TARIFF ORDER

True-up for the FY 2017-18, FY 2018-19 and FY 2019-20

Petition No. 85/2022

For

Electricity Department, Government of Goa (EDG)

28th March 2023

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

Abbreviation	Full Form
A&G	Administration & General
ABR	Average Billing Rate
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
Ckt. Km	Circuit Kilometer
COD	Commercial Operation Date
Commission/JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
Cr	Crore
DELP	Domestic Efficient Lightening Program
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
EDG	Electricity Department, Govt. of Goa
ED	Electricity Duty
EDF	Electricity Development Fund
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FAR	Fixed Asset Register
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
GGPP	Gandhar Gas based Power Plant
HP	Horse Power
HT	High Tension
IEX	Indian Energy Exchange Limited
INR	Indian Rupee
IPDS	Integrated Power Development Scheme

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

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

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Smt. Jyoti Prasad, Member (Law)

Petition No. 85/2022

In the matter of

Approval for the True-up of FY 2017-18, FY 2018-19 and FY 2019-20

And in the matter of

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

ORDER

1) This Order is passed in respect of a Petition filed by the Electricity Department, Government of Goa (EDG) (herein after referred to as "The Petitioner" or "EDG" or "The Licensee") for the approval of True-up of FY 2017-18, FY 2018-19 and FY 2019-20 before the Joint Electricity Regulatory Commission (hereinafter referred to as "The Commission" or "JERC").

2) The Commission scrutinized the said Petition and generally found it in order. The Commission admitted the Petition on 10th October 2022. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/comments/views and objections were invited from the Stakeholders and Electricity Consumers. The virtual Public Hearing was held on 22nd November 2022 and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) The Commission based on the Petitioner's submission, relevant JERC MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the True-up of FY 2017-18, FY 2018-19 and FY 2019-20.

4) A summary has been provided as follows:

   (a) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2017-18:

Secretary (I/c), JERC
(For Goa and UTs)

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2017-18 (In INR Cr)

S. No	Particulars	Petitioner's submission	Now Approved
1	Net Revenue Requirement	1782.05	1698.10
2	Revenue from Retail Sales including FPPCA	1739.44	1739.44
3	**Net Gap /(Surplus)**	**42.61**	**(41.34)**

(b) The Petitioner has submitted the letter dated 23rd December 2016 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2017-18. However, instead of gap, the Commission has arrived at revenue surplus at the end of FY 2017-18 and the same has been carried forward in the future years.

(c) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2018-19:

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2018-19 (In INR Cr)

S. No	Particulars	Petitioner's submission	Now Approved
1	Net Revenue Requirement	1999.35	1855.30
2	Revenue from Retail Sales including FPPCA	1746.23	1746.23
3	**Net Gap /(Surplus)**	**253.14**	**109.07**

(d) The Commission, in the True-up of FY 2018-19 approves a standalone gap of INR 109.07 Cr. Further, the Commission approved the standalone surplus of INR 41.34 Cr. n the true of 2017-18, which has been proposed to be carried forward to the FY 2018-19. Accordingly, the Commission has arrived at cumulative revenue gap as shown in following table:

S. No	Particulars	2017-18	2018-19
1	Opening Gap/(Surplus)	-	(42.99)
2	Addition of Gap/(Surplus)	(41.34)	109.07
3	Closing Gap/(Surplus)	(41.34)	66.08
4	Average Gap/(Surplus)	(20.67)	11.54
5	Rate of Interest	8%	8%
6	Carrying Cost	(1.65)	0.92
7	**Gross Closing Gap /(Surplus)**	(42.99)	67.00

(e) Further, the Petitioner has submitted the letter dated 14th December 2017 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2018-19. Accordingly, no revenue gap is carried forward in the future years.

(f) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission in the True-up of FY 2019-20:

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (In INR Cr)

S. No	Particulars	Petitioner's submission	Now Approved
1	Net Revenue Requirement	2149.59	2023.05
2	Revenue from Retail Sales including FPPCA	1734.95	1734.96
3	**Net Gap /(Surplus)**	**414.65**	**288.09**

(g) The Petitioner has submitted the letter dated 29th November 2018 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the

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deficit at the existing tariff for the FY 2019-20. Accordingly, no revenue gap is carried forward in the future years.

5) The attached documents giving detailed reasons, grounds and conditions are the integral part of this Order.

6) Ordered Accordingly.

Sd/-

(Jyoti Prasad)

Member (Law)

Place: Gurugram
Date: 28th March 2023

Certified Copy

(S.D. Sharma)

Secretary (I/c), JERC

1. Chapter 1: Introduction

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

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

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

1.2. About Goa

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

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

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

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

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

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

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

1.4. Multi-Year Distribution Tariff Regulations, 2014

The Petitioner has filed the petition for the true-up of FY 2017-18 and FY 2018-19 which shall be done in accordance with the JERC MYT Regulations 2014. The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as 'JERC MYT Regulations, 2014') on 30th June 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10th August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi-Year Tariff Regulations, 2018

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

1.6. Filing and Admission of the Present Petition

EDG submitted the current Petition for approval of 'True-up of the FY 2017-18, FY 2018-19 and FY 2019-20 vide Letter No. 120/03/MYT22-23 to 24-25/CEE/Tech/720 dated 9th August 2022. After initial scrutiny/analysis, the Petition was admitted on 10th October 2022 and was marked as Petition No. 85/2022.

1.7. Interaction with the Petitioner

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

The Commission conducted the Technical Validation Session (TVS) with the Petitioner during which the discrepancies in the Petition were discussed and additional information required by the Commission were sought. Subsequently, the Petitioner submitted replies to the issues raised in these sessions and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner along with the date:

Table 4: Timelines of the interaction with the Petitioner

S. No	Subject	Date
1	Issue of First Deficiency Note	17th October 2022
2	Reply received from Petitioner	10th November 2022
3	Public Hearing	25th November 2022
4	Technical Validation Session	7th December 2022
5	Issue of Second Deficiency Note	8th December 2022; 21st December 2022
6	Reply received from Petitioner	13th December 2022; 27th December 2022

1.8. Notice for Public Hearing

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

Table 5: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1.	28th October 2022	Gomantak	Marathi	Goa
		The Times of India	English	Goa
		The Navhind times	English	Goa
		Tarun Bharat	Hindi	Goa
2.	20th November 2022	Gomantak	Marathi	Goa
		The Times of India	English	Goa
		The Navhind times	English	Goa

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

Table 6: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1.	2nd November 2022	The Times of India	English	Goa
2.		The Navhind times	English	Goa
3.		Gomantak	Marathi	Goa
4.		Bhaangarbhuin	Konkani	Goa

1.9. Public Hearing

The Commission decided that the comments/suggestions of the stakeholders need to be heard virtually through video conferencing for seeking their opinion.

Accordingly, the Virtual Public Hearing was held on 22nd November 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

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

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments/objections from the public as per the provisions of the JERC MYT Regulations, 2014 and JERC MYT Regulations 2018.

The Commission decided that the comments/suggestions of the stakeholders need to be heard virtually through video conferencing for seeking their opinion. Accordingly, the Virtual Public Hearing was held on 22nd November 2022 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I.

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

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

2.2.1. Substantial increase in Power Purchase Cost

Stakeholder's Comment:

The stakeholder has submitted that the power cost has been increasing in the range of 4%-5% mainly on account of shortage of coal and increase in its prices. Although, the department has signed various renewable agreements with SECI but they were not done in timely manner which resulted in department opting to procure costly power.

Petitioner's Response:

The sales of the Consumers of EDG are increasing Y-o-Y respectively and the Power Purchases as well. 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 & NPCIL Ltd as allocated by the Central Government. Further, there are within the State Generation and Co-generating Company like Vedanta Plant-1, Vedanta Plant-2 and Goa Sponge & Power Ltd which are 3.5% to 3.7%.

Further to meet the increasing RPO targets as per Hon'ble JERC, EDG meticulously plans to meet its renewable power purchase through firm power sources and signed PPA with SECI (Solar & Wind) and NVVNL Solar. The EDG signed PPA with SECI Tranche VI 50 MW wind power in FY 2019-20, started receiving the power in FY 2022-23. This is due to the delay in the construction of the Power Plant due to various reasons including Covid-19.

EDG has signed PPA with SECI for purchase of 150 MW of Hybrid Power (Solar, Wind, BESS) with assured peak power at the rate of Rs.4.03 per unit. Various proposal for tieing up of cheap as well as renewable power is under scrutiny. Also, EDG is encouraging swapping of power transaction (Banking arrangement) were EDG's off peak surplus power is swapped to needy utility through CERC approved license trader and power is taken back by EDG in peak hours (deficit hours) on fixed ratio basis. This is much economical as EDG doesn't pay for peak power rates and financial liability is only to the extent of trading margin and open access charges. The remaining requirement is met through Short Term market and exchanges like GTAM, IEX. The high target of fulfilment of RPO for which short term power is purchased at Rs. 5 per kwh and above. However, EDG is making its best effort to tie up long term power at reasonable rate so as to fulfil the demand as well as to optimise the power purchase cost.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard.

2.2.2. Transition towards double entry accounting system

Stakeholder's Comment:

The stakeholder has submitted that the department still employs the single accounting system while preparing the annual accounts instead of double entry system, which reduces the chances of error and provides better clarity around department's financial health.

Petitioner's Response:

The Petitioner submitted that EDG functions as department under the control of Government of Goa. It is to inform that all the departments functioning under Government of Goa are following single entry system of accounting. Accordingly, ED Goa also follows single entry system of accounting.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard. Further, the Petitioner may take up the issue with the concerned authority to understand the feasibility for transitioning to the double entry system.

2.2.3. Increase in Distribution Loss

Stakeholder's Comment:

The stakeholder has submitted that the department's distribution loss has increased from 10.36% in 2017-18 to 15.03% in 2019-20 which will in turn increase the revenue requirement and the revenue gap.

Petitioner's Response:

The Petitioner submitted that during FY 2019-20 billing cycle followed was bi-monthly and further due to breakout of the CoVID -19 pandemic and imposition of nation-wide complete lockdown which hampered the billing cycle and resulted in lower sales during FY 2019-20. When the lockdown was declared, the Meter Readers could not move out to complete the meter reading for the month of February and March 2020 and the sales details of the same were not considered as the part of FY 2019-20 and the same were accounted in the FY 2020-21. Due to this reason, Distribution Loss for FY 2019-20 was recorded as high as 15.03% compared to 7.74% of FY 2020-21. The distribution loss was high to the level of 15.03% in FY 2019-20 because of Covid-19 Pandemic due to which the energy sales recorded for the month of March 2020 were not accounted for FY 2019-20. These sales has been accounted during FY 2020-21 which has resulted in major reduction in distribution loss of FY 2020-21 to 7.74%.

EDG have improved their Distribution losses to 8.45% for FY 2021-22 w.r.t to the JERC Approved figure of 10.25% which is a very good improvement. This is due to various infrastructure upgrades. Further, EDG is planning for more infrastructure development and performance is likely to improve in the upcoming years which will reduce the AT&C losses as well.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard. The Commission notes the submission made by the stakeholder and the Petitioner, however, it is pertinent to highlight that while approving the power purchase cost, the Commission considers the normative Distribution Losses instead of the actual loss. Further, the loss on account of under-achievement of Distribution Loss is borne by the Department, while the gains on account of over-achievement of Distribution Loss is shared between the consumers and the department.

2.2.4. Introduction of ToU pricing for other categories

Stakeholder's Comment:

The stakeholder has requested the introduction of time of use pricing for other categories including the residential consumers as it will motivate them to prudently utilize the power during the peak hours.

Petitioner's Response:

The Comments of the Stakeholder is noted. However, the EDG submits that at this stage the ToD metering may not be possible to introduce at LT level as it involves in changing the meters of all consumers. The same can be analysed once EDG moves to Smart Metering.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard.

3. Chapter 3: True-up of FY 2017-18

3.1. Applicable Provisions and Background

The Commission issued the Order on Aggregate Revenue Requirement (ARR) for 1st MYT Control Period (FY 2016-17 to FY 2018-19) on 18th April 2016 (hereinafter referred to as the "MYT Order"). Further, the Annual Revenue Requirement for FY 2017-18 was approved in line with the ARR approved in MYT Order as the Petitioner proposed to retain the same ARR in the tariff petition for FY 2017-18 (hereinafter referred to as the "ARR Order"). However, the Annual Performance Review (APR) for FY 2017-18 was not taken-up by the Commission as the data submitted by the Petitioner for the APR of 2017-18 was not reliable.

The True up for the FY 2017-18 is being carried out in accordance with Regulation 8(2) of the JERC MYT Regulations, 2014, stated as following:

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

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

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

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

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

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

3.2. Approach for True-up for FY 2017-18

The Petitioner has requested for True-up of FY 2017-18 and submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the ARR Order.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2017-18 based on the audited accounts submitted by the Petitioner and has carried out the True-up exercise in accordance with the principles laid down in the JERC MYT Regulations, 2014 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2017-18 as 3654.89 MU as against approved energy sales quantum of 3494.70 MU in the ARR Order.

Commission's Analysis

The Commission, after going through the submissions of the Petitioner including the audited accounts, has considered the energy sales as 3654.89 MU as submitted by the Petitioner for the purpose of True-up of the FY 2017-18 as shown in the following table:

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

S. No	Category	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	929.90	1124.84	1124.84
2	LTD/L.I.G.	1.10	1.92	1.92
3	LTC/Commercial	317.37	416.88	416.88
4	LTP Mixed (Hotel Industries)	4.83	2.45	2.45
5	LT-I Industrial	131.25	101.06	101.06
6	LTAG/Agriculture (Pump sets/Irrigation)	17.90	17.25	17.25
7	LTAG/Agriculture (Allied Activities)	5.97	0.51	0.51
8	Streetlight	36.95	4.93	4.93
9	Hoardings/Signboards	0.35	0.23	0.23
	Sub-Total	**1445.62**	**1669.60**	**1669.60**
	B. HIGH TENSION SUPPLY			
10	HT-D Domestic	0.27	0.32	0.32
11	HT- C Commercial	76.10	111.80	111.80
12	HTI/ Industrial- Connected at 11/33 kV	1203.59	1162.37	1162.37
13	HTI / Indutrial – Connected at 110 kV	142.23	211.75	211.75
14	HT-Industrial (f/M, Steel Melt, Power Intensive)	571.84	442.10	442.10
15	HTAG/Agriculture (Pump Sets/Irrigation)	4.56	4.16	4.16
16	HTAG/Agriculture (Allied Activities)	1.52	5.18	5.18
17	HT. MES/ Defence Establishment	26.89	28.87	28.87
	Sub-Total	**2027.00**	**1966.55**	**1966.55**
	C. TEMPORARY SUPPLY			
18	L.T. Temporary Domestic	17.47	-3.52	-3.52
19	L.T. Temporary Commercial	4.61	21.49	21.49
20	H.T. Temporary	0.00	0.30	0.30
	Sub-Total	**22.08**	**18.27**	**18.27**
	D. SINGLE POINT SUPPLY			
21	Residential Complexes	0.00	0.00	0.00
22	Commercial Complexes		5.88	5.88
23	Industrial Complexes	0.00	0.00	0.00
	Sub-Total	**0.00**	**5.88**	**5.88**
	Total	**3494.70**	**3654.89**	**3654.89**

The Commission approves the energy sales as 3654.89 MU in the True-up of FY 2017-18.

3.4. Open Access Sales and Purchase

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

The Commission approves NIL energy sales and purchase under Open Access in the True-up of the FY 2017-18.

3.5. Inter-State Transmission loss

Petitioner's submission

The Petitioner has submitted the Inter-State transmission loss of 4.54% against a loss of 4.17% approved in the ARR Order.

Commission's analysis

The Commission in this regard directed the Petitioner to submit the supporting documentary evidence to verify the loss levels. The Petitioner has submitted that they have computed the inter-state transmission loss considering the total scheduled energy at Ex-bus and the state periphery. Therefore, the Commission has considered the difference between the total energy scheduled at Ex-Bus periphery and the total energy scheduled at state periphery for computing the transmission losses. The Commission accordingly trues-up the Inter-State Losses as shown in the following table.

Table 8: Inter-State transmission loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	4.17%	4.54%	4.56%

The Commission trues-up weighted average Inter-State Transmission Loss as 4.56% in the True-up of the FY 2017-18.

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

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 10.36% in the FY 2017-18 against an approved loss of 11.00%.

Commission's analysis

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2017-18. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawl at State periphery as registered in the energy meters at the state periphery and the energy sales as approved above. Therefore, the Commission has determined the Intra-State T&D loss of 10.36% for the FY 2017-18 against an approved loss of 11.00% in the ARR Order.

The incentive for the over-achievement of T&D Loss target in the FY 2017-18 is dealt with in Section 3.19.1 of this Order. The table below provides the Intra-State T&D loss approved in the ARR of FY 2017-18, Petitioner's submission and as trued-up by the Commission now.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.00%	10.36%	10.36%

The Commission, while Truing up for FY 2017-18, has considered the actual Intra-State T&D loss of 10.36% for the FY 2017-18. However, the incentive for lower purchase of power on account of

over-achievement of T&D loss target has been detailed in Section 3.19 and has been added in the trued-up ARR.

3.7. Power Purchase Quantum & Cost

Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and Co-generating Companies like Vedanta Plant 1, Vedanta Plant 2 and Goa Sponge & Power Ltd. EDG also meets a part of its energy requirement through purchase of short term power from traders and power exchanges.

The transmission charges comprise of transmission charges to Western Region, Southern Region and POSOCO fee and charges. The Power Purchase Cost has been submitted as incurred by the Petitioner in FY 2017-18. The Power Purchase cost also includes ED, Cess, Incentive etc. and supplementary charges considered on actual basis.

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

The power purchase quantum and cost for FY 2017-18, as submitted by the Petitioner has been shown in the following table:

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

S. No	Source	Power Purchase (MU)	Variable Charges (Ps/Unit)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,556.58**	***162.04***	**297.55**	**576.30**	**26.98**	**(96.87)**	**803.96**
	KSTPS	*1,571.75*	*124.17*	*97.83*	*195.17*	*17.57*	*(58.23)*	*252.33*
	VSTPS - I	*275.70*	*149.99*	*21.33*	*41.35*	*2.00*	*(12.92)*	*51.76*
	VSTPS - II	*108.81*	*140.24*	*6.87*	*15.26*	*1.09*	*0.97*	*24.19*
	VSTPS -III	*99.63*	*140.66*	*9.15*	*14.01*	*1.22*	*0.75*	*25.14*
	VSTPS-IV	*109.29*	*140.50*	*16.18*	*15.36*	*0.98*	*1.15*	*33.67*
	VSTPS-V	*58.62*	*141.86*	*7.82*	*8.32*	*0.86*	*0.40*	*17.39*
	KGPP	*43.89*	*242.59*	*7.60*	*10.65*	-	*0.34*	*18.58*
	GGPP	*57.55*	*218.99*	*9.65*	*12.60*	-	*1.90*	*24.15*
	SIPAT- I	*193.71*	*120.16*	*24.55*	*23.28*	*1.79*	*0.93*	*50.55*
	FSTPS	-	-	-	-	-	*0.00*	*0.00*
	KSTPS-III	*46.57*	*122.04*	*6.17*	*5.68*	*0.56*	*0.57*	*12.98*
	TSTPS	-	-	-	-	-	-	-
	KHSTPS-I	-	-	-	-	-	*(0.08)*	*(0.08)*
	RSTPS	*737.70*	*241.05*	*48.83*	*177.83*	*0.00*	*(38.67)*	*187.99*
	SIPAT- II	*89.94*	*123.44*	*10.61*	*11.10*	*0.92*	*0.48*	*23.12*
	Mouda I	*94.34*	*277.69*	*17.88*	*26.20*	-	*(0.12)*	*43.95*
	Mouda II	*45.72*	*259.77*	*7.58*	*11.88*	-	*(0.10)*	*19.35*
	solaphur	*23.36*	*326.36*	*5.48*	*7.62*	-	*0.03*	*13.14*
	Add/ Less: Other Adjustments(URS Power)	-	-	-	-	-	*5.73*	*5.73*
II	**RGPPL**	**-**		**-**	**-**	**-**		**-**
						-		

S. No	Source	Power Purchase (MU)	Variable Charges (Ps/Unit)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
III	**NPCIL**	**69.59**	***310.67***		**21.62**	**-**	**(0.52)**	**21.10**
	KAPS	-	-	-	*0.00*	-	-	*0.00*
	TAPS	*69.59*	*310.60*	-	*21.61*	-	*(0.52)*	*21.10*
						-		-
IV	**Traders**	**241.60**	**408.70**	**-**	**98.74**	**-**	**(1.02)**	**97.72**
	IEX Purchase	220.06	392.00		86.26			86.26
	IEX Sale	(128.19)	287.79	-	(36.89)	-	-	(36.89)
	Traders	149.73	329.73	-	49.37	-	(1.02)	48.35
						-		-
V	**NET UI (OVER-DRAWAL)**	***63.97***	***365.59***	**-**	***23.39***	**-**	**-**	***23.39***
	Banking	**(19.68)**		-	-	-	-	**-**
B	**Within State Generations**					-		
I	**CO- GENERATION**	**165.01**	***232.99***	**-**	**38.45**	**-**	**(0.30)**	**38.15**
	Vedanta Plant-1	*93.59*	*238.78*	-	*22.35*	-	-	*22.35*
	Vedanta Plant -2 (Sesa Goa Limited)	*66.01*	*224.21*	-	*14.80*	-	*(0.30)*	*14.50*
	Goa Sponge & Power Limited	*5.41*	*240.00*	-	*1.30*	-	-	*1.30*
C	**RPO Obligations**	***186.26***	**528.89**	**-**	***98.51***	**-**	***(1.36)***	***97.15***
	MPL Solar	*21.43*	*490.00*	-	*10.50*	-	*(0.21)*	*10.29*
	NVVNL Solar	*11.61*	*864.96*	-	*10.04*	-	*(0.19)*	*9.86*
	SECI Solar	*51.10*	*585.00*	-	*29.89*	-	-	*29.89*
	Non Solar STOA	*102.12*	*470.76*	-	*48.07*	-	*(0.96)*	*47.11*
D	**REC Certificates**		**-**	**-**	**8.28**	**-**	**-**	**8.28**
	Solar		-	-	-	-	-	-
	Non Solar		-	-	*8.28*	-	-	*8.28*
E	**OTHER CHARGES**	**-**		**-**	**-**	**170.66**	**-**	***170.66***
	PGCIL Transmission Charges, Wheeling & Other Charges		-	-	-	*170.66*		*170.66*
F	**Total**	**4,263.33**	**202.96**	**297.55**	**865.28**	**197.65**	**(100.06)**	**1,260.41**

Commission's analysis

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, Co-Generating Plants, IPP's, Exchange etc. The Petitioner has submitted the overall Power Purchase cost as INR 1,260.41 Cr inclusive of transmission charges. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc. The Petitioner has also included an adjustment of (19.68) MUs on account of banking adjustment. However, no expenses have been claimed under the banking adjustment as it pertains to an in kind transaction of power.

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

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

Further, the Commission has verified the UI weekly data from the DSM account maintained by Western Region Power Committee (WRPC) and Southern Region Power Committee (SRPC) and found certain discrepancies. The Petitioner while claiming the cost and quantum of UI, has considered the few days of March 2017 and April 2018. However, the Commission has only considered the UI sale and receivable pertaining to FY 2017-18 while allowing the power purchase cost and MUs.

The Commission also sought the details and nature of banking power. The Petitioner submitted that the Banking transaction shown in the Petition is a Power Swap arrangement carried out by EDG. EDG in such arrangements swaps power to needy Utility through CERC licensed trader during the off-season period or during its surplus regime (Normally during July to September when Goa has low demand) and accepts the power during peak hours (18.00 to 24.00 Hrs). The power is swapped to EDG during the Peak Season of Goa as per the LOIs issued depending on the requirement of EDG. In this arrangement there are no financial transactions towards cost of power except trading margin and Open Access charges. Sometime the return power to EDG is on premium of 102% to 103% which means if 100 MUs are supplied by EDG then 102 MUs to 103 MUs are accepted by EDG under this arrangement.

The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2017-18 has adjusted the Income from UI Under-drawal in the Power Purchase cost approved now. Transmission Charges and the Other Charges submitted have been considered as Other Expenses as per actuals incurred by the Petitioner.

The Commission has considered the cost incurred towards the compliance of Renewable Purchase Obligation (RPO) in FY 2017-18 along with the Power Purchase cost. The compliance status of RPO has been discussed in detail in the subsequent section. The table below provides the summary of the power purchase quantum and the cost approved by the Commission for FY 2017-18.

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

S. No	Source	Power Purchase (MU)	Variable Charges (Ps/Unit)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,556.58**	***162.04***	**297.55**	**576.30**	**26.98**	**(96.87)**	**803.96**
	KSTPS	*1,571.75*	*124.17*	*97.83*	*195.17*	*17.57*	*(58.23)*	*252.33*
	VSTPS - I	*275.70*	*149.99*	*21.33*	*41.35*	*2.00*	*(12.92)*	*51.76*
	VSTPS - II	*108.81*	*140.24*	*6.87*	*15.26*	*1.09*	*0.97*	*24.19*
	VSTPS -III	*99.63*	*140.66*	*9.15*	*14.01*	*1.22*	*0.75*	*25.14*
	VSTPS-IV	*109.29*	*140.50*	*16.18*	*15.36*	*0.98*	*1.15*	*33.67*
	VSTPS-V	*58.62*	*141.86*	*7.82*	*8.32*	*0.86*	*0.40*	*17.39*
	KGPP	*43.89*	*242.59*	*7.60*	*10.65*	-	*0.34*	*18.58*
	GGPP	*57.55*	*218.99*	*9.65*	*12.60*	-	*1.90*	*24.15*
	SIPAT- I	*193.71*	*120.16*	*24.55*	*23.28*	*1.79*	*0.93*	*50.55*
	FSTPS	-	-	-	-	-	*0.00*	*0.00*
	KSTPS-III	*46.57*	*122.04*	*6.17*	*5.68*	*0.56*	*0.57*	*12.98*

S. No	Source	Power Purchase (MU)	Variable Charges (Ps/Unit)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Supplementary Charges (INR Cr)	Total Charges (INR Cr)
	TSTPS	-	-	-	-	-	-	-
	KHSTPS-I	-	-	-	-	-	*(0.08)*	*(0.08)*
	RSTPS	*737.70*	*241.05*	*48.83*	*177.83*	*0.00*	*(38.67)*	*187.99*
	SIPAT- II	*89.94*	*123.44*	*10.61*	*11.10*	*0.92*	*0.48*	*23.12*
	Mouda I	*94.34*	*277.69*	*17.88*	*26.20*	-	*(0.12)*	*43.95*
	Mouda II	*45.72*	*259.77*	*7.58*	*11.88*	-	*(0.10)*	*19.35*
	solaphur	*23.36*	*326.36*	*5.48*	*7.62*	-	*0.03*	*13.14*
	Add/ Less: Other Adjustments(URS Power)	-	-	-	-	-	*5.73*	*5.73*
II	**RGPPL**	**-**		**-**	**-**	**-**		**-**
						-		
III	**NPCIL**	**69.59**	***310.67***		**21.62**	**-**	**(0.52)**	**21.10**
	KAPS	-	-	-	*0.00*	-	-	*0.00*
	TAPS	*69.59*	*310.60*	-	*21.61*	-	*(0.52)*	*21.10*
						-		-
IV	**Traders**	**245.78**	***408.68***	**-**	**100.45**	**-**	**(1.02)**	**99.42**
	IEX Purchase	*220.06*	*392.00*		*86.26*			*86.26*
	IEX Sale	*(128.19)*	*287.79*	-	*(36.89)*	-	-	*(36.89)*
	Traders	*153.91*	*331.84*	-	*51.07*	-	*(1.02)*	*50.05*
						-		-
V	**NET UI (OVER-DRAWAL)**	***58.03***	***379.47***	**-**	***22.02***	**-**	**-**	***22.02***
	Banking	**(19.68)**		-	-	-	-	**-**
B	**Within State Generations**					-		
I	**CO- GENERATION**	**165.01**	*232.99*	**-**	**38.45**	**-**	**(0.30)**	**38.15**
	Vedanta Plant-1	*93.59*	*238.78*	-	*22.35*	-	-	*22.35*
	Vedanta Plant -2 (Sesa Goa Limited)	*66.01*	*224.21*	-	*14.80*	-	*(0.30)*	*14.50*
	Goa Sponge & Power Limited	*5.41*	*240.00*	-	*1.30*	-	-	*1.30*
C	**RPO Obligations**	***186.26***	***528.89***	**-**	***98.51***	**-**	***(1.36)***	***97.15***
	MPL Solar	*21.43*	*490.00*	-	*10.50*	-	*(0.21)*	*10.29*
	NVVNL Solar	*11.61*	*864.96*	-	*10.04*	-	*(0.19)*	*9.86*
	SECI Solar	*51.10*	*585.00*	-	*29.89*	-	-	*29.89*
	Non Solar STOA	*102.12*	*470.76*	-	*48.07*	-	*(0.96)*	*47.11*
D	**REC Certificates**		**-**	**-**	***8.28***	**-**	**-**	***8.28***
	Solar		-	-	-	-	-	-
	Non Solar		-	-	*8.28*	-	-	*8.28*
E	**OTHER CHARGES**	**-**		**-**	**-**	**170.66**	**-**	***170.66***
	PGCIL Transmission Charges, Wheeling & Other Charges		-	-	-	*170.66*		*170.66*
F	**Total**	**4,261.57**	**203.12**	**297.55**	**865.62**	**197.65**	**(100.06)**	**1260.75**

The Commission approves power purchase quantum of 4261.57 MU and cost of INR 1,260.75 Cr in the True-up of the FY 2017-18.

3.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

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

Commission's analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 6.70% of its total consumption (including 2.50% from Solar) from renewable sources for the FY 2017-18. Accordingly, the cumulative obligation and fulfillment till FY 2017-18 has been determined in the following table:

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

Description	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Sales within State (MU) (A)	2182.48	2880.11	2925.24	3070.56	3439.99	3420.90	3091.98	3654.89
Hydro Power available at State Periphery (MU) (B)	0.00	0.00	0.00	0.00	0.00	12.62	72.88	0.00
T&D Loss (%) (C)	13.50%	9.46%	13.15%	11.16%	8.23%	15.36%	20.38%	10.36%
T&D Loss (MU) (D = B * C)	0.00	0.00	0.00	0.00	0.00	1.94	14.85	0.00
Hydro Power Consumed (E = B - D)	0.00	0.00	0.00	0.00	0.00	10.68	58.03	0.00
Conventional Power Consumed (F = A - E)	**2182.48**	**2880.11**	**2925.24**	**3070.56**	**3439.99**	**3410.21**	**3033.95**	**3654.89**
RPO obligation (%)	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**
Solar (G)	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%
Non-Solar (H)	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%
RPO obligation for the year (MU)	**21.82**	**57.60**	**87.76**	**92.12**	**113.52**	**121.06**	**147.15**	**244.88**
Solar (F * G)	5.46	8.64	11.70	12.28	20.64	28.99	50.06	91.37
Non-Solar (F * H)	16.37	48.96	76.06	79.83	92.88	92.08	97.09	153.51
RPO Compliance (Physical Power + Certificates) (MU)	**0.00**	**128.14**	**71.80**	**29.20**	**152.56**	**167.52**	**65.54**	**243.26**
Solar	0.00	0.00	0.00	0.00	6.58	79.90	65.54	84.14
Non-Solar	0.00	128.14	71.80	29.20	145.98	87.62	0.00	159.12
Cumulative RPO Shortfall (MU)	**21.82**	**14.10**	**30.05**	**92.97**	**53.93**	**7.47**	**103.32**	**104.94**
Solar	5.46	14.10	25.80	38.08	52.14	1.23	-	7.23
Non-Solar	16.37	-	4.25	54.89	1.78	6.24	103.32	97.71
Cumulative RPO Compliance (MU)	**0.00**	**128.14**	**199.94**	**229.14**	**381.70**	**549.23**	**614.76**	**858.03**

Description	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Solar	0.00	0.00	0.00	0.00	6.58	86.48	152.02	236.16
Non-Solar	0.00	128.14	199.94	229.14	375.13	462.75	462.75	621.87

As can be seen from the table as earlier, a cumulative gap of 104.94 MU is pending till the end of FY 2017-18. The same has to be carried forward to subsequent years and shall be taken up in the True ups of respective years.

3.9. *Energy Balance*

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2017-18 as shown in the following table.

Table 13: Energy Balance (MU) submitted by Petitioner

S. No	Particulars	Petitioner's Submission
1	**Energy Input at Goa Periphery**	**3912.37**
2	**Total Power Scheduled/ Purchased at Goa Periphery**	
	Total Schedule Billed Drawal – CGS	3626.16
	Add: Overdrawal	99.88
	Add: Power purchase from Traders	241.60
	Add: Power purchase from NVVN / Banking	-
	Less: Underdrawal	35.91
	Less: banking Power	19.68
	Add: Renewable Power	186.26
	Less: Power diverted to Exchange	-
	Total	**4098.32**
3	**PGCIL Losses – MUs**	**185.95**
	PGCIL Losses - %	**4.54%**
4	**Total Power Purchased within Goa State**	
	Add: Co-generation	165.01
	Add: Independent Power Producers (IPP)	-
	Total	**165.01**
5	**Total Power Purchase availability after PGCIL Losses**	**4077.38**
	Less: Retail Sales to Consumers	3654.89
	Distribution Losses – MUs	422.49
6	**Distribution Losses - %**	**10.36%**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for FY 2017-18 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by WRPC and SRPC and documentary evidence submitted by the Petitioner against the Inter-State Transmission

Loss, the Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance as submitted by the Petitioner and now trued-up by the Commission.

Table 14: Energy Balance (MU) approved by Commission

S. No	Particulars	Trued-up by Commission
1	Sales within the State	**3654.89**
2	Intra-State T&D Loss (%)	10.36%
3	Intra-State T&D Loss	422.49
4	**Energy Requirement at Periphery**	**4077.38**
1	Total Schedule Billed Drawal - CGS	3626.16
2	Add: Power purchase from Traders/ Open Market	373.97
3	Less: Power diverted to Exchange	128.19
4	Add: Renewable Power	186.26
5	Less: Banking Power	19.68
	Total Power Scheduled/ Purchased at Ex-Bus Periphery (A)	**4038.53**
1	Energy input at state periphery (a)	3912.37
2	Add: Over-drawal	93.95
3	Less: Under-drawal	35.91
	Total Power Scheduled/ Purchased at Goa Periphery (B)	**3854.34**
1	PGCIL Losses – MU (A-B)	184.19
2	PGCIL Losses - % (A-B)/A	4.56%
3	Add: Within state generation (b)	165.01
	Energy Available at Periphery (a+b)	**4077.38**

3.10. Operation & Maintenance (O&M) Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

3.10.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of INR 330.21 Cr against the approved expenses of INR 254.24 Cr in the ARR of FY 2017-18.

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

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

S. No	Particulars	Petitioner's Submission
1	Salaries &Allowances	330.21
2	Terminal Benefits	
3	Other Salary Payments	
4	Total	330.21
5	Less: Add/Deduct share of others	-
6	Total	330.21
7	Less: Amount capitalized	-
8	Net Amount	330.21
9	Add: Pension/DA and other Provision	-
	Total Employee Expenses	**330.21**

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2017-18 are reflected as INR 330.21 Cr. However, in accordance with the JERC MYT Regulations, 2014, the Employee expenses are controllable and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative employee expenses as INR 254.24 Cr including the impact of 7th Pay Commission. Further, the Petitioner has claimed INR 30.53 crore as 7th Pay Commission arrears vis-à-vis INR 28.38 crore as approved in the Tariff Order. As the normative employee expenses approved in the ARR Order are lesser than the actual employee expenses, the Commission has approved employee expenses of INR 256.39 Cr including the impact of 7th pay commission.

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Normative Employee Expenses	225.86	330.21	225.86
2	7th Pay Commission arrears	28.38		30.53
3	**Employee Expenses**	**254.24**	**330.21**	**256.39**

The Commission approves Employee Expenses of INR 256.39 Cr in the True-up of FY 2017-18.

3.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of INR 26.62 Cr in FY 2017-18. The following table provides the A&G expenses as submitted by the Petitioner:

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

S. No.	Particulars	Petitioner's Submission
1	Travelling Expenses	0.17
2	Office Expenses	14.08
4	Petrol, Oil, Lubricant (P.O.L)	0.01
5	Rent, Rates & Taxes	0.34
6	Advertisement & Publicity	0.30
7	Professional & Special Services	0.44
8	Other A&G Charges	10.29
9	Overtime Allowance	0.00
10	Minor Works	0.89
11	Audit of Accounts and Professional Fees	0.10
13	**Total**	**26.62**
14	Less: share of others	
15	**Total expenses**	26.62
16	Less: Capitalized	
17	**Net expenses**	26.62
18	Add: Prior period	
19	**Total A&G Expenses**	**26.62**

Commission's analysis

Similar to the approach followed while approving the Employee Expenses, the A&G expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative A&G expenses as INR 10.12 Cr. As the normative A&G expenses approved in the ARR Order are lesser than the actual A&G expenses, the Commission considers the normative expenses of INR 10.12 Cr.

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Administration & General Expenses (A&G)**	**10.12**	**26.62**	**10.12**

The Commission approves the Administrative & General (A&G) expenses of INR 10.12 Cr in the True-up of FY 2017-18.

3.10.3. Repair & Maintenance (R&M) Expenses

Petitioner's submission

The Petitioner has incurred R&M expenses of INR 27.05 Cr against the approved expenses of INR 30.57 Cr in the ARR Order. The following table provides the R&M expenses as submitted by the Petitioner:

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

S. No.	Particulars	Petitioner's Submission
1	Plant & machinery	27.05

S. No.	Particulars	Petitioner's Submission
2	Building (Electricity Residential & Non-Residential)	
3	Hydraulic works & civil works	
4	Line cable & network	
5	Vehicles	
6	Furnitures & Fixtures	
7	Office Equipment	
9	Minor R&M works	
10	**Total**	**27.05**
11	Add/Deduct share of others	
12	**Total expenses**	27.05
13	Less : Capitalized	
14	**Net expenses**	27.05
15	Add: prior period	
16	**Total R&M expenses**	**27.05**

Commission's analysis

The R&M expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved K_b (percentage point as per the norm) as 2.92% and inflation index as 7.33%. The same have been considered for determining the normative R&M expenses for FY 2017-18. As now the opening GFA has been changed due to truing up of the early years, therefore, the same (GFA of Rs. 1,216.92 Cr.) has been considered as per the annual audited accounts. Accordingly, the normative R&M expenses have been worked out as follows:

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

S. No	Particulars	Normative Expenses
1	Opening GFA as per the annual audited accounts	1216.92
2	K_b approved in the ARR Order	2.92%
3	Inflation index approved in the ARR Order	7.33%
4	Total Normative R&M Expenses	**38.14**

As the normative R&M expenses are higher than the actual R&M expenses of INR 27.05 Cr, the Commission considers the actual R&M expenses of INR 27.05 Cr. The sharing of gains on account of over-achievement of norms is dealt with in Section 3.19.2.

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Normative R&M expenses approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**30.57**	**27.05**	**27.05**

The Commission approves the normative Repair & Maintenance (R&M) expenses of INR 27.05 Cr in the True-up of FY 2017-18.

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

The following table provides the O&M Expenses approved in the ARR of FY 2017-18, Petitioner's submission and O&M now trued-up by the Commission.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	254.24	330.21	256.39
2	Administrative & General Expenses (A&G)	10.12	26.62	10.12
3	Repair & Maintenance Expenses	30.57	27.05	27.05
4	**Total Operation & Maintenance Expenses**	**294.93**	**383.88**	**293.56**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 293.56 Cr in the True-up of FY 2017-18.

3.11. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation for the FY 2017-18 as INR 27.55 Cr against an approved capitalization of INR 579.54 Cr

Commission's analysis:

The Commission with regards to capitalisation submitted by the Petitioner, sought details of the assets created out of Loan/ Equity/ Govt. Grant/ Consumer Contribution etc. In reply, the Petitioner submitted that majority of capital assets are created out of the equity contribution from Govt. of Goa. The capitalization is inclusive of assets created out of the Electricity Development Fund which is treated as Government Grant. The Petitioner has further submitted that there are no assets created out of Consumer Contribution. Further, the Petition submitted that to relieve the overloaded infrastructure and to cater to the load and increasing demand from HT and LT consumers, EDG had undertaken the CAPEX of INR 103.36 Cr. and capitalisation of INR 27.55 Cr. for FY 2017-18 as per the audited accounts.

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

The Commission has examined the Fixed Asset Register (FAR) for FY 2017-18 as submitted by the Petitioner in detail and accordingly approves the capitalisation as shown in the following table.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Total Capitalisation**	**579.54**	**27.55**	**27.55**

The Commission approves Capitalisation of INR 27.55 Cr in the True-up of FY 2017-18.

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2017-18 excluding depreciation on assets created out of grants. The depreciation is arrived in annual accounts for FY 2017-18 based on the rates specified in the relevant CERC Tariff Regulations, 2014.

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

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

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	1026.18
2	Addition During the FY	27.55
3	Less: Capitalisation through Grants and Electricity Duty	5.81
4	Adjustment/Retirement During the FY	7.85
5	Closing Gross Fixed Assets	1040.06
6	Average Gross Fixed Assets	
7	Rate of Depreciation	5.21%
8	**Depreciation**	**53.85**

Commission's analysis

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

"

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

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

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

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

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

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

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

Table 25: Depreciation Rate (%)

Description	Opening Depreciable GFA	Less: Assets funded through Grants till 2016-17	Addition during the year	Deletion During the Year	Capitalisation through EDF	Closing Depreciable GFA	Average Depreciable GFA	Rate	Depreciation
Plant & Machinery	1078.81	204.36	18.51	7.12	3.90	881.94	878.20	5.28%	46.37
Building & Civil	13.33	2.53	0.00	0.09	0.00	10.72	10.76	3.34%	0.36

Description	Opening Depreciable GFA	Less: Assets funded through Grants till 2016-17	Addition during the year	Deletion During the Year	Capitalisation through EDF	Closing Depreciable GFA	Average Depreciable GFA	Rate	Depreciation
Engineering Works									
Furniture & Fixtures & Office Equipments	43.84	8.31	9.03	0.64	1.90	42.02	38.78	6.33%	2.45
Land	6.30	1.19	0.00	0.00	0.00	5.11	5.11	0.00%	0.00
Vehicles	3.69	0.70	0.01	0.00	0.00	3.00	3.00	9.50%	0.28
Computer & Others	70.93	13.44	0.00	0.00	0.00	57.50	57.50	15.00%	8.62
Total	**1216.92**	**230.52**	**27.55**	**7.85**	**5.81**	**1000.28**	**993.34**	**5.85%**	**58.09**

The weighted average depreciation rate has been computed as 5.85% against a rate of 5.28% approved in the ARR Order.

The Petitioner, while determining the opening RoE has worked out the opening GFA by deducting the capitalisation of INR 230.52 Cr. through Electricity Duty Fund from the opening GFA of INR 1,216.92 Cr. as per audited annual accounts. Accordingly, the Commission has considered the opening GFA as INR 986.40 Cr for calculation of depreciation for FY 2017-18, determined as follows:

Table 26: Opening GFA (net of capitalisation through EDF/Govt. Grants) approved by the Commission for FY 2017-18 (In INR Cr)

S. No	Particulars	Trued-up by Commission
1	Opening GFA (closing GFA as per true up of FY 2016-17)	1216.92
2	Less: Assets capitalized through EDF till 2016-17	230.52
3	Opening GFA excluding grants	986.40
4	Additions during the year	27.55
5	Less: Capitalisation through EDF	5.81
6	Less: Value of Assets sold/disposed off	7.85
7	**Closing GFA (net of capitalisation through EDF/Govt. Grants)**	**1000.28**

In respect of addition of GFA during the FY, the Commission has not considered depreciation on assets created from the Electricity Duty Fund, as the same has been treated as a Grant from the Government of Goa, in line with the approach adopted in the True-up of FY 2016-17. Further, the assets retired during the year were also not considered for computing the depreciation. The following table provides the calculation of depreciation during the FY 2017-18:

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	975.42	1026.18	986.40
2	Addition During the FY	579.54	27.55	27.55
3	Less: Capitalisation through Grants and Electricity Duty	100.00	5.81	5.81
4	Less: Value of Assets sold/disposed off	-	7.85	7.85

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
5	Closing Gross Fixed Assets	1454.96	1040.06	1,000.28
6	Weighted average Rate of Depreciation (%)	5.28%	5.21%	5.85%
7	Depreciation	**64.16**	**53.85**	**58.09**

The Commission approves depreciation of INR 58.09 Cr in the True-up of FY 2017-18.

3.13. Interest and Finance Charges

Petitioner's submission

The Petitioner has claimed the Interest on Loan based on normative loan calculation whereby closing GFA approved by the Hon'ble Commission for FY 2016-17 has been considered as opening GFA for FY 2017-18 and 70% of capitalisation (after deducting the assets created through Electricity Duty fund available as grants) during FY 2017-18 has been considered as normative debt addition during the financial year.

Further, the rate of interest has been considered as State Bank of India Prime Lending Rate (SBI PLR) of 13.85% (rate as on 1st April 2017). Further, the Petitioner has considered finance charges of INR 2.72 Cr. as per audited annual accounts.

Commission's analysis:

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

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on 1st April 2017. Further, in accordance with the JERC MYT Regulations, 2014, the interest has been calculated on the average normative loan during the year with the opening loan considered equivalent to the closing loan approved in the truing up of FY 2016-17. The addition in loan has been considered as explained above and the repayment is considered the same as depreciation during the year. Further, the Commission has considered finance charges of INR 2.72 Cr. as per audited annual accounts.

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	502.48	242.21	242.21
2	Add: Normative Loan During the year	335.68	15.22	15.22
3	Less: Normative Repayment	64.16	53.85	58.09
4	Closing Normative Loan	773.99	203.58	199.33
5	Average Normative Loan	638.24	222.89	220.77
6	Rate of Interest (%)	11.60	13.85	13.85
7	**Interest on Loan**	**74.04**	**30.87**	**30.58**
8	Financing Charges		2.72	2.72
9	**Interest and Finance Charges**	**74.04**	**33.59**	**33.30**

The Commission approves Interest and Finance Charges of INR 33.30 Cr in the True-up of the FY 2017-18.

3.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations, 2014. Opening equity has been considered as 30% of GFA computed by the Petitioner for FY 2017-18 (Net of assets funded by capital subsidies and grants). The equity addition has been considered to the tune of 30% of assets capitalized (net of capitalisation from grants) during the year. The rate of RoE has been considered as 16% on post tax basis as per JERC MYT Regulations, 2014.

Commission's analysis:

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

"

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

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

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

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

The opening equity for 2017-18 has been considered as the closing equity for 2016-17 approved by the Commission in the true-up of 2016-17. As the complete asset capitalisation during the year has been funded through equity and grants, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalisation (net of capitalisation through ED and Government Grants) in line with the JERC MYT Regulations, 2014.

The Commission noted that the Petitioner has not made any adjustment in respect of the assets retired during the year in equity. The 30% of the assets retired during the FY 2017-18 as per the audited books of accounts has also been deducted from the capitalisation during the year assuming, they have completed the useful life and the debt was repaid. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% on post-tax basis.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	292.63	295.77	286.46
2	Additions on account of new capitalisation (net of grants and retirement)	143.86	6.52	4.17
3	Closing Equity	436.49	302.29	290.63
4	Average Equity	364.56	299.03	288.54
5	Return on Equity (%)	16.00%	16.00%	16.00%
6	**Return on Equity**	**58.33**	**47.84**	**46.17**

The Commission approves a Return on Equity as INR 46.17 Cr in the True-up of FY 2017-18.

3.15. Interest on Consumer Security Deposits

Petitioner's submission

The Petitioner has considered the interest on Consumer Deposits in line with the Regulation 6.10 (8) of the Electricity Supply Code Regulations, 2010. The interest on Consumer Security Deposits has been considered as the Bank Rate notified by RBI as on 01st April 2017 i.e. 6.75%. However, the Petitioner has considered the actual Interest on Security Deposit of INR 4.74 Cr. paid as per the annual audited accounts.

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

S. No	Particulars	Petitioner's Submission
1	Opening Security Deposit	30.24
2	Add: Deposits During the year	4.75
3	Less: Deposits refunded	5.70
4	Closing Security Deposit	29.30
5	Average Security Deposit	29.77
6	Rate of Interest (%)	6.75%
7	**Interest on Security Deposit**	**2.01**
8	**Interest paid to consumers**	4.74

Commission's analysis:

As per Regulation 6.10 (8) of the JERC Electricity Supply Code Regulations, 2010

"The distribution licensee shall pay interest, at the bank rate notified by the Reserve Bank of India from time to time on such security deposits taken from the consumer. In this regard it shall be the responsibility of the licensee to keep a watch on the bank rate from time to time. The interest amount of previous financial year shall be adjusted in the energy bill issued in May / June of each financial year depending on billing cycle."

As per Section 47 (5) of the Electricity Act, 2003, the Petitioner has to pay the interest on the security deposits available with it and same shall be claimed in the ARR filed by the Petitioner. The Petitioner shall maintain the registers of security deposits collected from the consumers every year and pay the interest as per the bank rate of interest.

Accordingly, the Commission has considered the interest on consumer security deposits as per audited annual accounts as follows:

Table 31: Interest on Consumer Security Deposits as approved by the Commission (In INR Cr)

S. No	Particulars	As per Annual Audited Accounts
1	Opening Security Deposit	30.24
2	Add: Deposits During the year	4.75
3	Less: Deposits refunded	5.70
4	Closing Security Deposit	29.29
5	Average Security Deposit	29.77
6	Rate of Interest	6.75%
7	**Interest on Security Deposit**	**2.01**
8	**Interest on Security Deposit Paid During the year**	**4.74**

The Commission noted that the actual interest on security deposit paid during the year is higher than the normative interest on security deposit and sought the details from the Petitioner. The Petitioner has submitted that it is on account of past period discharge as in previous years, a lower interest on security deposit was paid.

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**6.93**	**2.01**	**4.74**

The Commission approves Interest on Security Deposit as INR 4.74 Cr. in the True-up of FY 2017-18.

3.16. Interest on Working Capital

Petitioner's submission

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

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

(a) Receivables of two months of billing

(b) Less: power purchase cost of one month

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

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

The interest on working capital is computed at 9.10% (SBI base rate as on 1st April 2017) as has been shown in the table below:

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

S. No.	Particulars	Petitioner's Submission
1	Receivables of two months of billing	297.01
2	Less: Power Purchase Cost for one month	105.03
3	Less: Security Deposit excluding BG/FDR	30.24
4	Net Working Capital Requirement	161.73
5	Rate of Interest (%)	9.10%
6	**Interest on Working Capital**	14.72

Commission's analysis:

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

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

(i) Receivables of two months of billing

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

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures."

The Commission, for determination of working capital requirement of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the average consumer security deposit as above and the inventory for two months as per the audited accounts of FY 2017-18.

The Commission has considered the SBI Base rate as on 1st April 2017 in line with the JERC MYT Regulations, 2014.

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

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

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	307.55	297.01	289.91
2	Less: Power Purchase Cost for one month	111.70	105.03	105.06
3	Less: Average Security Deposit excluding BG/FDR	89.43	30.24	29.77
4	Net Working Capital Requirement	106.42	161.73	155.08
5	Rate of Interest (%)	9.30%	9.10%	9.10%
6	**Interest on Working Capital**	**9.90**	**14.72**	**14.11**

The Commission approves the Interest on Working Capital as INR 14.11 Cr. in the True- up of FY 2017-18.

3.17. *Provision for Bad & Doubtful Debts*

Petitioner's submission

The Petitioner has submitted that the bad and doubtful debts actually written off during FY 2017-18 is INR 1.32 Cr., therefore Petitioner has considered provision for bad and doubtful debt for FY 2017-18 as INR 1.32 Cr.

Commission's analysis:

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

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

It is observed that as per the audited accounts, the licensee has not written off any bad and doubtful debts for the FY 2017-18 and only has provisioned the same in the book of accounts.

The Commission therefore has not approved any bad and doubtful debts in the True-up of FY 2017-18.

3.18. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted NTI of INR 18.29 Cr. in the True-Up of FY 2017-18 against INR 6.74 Cr approved by the Commission in the ARR for FY 2017-18. The Non–Tariff Income as submitted by the Petitioner has been shown in the following table:

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

S. No	Particulars	Petitioner's Submission
1	Meter/service rent	8.50
2	UI Sales/Sales to Exchange	
3	Wheeling charges under open access	0.01
4	Miscellaneous Receipts/Income	9.78
5	Deferred Income (Electricity Development fund)	
6	Income from trading	
7	Total Income	18.29
8	Add: prior period income	
9	**Total**	**18.29**

Commission's analysis:

The Commission after prudence check from the annual audited accounts has approved the Non-Tariff Income for 2017-18. The Commission approves the Non-Tariff Income as shown in the following table:

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Meter/service rent	6.74	8.50	8.50
2	UI Sales/Sales to Exchange			
3	Wheeling charges under open access		0.01	0.01
4	Miscellaneous Receipts/Income		9.78	9.78
5	Deferred Income (Electricity Development fund)			
6	Income from trading			
7	Total Income	6.74	18.29	18.29
8	Add: prior period income			
9	**Total**	**6.74**	**18.29**	**18.29**

The Commission approves Non-Tariff Income of INR 18.29 Cr in the True-up of FY 2017-18.

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

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

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

Mechanism for pass through of gains or losses:

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

…

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

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

3.19.1. Incentive on account of over-achievement of Intra- State Transmission & Distribution (T&D) loss

The Commission had approved the T&D loss target of 11.00% in the ARR Order. The Petitioner has achieved T&D loss of 10.36% as explained in Section 3.6. The incentive for lower purchase of power on account of over-achievement of T&D loss target has been considered at INR 2.67/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The savings in purchase of power has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (3,654.89 MU) with the actual Intra-State T&D Loss (10.36%). The following table provides the details of computation of Average Power Purchase Cost for FY 2017-18:

Table 37: Average Power Purchase Cost approved by Commission for FY 2017-18

S. No.	Particulars	Value
1	Total Power Purchase Cost (Rs Cr)	1,260.75
2	Less: Transmission charges and Power Purchase cost from renewable energy sources (Rs Cr)	170.66
3	Net Power Purchase Cost (Rs Cr)	1,090.09
4	Total Power Purchase quantum (MU)	4,261.57
5	Less: Quantum from renewable energy sources (MU)	186.26
6	Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	4,075.31
7	APPC (Rs/kWh)	2.67 `

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

Table 38: Incentive on account of over-achievement of Intra-State Distribution Loss target

S. No	Particulars	As per Approved Intra-State T&D Loss	Approved by the Commission
1	Retail Sales (MU)	3654.89	3654.89
2	T&D Loss (%)	11.00%	10.36%
3	Power Purchase at State/UT Periphery (MU)	4106.62	4077.38
4	Excess Power Purchase (MU)		29.24
5	Average Power Purchase Cost (APPC) (INR/kWh)		2.67
6	Gain/ (Loss) (INR Cr.)		7.82
7	**Sharing (30% to EDG in case of gain and 100% in case of loss)**		**2.35**

The Commission determines and approves INR 2.35 Cr. as incentive on account of over-achievement of T&D loss target for the FY 2017-18.

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

The Commission has determined the normative R&M expenses for FY 2017-18 as INR 38.14 Cr., as explained in Section 3.10.3 of this Order, against the actual R&M expenses of INR 27.05 Cr. as per audited annual accounts. The assessment of incentive on account of over-achievement of norms for R&M expenses is shown in the following table:

S. No	Particulars	Trued-up by Commission
1	Normative R&M Expenses	38.14
2	Actual R&M Expenses as per Audited Accounts	27.05
3	Gain/(Loss)	11.09
4	**Sharing (30% to EDG in case of gain and 100% in case of loss)**	**3.33**

The Commission approves INR 3.33 Cr. as incentive for FY 2017-18 on account of overachievement of norms for R&M expenses. Further, the Commission approves INR 5.67 Cr. (2.35+3.33) as incentive towards over achievement of norms.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,782.05 Cr is submitted for approval in the True-up of FY 2017-18.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2017-18 as given in the following table:

Table 39: Aggregate Revenue Requirement approved by Commission for FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost inclusive of cost towards compliance of RPO	1340.36	1260.41	1260.75
2	Operation & Maintenance Expenses	294.93	383.88	293.56
3	Depreciation	64.16	53.85	58.09
4	Interest and Finance charges	74.04	33.59	33.30
5	Interest on Working Capital	9.90	14.72	14.11
6	Interest on Security Deposit	6.93	4.74	4.74
7	Return on Equity	58.33	47.84	46.17
8	Provision for Bad Debt		1.32	0.00
9	Provision for DSM Expenses	3.41		0.00
10	Incentive/Disincentive on achievement of norms			5.67
11	**Total Revenue Requirement**	**1852.06**	**1800.34**	**1,716.39**
12	Less: Non-Tariff Income	6.74	18.29	18.29

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
13	**Net Revenue Requirement**	**1845.32**	**1782.05**	**1,698.10**

The Commission approves net Aggregate Revenue Requirement of INR 1698.10 Cr. in the True-up of FY 2017-18.

3.21. Revenue from Sale of Power at Approved tariff

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2017-18 as INR 1,739.44 Cr against revenue of INR 1,563.67 Cr approved by the Commission in the ARR Order. The following table provides the revenue at existing tariff as submitted by the Petitioner:

Table 40: Revenue at approved tariff submitted by the Petitioner for FY 2017-18

Particulars	Revenue from Demand and Energy Charges (Rs. Cr)	Revenue from FPPCA (Rs. Cr)	Total Revenue (Rs Cr)
A. LOW TENSION SUPPLY	**497.90**	**70.12**	**568.02**
LTD/Domestic	249.81	35.89	285.70
LTD/Low Income Group	0.48	0.04	0.52
LTC/Commercial	193.11	28.20	221.32
LT Mixed Hotel Industries	2.18	0.32	2.50
LT-I Industrial	37.53	4.68	42.21
LTAG/Agriculture (Pump sets/Irrigation)	2.80	0.00	2.80
LTAG/Agriculture (Allied Activities)	1.33	0.07	1.40
Metered Street Light	10.37	0.88	11.26
Hoardings/Signboards	0.28	0.03	0.31
B. HIGH TENSION SUPPLY	**996.23**	**140.86**	**1137.10**
HT- D Domestic	0.18	0.02	0.20
HT- C Commercial	75.76	10.91	86.67
HTI / Industrial - Connected at 11/33kV	585.11	80.46	665.57
HTI / Industrial - Connected at 110 kV	101.98	17.51	119.49
HT-Indust. (F/M, Steel Melt, Power Intensive)	215.87	29.83	245.70
HTAG/Agriculture (Pump sets/Irrigation)	1.03	0.00	1.03
HTAG/Agriculture (Allied Activities)	0.86	0.00	0.86
HT. MES / Defence Establishment	15.45	2.13	17.58
C. TEMPORARY SUPPLY	**24.26**	**2.96**	**27.22**
L.T. Temporary Domestic	1.35	0.15	1.50
L.T. Temporary Commercial	22.52	2.81	25.33
H.T. Temporary	0.39	0.01	0.40
D. SINGLE POINT SUPPLY	**3.35**	**0.64**	**3.99**
Residential Complexes	0.00	0.00	0.00
Commercial Complexes	3.35	0.64	3.99
Industrial Complexes	0.00	0.00	0.00
E. OTHERS	**2.74**	**0.38**	**3.11**
Unmetered LTPL	1.59	0.27	1.86
RRC referred	1.15	0.10	1.25

Particulars	Revenue from Demand and Energy Charges (Rs. Cr)	Revenue from FPPCA (Rs. Cr)	Total Revenue (Rs Cr)
Total	**1524.48**	**214.96**	**1739.44**

Commission's analysis

The Commission has verified revenue from sale of power within the State in the FY 2017-18 from the audited accounts. The category-wise revenue now Trued-up by the Commission is shown in the following table:

Table 41: Revenue at approved tariff approved by Commission for FY 2017-18

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	249.81	35.89	285.7
2	LTD/Low Income Group	0.48	0.04	0.52
4	LTC/Commercial	193.11	28.2	221.32
5	LTP Mixed (Hotel Industries)	2.18	0.32	2.5
6	LTP Industry	37.53	4.68	42.21
7	LTAG/Agriculture (Pump sets/Irrigation)	2.8	0	2.8
8	LTAG/Agriculture (Allied Activities)	1.33	0.07	1.4
9	Street Light	10.37	0.88	11.26
10	Hoardings/Signboards	0.288	0.03	0.31
	Sub-Total	**497.90**	**70.11**	**568.02**
	B. HIGH TENSION SUPPLY			
11	HT-D Domestic	0.18	0.02	0.2
12	HT-C Commercial	75.76	10.91	86.67
13	HTI/ Industrial - Connected at 11/33kV	585.11	80.46	665.57
14	HTI / Industrial- Connected at 110kV	101.98	17.51	119.49
15	HT-Industrial (F/M, Steel Melt, Power Intensive)	215.87	29.83	245.7
16	HTAG/ Agriculture (Pump stets/Irrigation)	1.03	0	1.03
17	HTAG/Agriculture (Allied Activities)	0.86	0	0.86
18	HT.MES / Defence Establishment	15.45	2.13	17.58
	Sub Total	**996.24**	**140.86**	**1137.10**
	C. Temporary Supply			
19	L.T Temporary Domestic	1.35	0.15	1.5
20	L.T Temporary Commercial	22.52	2.81	25.33
21	H.T. Temporary	0.39	0.01	0.4
	Sub Total	**24.26**	**2.97**	**27.23**
	D. Single Point Supply			
22	Residential Complexes	0.00	0.00	0.00

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
23	Commercial Complexes	3.35	0.64	3.99
24	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**3.35**	**0.64**	**3.99**
	D. Others			
25	Unmeterd LTPL	1.59	0.27	1.86
26	RRC referred	1.15	0.1	1.25
	Sub Total	**2.74**	**0.37**	**3.11**
	Total	**1524.49**	**214.95**	**1739.44**

The Commission approves the revenue from the sale of power as INR 1739.44 Cr. in the True-up of the FY 2017-18.

3.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 42.61 Cr is arrived at in the True-up of FY 2017-18.

Commission's analysis

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

Table 42: Standalone Revenue Gap/ (Surplus) determined by Commission for FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1845.32	1782.05	1698.10
2	Revenue from Tariff including FPPCA	1563.67	1739.44	1739.44
3	**Net Gap / (Surplus)**	**281.65**	**42.61**	**(41.34)**
4	Less: Budgetary Support from Govt	281.65	42.61	**(41.34)**
5	**Net Final Revenue Gap to be carry forward**	**NIL**	**NIL**	**NIL**

The Commission, in the True-up of FY 2017-18 approves a standalone surplus of INR (41.34 Cr.). The Petitioner has submitted that the entire gap for the FY 2017-18 is committed to be funded by the Government of Goa by way of budgetary support. The Petitioner in this regard has submitted the letter dated 23rd December 2016 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2017-18. However, instead of gap, the Commission has arrived at revenue surplus at the end of FY 2017-18 and the same has been carried forward in the future years.

4. Chapter 4: True-up of the FY 2018-19

4.1. Applicable Provisions and Background

The Commission issued the Order on Aggregate Revenue Requirement (ARR) for 1st MYT Control Period (FY 2016-17 to FY 2018-19) on 18th April 2016 (hereinafter referred to as the "MYT Order"). Further, the Annual Revenue Requirement for FY 2018-19 and retail tariff for FY 2018-19 was approved on 28th March 2018 (hereinafter referred to as the "ARR Order"). The Annual Performance Review (APR) for FY 2018-19 was not taken-up by the Commission as the data submitted by the Petitioner for the APR of 2018-19 was not reliable.

The True up for the FY 2018-19 is being carried out in accordance with Regulation 8(2) of the JERC MYT Regulations, 2014, stated as following:

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

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

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

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

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

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

4.2. Approach for True-up for FY 2018-19

The Petitioner has requested for True-up of FY 2018-19 and submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the ARR Order.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2018-19 based on the audited accounts submitted by the Petitioner and has carried out the True-up exercise in accordance with the principles laid down in the JERC MYT Regulations, 2014 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2018-19 as 3704.68 MU as against approved energy sales quantum of 3644.93 MU in the ARR Order.

Commission's Analysis

The Commission, after going through the submissions of the Petitioner including the audited accounts, has considered the energy sales as 3704.68 MU as submitted by the Petitioner for the purpose of True-up of the FY 2018-19 as shown in the following table:

Table 43: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	999.35	1077.67	1077.67
2	LTD/L.I.G.	1.10	1.46	1.46
3	LTC/Commercial	325.42	393.35	393.35
4	LTP Mixed (Hotel Industries)	5.31	3.41	3.41
5	LT-I Industrial	137.42	88.41	88.41
6	LTAG/Agriculture (Pump sets/Irrigation)	23.86	15.12	15.12
7	LTAG/Agriculture (Allied Activities)	0.00	0.84	0.84
8	Street Light	36.95	26.27	35.38
9	Hoardings/Signboards	0.35	0.14	0.14
	Sub-Total	**1529.76**	**1606.66**	**1606.67**
	B. HIGH TENSION SUPPLY			
10	HT-D Domestic	0.28	0.28	0.28
11	HT- C Commercial	79.05	107.76	107.76
12	HTI/ Industrial- Connected at 11/33 kV	1165.47	1169.24	1169.24
13	HTI / Indutrial – Connected at 110 kV	232.62	237.55	237.55
14	HT-Industrial (f/M, Steel Melt, Power Intensive)	582.70	509.89	509.89
15	HTAG/Agriculture (Pump Sets/Irrigation)	6.08	5.01	5.01
16	HTAG/Agriculture (Allied Activities)	0.00	4.80	4.80
17	HT. MES/ Defence Establishment	26.89	25.58	25.58
	Sub-Total	**2093.09**	**2065.96**	**2060.11**
	C. TEMPORARY SUPPLY			
18	L.T. Temporary Domestic	2.74	1.36	1.36
19	L.T. Temporary Commercial	19.34	20.56	20.56
20	H.T. Temporary	0.00	1.03	1.03
	Sub-Total	**22.08**	**22.95**	**22.95**
	D. SINGL POINT SUPPLY			
21	Residential Complexes	0.00	0.00	0.00
22	Commercial Complexes		5.85	5.85
23	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**0.00**	**5.85**	**5.85**
	Total	**3644.93**	**3704.68**	**3704.68**

The Commission approves the energy sales as 3704.68 MU in the True-up of FY 2018-19.

4.4. Open Access Sales and Purchase

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

The Commission approves NIL energy sales and purchase under Open Access in the True-up of the FY 2018-19.

4.5. Inter-State Transmission loss

Petitioner's submission

Petitioner has submitted the Inter-State transmission loss of 3.51% against a loss of 4.41% approved in the ARR Order.

Commission's analysis

The Commission in this regard directed the Petitioner to submit the supporting documentary evidence to verify the loss levels. The Petitioner has submitted that they have computed the inter-state transmission loss considering the total scheduled energy at Ex-bus and the state periphery. Therefore, the Commission has considered the difference between the total energy scheduled at Ex-Bus periphery and the total energy scheduled at state periphery for computing the transmission losses. The Commission accordingly trues-up the Inter-State Losses as shown in the following table.

Table 44: Inter-State transmission loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	4.41%	3.51%	4.64%

The Commission trues-up weighted average Inter-State Transmission Loss as 4.64% in the True-up of the FY 2018-19.

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

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 13.46% in the FY 2018-19 against an approved loss of 10.75%.

Commission's analysis

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2018-19. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawl at State periphery as registered in the energy meters at the state periphery and the energy sales as approved above. Therefore, the Commission has determined the Intra-State T&D loss of 13.46% for the FY 2018-19 against an approved loss of 10.75% in the ARR Order. The dis-incentive for the under-achievement of T&D Loss target in the FY 2018-19 is dealt with in Section 3.19.1 of this Order.

The table below provides the Intra-State T&D loss approved in the ARR of FY 2018-19, Petitioner's submission and as trued-up by the Commission now.

Table 45: Intra-State transmission and distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	10.75%	13.46%	13.46%

The Commission, while Truing up for FY 2018-19, has considered the actual Intra-State T&D loss of 13.46% for the FY 2018-19. However, the dis-incentive for excess purchase of power on account

of under-achievement of T&D loss target has been detailed in Section 4.19 and has been deducted from the trued-up ARR.

4.7. Power Purchase Quantum & Cost

Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and Co-generating Companies like Vedanta Plant 1, Vedanta Plant 2 and Goa Sponge & Power Ltd. Energy requirement is also met through NVVNL, traders and power exchanges. The Power Purchase Cost has been submitted as incurred by the Petitioner in FY 2018-19. The Power Purchase cost also includes ED, Cess, Incentive etc. and supplementary charges considered on actual basis.

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

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

The power purchase quantum and cost for FY 2018-19, as submitted by the Petitioner has been shown in the following table:

Table 46: Power Purchase cost submitted by the Petitioner (in INR Cr)

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,637.28**	**168.30**	**349.75**	**612.15**	**27.56**	**(13.98)**	**975.48**
	KSTPS	*1,544.22*	*127.45*	*103.35*	*196.81*	*16.26*	*(0.57)*	*315.85*
	VSTPS - I	*279.80*	*153.93*	*23.34*	*43.07*	*2.13*	*1.72*	*70.26*
	VSTPS - II	*120.07*	*144.05*	*7.90*	*17.30*	*1.13*	*0.88*	*27.21*
	VSTPS -III	*108.47*	*144.15*	*10.40*	*15.64*	*1.18*	*0.56*	*27.78*
	VSTPS-IV	*133.60*	*144.31*	*18.81*	*19.28*	*1.58*	*0.70*	*40.36*
	VSTPS-V	*59.71*	*145.56*	*9.41*	*8.69*	*0.57*	*0.33*	*19.00*
	KGPP	*42.82*	*256.87*	*7.62*	*11.00*	-	*0.13*	*18.75*
	GGPP	*24.30*	*241.17*	*9.53*	*5.86*	-	*0.08*	*15.47*
	SIPAT- I	*239.55*	*121.29*	*29.00*	*29.05*	*2.76*	*0.41*	*61.23*
	FSTPS	-	-	-	-	-	-	-
	KSTPS-III	*56.52*	*125.54*	*7.24*	*7.09*	*0.75*	*(0.05)*	*15.03*
	TSTPS	-	-	-	-	-	-	-
	KHSTPS-I	-	-	-	-	-	-	-
	RSTPS	*682.95*	*251.36*	*50.06*	*171.67*	*0.00*	*(1.69)*	*220.03*
	SIPAT- II	*104.60*	*125.62*	*12.15*	*13.14*	*1.20*	*0.10*	*26.59*
	Solapur	*34.73*	*395.53*	*17.88*	*13.74*	-	*(0.15)*	*31.47*
	Mouda I	*86.26*	*296.22*	*22.15*	*25.55*	-	*1.02*	*48.73*
	Mouda II	*119.68*	*286.26*	*20.93*	*34.26*	-	*0.33*	*55.52*
	Add/ Less: Other Adjustment	-		-	-	-	*(0.02)*	*(0.02)*
	Rebate	-		-	-	-	*(17.77)*	*(17.77)*
								-
II	**RGPPL**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

			-					
III	**NPCIL**	**150.21**	**559.22**	**-**	**44.65**	**-**	**(2.31)**	**42.34**
	KAPS	33.21	247.93	-	8.23	-	(1.43)	6.81
	TAPS	116.99	311.28	-	36.42	-	(0.88)	35.54
								-
IV	**Traders**	**68.93**	***947.07***		**65.28**	**-**	**(0.15)**	**65.13**
	a)IEX PURCHASE	208.73	*507.72*		105.98			105.98
	b)IEX SALES	(152.26)	*314.94*		(47.95)			(47.95)
	c) Traders	12.46	*582.25*	-	7.26	-	(0.15)	7.11
V	***NET UI (OVER DRAWAL)***	**51.76**	***615.43***	**-**	**31.86**	**-**	**-**	**31.86**
VI	***Banking of Power***	**12.65**		**-**	***0.37***	**-**	**-**	**0.37**
B	**Within State Generations**							
I	**CO-GENERATION**	**198.56**	***238.99***	**-**	**47.45**	**-**	**(0.44)**	**47.01**
	Vedanta Plant-1	*109.03*	240.48	-	*26.22*	-	*(0.04)*	26.18
	Vedanta Plant -2	*84.64*	237.02	-	*20.06*	-	*(0.40)*	19.66
	Goa Sponge and private limited	*4.88*	239.85	-	*1.17*	-	-	1.17
C	**RPO Obligation**	***310.19***	***513.68***	**-**	***159.34***	**-**	***(3.47)***	***155.87***
	Solar STOA	*60.13*	*479.67*	-	*28.84*	-	*(1.46)*	*27.38*
	NVVNL Solar	*12.50*	*854.71*	-	*10.68*	-	*(0.21)*	*10.47*
	SECI Solar	*50.12*	584.00	-	*29.27*	-	*(0.01)*	29.26
	Non Solar STOA	*186.06*	482.94	-	*89.86*	-	*(1.80)*	88.06
	Hindustan Waste Treatment Plant	*1.38*	497.84	-	*0.69*	-	-	0.69
D	**REC Certificates**			**-**	***5.34***	**-**	**-**	**5.34**
	Solar							-
	Non Solar							-
E	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**161.45**	**-**	**161.45**
	PGCIL Transmission Charges, Wheeling, Oen Access & Trading Marrgin & Other Charges			-	-	*161.45*	-	161.45
F	**Total**	**4,429.57**	**218.18**	**349.75**	**966.43**	**189.03**	**(20.34)**	**1,484.87**

Commission's analysis

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, Co-Generating Plants, IPP's, Exchange etc. The Petitioner has submitted the overall Power Purchase cost as INR 1,484.87 Cr inclusive of transmission charges. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc. The Petitioner has also included an adjustment of 12.65 MUs on account of banking adjustment.

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

Further, the Commission has verified the UI weekly data from the DSM account maintained by Western Region Power Committee (WRPC) and Southern Region Power Committee (SRPC) and found certain discrepancies. The Petitioner while claiming the cost and quantum of UI, has not considered the few days of April 2018. However, the Commission has only considered the UI sale and receivable pertaining to FY 2018-19 while allowing the power purchase cost and MUs.

The Commission also sought the details and nature of banking power. The Petitioner submitted that the Banking transaction shown in the Petition is a Power Swap arrangement carried out by EDG. EDG in such arrangements swaps power to needy Utility through CERC licensed trader during the off-season period or during its surplus regime (Normally during July to September when Goa has low demand) and accepts the power during peak hours (18.00 to 24.00 Hrs). The power is swapped to EDG during the Peak Season of Goa as per the LOIs issued depending on the requirement of EDG. In this arrangement there are no financial transactions towards cost of power except trading margin and Open Access charges. Sometime the return power to EDG is on premium of 102% to 103% which means if 100 MUs are supplied by EDG then 102 MUs to 103 MUs are accepted by EDG under this arrangement.

The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2018-19 has adjusted the Income from UI Under-drawal in the Power Purchase cost approved now. Transmission Charges and the Other Charges submitted have been considered as Other Expenses as per actuals incurred by the Petitioner.

The Commission has considered the cost incurred towards the compliance of Renewable Purchase Obligation (RPO) in FY 2018-19 along with the Power Purchase cost. The compliance status of RPO has been discussed in detail in the subsequent section. The table below provides the summary of the power purchase quantum and the cost approved by the Commission for FY 2018-19.

Table 47: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,637.28**	**168.30**	**349.75**	**612.15**	**27.56**	**(13.98)**	**975.48**
	KSTPS	*1,544.22*	*127.45*	*103.35*	*196.81*	*16.26*	*(0.57)*	*315.85*
	VSTPS - I	*279.80*	*153.93*	*23.34*	*43.07*	*2.13*	*1.72*	*70.26*

	VSTPS - II	120.07	144.05	7.90	17.30	1.13	0.88	27.21
	VSTPS -III	108.47	144.15	10.40	15.64	1.18	0.56	27.78
	VSTPS-IV	133.60	144.31	18.81	19.28	1.58	0.70	40.36
	VSTPS-V	59.71	145.56	9.41	8.69	0.57	0.33	19.00
	KGPP	42.82	256.87	7.62	11.00	-	0.13	18.75
	GGPP	24.30	241.17	9.53	5.86	-	0.08	15.47
	SIPAT- I	239.55	121.29	29.00	29.05	2.76	0.41	61.23
	FSTPS	-	-	-	-	-	-	-
	KSTPS-III	56.52	125.54	7.24	7.09	0.75	(0.05)	15.03
	TSTPS	-	-	-	-	-	-	-
	KHSTPS-I	-	-	-	-	-	-	-
	RSTPS	682.95	251.36	50.06	171.67	0.00	(1.69)	220.03
	SIPAT- II	104.60	125.62	12.15	13.14	1.20	0.10	26.59
	Solapur	34.73	395.53	17.88	13.74	-	(0.15)	31.47
	Mouda I	86.26	296.22	22.15	25.55	-	1.02	48.73
	Mouda II	119.68	286.26	20.93	34.26	-	0.33	55.52
	Add/ Less: Other Adjustment	-		-	-	-	(0.02)	(0.02)
	Rebate	-		-	-	-	(17.77)	(17.77)
								-
II	**RGPPL**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
			-					
III	**NPCIL**	**150.21**	**559.22**	**-**	**44.65**	**-**	**(2.31)**	**42.34**
	KAPS	33.21	247.93	-	8.23	-	(1.43)	6.81
	TAPS	116.99	311.28	-	36.42	-	(0.88)	35.54
								-
IV	**Traders**	**68.93**	**947.07**		**65.28**	**-**	**(0.15)**	**65.13**
	a)IEX PURCHASE	208.73	507.72		105.98			105.98
	b)IEX SALES	(152.26)	314.94		(47.95)			(47.95)
	c) Traders	12.46	582.25	-	7.26	-	(0.15)	7.11
V	***NET UI (OVER DRAWAL)***	**49.90**	**625.12**	**-**	**31.19**	**-**	**-**	**31.19**
VI	***Banking of Power***	**12.65**		**-**	***0.37***	**-**	**-**	**0.37**
B	**Within State Generations**							
I	**CO-GENERATION**	**198.56**	**238.99**	**-**	**47.45**	**-**	**(0.44)**	**47.01**
	Vedanta Plant-1	109.03	240.48	-	26.22	-	(0.04)	26.18

	Vedanta Plant - 2	*84.64*	237.02	-	*20.06*	-	*(0.40)*	19.66
	Goa Sponge and private limited	*4.88*	239.85	-	*1.17*	-	-	1.17
C	**RPO Obligation**	***309.61***	***515.61***	**-**	***159.64***	**-**	***(3.47)***	***156.17***
	Solar STOA	*59.53*	476.43	-	*28.36*	-	*(1.46)*	26.90
	NVVNL Solar	*12.52*	915.62	-	*11.46*	-	*(0.21)*	11.25
	SECI Solar	*50.12*	584.00	-	*29.27*	-	*(0.01)*	29.26
	Non Solar STOA	*186.06*	482.94	-	*89.86*	-	*(1.80)*	88.06
	Hindustan Waste Treatment Plant	*1.38*	497.84	-	*0.69*	-	-	0.69
D	**REC Certificates**			**-**	***5.34***	**-**	**-**	**5.34**
	Solar							-
	Non Solar							-
E	**OTHER CHARGES**	**-**	**-**	**-**	**-**	**161.45**	**-**	**161.45**
	PGCIL Transmission Charges, Wheeling, Oen Access & Trading Marrgin & Other Charges			-	-	*161.45*	-	161.45
F	Total	4,427.12	218.22	349.75	966.07	189.01	(20.34)	1484.48

The Commission approves power purchase quantum of 4,427.12 MU and cost of INR 1,484.48 Cr in the True-up of the FY 2018-19.

4.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

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

Commission's analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 9.00% of its total consumption (including 3.60% from Solar) from renewable sources for the FY 2018-19.. Accordingly, the cumulative obligation and fulfillment till FY 2018-19 has been determined in the following table:

Table 48: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Sales within State (MU) (A)	2182.48	2880.11	2925.24	3070.56	3439.99	3420.90	3091.98	3654.89	3704.69
Hydro Power available at State Periphery (MU) (B)	0.00	0.00	0.00	0.00	0.00	12.62	72.88	0	0
T&D Loss (%) (C)	13.50%	9.46%	13.15%	11.16%	8.23%	15.36%	20.38%	10.36%	13.46%
T&D Loss (MU) (D = B * C)	0.00	0.00	0.00	0.00	0.00	1.94	14.85	0.00	0.00
Hydro Power Consumed (E = B - D)	0.00	0.00	0.00	0.00	0.00	10.68	58.03	0.00	0.00
Conventional Power Consumed (F = A - E)	**2182.48**	**2880.11**	**2925.24**	**3070.56**	**3439.99**	**3410.21**	**3033.95**	**3654.89**	**3704.69**
RPO obligation (%)	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**	**9.00%**
Solar (G)	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%	3.60%
Non-Solar (H)	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%	5.40%
RPO obligation for the year (MU)	**21.82**	**57.60**	**87.76**	**92.12**	**113.52**	**121.06**	**147.15**	**244.88**	**333.42**
Solar (F * G)	5.46	8.64	11.70	12.28	20.64	28.99	50.06	91.37	133.37
Non-Solar (F * H)	16.37	48.96	76.06	79.83	92.88	92.08	97.09	153.51	200.05
RPO Compliance (Physical Power + Certificates) (MU)	**0.00**	**128.14**	**71.80**	**29.20**	**152.56**	**167.52**	**65.54**	**243.26**	**340.19**
Solar	0.00	0.00	0.00	0.00	6.58	79.90	65.54	84.14	138.74
Non-Solar	0.00	128.14	71.80	29.20	145.98	87.62	0.00	159.12	201.44
Cumulative RPO Shortfall (MU)	**21.82**	**14.10**	**30.05**	**92.97**	**53.93**	**7.47**	**103.32**	**104.94**	**98.18**
Solar	5.46	14.10	25.80	38.08	52.14	1.23	-	7.23	1.86
Non-Solar	16.37	-	4.25	54.89	1.78	6.24	103.32	97.71	96.32
Cumulative RPO Compliance (MU)	**0.00**	**128.14**	**199.94**	**229.14**	**381.70**	**549.23**	**614.76**	**858.03**	**1,198.21**
Solar	0.00	0.00	0.00	0.00	6.58	86.48	152.02	236.16	374.90
Non-Solar	0.00	128.14	199.94	229.14	375.13	462.75	462.75	621.87	823.31

As can be seen from the table as earlier, a cumulative gap of 98.18 MU is pending till the end of FY 2018-19. The same has to be carried forward to subsequent years and shall be taken up in the True ups of respective years.

4.9. *Energy Balance*

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2018-19 as shown in the following table.

Table 49: Energy Balance (MU) submitted by Petitioner

S. No	Particulars	Petitioner's Submission
1	**Energy Input at Goa Periphery**	**4082.36**
2	**Total Power Scheduled/ Purchased at Goa Periphery**	
	Total Schedule Billed Drawal – CGS	3787.48
	Add: Overdrawal	72.51
	Add: Power purchase from Traders	68.93
	Add: Power purchase from NVVN / Banking	12.65
	Less: Underdrawal	20.75
	Less: banking Power	
	Add: Renewable Power	310.19
	Less: Power diverted to Exchange	
	Total	**4231.01**
3	**PGCIL Losses – MUs**	**148.65**
	PGCIL Losses - %	**3.51%**
4	**Total Power Purchased within Goa State**	
	Add: Co-generation	198.56
	Add: Independent Power Producers (IPP)	
	Total	**198.56**
5	**Total Power Purchase availability after PGCIL Losses**	**4280.92**
	Less: Retail Sales to Consumers	3704.68
	Distribution Losses – MUs	576.23
6	**Distribution Losses - %**	**13.46%**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for FY 2018-19 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by WRPC and SRPC and documentary evidence submitted by the Petitioner against the Inter-State Transmission Loss, the Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance as submitted by the Petitioner and now trued-up by the Commission.

Table 50: Energy Balance (MU) approved by Commission

S. No	Particulars	Trued-up by Commission
1	Sales within the State	3704.68
2	Intra-State T&D Loss (%)	13.46%
3	Intra-State T&D Loss	576.23
4	**Energy Requirement at Periphery**	**4280.92**
1	Total Schedule Billed Drawal - CGS	3787.48
2	Add: Power purchase from Traders/ Open Market	221.19
3	Less: Power diverted to Exchange	152.26
4	Add: Renewable Power	309.61
5	Add: Banking Power	12.65
	Total Power Scheduled/ Purchased at Ex-Bus Periphery (A)	**4228.56**

S. No	Particulars	Trued-up by Commission
1	Energy input at state periphery (a)	4082.36
2	Add: Over-drawal	70.64
3	Less: Under-drawal	20.75
	Total Power Scheduled/ Purchased at Goa Periphery (B)	**4032.46**
1	PGCIL Losses – MU (A-B)	196.10
2	PGCIL Losses - % (A-B)/A	4.64%
3	Add: Within state generation (b)	198.56
	Energy Available at Periphery (a+b)	**4280.92**

4.10. Operation & Maintenance (O&M) Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

4.10.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of INR 325.73 Cr against the approved expenses of INR 270.41 Cr in the ARR of FY 2018-19.

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

Table 51: Employee Expenses submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Salaries &Allowances	325.73
2	Terminal Benefits	
3	Other Salary Payments	

S. No	Particulars	Petitioner's Submission
4	Total	**325.73**
5	Less: Add/Deduct share of others	
6	Total	**325.73**
7	Less: Amount capitalized	
8	Net Amount	**325.73**
9	Add: Pension/DA and other Provision	
	Total Employee Expenses	**325.73**

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2018-19 are reflected as INR 325.73 Cr. However, in accordance with the JERC MYT Regulations, 2014, the Employee expenses are controllable and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative employee expenses as INR 270.41 Cr (including impact of 7th Pay Commission). As the normative employee expenses approved in the ARR Order are lesser than the actual employee expenses, the Commission considers the normative expenses of INR 241.71 Cr. As there was no additional expenses on account of 7Th pay Commission, the same has not been considered while allowing the employee expenses.

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

Table 52: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Normative Employee Expenses	241.71	325.73	241.71
2	7th Pay Commission arrears	28.70		0.00
3	**Employee Expenses**	**270.41**	**325.73**	**241.71**

The Commission approves Employee Expenses of INR 241.71 Cr in the True-up of FY 2018-19.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of INR 27.42 Cr in FY 2018-19. The following table provides the A&G expenses as submitted by the Petitioner:

Table 53: A&G Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Travelling Expenses	0.28
2	Office Expenses	15.60
4	Petrol, Oil, Lubricant (P.O.L)	0.01
5	Rent, Rates & Taxes	0.68
6	Advertisement & Publicity	0.82
7	Professional & Special Services	0.79
8	Other A&G Charges	7.96
9	Overtime Allowance	
10	Minor Works	1.17
11	Audit of Accounts and Professional Fees	0.10
13	**Total**	**27.42**

S. No.	Particulars	Petitioner's Submission
14	Less: share of others	
15	**Total expenses**	**27.42**
16	Less: Capitalized	
17	**Net expenses**	**27.42**
18	Add: Prior period	
19	**Total A&G Expenses**	**27.42**

Commission's analysis

Similar to the approach followed while approving the Employee Expenses, the A&G expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved the normative A&G expenses as INR 10.81 Cr. As the normative A&G expenses approved in the ARR Order are lesser than the actual A&G expenses, the Commission considers the normative expenses of INR 10.81 Cr.

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

Table 54: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Administration & General Expenses (A&G)**	**10.81**	**27.42**	**10.81**

The Commission approves the Administrative & General (A&G) expenses of INR 10.81 Cr in the True-up of FY 2018-19.

4.10.3. Repair & Maintenance (R&M) Expenses

Petitioner's submission

The Petitioner has incurred R&M expenses of INR 26.32 Cr against the approved expenses of INR 45.60 Cr in the ARR Order. The following table provides the R&M expenses as submitted by the Petitioner:

Table 55: R&M Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Plant & machinery	26.32
2	Building (Electricity Residential & Non-Residential)	
3	Hydraulic works & civil works	
4	Line cable & network	
5	Vehicles	
6	Furnitures & Fixtures	
7	Office Equipment	
9	Minor R&M works	
10	**Total**	**26.32**
11	Add/Deduct share of others	
12	**Total expenses**	26.32
13	Less : Capitalized	
14	**Net expenses**	26.32

S. No.	Particulars	Petitioner's Submission
15	Add: prior period	
16	**Total R&M expenses**	**26.32**

Commission's analysis

The R&M expenses are controllable as per JERC MYT Regulations, 2014 and therefore, are allowed on a normative basis. The Commission, in the ARR Order, had approved Kb (percentage point as per the norm) as 2.92% and inflation index as 7.33%. The same have been considered for determining the normative R&M expenses for FY 2018-19. As now the opening GFA has been changed due to truing up of the early years, therefore, the same (GFA of Rs. 1,236.61 Cr.) has been considered as per the annual audited accounts. Accordingly, the normative R&M expenses have been worked out as follows:

Table 56: Normative R&M Expenses worked out by the Commission (In INR Cr)

S. No	Particulars	Normative Expenses
1	Opening GFA as per the annual audited accounts	1236.61
2	Kb approved in the ARR Order	2.92%
3	Inflation index approved in the ARR Order	7.33%
4	**Total Normative R&M Expenses**	**38.75**

As the normative R&M expenses are higher than the actual R&M expenses of INR 27.05 Cr, the Commission considers the actual R&M expenses of INR 26.32 Cr. The sharing of gains on account of over-achievement of norms is dealt with in Section 4.19.2.

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

Table 57: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Normative R&M expenses approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**45.60**	**26.32**	**26.32**

The Commission approves the normative Repair & Maintenance (R&M) expenses of INR 26.32 Cr in the True-up of FY 2018-19.

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

The following table provides the O&M Expenses approved in the ARR of FY 2018-19, Petitioner's submission and O&M now trued-up by the Commission.

Table 58: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	270.41	325.73	241.71
2	Administrative & General Expenses (A&G)	10.81	27.42	10.81
3	Repair & Maintenance Expenses	45.60	26.32	26.32
4	**Total Operation & Maintenance Expenses**	**326.82**	**379.46**	**278.84**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 278.84 Cr in the True-up of FY 2018-19.

4.11. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation for the FY 2018-19 as INR 42.01 Cr against an approved capitalization of INR 685.27 Cr

Commission's analysis:

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

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

The Commission has examined the Fixed Asset Register (FAR) for FY 2018-19 as submitted by the Petitioner in detail and accordingly approves the capitalisation as shown in the following table.

Table 59: Capitalisation approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Capitalisation**	**685.27**	**42.01**	**42.01**

The Commission approves the capitalisation of INR 42.01 Cr in the True-up of FY 2018-19.

4.12. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2018-19 excluding depreciation on assets created out of grants. The depreciation is arrived in annual accounts for FY 2018-19 based on the rates specified in the relevant CERC Tariff Regulations, 2014.

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

Table 60: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	1040.06
2	Addition During the FY	42.01
3	Less: Capitalisation through Grants and Electricity Duty	25.29
4	Adjustment/Retirement During the FY	4.49
5	Closing Gross Fixed Assets	1052.30
6	Average Gross Fixed Assets	
7	Rate of Depreciation	5.18%
8	**Depreciation**	**54.23**

Commission's analysis

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

"

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

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

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

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

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

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

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

Table 61: Depreciation Rate (%)

Description	Opening Depreciable GFA	Less: Grants through EDF till 2017-18	Addition during the year	Deletion During the Year	Capitalisation through EDF	Closing Depreciable GFA	Average Depreciable GFA	Rate	Depreciation
Plant & Machinery	1090.20	208.26	39.82	4.29	23.97	893.51	887.72	5.28%	46.87
Building & Civil Engineering Works	13.24	2.53	0.00	0.04	0.00	10.68	10.70	3.34%	0.36
Furniture & Fixtures & Office Equipments	52.23	10.21	2.17	0.05	1.31	42.83	42.43	6.33%	2.69
Land	6.30	1.19	0.00	0.00	0.00	5.11	5.11	0.00%	0.00
Vehicles	3.70	0.70	0.02	0.12	0.01	2.88	2.94	9.50%	0.28
Computer & Others	70.93	13.44	0.00	0.00	0.00	57.50	57.50	15.00%	8.62
Total	**1236.61**	**236.33**	**42.01**	**4.49**	**25.29**	**1012.51**	**1006.39**	**5.84%**	**58.82**

The weighted average depreciation rate has been computed as 5.84% against a rate of 5.28% approved in the ARR Order.

The Commission has considered the opening GFA as INR 1000.28 Cr for calculation of depreciation for FY 2018-19, determine as follows:

Table 62: Opening GFA (net of capitalisation through EDF/Govt. Grants) approved by the Commission for FY 2018-19 (In INR Cr)

S. No	Particulars	Trued-up by Commission
1	Opening GFA as per Audited Annual Accounts	1236.61
2	Less: Assets capitalized through EDF from FY 2008-09 to FY 2017-18	236.33
3	**Opening GFA (net of capitalisation through EDF/Govt. Grants)**	**1000.28**

In respect of addition of GFA during the FY, the Commission has not considered depreciation on assets created from the Electricity Duty Fund, as the same has been treated as a Grant from the Government of Goa, in line with the approach adopted in the True-up of FY 2017-18. Further, the assets retired during the year were also not considered for computing the depreciation. The following table provides the calculation of depreciation during the FY 2018-19:

Table 63: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening GFA (Closing GFA of FY 2017-18)	1454.96	1040.06	1000.28
2	Addition During the FY	685.27	42.01	42.01
3	Less: Capitalisation through Grants and Electricity Duty	125.77	25.29	25.29
4	Less: Value of Assets sold/disposed off		4.49	4.49
7	Closing Gross Fixed Assets	2014.46	1052.30	1012.51
8	Average Gross Fixed Assets	1734.71	1046.18	1006.39
9	Weighted average Rate of Depreciation (%)	5.28%	5.18%	5.84%
10	**Depreciation**	**91.59**	**54.23**	**58.82**

The Commission approves depreciation of INR 58.82 Cr in the True-up of FY 2018-19.

4.13. Interest and Finance Charges

Petitioner's submission

The Petitioner has estimated Interest on Loan based on the normative loan calculation whereby 70% of the capitalization (net of capitalisation from grants) during the year have been considered as normative debt addition during the year. Opening balance of normative loan for FY 2018-19 is considered as per the approved closing normative loan in truing up of FY 2017-18. Further, the rate of interest has been considered as State Bank of India Prime Lending Rate (SBI PLR) of 13.45% (rate as on 1st April 2018). Further, the Petitioner has considered finance charges of INR 2.52 Cr. as per audited annual accounts.

Commission's analysis:

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

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on 1st April 2018. Further, in accordance with the JERC MYT Regulations, 2014, the interest has been calculated on the average normative loan during the year with the opening loan considered equivalent to the closing loan approved in the truing up of FY 2017-18. The addition in loan has been considered as explained above and the repayment is considered the same as depreciation during the year. Further, the Commission has considered finance charges of INR 2.52 Cr. as per audited annual accounts.

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

Table 64: Interest and Finance charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	773.99	203.58	199.33
2	Add: Normative Loan During the year	391.65	11.71	11.71
3	Less: Normative Repayment	91.59	54.23	58.82
4	Closing Normative Loan	1074.05	161.05	152.22
5	Average Normative Loan	924.02	182.31	175.78
6	Rate of Interest (%)	11.60%	13.45%	13.45%
7	**Interest on Loan**	**107.19**	**24.52**	**23.64**
8	Financing Charges		2.52	2.52
9	**Interest and Finance Charges**	**107.19**	**27.04**	**26.16**

The Commission approves Interest and Finance Charges of INR 26.16 Cr in the True-up of the FY 2018-19.

4.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations, 2014. Opening equity has been considered as 30% of GFA computed by the Petitioner for FY 2018-19 (Net of assets funded by consumer contribution, capital subsidies and grants). The equity addition has been considered to the tune of 30% of assets capitalized (net of capitalisation from grants) during the year. The rate of RoE has been considered as 16% on post tax basis as per JERC MYT Regulations, 2014.

Commission's analysis:

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

"

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

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

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

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

As the complete asset capitalisation during the year has been funded through equity, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalisation (net of capitalisation through ED and Government Grants) in line with the JERC MYT Regulations, 2014.

The Commission noted that the Petitioner has not made any adjustment in respect of the assets retired during the year in equity. The 30% of the assets retired during the FY 2018-19 as per the audited books of accounts has also been deducted from the capitalisation during the year assuming, they have completed the useful life and the debt was repaid. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% on post-tax basis.

Table 65: Return on Capital Base approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	436.49	302.29	290.63
2	Additions on account of new capitalisation (net of grants and retirement)	167.85	5.02	3.67
3	Closing Equity	604.34	307.31	294.29
4	Average Equity	520.42	304.80	292.46
5	Return on Equity (%)	16.00%	16.00%	16.00%
6	**Return on Equity**	**83.27**	**48.77**	**46.79**

The Commission approves a Return on Equity as INR 46.79 Cr in the True-up of FY 2018-19.

4.15. Interest on Consumer Security Deposits

Petitioner's submission

The Petitioner has considered the interest on Consumer Deposits in line with the Regulation 6.10 (8) of the Electricity Supply Code Regulations, 2010. The interest on Consumer Security Deposits has been considered as the Bank Rate notified by RBI as on 01st April 2018 i.e. 6.25%. However, the Petitioner has considered the actual Interest on Security Deposit of INR 5.63 Cr. paid as per the annual audited accounts.

Table 66: Interest on Consumer Security Deposits submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Security Deposit	29.30
2	Add: Deposits During the year	14.23
3	Less: Deposits refunded	3.65
4	Closing Security Deposit	39.88
5	Average Security Deposit	34.59
6	Rate of Interest (%)	6.25%
7	**Interest on Security Deposit**	**2.16**
8	**Interest paid to consumers**	**5.63**

Commission's analysis:

As per Regulation 6.10 (8) of the JERC Electricity Supply Code Regulations, 2010

"The distribution licensee shall pay interest, at the bank rate notified by the Reserve Bank of India from time to time on such security deposits taken from the consumer. In this regard it shall be the responsibility of the licensee to keep a watch on the bank rate from time to time. The interest amount of previous financial year shall be adjusted in the energy bill issued in May / June of each financial year depending on billing cycle."

As per Section 47 (5) of the Electricity Act, 2003, the Petitioner has to pay the interest on the security deposits available with it and same shall be claimed in the ARR filed by the Petitioner. The Petitioner shall maintain the registers of security deposits collected from the consumers every year and pay the interest as per the bank rate of interest.

Accordingly, the Commission has considered the interest on consumer security deposits as per audited annual accounts as follows:

Table 67: Interest on Consumer Security Deposits as approved by the Commission (In INR Cr)

S. No	Particulars	As per Annual Audited Accounts
1	Opening Security Deposit	29.29

S. No	Particulars	As per Annual Audited Accounts
2	Add: Deposits During the year	14.23
3	Less: Deposits refunded	3.65
4	Closing Security Deposit	39.87
5	Average Security Deposit	34.58
6	Rate of Interest (%)	6.25%
7	**Interest on Security Deposit**	**2.16**
8	**Interest on Security Deposit paid during the year**	**5.63**

The Commission noted that the actual interest on security deposit paid during the year is higher than the normative interest on security deposit and sought the details from the Petitioner. The Petitioner has submitted that it is on account of past period discharge as in previous years, a lower interest on security deposit was paid.

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

Table 68: Interest on Consumer Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**7.02**	**5.63**	**5.63**

The Commission approves Interest on Security Deposit as INR 5.63 Cr. in the True-up of FY 2018-19.

4.16. Interest on Working Capital

Petitioner's submission

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

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

(e) Receivables of two months of billing

(f) Less: power purchase cost of one month

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

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

The interest on working capital is computed at 8.70% (SBI base rate as on 1st April 2018) as has been shown in the table below:

Table 69: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Receivables of two months of billing	333.23
2	Less: Power Purchase Cost for one month	123.74
3	Less: Security Deposit excluding BG/FDR	29.30
4	Net Working Capital Requirement	180.19
5	Rate of Interest (%)	8.70%

6	**Interest on Working Capital**	15.68

Commission's analysis:

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

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

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

The rate of interest on working capital shall be equal to the base rate for the State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan worked out on the normative figures."

The Commission, for determination of working capital requirement of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the average consumer security deposit as above and the inventory for two months as per the audited accounts of FY 2018-19.

The Commission has considered the SBI Base rate as on 1st April 2018 in line with the JERC MYT Regulations, 2014.

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

Table 70: Interest on Working Capital approved by Commission (In INR Cr)

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	325.42	333.23	291.04
2	Less: Power Purchase Cost for one month	110.81	123.74	123.71
3	Less: Average Security Deposit excluding BG/FDR	91.15	29.30	34.58
4	Net Working Capital Requirement	123.46	180.19	132.75
5	Rate of Interest (%)	8.65%	8.70%	8.70%
6	**Interest on Working Capital**	**10.68**	**15.68**	**11.55**

The Commission approves the Interest on Working Capital as INR 11.55 Cr. in the True- up of FY 2018-19.

4.17. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has submitted that the bad and doubtful debts actually written off during FY 2018-19 is INR 3.11 Cr., the Petitioner has considered provision for bad and doubtful debt for FY 2018-19 as INR 3.11 Cr.

Commission's analysis:

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

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

It is observed that as per the audited accounts, the licensee has not written off any bad and doubtful debts for the FY 2018-19 and only has provisioned the same in the book of accounts.

The Commission therefore has not approved any bad and doubtful debts in the True-up of FY 2018-19.

4.18. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted NTI of INR 19.43 Cr. in the True-Up of FY 2018-19 against INR 6.74 Cr approved by the Commission in the ARR for FY 2018-19. The Non–Tariff Income as submitted by the Petitioner has been shown in the following table:

Table 71: Non- Tariff Income submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Meter/service rent	7.54
2	UI Sales/Sales to Exchange	
3	Wheeling charges under open access	0.01
4	Miscellaneous Receipts/Income	11.87
5	Deferred Income (Electricity Development fund)	
6	Income from trading	0.01
7	Total Income	19.43
8	Add: prior period income	
9	**Total**	**19.43**

Commission's analysis:

The Commission after prudence check from the annual audited accounts has approved the Non-Tariff Income for 2018-19. Accordingly, the Commission approves the Non-Tariff Income as shown in the following table:

Table 72: Non- Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Meter/service rent	6.74	7.54	7.54
2	UI Sales/Sales to Exchange			
3	Wheeling charges under open access		0.01	0.01
4	Miscellaneous Receipts/Income		11.87	11.87
5	Deferred Income (Electricity Development fund)			
6	Income from trading		0.01	0.01
7	Total Income	6.74	19.43	19.43
8	Add: prior period income			
9	**Total**	**6.74**	**19.43**	**19.43**

The Commission approves Non-Tariff Income of INR 19.43 Cr in the True-up of FY 2018-19.

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

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

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

Mechanism for pass through of gains or losses:

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

...

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

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

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

The Commission had approved the T&D loss target of 10.75% in the ARR Order. The Petitioner has achieved T&D loss of 13.46% as explained in Section 4.6. The dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been considered at INR 3.17/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The excess purchase of power has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (3704.68 MU) with the actual Intra-State T&D Loss (13.46%). The following table provides the details of computation of Average Power Purchase Cost for FY 2018-19:

Table 73: Average Power Purchase Cost approved by Commission for FY 2018-19

S. No.	Particulars	Value
1	Total Power Purchase Cost (Rs Cr)	1,484.48
2	Less: Transmission charges and Power Purchase cost from renewable energy sources (Rs Cr)	161.45
3	Net Power Purchase Cost (Rs Cr)	1,323.03
4	Total Power Purchase quantum (MU)	4,477.01
5	Less: Quantum from renewable energy sources (MU)	309.61
6	Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	4,167.41
7	APPC (Rs/kWh)	3.17

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

Table 74: Dis-incentive on account of under-achievement of Intra-State Distribution Loss target

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales (MU)	3704.69	3704.69
2	T&D Loss (%)	10.75%	13.46%
3	Power Purchase at State/UT Periphery (MU)	4150.90	4280.92

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
4	Excess Power Purchase (MU)		130.01
5	Average Power Purchase Cost (APPC) (INR/kWh)		3.17
6	Gain/ (Loss) (INR Cr.)		(41.28)
7	**Sharing of 100% of Loss with the Petitioner (INR Cr.)**		**(41.28)**

The Commission determines and approves INR 41.28 Cr. as dis-incentive on account of under-achievement of T&D loss target for the FY 2018-19.

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

The Commission has determined the normative R&M expenses for FY 2018-19 as INR 38.75 Cr., as explained in Section 4.10.3 of this Order, against the actual R&M expenses of INR 26.32 Cr. as per audited annual accounts. The assessment of incentive on account of over-achievement of norms for R&M expenses is shown in the following table:

Table 75: Incentive on account of over achievement of R&M Expenses

S. No	Particulars	Trued-up by Commission
1	Normative R&M Expenses	38.75
2	Actual R&M Expenses as per Audited Accounts	26.32
3	Gain/(Loss)	12.43
4	**Sharing (30% to EDG in case of gain and 100% in case of loss)**	**3.73**

The Commission approves INR 3.73 Cr. as incentive for FY 2018-19 on account of overachievement of norms for R&M expenses. Further, the Commission approves dis-incentive of INR 37.55 Cr. towards under/over achievement of norms.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,999.35 Cr is submitted for approval in the True-up of FY 2018-19.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2018-19 as given in the following table:

Table 76: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost inclusive of cost towards compliance of RPO	1329.68	1484.87	1484.48
2	Operation & Maintenance Expenses	326.82	379.46	278.84
3	Depreciation	91.59	54.23	58.82
4	Interest and Finance charges	107.19	27.04	26.16

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
5	Interest on Working Capital	10.68	15.68	11.55
6	Interest on Security Deposit	7.02	5.63	5.63
7	Return on Equity	83.27	48.77	46.79
8	Provision for Bad Debt		3.11	0.00
9	Provision for DSM Expenses	3.03		0.00
10	Incentive/ (Disincentive) on achievement of norms			-37.55
11	**Total Revenue Requirement**	**1959.27**	**2018.78**	**1,874.73**
12	Less: Non-Tariff Income	6.74	19.43	19.43
13	**Net Revenue Requirement**	**1952.53**	**1999.35**	**1,855.30**

The Commission approves net Aggregate Revenue Requirement of INR 1855.30 in the True-up of FY 2018-19.

4.21. Revenue from Sale of Power

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2018-19 as INR 1,746.23 Cr against revenue of 1,634.92 Cr approved by the Commission in the ARR Order. The following table provides the revenue at existing tariff as submitted by the Petitioner:

Table 77: Revenue at approved tariff submitted by the Petitioner for FY 2018-19

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	256.13	23.42	279.55
2	LTD/Low Income Group	0.28	0.02	0.31
4	LTC/Commercial	190.31	17.62	207.94
5	LTP Mixed (Hotel Industries)	2.21	0.19	2.41
6	LTP Industry	38.41	2.75	41.16
7	LTAG/Agriculture (Pump sets/Irrigation)	2.86	0	2.86
8	LTAG/Agriculture (Allied Activities)	0.19	0	0.19
9	Street Light	7.65	4.47	12.12
10	Hoardings/Signboards	0.18	0.01	0.19
	Sub-Total	**498.22**	**48.49**	**546.71**
	B. HIGH TENSION SUPPLY			
11	HT-D Domestic	0.13	0.01	0.14
12	HT-C Commercial	82.5	6.29	88.79

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
13	HTI/ Industrial - Connected at 11/33kV	622.04	45.81	667.84
14	HTI / Industrial- Connected at 110kV	111.05	9.6	120.65
15	HT-Industrial (F/M, Steel Melt, Power Intensive)	249.51	19.14	268.65
16	HTAG/ Agriculture (Pump stets/Irrigation)	1.14	0	1.14
17	HTAG/Agriculture (Allied Activities)	1.14	0	1.14
18	HT.MES / Defence Establishment	14.18	1.14	15.32
	Sub Total	**1081.68**	**81.99**	**1163.67**
	C. Temporary Supply			
19	L.T Temporary Domestic	1.54	0.08	1.63
20	L.T Temporary Commercial	24.8	1.69	26.49
21	H.T. Temporary	1.21	0	1.21
	Sub Total	**27.56**	**1.77**	**29.33**
	D. Single Point Supply			
22	Residential Complexes	0.00	0.00	0.00
23	Commercial Complexes	3.52	0.31	3.83
24	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**3.52**	**0.31**	**3.83**
	D. Others			
25	Unmeterd LTPL	2.35	0.33	2.68
26	RRC referred	0.01	0	0.02
	Sub Total	**2.36**	**0.33**	**2.69**
	Total	**1613.34**	**132.90**	**1746.23**

Commission's analysis

The Commission has verified revenue from sale of power within the State in the FY 2018-19 from the audited accounts. However, the Commission has not considered the energy sales and revenue from Arrears as the same does not pertain to the current financial year. The category-wise revenue now Trued-up by the Commission is shown in the following table:

Table 78: Revenue at approved tariff approved by Commission for FY 2018-19

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	256.13	23.42	279.55

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
2	LTD/Low Income Group	0.28	0.02	0.31
4	LTC/Commercial	190.31	17.62	207.94
5	LTP Mixed (Hotel Industries)	2.21	0.19	2.41
6	LTP Industry	38.41	2.75	41.16
7	LTAG/Agriculture (Pump sets/Irrigation)	2.86	0	2.86
8	LTAG/Agriculture (Allied Activities)	0.19	0	0.19
9	Street Light	7.65	4.47	12.12
10	Hoardings/Signboards	0.18	0.01	0.19
	Sub-Total	**498.22**	**48.49**	**546.71**
	B. HIGH TENSION SUPPLY			
11	HT-D Domestic	0.13	0.01	0.14
12	HT-C Commercial	82.5	6.29	88.79
13	HTI/ Industrial - Connected at 11/33kV	622.04	45.81	667.84
14	HTI / Industrial- Connected at 110kV	111.05	9.6	120.65
15	HT-Industrial (F/M, Steel Melt, Power Intensive)	249.51	19.14	268.65
16	HTAG/ Agriculture (Pump stets/Irrigation)	1.14	0	1.14
17	HTAG/Agriculture (Allied Activities)	1.14	0	1.14
18	HT.MES / Defence Establishment	14.18	1.14	15.32
	Sub Total	**1081.68**	**81.99**	**1163.67**
	C. Temporary Supply			
19	L.T Temporary Domestic	1.54	0.08	1.63
20	L.T Temporary Commercial	24.8	1.69	26.49
21	H.T. Temporary	1.21	0	1.21
	Sub Total	**27.56**	**1.77**	**29.33**
	D. Single Point Supply			
22	Residential Complexes	0.00	0.00	0.00
23	Commercial Complexes	3.52	0.31	3.83
24	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**3.52**	**0.31**	**3.83**
	D. Others			
25	Unmeterd LTPL	2.35	0.33	2.68
26	RRC referred	0.01	0	0.02
	Sub Total	**2.36**	**0.33**	**2.69**

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
	Total	**1613.34**	**132.89**	**1746.23**

The Commission approves the revenue from the sale of power as INR 1746.23 Cr. in the True-up of the FY 2018-19.

4.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 253.12 Cr is arrived at in the True-up of FY 2018-19.

Commission's analysis

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

Table 79: Standalone Revenue Gap/ (Surplus) determined by Commission for FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1952.53	1999.35	1855.30
2	Revenue from Tariff including FPPCA	1634.92	1746.23	1746.23
3	**Net Gap / (Surplus)**	**317.61**	**253.14**	**109.07**
4	Less: Budgetary Support from Govt	317.61	253.14	109.07
5	**Net Final Revenue Gap to be carry forward**	**NIL**	**NIL**	**NIL**

The Commission, in the True-up of FY 2018-19 approves a standalone gap of INR 109.07 Cr. Further, the Commission approved the standalone surplus of INR 41.34 Cr. n the true of 2017-18, which has been proposed to be carried forward to the FY 2018-19. Accordingly, the Commission has arrived at cumulative revenue gap as shown in following table:

S. No	Particulars	2017-18	2018-19
1	Opening Gap/(Surplus)	-	(42.99)
2	Addition of Gap/(Surplus)	(41.34)	109.07
3	Closing Gap/(Surplus)	(41.34)	66.08
4	Average Gap/(Surplus)	(20.67)	11.54
5	Rate of Interest	8%	8%
6	Carrying Cost	(1.65)	0.92
7	**Gross Closing Gap /(Surplus)**	(42.99)	67.00

Further, the Petitioner has submitted that the entire gap for the FY 2018-19 is committed to be funded by the Government of Goa by way of budgetary support. The Petitioner in this regard has submitted the letter dated 14th December 2017 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2018-19. Accordingly, no revenue gap is carried forward in the future years.

5. Chapter 5: True up of the FY 2019-20

5.1. Applicable Provisions and Background

Under the second MYT regime of the JERC, the Tariff Order approving the True-up for the FY 2014-15 and Aggregate Revenue Requirement (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and determination of retail tariff for the FY 2019-20 was issued on 20th May 2019 (hereinafter referred to as the "MYT Order"). However, the Annual Performance Review (APR) for FY 2019-20 was not taken-up by the Commission as the data submitted by the Petitioner for the APR of 2019-20 was not reliable.

The True up for the FY 2019-20 is to be carried out in accordance to Regulation 11 of the JERC MYT Regulations, 2018, stated as following:

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

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

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

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

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

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

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

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

e) Other relevant details, if any.

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

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

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

a) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous Year, to be passed through in tariff as per Regulation 13 of these Regulations:

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

b) Approved aggregate gain or loss to the Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 14 of these Regulations:

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

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

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

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

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

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

5.2. Approach for True-up for FY 2019-20

The Petitioner has requested for True-up of FY 2019-20 and submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the MYT Order.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2019-20 based on the audited accounts submitted by the Petitioner and has carried out the True-up exercise in accordance with the principles laid down in the JERC MYT Regulations, 2018 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

5.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for the FY 2019-20 as 3722.97 MU as against the approved energy sales quantum of 3979.76 MU for FY 2019-20 in the MYT Order.

Commission's Analysis

Regulation 12.1 of the JERC MYT Regulations, 2018 provides:

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

a) Force Majeure events;
b) Change in Law, judicial pronouncements and Orders of the Central Government, State Government or Commission;
c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;
d) Transmission loss;
e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;
f) Variation in fuel cost;
g) Change in power purchase mix;
h) Inflation;
i) Transmission Charges for a Distribution Licensee;
j) Variation in market interest rates for long-term loans;
k) Employee expenses limited to one time payment owing requirements of a pay commission and terminal liability of employees;
l) Taxes and Statutory levies;
m) Taxes on income;
n) Income from the realisation of bad debts written off:

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

Provided further that the uncontrollable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations."

The Commission had approved the energy sales of 3979.76 MU in the MYT Order for FY 2019-20, against which the Petitioner has now submitted the actual energy sales of 3722.97 MU.

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

Table 80: Energy Sales (MU) Trued-up by the Commission for FY 2019-20

S. No	Category	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	1206.08	1140.52	1140.52
2	LTD/L.I.G.	1.76	1.31	1.31
3	LTC/Commercial	491.97	414.94	414.94
4	LTP Mixed (Hotel Industries)	5.62	4.21	4.21
5	LT-I Industrial	101.12	75.87	75.87
6	LTAG/Agriculture (Pump sets/Irrigation)	17.03	15.63	15.63
7	LTAG/Agriculture (Allied Activities)	0.89	0.78	0.78
8	Street Light	2.66	27.90	27.90
9	Hoardings/Signboards	0.24	0.15	0.15

S. No	Category	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
	Sub-Total	**1827.37**	**1681.30**	**1681.30**
	B. HIGH TENSION SUPPLY			
10	HT-D Domestic	0.29	0.39	0.39
11	HT- C Commercial	119.05	114.83	114.83
12	HTI/ Industrial- Connected at 11/33 kV	1527.76	1154.07	1154.07
13	HTI / Indutrial – Connected at 110 kV		232.16	232.16
14	HT-Industrial (f/M, Steel Melt, Power Intensive)	442.64	468.44	468.44
15	HTAG/Agriculture (Pump Sets/Irrigation)	4.85	4.46	4.46
16	HTAG/Agriculture (Allied Activities)	4.52	6.82	6.82
17	HT. MES/ Defence Establishment	27.01	25.91	25.91
	Sub-Total	**2126.12**	**2007.09**	**2007.09**
	C. TEMPORARY SUPPLY			
18	L.T. Temporary Domestic	20.51	1.20	1.20
19	L.T. Temporary Commercial		19.66	19.66
20	H.T. Temporary	0.30	2.30	2.30
	Sub-Total	**20.81**	**23.15**	**23.15**
	D. Single Point Supply			
21	Residential Complexes	0.00	0.00	0.00
22	Commercial Complexes	5.46	5.38	5.38
23	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**5.46**	**5.38**	**5.38**
	D. Others			
24	Unmetered LTPL	0.00	6.06	6.06
	Sub-Total	**0.00**	**11.44**	**6.06**
	Total	**3979.76**	**3722.97**	**3722.98**

The Commission approves 3722.98 MU as energy sales in the True-Up of FY 2019-20.

5.4. *Open Access Sales and Purchase*

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

The Commission approves NIL energy sales and purchase under Open Access in the True-up of the FY 2019-20.

5.5. *Inter-State Transmission loss*

Petitioner's submission

Petitioner has submitted the Inter-State transmission loss of 2.54% against a loss of 4.39% approved in the MYT Order.

Commission's analysis

The Commission in this regard directed the Petitioner to submit the supporting documentary evidence to verify the loss levels. The Petitioner has submitted that they have computed the inter-state transmission loss considering the total scheduled energy at Ex-bus and the state periphery. Therefore, the Commission has considered the difference between the total energy scheduled at Ex-Bus periphery and the total energy scheduled at state periphery for computing the transmission losses. The Commission accordingly trues-up the Inter-State Losses as shown in the following table.

Table 81: Inter-State transmission loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	4.39%	2.54%	2.05%

The Commission trues-up weighted average Inter-State Transmission Loss as 2.05% in the True-up of the FY 2019-20.

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

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 15.03% in the FY 2019-20 against an approved loss of 10.75%.

Commission's analysis

The Petitioner in its submission has failed to submit the Energy Audit Report of the State for FY 2019-20. In the absence of the Energy Audit Report, the Commission, for verification of the Intra-State T&D loss levels has relied on the information of energy drawl at State periphery as registered in the energy meters at the state periphery and the energy sales as approved above. Therefore, the Commission has determined the Intra-State T&D loss of 15.03% for the FY 2019-20 against an approved loss of 10.75% in the MYT Order. The dis-incentive for the under-achievement of T&D Loss target in the FY 2019-20 is dealt with in Section 5.19.1 of this Order.

The table below provides the Intra-State T&D loss approved in the MYT Order for FY 2019-20, Petitioner's submission and as trued-up by the Commission now.

Table 82: Intra-State transmission and distribution loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	10.75%	15.03%	15.03%

The Commission, while Truing up for FY 2019-20, has considered the actual Intra-State T&D loss of 15.03% for the FY 2019-20. However, the dis-incentive for excess purchase of power on account of under-achievement of T&D loss target has been detailed in Section 5.19 and has been deducted from the trued-up ARR.

5.7. Power Purchase Quantum & Cost

Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and Co-generating Companies like Vedanta Plant 1, Vedanta Plant 2 and Goa Sponge & Power Ltd. Energy requirement is also met through NVVNL, traders and power exchanges. The Power Purchase Cost has been submitted as incurred by the Petitioner in FY 2019-20. The Power Purchase cost also includes ED, Cess, Incentive etc. and supplementary charges considered on actual basis.

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

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

The power purchase quantum and cost for FY 2019-20, as submitted by the Petitioner has been shown in the following table:

Table 83: Power Purchase cost submitted by the Petitioner (in INR Cr)

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,533.71**	**180.63**	**378.50**	**638.28**	**27.97**	**(15.23)**	**1,029.53**
1	*KSTPS*	*1,550.92*	*135.66*	*103.12*	*210.41*	*18.02*	*1.67*	*333.21*
2	*VSTPS - I*	*256.99*	*173.27*	*23.14*	*44.53*	*2.48*	*1.88*	*72.02*
3	*VSTPS - II*	*107.38*	*166.52*	*7.87*	*17.88*	*0.81*	*0.81*	*27.37*
4	*VSTPS -III*	*103.60*	*165.44*	*10.40*	*17.14*	*0.71*	*0.66*	*28.91*
5	*VSTPS-IV*	*122.65*	*163.33*	*18.06*	*20.03*	*1.09*	*0.82*	*39.99*
6	*VSTPS-V*	*60.27*	*168.12*	*9.06*	*10.13*	*0.73*	*0.33*	*20.25*
7	*KGPP*	*26.01*	*271.98*	*7.72*	*7.07*	-	*0.09*	*14.88*
8	*GGPP*	*6.61*	*273.93*	*9.84*	*1.81*	-	*0.06*	*11.71*
9	*SIPAT- I*	*215.74*	*143.11*	*27.76*	*30.87*	*2.12*	*0.82*	*61.57*
10	*FSTPS*	-	-	-	-	-	-	-
11	*KSTPS-III*	*51.05*	*133.67*	*6.94*	*6.82*	*0.52*	*(0.01)*	*14.27*
12	*TSTPS*	-	-	-	-	-	-	-
13	*KHSTPS-I*	-	-	-	-	-	*0.00*	*0.00*
14	*RSTPS*	*694.07*	*264.16*	*50.05*	*183.35*	*(0.00)*	*(0.44)*	*232.95*
15	*SIPAT- II*	*102.34*	*145.45*	*12.11*	*14.88*	*1.20*	*0.21*	*28.41*
16	*Solapur*	*13.58*	*349.33*	*26.52*	*4.74*	-	*(0.09)*	*31.17*
17	*Gadarwara*	*13.27*	*328.96*	*13.24*	*4.36*	*0.10*	*0.04*	*17.74*
18	*Lara*	*23.57*	*244.54*	*5.69*	*5.76*	*0.18*	*0.09*	*11.72*
19	*Khargone*	*7.76*		*2.23*	*2.28*	*0.04*	*0.00*	*4.55*
20	*Mouda I*	*83.07*		*21.85*	*26.37*	-	*2.24*	*50.46*
21	*Mouda II*	*94.82*		*22.91*	*29.82*	-	*3.35*	*56.07*
22	*Add/ Less: Other Adjustments*	-		-	-	-	*(27.73)*	*(27.73)*
II	**RGPPL**	**-**	-	**-**	**-**	**-**	**-**	-
			-					
III	**NPCIL**	**232.40**	**562.15**	**-**	**65.32**	**-**	**(1.59)**	**63.74**
	KAPS	116.20	249.99	-	29.05	-	(0.71)	28.34
	TAPS	116.21	312.16	-	36.27	-	(0.88)	35.39
								-
IV	**Traders**	**151.24**	*499.22*		**75.50**	**-**	**-**	**75.50**
	a)IEX PURCHASE	315.29	*380.52*		119.98			119.98
	b)IEX SALES	(164.06)	*271.10*		(44.48)			(44.48)

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
	c) Traders		-	-	-	-	-	-
V	***NET UI (Under DRAWAL)***	**(19.67)**		**-**	**10.44**	**-**	**-**	**10.44**
VI	***Banking of Power***	**8.00**		**-**	***1.45***	**-**	**-**	**1.45**
B	**Within State Generations**							
I	**CO-GENERATION**	**169.50**	***237.69***	**-**	**40.29**	**-**	**(0.37)**	**39.92**
	Vedanta Plant-1	*94.96*	238.83	-	*22.68*	-	*(0.04)*	22.64
	Goa Sponge and private limited	*5.11*	240.00	-	*1.23*	-	-	1.23
	Vedanta Plant-2	*69.43*	235.95	-	*16.38*	-	*(0.33)*	16.05
C	**RPO Obligation**	***415.14***	***461.60***	**-**	***191.63***	**-**	**(2.76)**	***188.87***
	Non Solar (SECI+STOA)	*227.23*	401.10	-	*91.14*	-	*(1.33)*	89.81
	NVVNL Solar	*12.27*	703.37	-	*8.63*	-	*(0.16)*	8.47
	SECI Solar	*46.37*	584.00	-	*27.08*	-	*(0.03)*	27.05
	Solar STOA	*128.09*	501.10	-	*64.19*	-	*(1.24)*	62.95
	Hindustan Waste Treatment Plant	*1.17*	500.00	-	*0.59*	-	-	0.59
D	**REC Certificates**							**-**
	Solar		-	-	-	-	-	-
	Non Solar		-	-	-	-	-	-
E	**OTHER CHARGES**	**-**	**-**	**-**	**205.63**	**-**	**(3.65)**	**201.97**
	PGCIL Transmission Charges, Wheeling, Oen Access & Trading Marrgin & Other Charges			-	*205.63*	-	*(3.65)*	201.97
F	**Total**	**4,490.31**	**273.54**	**378.50**	**1,228.53**	**27.97**	**(23.59)**	**1,611.42**

Commission's analysis

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, Co-Generating Plants, IPP's, Exchange etc. The Petitioner has submitted the overall Power Purchase cost as INR 1,611.42 Cr inclusive of transmission charges. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc. The Petitioner has also included an adjustment of 8.00 MUs on account of banking adjustment.

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

Further, the Commission has verified the UI weekly data from the DSM account maintained by Western Region Power Committee (WRPC) and Southern Region Power Committee (SRPC) and found certain discrepancies. The Petitioner while claiming the cost and quantum of UI, has not considered the few days of March 2020. However, the Commission has only considered the UI sale and receivable pertaining to FY 2019-20 while allowing the power purchase cost and MUs.

The Commission also sought the details and nature of banking power. The Petitioner submitted that the Banking transaction shown in the Petition is a Power Swap arrangement carried out by EDG. EDG in such arrangements swaps power to needy Utility through CERC licensed trader during the off-season period or during its surplus regime (Normally during July to September when Goa has low demand) and accepts the power during peak hours (18.00 to 24.00 Hrs). The power is swapped to EDG during the Peak Season of Goa as per the LOIs issued depending on the requirement of EDG. In this arrangement there are no financial transactions towards cost of power except trading margin and Open Access charges. Sometime the return power to EDG is on premium of 102% to 103% which means if 100 MUs are supplied by EDG then 102 MUs to 103 MUs are accepted by EDG under this arrangement.

The Commission, for the purpose of finalization of the Power Purchase Cost in the True up of FY 2019-20 has adjusted the Income from UI Under-drawal in the Power Purchase cost approved now. Transmission Charges and the Other Charges submitted have been considered as Other Expenses as per actuals incurred by the Petitioner.

The Commission has considered the cost incurred towards the compliance of Renewable Purchase Obligation (RPO) in FY 2019-20 along with the Power Purchase cost. The compliance status of RPO has been discussed in detail in the subsequent section. The table below provides the summary of the power purchase quantum and the cost approved by the Commission for FY 2019-20.

Table 84: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
A	**Central Sector Power Stations**							
I	**NTPC**	**3,533.71**	**180.63**	**378.50**	**638.28**	**27.97**	**(15.23)**	**1,029.53**
1	*KSTPS*	*1,550.92*	*135.66*	*103.12*	*210.41*	*18.02*	*1.67*	*333.21*
2	*VSTPS - I*	*256.99*	*173.27*	*23.14*	*44.53*	*2.48*	*1.88*	*72.02*
3	*VSTPS - II*	*107.38*	*166.52*	*7.87*	*17.88*	*0.81*	*0.81*	*27.37*
4	*VSTPS -III*	*103.60*	*165.44*	*10.40*	*17.14*	*0.71*	*0.66*	*28.91*

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
5	*VSTPS-IV*	*122.65*	*163.33*	*18.06*	*20.03*	*1.09*	*0.82*	*39.99*
6	*VSTPS-V*	*60.27*	*168.12*	*9.06*	*10.13*	*0.73*	*0.33*	*20.25*
7	*KGPP*	*26.01*	*271.98*	*7.72*	*7.07*	-	*0.09*	*14.88*
8	*GGPP*	*6.61*	*273.93*	*9.84*	*1.81*	-	*0.06*	*11.71*
9	*SIPAT- I*	*215.74*	*143.11*	*27.76*	*30.87*	*2.12*	*0.82*	*61.57*
10	*FSTPS*	-	-	-	-	-	-	-
11	*KSTPS-III*	*51.05*	*133.67*	*6.94*	*6.82*	*0.52*	*(0.01)*	*14.27*
12	*TSTPS*	-	-	-	-	-	-	-
13	*KHSTPS-I*	-	-	-	-	-	*0.00*	*0.00*
14	*RSTPS*	*694.07*	*264.16*	*50.05*	*183.35*	*(0.00)*	*(0.44)*	*232.95*
15	*SIPAT- II*	*102.34*	*145.45*	*12.11*	*14.88*	*1.20*	*0.21*	*28.41*
16	*Solapur*	*13.58*	*349.33*	*26.52*	*4.74*	-	*(0.09)*	*31.17*
17	*Gadarwara*	*13.27*	*328.96*	*13.24*	*4.36*	*0.10*	*0.04*	*17.74*
18	*Lara*	*23.57*	*244.54*	*5.69*	*5.76*	*0.18*	*0.09*	*11.72*
19	*Khargone*	*7.76*		*2.23*	*2.28*	*0.04*	*0.00*	*4.55*
20	*Mouda I*	*83.07*		*21.85*	*26.37*	-	*2.24*	*50.46*
21	*Mouda II*	*94.82*		*22.91*	*29.82*	-	*3.35*	*56.07*
22	*Add/ Less: Other Adjustments*	-		-	-	-	*(27.73)*	*(27.73)*
II	**RGPPL**	**-**	-	**-**	-	**-**	**-**	-
			-					
III	**NPCIL**	**232.40**	**562.15**	**-**	**65.32**	**-**	**(1.59)**	**63.74**
	KAPS	116.20	249.99	-	29.05	-	(0.71)	28.34
	TAPS	116.21	312.16	-	36.27	-	(0.88)	35.39
								-
IV	**Traders**	**151.24**	***499.22***		**75.50**	**-**	**-**	**75.50**
	a)IEX PURCHASE	315.29	*380.52*		119.98			119.98
	b)IEX SALES	(164.06)	*271.10*		(44.48)			(44.48)
	c) Traders		-	-	-	-	-	-
V	***NET UI (Under DRAWAL)***	**(20.01)**		**-**	**10.33**	**-**	**-**	**10.33**
VI	***Banking of Power***	**8.00**		**-**	***1.45***	**-**	**-**	**1.45**
B	**Within State Generations**							

Sr. No.	Source	Purchase (MU)	VC (Ps/ Unit)	FC (Rs. Crore)	VC (Rs.Crore)	Others (Rs.Crore)	Supplementary (Rs. Crore)	Total (Rs.Crore)
I	**CO-GENERATION**	**169.50**	***237.69***	**-**	**40.29**	**-**	**(0.37)**	**39.92**
	Vedanta Plant-1	*94.96*	238.83	-	*22.68*	-	*(0.04)*	22.64
	Goa Sponge and private limited	*5.11*	240.00	-	*1.23*	-	-	1.23
	Vedanta Plant-2	*69.43*	235.95	-	*16.38*	-	*(0.33)*	16.05
C	**RPO Obligation**	***415.14***	***461.60***	**-**	***191.63***	**-**	***(2.76)***	***188.87***
	Non Solar (SECI+STOA)	*227.23*	401.10	-	*91.14*	-	*(1.33)*	89.81
	NVVNL Solar	*12.27*	703.37	-	*8.63*	-	*(0.16)*	8.47
	SECI Solar	*46.37*	584.00	-	*27.08*	-	*(0.03)*	27.05
	Solar STOA	*128.09*	501.10	-	*64.19*	-	*(1.24)*	62.95
	Hindustan Waste Treatment Plant	*1.17*	500.00	-	*0.59*	-	-	0.59
D	**REC Certificates**							**-**
	Solar		-	-	-	-	-	-
	Non Solar		-	-	-	-	-	-
E	**OTHER CHARGES**	**-**	**-**	**-**	**205.63**	**-**	**(3.65)**	**201.97**
	PGCIL Transmission Charges, Wheeling, Oen Access & Trading Marrgin & Other Charges			-	*205.63*	-	*(3.65)*	201.97
F	**Total**	**4,489.97**	**273.59**	**378.50**	**1,228.42**	**27.97**	**(23.59)**	**1,611.31**

The Commission approves power purchase quantum of 4,489.97 MU and cost of INR 1,611.31 Cr in the True-up of the FY 2019-20.

5.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

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

Commission's analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 11.50% of its total consumption (including 4.70% from Solar) from renewable sources for the FY 2019-20. Based on the above, the Commission has computed the standalone RPO compliance for FY 2019-20 as shown in the following table:

Table 85: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Sales within State (MU) (A)	2182.48	2880.11	2925.24	3070.56	3439.99	3420.90	3091.98	3654.89	3704.69	3722.99
Hydro Power available at State Periphery (MU) (B)	0.00	0.00	0.00	0.00	0.00	12.62	72.88	0	0	0.00
T&D Loss (%) (C)	13.50%	9.46%	13.15%	11.16%	8.23%	15.36%	20.38%	10.36%	13.46%	15.03%
T&D Loss (MU) (D = B * C)	0.00	0.00	0.00	0.00	0.00	1.94	14.85	0.00	0.00	0.00
Hydro Power Consumed (E = B - D)	0.00	0.00	0.00	0.00	0.00	10.68	58.03	0.00	0.00	0.00
Conventional Power Consumed (F = A - E)	**2182.48**	**2880.11**	**2925.24**	**3070.56**	**3439.99**	**3410.21**	**3033.95**	**3654.89**	**3704.69**	**3722.99**
RPO obligation (%)	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**	**9.00%**	**11.50%**
Solar (G)	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%	3.60%	4.70%
Non-Solar (H)	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%	5.40%	6.80%
RPO obligation for the year (MU)	**21.82**	**57.60**	**87.76**	**92.12**	**113.52**	**121.06**	**147.15**	**244.88**	**333.42**	**428.14**
Solar (F * G)	5.46	8.64	11.70	12.28	20.64	28.99	50.06	91.37	133.37	174.98
Non-Solar (F * H)	16.37	48.96	76.06	79.83	92.88	92.08	97.09	153.51	200.05	253.16
RPO Compliance (Physical Power + Certificates) (MU)	**0.00**	**128.14**	**71.80**	**29.20**	**152.56**	**167.52**	**65.54**	**243.26**	**340.19**	**415.14**
Solar	0.00	0.00	0.00	0.00	6.58	79.90	65.54	84.14	138.74	186.73
Non-Solar	0.00	128.14	71.80	29.20	145.98	87.62	0.00	159.12	201.44	228.40
Cumulative RPO Shortfall (MU)	**21.82**	**14.10**	**30.05**	**92.97**	**53.93**	**7.47**	**103.32**	**104.94**	**98.18**	**121.08**
Solar	5.46	14.10	25.80	38.08	52.14	1.23	-	7.23	1.86	-
Non-Solar	16.37	-	4.25	54.89	1.78	6.24	103.32	97.71	96.32	121.08
Cumulative RPO Compliance(MU)	**0.00**	**128.14**	**199.94**	**229.14**	**381.70**	**549.23**	**614.76**	**858.03**	**1,198.21**	**1,613.35**
Solar	0.00	0.00	0.00	0.00	6.58	86.48	152.02	236.16	374.90	561.63
Non-Solar	0.00	128.14	199.94	229.14	375.13	462.75	462.75	621.87	823.31	1051.72

As can be seen from the table as earlier, a cumulative gap of 121.08 MU is pending till the end of FY 2019-20. The same has to be carried forward to subsequent years and shall be taken up in the True ups of respective years.

5.9. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2019-20 as shown in the following table.

Table 86: Energy Balance (MU) submitted by Petitioner

S. No	Particulars	Petitioner's Submission
1	**Energy Input at Goa Periphery**	**4212.10**
2	**Total Power Scheduled/ Purchased at Goa Periphery**	
	Total Schedule Billed Drawal – CGS	3766.11
	Add: Overdrawal	54.98
	Add: Power purchase from Traders	151.24
	Add: Power purchase from NVVN / Banking	8.00
	Less: Underdrawal	73.72
	Less: banking Power	
	Add: Renewable Power	415.14
	Less: Power diverted to Exchange	
	Total	**4321.76**
3	**PGCIL Losses – MUs**	**109.66**
	PGCIL Losses - %	**2.54%**
4	**Total Power Purchased within Goa State**	
	Add: Co-generation	169.50
	Add: Independent Power Producers (IPP)	
	Total	**169.50**
5	**Total Power Purchase availability after PGCIL Losses**	**4381.59**
	Less: Retail Sales to Consumers	3722.97
	Distribution Losses – MUs	658.62
6	**Distribution Losses - %**	**15.03%**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for FY 2019-20 has been derived. In accordance with the publicly available information from the Regional Energy Accounts (REA) maintained by WRPC and SRPC and documentary evidence submitted by the Petitioner against the Inter-State Transmission Loss, the Commission has determined the energy balance at the Periphery of the State of Goa. The following table provides the energy balance as submitted by the Petitioner and now trued-up by the Commission.

Table 87: Energy Balance (MU) approved by Commission

S. No	Particulars	Trued-up by Commission
1	Sales within the State	3722.98
2	Intra-State T&D Loss (%)	15.03%
3	Intra-State T&D Loss	658.62
4	**Energy Requirement at Periphery**	**4381.60**

S. No	Particulars	Trued-up by Commission
1	Total Schedule Billed Drawal - CGS	3766.11
2	Add: Power purchase from Traders/ Open Market	315.29
3	Less: Power diverted to Exchange	164.06
4	Add: Renewable Power	415.14
5	Add: Banking Power	8.00
	Total Power Scheduled/ Purchased at Ex-Bus Periphery (A)	**4320.48**
1	Energy input at state periphery (a)	4212.10
2	Add: Over-drawal	54.20
3	Less: Under-drawal	74.21
	Total Power Scheduled/ Purchased at Goa Periphery (B)	**4232.11**
1	PGCIL Losses – MU (A-B)	88.36
2	PGCIL Losses - % (A-B)/A	2.05%
3	Add: Within state generation (b)	169.50
	Energy Available at Periphery (a+b)	**4381.60**

5.10. Operation & Maintenance (O&M) Expenses

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

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

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

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

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

d) Availability of transmission system;

e) Variations in performance parameters;

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

g) Variations in labour productivity;

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

i) Bad debts written off, in accordance with the provisions of Regulation 62:

Provided further that the controllable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations."

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

5.10.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of INR 340.39 Cr against the approved expenses of INR 294.08 Cr in the ARR of FY 2019-20.

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

Table 88: Employee Expenses submitted by the Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Salaries &Allowances	340.39
2	Terminal Benefits	
3	Other Salary Payments	
4	Total	**340.39**
5	Less: Add/Deduct share of others	
6	Total	340.39
7	Less: Amount capitalized	
8	Net Amount	340.39
9	Add: Pension/DA and other Provision	
	Total Employee Expenses	**340.39**

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2019-20 are reflected as INR 340.39 Crore. In accordance with the JERC MYT Regulations, 2018, the Commission had determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

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

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

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

The Commission vide deficiency note sought clarification from the Petitioner for such exorbitant hike in the employee expenses vis-à-vis the employee expenses approved by the Commission. The Petitioner clarified that It is submitted that at the time of Tariff Order, the Annual accounts of the Department was pending for several previous years. Hence, the Commission considered the employee cost based on the past trends of the expenditure. However, the employee cost considered in the True-up Petition is based on actual figures as per Audited Accounts of the respective years. In view of the above, the employee cost in the True-up petition is at variance with the approved figure for the year.

In accordance with JERC MYT Regulations, the Employee expenses has been revised to the extent of change in inflation and growth rate during the control period. Accordingly, the Commission has considered the approved value of employee expenses for base year (FY 2018-19) for computation of revised employee expenses of FY 2019-20. Thus, the approved employee expenses for base year has been escalated with the actual CPI growth and employee growth rate to arrive at the employee expenses for FY 2019-20.

The CPI Inflation has been computed as follows:

Table 89: Computation of CPI Inflation (%)

FY	CPI Index	% Increase in CPI Index
2018-19	299.92	
2019-20	322.50	7.53%

The growth rate has been computed as follows:

Table 90: Employee Growth Rate for FY 2019-20 (INR Crore)

S. No	Particulars	FY 2018-19 (Base Year)	FY 2019-20
1	Opening Employee	6,796	6,705
2	Recruitment during the year	66	52
3	Retirement during the year	157	153
4	Closing Employee	**6,705**	**6,604**
5	**Growth rate**	-1.34%	-1.51%

Accordingly, the employee expenses approved by the Commission for FY 2019-20 have been provided in the following table:

Table 91: Employee Expenses computation for FY 2019-20 (INR Crore)

S. No	Particulars	FY 2018-19-Base Year (Approved in MYT Order)	FY 2019-20
1	Employee Expenses base year		287.45
2	Growth in number of employees (Gn)		-1.51%
3	CPI Inflation for preceding 3 years (CPI)		7.53%
4	**Normative Employee Expenses**	**287.45**	**304.44**

Table 92: Employee Expenses Trued-up by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Normative Expenses approved by Commission
1	Employee Expenses for FY 2019-20	294.08	340.39	304.44

The Commission approves the normative Employee Expenses of INR 304.44 Crore in the true-up for the FY 2019-20.

5.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of INR 26.91 Cr in FY 2019-20. The following table provides the A&G expenses as submitted by the Petitioner:

Table 93: A&G Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Travelling Expenses	11.25
2	Office Expenses	6.36
4	Petrol, Oil, Lubricant (P.O.L)	
5	Rent, Rates & Taxes	0.58
6	Advertisement & Publicity	0.20
7	Professional & Special Services	0.68
8	Other A&G Charges	7.73

S. No.	Particulars	Petitioner's Submission
9	Overtime Allowance	0.00
10	Minor Works	
11	Audit of Accounts and Professional Fees	0.10
13	**Total**	**26.91**
14	Less: share of others	
15	**Total expenses**	**26.91**
16	Less: Capitalized	
17	**Net expenses**	**26.91**
18	Add: Prior period	
19	**Total A&G Expenses**	**26.91**

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. As per the audited accounts submitted by the Petitioner, the A&G expenses are reflected as INR 26.91 Crore for FY 2019-20. The Regulation 6 of the JERC MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

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

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

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

Similar to the methodology followed while estimating the employee expenses, the Commission has determined the A&G expenses for the FY 2019-20 using the CPI Inflation for FY 2019-20 to determine the A&G expenses for FY 2019-20.

The A&G expenses approved by the Commission in FY 2019-20 have been provided in the following table:

Table 94: A&G Expenses computation for FY 2019-20 (INR Crore)

S. No	Particulars	FY 2018-19 Base Year (Approved in MYT Order)	FY 2019-20
1	A&G Expenses base year		25.99
2	CPI Inflation for FY 2019-20 (CPI)		7.53%
3	**Normative A&G Expenses**	**25.99**	**27.95**

Table 95: A&G Expenses Trued-up by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Normative Expenses approved by Commission
1	A&G Expenses for FY 2019-20	27.10	26.91	27.95

The Commission approves the normative Administrative & General (A&G) expenses of INR 27.95 Crore in the True-up of FY 2019-20.

5.10.3. Repair & Maintenance (R&M) Expenses

Petitioner's submission

The Petitioner has incurred R&M expenses of INR 32.98 Cr against the approved expenses of INR 42.55 Cr in the MYT Order. The following table provides the R&M expenses as submitted by the Petitioner:

Table 96: R&M Expenses submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Plant & machinery	32.98
2	Building (Electricity Residential & Non-Residential)	
3	Hydraulic works & civil works	
4	Line cable & network	
5	Vehicles	
6	Furnitures & Fixtures	
7	Office Equipment	
9	Minor R&M works	
10	**Total**	**32.98**
11	Add/Deduct share of others	
12	**Total expenses**	32.98
13	Less : Capitalized	
14	**Net expenses**	32.98
15	Add: prior period	
16	**Total R&M expenses**	**32.98**

Commission's analysis

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

"6. Values for Base Year

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

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

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

Therefore, the Commission has determined the revised normative R&M Expenses which is based on the Opening GFA of FY 2019-20, actual WPI Inflation (1.68%) for FY 2019-20 with respect to FY 2018-19 & k factor as approved in MYT order dated 20th May, 2019 for FY 2019-20, i.e., 2.91%. The R&M expenses approved for FY 2019-20 is provided in the following table:

Table 97: R&M Expenses Trued-up by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Normative Expenses approved by Commission
1	Opening GFA (GFAn-1) of previous year	1454.96	32.98	1274.13
2	K factor approved (K)	2.91%		2.91%

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Normative Expenses approved by Commission
3	WPI Inflation	0.33%		1.68%
4	**Repair & Maintenance Expenses (R&M) for FY 2019-20**	**42.55**	**32.98**	**37.70**

The Commission approves the normative Repair & Maintenance (R&M) expenses of INR 37.70 Crore in the True-up of FY 2019-20.

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

Table 98: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Normative Expenses approved by Commission
1	Employee Expenses	294.08	340.39	304.44
2	Administrative & General Expenses (A&G)	27.10	26.91	27.95
3	Repair & Maintenance Expenses	42.55	32.98	37.70
4	**Total Operation & Maintenance Expenses**	**363.73**	**400.27**	**370.08**

The Commission approves the normative Operation & Maintenance (O&M) expenses of INR 370.08 Cr in the True-up of FY 2019-20. Further, the incentive/dis-incentive on account of over/under-achievement of O&M Norms has been detailed in Section 5.19.

5.11. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation for the FY 2019-20 as INR 127.18 Cr against an approved capitalization of INR 442.99 Cr in the MYT Order.

Commission's analysis:

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

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

Post thorough scrutiny and review of the submissions made by the Petitioner with regards to the capitalization of schemes undertaken and the Fixed Asset Register (FAR) as submitted by the Petitioner, the Commission approves the capitalisation for the year as shown in the following table:

Table 99: Capitalisation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	442.99	127.18	127.18

The Commission approves Capitalisation of INR 127.18 Cr in the True-up of FY 2019-20.

5.12. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2019-20 excluding depreciation on assets created out of grants. The depreciation is arrived in annual accounts for FY 2019-20 based on the rates specified in the relevant CERC Tariff Regulations, 2018.

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

Table 100: Depreciation submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	1052.30
2	Addition During the FY	127.18
3	Less: Capitalisation through Grants and Electricity Duty	85.72
4	Less: Value- of assets sold/disposed off	2.68
5	Closing Gross Fixed Assets	1091.08
6	Rate of Depreciation	5.09%
	Depreciation	**54.50**

Commission's analysis

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

30. Depreciation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 101: Depreciation Rate (%)

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

Table 102: Calculation of revised GFA and depreciation for FY 2019-20 (INR Crore)

Description	Opening GFA	Less: grants through EDF till 2018-19	Net GFA	Addition during the year	Capitalisation through EDF	Deletion during the year	Closing GFA	Depreciation Rate	Depreciation
Plant & Machinery	1125.74	232.24	893.51	123.93	83.53	2.36	931.55	3.60%	32.85
Building & Civil Engineering Works	13.21	2.53	10.68	0.03	0.02	0.01	10.68	1.80%	0.19

Description	Opening GFA	Less: grants through EDF till 2018-19	Net GFA	Addition during the year	Capitalisation through EDF	Deletion during the year	Closing GFA	Depreciation Rate	Depreciation
Furniture & Fixtures & Office Equipments	54.35	11.52	42.83	3.01	2.03	0.27	43.54	6.00%	2.59
Land	6.30	1.19	5.11	0.00	0.00	0.00	5.11	0.00%	0.00
Vehicles	3.60	0.71	2.88	0.00	0.00	0.03	2.85	18.00%	0.52
Computers & Others	70.93	13.44	57.50	0.21	0.14	0.00	57.56	6.00%	3.45
Total	**1274.13**	**261.62**	**1012.51**	**127.18**	**85.72**	**2.68**	**1051.29**	**3.84%**	**39.60**

The weighted average depreciation rate has been computed as 3.84% against a rate of 5.09% approved in the MYT Order.

The Commission has considered the opening GFA as INR 1012.51 Cr for calculation of depreciation for FY 2019-20, determine as follows:

Table 103: Opening GFA (net of capitalisation through EDF/Govt. Grants) approved by the Commission for FY 2019-20 (In INR Cr)

S. No	Particulars	Trued-up by Commission
1	Opening GFA as per Audited Annual Accounts	1274.13
2	Less: Assets capitalized through EDF from FY 2008-09 to FY 2018-19	261.62
3	**Opening GFA (net of capitalisation through EDF/Govt. Grants)**	**1012.51**

In respect of addition of GFA during the FY, the Commission has not considered depreciation on assets created from the Electricity Duty Fund, as the same has been treated as a Grant from the Government of Goa, in line with the approach adopted in the True-up of FY 2018-19. Further, the assets retired during the year were also not considered for computing the depreciation. The following table provides the calculation of depreciation during the FY 2019-20:

The depreciation approved by the Commission in the true-up for the FY 2019-20 is calculated as follows:

Table 104: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening GFA (Closing GFA of FY 2018-19)	2014.46	1052.30	1012.51
2	Addition During the FY	442.99	127.18	127.18
3	Less: Capitalisation through Grants and Electricity Duty	240.45	85.72	85.72
4	Less: Value of Assets sold/disposed off		2.68	2.68
5	Closing Gross Fixed Assets	2217.00	1091.08	1051.29
6	Average Gross Fixed Assets	2115.73	1071.69	1031.90
7	Weighted average Rate of Depreciation (%)	3.64%	5.09%	3.84%
8	Depreciation	**76.93**	**54.50**	**39.60**

The Commission approves depreciation of INR 39.60 Cr in the True-up of FY 2019-20.

5.13. Interest and Finance Charges

Petitioner's submission

Interest on Loan has been estimated based on the normative loan calculation whereby 70% of the capitalization (net of capitalisation from grants) during the year have been considered as normative debt addition during the year. Opening balance of normative loan for FY 2019-20 is considered as per the approved closing normative loan in truing up of FY 2018-19. Further, the rate of interest has been considered as State Bank of India MCLR (SBI MCLR) as on 1st April 2019 plus 100 basis points i.e. 9.55%. Further, the Petitioner has considered finance charges of INR 2.32 Cr. as per audited annual accounts.

Commission's analysis:

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

28. Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that capitalisation during each year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets. In absence of any actual loans, the Commission has considered the SBI MCLR rate, as on 1st April of the relevant year, plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2018.

As per the JERC MYT Regulations 2018, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation (net of capitalisation from grants) has considered the normative debt equity ratio of 70:30.

The Interest on Loan has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved for FY 2018-19 in the True-Up. The total normative loan has been considered to be repaid through depreciation during the year. The following table provides the Interest on Loan approved in ARR, Petitioner's submission and now approved by the Commission:

Table 105: Interest and Finance charges approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	1074.05	161.05	152.22
2	Add: Normative Loan During the year	141.78	29.02	29.02
3	Less: Normative Repayment	76.93	54.50	39.60
4	Closing Normative Loan	1138.90	135.58	141.64
5	Average Normative Loan	1106.48	148.31	146.93
6	Rate of Interest (%)	9.55%	9.55%	9.55%
7	**Interest on Loan**	**105.67**	**14.16**	**14.03**
8	Financing Charges		2.32	2.32
9	**Interest and Finance Charges**	**105.67**	**16.48**	**16.35**

The Commission approves Interest and Finance Charges of INR 16.35 Cr in the True-up of the FY 2019-20.

5.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations, 2018. Opening equity has been considered as 30% of GFA computed by the Petitioner for FY 2019-20 (Net of assets funded by consumer contribution, capital subsidies and grants). The equity addition has been considered to the tune of 30% of assets capitalized (net of capitalisation from grants) during the year. The rate of RoE has been considered as 16% on post tax basis as per JERC MYT Regulations, 2018.

Commission's analysis:

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

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

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

As mentioned above, the total asset capitalisation other than the Central Government schemes during the year has been funded by equity. The Commission for the purpose of equity addition during the year, has limited it to 30% of total capitalisation (net of capitalisation through ED and Government Grants) as prescribed in the JERC MYT Regulations, 2018.

The Commission noted that the Petitioner has not made any adjustment in respect of the assets retired during the year in equity. The 30% of the assets retired during the FY 2019-20 as per the audited books of accounts has also been deducted from the capitalisation during the year assuming, they have completed the useful life and the debt was repaid.

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

Table 106: Return on Capital Base approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	604.34	307.31	294.29
2	Additions on account of new capitalisation	60.76	12.44	11.63
3	Closing Equity	665.10	319.75	305.93
4	Average Equity	634.72	313.53	300.11
5	Average Equity-Wires Business (90%)	571.25	282.17	270.10
6	Average Equity- Retail Supply Business (10%)	63.47	31.35	30.01
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.5%
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.0%
9	Return on Equity for Wires Business (INR Cr)	88.54	43.74	41.87
10	Return on Equity for Retail Supply Business (INR Cr)	10.16	5.02	4.80
11	**Return on Equity**	**98.70**	**48.75**	**46.67**

The Commission approves a Return on Equity as INR 46.67 Cr in the True-up of FY 2019-20.

5.15. Interest on Consumer Security Deposits

Petitioner's submission

Interest on Security Deposits has been calculated in accordance with the JERC MYT Regulations, 2018 based on the average of opening and closing consumer security deposits during the year. The opening security deposit has been derived based on the closing security deposit of FY 2018-19. The addition during the year has been considered as per the actuals as reflected in the audited accounts for FY 2019-20.

In accordance with the JERC (Electricity Supply Code) (First Amendment) Regulations, 2019, the rate of interest to the consumer has been considered at the Bank Rate declared by the Reserve Bank of India prevailing on the 1st of April 2019 i.e., 6.50% and the same has been considered for computation of Interest on Security deposit which comes out to be Rs.2.79 Cr. However, as per the audited annual accounts, the actual Interest on Security Deposit paid by EDG during FY 2019-20 was Rs.6.15 Crore and the same has been considered as Interest on Security Deposit for the purpose of true-up.

Table 107: Interest on Consumer Security Deposits submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Security Deposit	39.88
2	Add: Deposits During the year	8.74
3	Less: Deposits refunded	2.75
4	Closing Security Deposit	45.87
5	Average Security Deposit	42.87
6	Rate of Interest (%)	6.50%
7	**Interest on Security Deposit**	**2.79**
8	**Interest paid to consumers**	**6.15**

Commission's analysis:

The Petitioner has determined the Interest on Security Deposits on normative basis as per JERC MYT Regulations, 2018.

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

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

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

Accordingly, the Commission has considered the interest on consumer security deposits as per audited annual accounts as follows:

Table 108: Interest on Consumer Security Deposits as per Audited Annual Accounts (In INR Cr)

S. No	Particulars	As per Annual Audited Accounts
1	Opening Security Deposit	39.87
2	Add: Deposits During the year	8.74
3	Less: Deposits refunded	2.75
4	Closing Security Deposit	45.86
5	Average Security Deposit	42.87
6	Rate of Interest	6.50%
7	**Interest on Security Deposit**	**2.79**
8	**Interest paid to consumers**	**6.15**

The Commission noted that the actual interest on security deposit paid during the year is higher than the normative interest on security deposit and sought the details from the Petitioner. The Petitioner has submitted that it is on account of past period discharge as in previous years, a lower interest on security deposit was paid.

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

Table 109: Interest on Consumer Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**6.74**	**6.15**	**6.15**

The Commission approves Interest on Security Deposit as INR 6.15 Cr. in the True-up of FY 2019-20.

5.16. Interest on Working Capital

Petitioner's submission

As per clause 31 & 52 of JERC MYT Regulations, 2018 the working capital of a licensee shall consist of:

(a) Receivable of two months of billing

(b) O&M Expenses of one month

(c) 40% of Repair & maintenance expenses for one month

(d) Less consumer security deposit but excluding Bank Guarantee

The interest on working capital is computed at 10.55% (SBI base rate as on 1st April 2019) as has been shown in the table below:

Table 110: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No.	Particulars	Petitioner's Submission
1	Receivables of 2 months of billing	289.16
2	O&M expense for 1 month	33.36
3	Maintenance spares at 40% of R&M expenses for 1 month	1.10
5	Less: Security Deposit excluding BG/FDR	42.87
6	Net Working Capital Requirement	280.74
7	Rate of Interest (%)	10.55%
8	**Interest on Working Capital**	**29.62**

Commission's analysis:

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

"52. Norms of Working Capital for Distribution Wires Business

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

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

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

(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution

wires at the prevailing tariff;

Less:

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

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

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

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

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

In accordance with the JERC MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for FY 2019-20. The interest on working capital is computed at SBI base rate as on 1st April for the relevant year plus 200 basis point.

Accordingly, the Interest on Working Capital as approved in the MYT Order, as submitted by the Petitioner and now approved by the Commission is shown in the table below:

Table 111: Interest on Working Capital approved by Commission (In INR Cr)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of 2 months of billing	368.70	289.16	289.16
2	O&M expense for 1 month	30.31	33.36	30.60
3	Maintenance spares at 40% of R&M Expenses for 1 month	1.42	1.10	1.18
5	Less: Security Deposit excluding BG/FDR	107.80	42.87	42.87
6	Net Working Capital Requirement	292.63	280.75	278.07
7	Rate of Interest (%)	10.15%	10.55%	10.55%
8	**Interest on Working Capital**	**29.70**	**29.62**	**29.34**

The Commission approves the Interest on Working Capital as INR 29.34 Cr. in the True- up of FY 2019-20.

5.17. *Provision for Bad & Doubtful Debts*

Petitioner's submission

The Petitioner has submitted that the bad and doubtful debts actually written off during FY 2019-20 is INR 2.86 Cr., the Petitioner has considered provision for bad and doubtful debt for FY 2019-20 as INR 2.86 Cr.

Commission's analysis:

As per Regulation 62 of the JERC MYT Regulations, 2018:

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

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

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

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

It is observed that as per the audited accounts, the licensee has not written off any bad and doubtful debts for the FY 2019-20 and only has provisioned the same in the book of accounts.

The Commission therefore has not allowed any bad and doubtful debts in the True-up of FY 2019-20.

5.18. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted NTI of INR 20.47 Cr. in the True-Up of FY 2019-20 against INR 24.40 Cr approved by the Commission in the ARR for FY 2019-20. The Non–Tariff Income as submitted by the Petitioner has been shown in the following table:

Table 112: Non- Tariff Income submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Meter/service rent	9.33
2	UI Sales/Sales to Exchange	
3	Wheeling charges under open access	0.04
4	Miscellaneous Receipts/Income	11.10
5	Deferred Income (Electricity Development fund)	
6	Income from trading	0.01
7	Total Income	20.47
8	Add: prior period income	
9	**Total**	**20.47**

Commission's analysis:

Regulation 34.2 of JERC MYT Regulation, 2018 states the following:

"The delayed payment charge earned by the Transmission Licensee or the Distribution Licensee shall not be considered under its Non-Tariff Income."

The Commission has verified the submission of the Petitioner from the audited accounts and found the same to be correct. The NTI approved in the MYT Order, the Petitioner's submission and now trued-up by the Commission is shown in the following table:

Table 113: Non- Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Meter/service rent	24.40	9.33	9.33
2	UI Sales/Sales to Exchange			0.00
3	Wheeling charges under open access		0.04	0.04
4	Miscellaneous Receipts/Income		11.10	11.10
5	Deferred Income (Electricity Development fund)			0.00
6	Income from trading		0.01	0.05
7	Total Income	24.40	20.47	**20.52**
8	Add: prior period income			0.00
9	**Total**	**24.40**	**20.47**	**20.52**

The Commission approves Non-Tariff Income of INR 20.52 Cr in the True-up of FY 2019-20.

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

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

In the MYT Order, the Commission had approved the T&D loss level of 10.75% for FY 2019-20 against which the Petitioner has achieved T&D loss of 15.03%. The Commission, in accordance with Regulation 14.2 of the JERC MYT Regulations, 2018 (reproduced below) has determined the dis-incentive towards the under-achievement of the target of T&D loss for the FY 2019-20 as follows:

As per Regulation 14.2 of the JERC MYT Regulations 2018,
"14.2 Approved aggregate loss, if any to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be on account of the Licensee, and shall not be passed to the Consumers"

The disincentive has been derived by calculating the additional cost of power procured due to under achievement of the stipulated Intra-State T&D loss target by the Petitioner, at the Average Power Purchase cost (APPC). The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up above and the Energy at State/UT Periphery computed after grossing up the retail energy sales with the approved Intra-State T&D Loss. The following table provides the details of computation of Average Power Purchase Cost for FY 2019-20:

Table 114: Average Power Purchase Cost approved by Commission for FY 2019-20

S. No.	Particulars	Value
1	Total Power Purchase Cost (Rs Cr)	1,611.31
2	Less: Transmission charges and Power Purchase cost from renewable energy sources (Rs Cr)	201.97
3	Net Power Purchase Cost (Rs Cr)	1,409.33
4	Total Power Purchase quantum (MU)	4,469.96
5	Less: Quantum from renewable energy sources (MU)	415.14
6	Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	4,054.82
7	APPC (Rs/kWh)	3.48

The assessment of dis-incentive for higher T&D losses is shown in the following table:

Table 115: Dis-incentive due to under-achievement of T&D Loss target for FY 2019-20 (INR Crore)

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	3722.98	3722.98
2	T&D Loss (%)	10.75%	15.03%
3	Power Purchase at State/UT Periphery	4171.41	4381.60
4	Gain/(Loss) (MU)		-210.19
5	Average Power Purchase Cost (APPC)		3.48
6	Gain/ (Loss) (INR Cr)		-73.06
7	**Sharing of 100% of Loss with the Petitioner**		**-73.06**

The Commission determines and approves INR 73.06 Cr. as dis-incentive on account of under-achievement of T&D loss target for the FY 2019-20.

5.19.2. *Incentive/Disincentive on account of under/over-achievement of norms for Operations & Maintenance (O&M) Expenses*

The Regulation 14 of the JERC MYT Regulations, 2018 stipulates the following:

"14. Mechanism for sharing of gains or losses on account of controllable factors

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

Provided that the mechanism for sharing of gains or losses on account of controllable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations.

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

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

Table 116: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Normative Expenses	Gain/Loss Sharing	Trued-up by Commission
1	Employee Expenses	294.08	340.39	304.44	-35.95	304.44
2	Administrative & General Expenses (A&G)	27.10	26.91	27.95	1.04	27.43
3	Repair & Maintenance Expenses	42.55	32.98	37.70	4.72	35.34
	Total Operation & Maintenance Expenses	**363.73**	**400.27**	**370.08**	**-30.20**	**367.21**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 367.21 Cr in the True-up of FY 2019-20 after adjusting incentive/dis-incentive on account of over/under-achievement of O&M Expenses.

5.20. *Aggregate Revenue Requirement (ARR)*

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 2149.59 Cr is submitted for approval in the True-up of FY 2019-20.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of FY 2019-20 as given in the following table:

Table 117: Aggregate Revenue Requirement approved by Commission for FY 2019-20 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost inclusive of cost towards compliance of RPO	1555.16	1611.42	1611.31
2	Operation & Maintenance Expenses	363.73	400.28	367.21

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
3	Depreciation	76.93	54.50	39.60
4	Interest and Finance charges	105.67	16.48	16.35
5	Interest on Working Capital	29.70	29.62	29.34
6	Interest on Security Deposit	6.74	6.15	6.15
7	Return on Equity	98.70	48.75	46.67
8	Provision for Bad Debt	0.00	2.86	0.00
9	Provision for DSM Expenses	0.00	0.00	0.00
10	Incentive/Disincentive in under/over achievement of norms	0.00	0.00	-73.06
10	**Total Revenue Requirement**	**2236.63**	**2170.06**	**2,043.57**
11	Less: Non-Tariff Income	24.40	20.47	20.52
12	**Net Revenue Requirement**	**2212.23**	**2149.59**	**2,023.05**

The Commission approves net Aggregate Revenue Requirement of INR 2023.05 Cr. in the True-up of FY 2019-20.

5.21. Revenue from Sale of Power

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2019-20 as INR 1,734.95 Cr against revenue of 1882.97 Cr approved by the Commission in the MYT Order. The following table provides the revenue at existing tariff as submitted by the Petitioner:

Table 118: Revenue at approved tariff submitted by the Petitioner for FY 2019-20

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	279.17	22.45	301.62
2	LTD/Low Income Group	0.24	0.02	0.25
4	LTC/Commercial	198.55	14.99	213.54
5	LTP Mixed (Hotel Industries)	2.07	0.15	2.22
6	LTP Industry	33.24	2.34	35.58
7	LTAG/Agriculture (Pump sets/Irrigation)	2.72	0	2.72
8	LTAG/Agriculture (Allied Activities)	0.19	0	0.19
9	Street Light	7.62	1.64	9.26
10	Hoardings/Signboards	0.19	0.01	0.19
	Sub-Total	**523.98**	**41.60**	**565.57**
	B. HIGH TENSION SUPPLY			
11	HT-D Domestic	0.17	0.01	0.18
12	HT-C Commercial	80.74	5.08	85.82

S. No	Category	Revenue from Demand and Energy Charges (Rs.Cr)	Revenue from FPPCA (Rs.Cr)	Total Revenue (Rs. Cr)
13	HTI/ Industrial - Connected at 11/33kV	620.22	46.19	666.41
14	HTI / Industrial- Connected at 110kV	112.12	8.66	120.78
15	HT-Industrial (F/M, Steel Melt, Power Intensive)	231.85	18.36	250.21
16	HTAG/ Agriculture (Pump stets/Irrigation)	1.12	0	1.12
17	HTAG/Agriculture (Allied Activities)	1.37	0	1.37
18	HT.MES / Defence Establishment	13.31	0.99	14.30
	Sub Total	**1060.90**	**79.29**	**1140.19**
	C. Temporary Supply			
19	L.T Temporary Domestic	0.87	0.05	0.92
20	L.T Temporary Commercial	16.3	0.73	17.03
21	H.T. Temporary	2.83	0.09	2.91
	Sub Total	**20.00**	**0.86**	**20.86**
	D. Single Point Supply	3.27	0.22	3.49
22	Residential Complexes	0.00	0.00	0.00
23	Commercial Complexes	3.27	0.22	3.49
24	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**3.27**	**0.22**	**3.49**
	D. Others			
25	Unmeterd LTPL	3.67	0.08	3.75
26	RRC referred	1.07	0,01	1.08
	Sub Total	**4.74**	**0.08**	**4.83**
	Total	**1612.88**	**122.07**	**1734.95**

Commission's analysis

The Commission has verified revenue from sale of power within the State in the FY 2019-20 from the audited accounts. However, the Commission has not considered the energy sales and revenue from Arrears as the same does not pertain to the current FY. The category-wise revenue now Trued-up by the Commission is shown in the following table:

Table 119: Revenue at approved tariff approved by Commission for FY 2019-20 (INR Crore)

S. No	Category	Revenue from Demand and Energy Charges	Revenue from FPPCA	Total Revenue
	A. LOW TENSION SUPPLY			
1	LTD/Domestic	279.17	22.45	301.62
2	LTD/Low Income Group	0.24	0.02	0.25
4	LTC/Commercial	198.55	14.99	213.54

S. No	Category	Revenue from Demand and Energy Charges	Revenue from FPPCA	Total Revenue
5	LTP Mixed (Hotel Industries)	2.07	0.15	2.22
6	LTP Industry	33.24	2.34	35.58
7	LTAG/Agriculture (Pump sets/Irrigation)	2.72	0	2.72
8	LTAG/Agriculture (Allied Activities)	0.19	0	0.19
9	Street Light	7.62	1.64	9.26
10	Hoardings/Signboards	0.19	0.01	0.19
	Sub-Total	**523.99**	**41.60**	**565.57**
	B. HIGH TENSION SUPPLY			
11	HT-D Domestic	0.17	0.01	0.18
12	HT-C Commercial	80.74	5.08	85.82
13	HTI/ Industrial - Connected at 11/33kV	620.22	46.19	666.41
14	HTI / Industrial- Connected at 110kV	112.12	8.66	120.78
15	HT-Industrial (F/M, Steel Melt, Power Intensive)	231.85	18.36	250.21
16	HTAG/ Agriculture (Pump stets/Irrigation)	1.12	0	1.12
17	HTAG/Agriculture (Allied Activities)	1.37	0	1.37
18	HT.MES / Defence Establishment	13.31	0.99	14.3
	Sub Total	**1060.90**	**79.29**	**1140.19**
	C. Temporary Supply			
19	L.T Temporary Domestic	0.87	0.05	0.92
20	L.T Temporary Commercial	16.3	0.73	17.03
21	H.T. Temporary	2.83	0.09	2.91
	Sub Total	**20.00**	**0.87**	**20.86**
	D. Single Point Supply			
22	Residential Complexes	0.00	0.00	0.00
23	Commercial Complexes	3.27	0.22	3.49
24	Industrial Complexes	0.00	0.00	0.00
	Sub Total	**3.27**	**0.22**	**3.49**
	D. Others			
25	Unmeterd LTPL	3.67	0.08	3.75
26	RRC referred	1.07	0,01	1.08
	Sub Total	**4.74**	**0.08**	**4.83**
	Total	**1612.90**	**122.06**	**1734.96**

The Commission approves the revenue from the sale of power as INR 1734.96 Cr. in the True-up of the FY 2019-20.

5.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 414.65 Cr is arrived at in the True-up of FY 2019-20.

Commission's analysis

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

Table 120: Standalone Revenue Gap/ (Surplus) determined by Commission for FY 2019-20 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	2212.23	2149.59	2,023.05
2	Revenue from Tariff including FPPCA	1882.97	1734.95	1734.96
3	**Net Gap / (Surplus)**	**329.25**	**414.65**	**288.09**
4	Less: Budgetary Support from Govt	329.25	414.65	288.09
5	**Net Final Revenue Gap to be carry forward**	**NIL**	**NIL**	**NIL**

The Commission, in the True-up of FY 2019-20 approves a standalone gap of INR 288.09 Cr. The Petitioner has submitted that the entire gap for the FY 2019-20 is committed to be funded by the Government of Goa by way of budgetary support. The Petitioner in this regard has submitted the letter dated 29th November 2018 from the Government of Goa wherein the Govt. had assured that it would provide the requisite budgetary support to meet the deficit at the existing tariff for the FY 2019-20. Accordingly, no revenue gap is carried forward in the future years.

Annexures

1.1. List of stakeholders who attended the public hearing

Annexure 1: List of Stakeholders who attended the Public hearing on 22nd November 2022

Table 121: List of Stakeholders

S. No.	Name of Person (Mr/Ms)	Organization/ Address
1	Mr. Martin Rodrigues	Secretary, Raia Civic and Consumer Forum
2	Miss. Lisa Ann Monterio	Goa Chamber of Commerce & Industry
3	Mr. Prakash Lotlikar	Goa Chamber of Commerce & Industry
4	Mr. Sanjay Y. Amonkar	Goa Chamber of Commerce & Industry