TARIFF ORDER

True-up for FY 2016-17, Annual Performance Review for FY 2019-20 and Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for the FY 2020-21

Petition No. 23/2019

For

Electricity Department Andaman & Nicobar Islands (EDA&N)

18th May 2020

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

Abbreviation	Full Form
A&G	Administrative and General
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CGS	Central Generating Stations
Cr	Crores
DG	Diesel Generator
Discom	Distribution Company
FY	Financial Year
GoI	Government of India
HPP	Hired Power Plant
HT	High Tension
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
kVA	Kilo Volt Ampere
kWh	Kilo Watt Hour
LT	Low Tension
MoP	Ministry of Power
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PH	Power House
PLF	Plant Load Factor
PPA	Power Purchase Agreement
REC	Renewable Energy Certificate
RPO	Renewable Purchase Obligation
SECI	Solar Energy Corporation of India Limited
SERC	State Electricity Regulatory Commission
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
YoY	Year on Year

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Sh. M. K. Goel, Chairperson

Petition No. 23/2019

In the matter of

Approval for the True-up of FY 2016-17, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2020-21.

And in the matter of

Electricity Department, Andaman & Nicobar (EDA&N) ....Petitioner

ORDER

Dated: 18th May 2020

1) This Order is passed in respect of a Petition filed by the Electricity Department Andaman & Nicobar (EDA&N) (herein after referred to as "The Petitioner" or "EDA&N" or "The Licensee") for approval of True-up of FY 2016-17, Annual Performance Review for the FY 2019-20, Aggregate Revenue Requirement (ARR) and Retail Tariff for the FY 2020-21 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 12th December 2019. 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. A Public Hearing was also held on 02nd and 04th March 2020, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3) Ministry of Home Affairs (MHA), Govt. of India has imposed nationwide lockdown with certain exceptions in the entire country from 24th March 2020 onwards to contain Covid-19. The Commission acknowledges that the prevailing situation due to outbreak of Covid-19 has led to complete shutdown of a number of commercial, industrial and Institutional establishments. COVID-19 (Corona Virus) outbreak has posed an unprecedented and unconceivable situation which is causing wide spread concern and economic hardship for communities, businesses and consumers across the country. The delay in issuance of this Order is due to the above uncontrollable factor i.e. nationwide lockdown with effect from March 24, 2020 due to the pandemic COVID 19.

4) The Commission also recognises the fact that the lockdown announced in the country will certainly have impact on sales of Industrial and Commercial consumers, thereby impacting the computation of ARR. Even after the lockdown restrictions are lifted in entirety, it is going to take some time before the economic situation stabilises. Therefore, at this point of time it will not be possible to factor the impact of lockdown on sales and components of ARR for FY 2020-21 with desired accuracy and efficacy.

5) The Commission, vide its Order dated April 10, 2020 in SUO MOTU PETITION NO. JERC/LEGAL/SMP/27/2020 issued certain Directions to mitigate the hardship of Electricity consumers

and DISCOMS/EDs in view of nationwide lockdown due to COVID-19. The Commission, in the said Order, ruled that the additional expenses that are likely to be incurred by the Distribution Licensees on compliance with the directions issued in the said Order, will be taken into account while evaluating the APR of FY 2020-21.

6) The Commission is issuing this Order considering the "Business as Usual" scenario on the basis of the Petition submitted by the Electricity Department of Andaman & Nicobar after detailed analysis of submissions made by the Petitioner for FY 2020-21 and without factoring the impact of lockdown. The Commission will duly consider the impact of lockdown on sales and ARR of the Petitioner for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.

7) The Petitioner has not submitted the true-up petition for FY 2017-18 and FY 2018-19; therefore, the Commission has not carried out the True-up for FY 2017-18 and FY 2018-19. The Commission shall revisit the ARR for the FY 2017-18 and FY 2018-19 after the submission of true petition along with audited accounts by the Petitioner.

8) The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligence and prudence check, has approved the True-up of FY 2016-17, APR of FY 2019-20 and ARR along with Retail Tariff for the FY 2020-21.

9) A Summary has been provided as follows:

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

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	623.48	602.44
2	Revenue from Retail Sales at Existing Tariff	135.76	135.76
	Net Gap /(Surplus)	**487.72**	**466.68**

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

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (INR Crore)

S. No	Particulars	Petitioners submission	Approved by Commission
1	Net Revenue Requirement	760.82	702.29
2	Revenue from Retail Sales at Existing Tariff	182.79	183.98
	Net Gap /(Surplus)	**578.03**	**518.31**

(c) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission for FY 2020-21:

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2020-21 (INR Crore)

S. No	Particulars	Petitioners submission	Approved by Commission
1	Net Revenue Requirement	794.91	767.20
2	Revenue from Retail Sales at Approved Tariff	192.05	192.86
	Net Gap /(Surplus)	**602.86**	**574.34**

(d) The Petitioner has submitted that the above gap shall be met through the budgetary support and accordingly, the Commission has not approved any hike in the existing tariff.

(e) The Commission has approved the reduced tariffs for Domestic, Commercial and Industrial categories to incentivise consumers installing solar technologies on their roofs or other available areas.

(f) The Commission has approved the average revenue for FY 2020-21 as INR 6.90/kWh as against the approved Average Cost of Supply of INR 27.45/kWh.

(g) In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for E.V. Charging Stations where the Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of ABR.

(h) The limit on monthly energy consumption for Lifeline Connection has been increased to 100 units/month and beyond it, the entire consumption for such consumers shall be charged at Domestic tariff.

(i) This Order shall come into force with effect from 1st June, 2020 and shall, unless amended or revoked, continue to be in force till further orders of the Commission. As the tariff is being implemented with effect from 1st June, 2020 instead of 1st April, 2020, the Commission will duly consider the impact of under recovery of ARR for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.

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

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

-Sd-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 18th May 2020

(Certified Copy)

(Rakesh Kumar)

Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "the 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 "the 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 the 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. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting the interest of consumers and ensuring the supply of electricity to all areas.

1.2. Andaman & Nicobar Islands

Andaman & Nicobar Islands (hereinafter referred to as "A&N") is a cluster of islands scattered in the Bay of Bengal and a designated Union Territory of India. These islands are separated from the rest of India by more than 1000 kms. The total area of the territory is 8,249 sq.km out of which the forest cover is about 7,589 sq. km. (92%). A&N is having population of 379,944 as per census provisional records and average growth rate of population is 6.68%. These islands are divided in three districts, viz., Andaman, Nicobar and North & Middle Andaman. The seat of the Administration is at Port Blair (South Andaman) in which 14.14 sq. km. area is under the jurisdiction of Port Blair Municipal Council.

The tempo of economic development has tremendously accelerated along with all-round expansion in the areas/ sectors, viz., (i) Shipping Services, (ii) Civil Supplies, (iii) Education, (iv) Fisheries, (v) Tourism & Information Technology, (vi) Health, (vii) Industries, (viii) Rural Development, (ix) Social Welfare, (x) Transport, (xi) Increase in District Headquarters, (xii) Central Government Department, (xiii) Public Undertaking & other offices, (xiv) Services & Utilities, (xv) Defence Establishment, (xvi) Commercial Organisations/Business Centres, etc. Thus, these islands have reached the take off stage for total economic transformation. All these economic and infrastructure developments require power as a vital input and to play a key role for achieving overall transformation.

For operational purpose the area has been divided into 7 divisions and 26 sub-divisions.

Andaman Group of Islands

1.3. About Electricity Department Andaman & Nicobar Administration (EDA&N)

The Electricity Department of Andaman & Nicobar Administration (hereinafter referred to as "EDA&N" or "Utility" or "Petitioner") is solely responsible for power supply in the Union Territory (UT). Power requirements of EDA&N are met by own generating stations as well as power purchase.

Due to the geographical and topographical peculiarities of these islands including separation by sea over great distances, there is no single power grid for the entire electrified islands, instead, power house at various islands caters independently to the power requirements of area/islands.

EDA&N is operating and maintaining power generation, transmission and distribution system network in these islands for providing electric power supply to general public. It implements various Planned and Non-Planned schemes for augmentation of Diesel Generating Capacity, establishment of new power plants and T&D Systems. EDA&N is also functioning as a Nodal Agency for implementing renewable energy programme of the Ministry of New & Renewable Energy (MNRE) on these islands. Presently, EDA&N is headed by a Superintending Engineer, along with seven Executive Engineers and around thirty-eight Assistant Engineers for carrying out the task of power generation, transmission and distribution to the general public including schemes under renewable energy sources.

The key duties being discharged by EDA&N are:

- Laying and operating of electric lines, sub-stations and electrical plants that are primarily maintained for the purpose of distributing electricity in the area of Andaman & Nicobar Islands.

- Operating and maintaining sub-stations and dedicated transmission lines connected therewith as per the provisions of the Act and the rules framed there under;
- Generation of electricity for the supply of electricity required within the boundary of the UT and for the distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Implementation of schemes for distribution and generally for promoting the use of electricity within the UT.

The present Installed Capacity of EDA&N is approximately 113.86 MW from various generating stations. The current demand mainly comprises of the domestic and commercial category, which contributed approximately 75% to the total sales of the EDA&N.

The table below gives an overview of present infrastructure of EDA&N.

Table 4: Present Infrastructure

S. No.	Particulars	Details
1	33 kV Lines	496.64 kMs
2	11 kV Lines	910.00 kMs
3	LT Lines (415V)	3333.00 kMs
4	Distribution Transformers	111.953 Kms
5	Capacity of Distribution Transformers 33 kV S/S	163.23 MVA
6	Total Number of Power House (in Nos)	51
7	Peak Demand	60 MW
8	Present Installed capacity	118.77 MW
9	Diesel Capacity | Hydro Capacity | Solar Capacity	107.47 MW | 5.25 MW | 6.15 MW
10	Department Power House	27 Nos
11	Power House-others	13 Nos
12	Consumers	133990 Nos

1.4. Multi Year Distribution Tariff 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 MYT Regulations, 2014) on June 30, 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 August 10, 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi Year Tariff Regulations, 2018

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (hereinafter referred to as MYT Regulations, 2018) on August 10, 2018. These Regulations are applicable in 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

The present Petition was admitted on December 12, 2019 and marked as Petition No. 23/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.7. Interaction with the Petitioner

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

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

Table 5: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of Discrepancy Note	13.12.2019
2	Public hearing	02.03.2020, 04.03.2020
3	Petitioner's reply to the Stakeholders' comments sought by the Commission	14.03.2020
4	Technical Validation Session	24.01.2020
5	Reply received from the Petitioner with regard to first discrepancy Note	26.12.2019
6	Issue of second Discrepancy Note	18.02.2020; 25.01.2020
7	Replies received from the Petitioner with regard to second Discrepancy note	20.02.2020

1.8. Notice for Public Hearing

The Petitioner published the Public Notices for inviting suggestions/ comments from stakeholders on the Tariff Petition as given below:

Table 6: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of circulation
1	March 2, 2020	The Daily Telegrams	English	Port Blair

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearings.

Table 7: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1	January 15, 2020	The Times of India	English	Kolkata
2	January 15, 2020	The Eco of India	English	Port Blair
3	January 15, 2020	Arthik Lipi	Bengali	Port Blair
4	January 15, 2020	The Andaman Express	English	Port Blair
5	February 28, 2020	The Times of India	English	Kolkata
6	February 28, 2020	The Eco of India	English	Port Blair

S. No.	Date	Name of Newspaper	Language	Place of Circulation
7	February 28, 2020	Arthik Lipi	Bengali	Port Blair
8	February 28, 2020	The Andaman Express	English	Port Blair

The Commission also uploaded the MYT Petition and the Public Notice on its website www.jercuts.gov.in giving due intimation to stakeholders, consumers, objectors and the public at large about the Public Hearing to be conducted by the Commission on 2th March 2020 at Shaheed Dweep and 4th March 2020 at Port Blair.

1.9. Public Hearing

The Public Hearings were held on 2th March 2020 at Shaheed Dweep and on 4th March 2020 at Port Blair to discuss the issues related to the Petition filed by the Petitioner. The list of the Stakeholders is attached as Annexure 1 of this Order. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

2. Chapter 2: Summary of Suggestions/ Comments 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 suggestions/ comments from the public as per the provisions of the MYT Regulations, 2014 and MYT Regulations, 2018.

The Public Hearings were held on March 2, 2020 at Panchayat Hall, Neil Kendra, Shaheed Dweep and on March 4, 2020 at DBRAIT Auditorium, Dollyganj, Port Blair on the Petition for the True-up of the FY 2016-17, APR of the FY 2019-20, Aggregate Revenue Requirement (ARR) and Tariff for the FY 2020-21. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written suggestions/ comments earlier, were also given an equal opportunity to present their views/ suggestions in respect to the Petition.

The list of the Stakeholders is attached as **Annexure 1** of this Order.

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

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/ comments/ observations to make the Electricity Distribution Sector responsive and efficient. The Commission has noted the concerns of all the stakeholders and has tried to address them to the extent possible in the Chapters on tariff design and Directives. The Commission while finalizing the Tariff Order has suitably considered relevant observations. The submissions of the stakeholders, Petitioner's response and views of the Commission are summarized below:

2.2.1. Consideration of hotels in Industrial Category

Stakeholders' Comments

The representatives from hotel industry has requested the Commission to consider the hotels as part of Industrial category instead of Commercial category as it is the only dominant industry in Andaman & Nicobar Islands.

Petitioner's Response

It is submitted that the EDA&N has already submitted the tariff proposal for various categories of consumers in the tariff petition. The Hon'ble Commission may decide the matter in view of the submission & tariff structure prevalent in other distribution utilities in India.

Commission's View

The Commission has noted the concern of the stakeholders. However, the Commission would like to clarify that based on nature of industry, hotel industry should be a part of Commercial category only. Also, hotel industry shall be burdened with huge fixed charges even in lean season, if they are considered in Industrial category, which will be against their interest.

2.2.2. Rebate on advance payment

Stakeholders' Comments

Stakeholders have requested the Commission to allow the rebate on advance payment thereby incentivising the consumers for advance payment of the electricity bills.

Petitioner's Response

It is submitted that the provision for rebate is already there in the existing tariff order. However, the same is yet to be incorporated in the billing software. EDA&N shall take steps to incorporate the same in the billing system.

Commission's View

The Commission appreciates the stakeholder's submission and directs the Petitioner to modify the billing system to incorporate the rebate on early payment.

2.2.3. Employee Strength

Stakeholders' Comments

Stakeholders submitted that there is shortage of employees of Electricity Department of Andaman and Nicobar island on the Havelock island, because of which there is delay in resolution of problems faced by the Consumers.

Petitioner's Response

It is submitted that the sanctioned strength viz-a-viz vacancy of all the posts in the department is appended as Annexure-A.

Commission's View

The Commission appreciates the steps taken by the Petitioner to fill the vacant positions and directs to complete the recruitment process at the earliest.

2.2.4. Separate category for Hotel Industry

Stakeholders' Comments

Stakeholders has requested the Commission to introduce a separate category for hotel industry with tariff in between the Industrial category and Commercial category as proposed by the Hon'ble Commission in the State of Goa.

Petitioner's Response

It is submitted that the EDA&N has already submitted the tariff proposal for various categories of consumers in the tariff petition, however, deciding on the tariff category is the prerogative of the Hon'ble Commission and the same may be decided in view of our submissions in the petition & tariff structure prevalent in other distribution utilities in India.

Commission's View

The Commission has noted the submission of all the stakeholders. The Commission has discussed the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.5. Interest on Security Deposits

Stakeholders' Comments

A stakeholder has submitted that the security deposit for new connection which lies with the bank earns interest and the same should be adjusted in the monthly billing or returned to the consumers which is not done by the Department.

Petitioner's Response

The Petitioner has submitted that it does not collect security deposit from consumers in cash. The consumers are required to create a Term Deposit in scheduled bank equivalent to the security amount and a lien is created in favour of the EDA&N towards security deposit. Hence, Interest on Security deposits is not payable to the consumers.

Commission's View

The Commission notes the stakeholders' submission and directs the Petitioner to change its practice for handling security deposits as interest on security deposit is allowed separately by the Commission in the ARR and it shall reduce the normative working capital requirement. The Commission would like to highlight that the Petitioner has to pay interest on security deposits in accordance with the provisions of Supply Code 2018.

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

3.1. Background

Under the MYT regime, Order on Aggregate Revenue Requirement (ARR) for the 1st MYT Control Period (FY 2016-17 to FY 2018-19) and Retail Tariff for the FY 2016-17 was issued on April 06, 2016 (hereinafter referred to as the "MYT Order"). However, the Annual Performance Review (APR) for FY 2016-17 was not taken-up by the Commission as the Petitioner did not proposed the review of FY 2016-17 along with the tariff petition for determination of ARR for FY 2017-18.

The Commission, now, in this Chapter carries out the True-up of FY 2016-17, being the first year of the Control Period in accordance with the principles laid down in the MYT Regulations, 2014. The True up for the FY 2016-17 has to be carried out in accordance with Regulation 8(2) of the MYT Regulations, 2014, which states as following:

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

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

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

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

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

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

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

The Petitioner has requested for True-up of FY 2016-17 on the basis of audited accounts. The Petitioner has 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 of FY 2016-17.

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

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2016-17 as 252.13 MU as against an approved energy sales quantum of 252.60 MU in the MYT Order.

Commission's Analysis

The MYT Regulations, 2014 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 9.1 of the MYT Regulations, 2014 in this regard stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(a) Force Majeure events, such as acts of war, fire, natural calamities, etc.
(b) Change in law;
(c) Taxes and Duties;
(d) Variation in sales; and
(e) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

The table below provides the energy sales approved by the Commission in the Tariff Order of FY 2016-17, the Petitioner's submission and quantum of energy sales now trued-up by the Commission.

Table 8: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	131.90	129.90	129.90
2	Commercial	63.69	58.93	58.93
3	Industrial	15.91	17.98	17.98
4	Bulk Supply	30.86	35.63	35.63
5	Public Lighting	9.37	8.65	8.65
6	Irrigation Pumps & Agriculture	0.87	1.04	1.04
	Total	**252.60**	**252.13**	**252.13**

The Commission approves 252.13 MU as energy sales in the True-up of the FY 2016-17.

3.4. Power Purchase Quantum & Cost

Petitioner's submission

The energy requirement is met mainly from own generation apart from procurement of power from the IPPs and other generators. However, there is no availability of power from Central Generating Stations (CGS) or from other sources/ open market/ power exchanges, etc. The Petitioner purchased power worth INR 195.62 Crore against INR 216.72 Crore approved earlier by the Commission. Further, the Petitioner has incurred fuel cost of INR 215.76 Crore against INR 122.29 Crore approved by the Commission in the Tariff Order dated April 6, 2016. The Petitioner has submitted the IPP and HPPs wise power generation, fuel consumption and power purchase cost including own generation for FY 2016-17 as shown in table below:

Table 9: Plant wise cost Power Purchase Quantum and Cost (INR Crore)

Particulars	Units generated (MU)	Cost of HSD	Cost of Lube	Fixed Charges	Total Cost
Own Generation (HSD)	137.35	212.72	3.04	0.00	215.76
KHEP (Kalpong Hydro)	12.48	0.00	0.00	0.00	0.00
IPP - SPCL	86.95	86.48	1.83	7.87	96.18
HPP -1 (5 MW)	8.25	21.96	0.00	0.00	21.96
HPP-2 (10MW)	62.07	69.94	0.00	4.57	74.51
NTPC - SPV	6.27	0.00	0.00	2.97	2.97

Particulars	Units generated (MU)	Cost of HSD	Cost of Lube	Fixed Charges	Total Cost
Total	313.36	391.10	4.87	15.41	411.37

Commission's analysis

The MYT Regulations, 2014 stipulate that any variation in the cost of power generation and/or power purchase shall be treated as an uncontrollable factor. Regulation 9.1 of the MYT Regulations stipulates the following:

"The "uncontrollable factors" shall comprise of the following factors which were beyond the control of, and could not be mitigated by the applicant:

(a) Force Majeure events, such as acts of war, fire, natural calamities, etc.
(b) Change in law;
(c) Taxes and Duties;
(d) Variation in sales; and
(e) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

Although, the Petitioner has submitted the plant wise units purchased from the IPPs and the units generated from own generating stations for FY 2016-17. The Petitioner has also not submitted the invoices of the IPPs for validating the claim of the Petitioner. Therefore, in absence of adequate supporting documents, the Commission has no other option than to accept and approve the quantum of power generation and power purchase as submitted by the Petitioner for FY 2016-17. The Commission has verified the power purchase cost and fuel cost as per annual audited accounts and has considered the same for the true-up for FY 2016-17.

On scrutiny of the Own Generation Power Purchase cost for FY 2016-17, it is observed as follows:

Table 10: Comparison of Cost of Own Generation and Power Purchase for FY 2016-17

Particular	Approved in True-up of FY 2015-16	Approved in MYT Order	As per Actuals of FY 2016-17	Deviation (Actual– Approved)
Own Generation (MU)	133.94	118.46	149.83	31.37
Own Generation Fuel Cost (in INR Crore)	183.36	122.29	215.76	93.47
Per unit Own Generation Fuel Cost (INR /kWh)	13.69	10.32	14.40	
Power Purchase (MU)	160.86	186.62	163.53	-23.09
Power Purchase Cost (in INR Crore)	197.64	216.72	195.62	-21.10
Per unit Power Purchase Cost (INR /kWh)	12.27	11.61	11.96	

From above, it is inferred that the per unit cost of own generation for FY 2016-17 has increased from FY 2015-16 level and power purchase for FY 2016-17 has decreased from FY 2015-16 level, but it has increased in comparison to the approved per unit cost for FY 2016-17 in Tariff order dated April 6, 2016. The Commission vide deficiency note sought justification for such increase in cost of own generation and power purchase cost for FY 2016-17. In reply, the Petitioner has submitted that the increase in cost of generation and power purchase is mainly on account of increase in HSD prices. The Commission has determined a hike of 5.19% in per unit cost from own generation vis-à-vis the per unit approved cost for FY 2015-16, which reflects the increase due to inflation. Accordingly, the Commission has approved the total power purchase cost and fuel cost as per the amount reflected in the audited accounts for FY 2016-17.

The approved quantum of Own generation, cost of fuel, power purchase quantum and cost in True-up of FY 2016-17 is as given in the following table:

Table 11: Power purchase quantum (MU) and Cost (INR Crore) approved by the Commission for FY 2016-17

Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Own Generation (MU)	118.46	144.38	149.83
Own Generation Fuel Cost (in INR Crore)	**122.29**	**215.76**	**215.76**
Own Generation Fuel Cost (INR /kWh)	10.32	14.94	14.40
Power Purchase (MU)	186.62	160.86	163.53
Power Purchase Cost (in INR Crore)	**216.72**	**195.62**	**195.62**
Power Purchase Cost (INR /kWh)	11.61	12.16	11.96
Total Own Generation and Power Purchase (MU)	**305.08**	**305.24**	**310.02**
Total Own Generation and Power Purchase Cost (INR Crore)	**339.01**	**411.38**	**411.38**
Total Own Generation and Power Purchase Cost (INR /kWh)	**11.11**	**13.48**	**13.13**

Further, the Petitioner has submitted the auxiliary consumption for IPPs and own generation. The Commission has considered the same for calculation of net generation as shown below:

Table 12: Net Power Purchase for FY 2016-17 (MU)

S.No.	Particulars	Units generated	Auxiliary Consumption	Net Generation
1	Own Generation (HSD)	137.35	3.38%	132.71
2	KHEP (Kalpong Hydro)	12.48	3.38%	12.06
3	IPP - SPCL	86.95	3.53%	83.88
4	HPP -1 (5 MW)	8.25	0.00%	8.25
5	HPP-2 (10MW)	62.07	0.00%	62.07
6	NTPC - SPV	6.27	0.00%	6.27
7	**Total**	**313.36**		**305.23**

The approved cost towards own generation consists of cost incurred towards consumption of HSD oil and Lube oil only as per the audited accounts as the fixed cost incurred against own generation (i.e. O&M expenses, interest and finance charges, depreciation, interest on working capital etc.) has been considered and approved for the department as a whole in subsequent sections. Accordingly, no separate cost has been approved for own generation.

Accordingly, no separate cost has been approved for own renewable based generation.

Therefore, the Commission approves the overall power generation and purchase cost of INR 411.38 Crore in the True-up of FY 2016-17.

3.5. Renewable Purchase Obligation (RPO)

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 4.85% of its total consumption (including 3.20% from Solar) from renewable sources for the FY 2016-17.

For the FY 2016-17, the Petitioner had a standalone target of 11.62 MU comprising of 3.95 MU Solar and 7.67 MU Non-Solar. Against the compliance target, the Petitioner has procured 6.27 MU of solar power and 12.48 MU of Non-Solar Power, thereby resulting in overachievement of 7.13 MU in achieving overall RPO target.

Based on the above, the Commission has computed the standalone RPO compliance for FY 2016-17 as shown in the following table:

Table 13: Compliance status of Renewable Purchase Obligation (RPO) (In MU)

Sr. No.	Particulars	Value
1.	Sales Within the State (excluding Hydro)	239.65
2.	RPO Obligation (in %)	4.85%
a)	Solar	1.65%
b)	Non-Solar	3.20%
3.	RPO Obligation	11.62
a)	Solar	3.95
b)	Non-Solar	7.67
4.	RPO Compliance (Actual Purchase)	18.75
a)	Solar	6.27
b)	Non-Solar	12.48
5.	RPO Compliance (REC Purchase)	0.00
6.	Total RPO Compliance	18.75
7.	**Shortfall/ (Surplus) in RPO Compliance**	**(7.13)**

The Commission notes that there is a net surplus in RPO compliance for FY 2016-17 (7.13 MU).

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 17.40% in the FY 2016-17 against target of 17.11% in FY 2016-17.

Commission's analysis

The Petitioner has not submitted the energy Audit report for FY 2016-17. In absence of the energy audit report, the Commission has considered the net generation/purchase as submitted by the Petitioner for the purpose of True-up. Considering actual sales of 252.13 MU and actual generation of 305.23 MU as approved above, actual T&D loss comes to 17.40%.

Since, the Petitioner has not been able to achieve the Intra-State T&D loss target for the year, the disincentive for the same has to be borne by the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in "Section 3.18.: Incentive/Disincentive towards over/under-achievement of norms of distribution losses section" of this Order.

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

Table 14: Intra-State T&D loss (%)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	17.11%	17.40%	17.40%

The Commission, while Truing UP for FY 2016-17, has considered the actual Intra-State T&D loss of 17.40% for the FY 2016-17.

3.7. Energy Balance

Petitioner's submission

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

Table 15: Energy Balance (MU) as submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within UT	252.13
2	Transmission & Distribution Losses (%)	17.40%
3	T&D Losses (MU)	53.11
	Total Energy Requirement (for sale to retail consumers)	305.24
B	**Energy Availability at Periphery**	
1	Power Purchase	160.86
2	Own Generation	144.38
	Total Energy Availability	305.24
9	**Energy Surplus/(Gap)**	0.00

Commission's analysis

The information submitted by the Petitioner on power purchase quantum has been examined and accordingly the energy balance for the FY 2016-17 is derived. The following table provides the energy balance approved in the ARR of the FY 2016, the Petitioner's submission and now trued-up by the Commission.

Table 16: Energy Balance (MU) approved by Commission

S. No	Particulars	Formula	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
A	**Energy Requirement**				
1	Total Sales within the State/UT	a	252.60	252.13	252.13
	Transmission & Distribution losses				
2	%	b	17.11%	17.40%	17.40%
3	MU	c=d-a	52.14	53.11	53.10
	Energy required at UT Periphery	d=a/(1-b)	**304.74**	**305.24**	**305.23**
B	**Energy Available at Periphery**				
1	**Power Purchase**	e	186.62	160.86	160.46
2	Own Generation	f	118.46	144.38	144.77
	Total Energy Availability	g=e+f	**305.08**	**305.24**	**305.23**
C	**Shortfall/(Surplus)**	**h= d-g**	**-0.34**	**0.00**	**0.00**

3.8. Operation & Maintenance (O&M) Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

3.8.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of INR 108.07 Crore against the approved expenses of INR 55.46 Crore in the ARR of FY 2016-17.

Commission's analysis

Any variation in Employee Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any expense which is beyond the control of the Petitioner. 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 the number of employees & corresponding cost are comparatively more in the A&N than other utilities due to the fact that the operating area of the department is spread across more than 40 isolated islands. Also, the Petitioner requested the Commission to compare the employee expenses vis-à-vis the employee expenses approved by the Commission in the true-up order of FY 2014-15 and FY 2015-16. The Petitioner has also requested to allow the employee expenses as per actual as actual base data was not available at the time of MYT trajectory setting and certain assumptions were used to set the same. Accordingly, the Commission finds it appropriate to allow the employee expenses as per actuals. The table below provides the employee expenses approved in the ARR Order, submission of the Petitioner and now trued-up by the Commission.

Table 17: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	**Total Employee Expenses**	**55.46**	**108.07**	**108.07**

The Commission approves the Employee Expenses of INR 108.07 Crore in the True-up of the FY 2015-16.

3.8.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of INR 15.53 Crore against the approved expenses of INR 1.75 Crore in the ARR Order.

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, office expenses etc.

Any variation in A&G Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any expense which is beyond the control of the Petitioner. The Commission vide deficiency note sought clarification from the Petitioner for such exorbitant hike in the A&G expenses vis-à-vis the A&G expenses approved by the Commission. The Petitioner clarified that the A&G expenses were approved at the lower level in the MYT trajectory for the 1st Control Period by the Hon'ble Commission and the Commission revised the A&G expenses to INR 29.87 crores and INR 30.82 crores in the True-up order of FY 2014-15 and FY 2015-16 respectively. The Petitioner also clarified that they had made efforts and reduced the A&G expenses to INR 15.53 crores in FY 2016-17 from the existing level of INR 30.82 crore in FY 2015-16 and requested to approve the A&G expenses as per audited accounts. The Petitioner has also requested to allow the A&G expenses as per actual as actual base data was not available at the time of MYT trajectory setting and certain assumptions were used to set the same. Accordingly, the Commission finds it appropriate to allow the A&G expenses as per actuals. The table below provides the A&G expenses approved in the ARR Order, submission of the Petitioner and now trued-up by the Commission

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

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Total A&G Expenses	1.75	15.53	15.53

The Commission approves the Administrative & General (A&G) expenses of INR 15.53 Crore in the True-up of FY 2016-17.

3.8.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has incurred R&M expenses of INR 55.79 Crore against the approved expenses of INR 41.31 Crore in the Tariff Order.

Commission's analysis

Any variation in R&M Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any expense which is beyond the control of the Petitioner. The Commission vide deficiency note sought clarification from the Petitioner for such hike in the R&M expenses vis-à-vis the R&M expenses approved by the Commission. The Petitioner clarified that R&M cost are comparatively more in the A&N than other utilities due to the fact that the operating area of the department is spread across more than 40 isolated islands and due to topographical & geographical conditions of the area of operation of the utility. Also, the Petitioner requested to the compare the R&M expenses vis-à-vis the R&M expenses approved by the Commission in the true-up order of FY 2014-15 and FY 2015-16. The Petitioner has also requested to allow the R&M expenses as per actual as actual base data was not available at the time of MYT trajectory setting and certain assumptions were used to set the same.

Accordingly, the Commission finds it appropriate to allow the R&M expenses as per actuals. The table below provides the R&M expenses approved in the ARR Order, submission of the Petitioner and now trued-up by the Commission

Table 19: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	**Repair & Maintenance Expenses (R&M)**	**41.31**	**55.79**	**55.79**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 55.79 Crore in the True-up of FY 2016-17

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

The following table provides the O&M expenses approved in the Tariff Order, submitted by the Petitioner and now trued-up by the Commission.

Table 20: O&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	55.46	108.07	108.07
2	Administrative & General Expenses (A&G)	1.75	15.53	15.53
3	Repair & Maintenance Expenses	41.31	55.79	55.79
	Total Operation & Maintenance Expenses	**98.52**	**179.39**	**179.39**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 179.39 Crore in the True-up of FY 2016-17.

3.9. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation as Nil for the FY 2016-17 against an approved capitalization of INR 21.38 Crore in the ARR of FY 2016-17.

Commission's analysis

The Commission approves the Capitalisation as per the submission in the audited Accounts by the Petitioner. The Commission observed that the Petitioner consistently has not been able to meet the capitalisation targets, which is necessary for efficient and reliable operations of the system. Accordingly, the Commission directs the Petitioner to achieve the capitalisation targets, failing which Commission may be constrained to impose penalty.

The table below provides the capitalisation approved in the Tariff Order, the Petitioner's submission and the capitalisation approved by the Commission now:

Table 21: Capitalisation approved by the Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	21.38	0.00	0.00

The Commission approves the Nil Capitalisation in the True-up of FY 2016-17.

3.10. Capital Structure

Petitioner's Submission

The Petitioner has submitted that all the capital assets have been created out of equity contribution from Andaman & Nicobar Administration.

Commission's analysis

The MYT Regulations 2014, specify that if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as the normative loan. Regulation 24 of the MYT Regulations, states the following:

(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.

The Commission sought details of assets created out of consumer contribution/ grants from the Petitioner, on which the Petitioner has responded that no assets have been created out of consumer contribution/ grants.

In accordance with the MYT Regulations, 2014, and the submissions made by the Petitioner, the Commission has determined the Capital Structure for FY 2016-17 as follows:

Table 22: GFA addition approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	183.15	107.64	130.81
2	Addition During the FY	21.38	0.00	0.00
3	Adjustment/Retirement During the FY	-	0.00	0.00
4	Closing Gross Fixed Assets	204.53	107.64	130.81

Table 23: Normative Loan addition approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	126.38	78.28	14.40
2	Add: Normative Loan During the year	14.97	0.00	0.00
3	Less: Normative Repayment equivalent to Depreciation	9.69	6.16	7.80*
4	Closing Normative Loan	131.65	72.12	6.60

**Depreciation has been calculated in the next section*

Table 24: Normative Equity addition approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	54.95	66.62	39.24
2	Additions on account of new capitalisation	6.41	0.00	0.00
3	Closing Equity	61.36	66.62	39.24

3.11. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2016-17.

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

Table 25: Depreciation submitted by Petitioner (INR Crore)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	107.64
2	Addition During the FY	0.00
3	Adjustment/Retirement During the FY	0.00
4	Closing Gross Fixed Assets	107.64
5	Average Gross Fixed Assets	107.64
6	Weighted Average Depreciation rate (%)	5.72%
	Depreciation	**6.16**

Commission's analysis

Regulation 23 of the 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 MYT Regulations, 2014 the Commission has verified the asset wise capitalisation of the Petitioner and has accordingly 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 26: Depreciation Rate (%)

Description	Rate
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	15.00%
Land	0.00%

The Petitioner as part of this Petition has submitted the Fixed Asset Register (FAR) for FY 2016-17 which specifies the value of assets that have achieved 90% depreciation as of FY 2016-17. As the MYT Regulations, 2014 stipulates that the depreciation shall be allowed to a maximum of 90% of the original cost of the asset, therefore the total value of assets depreciated upto 90% as reflected in the FAR of FY 2016-17 has been deducted from the opening GFA as approved in the previous section.

The revised GFA has then been considered and the depreciation on average Gross Fixed Assets (GFA) has been determined. The net addition during the year has been calculated after deducting the value of retired assets.

The following table provides the calculation of revised GFA for the year FY 2016-17:

Table 27: Calculation of revised GFA (INR Crore)

Description	Opening GFA as per audited accounts	Less: Assets depreciated upto 90% till FY 2015-16	Revised Opening GFA	Addition/ Deletion during the year	Closing GFA	Depreciation Rate	Depreciation
Plant & Machinery	71.47	0.00	71.47	-	71.47	5.28%	3.77
Buildings	36.43	0.00	36.43	-	36.43	3.34%	1.22
Furniture & Fixtures	1.36	0.00	1.36	-	6.42	6.33%	0.41
Vehicles	6.42	0.00	6.42	-	1.36	9.50%	0.13
Computers	15.13	0.00	15.13	-	15.13	15.00%	2.27
Total	**130.81**	**0.00**	**130.81**	**-**	**130.81**		**7.80**

The following table provides the calculation of depreciation during the year FY 2016-17:

Table 28: Depreciation approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	183.15	107.64	130.81
2	Addition during FY	21.38	0.00	0.00
3	Adjustment/Retirement during FY	-	0.00	0.00
4	Closing Gross Fixed Assets	204.53	107.64	130.81
5	Average Gross Fixed Assets	193.84	107.64	130.81
6	Rate of Depreciation (%)	5.00%	5.72%	5.96%
7	**Depreciation**	**9.69**	**6.16**	**7.80**

The Commission approves depreciation of INR 7.80 Crore in the true-up of FY 2016-17

3.12. Interest and Finance Charges

Petitioner's submission

The Petitioner has submitted that the Fixed Asset Register up-to FY 2016-17 has been finalised and the GFA figures have been considered as per the annual audited accounts. The Hon'ble Commission has considered the closing loan balance of INR 14.40 crore in the true-up of FY 2015-16 corresponding to the GFA of INR 130.81 crore. Since there is a difference between the closing GFA as per the Fixed asset register and the Commission approved figures in the true-up order of FY 2015-16, the Petitioner has requested to revise the opening loan balance as per the FAR for FY 2016-17. Further, the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 14.75% (rate as on 6th April 2016).

Commission's analysis

The MYT Regulations, 2014 stipulate that the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. Regulation 24 of the MYT Regulations, states the following:

(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.

(h) *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. •

(i) *(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."*

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would 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. Repayment has been considered equivalent to depreciation allowed during the year.

The Commission for the purpose of calculation of Interest on Loan has considered interest rate equivalent to SBI PLR @ 14.05%, as on 1st April 2016. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved for FY 2015-16. The addition of loan has been considered as explained above and the repayment is considered same as per accrued depreciation during the year.

The following table provides the Interest and Finance charges as approved by the Commission:

Table 29: Interest and Finance charges approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	126.38	78.28	14.40
2	Add: Normative Loan During the year	14.97	0.00	0.00
3	Less: Normative Repayment= Depreciation	9.69	6.16	7.80
4	Closing Normative Loan	131.65	72.12	6.60
5	Average Normative Loan	129.02	75.20	10.50
6	Rate of Interest (%)	14.05%	14.75%	14.05%
7	**Interest on Loan**	**18.13**	**11.09**	**1.48**

The Commission approves the Interest and Finance Charges of INR 1.48 Crore in the True-up of the FY 2016-17

3.13. Return on Equity (RoE)

Petitioner's submission

RoE is calculated in accordance with the MYT Regulations 2014 on 30% of the capital base. Equity to the tune of 30% has been considered based on the assets capitalized during the year. Accordingly, the Return on Equity has been computed at 16% on post-tax basis.

Commission's analysis

According to the Regulation 27 of the MYT Regulations, 2014,

(a) the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower: Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.

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

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

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 as prescribed in the MYT Regulations, 2014. The RoE has been calculated on the average of opening and closing of equity during the year @ 16% post-tax basis with opening equity considered at 30% of the opening GFA for FY 2016-17 as the assets are completely funded by the equity contribution from Andaman & Nicobar Administration. The following table provides the RoE approved by the Commission now:

Table 30: RoE approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	54.95	66.62	39.24
2	Additions on account of new capitalisation	6.41	0.00	0.00
3	Closing Equity	61.36	66.62	39.24
4	Average Equity	58.16	66.62	39.24
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**9.31**	**10.66**	**6.28**

The Commission approves a Return on Equity of INR 6.28 Crore in the True-up of FY 2016-17

3.14. Interest on Security Deposits

Petitioner's submission

The Petitioner has submitted that it does not collect security deposit from consumers in cash. The consumers are required to create a Term Deposit in scheduled bank equivalent to the security amount and a lien is created in favour of the EDA&N towards security deposit. Hence, Interest on Security deposits is not payable to the consumers. Therefore, EDA&N has not claimed Interest on Security deposit in the ARR.

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."

The security deposit of Rs 0.17 crore is available to the Petitioner as per the audited balance sheet. 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. However, the Petitioner has not considered any interest on consumer security deposit as the interest amount on fixed deposits is not available with Petitioner in cash.

Therefore, the Commission has not approved any interest on security deposits of the consumers in the True-up of FY 2016-17.

3.15. Interest on Working Capital

Petitioner's submission

Interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) 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 the annual requirement for the previous year

The Petitioner has erroneously claimed the Interest on Working Capital as per the Tariff Regulations, 2009.

Commission's analysis

The computation of the working capital requirements and the rate of interest to be considered as stipulated in the MYT Regulations. Regulation 25 of the MYT Regulations 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 requirements of the Petitioner during the year has considered the receivables as proportionate ARR for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit and the inventory for two months as per the audited annual accounts of FY 2016-17.

With regards to the interest rate, the Commission has considered the SBI Base rate as on 1st April 2016, as stipulated in the MYT Regulations, 2014. Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 31: Interest on Working Capital approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	79.47	7.26	22.63
2	Less: Power Purchase Cost for one month	28.25		34.28
3	Less: Security Deposit excluding BG/FDR	0.00		0.00
4	Add: Inventory Based on Annual Requirement for Previous FY for 2 months	0.00		0.00
5	Total Working Capital Requirement	51.22		-11.66
6	Rate of Interest (%)	9.30%		14.05%
	Interest on Working Capital	**4.76**		**0.00**

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

3.16. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner hasn't claimed any amount towards bad and doubtful debts for the year.

Commission's analysis

As per Regulation 29 of the 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 amount in the FY 2016-17. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts in the True-up of FY 2016-17..

3.17. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has claimed a Non-Tariff Income (NTI) of INR 2.46 crore as against the approved value of INR 2.62 crore in the tariff order.

Commission's analysis

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 tariff Order, the Petitioner's submission and now trued-up by the Commission is shown in the following table:

Table 32: Non- Tariff Income approved by Commission (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Meter Rent	2.62	0.58	0.58
2	New Service Connection		0.001	0.001
3	RC Fees		0.78	0.78
4	Miscellaneous & others		1.10	1.10
5	Sale of waste Oil		0.004	0.004
6	**Non-Tariff Income**		**2.46**	**2.46**

The Commission approves Non-Tariff Income of INR 2.46 Crore in the True-up of FY 2016-17.

3.18. Incentive/Disincentive towards over/under-achievement of norms of distribution losses

Petitioner's submission

No submission has been made in this regard.

Commission's analysis

In the ARR of the FY 2016-17, the Commission had approved the distribution loss level of 17.11%. As discussed earlier, the Petitioner has only been able to achieve an Intra-State T&D Loss of 17.40%. Thus, there is an underachievement of the loss target. The Commission, in accordance with Regulations 10 & 11 of the MYT Regulations, 2014 (reproduced below) therefore has determined the disincentive towards underachievement of the target of Intra-State distribution loss for FY 2016-17.

"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.

10.2 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations.

10.3 The Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.

10.4 Nothing contained in this Regulation 10 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.

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."

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 of 17.11% by the Petitioner, at the Average Power Purchase cost (APPC) of Rs. 13.48/kWh. 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 (252.13 MU) with the approved Intra-State T&D Loss (17.11%).

The assessment of disincentive for higher Intra-State T&D Loss is shown in the following table:

Table 33: Disincentive towards underachievement of Intra-State distribution loss (INR Crore)

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	252.13	252.13
2	T&D Loss (%)	17.11%	17.40%
3	Power Purchase at State/UT Periphery	304.17	305.23
4	Gain/(Loss) (MU)		-1.06
5	Average Power Purchase Cost (APPC)		13.48
6	Gain/ (Loss) (INR Crore)		-1.42
	Sharing (30% to EDA&N in case of gain and 100% in case of loss) (INR Crore)		**-1.42**

The Commission approves INR 1.42 Crore as disincentive for under-achieving the Intra-State distribution loss target for FY 2016-17.

3.19. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 623.48 Crore is submitted for approval in the True-up of FY 2016-17.

Commission's analysis

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

Table 34: Aggregate Revenue Requirement approved by Commission for FY 2016-17 (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	216.72	195.62	195.62
2	Fuel Cost	122.29	215.76	215.76
3	Employee Expenses	55.46	108.07	108.07
4	Administration & General Expenses (A&G)	1.75	15.53	15.53
5	Repair & Maintenance Expenses (R&M)	41.31	55.79	55.79
6	Depreciation	9.69	6.16	7.80
7	Interest and Finance charges	18.13	11.09	1.48
8	Interest on Working Capital	4.76	7.26	0.00
9	Interest on Security Deposit	0.00	0.00	0.00
10	Return on Equity	9.30	10.66	6.28
11	Incentive/ (Disincentive)on achievement of norms	-	0.00	(1.42)
12	**Total Revenue Requirement**	**479.42**	**625.94**	**604.90**
13	Less: Non-Tariff Income	2.62	2.46	2.46
14	**Net Revenue Requirement**	**476.80**	**623.48**	**602.44**

The Commission approves net Aggregate Revenue Requirement of INR 602.44 Crore in the True-up of the FY 2016-17.

3.20. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2016-17 as INR 135.76 Crore against revenue of INR 129.68 Crore approved by the Commission in the ARR Order.

Commission's analysis

The Commission has analysed the sales and revenue figures for each consumer category and verified the revenue from audited accounts. The consumer category-wise revenue as submitted by the Petitioner and approved by the Commission is shown in the following table:

Table 35: Revenue at existing tariff approved by Commission for FY 2016-17 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	43.53	33.17	33.17
2	Non-Domestic	41.93	49.03	49.03
3	Industrial	8.13	10.55	10.55
4	Public Lighting	4.64	4.50	4.50
5	Agriculture	0.12	0.08	0.08
6	Bulk Supply	31.33	38.41	38.41
7	**Total Revenue**	**129.68**	**135.76**	**135.76**

The Commission approves the revenue from sale of power as INR 135.76 Crore in the True-up of the FY 2016-17.

3.21. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of INR 487.72 Crore is arrived at in the True-up of FY 2016-17.

Commission analysis

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

Table 36: Standalone Revenue Gap/ Surplus for FY 2016-17 (INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	476.80	623.48	602.44
2	Total Revenue	138.41	135.76	135.76
	Net Gap / (Surplus)	**338.39**	**487.72**	**466.68**

The Commission, in the True-up of FY 2016-17 approves a standalone gap of INR 466.68 Crore, to be met from the budgetary support by the Government.

4. Chapter 4: Annual Performance Review of FY 2019-20

4.1. Background

The Tariff Order for the FY 2019 was issued by the Commission on May 20, 2019 approving the ARR for the 2nd MYT Control Period and Retail Tariff for the FY 2019-20. This Chapter covers the Annual Performance Review (APR) of the FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the Tariff Order the 2nd MYT Control Period. The Annual Performance Review for the FY 2019-20 is to be carried out as per the following provisions of Regulation 11 of the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018.

4.2. Approach for the Review for the FY 2019-20

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M Expenses, interest on long-term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2019-20 has been done based on the actual data as provided by the Petitioner for the FY 2019-20 of the Power Purchase Quantum and the Cost, Energy Sales, Capitalisation etc. Based on such data, the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the MYT Regulations, 2018 and on the basis of the norms approved in the MYT Order dated May 20, 2019 and Tariff Order of FY 2019-20.

4.3. Energy Sales, Connected Load and Number of Consumers

Petitioner's Submission

The Petitioner has submitted a revised estimate of energy sales as 267.08 MU as against the approved figures of 295.05 for FY 2019-20, based on the actual energy sales of initial six months in FY 2019-20. Similarly, the Petitioner has indicated the number of consumers as 138,423 for FY 2019-20.

Commission's Analysis

The Commission has considered the actual category wise sales data, connected load and number of consumers as submitted by the Petitioner for initial five months of FY 2019-20 for calculating the category wise sales, connected load and number of consumers respectively for FY 2019-20. Hence, the Commission has computed the sales data for FY 2019-20 from the actual category wise sales figure of initial five month for FY 2019-20 by linear extrapolation as shown in table below:

Table 37: Sales projected for FY 2019-20 (MU)

S. No.	Category	Actual Sales Apr'19 – Aug'19	Projected Sales for FY 2019-20
1	Domestic	58.96	141.50
2	Commercial	27.88	66.91
3	Industry	7.30	17.52
4	Bulk	13.30	31.92
5	Public Lighting	2.78	6.67
6	Irrigation, Pumps & Agriculture	0.47	1.13
7	**Total Sales**	**110.69**	**265.66**

The table below provides the energy sales approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 38: Energy Sales (MU) approved by the Commission

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	156.46	142.21	141.50
2	Commercial	63.26	62.56	66.91
3	Industry	23.93	23.13	17.52
4	Bulk	41.6	31.41	31.92
5	Public Lighting	8.65	6.72	6.67
6	Irrigation, Pumps & Agriculture	1.15	1.06	1.13
7	**Total Sales**	**295.05**	**267.08**	**265.66**

Since, the Petitioner has not submitted any data pertaining to number of consumers for initial six months of FY 2019-20, the Commission has extrapolated the category wise number of consumers for FY 2018-19 using the approved CAGR for each category for number of consumers as shown in table below:

Table 39: Number of Consumers projected for FY 2019-20 (MU)

S. No.	Category	Actual Number of consumers for FY 2018-19	CAGR as approved in MYT Order	Projected Number of Consumers for FY 2019-20
1	Domestic	112014	3.35%	115766
2	Commercial	20261	3.01%	20871
3	Industry	581	2.94%	598
4	Bulk	64	2.71%	66
5	Public Lighting	689	1.17%	697
6	Irrigation, Pumps & Agriculture	381	11.40%	424
7	**Total Consumers**	**133990**		**138,423**

The table below provides the number of consumers approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 40: Number of Consumers approved by the Commission

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	118,077	115766	115766
2	Commercial	21,282	20871	20871
3	Industry	614	598	598
4	Bulk	68	66	66
5	Public Lighting	704	697	697
6	Irrigation, Pumps & Agriculture	464	424	424
7	**Total Consumers**	**141,209**	**138423**	**138,423**

Similarly, the Commission has extrapolated the category wise connected load for FY 2018-19 using the approved CAGR for each category for connected load as shown in table below:

Table 41: Connected Load projected for FY 2019-20 (kW)

S. No.	Category	Actual Connected Load for FY 2018-19	CAGR as approved in MYT Order	Projected Connected Load for FY 2019-20
1	Domestic	155414	9.43%	170069
2	Commercial	62911	2.18%	64282
3	Industry	22990	8.00%	24829
4	Bulk	12388	5.87%	13115
5	Public Lighting	2870	0.00%	2870
6	Irrigation, Pumps & Agriculture	2977	7.19%	3191
7	**Total Connected Load**	**259549**		**278,356**

The table below provides the category wise connected load approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 42: Connected Load approved by the Commission (kW)

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	173,850	170069	170069
2	Commercial	60,213	64282	64282
3	Industry	25,197	24829	24829
4	Bulk	13,886	13115	13115
5	Public Lighting	2,832	2870	2870
6	Irrigation, Pumps & Agriculture	1,167	3191	3191
7	**Total Connected Load**	**277,145**	**278,356**	**278,356**

The Commission approves energy sales of 265.66 MU, connected load of 278,356 kW and number of consumers as 138,423 in the APR of FY 2019-20.

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

Petitioner's submission

The Petitioner has proposed Intra-State T&D loss level at 14.34% which is same as the approved loss of 14.34% in the MYT Order. Further, the Petitioner has submitted the actual T&D loss achieved for FY 2018-19 as 15.00%.

Commission's analysis

The Commission had approved loss level of 14.34% for FY 2019-20 in the MYT Order dated May 20, 2019 while determining ARR for the FY 2019-20. The Commission, in the Business Plan Order dated December 21, 2018, had set the loss trajectory for the 2nd Control Period considering the actual loss of 15.34% in FY 2017-18. The Commission in the APR of FY 2019-20 finds it appropriate to consider the loss level of 14.34% as approved in the MYT Order for FY 2019-20. The following table provides the Intra-State distribution loss approved in the MYT Order, the Petitioners submission and now approved by the Commission.

Table 43: Intra-State distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	14.34%	14.34%	14.34%

The Commission approves Intra-State T&D loss of 14.34% in the APR of FY 2019-20.

4.5. Energy Balance

Petitioner's submission

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

Table 44: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within the UT	267.08
2	Distribution losses (%)	14.34%
	Distribution losses (MU)	44.71
3	**Energy Requirement @ periphery**	**311.79**
B	**Energy Availability**	
1	Power Purchase	241.74
2	Own Generation	70.05
3	**Total Energy Availability**	**311.79**
C	**Total shortfall/(Surplus)**	**0.00**

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales and Petitioner's submission. The table below provides the Energy Balance as approved by the Commission in the Tariff Order of FY 2019-20, the Petitioner's submission and the Energy Balance now approved by the Commission.

Table 45: Energy Balance (MU) approved by Commission

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
A	**Energy Requirement**			
1	Total Sales within the UT	295.05	267.08	265.66
2	Distribution losses (%)	14.34%	14.34%	14.34%
	Distribution losses (MU)	49.39	44.71	44.47
3	**Energy Requirement @ periphery**	**344.44**	**311.79**	**310.13**
B	**Energy Availability**			
1	Power Purchase	221.62	241.74	245.87
2	Own Generation	123.33	70.05	64.26
3	**Total Energy Availability**	**344.95**	**311.79**	**310.13**
C	**Total shortfall/(Surplus)**	**-0.51**	**0.00**	**0.00**

In the APR of FY 2019-20, the Commission has estimated a shortfall/(surplus) quantum of 0.00 MU.

4.6. Power Purchase Quantum & Cost

Petitioner's submission

The energy requirement is met mainly from own generation apart from procurement of power from the IPPs and other generators. However, there is no availability of power from Central Generating Stations (CGS) or from other sources/ open market/ power exchanges, etc. Accordingly, the Petitioner has claimed the fuel cost of INR 107.71 crore as against the approved cost of INR 191.74 crore and the power purchase cost of INR 414.92 crore as against the approved cost of INR 349.71 crore in the MYT Order. The Petitioner has submitted the IPP and HPPs wise power generation, fuel consumption and power purchase cost including own generation for FY 2019-20 as presented in the following tables:

Table 46: Power Purchase Quantum and Cost from IPPs and Fuel Cost for Own Generation for FY 2019-20

S. No.	Particulars	Units generated (MU)	Cost of HSD (INR Cr)	Cost of Lube (INR Cr)	Fixed Charges (INR Cr)	Total Cost (INR Cr)
1	Own Generation (HSD)	57.69	106.50	1.22	0.00	107.71
2	KHEP (Kalpong Hydro)	16.56	0.00	0.00	0.00	0.00
3	Solar(Own)	2.31	0.00	0.00	0.00	0.00
4	HPP -1 (5 MW)	41.61	69.11	0.00	3.60	72.71
5	HPP-2 (10MW)	79.12	124.19	0.00	9.39	133.58
6	NTPC - SPV	5.80	0.00	0.00	5.42	5.42
7	Other HPPs	0.40	0.63	0.00	1.69	2.32
8	NTPC DG (5MW)	43.07	70.69	0.00	6.02	76.71
9	NTPC DG (10MW)	53.51	85.23	0.00	6.68	91.91
10	DG P/Plant Niel (0.96MW)	3.50	6.27	0.00	0.35	6.62
11	DG P/Plant Havelock (3 MW)	12.66	20.06	0.00	1.46	21.51
12	SECI Solar	1.11	0.00	0.00	0.54	0.54
13	M/s. MUNDRA	3.02	0.00	0.00	0.66	0.66
14	Mona Generator	2.08	3.23	0.00	0.26	3.49
15	**Total**	**322.43**	**485.90**	**1.22**	**36.06**	**523.18**

Table 47: SFC and fuel consumption for IPP, HPP and own Generation

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
Own Generation (HSD)	57.69	304.00	60.73	17536603.29	1.12	189.00	64357.11
HPP -1 (5 MW)	41.61	273.51	60.73	11379536.00	0.00	0.00	0.00
HPP-2 (10MW)	79.12	258.46	60.73	20449533.00	0.00	0.00	0.00
Other HPPs	0.40	256.41	60.73	103757.18	0.00	0.00	0.00
NTPC DG 5MW	43.07	270.25	60.73	11640490.00	0.00	0.00	0.00
NTPC DG 10MW	53.51	262.28	60.73	14034015.39	0.00	0.00	0.00
DG P/Plant Niel 0.96MW	3.50	295.20	60.73	1032276.00	0.00	0.00	0.00
DG P/Plant Havelock 3 MW	12.66	260.80	60.73	3302838.00	0.00	0.00	0.00
Mona Generator	2.08	256.00	60.73	532480.00	0.00	0.00	0.00
Total	**293.64**			**80011528.86**			**64357.11**

Commission's Analysis

As per Regulation 12.1 of the MYT Regulations, 2018, power purchase and fuel cost are uncontrollable parameters. Thus, the power purchase and fuel cost must be revisited every year by the Commission based on the audited accounts. The Commission has considered that the power requirement shall be met mainly from own generation apart from procurement of power from the IPPs and other generators. The Petitioner has considered the power purchase quantum and own generation units as proposed in energy balance. Accordingly, the Commission approves the power purchase quantum and own generation units as determined in the energy balance.

The Petitioner has not made any submissions regarding auxiliary consumption for FY 2019-20. In absence of the same, the Commission has considered the auxiliary consumption as approved by the Commission in MYT Order. The following table shows the unit to be generated from own generation in order to meet the energy requirement:

Table 48: Net own generation required to meet the energy requirement for FY 2019-20 (MU)

S. No.	Particulars	Net generation	Auxiliary consumption as approved in MYT Order	Units to be generated
1	Own Generation (HSD)	46.18	3.59%	47.90
2	KHEP (Kalpong Hydro)	15.76	4.82%	16.56
3	Solar (Own)	2.31	0.00%	2.31
4	**Total**	**64.26**		**66.77**

The Commission has observed that the Petitioner has considered different SFC of HSD and Lube oil for various IPPs and HPPs vis-à-vis the values approved by the Commission in the MYT Order dated May 20, 2019. Similarly, the Petitioner has considered the per unit cost of HSD and Lube Oil as INR 60.73 per litre and INR 189 per litre respectively vis-à-vis the approved per cost of INR 54.79 per litre and INR 180 per litre. Further, the Commission has determined the per unit cost for HSD and lube oil as INR 59.94 per litre and INR 189 per litre as per the fuel bills submitted by the Petitioner. Accordingly, the Commission has computed the fuel requirement for various IPPs, HPPs and own generation considering the approved values of specific fuel consumption as shown in table below:

Table 49: Fuel Requirement for various IPPs, HPPs & Own generations as approved by the Commission

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
Own Generation (HSD)	47.90	304.00	59.94	14562972.78	0.98	189.00	46946.43
HPP -1 (5 MW)	41.61	273.51	59.94	11379536.00	0.00	0.00	0.00
HPP-2 (10MW)	79.12	258.46	59.94	20449533.00	0.00	0.00	0.00
Other HPPs	0.40	269.00	59.94	108851.66	0.00	0.00	0.00
NTPC DG 5MW	43.07	270.25	59.94	11640490.00	0.00	0.00	0.00
NTPC DG 10MW	53.51	270.25	59.94	14460443.12	0.00	0.00	0.00
DG P/Plant Niel 0.96MW	3.50	270.25	59.94	945029.04	0.00	0.00	0.00
DG P/Plant Havelock 3 MW	12.66	269.00	59.94	3406670.88	0.00	0.00	0.00
Mona Generator	2.08	269.00	59.94	559520.00	0.00	0.00	0.00
Total	**283.86**			**77513046.48**			**46946.43**

The Commission has considered the fixed cost for various power plants as submitted by the Petitioner. Accordingly, the Commission has computed the power purchase cost for various sources as shown in following table:

Table 50: Power Purchase Cost approved by the Commission for FY 2019-20

S. No.	Particulars	Units generated (MU)	Cost of HSD (INR Cr)	Cost of Lube (INR Cr)	Fixed Charges (INR Cr)	Total Cost (INR Cr)
1	Own Generation (HSD)	47.90	87.29	0.89	0.00	88.18
2	KHEP (Kalpong Hydro)	16.56	0.00	0.00	0.00	0.00
3	Solar(Own)	2.31	0.00	0.00	0.00	0.00
4	HPP -1 (5 MW)	41.61	68.21	0.00	3.60	71.81
5	HPP-2 (10MW)	79.12	122.58	0.00	9.39	131.97
6	NTPC - SPV	5.80	0.00	0.00	5.42	5.42
7	Other HPPs	0.40	0.65	0.00	1.69	2.35
8	NTPC DG (5MW)	43.07	69.78	0.00	6.02	75.79
9	NTPC DG (10MW)	53.51	86.68	0.00	6.68	93.36
10	DG P/Plant Niel (0.96MW)	3.50	5.66	0.00	0.35	6.01
11	DG P/Plant Havelock (3 MW)	12.66	20.42	0.00	1.46	21.88
12	SECI Solar	1.11	0.00	0.00	0.54	0.54
13	M/s. MUNDRA	3.02	0.00	0.00	0.66	0.66
14	Mona Generator	2.08	3.35	0.00	0.26	3.61
15	**Total**	**312.65**	**464.63**	**0.89**	**36.06**	**501.59**

The approved cost towards diesel-based generation consists of cost incurred towards consumption of HSD oil and Lube oil only as the fixed cost incurred against own generation (i.e. O&M expenses, interest and finance charges, depreciation, interest on working capital etc.) has been considered and revised for the department as a whole in subsequent sections. Accordingly, no separate cost has been approved for own renewable based generation also.

The table below provides the power purchase cost and fuel cost approved in MYT Order, claimed by the Petitioner and now approved by the Commission:

Table 51: Power Purchase & Fuel Cost approved for FY 2019-20 (INR crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Fuel Cost	191.74	107.71	88.18
2	Power Purchase Cost	349.71	414.92	413.40
3	**Total Cost**	**541.45**	**522.63**	**501.59**

The Commission approves power purchase quantum of 310.13 MU and cost of INR 501.59 Crore in the APR of FY 2019-20.

4.7. Renewable Purchase Obligations (RPOs)

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.

For the FY 2019-20, the Commission approves the RPO target of 28.65 MU comprising of 11.71 MU Solar and 16.94 MU Non-Solar. Out of which, the Petitioner has projected to purchase 12.23 MU of solar energy and 16.56 MU of non-solar energy, thereby resulting in a surplus of 0.14 MU in RPO compliance.

Table 52: RPO compliance for FY 2019-20 (MU)

Sr. No.	Particulars	Value
1.	Sales Within the State (excluding Hydro)	249.09
2.	RPO Obligation (in %)	11.50%
a)	Solar	4.70%
b)	Non-Solar	6.80%
3.	**RPO Obligation**	**28.65**
a)	Solar	11.71
b)	Non-Solar	16.94
4.	**RPO Compliance (Actual Purchase)**	**28.79**
a)	Solar	12.23
b)	Non-Solar	16.56
5.	RPO Compliance (REC Purchase)	0.00
6.	Total RPO Compliance	28.79
7.	**Shortfall/ (Surplus) in RPO Compliance**	**(0.14)**

The Commission notes that there is a net surplus in RPO compliance for FY 2019-20 (0.14 MU).

4.8. Operation & Maintenance Expenses

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

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (WPI inflation)

EMPn = (EMPn-1) x (1+Gn) x (CPI inflation)

A&Gn = (A&Gn-1) x (CPI inflation)

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

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

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

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

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

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

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

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

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

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

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

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

4.8.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted employee expenses of INR 129.95 Crore against the approved expenses of INR 102.52 Crore in the Tariff Order.

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period in MYT Order. The Regulation 6 of the 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."

In accordance with MYT Regulations, the Employee expenses shall be 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 FY 2018-19 for computation of revised employee expenses of FY 2019-20. Thus, the approved employee expenses for FY 2018-19 has been escalated with the average CPI of previous three years and growth rate to arrive at the employee expenses for FY 2019-20.

The CPI Inflation has been computed as follows:

Table 53: Computation of CPI Inflation (%)

FY	Increase in CPI Index	Average increase in CPI Index over 3 years
2016-17	4.12%	**4.22%**
2017-18	3.08%	
2018-19	5.45%	

The growth rate has been computed as follows:

Table 54: Employee Growth Rate for FY 2019-20 and FY 2020-21

S. No	Particulars	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	Opening Employee	2,272	2,378	2,455
2	Recruitment during the year	222	197	217
3	Retirement during the year	116	120	105
4	Closing Employee	2,378	2,455	2,567
5	**Growth rate**	**4.67%**	**3.24%**	**4.56%**

Table 55: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	EMPn-1 (INR Crore)	95.17		95.17
2	Gn (%)	3.24%		3.24%
3	CPIinflation (%)	4.34%		4.22%
4	**Gross Employee Expense EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)** (INR Crore)	**102.52**	**129.95**	**102.39**

The Commission now approves employee expenses of INR 102.39 Crore in the APR of the FY 2019-20.

4.8.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted a revised estimate of A&G expenses of INR 17.23 crore as against the approved value of INR 36.05 crore in MYT Order.

Commission's analysis

In accordance with MYT Regulations, the A&G expenses shall be revised to the extent of change in inflation during the control period. Accordingly, the Commission has considered the approved value of A&G expenses for FY 2018-19 for computation of revised A&G expenses of FY 2019-20. The A&G expenses for FY 2018-19 has been escalated with the average CPI of previous three years as computed above to arrive at the A&G expenses for FY 2019-20.

The table below provides the A&G expenses approved in Tariff Order, Petitioner's Submission and now approved by the Commission:

Table 56: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	A&Gn-1 (INR Crore)	34.55		34.55
2	CPIinflation (%)	4.34%		4.22%
3	Provision (INR Crore)	0.00		0.00
4	**Gross A&Gn = A&Gn-1 x (1+CPIinflation) (INR Crore)**	**36.05**	**17.23**	**36.01**

The Commission now approves the Administrative & General (A&G) expenses of INR 36.01 Crore in the APR of the FY 2019-20.

4.8.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted a revised estimate of R&M expenses of INR 59.21 crore as against the approved value of INR 48.25 crore in MYT Order

Commission's analysis

In accordance with MYT Regulations, the R&M expenses shall be revised to the extent of change in inflation during the control period. The Commission has considered the k-Factor as approved in the MYT Order and multiplied the same with the opening GFA of FY 2019-20. The resultant amount is then escalated by average WPI Inflation of previous three years to arrive at the R&M expenses for FY 2019-20.

The WPI Inflation has been computed as follows:

Table 57: Computation of WPI Inflation (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2016-17	1.73%	**2.99%**
2017-18	2.92%	
2018-19	4.32%	

The R&M expenses as approved by the Commission for FY 2019-20 have been provided in the following table:

Table 58: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20
1	Opening GFA (GFA_{n-1})	171.09

S. No	Particulars	FY 2019-20
2	K factor approved (K) (%)	24.99%
3	Avg. WPI Inflation (%)	2.99%
4	**R&M Expenses =** **K x (GFA $_{n-1}$) x (1+WPI$_{inflation}$)**	**44.03**

Table 59: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**48.25**	**59.21**	**44.03**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 44.03 Crore in the APR of FY 2019-20.

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

The following table provides the O&M expenses approved in the ARR of FY 2019-20, Petitioner's submission and now approved by the Commission.

Table 60: O&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	102.52	129.95	102.39
2	Administrative & General Expenses (A&G)	36.05	17.23	36.01
3	Repair & Maintenance Expenses	48.25	59.21	44.03
	Total Operation & Maintenance Expenses	**186.82**	**206.39**	**182.44**

The Commission approves the Operation & Maintenance (O&M) Expenses of INR 182.44 Crore in the APR of FY 2019-20.

4.9. Capital Expenditure & Capitalisation

Petitioner's submission

The Petitioner has submitted the capitalisation of INR 6.32 Crore as approved by the Commission in the Business Plan order dated December 31, 2018.

Commission's analysis

The Commission with regard to the capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. In accordance with the submission of the Petitioner and the Capital Expenditure and Capitalisation approved in MYT Order, the Commission approves the capital expenditure and capitalisation for the year as shown in the following table:

Table 61: Capitalisation approved by the Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	6.32	6.32	6.32

The Commission approves capitalisation of INR 6.32 Crore in the APR of FY 2019-20. The same shall be revisited at the time of True-up.

4.10. Capital Structure

Petitioner's Submission

The Petitioner has submitted that all the capital assets have been created out of equity contribution from Andaman & Nicobar Administration.

Commission's analysis

Regulation 26 of the MYT Regulations, 2018 specifies the following:

"26. Debt to Equity Ratio

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

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

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

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

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

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

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

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

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

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

For the purpose of calculating the opening value of GFA in FY 2019-20, the Commission has considered the closing value of GFA for FY 2016-17 as approved in previous sections and capitalisation for FY 2017-18 and FY 2018-19 as submitted by the Petitioner as shown in following table:

Table 62: Capitalisation for FY 2017-18 and FY 2018-19 as submitted by the Petitioner (INR Crore)

Particulars	FY 2017-18	FY 2018-19
Opening GFA	130.81	152.39
Additions during the FY	21.58	18.70
Adjustment/Retirement During the FY	-	
Closing GFA	152.39	171.09

In accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for FY 2019-20 as follows:

Table 63: GFA addition approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	192.46	128.74	171.09
2	Addition During the FY	6.32	6.32	6.32
3	Adjustment/Retirement During the FY	0	0	0
4	Closing Gross Fixed Assets	198.78	135.06	177.41

Table 64: Normative Loan addition approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	25.4	87.3	16.72
2	Add: Normative Loan During the year	4.42	4.42	4.42
3	Less: Normative Repayment equivalent to Depreciation	5.67	7.19	6.35*
4	Closing Normative Loan	24.15	84.53	14.80

**Depreciation calculated in next section*

Table 65: Normative Equity addition approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	57.73	73.44	51.33
2	Additions on account of new capitalisation	1.90	1.90	1.90
3	Closing Equity	59.63	75.34	53.22

4.11. Depreciation

Petitioner's submission

The Petitioner has submitted the depreciation of INR 7.19 crore as per MYT Regulations 2018 as against the approved depreciation of INR 5.67 crores in MYT Order.

Commission's analysis

Regulation 30 of the 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: In the ARR Order, the Commission approved the following asset wise depreciation rate as per the CERC Tariff Regulations, 2014:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 66: Depreciation Rate (%)

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

The opening and closing GFA has been considered as approved in the *Section 4.10: Capital Structure* of this Order. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. The overall depreciation rate is considered as the weighted average depreciation rate calculated based on the asset wise depreciation rates and asset classification as per the true-up of FY 2016-17.

The following table provides the calculation of depreciation as approved in the tariff order, Petitioner's submission and now approved by the Commission.

Table 67: Depreciation approved by Commission (In INR Crore)

S. No	Particulars	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	192.46	128.74	171.09
2	Addition During the FY	6.32	6.32	6.32
3	Retirement During the FY	0	0	0
4	Closing Gross Fixed Assets	198.78	135.06	177.41
5	Average Gross Fixed Assets	195.62	131.90	174.25
6	Weighted Average Depreciation rate (%)	2.90%	5.45%	3.64%
	Depreciation	**5.67**	**7.19**	**6.35**

The Commission now approves depreciation of INR 6.35 Crore in the APR of the FY 2019-20.

4.12. Interest and Finance Charges

Petitioner's submission

The petitioner has estimated the Interest and Finance charges as per the JERC MYT Regulations, 2018 for the year FY 2019-20. The Petitioner has submitted that the majority of capital assets are created out of the equity contribution from Andaman & Nicobar Administration only. The rate of interest considered is SBI MCLR as on 1st April of that relevant year plus 100 basis points.

Commission's analysis

Regulation 28 of the MYT Regulations, 2018 stipulates 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-capitalization or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

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 capitalization 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, in absence of detailed data with respect to the actual loan portfolio, the Commission has considered the SBI 1 Year MCLR rate[1] plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018.

As per the MYT Regulations, 2018, if the equity deployed is more than 30% of the capital cost, then equity in excess of 30% is considered as normative loan. The Interest on Loan has been has considered as the SBI 1 Year MCLR rate plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018.

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

Table 68: Interest and Finance Charges approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	25.4	87.3	16.72
2	Add: Normative Loan During the year	4.42	4.42	4.42
3	Less: Normative Repayment equivalent to Depreciation	5.67	7.19	6.35
4	Closing Normative Loan	24.15	84.53	14.80
5	Average Normative Loan	24.78	85.92	15.76
6	Rate of Interest (%)	9.15%	9.55%	9.55%
7	**Interest on Loan**	**2.27**	**8.21**	**1.51**

The Commission approves Interest and Finance Charges of INR 1.51 Crore in the APR of the FY 2019-20

4.13. Return on Equity (RoE)

Petitioner's submission

Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018 on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2018-19 and addition in equity to the tune of 30% to be capitalized during the year. RoE is computed @ 16% post-tax.

[1] SBI 1 Year MCLR rate as on 10th March 2019

Commission's analysis

RoE has been calculated on normative basis on the average of opening and closing equity during the year at the rate of 16% (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2018-19 as derived in *Section 4.10: Capital Structure* above. The addition in equity has been considered to the tune of 30% of the approved capitalisation. Income Tax payable shall be considered on actual basis at the time of True-up. The following table provides the RoE approved in the ARR of FY 2019-20, the Petitioner's submission and RoE now approved by the Commission.

Table 69: RoE approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	57.73	73.44	51.33
2	Additions on account of new capitalisation	1.90	1.90	1.90
3	Closing Equity	59.63	75.34	53.22
4	Average Equity	58.68	74.39	52.28
5	Rate of Return	16.00%	16.00%	16.00%
6	**Return on Equity**	**9.39**	**11.90**	**8.36**

The Commission approves the Return on Equity of INR 8.36 Crore in the APR of the FY 2019-20.

4.14. Interest on Security Deposits

Petitioner's submission

The Petitioner has submitted that it does not collect security deposit from consumers in cash. The consumers are required to create a Term Deposit in scheduled bank equivalent to the security amount and a lien is created in favour of the FDA&N towards security deposit. Hence, Interest on Security deposits is not payable to the consumers. Therefore, EDA&N has not claimed Interest on Security deposit in the ARR.

Commission's analysis

Regulation 28.11 of the MYT Tariff Regulations, 2018 stipulates as follows:

"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."

However, the Petitioner has not considered any interest on consumer security deposit. Therefore, the Commission has not approved any Interest on Security Deposits as the interest amount on fixed deposits is not available with Petitioner in cash.

Accordingly, the Commission approves Interest on Security Deposit as NIL in the APR of the FY 2019-20.

4.15. Interest on Working Capital

Petitioner's submission

Interest on Working Capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2018.

The Petitioner has computed the Interest on Working Capital at interest rate of 10.55% as INR 7.45 crores.

Commission's analysis

The Commission has considered the receivables as proportionate revenue for 2 months as gap funding is done month on month basis from the Andaman & Nicobar Administration, the revised power purchase cost of FY 2019-20 as determined above and the average consumer security deposit amount during the year for computing the Working Capital Requirement for the year. The inventory for two months has been considered on the same levels as per the audited annual accounts of FY 2016-17.

The Commission has considered the SBI Base rate as on 1st April 2019 for calculation of interest, as stipulated in the MYT Regulations, 2014.

Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	15.57	17.20	15.20
2	Maintenance spares at 40% of R&M expenses for one (1) month;	1.61	23.68	1.47
3	Receivables equivalent to two (2) months of the expected revenue at the prevailing tariff	33.89	29.71	30.66
4	Less: Amount held as security deposits	0.00	0.00	0.00
5	Net Working Capital	51.07	70.59	47.33
6	Rate of Interest (%)	10.15%	10.55%	10.55%
7	**Interest on Working Capital**	**5.18**	**7.45**	**4.99**

The Commission approves the Interest on Working Capital as INR 4.99 Crore in the APR of the FY 2019-20.

4.16. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not earmarked any provision for bad and doubtful debts for the year.

Commission's analysis

The Commission also has not considered any provision towards Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of FY 2019-20.

4.17. Non-Tariff Income

Petitioner's submission

The Petitioner has submitted the Non-Tariff Income of INR 2.94 Crore as approved by the Commission in the MYT Order.

Commission's analysis

The Commission also has considered the same NTI as submitted by the Petitioner. The NTI approved in the Tariff Order, the Petitioner's submission and the NTI now approved by the Commission is shown in the table below:

Table 71: Non-Tariff Income approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Non-Tariff Income**	**2.94**	**2.94**	**2.94**

The Commission approves Non-Tariff Income of INR 2.94 crore in the APR of FY 2019-20. The same shall be considered at actuals at the time of True-up of FY 2019-20.

4.18. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 760.83 Crore after adjusting the Non -Tariff Income for FY 2019-20.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the Commission has considered and approved the revenue requirement in the APR of the FY 2019-20 as provided in the table below:

Table 72: Aggregate Revenue Requirement approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	349.71	414.92	413.40
2	Fuel Cost	191.74	107.71	88.18
3	Employee Expenses	102.52	129.95	102.39
4	Administration & General Expenses (A&G)	36.05	17.23	36.01
5	Repair & Maintenance Expenses (R&M)	48.25	59.21	44.03
6	Depreciation	5.67	7.19	6.35
7	Interest and Finance charges	2.27	8.21	1.51
8	Interest on Working Capital	5.18	7.45	4.99
9	Return on Equity	9.39	11.90	8.36
10	Interest on Security Deposit	0.00	0.00	0.00
12	Income Tax	0.00	0.00	0.00
13	**Total Revenue Requirement**	**750.78**	**763.76**	**705.23**
14	Less: Non-Tariff Income	2.94	2.94	2.94
15	**Net Revenue Requirement**	**747.84**	**760.82**	**702.29**

The Commission now approves the net ARR of INR 702.29 crore in the APR of FY 2019-20.

4.19. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the revenue from the sale of power at existing tariff as INR 182.79 crore determined on the basis of energy sales in the territory for FY 2019-20.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2018-19 for initial 2 months and as per tariff rates applicable for FY 2019-20 from June 2019 onwards as per tariff order dated May 20, 2019. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab in line with the methodology followed by the Commission in the MYT Order. The Commission has not projected any revenue from Power factor incentive etc. and the same shall be considered as per actuals while truing up of the FY 2019-20. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2019-20 has been shown in the following table:

Table 73: Revenue at existing tariff computed by Commission for 2019-20 (INR Crore)

<table>
<tr><th rowspan="2">S. No.</th><th rowspan="2">Category</th><th rowspan="2">Sales (MUs)</th><th colspan="2">Apr'19 – May'19</th><th colspan="2">Jun'19 – Mar'20</th><th rowspan="2">Total</th><th rowspan="2">ABR (INR /unit)</th></tr>
<tr><th>Revenue from Energy Charges</th><th>Revenue from Fixed charges</th><th>Revenue from Energy Charges</th><th>Revenue from Fixed charges</th></tr>
<tr><td>1</td><td>Life Line Connection</td><td>7.22</td><td>0.00</td><td>0.00</td><td>1.23</td><td>0.00</td><td>1.23</td><td>1.71</td></tr>
<tr><td>2</td><td>Domestic</td><td>134.29</td><td>8.97</td><td>1.13</td><td>46.82</td><td>2.48</td><td>59.40</td><td>4.42</td></tr>
<tr><td>3</td><td>Commercial</td><td>39.06</td><td>5.31</td><td rowspan="2">0.71</td><td>28.48</td><td>0.56</td><td>35.07</td><td>8.98</td></tr>
<tr><td>4</td><td>Government Connection</td><td>27.85</td><td>4.56</td><td>23.95</td><td>0.20</td><td>28.70</td><td>10.31</td></tr>
<tr><td>5</td><td>Industry</td><td>17.52</td><td>1.91</td><td>0.38</td><td>9.78</td><td>1.40</td><td>13.46</td><td>7.68</td></tr>
<tr><td>6</td><td>Bulk</td><td>31.92</td><td>6.38</td><td>0.15</td><td>33.25</td><td>1.54</td><td>41.33</td><td>12.95</td></tr>
<tr><td>7</td><td>Public Lighting</td><td>6.67</td><td>0.68</td><td>0.04</td><td>3.39</td><td>0.47</td><td>4.58</td><td>6.87</td></tr>
<tr><td>8</td><td>Irrigation, Pumps & Agriculture</td><td>1.13</td><td>0.03</td><td>0.00</td><td>0.15</td><td>0.02</td><td>0.21</td><td>1.81</td></tr>
<tr><td></td><td>TOTAL</td><td>265.66</td><td>27.84</td><td>2.42</td><td>147.06</td><td>6.67</td><td>183.98</td><td>6.93</td></tr>
</table>

The Commission has determined revenue from the sale of power at existing tariff as INR 183.98 Crore in the APR of FY 2019-20.

4.20. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from Retail tariff, the standalone revenue gap of INR 578.03 Crore is arrived at in the APR of FY 2019-20.

Commission analysis

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

Table 74: Standalone Revenue Gap/ Surplus at existing tariff (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	747.84	760.82	702.29
2	Revenue from Retail Sales at Existing Tariff	203.33	182.79	183.98
	Net Gap /(Surplus)	**544.51**	**578.03**	**518.31**

The Commission approves the standalone gap at INR 518.31 Crore in the APR of FY 2019-20.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2020-21

5.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for the FY 2020-21. The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2018.

5.2. Approach for determination of ARR for each year of the FY 2020-21

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2020-21 based on figures approved in the Business Plan and MYT Order, the actual information available of various parameters for the FY 2018-19 and the provisional information available for the FY 2019-20. The ARR and revenue at existing tariff has been determined for FY 2020-21 to arrive at the revenue gap/surplus for the FY 2020-21.

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

Petitioner's Submission

The Petitioner has revised the number of consumers and energy sales considering the actual figures of initial six months of FY 2019-20.

Table 75: Number of consumers and Energy Sales as submitted by the Petitioner for the FY 2020-21

S. No.	Particulars	No. of Consumers	Energy Sales (MU)
1	Domestic	119645	151.31
2	Commercial	21499	63.79
3	Industry	616	25.44
4	Bulk	68	33.07
5	Public Lighting	705	6.72
6	Irrigation, Pumps & Agriculture	473	1.09
	Total	**143,005**	**281.42**

Commission's Analysis

The Commission has considered the category wise sales data, connected load and number of consumers as approved by the Commission for FY 2019-20 and CAGR for various categories as approved in Business Plan order dated December 21, 2018 for calculating the category wise sales, connected load and number of consumers respectively for FY 2020-21. Hence, the Commission has extrapolated the sales data from the category wise sales figure of FY 2019-20 using the approved CAGR for each category of sales as shown in table below:

Table 76: Sales projected for FY 2020-21 (MU)

S. No.	Category	Approved Sales for FY 2019-20	CAGR as approved in MYT Order	Projected Sales for FY 2020-21
1	Domestic	141.50	6.40%	150.56
2	Commercial	66.91	1.96%	68.22
3	Industry	17.52	10.00%	19.27
4	Bulk	31.92	5.30%	33.61
5	Public Lighting	6.67	0.00%	6.67
6	Irrigation, Pumps & Agriculture	1.13	3.39%	1.17
7	**Total Sales**	**265.66**		**279.51**

The table below provides the energy sales approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 77: Energy Sales (MU) approved by the Commission

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	166.48	151.31	150.56
2	Commercial	64.5	63.79	68.22
3	Industry	26.32	25.44	19.27
4	Bulk	43.81	33.07	33.61
5	Public Lighting	8.65	6.72	6.67
6	Irrigation, Pumps & Agriculture	1.19	1.09	1.17
7	**Total Sales**	**310.95**	**281.42**	**279.51**

Similarly, the Commission has extrapolated the category wise number of consumers approved for FY 2019-20 using the approved CAGR for each category for number of consumers as shown in table below:

Table 78: Number of Consumers projected for FY 2020-21 (MU)

S. No.	Category	Approved Number of consumers for FY 2019-20	CAGR as approved in MYT Order	Projected Number of Consumers for FY 2020-21
1	Domestic	115766	3.35%	119645
2	Commercial	20871	3.01%	21499
3	Industry	598	2.94%	616
4	Bulk	66	2.71%	68
5	Public Lighting	697	1.17%	705
6	Irrigation, Pumps & Agriculture	424	11.40%	473
7	**Total Consumers**	**138,423**		**143,005**

The table below provides the number of consumers approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 79: Number of Consumers approved by the Commission

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	122032	119645	119645
2	Commercial	21923	21499	21499
3	Industry	632	616	616
4	Bulk	69	68	68
5	Public Lighting	713	705	705
6	Irrigation, Pumps & Agriculture	517	473	473

S. No.	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
7	**Total Consumers**	**145,886**	**143005**	**143,005**

Similarly, the Commission has extrapolated the category wise connected load approved for FY 2019-20 using the approved CAGR for each category for connected load as shown in table below:

Table 80: Connected Load projected for FY 2020-21 (kW)

S. No.	Category	Approved Connected Load for FY 2019-20	CAGR as approved in MYT Order	Projected Connected Load for FY 2020-21
1	Domestic	170069	9.43%	186107
2	Commercial	64282	2.18%	65684
3	Industry	24829	8.00%	26816
4	Bulk	13115	5.87%	13885
5	Public Lighting	2870	0.00%	2870
6	Irrigation, Pumps & Agriculture	3191	7.19%	3420
7	**Total Connected Load**	**278,356**		**298,781**

The table below provides the category wise connected load approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission.

Table 81: Connected Load approved by the Commission (kW)

S. No.	Category	Approved in MYT Order	Now Approved by Commission
1	Domestic	190,236	186107
2	Commercial	61,526	65684
3	Industry	27,212	26816
4	Bulk	14,702	13885
5	Public Lighting	2,832	2870
6	Irrigation, Pumps & Agriculture	1,251	3420
7	**Total Connected Load**	**297,760**	**298,781**

The Commission approves energy sales of 279.51 MU, connected load of 298,781 kW and number of consumers as 143,005 in the ARR of FY 2020-21.

5.4. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has proposed the T&D loss as approved by the Commission in the Business Plan Order i.e. at 13.84%.

Commission's analysis

The Commission, in the Business Plan Order, had set the loss trajectory for the 2nd Control Period considering the actual loss of 15.34% in FY 2017-18. The Commission approves the T&D loss for FY 2020-21 as approved in the Business Plan Order. The table below provides the T&D loss approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission

Table 82: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	13.84%	13.84%	13.84%

The Commission approves the Intra-State Distribution Loss of 13.84% for the FY 2020-21.

5.5. Energy Balance

Petitioner's submission

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

Table 83: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within the UT	281.42
2	Distribution losses (%)	13.84%
	Distribution losses (MU)	45.20
3	**Energy Requirement @ periphery**	**326.62**
B	**Energy Availability**	
1	Power Purchase	249.02
2	Own Generation	77.60
3	**Total Energy Availability**	**326.62**
C	**Total shortfall/(Surplus)**	**0.00**

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The table below provides the Energy Balance as approved by the Commission in the MYT Order, the Petitioner's submission and the Energy Balance now approved by the Commission

Table 84: Energy Balance (MU) approved by Commission

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
A	**Energy Requirement**			
1	Total Sales within the UT	310.95	281.42	279.51
2	Distribution losses (%)	13.84%	13.84%	13.84%
	Distribution losses (MU)	49.95	45.20	44.90
3	**Energy Requirement @ periphery**	**360.90**	**326.62**	**324.40**
B	**Energy Availability**			
1	Power Purchase	221.61	249.02	253.15
2	Own Generation	139.28	77.60	71.25
3	**Total Energy Availability**	**360.89**	**326.62**	**324.40**
C	**Total shortfall/(Surplus)**	**0.00**	**0.00**	**0.00**

In the ARR of FY 2020-21, the Commission has estimated a shortfall/(surplus) quantum of 0.00 MU considering all the demand net of Power Purchase from IPPs and HPPs shall be met by own generation.

5.6. Power Purchase Quantum & Cost

Petitioner's submission

The energy requirement is met from own generation apart from procurement of power from the IPPs and other generators. However, there is no availability of power from Central Generating Stations (CGS) or from other sources/ open market/ power exchanges, etc. Accordingly, the Petitioner has claimed the fuel cost of INR 122.62 crore as against the approved cost of INR 219.62 crore and the power purchase cost of INR 427.09 crore as against the approved cost of INR 350.62 crore in the MYT Order. The Petitioner has submitted the IPP and HPP wise power generation, fuel consumption and power purchase cost including own generation for FY 2020-21 as presented in the following tables:

Table 85: Power Purchase Quantum and Cost from IPPs and Fuel Cost for Own Generation for FY 2020-21

S. No.	Particulars	Units generated (MU)	Cost of HSD (INR Cr)	Cost of Lube (INR Cr)	Fixed Charges (INR Cr)	Total Cost (INR Cr)
1	Own Generation (HSD)	65.63	121.16	1.45	0.00	122.62
2	KHEP (Kalpong Hydro)	16.56	0.00	0.00	0.00	0.00
3	Solar(Own)	2.31	0.00	0.00	0.00	0.00
4	HPP -1 (5 MW)	41.61	69.11	0.00	3.60	72.71
5	HPP-2 (10MW)	79.12	124.19	0.00	9.39	133.58
6	NTPC - SPV	5.80	0.00	0.00	5.42	5.42
7	Other HPPs	0.40	0.63	0.00	1.69	2.32
8	NTPC DG (5MW)	43.07	70.69	0.00	6.02	76.71
9	NTPC DG (10MW)	53.51	85.23	0.00	6.68	91.91
10	DG P/Plant Niel (0.96MW)	3.50	6.27	0.00	0.35	6.62
11	DG P/Plant Havelock (3 MW)	12.66	20.06	0.00	1.46	21.51
12	SECI Solar	1.11	0.00	0.00	0.54	0.54
13	M/s. MUNDRA	3.02	0.00	0.00	0.66	0.66
14	Mona Generator	6.24	9.70	0.00	0.77	10.47
15	Baratang(0.8MW)	3.12	4.85	0.00	0.33	5.18
16	**Total**	**337.65**	**511.88**	**1.45**	**36.91**	**550.25**

Table 86: SFC and fuel consumption for IPP, HPP and own Generation

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
Own Generation (HSD)	65.63	304.00	60.73	19951387.43	1.12	198.45	73219.06
HPP -1 (5 MW)	41.61	273.51	60.73	11379536.00	0.00	0.00	0.00
HPP-2 (10MW)	79.12	258.46	60.73	20449533.00	0.00	0.00	0.00
Other HPPs	0.40	256.41	60.73	103757.18	0.00	0.00	0.00
NTPC DG 5MW	43.07	270.25	60.73	11640490.00	0.00	0.00	0.00
NTPC DG 10MW	53.51	262.28	60.73	14034015.39	0.00	0.00	0.00
DG P/Plant Niel 0.96MW	3.50	295.20	60.73	1032276.00	0.00	0.00	0.00
DG P/Plant Havelock 3 MW	12.66	260.80	60.73	3302838.00	0.00	0.00	0.00
Mona Generator	6.24	256.00	60.73	1597440.00	0.00	0.00	0.00

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
Baratang(0.8MW)	3.12	256.00	60.73	798720.00	0.00	0.00	0.00
Total	**337.65**			**84289993.00**			**73219.06**

Commission's Analysis

As per Regulation 12.1 of the MYT Regulations, 2018, power purchase and fuel cost are an uncontrollable parameter. Thus, the power purchase and fuel cost must be revisited every year by the Commission based on the audited accounts. The Commission has considered that the power requirement shall be met mainly from own generation apart from procurement of power from the IPPs and other generators. The Petitioner has considered the power purchase quantum and own generation units as proposed in energy balance. Accordingly, the Commission approves the power purchase quantum and own generation units as determined in the energy balance.

The Petitioner has not made any submissions regarding auxiliary consumption for FY 2020-21. In absence of the same, the Commission has considered the auxiliary consumption as approved by the Commission in MYT Order. The following table shows the unit to be generated from own generation in order to meet the energy requirement:

Table 87: Net own generation required to met the energy requirement for FY 2020-21 (MU)

S. No.	Particulars	Net generation	Auxiliary consumption as approved in MYT Order	Units to be generated
1	Own Generation (HSD)	53.18	3.59%	55.16
2	KHEP (Kalpong Hydro)	15.76	4.82%	16.56
3	Solar (Own)	2.31	0.00%	2.31
4	**Total**	**71.25**		**74.03**

The Commission has observed that the Petitioner has considered different SFC of HSD and Lube oil for various IPPs and HPPs vis-à-vis the values approved by the Commission in the MYT Order dated May 20, 2019. Similarly, the Petitioner has considered the per unit cost of HSD and Lube Oil as INR 60.73 per litre and INR 198.45 per litre respectively vis-à-vis the approved per cost of INR 54.79 per litre and INR 180 per litre. Further, the Commission has determined the per unit cost for HSD and lube oil as INR 57.07 per litre and INR 180 per litre as per the fuel bills submitted by the Petitioner. The Commission has assumed an escalation of 5% in the fuel cost as the hike due to inflation to bring them at the FY 2020-21 levels. Accordingly, the Commission has computed the fuel requirement for various IPPs, HPPs and own generation considering the approved values of specific fuel consumption as shown in table below:

Table 88: Fuel Requirement for various IPPs, HPPs & Own generations as approved by the Commission

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
Own Generation (HSD)	55.16	304.00	62.94	16768543.99	0.98	198.45	54056.49
HPP -1 (5 MW)	41.61	273.51	62.94	11379536.00	0.00	0.00	0.00
HPP-2 (10MW)	79.12	258.46	62.94	20449533.00	0.00	0.00	0.00
Other HPPs	0.40	269.00	62.94	108851.66	0.00	0.00	0.00
NTPC DG 5MW	43.07	270.25	62.94	11640490.00	0.00	0.00	0.00

Particulars	Units generated	SFC of HSD (ml/kWh)	Per Litre cost of HSD (INR)	Total Consumption of HSD (Litre)	SFC of Lube (ml/kWh)	Per Litre cost of Lube (INR)	Total Lube Consumption (Litre)
NTPC DG 10MW	53.51	270.25	62.94	14460443.12	0.00	0.00	0.00
DG P/Plant Niel 0.96MW	3.50	270.25	62.94	945029.04	0.00	0.00	0.00
DG P/Plant Havelock 3 MW	12.66	269.00	62.94	3406670.88	0.00	0.00	0.00
Mona Generator	6.24	269.00	62.94	1678560.00	0.00	0.00	0.00
Baratang(0.8MW)	3.12	269.00	62.94	839280.00	0.00	0.00	0.00
Total	**298.39**			**81676937.69**	**0.98**		**54056.49**

The Commission has considered the fixed cost for various power plants as submitted by the Petitioner. Accordingly, the Commission has computed the power purchase cost for various sources as shown in following table:

Table 89: Power Purchase cost approved by the Commission for FY 2020-21

S. No.	Particulars	Units generated (MU)	Cost of HSD (INR Cr)	Cost of Lube (INR Cr)	Fixed Charges (INR Cr)	Total Cost (INR Cr)
1	Own Generation (HSD)	55.16	105.54	1.07	0.00	106.61
2	KHEP (Kalpong Hydro)	16.56	0.00	0.00	0.00	0.00
3	Solar(Own)	2.31	0.00	0.00	0.00	0.00
4	HPP -1 (5 MW)	41.61	71.62	0.00	3.60	75.22
5	HPP-2 (10MW)	79.12	128.71	0.00	9.39	138.10
6	NTPC - SPV	5.80	0.00	0.00	5.42	5.42
7	Other HPPs	0.40	0.69	0.00	1.69	2.38
8	NTPC DG (5MW)	43.07	73.27	0.00	6.02	79.28
9	NTPC DG (10MW)	53.51	91.01	0.00	6.68	97.70
10	DG P/Plant Niel (0.96MW)	3.50	5.95	0.00	0.35	6.30
11	DG P/Plant Havelock (3 MW)	12.66	21.44	0.00	1.46	22.90
12	SECI Solar	1.11	0.00	0.00	0.54	0.54
13	M/s. MUNDRA	3.02	0.00	0.00	0.66	0.66
14	Mona Generator	6.24	10.56	0.00	0.77	11.34
15	Baratang(0.8MW)	3.12	5.28	0.00	0.33	5.36
16	**Total**	**327.18**	**514.08**	**1.07**	**36.91**	**552.06**

The approved cost towards diesel-based generation consists of cost incurred towards consumption of HSD oil and Lube oil only as the fixed cost incurred against own generation (i.e. O&M expenses, interest and finance charges, depreciation, interest on working capital etc.) has been considered and revised for the department as a whole in subsequent sections. Accordingly, no separate cost has been approved for own renewable based generation also.

The table below provides the power purchase cost and fuel cost approved in MYT Order, claimed by the Petitioner and now approved by the Commission:

Table 90: Power Purchase & Fuel Cost approved for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Fuel Cost	219.62	122.62	106.61

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
2	Power Purchase Cost	350.65	427.09	445.44
3	**Total Cost**	**570.26**	**549.71**	**552.06**

The Commission approves power purchase quantum of 324.40 MU and cost of INR 552.06 Crore in the ARR of FY 2020-21.

5.7. Renewable Purchase Obligation (RPO)

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 will have to purchase 14.10% of its total consumption (including 6.10% from Solar) from renewable sources for the FY 2020-21.

For the FY 2020-21, the Commission approves the RPO target of 37.08 MU comprising of 16.04 MU Solar and 21.04 MU Non-Solar. The Petitioner has projected purchase of 12.23 MU solar energy and 16.56 MU of non-solar energy, thereby anticipating in a shortfall of 3.81 MU in solar RPO compliance and a shortfall of 4.47 MU in non-solar RPO compliance.

Table 91: RPO compliance for FY 2020-21 (MU)

Sr. No.	Particulars	Value
1.	Sales Within the State (excluding Hydro)	262.94
2.	RPO Obligation (in %)	14.10%
a)	Solar	6.10%
b)	Non-Solar	8.00%
3.	RPO Obligation	37.08
a)	Solar	16.04
b)	Non-Solar	21.04
4.	RPO Compliance (Actual Purchase)	28.79
a)	Solar	12.23
b)	Non-Solar	16.56
5.	RPO Compliance (REC Purchase)	0.00
6.	Total RPO Compliance	28.79
7.	**Shortfall/ (Surplus) in RPO Compliance**	**8.29**

The Commission notes that there is a net shortfall in RPO compliance for FY 2020-21 (8.29 MU). The Commission directs the Petitioner to complete the RPO obligation through physical power purchase failing which it should be fulfilled by REC purchase and the cost of same shall be approved at the time of true-up.

5.8. Operation & Maintenance Expenses

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

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (WPIinflation)

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

A&Gn = (A&Gn-1) x (CPIinflation)

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

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

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

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

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

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

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

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

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

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

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

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

5.8.1. Employee Expenses

Petitioner's submission

The Petitioner has determined the revised estimates of the employee cost for the FY 2020-21 based on the actual expenses for the FY 2018-19 & 1st Half (April 19 to September 19) of the FY 2019-20. Accordingly, the Petitioner has claimed the employee expenses of INR 132.55 crore as against the approved employee expenses of INR 111.85 crore.

Commission's analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the 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."

In accordance with MYT Regulations, the Employee expenses shall be 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 FY 2019-20 for computation of revised employee expenses of FY 2020-21. Thus, the approved employee expenses for FY 2019-20 has been escalated with the average CPI of previous three years and growth rate to arrive at the employee expenses for FY 2019-20

The CPI Inflation has been computed as follows:

Table 92: Computation of CPI Inflation (%)

FY	Increase in CPI Index	Average increase in CPI Index over 3 years
2016-17	4.12%	**4.22%**
2017-18	3.08%	
2018-19	5.45%	

The growth rate has been computed as follows:

Table 93: Employee Growth Rate for FY 2019-20 and FY 2020-21

S. No	Particulars	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
1	Opening Employee	2,272	2,378	2,455
2	Recruitment during the year	222	197	217

S. No	Particulars	FY 2018-19 (Base Year)	FY 2019-20	FY 2020-21
3	Retirement during the year	116	120	105
4	Closing Employee	2,378	2,455	2,567
5	**Growth rate**	**4.67%**	**3.24%**	**4.56%**

Table 94: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	EMPn-1 (INR Crore)	102.52		102.39
2	Gn (%)	4.56%		4.56%
3	CPIinflation (%)	4.34%		4.22%
4	**Gross Employee Expense EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)** (INR Crore)	**111.85**	**132.55**	**111.58**

The Commission approves Employee Expenses of INR 111.58 Crore for FY 2020-21.

5.8.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the Administrative & General Expenses of INR 18.64 Crore as against the approved figure of INR 37.62 crore in the MYT Order.

Commission's analysis

In accordance with MYT Regulations, the A&G expenses shall be revised to the extent of change in inflation during the control period. Accordingly, the Commission has considered the approved value of A&G expenses for FY 2019-20 for computation of revised A&G expenses of FY 2020-21. The A&G expenses for FY 2019-20 has been escalated with the average CPI of previous three years as computed to arrive at the A&G expenses for FY 2020-21.

The table below provides the A&G expenses approved in MYT Order, Petitioner's Submission and now approved by the Commission:

Table 95: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	A&Gn-1 (INR Crore)	36.05		36.01
2	CPIinflation (%)	4.34%		4.22%
3	Provision (INR Crore)	0.00		0.00
4	**Gross A&Gn = A&Gn-1 x (1+CPIinflation) (INR Crore)**	**37.62**	**18.64**	**37.53**

The Commission approves the Administrative & General (A&G) expenses of INR 37.53 Crore for FY 2020-21.

5.8.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted the Repair & Maintenance Expenses of INR 60.39 Crore as against the approved figure of INR 49.83 crore in the MYT Order.

Commission's analysis

In accordance with MYT Regulations, the R&M expenses shall be revised to the extent of change in inflation during the control period. The Commission has considered the k-Factor as approved in the MYT Order and multiplied the same with the opening GFA of FY 2020-21. The resultant amount is then escalated by average WPI Inflation of previous three years to arrive at the R&M expenses for FY 2020-21.

The WPI Inflation has been computed as follows:

Table 96: Computation of WPI Inflation (%)

FY	Increase in WPI Index	Average increase in WPI index over 3 years
2016-17	1.73%	**2.99%**
2017-18	2.92%	
2018-19	4.32%	

The R&M expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 97: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA_{n-1})	177.41
2	K factor approved (K) (%)	24.99%
3	Avg. WPI Inflation (%)	2.99%
4	**R&M Expenses =** **$K \times (GFA_{n-1}) \times (1+WPI_{inflation})$**	**45.66**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 45.66 Crore for the FY 2020-21

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

The following table provides the total O&M expenses approved by the Commission for the FY 2020-21:

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	111.85	132.55	111.58
2	Administrative & General Expenses (A&G)	37.62	18.64	37.53
3	Repair & Maintenance Expenses	49.83	60.39	45.66
	Total Operation & Maintenance Expenses	**199.30**	**211.58**	**194.77**

The Commission approves Operation & Maintenance (O&M) expenses of INR 194.77 Crore in FY 2020-21

5.9. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has claimed the capitalisation of INR 30.30 crore as approved in MYT order for FY 2020-21. The opening value of GFA has been considered as the closing value of FY 2019-20.

Commission's analysis

The Commission has considered the approved closing value of the GFA for FY 2019-20 as the opening value of GFA for FY 202-21. The Commission has considered the capitalisation for FY 2020-21 as approved in the MYT order. Accordingly, the Commission has arrived at the closing value of GFA for FY 2020-21. The following table provides the summary of capitalization now approved by the Commission vis-à-vis the capitalisation approved by the Commission in the MYT Order:

Table 99: Capitalisation now approved by the Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Capitalisation**	**30.30**	**30.30**	**30.30**

The Commission approves the capitalisation of INR 30.30 crore for FY 2020-21.

5.10. Capital Structure

Petitioner's Submission

The Petitioner has submitted that all the capital assets have been created out of equity contribution from Andaman & Nicobar Administration.

Commission's analysis

Regulation 26 of the MYT Regulations, 2018 specifies the following:

"26. Debt to Equity Ratio

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

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

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

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

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

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

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

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

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

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

For the purpose of calculating the opening value of GFA in FY 2020-21, the Commission has considered the closing value of GFA for FY 2019-20 as approved in previous sections.

Therefore, in accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for the FY 2020-21 as follows:

Table 100: GFA addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2020-21
1	Opening Gross Fixed Assets	177.41
2	Addition During the FY	30.30
3	Adjustment/Retirement During the FY	0
4	Closing Gross Fixed Assets	207.71

Table 101: Loan addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2020-21
1	Opening Loan	14.80
2	Additions during the year	21.21
3	Less: Normative Repayment equivalent to Depreciation	7.02
4	Closing Loan	28.99

Table 102: Normative Equity addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2020-21
1	Opening Equity	53.22
2	Additions during the year	9.09
3	Closing Equity	62.31

5.11. Depreciation

Petitioner's submission

The Petitioner has submitted the depreciation of INR 7.42 crore as per MYT Regulations 2018 as against the approved depreciation of INR 6.20 crores in MYT Order.

Commission's analysis

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

"30. Depreciation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 103: Depreciation Rate (%)

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

The closing GFA of the FY 2019-20 as approved in the APR has been considered as opening GFA of the FY 2020-21. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. The overall depreciation rate is considered as the weighted average depreciation rate calculated based on the asset wise depreciation rates and asset classification as per the true-up of FY 2016-17. The following table provides the calculation of depreciation as approved in the MYT order, Petitioner's submission and now approved by the Commission.

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	198.78	127.87	177.41
2	Addition During the FY	30.30	30.30	30.30
3	Retirement During the FY	0	0	0
4	Closing Gross Fixed Assets	229.08	158.17	207.71
5	Average Gross Fixed Assets	213.93	143.02	192.56
6	Weighted Average Depreciation rate (%)	2.90%	5.19%	3.64%
7	**Depreciation**	**6.20**	**7.42**	**7.02**

The Commission approves a depreciation of INR 7.02 Crore for the FY 2020-21.

5.12. Interest on Loan

Petitioner's submission

The petitioner has estimated the Interest and Finance charges as per the JERC MYT Regulations, 2018 for the year FY 2019-20. The Petitioner has submitted that the majority of capital assets are created out of the equity contribution from Andaman & Nicobar Administration only. The rate of interest considered is SBI MCLR as on 1stApril of the relevant year plus 100 basis points

Commission's analysis

Regulation 28 of the MYT Regulations, 2018 stipulates 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-capitalization or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalised or retired or replaced assets, based on documentary evidence.

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 capitalization 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, in absence of detailed data with respect to the actual loan portfolio, the Commission has considered the SBI 1 Year MCLR rate[2] plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018

As per the MYT Regulations, 2018, if the equity deployed is more than 30% of the capital cost, then equity in excess of 30% is considered as normative loan. The Interest on Loan has been calculated on the average loan during the year with the opening loan for the first year of the Control Period considered equivalent to the closing loan approved in the APR for the FY 2019-20.

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

Table 105: Interest on loan approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	24.14	84.53	14.80
2	Add: Normative Loan During the year	21.21	21.21	21.21
3	Less: Normative Repayment equal to Depreciation	6.20	7.42	7.02
4	Closing Normative Loan	39.15	98.32	28.99
5	Average Normative Loan	31.64	91.43	21.89
6	Rate of Interest (%)	9.15%	9.55%	8.85%
	Interest on Loan	**2.90**	**8.73**	**1.94**

The Commission approves Interest on Loan as INR 1.94 Crore for the FY 2020-21.

5.13. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations, 2018, wherein RoE is computed on 30% of the capital base if the actual equity deployed is more than 30% and the actual equity base if the equity deployed is less than 30%. Accordingly, the Petitioner has computed the Return on Equity at 16% on post-tax basis. The following table summarizes Petitioner's submission:

[2] SBI 1 Year MCLR rate as on 10th Feb 2020

Table 106: Return on equity as submitted by the Petitioner (INR Crore)

S. No.	Particulars	Petitioner's Submission
1	Opening Equity Amount	75.34
2	Equity Addition during year (30% of Capitalization)	9.09
3	Closing Equity Amount	84.43
4	Average Equity Amount	79.88
5	Return on Equity (%)	16.00%
6	**Total Return on Equity**	**12.78**

Commission's analysis

Regulations 27.2 and 27.3 of the 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."

RoE has been calculated on normative basis on the average of opening and closing of equity during the year at the rate of 16% (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2019-20 as approved in the APR. Income Tax payable shall be considered taken on actual basis at the time of True-up. The following table provides the RoE approved in the ARR of FY 2020-21, the Petitioner's submission and RoE now approved by the Commission.

Table 107: RoE approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	59.63	75.34	53.22
2	Additions on account of new capitalisation	9.09	9.09	9.09
3	Closing Equity	68.72	84.43	62.31
4	Average Equity	64.17	79.88	57.77
5	Rate of Return	16.00%	16.00%	16.00%
6	**Return on Equity**	**10.27**	**12.78**	**9.24**

The Commission approves Return on Equity of INR 9.24 Crore for the FY 2020-21.

5.14. Interest on Security Deposits

Petitioner's submission

The Petitioner has submitted that it does not collect security deposit from consumers in cash. The consumers are required to create a Term Deposit in scheduled bank equivalent to the security amount and a lien is created in favour of the FDA&N towards security deposit. Hence, Interest on Security deposits is not payable to the consumers. Therefore, EDA&N has not claimed Interest on Security deposit in the ARR

Commission's analysis

Regulation 28.11 of the MYT Tariff Regulations, 2018 stipulates as follows:

"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."

However, the Petitioner has not considered any interest on consumer security deposit. Therefore, the Commission has not approved any Interest on Security Deposits as the interest amount on fixed deposits is not available with Petitioner in cash.

Accordingly, the Commission approves Interest on Security Deposit as NIL for the FY 2020-21.

5.15. Interest on Working Capital

Petitioner's submission

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

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

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

The SBI 1 year MCLR as on 1st April 2019 plus 200 basis points i.e. 10.55% (8.55% + 2%) has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for each year of the Control Period.

Table 108: Interest on Working Capital submitted by the Petitioner (INR Crore)

S. No.	Particulars	FY 2020-21
1	O&M Expense - 1 month	17.63
2	Maintenance Spare @ 40% of R&M Exp - one month	24.16
3	Two Months Receivables	31.93
4	Less : Amount held as Security Deposit	0.00
5	Total Working Capital	73.73
6	Interest Rate	10.55%
7	**Interest on Working Capital**	**7.78**

Commission's analysis

Regulation 52 of the 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 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.

The Commission has computed the Interest on Working Capital for FY 2020-21 in accordance with the MYT Regulation, 2018. The interest rate has been considered as 10.55% (1 year MCLR as on 1st April 2019 i.e. 8.55% + 200 basis points). The computation of interest on working capital is shown in the following table:

Table 109: Interest on Working Capital approved by Commission (INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	16.61	17.63	16.23
2	Maintenance spares at 40% of R&M expenses for one (1) month;	1.66	24.16	1.52
3	Receivables equivalent to two (2) months of the expected revenue from charges	36.44	31.93	32.14
4	Less: Amount held as security deposits	0.00	0.00	0.00
5	Net Working Capital	54.71	73.72	49.90
6	Rate of Interest (%)	10.15%	10.55%	10.55%
	Interest on Working Capital	**5.55**	**7.78**	**5.26**

The Commission approves the Interest on Working Capital as INR 5.26 Crore for the FY 2020-21.

5.16. Income Tax

Petitioner's submission

The Petitioner has not made any submission has been made in this regard.

Commission's analysis

Regulation 32 of MYT Regulations, 2018 stipulates the following:

"32. Tax on Income

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

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

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

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

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

Since the Petitioner has paid no Income tax in the previous years, no income tax liability is computed for the FY 2020-21 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

5.17. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not proposed any provision for bad and doubtful debts during the FY 2020-21.

Commission's analysis

Regulation 62 of the MYT Regulations, 2018 stipulates the following

"62. Provision for bad and doubtful debts

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

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

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

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

The Commission also has not considered any Provision for Bad & Doubtful Debts for the FY 2020-21. The same shall be accounted for as per actuals during the True-up of respective years.

5.18. Non-Tariff Income

Petitioner's submission

The Petitioner has estimated the non-tariff income of INR 3.09 crore for FY 2020-21 as approved by the Commission in MYT Order.

Commission's analysis

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

"64. Non-Tariff Income

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

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

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

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

(g) Income from hire charges from contactors and others;

(h) Income from advertisements, etc.;

(i) Meter/metering equipment/service line rentals;

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

(m) Rebate availed on account of timely payment of bills;

(n) Miscellaneous receipts;

(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;

(p) Prior period income, etc.:

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

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

The Commission approves the NTI in line with the approved figures of MYT Order. The same shall be Trued-up on actual basis at the time of true-up. The NTI approved for FY 2020-21 has been shown in the following table:

Table 110: Non -tariff Income approved by Commission (INR Crore)

S. No	Particulars	FY 2020-21
1	Non- Tariff Income	3.09

The Commission approves Non-Tariff Income of INR 3.09 Crore for the FY 2020-21.

5.19. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 794.90 crore as against the approved net aggregate revenue requirement of INR 791.40 crore in MYT Order.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement as approved in MYT order, Petitioner's Submission and now approved by the Commission for FY 2020-21 is shown in table below:

Table 111: Aggregate Revenue Requirement approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	350.65	427.09	445.44
2	Fuel Cost	219.62	122.62	106.61
3	Employee Expenses	111.85	132.55	111.58
4	Administration & General Expenses (A&G)	37.62	18.64	37.53
5	Repair & Maintenance Expenses (R&M)	49.83	60.39	45.66
6	Depreciation	6.20	7.42	7.02
7	Interest and Finance charges	2.90	8.73	1.94
8	Interest on Working Capital	5.55	7.78	5.26
9	Return on Equity	10.27	12.78	9.24
10	Interest on Security Deposit	0.00	0.00	0.00
11	Income Tax	0.00	0.00	0.00
12	**Total Revenue Requirement**	**794.49**	**798.00**	**770.29**
13	Less: Non-Tariff Income	3.09	3.09	3.09
14	**Net Revenue Requirement**	**791.40**	**794.91**	**767.20**

The Commission approves net ARR of INR 767.20 Crore for the FY 2020-21.

5.20. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 192.05 Crore including INR 183.69 crores of energy charges and INR 8.35 crores of fixed charges for FY 2020-21 based on the projected energy sales, connected load and number of consumers.

Commission's analysis

The category wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category. The Commission has considered number of single phase and three phase consumers in the ratio of 98.02%-1.98% for Domestic consumers, 86.43%-13.57% for Commercial consumers and 58.52%-41.48% for government consumers. Further, the Commission has also considered the power factor of 0.9 for kVAh billing. The revenue from various categories as computed by the Commission for the FY 2020-21 has been shown in the following table:

Table 112: Revenue at existing tariff computed by the Commission for the FY 2020-21 (INR Crore)

S. No.	Category	Sales (MUs)	Revenue from Energy Charges (INR Crore)	Revenue from Fixed charges (INR Crore)	Total (INR Crore)	ABR (INR/ unit)
1	Life Line Connection	7.68	1.57	0.00	1.57	2.05
2	Domestic	142.88	59.78	3.01	62.79	4.39
3	Commercial	39.83	34.85	0.68	35.53	8.92
4	Government Connection	28.40	29.30	0.24	29.54	10.40
5	Industry	19.27	12.91	1.79	14.70	7.63
6	Bulk	33.61	42.01	1.85	43.87	13.05
7	Public Lighting	6.67	4.07	0.57	4.64	6.96
8	Irrigation, Pumps & Agriculture	1.17	0.19	0.03	0.21	1.84
	TOTAL	**279.51**	**184.69**	**8.17**	**192.86**	**6.90**

The Commission has determined revenue from sale of power at existing tariff as INR 192.86 Crore in FY 2020-21.

5.21. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 602.86 Crore for the FY 2020-21.

Commission's analysis

The Commission based on the approved ARR and existing retail tariff has derived the following Revenue Gap/Surplus:

Table 113: Standalone Revenue Gap/ Surplus approved at existing tariff for the FY 2020-21 (INR Crore)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	794.91	767.20
2	Revenue from sale of power	192.05	192.86
	Revenue Gap/(Surplus)	**602.86**	**574.34**

The standalone revenue gap at existing retail tariff is INR 574.34 Crore for the FY 2020-21.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2019-20 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

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

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. Since the majority of the energy sales within EDA&N's jurisdiction is to tourism related businesses, the Commission has attempted to ensure that, tourism is promoted, but not at the cost of other segments of society.

6.2. Applicable Regulations

Regulation 19 of MYT Regulations, 2018 states the following:

"19. Annual determination of tariff

19.1 The Commission shall determine the tariff of a Generating Company, Transmission Licensee and Distribution Licensee covered under a Multi Year Tariff framework for each Year during the Control Period, in accordance with timelines specified in Regulation 17, having regard to the following:

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

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

Further, Regulation 67 of the MYT Tariff Regulations, 2018 stipulates as follows:

"67. Determination of Tariff

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

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

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

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

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

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

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

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

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

In case of Andaman & Nicobar Islands, the source of power is own generation and purchase from Hired Power Plants (HPP), Independent Power Producers (IPP) and solar plant of NTPC.

Since sales are predominantly in the LT category, the Commission is of the view that the functional demarcation of costs will not have substantial impact on the present tariff structure. Additionally, due to practical constraints, open access is not an option for the consumers of Andaman and Nicobar Islands.

In view of the above, the tariff needs to be designed in such a way that cross subsidy between different categories of consumers is progressively brought within ±20% of Average Cost of Supply and that even for BPL category consumers, tariff rates are close to 50% of the Average Cost of Supply. The Commission has taken a considerate view in this regard balancing the interest of the utility and the consumer, thus compensating the department with additional revenue and providing a reasonable hike in consumers' tariff.

Accordingly, the Commission has designed tariff for different categories of consumers as brought out subsequently.

6.3. Cumulative Revenue Gap/ (Surplus) at Existing Tariff

Petitioner's Submission

The Petitioner has proposed revenue gap of INR 602.86 Crore for FY 2020-21 at existing tariff. The revenue gap submitted by the Petitioner for FY 2020-21 is as follows:

Table 114: Revenue Gap at existing tariff submitted by the Petitioner for FY 2020-21 (INR Crore)

Sr. No.	Particulars	FY 2020-21
1	Net Revenue Requirement	794.91
2	Revenue from Sale of Power at existing Tariff	192.05
3	**Net Gap during the year**	**602.86**
4	Add: Previous Year Gap	0.00
5	**Total Gap**	**602.86**

Commission's View

The Commission based on the ARR and Revenue from sale of power computed above, has derived revenue gap for the FY 2020-21 at existing tariff as shown in table below:

Table 115: Revenue Gap determined by the Commission at existing tariff for FY 2020-21 (INR Crore)

Sr. No.	Particulars	FY 2020-21
1	Net Revenue Requirement	767.20
2	Revenue from Sale of Power at existing Tariff	192.86
3	**Net Gap during the year**	**574.34**
4	Add: Previous Year Gap	0.00
5	**Total Gap**	**574.34**

Accordingly, the Commission determined the revenue gap of INR 574.34 Crore for FY 2020-21 at existing tariff.

6.4. Treatment of Gap /(Surplus) and Tariff Design

From above, it can be seen that at existing tariff, there is revenue gap of INR 574.34 Crore for FY 2020-21. However, the Commission has not approved any tariff hike in tariff for FY 2020-21 as compared to tariff for FY 2019-20 considering the socio-economic conditions of the people in Andaman & Nicobar and in view of the budgetary support by the Government to meet the balance revenue gap.

6.4.1. Tariff Proposal

Petitioner Submission

1. The Petitioner has proposed that at existing tariff, the average cost of supply comes to INR 28.25 per unit, whereas the Average Billing Rate (ABR) is INR 6.82 per unit. Thus, there is a gap of INR 21.42 per unit.
2. The Petitioner has not proposed any revision in tariff from tariff applicable for FY 2019-20.
3. However, the Petitioner has proposed a reduced tariff for domestic, commercial and industrial consumers who have installed Rooftop Solar in their premises in order to incentivize them.

Accordingly, the tariff proposal submitted by the Petitioner for FY 2020-21 for individual category is as follows:

Table 116: Tariff proposal submitted by the Petitioner for FY 2020-21

Existing			Proposed		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
Life Line Connection			**Life Line Connection**		
0 to 50 units	INR 10 per connection per month or part thereof	2.05	0 to 50 units	INR 10 per connection per month or part thereof	2.05
Domestic Connection			**Domestic Connection**		
0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25	0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25
101 to 200 units		5.00	101 to 200 units		5.00
201 to 500 units		7.20	201 to 500 units		7.20
501 units & above		7.50	501 units & above		7.50
Commercial			**Commercial**		
0-200 Units		7.50	0-200 Units		7.50

Existing			Proposed		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
201 to 500 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.50	201 to 500 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.50
501 units & above		12.00	501 units & above		12.00
Govt. Connection			**Govt. Connection**		
0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20	0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20
501 units & above		10.60	501 units & above		10.60
Industrial			**Industrial**		
0 to 500 units	INR 50/kVA/Month or part thereof	6.00	0 to 500 units	INR 50/kVA/Month or part thereof	6.00
501 units & above		8.00	501 units & above		8.00
Bulk Supply	INR 100/kVA/Month or part thereof	12.50	**Bulk Supply**	INR 100/kVA/Month or part thereof	12.50
Public Lighting	INR 150/kVA/Month or part thereof	6.10	**Public Lighting**	INR 150/kVA/Month or part thereof	6.10
Irrigation Pumps & Agriculture	INR 50/kVA/Month or part thereof	1.60	**Irrigation Pumps & Agriculture**	INR 50/kVA/Month or part thereof	1.60

Existing			Proposed		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
EV Charging Stations	INR 100/kVA/Month or part thereof	6.89	**EV Charging Stations**		6.89
	-				
Temporary Supply	1.5 times the rate applicable to the relevant category of consumers.		**Temporary Supply**	1.5 times the rate applicable to the relevant category of consumers.	

Accordingly, the computation of impact of proposed tariff on revenue for FY 2020-21 is as follows:

Table 117: Average Tariff Hike for FY 2020-21 as submitted by the Petitioner

Sr. No.	Particulars	Units	FY 2020-21	
			Existing	Proposed
1	Net ARR for FY 2020-21	INR Crore	794.91	794.91
2	Revenue for FY 2020-21	INR Crore	192.05	192.05
3	Gap (1-2)	INR Crore	602.86	602.86
4	Total Sales	MU	281.42	281.42
5	Average Cost of Supply	INR/kWh	28.25	28.25
6	Average Revenue	INR/kWh	6.82	6.82
7	Pure Gap	INR/kWh	21.42	21.42
8	Average Tariff Hike	INR/kWh		0.00
9	Tariff Hike in %	%		0.00

The Petitioner has not proposed any tariff hike in existing tariff slabs. However, the Petitioner has proposed lower tariffs to incentivise the consumers to become prosumers (producing Consumers) by installing solar panels on their roofs or other available areas and participating under the virtual net metering scheme of EDA&N as shown in the following table:

Table 118: Proposed Tariff for consumers installing solar panels in their premises

Sr. No	Particulars	Slab	Proposed Tariff	
			Fixed Charges	Energy Charges (INR/kWh)
1	Domestic (Solar)*	0 to 200 units	Rs. 20/- per connection per month or part thereof for single phase Rs. 70/- per connection per month or part thereof for three phase	2.05
		201 to 500 units		7.20
		501 & above units		7.50
2	Commercial (Solar)*	0 to 200 units	Rs. 30/- per connection per month or part thereof for single phase Rs. 125/- per connection per month or part thereof for three phase	7.00
		201 to 500 units		9.50
		501 & above units		12.00
3	Industrial (Solar)*	0 to 200 units	Rs. 35/- per connection per month or part thereof for single phase Rs.	5.50
		201 to 500 units		6.00

Sr. No	Particulars	Slab	Proposed Tariff	
			Fixed Charges	Energy Charges (INR/kWh)
		501 & above units	125/- per connection per month or part thereof for three phase	8.00

** Consumers shall be considered under Domestic (Solar), Commercial (Solar) and Industrial (Solar) category after having installed Rooftop / Ground Mounted Solar Power Plant in their premises equivalent to 15% of the connected load/contract demand or 25% of the roof area whichever is less.*

Commission View

As discussed above, the Commission has determined the retail tariff for the FY 2020-21 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2018. The Tariff design in general is guided by the following principles:

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

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

1. Cost of Supply

a) Context

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

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

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

b) Approach:

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

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels. A simplified version of the same was suggested by Hon'ble ATE in 2010, to determine VCoS in the absence of all necessary data. In this method, the power purchase costs and other costs (such as network costs, wheeling costs etc.) are allocated to various consumer categories based on energy input or energy sales (as considered appropriate by the State Commission). This approach factors in the voltage level differentiation based on losses, however, it does not factor in asset utilization at different voltage levels.

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

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

On studying the existing methodologies followed internationally, among developing nations with energy access situations like India's, the Commission is of the opinion that the Category wise Cost of Supply methodology is an appropriate starting point. The embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Discom's revenue requirement to all categories and sub-categories of consumers.

This method involves three steps:

- Cost Functionalization
- Cost Classification
- Cost Allocation

Cost functionalization separates cost data into the functional activities performed in the operation of a utility system - power generation/supply, transmission, distribution and retail supply. Classification determines the portion of the cost that is related to specific cost-causal factors, such as those that are demand-related, energy-related, or customer-related. Finally, the cost allocation step assigns the costs to specific customer categories based on the customer's contribution to the specific classifier selected.

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

2. *Tariff Affordability*

a) Context

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

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

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

b) Approach

On reviewing methodologies adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

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

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

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

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

The Commission, after analysis of the various components of the ARR for FY 2020-21, has come to the conclusion that the utility has to increase the average tariff from the existing level of INR 6.90 per unit to INR 27.44 per unit to recover the full amount of ARR as approved for FY 2020-21. This however will not be a practical proposition under the socio-economic circumstances.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, and in view of the socio-economic constraints of the people residing in the licensee's area, the Commission feels that aligning the tariff with Average Cost of Supply would be unjust to the consumers. Duly considering the difficult terrain where people reside in remote areas spread across the various islands with limited access to basic amenities, the Commission has not approved any increased the tariff of FY 2020-21 over the FY 2019-20. However, Single Part Tariff has been approved for Electric Vehicle Charging Station category in line with the Draft Amendment to the Tariff Policy, 2016 dated May 30, 2018.

Accordingly, considering the revised tariff proposal submitted by the Petitioner for FY 2020-21 and the net ARR approved by the Commission for FY 2020-21, the Commission has approved the tariffs for FY 2020-21. The Commission has also given due consideration to the guiding principles as stated in the Electricity Act 2003, the Tariff Policy, MYT Tariff Regulations 2018, the suggestions/observations of the stakeholders in this regard and the Petition submitted by EDA&N, while deciding the tariff for FY 2020-21. Accordingly, the Commission has considered a marginal increase in tariff for FY 2020-21. Also, the limit on monthly energy consumption for Lifeline Connection has been increased to 100 units/month and beyond it, the entire consumption for such consumers shall be charged at Domestic tariff.

The approved tariff for FY 2020-21 is as follows:

Table 119: Existing vs. Tariff approved by the Commission for FY 2020-21

Existing			**Approved**		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
Life Line Connection			**Life Line Connection**		
0 to 50 units	INR 10 per connection per	2.05	0 to 100 units	INR 10 per connection per	2.05

Existing			Approved		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
	month or part thereof			month or part thereof	
Domestic Connection			**Domestic Connection**		
0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25	0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25
101 to 200 units		5.00	101 to 200 units		5.00
201 to 500 units		7.20	201 to 500 units		7.20
501 units & above		7.50	501 units & above		7.50
Commercial			**Commercial**		
0-200 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50	0-200 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50
201 to 500 Units		9.50	201 to 500 Units		9.50
501 units & above		12.00	501 units & above		12.00
Govt. Connection			**Govt. Connection**		
0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20	0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20
501 units & above		10.60	501 units & above		10.60
Industrial			**Industrial**		
0 to 500 units	INR 50/kVA/Month or part thereof	6.00	0 to 500 units	INR 50/kVA/Month or part thereof	6.00
501 units & above		8.00	501 units & above		8.00

Existing			Approved		
Category	**Fixed Charge**	**Energy Charge (INR/kWh)**	**Category**	**Fixed Charge**	**Energy Charge (INR/kWh)**
Bulk Supply	INR 100/kVA/Month or part thereof	12.50	**Bulk Supply**	INR 100/kVA/Month or part thereof	12.50
Public Lighting	INR 150/kVA/Month or part thereof	6.10	**Public Lighting**	INR 150/kVA/Month or part thereof	6.10
Irrigation Pumps & Agriculture	INR 50/kVA/Month or part thereof	1.60	**Irrigation Pumps & Agriculture**	INR 50/kVA/Month or part thereof	1.60
EV Charging Stations	INR 100/kVA/Month or part thereof	6.89	**EV Charging Stations**		6.90
	-				
Temporary Supply	1.5 times the rate applicable to the relevant category of consumers.		**Temporary Supply**	1.5 times the rate applicable to the relevant category of consumers.	

The Commission has also analyzed the Petitioner's proposal of lower tariffs to incentivise the consumers to become prosumers (producing Consumers) by installing solar on their roofs or other available areas. The Andaman Islands has a very high average cost of supply on account of Diesel generation. The Commission appreciates the Petitioner's effort to reduce Diesel generation which shall bring down the average cost of supply and accordingly approves the reduced tariffs for Domestic, Commercial and Industrial categories installing solar on their roofs or other available areas as shown in the following table:

Table 120: Approved Tariff for consumers installing solar in their premises

Sr. No	Particulars	Slab	Approved Tariff	
			Fixed Charges	**Energy Charges (INR/kWh)**
1	Domestic (Solar)*	0 to 200 units	Rs. 20/- per connection per month or part thereof for single phase Rs. 70/- per connection per month or part thereof for three phase	2.05
		201 to 500 units		7.20
		501 & above units		7.50
2	Commercial (Solar)*	0 to 200 units	Rs. 30/- per connection per month or part thereof for single phase Rs. 125/- per connection per month or part thereof for three phase	7.00
		201 to 500 units		9.50
		501 & above units		12.00
3	Industrial (Solar)*	0 to 200 units	Rs. 35/- per connection per month or part thereof for single phase Rs.	5.50
		201 to 500 units		6.00

Sr. No	Particulars	Slab	Approved Tariff	
			Fixed Charges	Energy Charges (INR/kWh)
		501 & above units	125/- per connection per month or part thereof for three phase	8.00
* Consumers shall be considered under Domestic (Solar), Commercial (Solar) and Industrial (Solar) category after having installed Rooftop / Ground Mounted Solar Power Plant in their premises equivalent to 15% of the connected load/contract demand or 25% of the roof area whichever is less.				

6.4.2. Revenue from Approved Retail Tariff for FY 2020-21

Based on the retail tariff approved above, the revenue at revised tariff approved by the Commission for FY 2020-21 is given in the following Table:

Table 121: Revenue at tariff approved by the Commission for FY 2020-21

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
1	**Life line Connection**							
	0 to 100 units		**7.68**	INR 10 per connection per month or part thereof	**2.05**	**0.00**	**1.57**	**1.57**
2	**Domestic**							
	0 to 100 units	119645	67.60	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25	3.01	15.21	
	101 to 200 units		45.17		5.00		22.59	
	201 to 500 units		20.00		7.20		14.40	
	501 units & above		10.11		7.50		7.59	
	Sub-total		**142.88**			**3.01**	**59.78**	**62.79**
3	**Commercial**							
	0-200 Units	**18775**	23.90	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50	0.68	17.92	
	201 to 500 Units		8.76		9.50		8.32	
	501 units & above		7.17		12.00		8.61	

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
	Sub-total		**39.83**			**0.68**	**34.85**	**35.53**
4	**Govt. Connection**							
	0-500 Units	2725	5.68	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20	0.24	5.23	
	501 units & above		22.71		10.60		24.08	
	Sub-total		**28.40**			**0.24**	**29.30**	**29.54**
5	**Industrial**							
	0-500 Units	616	12.53	INR 50 per kVA per month or part thereof	6.00	1.79	7.52	
	501 units & above		6.74		8.00		5.39	
	Sub-total		**19.27**			**1.79**	**12.91**	**14.70**
6	**Bulk Supply**							
	All units	**68**	**33.61**	INR 100 per kVA per month or part thereof	**12.50**	**1.85**	**42.01**	**43.87**
7	**Public Lighting**							
	All units	**705**	**6.67**	INR 150 per kVA per month or part thereof	6.10	**0.57**	**4.07**	**4.64**
8	**Irrigation Pumps & Agriculture**							
	All units	**473**	**1.17**	INR 50 per connection per month or part thereof	1.60	**0.03**	**0.19**	**0.21**
9	**Electric Vehicle Charging Station**	**0**	**0.00**		6.90	**0.00**	**0.00**	**0.00**

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
10	**Temporary Supply**							
	All units		**0.00**	1.5 times the rate applicable to the relevant category of consumers.		**0.00**	**0.00**	**0.00**
11	**Total**		**279.51**			**8.17**	**184.69**	**192.86**

The revenue gap at the revised tariff approved by the Commission is given in the Table below:

Table 122: Revenue gap at tariff approved by the Commission for FY 2020-21 (INR crore)

S. No.	Particulars	FY 2020-21	
		Claimed	Approved
1	Net Revenue Requirement	794.91	767.20
2	Revenue from Sale of Power at Revised Tariff	192.05	192.86
3	**Net Gap during the year**	**602.86**	**574.34**
4	Add: Previous Year Gap	0.00	0.00
5	**Total Gap**	**602.86**	**574.34**

In view of solar rooftop scheme introduced by the Petitioner, it is expected that there will be migration of consumers in all the categories (Domestic, Commercial & Industrial) from higher slab to lower slab, which will impact the revenue calculation of EDA&N. However, the Commission has not projected any reduction in revenue considering the solar panel installation shall bring down the diesel generation and power purchase cost. The following comparative chart gives the overview of the category-wise levels of percentage recovery of Average Cost of Supply at existing and revised tariffs.

Table 123: Percentage recovery of ACOS at tariff approved by the Commission for FY 2020-21

S. No.	Category	Average Cost of Supply (INR/unit)	Average Billing Rate (INR/unit)	% of AcoS
1	Life Line Connection (Upto 100 Units)	27.45	2.05	7.47%
2	Domestic	27.45	4.39	16.01%
3	Commercial	27.45	8.92	32.50%
4	Government Connection	27.45	10.40	37.90%
5	Industrial	27.45	7.63	27.79%
6	Bulk Supply	27.45	13.05	47.55%
7	Public Lighting	27.45	6.96	25.36%
8	Irrigation Pumps & Agriculture	27.45	1.84	6.72%
9	Electric Vehicle Charging Station	27.45	6.90	25.14%
10	Temporary Supply	27.45	0.00	0.00%
11	**Overall**	**27.45**	**6.90**	**25.14%**

Table 124: Approved ACoS and ABR by the Commission at approved tariff for FY 2020-21

Sr. No.	Particulars	FY 2020-21
1	Net Revenue Requirement (INR Crore)	767.20
2	Revenue from Revised Tariff (INR Crore)	192.86
3	Energy Sales (MU's)	279.51

Sr. No.	Particulars	FY 2020-21
4	Average cost of supply/unit (INR/kWh)	27.45
5	Average Billing Rate (INR/kWh)	6.90
6	**Gap (INR/kWh)**	**20.55**

The highlights of the tariff structure approved by the Commission for FY 2020-21 is as follows:

1. The Commission has not approved any tariff hike for FY 2020-21 from FY 2019-20.
2. The Commission has approved the reduced tariffs for Domestic, Commercial and Industrial categories to incentivise consumers installing solar on their roofs or other available areas
3. The Commission has approved the ABR for FY 2020-21 as INR 6.90/kWh as against the approved Average Cost of Supply of INR 27.45/kWh.
4. In order to promote the use of Electric Vehicles (E.V.), the Commission has introduced a single-part tariff for E.V. Charging Stations where the Fixed Charges have been removed and the Energy Charges have been rationalised on the basis of ABR.
5. The limit on monthly energy consumption for Lifeline Connection has been increased to 100 units/month and beyond it, the entire consumption for such consumers shall be charged at Domestic tariff.

The Commission observes that the Revenue Gap of the previous years was funded by the Government as a Budgetary Support. The Commission vide deficiency note had asked the Petitioner to submit the treatment of the proposed revenue gap for FY 2020-21. In reply, the Petitioner has submitted that revenue gap shall be funded through Budgetary Support from Government of India. Accordingly, the Commission has approved the revenue gap of INR 574.34 Crore to be funded through Budgetary Support from Government of India.

7. Chapter 7: Tariff Schedule

7.1. Tariff Schedule

Sr. No.	Category	Fixed Charges	Energy Charge (INR/kWh)
1.	**Life Line Connection**		
	0 to 100 units	INR 10/- per service connection per month or part thereof	2.05
2.	**Domestic Connection**		
	0 to 100 units	INR 20/- per connection per month or part thereof for single phase INR 70/- per connection per month or part thereof for three phase	2.25
	101 to 200 units		5.00
	201 to 500 units		7.20
	501 units & above		7.50
3.	**Commercial**		
	0-200 Units	INR 30/- per connection per month or part thereof for single phase INR 125/- per connection per month or part thereof for three phase	7.50
	201 to 500 Units		9.50
	501 and above		12.00
4.	**Govt. Connection**		
	0-500 Units	INR 35/- per connection per month or part thereof for single phase INR 125/- per connection per month or part thereof for three phase	9.20
	501 Units & above		10.60
5.	**Industrial**		
	0-500 Units	INR 50/- per KVA per month or part thereof	6.00
	501 Units & above		8.00
6.	**Bulk Supply**		
	All Units	INR 100/- per KVA per month or part thereof	12.50
7.	**Public Lighting**		
	All Units	INR 150/- per KVA per month or part thereof	6.10
8.	**Irrigation Pumps and Agriculture**		
	All Units	INR 50/- per KVA per month or part thereof	1.60
10	**Electric Vehicle Charging Station**		6.90
9	**Temporary supply**		
	All Units	1.5 times the rate applicable to the relevant category of consumers.	

Secretary, JERC
(For Goa & UTs)

7.2. Applicability

Sr. No.	Category	Applicability	Point of Supply news
1	Life Line	Applicable to domestic consumers with monthly consumption of upto 100 units and below.	Note: The Domestic Consumer having consumption above 100 units shall be charged according to the slabs defined under Domestic Category.
2	Domestic	This schedule will apply for single delivery point including light, fan, domestic pumping sets and household appliances. a) Single private house/flat b) Government schools along with related facilities. c) Housing colonies and multi-storeyed flats/buildings as defined in the Electricity Supply Code Regulations notified by the JERC	NOTE: Where a portion of the dwelling is used for mixed load purposes, the connection will be billed for the purpose for which the tariffs are higher
3	Commercial	This schedule will apply to all consumers, using electrical energy for light, fans, and appliances like pumping sets, motors of up to 3 HP used for commercial purpose, central air conditioning plants, lifts, welding sets, small lathe machines, electric drills, heaters, battery chargers, embroidery machines, printing presses, ice candy, dry cleaning machines, power presses, small motors in commercial establishments/ non-residential private premises such as printing presses, hotels, rest houses, restaurants, hostels, nursing homes, bus stands, clubs, auditoriums, communication, cinema theatres, operas, circus, exhibitions, and bakeries, and grinders and installations for private gains, etc. Commercial supply will also be applicable to multi-consumer complex including commercial complexes as defined in the Electricity Supply Code Regulations notified by JERC. This schedule will also apply to the places of worship like temples, mosques, churches, gurudwaras, Buddhist Pongi Chung (except residential areas), public Pooja celebrations and religious ceremonies. No separate circuit/connection for power load including pumping set/ central air conditioning plant, lifts, etc., is permitted.	Note: It has come to notice of the Commission that the hotels are being charged industrial tariff though as per the rate schedule approved by the Commission, categorises it under Commercial Category. Therefore, the Commission directs the Petitioner to charge tariff applicable for Commercial category to all the hotel establishment, failing which, the Commission may take an appropriate view considering the incompliance of Commission's direction.
4	Government Connection	This schedule will apply to all government connections.	The supply will be given through a single delivery and metering point and a single voltage.
5	Industrial Supply	The schedule will apply for supply of energy for lighting, fan and power to industrial establishments & industries such as wood-based, cottage, small scale,	The supply will be given through a single delivery and metering point and at a single voltage.

Sr. No.	Category	Applicability	Point of Supply news
		medium-scale, finishing shell based and any other establishments/ organisations engaged in the manufacturing and processing of goods for sale, rice mills, flour mills, workshops, dry docks, factories base repair organisations, public water works & gem cutting units	
6	Bulk Supply	This schedule will apply to general or mixed loads receiving supply of energy through a bulk energy meter at either HT or LT supply and distribution is maintained by them. For dedicated transformers, the complete cost of technical transmission lines of transformer sub-station, switch gear & installation is to be borne by the consumer.	The supply will be given through a single delivery and metering point and at a single voltage.
7	Public Lighting	This schedule will apply for lighting on public roads, footpaths, streets and thoroughfares in parks & markets, etc.	Cost of spares, materials and labour required for maintenance is to be borne by respective panchayati raj institution / local body.
8	Irrigation Pumps & agriculture	This schedule will apply to all consumers for use of electrical energy for irrigation and agricultural purposes including animal husbandry.	The supply will be given through a single delivery and metering point and at a single voltage.
9	Electric Vehicle Charging Station	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	
10	Temporary Supply	The supply may be given for a limited period as per the provisions of JERC Supply Code Regulations, 2018, and amendments thereon.	

In order to mitigate the hardship of Electricity Consumers and DISCOMs/EDs in view of nation wide lockdown due to COVID-19. The Commission has issued SUO MOTU Order No. JERC/LEGAL/SMP/27/2020 on April 10, 2020 giving directions, wherein the Commission has provided relief to Industrial and Commercial consumers and acknowledged the need for additional working capital requirement by the Distribution Licensees. Further, the Commission is of the view that the lockdown will also impact certain other parameters of ARR like sales/sales mix, power purchase quantum and cost, revenue etc. However, it may not be possible to take into account all these impacts in totality with the desired accuracy and efficacy at this point of time. The Commission will consider all such additional costs and variations in parameters appropriately while evaluating the APR of FY 2020-21 and thereafter True-up of FY 2020-21.

7.3. General conditions of HT and LT Supply

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

1) The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.

2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.

3) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.

4) Fixed charges, as applicable, will be charged on pro-rata basis from the date of release of connection.

5) If the connected load of a domestic category is found to be at variance from the sanctioned/contracted load as a result of increase of load or due to replacement of lamps, fans, fuses, switches, low-voltage domestic appliances, fittings, etc., it will fall neither under unauthorised use of electricity (Section 126 of Electricity Act, 2003) nor under theft of electricity (Section 135 of Electricity Act, 2003).

6) The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of the contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawl is more than 20% of the contract demand then the connection shall be disconnected immediately.

   Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

7) Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amounts less than 50 paisa shall be ignored and amounts of 50 paisa or more shall be rounded off to the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only upto the month of permanent disconnection.

8) **Advance Payment Rebate**: If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @1% per month will be given on the amount (excluding security deposit), which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, will be credited to the account of the consumer.

9) **Prompt Payment Rebate:** If payment is made at least 7-days in advance of the due date of payment of the current bill a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

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

10) **Surcharge for Low Power Factor/Non Installation of Required rated LT Shunt Capacitors**

    (a) Consumers with L.T connections where the meter provided by the licensee has the power factor recording feature, shall install shunt capacitors of adequate rating to ensure power factor of 85% or above failing which low power factor surcharge at the rates noted below will be levied.

S. No.	Power Factor range	Surcharge
1.	85% and above	NIL
2.	Below 85% and upto 80%	2% of billed energy charges of that month for every 1% fall in P.F from 85%
3.	Below 80% and upto 75%	2.5% of billed energy charges of the month for every 1% fall in P.F from 80%
4.	Below 75%	3% of billed energy charges of that month for every 1% fall in P.F from 75%

The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply.

11) **Unauthorized use of Electricity:** The unauthorized use of electricity shall be treated as specified in the Supply Code Regulations notified by JERC.

12) **Taxes and duties**

The tariff does not include any tax or duty etc. on electricity energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

7.4. Schedule of Miscellaneous Charges

S. No.	PARTICULARS	Rate (INR)
METER RENT CHARGES		
A	Application processing charges for new connection/ enhancement of load/ reduction of load	
i	Domestic Supply	NIL
ii	Non-Domestic Supply	NIL
iii	Small Power, Medium Supply and Street Lighting Supply	NIL
iv	Large and Bulk Supply	NIL
V	Agriculture Power Supply	NIL
vi	Temporary Metered Supply	NIL
B	Charges for Re-fixing/ Changing of meter/ Meter Board in the same premise on consumer request when no additional material is required. (When the cause leading to subsequent change/ replacement of meter is either manufacturing defect or Department's fault then, it shall be free of cost and further, if shifting of meter is done in the interest of department work then it is free of cost.)	
i	Single phase meter	385
ii	Three phase meter without CT	570
C	Meter Inspection & Testing Charges (In case correctness/ accuracy of a meter belonging to the Licensee is challenged by the consumer)	
i	Single Phase	
ii	3-phase whole current i.e. without CT	
iii	L.T. meter with CTs	

S. No.	PARTICULARS	Rate (INR)
D	Re-sealing charges (irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer)	
i	Meter cover or Meter Terminal cover (single phase) Push Type	285
ii	Meter cover or Meter Terminal cover (single phase) Sintex Type	1,530
iii	Meter cover or Meter Terminal cover (3-phase) Sintex Type	5,030
E	Reconnection Charges	
i	Single Phase	25
ii	Three Phase	50
iii	Meter Reading Cards/ Passbook (New/ Replacement)	Free
F	Meter Rentals	
i	Single Phase	15
ii	Three Phase	30
G	Amount of Security Deposit for new/ extension of load	As per procedure prescribed in Regulation 5.130 of the JERC Electricity Supply Code Regulation 2018.
H	Charges recoverable from the consumer when the meter is found damaged/ burnt owing to negligence or default on the part of consumer	Three times the cost of Energy Meter
I	Special Meter reading charges in case of change in occupancy/ vacation of premises for domestic consumers	NIL
J	Supply of Duplicate copies of Electricity Bills	Free
K	Review of Electricity Bills (If the accuracy of licensee's bill is challenged by the consumer and a review of the bills is demanded)	Free

8. Chapter 8: Directives

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

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

8.1. Directives continued in this Tariff Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it has been observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

These Directives are important for the functioning of department and the Commission has directed to continue with the following directives:

8.1.1. Collection of arrears

Originally issued in Tariff Order dated 04th June 2012
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to expedite the work and submit the details of the outstanding arrears at the earliest.*
Petitioner's response in the present Tariff Petition *It is submitted that the outstanding arrears are being reconciled with the accounts and same shall be submitted shortly.*
Commission's response The Commission has noted the submission of the Petitioner and directs the Petitioner to submit the details of the outstanding arrears at the earliest.

8.1.2. Filing of Review and True-up Petitions for previous years

Originally issued in Tariff Order dated 04th June 2012
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has observed that the Petitioner has submitted the Audited Accounts for FY 2015-16 and has filed true up Petition. However, the Petitioner has still not submitted the audited accounts for FY 2016-17 and its True Up Petition. The Commission directs the Petitioner to get the audited accounts of FY 2016-17 and file the true up Petitions for this year within two months from the issuance of this Tariff Order. Further, the Commission directs the Petitioner to prepare the accounts for FY 2017-18 & FY 2018-19 and get the same audited to enable the Petitioner to file the true up petitions for the said years with the next tariff filing for FY 2020-21.*

Similar method was followed by Electricity Wing of Engineering Department, Chandigarh where commercial accounts were got audited from CAG for multiple years together to clear the back log and now their true up is done timely. *Further, the Petitioner is directed to file APR for FY 2019-20 along with the tariff petition for FY 2020-21.*
Petitioner's response in the present Tariff Petition *It is submitted that the Annual Accounts for the FY 2016-17 has been finalized and Audited by AG. True-up petition are submitted along with APR for FY 2019-20 and tariff petition for FY 2020-21.*
Commission's response The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to get the audited accounts of FY 2017-18 and FY 2018-19 and file the true up Petitions for these years within two months from the issuance of this Tariff Order.

8.1.3. Bill Payment

Originally issued in Tariff Order dated 04th June 2012
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission appreciates the efforts taken by the Petitioner for implementation of the Web based billing / payment software. However, the Commission directs the Petitioner to expedite the process of initiation of bill payments through web services, which will not only ease out the problems faced by the consumers in bill payment, but also improve collection efficiency of the Petitioner. Accordingly, the Petitioner is directed to submit the quarterly report on the island wise status of the implementation of the web billing / payment software within 3 months of the completion of each quarter.*
Petitioner's response in the present Tariff Petition *The updated report on the status of implementation of the web billing / payment software is being prepared and shall be submitted shortly.*
Commission's response The Commission directs the Petitioner to submit the status report within a month of issuance of this order.

8.1.4. Preparation of Fixed Asset Register

Originally issued in Tariff Order dated 04th June 2012
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has observed that the Petitioner has not submitted the Fixed Asset Register till FY 2017-18. Accordingly, the Commission directs the Petitioner to submitted the Fixed Asset Register till FY 2017-18 within three months otherwise the Commission may take appropriate action against the Petitioner.*
Petitioner's response in the present Tariff Petition *It is submitted that the audited Annual accounts & Fixed Asset Register (FAR) for the FY 2016-17 has been submitted.*

Commission's response
The Commission has observed that the Petitioner has not submitted the Fixed Asset Register till FY 2018-19. Accordingly, the Commission directs the Petitioner to submit the Fixed Asset Register till FY 2018-19 within three months otherwise the Commission may take appropriate action against the Petitioner.

8.1.5. Energy Audit

Originally issued in Tariff Order dated 04th June 2012
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has noted the submission of the Petitioner and directs the Petitioner to conduct the DT wise and Feeder wise energy audit.*
Petitioner's response in the present Tariff Petition *The Department has not been able to do energy audit. Hon'ble Commission may please give some time for same.*
Commission's response It is disheartening to see that the Petitioner has not been able to comply with the Commission's directions. The Commission directs the Petitioner to submit the Action Plan in one month and comply with the direction within nine months from the issuance of this order.

8.1.6. Island-wise data/Information

Originally issued in Tariff Order dated 29th March 2017
Commission's latest directive in Tariff Order dated 20th May 2019 *It is observed that the Petitioner has not submitted all the details of the actual island-wise information for category-wise sales, number of consumers, connected load, peak load, T&D losses, plant-wise generation on monthly basis, fuel consumption in each plant, etc. for FY 2015-16 in compliance to above direction. The Petitioner is directed to submit the above details till FY 2017-18 within 3 months from the date of issuance of this Order.*
Petitioner's response in the present Tariff Petition *It is submitted that the above details for the FY 2016-17 & FY 2017-18 has been submitted.*
Commission's response The Commission has noted the Petitioner's submission and accordingly, drops the directive.

8.1.7. State load Dispatch Centre

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to submit the quarterly progress report within one month from the completion of each quarter.*

Petitioner's response in the present Tariff Petition *The status report shall be submitted shortly.*
Commission's response The Commission directs the Petitioner to submit the status report within two months of issuance of this order.

8.1.8. Slab wise details

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission again directs the Petitioner to provide the island-wise, month-wise and slab-wise detailed break up of number of consumers, connected load and energy sales under each consumer category for the last five years within three months of the issuance of this order.* *Further, the Commission also directs the Petitioner to maintain and submit monthly island-wise information for category-wise sales, number of consumers, connected load, T&D losses, plant-wise generation/purchase, fuel cost, etc. on quarterly basis.*
Petitioner's response in the present Tariff Petition *It is submitted that the above details are not currently available.*
Commission's response The Commission directs the Petitioner to make efforts to collect and provide the above data and submit the same at earliest.

8.1.9. Introduction of Fixed charges

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission observed that the Petitioner has not proposed replacement of Minimum Charges with Fixed Charges, accordingly, the Commission vide additional information sought proposal for the same. The Petitioner in reply has submitted its proposal for introduction of Fixed Charges in place of Minimum Charges. The Commission considering the Petitioner's submission has appropriately approved tariff as detailed in Chapter 7 of this Order.* *Further, the Petitioner is required to maintain separate details of the revenue earned from fixed Charges and Energy charges which is to be submitted along with the tariff filing for the next year.*
Petitioner's response in the present Tariff Petition *Revenue from fixed charges & energy charges is being submitted in the current tariff filing.*
Commission's response The Commission has noted the Petitioner's submission. However, the Petitioner has submitted the overall revenue breakup between fixed charges and energy charges. The Commission directs the Petitioner to submit the category wise fixed charges and energy charges with the next year tariff filing.

8.1.10. Details of O&M Expenses

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *It is observed that the Petitioner has submitted the details for the actual O&M Expense for FY 2015-16 as per the audited account. However, on the analysis of the audited account for FY 2015-16 and the Petitioner submission, it is observed that the R&M Expense increased from 8.24 Crore approved in True Up of FY 2014-15 vide order dated 26th February 2018 to Rs. 76.21 Crore claimed by the Petitioner as per audited account. In this regard, the Petitioner is required to submit the detailed justification for exorbitant increase in R&M Expense for FY 2015-16 within three months from the date of issuance of this Order.*
Petitioner's response in the present Tariff Petition *It is submitted that repair & maintenance expenses claimed in the True-up is based on the audited accounts for the financial year. The Hon'ble Commission had approved the R&M expenses based on standard norms. However, actual R&M cost are comparatively more in the A&N than other utilities due to the fact that the operating area of the department is spread across more than 40 isolated islands. Further, maintenance cost are higher due to topographical & geographical conditions of the area of operation of the utility.*
Commission's response The Commission has noted the Petitioner's submission and drops the directive.

8.1.11. T&D Losses

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *It is observed that the Petitioner has not submitted the status report on the initiatives taken to reduce T&D loss in compliance to above direction. Accordingly, the Commission directs the Petitioner to submit the status report within three months from the date of issuance of this Order, failing which, the Commission may take appropriate action against the Petitioner.*
Petitioner's response in the present Tariff Petition *It is submitted that the Department has been able to contain the actual T&D losses for the FY 2018-19 & estimated losses for the FY 2019-20 & FY 2020-21 within the target set by the Hon'ble Commission.*
Commission's response The Commission has noted the Petitioner's submission and directs the Petitioner to submit the status report on the initiatives taken to reduce T&D loss within three months from the date of issuance of this Order.

8.1.12. Details of upcoming Power Plants

Originally issued in Tariff Order dated 26th February 2018
Commission's latest directive in Tariff Order dated 20th May 2019 *The Commission has noted the details submitted by the Petitioner and directs the Petitioner to submit the status of upcoming power plants on quarterly basis.*

Petitioner's response in the present Tariff Petition *The details of ongoing and proposed power plants in the UT of A&N stands submitted along with the Business plan for the control period FY 2019-20 to FY 2021-22 in the Business Plan for the next Control Period.*
Commission's response The Commission has noted the Petitioner's submission and directs the Petitioner to submit the progress report on the proposed power plants within two months from the date of issuance of this Order.

Annexures

Annexure 1: List of Stakeholders who attended the Public hearing on 2th March 2020 in Shaheed Dweep and 4th March in Port Blair

Table 125: List of Stakeholders

S.No.	Name of Person (Mr/Ms)
List of Stakeholders in Shaheed Dweep	
1	Shubh Kumar Das
2	Gurudas Das
3	Amar Lal Das
4	Sameer
5	Sukhen Mandal
6	B. Manavaran
7	Mahanandan
8	D.K. Nayak
9	R. K. Vishwash
10	K Andaswamy
11	Dulal Mistry
12	Astolal Das
List of Stakeholders in Port Blair	
1	K.P. Mohandas
2	Ajay Kumar
3	Rakesh Mazasah
4	Diwakar Moorthy
5	Madhav Rav
6	A. Guruswamy
7	Virender Thapa
8	Mohammed H Jadwet
9	J Bhaskar