➤ Tariff for Agriculture Allied Activities:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Total Consumption	Rs/kVA/Month	70	1.95	60	1.90

7.2.7 High Tension Temporary Supply/ HT-HTTS

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> This schedule shall apply to usage of electricity for all temporary purposes. 	<ul style="list-style-type: none"> The temporary connection shall be released through a proper meter 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. 	No change Proposed

➤ Tariff for HT Temporary Supply:

Consumption Slab	Existing Tariff (Approved in T.O. dated 30.03.21) & Proposed Tariff for FY 2022-23	
	Fixed Charges	Energy Charges
HT Temporary	<p>The 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.</p> <p>For multi activity pursuit, applicable tariff for temporary connection shall be with reference to that of commercial category for permanent supply.</p>	

7.2.8 High Tension Single Point Supply/ HT SPS



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> • 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. • 	<ul style="list-style-type: none"> • 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: <ol style="list-style-type: none"> 1. All LT consumer mix area 2. All HT consumer mix area 3. HT+LT consumer mix area • • The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories. • 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. • The SPS arrangement would be applicable for the application received from a Residential complex / Association of Persons (AOP) / Developer of the complex or any other such similar person. • 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. • 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. • 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 	<p>No change Proposed</p>



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
	<p>Department, if any. The network within the complex will need to be certified by the Chief Electrical Inspector.</p> <ul style="list-style-type: none"> • 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%. • Individual Domestic HT consumers in a residential complex that opt for SPS shall need to apply separately under HT Domestic category. • The SPS applicant shall not charge tariff to the downstream consumers higher than stipulated. • 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: 	



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
	<ul style="list-style-type: none"> • 5% on the overall billed amount in all cases of LT and HT consumers • Any other loss would be to the account of the applicant. • For CC and IC applicant, any LT / HT Consumer in the area should have minimum 80% predominant 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. • 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. 	

➤ Tariff for HT Single Point Supply:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21)		Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kVAh)	Fixed Charges	Energy Charges (Rs. / kVAh)
Residential Complex	Rs/kVA/ Month or part thereof	110	3.55	100	3.45
Commercial Complex	Rs/kVA/ Month or part thereof	220	4.80	200	4.60
Industrial Complex	Rs/kVA/ Month or part thereof	220	4.40	200	4.20



Petition for APR for FY 2021-22, MYT ARR for the Control period FY 2022-23 to FY 2024-25 and Tariff Determination Proposal for FY 2022-23.

Electric Vehicle Charging Station

Existing Applicability Clause	Point of Supply/Notes	Proposed Applicability Clause
<ul style="list-style-type: none"> 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) 	•	No change Proposed

➤ Tariff EV Charging Station:

Consumption Slab	Basis of Fixed charge	Existing Tariff (Approved in T.O. dated 30.03.21) & Proposed Tariff for FY 2022-23	
		Fixed Charges	Energy Charges (Rs. / kWh)
Total Consumption	NA	-	3.50



8 REVENUE FROM SALE OF POWER AT PROPOSED TARIFF

8.1.1 For the FY 2022-23, the Government of Goa has decided to keep the same tariff for consumers as is being levied on them currently. **Accordingly, for the benefit of the consumers and to fully revive the industry in the area, EDG proposes reduction in current Tariff i.e. reduction from existing Commission approved Tariff of FY 2021-22 to Commission approved Tariff of FY 2019-20 and implementation of kVAh based tariff for HT/EHT Categories.**

8.1.2 The Revenue from sale of power at proposed (reduction) tariff rates by ED-Goa for MYT control period is outlined below. The detailed proposed tariff structure has been discussed in the Tariff philosophy chapter. The detailed computation has been provided in Format F 23 of the MYT Tariff Formats. Further, for computation of revenue for the MYT period, the proposed tariff rates for FY 2022-23 have also been considered as existing rates for FY 2023-24 & FY 2024-25.

Table 8-1: Revenue from Sale of Power at Proposed Tariff from FY 2022-23 to FY 2024-25 (Rs. Cr.)

Sl. No.	Category	FY 2022-23		FY 2023-24		FY 2024-25	
		Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)
1	Domestic						
	11 kV Voltage Level						
	Tariff HTD/Domestic	0.43	0.21	0.45	0.22	0.47	0.23
	Tariff-HTTS/Temporary Supply (HT Domestic)	3.51	3.05	3.69	3.20	3.87	3.36
	LT Voltage Level						
	Tariff LTD/Domestic and Non-Commercial	1325.53	332.38	1379.16	345.37	1434.96	358.88
	0-100 units	508.38		528.95	0.00	550.35	0.00
	101-200 units	320.26		333.22	0.00	346.70	0.00
	201 to 300 units	174.32		181.37	0.00	188.71	0.00
	301 to 400 units	96.92		100.84	0.00	104.92	0.00
	Above 400 units	225.65		234.78	0.00	244.28	0.00
	Tariff LTD/Low Income Group	1.27	0.04	1.27	0.04	1.27	0.04
				0.00	0.00	0.00	0.00
	Tariff-LT/Temporary Domestic	0.69	0.19	0.69	0.19	0.69	0.19
	0-100 Units	0.69	0.19	0.69	0.19	0.69	0.19
	101 to 200 Units	0.00					
	201 to 300 Units	0.00					
	301 to 400 Units	0.00					
	Above 400 Units	0.00					



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Sl. No.	Category	FY 2022-23		FY 2023-24		FY 2024-25	
		Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)
	Sub-Total	1331.43	335.87	1385.25	349.03	1441.26	362.71
2	Commercial						
	33 kV & 11 kV Voltage Level						
	Tariff HT-Commercial	116.74	105.91	122.58	111.20	128.71	116.76
	33 kV Voltage Level						
	Tariff HT-Commercial						
	11 kV Voltage Level						
	Tariff HT-Commercial						
	Tariff-HTTS/Temporary Supply (HT Commercial)						
	LT Voltage Level						
	Tariff-LTC/Commercial	436.59	213.29	448.26	219.06	460.24	225.00
	<i>0-20 KW/Commercial Consumers</i>						
	<i>1-100 Units</i>	72.87	28.60	74.82	29.33	76.82	30.09
	<i>101-200 units</i>	42.59	18.30	43.73	18.79	44.90	19.28
	<i>201-400 Units</i>	50.72	24.01	52.08	24.65	53.47	25.30
	<i>Above 400 units</i>	159.46	80.43	163.72	82.58	168.10	84.78
	<i>>20-90Kw Commercial Consumers</i>			0.00	0.00	0.00	0.00
	<i>1-100 Units</i>	3.52	2.22	3.61	2.29	3.71	2.37
	<i>101-200 units</i>	3.34	1.71	3.43	1.76	3.52	1.81
	<i>201-400 Units</i>	6.29	3.52	6.46	3.62	6.63	3.73
	<i>Above 400 units</i>	97.80	54.50	100.42	56.04	103.10	57.64
	Tariff-LT/Temporary Commercial	9.08	4.79	9.08	4.79	9.08	4.79
	<i>0-20 KW/Commercial Consumers</i>						
	<i>0-100 Units</i>	9.08	4.79	9.08	4.79	9.08	4.79
	<i>101 - 200 Units</i>		0.00				
	<i>201 - 400 Units</i>		0.00				
	<i>Above 400 Units</i>		0.00				
	<i>>20-90 KW and above Commercial Consumers</i>						
	<i>0 - 100 units</i>		0.00				
	<i>101 - 200 units</i>		0.00				
	<i>201-400 units</i>		0.00				
	<i>Above 400 units</i>		0.00				
	Sub-Total	562.42	323.98	579.92	335.05	598.03	346.55
3	Public Lighting						
	LT Voltage Level						



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Sl. No.	Category	FY 2022-23		FY 2023-24		FY 2024-25	
		Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)
	Tariff-LTPL/Public Lighting	50.41	21.40	52.93	22.47	55.58	23.59
4	Agricultural Pumpsets						
	HT Voltage Level (33 kV & 11 kV)						
	HT-Agriculture						
	<i>Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)</i>	5.30	1.82	5.30	1.83	5.30	1.84
	<i>Tariff-HTAG/Agriculture (Allied Activities) (B)</i>	9.36	1.97	9.82	2.06	10.32	2.15
	HT Voltage Level (33 kV)						
	HT-Agriculture						
	<i>Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)</i>						
	<i>Tariff-HTAG/Agriculture (Allied Activities) (B)</i>						
	HT Voltage Level (11 kV)						
	HT-Agriculture						
	<i>Tariff-HTAG/Agriculture (Pump Sets/Irrigation) (A)</i>						
	<i>Tariff-HTAG/Agriculture (Allied Activities) (B)</i>						
	LT Voltage Level						
	LT-Agriculture						
	<i>Tariff-LTAG/Agriculture (Pump Sets/Irrigation) (A)</i>	17	3.29	17.71	3.39	18.18	3.49
	<i>Tariff-LTAG/Agriculture Allied (B)</i>	1	0.22	0.99	0.23	0.99	0.23
	Sub-Total	32.90	7.30	33.83	7.50	34.79	7.71
5	Small Power						
	LT Voltage Level						
	LTI-Industry	81	36	80.91	36.07	80.91	36.09
	<i>0-500 Units</i>	17	8.29	16.54	8.30	16.54	8.32
	<i>Above 500 units</i>	64	27.75	64.37	27.76	64.37	27.78
	Tariff-LTP/Mixed (Hotel Industries)	4	2.21	4.48	2.21	4.48	2.21
	Sub-Total	85.38	38.25	85.38	38.28	85.38	38.31
6	Medium Supply 11kV, Large Supply 33 kV & Bulk Supply 110 kV						
	33 kV / 11 kV & 110 kV Voltage Level						
	Tariff HTI/Industrial	1483	963.35	1512.88	982.19	1543.01	1001.41



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Sl. No.	Category	FY 2022-23		FY 2023-24		FY 2024-25	
		Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)
	33 kV/11kV	1228	811.26	1252.69	827.12	1277.63	843.29
	110kV	255	152.08	260.19	155.07	265.37	158.11
	H.T. Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)	507	290.44	530.35	302.62	554.97	315.37
	H.T. MES/Defence Establishments	28	16.70	27.86	16.79	27.86	16.89
	Sub-Total	2018.04	1270.49	2071.10	1301.61	2125.84	1333.67
6	Medium Supply						
	11 kV Voltage Level						
	Tariff HTI/Industrial (Connected at 11 kV)						
	H.T.Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)						
	H.T. MES/Defence Establishments						
	Sub-Total						
7	Large Supply						
	33 kV Voltage Level						
	Tariff HTI/Industrial (Connected at 33 kV)						
	H.T. Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive)						
	H.T. MES/Defence Establishments						
	Sub-Total						
8	Bulk Supply						
	110 kV Voltage Level						
	Tariff HTI/Industrial (Connected at 110 kV)						
	33 kV Voltage Level						
	Single Point Supply	5.55	3.53	5.60	3.55	5.65	3.57
	Residential Complexes		0.00	0.00	0.00	0.00	0.00
	Commercial Complexes	5.55	3.53	5.60	3.55	5.65	3.57
	Industrial Complexes		0.00	0.00	0.00	0.00	0.00
	Sub-Total	5.55	3.53	5.60	3.55	5.65	3.57
9	Other Categories						
	33 kV Voltage Level						
	Electric Vehicle Charging Station						
	11 kV Voltage Level						
	Tariff-LT Hoarding and Sign Board	0	0.20	0.16	0.20	0.16	0.20



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Sl. No.	Category	FY 2022-23		FY 2023-24		FY 2024-25	
		Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)	Sales in MU	Total Revenue (Rs. Crs)
	Electric Vehicle Charging Station						
	Grand Total	4086.29	2001.02	4214.18	2057.69	4346.69	2116.30

8.1.3 EDG prays and requests the Hon`ble Commission to approve the reduction in the consumer tariff proposed for FY 2022-23.

8.1.4 Based on the aggregate revenue requirement and revenue calculation based on the existing tariff, the revenue gap/ (surplus) for the control period has been computed. The revenue gap for FY 2022-23 is as shown in the table below:

Table 8-2: Revenue Gap for FY 2022-23 (Rs. Cr.)

Particulars	FY 2022-23
Net Revenue Requirement	2,361.15
Revenue from Sale of Power at existing Tariff	2,109.47
Revenue from Sale of Power at proposed Tariff	2,001.02
Revenue Gap during the Year (at proposed Tariff)	360.13

Table 8-3: Revenue Gap for FY 2022-23, FY 2023-24 & FY 2024-25 (Rs. Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Net Revenue Requirement	2,361.15	2,571.38	2,767.86
Revenue from Sale of Power	2,001.02	2,057.69	2,116.30
Revenue Gap during the Year	360.13	513.70	651.56

8.1.5 In view of above, the Hon`ble Commission is requested to kindly approve the revenue gap for FY 2022-23 at proposed tariff. Further, EDG submits that the total gap for FY 2022-23 will be recovered by Government of Goa by providing budgetary support for the same.



9 PROPOSAL TO MEET ARR AND REVENUE GAP OF FY 2022-23

9.1 Cumulative Revenue Gap till FY 2022-23

9.1.1 EDG would like to submit before Hon`ble Commission that due to the COVID-19 pandemic, in order to boost the economic activity in the State, Government of Goa vide Cabinet decision attached at **Annexure-2** taken in the Cabinet Meeting of the Council of Ministers held on 25/08/2021, has approved the following:

The Council of Ministers resolved to keep the Tariff Order for FY 2021-22 in abeyance for the period from 1st April, 2021 till 31st March, 2022 (12 months) except for levy of Tariff of Rs.3.50/Unit as per Tariff Order for FY 2021-22 to Consumer Category “Electric Vehicle Charging Station” and implementation of kVAh based tariff for HT/EHT Categories and to grant of subsidy to all categories of Consumers to nullify the impact of hike in Tariff Order for FY 2021-22 issued vide Petition No: 39/2020 by the joint Electricity Regulatory Commission for the State of Goa and Union Territories.

9.1.2 Post issuance of above-mentioned order by the Government of Goa, the Electricity Department, in FY 2021-22 has been levying the Tariff approved by JERC for FY 2019-20 on all consumers except for EV Charging Stations, and implementation of kVAh based tariff for HT/EHT Categories. The difference in the revenue was considered as subsidy from the Government to each category of consumer during FY 2021-22, in addition, any revenue gap remaining for the year would be met entirely through budgetary support from the Government of Goa.

9.1.3 It is submitted that the revenue gap for past years i.e. from FY 2017-18 to FY 2019-20 is not being claimed as the audited accounts for the said Financial Years are in process of audit by CAG. The same would be claimed once financial statements are audited and separate True-up petition would be filed before JERC. The said revenue gap after True-up shall be met entirely through budgetary support from the Government of Goa. \

9.1.4 Therefore, the revenue gap carried forward as per the APR submitted in this petition is NIL. In view of this, cumulative Revenue gap after proposed tariff, to be claimed in FY 2022-23 is as shown below.

Table 9-1: Cumulative Revenue gap to be claimed in FY 2022-23 (Rs. Cr.)

Particulars	APR	Ensuing Year
	FY 2021-22	FY 2022-23
Net ARR	2,201.01	2,361.15
Revenue from Existing Tariff	2,037.14	2,109.47



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Particulars	APR	Ensuing Year
	FY 2021-22	FY 2022-23
Revenue Gap for the Year (at existing tariff)	164.87	251.69
Opening Balance of Gap	0.00	0.00
Total Cumulative Gap for years	164.87	251.69
Less: Budgetary Support commitment provided	164.87	-
Balance Gap to be recovered	0.00	0.00
Proposed Gap Recovery		251.69
Proposed Tariff Reduction from last year		-108.44
Budgetary Support required from Government of Goa to meet balance Revenue Gap		360.13

9.1.5 EDG submits that it proposes to recover the cumulative Revenue Gap till FY 2022-23 through budgetary support from the Government of Goa.



10 SEGREGATION OF WHEELING AND SUPPLY BUSINESS

10.1 Allocation Policy

10.1.1 EDG submits the bifurcation of all expenses of FY 2021-22 between the functions of wheeling business (wire business) and retail supply business based on the regulation 49 of the MYT Regulations, 2021. The summary of the allocation statement and the segregation of ARR into wheeling and retail supply business for FY 2022-23 is given in the table below:

Table 10-1: Allocation Statement Wheeling and Retail Supply for FY 2022-23 (Rs. Cr.)

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



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

10.1.2 The Hon'ble Commission is requested to approve the segregation of ARR into Wheeling & Retail Supply Business for FY 2022-23 as per above table.



11 DETERMINATION OF CHARGES RELATED TO OPEN ACCESS

11.1 Approach for computation of open access charges

11.1.1 EDG submits that as per Regulation 68.2 and 68.3 of JERC MYT Regulations, 2021 category wise cost of supply needs to be computed for facilitating determination of tariff and for gradual reduction of cross subsidy. Cost of supply study also facilitates determination of cross subsidy surcharge. However, the cost of supply methodology suggested by APTEL is based on voltage wise segregation.

11.1.2 In absence of relevant data for computation of open access charges, EDG requests Hon'ble Commission to consider the same methodology and approach as approved in Tariff Order FY 2021-22 dated 30th March 2021.

11.1.3 Accordingly, EDG has computed open access charges considering the following wheeling losses for HT & EHT and allocation % for wheeling cost between HT & LT as approved in Tariff Order FY 2022-23.

11.1.3.1 Wheeling Loss at HT & EHT Level - 3.55% (balance losses attributable to LT Level)

11.2 Computation of Wheeling Charge and losses

11.2.1 In line with methodology, adopted by Hon'ble Commission in previous tariff orders for FY 2020-21 & FY 2021-22 and based on above mentioned projections for Sales & Wheeling ARR for FY 2022-23, EDG has calculated wheeling charges for LT and HT/EHT level. Following methodology has been adopted:

- (a) O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level based on number of consumers.
- (b) All expenses other than the O&M expenses are allocated to each voltage level based on voltage wise asset allocation.
- (c) The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.

11.2.2 EDG submits that parameters assumed for allocation of wheeling cost at LT and HT/EHT level are tabulated below:



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Table 11-1: Parameters assumed for allocation of Wheeling Cost

Input	Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage Wise Losses (%)	Energy Input (MU)
Low Tension (LT) Level	679509	60%	1927.36	16.55%	2309.50
High Tension (HT)/ Extra High Tension (EHT)Level	1190	40%	2158.94	3.55%	2238.40
Total	680699	100%	4086.29	10.15%	4547.90

11.2.3 Based on above assumption of parameters, the wheeling charge at LT and HT/EHT level has been determined as shown below.

Table 11-2: Allocation of Wheeling Cost based on voltage Level for FY 2022-23

Input	O&M expenses (Rs.Cr.)	Other Expenses (Rs.Cr.)	Total Expenses (Rs.Cr.)	Sales (MU)
Low Tension (LT) Level	223.00	117.01	417.68	1927.36
High Tension (HT)/ Extra High Tension (EHT)Level	0.39	78.01	0.73	2158.94
Total	223.39	195.02	418.41	4086.29

Table 11-3: Computation of Wheeling Charge for FY 2022-23

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

11.2.4 Therefore, EDG requests the Hon'ble Commission to approve wheeling charge for HT/EHT and LT category as computed in the above tables

11.3 Computation of Additional Surcharge for FY 2022-23

11.3.1 The Hon'ble 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. The Regulation 4.5 (1) of the said



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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”

11.3.2 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.]”

11.3.3 In line with above regulations, EDG has determined the Additional Surcharge as per the following:

Table 11-4: Additional Surcharge for FY 2022-23

Category	FY 2022-23
Total Power Purchase Cost for FY 2021-22 (Rs. Cr)	1,615.79
Fixed Cost Component in Power Purchase Cost (excluding transmission charges) (Rs. Cr)	422.80
Energy Sales (MU)	4086.29
Additional Surcharge (INR/kWh)	1.03

11.3.4 EDG request Hon’ble Commission to approve additional surcharge for FY 2022-23 as computed in the above table.



11.4 Computation of Cross Subsidy Surcharge for FY 2022-23

11.4.1 The National Electricity Policy as stipulated by the Central Government provides that –Under sub – section (2) of Section 42 of the Act, a surcharge is to be levied by the respective State Commissions on consumers switching to alternate supplies under open access. This is to compensate the host distribution licensee serving such consumers who are permitted Open Access under Section 42 (2), for loss of cross subsidy element built into the tariff of such consumers. An additional surcharge may also be levied under sub – section (4) of section 42 of the said Act for meeting the fixed cost of the distribution licensee arising out of obligation to supply in cases where consumers are allowed open access.

11.4.2 The Government of India has notified the National Tariff Policy, 2016 on 28th January 2016. The Cross-Subsidy surcharge is based on the following formula given in the Tariff Policy, 2016 which is as follows:

$$S = T - [C / (1 - L/100) + D + R]$$

Where,

S is the surcharge

T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation;

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation;

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

R is the per unit cost of carrying regulatory assets.”

11.4.3 However, calculation of Cross subsidy surcharge is calculated in this chapter as per methodology adopted by Hon’ble Commission in the previous tariff orders for FY 2020-21 and FY 2021-22.

11.4.4 Voltage wise losses for HT/EHT is considered at 3.55%. In order to maintain the Intra-State T&D losses at 10.15% for FY 2022-23, losses at LT level has been computed. Accordingly, voltage wise losses considered for the calculation of Cross-subsidy Surcharge for FY 2022-23 is provided as below:



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Table 11-5: Voltage wise losses assumed for FY 2022-23

Category	Voltage Level Losses (%)	Cumulative Loss upto that voltage level (%)
Low Tension (LT) Level	13.63%	16.55%
High Tension (HT)/ Extra High Tension (EHT)Level	3.55%	3.55%
Total	10.15%	10.15%

11.4.5 Based on the Voltage wise energy sales projected for FY 2022-23, voltage level wise energy input is calculated as given below:

Table 11-6: Voltage wise Energy Input for FY 2021-22

Category	Sales (MU)	Cumulative Loss upto that voltage level (%)	Energy Input (MU)
Low Tension (LT) Level	1927.36	16.55%	2309.50
High Tension (HT)/ Extra High Tension (EHT)Level	2158.94	3.55%	2238.40
Total	4086.29	10.15%	4547.90

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

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

- The fixed cost of power purchase is assigned to each voltage level based on the energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level based on the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated between HT/EHT and LT level based on the input energy, as the HT/EHT network is utilized by both LT and HT/EHT network consumers.
- The remaining fixed costs are allocated based on the voltage wise asset allocation assumed earlier and further allocated to respective voltage levels based on input energy.



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Table 11-7 : Parameters used for allocation of fixed costs for FY 2022-23

Category	Energy Input (MU)	Voltage Wise Allocation (%)	Number of Consumers
Low Tension (LT) Level	2309.50	60%	679509
High Tension (HT)/ Extra High Tension (EHT)Level	2238.40	40%	1190
Total	4547.90	100%	680699

11.4.8 The Variable component of the Power purchase cost is allocated based on the energy input.

11.4.9 The Voltage wise cost of supply (VCoS) is then calculated based on the energy sales of respective categories. Accordingly, the VCoS is determined as shown in the table below:

Table 11-8: Voltage Wise Cost of Supply (VCoS) for FY 2022-23

Category	Allocated Fixed Cost (Rs.Cr.)	Allocated Variable Cost (Rs.Cr.)	Total Cost (Rs.Cr.)	Energy Sales (MU)	VCoS (Rs./kWh)
Low Tension (LT) Level	803.02	583.75	1386.77	1927.36	7.20
High Tension (HT)/ Extra High Tension (EHT)Level	320.50	609.14	929.64	2158.94	4.31
Total	1123.52	1237.63	2361.15	4086.29	

11.4.10 As per above VCoS calculated and applicable level wise ABR level, EDG has computed the Cross-Subsidy Surcharge for FY 2022-23 as provided in the table give below:

Table 11-9: Cross-Subsidy Surcharge for FY 2022-23

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

11.4.11 Therefore, EDG requests the Hon'ble Commission to approve the cross-subsidy surcharge for FY 2022-23 as computed in the above tables.



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12 COMPLIANCE OF DIRECTIVES GIVEN BY HON'BLE COMMISSION

EDG submits that the Hon'ble Commission in its Tariff Order for FY 2021-22 dated 30th March 2021 had laid down certain directives to be complied by EDG. The directives as provided by the Hon'ble Commission and the status of the said directives are replied as below:

12.1 Status of Compliance of Directives issued in tariff order dated 30th March 2021

S. No.	Directives in brief	Commission`s Direction in the Tariff Order for FY 2021-22 dated 30 th March 2021	Compliance by the Electricity Department, Goa
1.	Annual Statement of Accounts	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.	<ul style="list-style-type: none"> The CAG audit process for Financial Accounts of FY 2017-18 is under process. The Financial Accounts of FY 2018-19 and FY 2019-20 are submitted to CAG and is due for Audit. Financial Accounts for FY 2020-21 are under progress and the same will be completed by 31th December 2021. Upon completion, the same will be submitted to CAG for audit purposes.
2.	Preparation of Fixed Asset Register	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.	<ul style="list-style-type: none"> Collection of Information for the Assets for FY 2020-21 is under progress and the same shall be submitted on 31th December 2021.
3.	Energy Audit Reports	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.	<ul style="list-style-type: none"> Department has started process of energy audit. However, at this point of time because of 100% DT metering is not done and we are unable to ascertain the losses of feeder-wise.



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S. No.	Directives in brief	Commission`s Direction in the Tariff Order for FY 2021-22 dated 30 th March 2021	Compliance by the Electricity Department, Goa
			<ul style="list-style-type: none"> • However, on the broader level we are able to measure losses based on the Power delivered during the April 2019 to March 2020 and respective energy recorded billed in May 2019 to April 2020 at each Feeder level, Sub-Division level and Division level are listed out the attached Annexure-3. • The proposal for the procurement of non-working CT's, PT's and meters was kept on hold due to financial constraint resulted from the recent Pandemic but it is now being processed and all non-working CTs, PTs, and meters shall be installed by May 2022. Further after installation of above required equipments, Energy Audit will be conducted by September 2022.
4.	Employee Cost / Manpower study	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 submit the same along with the next quarterly progress report without further delay.	<ul style="list-style-type: none"> • ED-Goa has done the Manpower Analysis at all the divisional level. The Details of the same was submitted in the 1st quarter directives. However, in this regard, some clarifications were sought by Hon'ble JERC and the ED-Goa has prepared a detailed Manpower Analysis, which is attached herewith as Annexure-4.
5.	Interest on Consumer Security Deposit	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.	<ul style="list-style-type: none"> • ED-Goa submits payment towards consumer's security deposit for FY 2020-21 is in the process of disbursement and the same shall be completed by March 2022 along with the arrears if any.



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S. No.	Directives in brief	Commission`s Direction in the Tariff Order for FY 2021-22 dated 30 th March 2021	Compliance by the Electricity Department, Goa
6.	Sub Divisions as Strategic Business Units	<p>The Commission is yet to receive the above compiled data for Strategic Business Unit for Sub-Division of Division –VII Curchorem and Division XIV Verna. The Petitioner is directed to submit the same within one month of the issuance of this Order.</p> <p>Further an overall strategic plan to implement the same in the entire area/ all subdivisions of Petitioner`s serving area.</p>	<ul style="list-style-type: none"> Collection of Data for Strategic Business Unit for Sub-Division of Division 6 is completed. The same is being submitted to the Hon`ble Commission along with this Tariff petition in the Annexure-5. The Collection of data for Sub-Division of 4 & 17 are under progress.
7.	Installation of Pre Paid Meters	<p>The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report.</p>	<ul style="list-style-type: none"> Administrative approval from the Government has been obtained for installation of 7 Lakhs Prepaid SMART meters on Totax mode. The project will be tendered after the receipt of the standard bidding document from REC as the project is proposed to be funded under the Revamped Distribution Sector Scheme.
8.	Unbundling of Electricity Department	<p>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.</p>	<ul style="list-style-type: none"> The Matter has been discussed with the Government of Goa and the Government decision is to continue as Department.
9.	Renewable Purchase Obligation	<p>The Commission reiterates its directive to the Petitioner that it must continue its efforts towards fulfilment of RPO and ensure yearly obligation is fulfilled.</p>	<ul style="list-style-type: none"> ED-Goa has fulfilled 50% of the total RPO Obligation for FY 2021-22 and making continuous efforts to fulfil the RPO Target for FY 2021-22.
10.	Billing and Collection Efficiency	<p>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. The Government of Goa has approved one-time</p>	<ul style="list-style-type: none"> The Report on OTS scheme is already submitted.



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S. No.	Directives in brief	Commission`s Direction in the Tariff Order for FY 2021-22 dated 30 th March 2021	Compliance by the Electricity Department, Goa
		Settlement scheme. The notification for registration by the consumers under this scheme shall be issued during 1st Dec 2020 to 31st Dec 2020. The Commission directs the Petitioner to submit a detailed status report along with the next quarterly progress report.	
11.	Determination of Category wise/ Voltage wise Cost of supply	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.	<ul style="list-style-type: none"> • GIS Mapping for 11kV/33kV assets are under progress. It shall be completed once the energy audit and the same is expected to be completed by November 2022.
12.	Submission of Petition for True up of FY 2015-16, FY 2016-17, FY 2017-18 and FY 2018-19 and APR of FY 2019-20	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.	<ul style="list-style-type: none"> • The CAG audit process for Financial Accounts of FY 2017-18 is under process. • The Financial Accounts of FY 2018-19 and FY 2019-20 are submitted to CAG and is due for Audit. • Financial Accounts for FY 2020-21 are under progress and the same will be completed by 31th December 2021. Further completion the same will be submitted to CAG for audit purposes. • The True-up petition for FY 2017-18, FY 2018-19 and FY 2019-20 will be submitted separately once the accounts are audited by CAG.
13.	Collection of data based on consumer type	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	<ul style="list-style-type: none"> • The requisite data has been collected from all the sub-division and division level. The sub division/division personnel has performed physical survey for identification of Hotel Industries, Govt./Private



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S. No.	Directives in brief	Commission`s Direction in the Tariff Order for FY 2021-22 dated 30 th March 2021	Compliance by the Electricity Department, Goa
		Industries, Govt./Private educational institutions, Govt./Private hospitals etc. within the existing categories and submit the requisite information along with the next quarterly progress report.	educational institutions, Govt./Private hospitals etc category of consumers and respective details were flagged and updated in SAP database. Accordingly, the requisite details are summarised and submitted as Annexure-6.



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12.2 New Directives issues in Tariff Order for FY 2021-22:

S. No.	Directives in brief	Commission`s Direction	Compliance by the Electricity Department, Goa
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.	<ul style="list-style-type: none"> ED-Goa is in the process of installing smart meters and the Proof of Concept (PoC) for the Smart Meter has also been carried out successfully. The kVAh based billing will be carried out for LT Commercial and LT Industrial after installation of the Smart Meters.



13 PRAYER'S TO THE COMMISSION

13.1 Prayer to the Hon'ble Commission

13.1.1 The Electricity Department, Government of Goa (EDG) respectfully prays to the Hon'ble Commission to:

- (a) Accept and admit the petition for APR of FY 2021-22 as per MYT Tariff Regulations 2018, Aggregate Revenue Requirement FY 2022-23, FY 2023-24 & FY 2024-25 and Tariff Determination for FY 2022-23 which is in line with the principles laid by the Hon'ble Commission contained in MYT Tariff Regulations 2021;
- (b) Approve the total recovery and revenue gap for Annual Performance Review for FY 2021-22 and ARR & Tariff for FY 2022-23 and other claims as proposed by EDG;
- (c) Approve the Revenue Gap for FY 2021-22 of Rs. 164.87 Cr. as per APR and standalone Revenue Gap considering revenue from proposed tariff amounting to Rs. 360.13 Cr. for FY 2022-23 on provisional basis and the revenue gap as may be approved by the Hon'ble Commission during the process of finalising tariff petition;
- (d) To consider the Tariff Design Philosophy and grant approval for proposed changes in Tariff Schedule (changes in applicability clauses), charges for services, miscellaneous charges and general terms & condition of the tariff order for FY 2022-23;
- (e) Approve the revenue at proposed tariff for FY 2022-23 and the gap of Rs. 360.13 Cr. till FY 2022-23. The revenue gap of Rs. 360.13 Cr. is proposed to be met from the budgetary support by the Government of Goa. The letter for the Budgetary Support shall be submitted after issuance of the same by Government of Goa;
- (f) Pass suitable orders with respect to APR for FY 2021-22 and ARR for FY 2022-23, FY 2023-24 and FY 2024-25 & Tariff Determination Proposal for 2022-23 for the expenses to be incurred by EDG for serving its consumers;
- (g) Grant any other relief as the Hon'ble Commission may consider appropriate;
- (h) The petitioner craves leave of the Hon'ble Commission to allow further submission, addition and alteration to this petition as may be necessary from time to time;
- (i) Condone any inadvertent omissions/errors/shortcomings and permit EDG to add/change/ modify/ alter this filing and make further submissions as may be required at a future date;
- (j) To pass any other Order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

13.1.2 The Petitioner declares that the subject matter of the petition has not been raised by



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the petitioner before any other competent forum, and that no other competent forum is currently seized of the matter or has passed any order in relation thereto.

14 ANNEXURES.

14.1 Annexure 1: Tariff Formats

14.2 Annexure 2: Cabinet Decision

14.3 Annexure 3: Directives- Energy Audit Report

14.4 Annexure 4: Directives-Manpower Details

14.5 Annexure 5: Directives-Collection of Data based on Consumer Type

14.6 Annexure 6: Directives-Strategic Business Unit