TARIFF ORDER

True-up of FY 2018-19, Annual Performance Review of FY 2019-20
and Approval of Aggregate Revenue Requirements (ARR)
and Determination of Retail Tariff for FY 2020-21

Petition No. 22/2019

for

Electricity Department of Daman & Diu

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
ACoS	Average Cost of Supply
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
Discom	Distribution Company
EDDD	Electricity Department of Daman & Diu
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
LT	Low Tension
MU	Million Units
MYT	Multi Year Tariff
NFA	Net Fixed Assets
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
LIG	Low Income Group

Abbreviation	Full Form
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
RRAS	Reserves Regulation Ancillary Services
SBI PLR	State Bank of India Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
STU	State Transmission Utility
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

CORAM

Shri. M. K. Goel, Chairperson

Petition No. 22/2019

In the matter of

Approval for the True-up of FY 2018-19, Annual Performance Review for FY 2019-20, Aggregate Revenue Requirements (ARR) and Retail Tariff for FY 2020-21.

And in the matter of

Electricity Department, Daman & Diu (EDDD) ....Petitioner

ORDER

Dated: 18th May 2020

1. This Order is passed in respect of a Petition filed by the Electricity Department, Daman & Diu (EDDD) (herein after referred to as "The Petitioner" or "EDDD" or "The Licensee") for approval of True-up of FY 2018-19, Annual Performance Review of FY 2019-20, Aggregate Revenue Requirements (ARR) and Retail Tariff for 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 13th 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. The Public Hearings were also held at Daman on 21st January 2020 and at Diu on 29th January 2020 and all the Stakeholders/Electricity Consumers present in the Public Hearings 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 widespread 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 24th March 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, Daman & Diu, 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 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 2018-19, APR of FY 2019-20 and ARR along with the Retail Tariff for FY 2020-21.

8. 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 2018-19:

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2018-19 (INR Crore)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	1,115.49	1,119.64
2	Revenue from Retail Sales at Existing Tariff	939.45	939.45
3	Total Revenue	939.45	939.45
	Net Gap /(Surplus)	**176.04**	**180.19**

(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	1329.59	1,302.50
2	Revenue from Retail Sales at Existing Tariff	1038.94	1,046.92
3	Revenue from FPPCA	115.07	119.06
4	Total Revenue	1,154.01	1,165.98
	Net Gap /(Surplus)	**175.58**	**136.52**

(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	1,347.44	1,347.69
2	Revenue from Retail Sales at Approved Tariff	1,085.27	1,316.16
	Net Gap/(Surplus)	**262.17**	**31.53**

(d) Accordingly, the following table provides the cumulative revenue Gap/ (Surplus) at approved tariff by the end of FY 2020-21:

Table 4: Cumulative Revenue Gap/ (Surplus) approved at FY 2020-21 (INR Crore)

S. No	Particulars		FY 2018-19	FY 2019-20	FY 2020-21
1	Opening Gap/(Surplus)	(a)	**(306.92)**	**(144.07)**	**(14.79)**
2	Add: Gap/(Surplus)	(b)	180.19	136.52	31.53
3	Closing Gap/(Surplus)	(c=a+b)	(126.73)	(7.55)	16.74
4	Average Gap/(Surplus)	(d=(a+c)/2)	(216.82)	(75.81)	0.98
5	Interest Rate on carrying cost	(%, e)	8.00%	9.55%	8.85%
6	Carrying Cost	(f=d*e)	(17.35)	(7.24)	0.09
7	**Final Closing Gap/ (Surplus) (c+f)**		**(144.07)**	**(14.79)**	**16.83**

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

(f) The average increase in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2019-20 vide Order dated May 20, 2019 is 18.73%. However, the effective tariff hike considering the FPPCA paid by the consumers during FY 2019-20, works out to 8.49% only.

(g) In order to promote the use of Electric Vehicles (EV) the Commission has introduced a single-part tariff for EV Charging Stations for FY 2020-21, thereby the Fixed Charges have been abolished and the Energy Charges have been rationalized considering the APPC at Discom periphery for FY 2020-21.

(h) The Commission has approved the Average Billing Rate (ABR) for FY 2020-21 as INR 4.90/kWh as against the approved Average Cost of Supply (ACoS) of INR 5.02/kWh.

(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.

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

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

-Sd-
(M.K. Goel)
Chairperson

Place: Gurugram
Date: 18th May 2020

(Certified Copy)

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

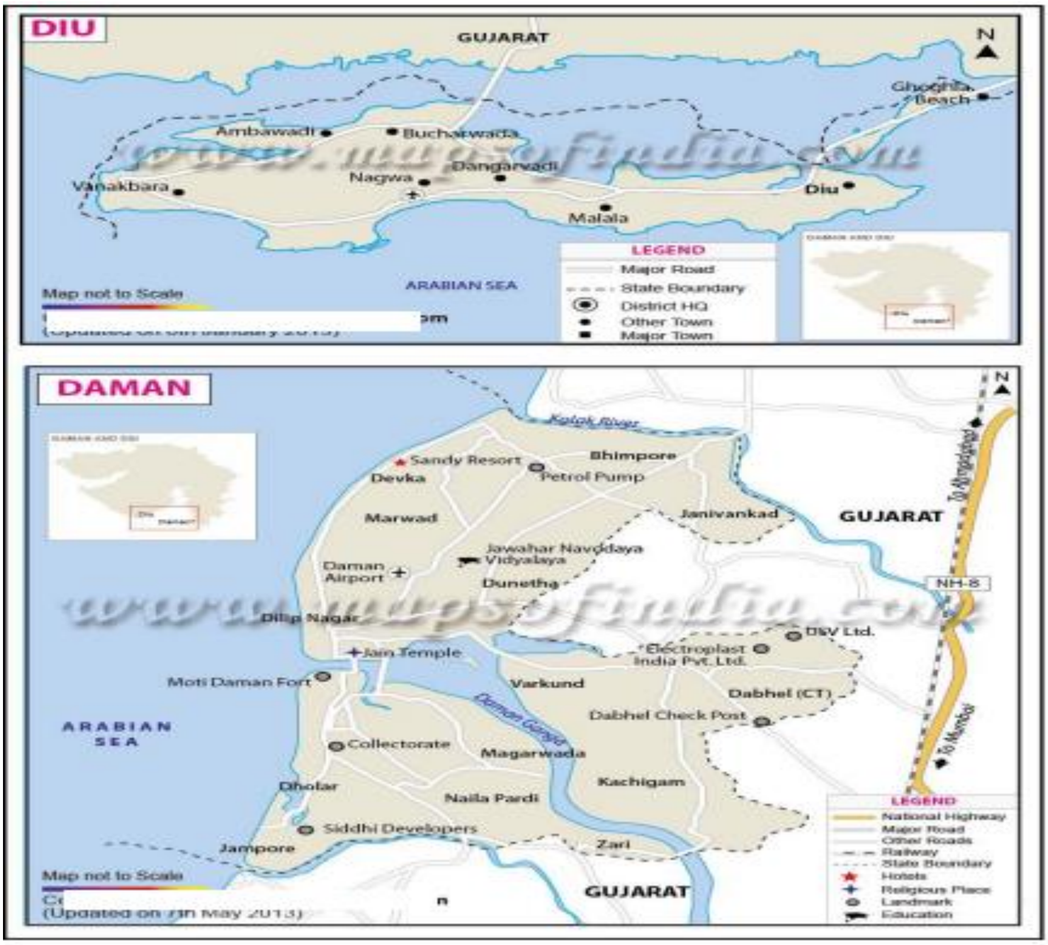
1.1. About Joint Electricity Regulatory Commission (JERC)

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 May 2, 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 May 30, 2008.

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

1.2. About Daman & Diu

Daman and Diu (hereinafter referred to as "DD") covers a total area of 112 sq. km, with the Daman District comprising of an area of 72 sq. km and Diu District of 40 sq. km. In FY 2018-19, the power demand of the DD was predominantly from HT and LT industries, contributing to 91.6% of sales.



1.3. About Electricity Department of Daman & Diu (ED DD)

The Electricity Department of Daman and Diu (hereinafter called "EDDD"), is a Deemed Licensee under Section 14 of the Electricity Act 2003, and is carrying on the business of transmission, distribution and retail supply of electricity in Daman & Diu. It is responsible for ensuring quality and continuous power supply to every resident of Daman and Diu at the most economical rates.

The key duties being discharged by Daman & Diu Electricity Department are:

- Laying and operating of such electric line, sub-station and electrical plant that is primarily maintained for the purpose of distributing electricity in the area of supply of 'Daman & Diu Electricity Department', notwithstanding that such line, sub-station or electrical plant are high tension cables or overhead lines or associated with such high tension cables or overhead lines; or used incidentally for the purpose of transmitting electricity for others, in accordance with Electricity Act. 2003 or the Rules framed there under.

- Operating and maintaining sub-stations and dedicated transmission lines connected there with as per the provisions of the Act and the Rules framed there under.

- Arranging, in-coordination with the Generating Company(ies) operating in or outside the State, for the supply of electricity required within the State 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;

- Preparing and carrying out schemes for distribution and generally for promoting the use of electricity within the State.

EDDD does not have its own power generation station and completely rely on its allocation in the Central Sector Generating Stations (CSGS) in Western and Eastern Region to meet its energy demand. The present power allocation of Daman & Diu is approximately 377 MW from various central generating stations including 70 MW from NTPC-SAIL plant located at Bhilai and 38 MW from Ratnagiri Gas and Power Private Limited (RGPPL).

The total installed solar capacity of Daman and Diu is 16.19 MW out of which 10 MW is ground mounted and the remaining 6.19 MW is solar rooftop plants. The Department is in the process of procuring 80 MW of solar energy from NTPC and another 50 MW of solar energy from SECI from FY 2020-21 onwards. Further, procurement of solar power for 40 MW from open tender is also under the process.

Existing Network

The present distribution system of EDDD consists of 33 circuit km of 220 kV Double Circuit (D/C) lines, 89kms of 66kV lines, 420 circuit kms of 11kV lines (O/H as well as U/G) and 773 circuit kms of LT OH & U/G lines. along with 936 transformers.

Daman gets power at 220/66 kV Magarwada Substation and 220/66 kV Ringanwada Substation. The 220/66 kV Magarwada Substation gets power from 220 kV (D/C) Ambethi-Magarwada line and from 220 kV (D/C)Magarwada (POWERGRID) Magarawada, Daman. The 220/66 KV Ringanwada Substation gets power from 220kV (D/C) Magarwada (POWERGRID) Magarawada, Daman. Diu gets power from 66 kV Una Substation through 66 kV double circuit line emanating from 220 /66 kV Kansari Substation of GETCO.

The details of the transmission and distribution network of EDDD are as follows:

Table 5: Transmission and Distribution System of EDDD

S.No.	Details	Daman (ckms)	Diu (ckms)	Total (ckms)
1	220 KV D/C Line	33	-	33
2	66 KV D/C Line	67	22	89
3	11 KV Line O/H	170	4	174
4	11 KV Line U/G	161	85	246
5	L T Line	432	77	509
6	LT Line U/G	154	110	264
7	Transformer Center (Nos.)	803	133	936

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 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, Dadra & Nagar Haveli and Daman & Diu 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 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, Dadra & Nagar Haveli and Daman & Diu and Puducherry.

1.6. Approval of Business Plan for 2nd MYT Control Period

In accordance with the Regulation 8.1 of the JERC MYT Regulations 2018, the Petitioner filed the Petition for approval of Business Plan for 2nd Multi-Year Control Period from FY 2019-20 to FY 2021-22 on September 4, 2018. The Commission issued the Business Plan Order for the MYT Control Period (hereinafter referred to as 'Business Plan Order') on October 31, 2018.

1.7. Multi Year Tariff Order for 2nd MYT Control Period

In accordance with the Regulation 9.1 of the JERC MYT Regulations 2018, the Petitioner filed the Petition for approval of True-up of FY 2017-18, Annual Performance Review for FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Determination of Retail Tariff for FY 2019-20 (MYT Petition). The Commission issued the Order on MYT Petition for Control Period (hereinafter referred to as 'MYT Order') on May 20, 2019.

1.8. Filing and Admission of the Present Petition

The present Petition was admitted on 13th December 2019 and marker as Petition No. 22/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.9. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted, and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications 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, capitalisation, tariff proposal etc. The Petitioner submitted its response on 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 6: List of interactions with the Petitioner

S. No.	Subject	Date
1	Issuance of First Discrepancy Note	December 13, 2019
2	Reply received from Petitioner	December 30, 2019
3	Technical Validation Session with the Petitioner at JERC office	January 7, 2020
4	Issuance of Second Discrepancy Note	January 8, 2020
5	Reply received from Petitioner	January 13, 2020 / January 16, 2020
6	Public hearing	January 21, 2020 (Daman) & January 29, 2020 (Diu)
7	Issuance of Third Discrepancy Note	February 05, 2020
8	Reply received from Petitioner	February 05, 2020/February 07, 2020/ February 11, 2020 / February 24, 2020

1.10. Notice for Public Hearing

Public notices were published by the Petitioner for inviting suggestions/comments from Stakeholders on the Tariff Petition as given below:

Table 7: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Place of circulation
1	January 01, 2020	Asli Azadi (Hindi)	Daman
2	January 01, 2020	Vartaman Pravah (Gujarati)	Surat
3	January 01, 2020	Daman Ganga Times (Hindi)	Daman

The Commission published Public Notices in the leading newspapers as per following table, giving due intimation to the Stakeholders and consumers:

Table 8: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Place of Circulation
1	December 15, 2019	Gujarat Samachar (Gujarati)	Surat
2	December 15, 2019	Times of India (English)	Ahmedabad
3	December 15, 2019	Vartaman Pravah (Gujarati)	Surat
4	December 16, 2019	Savera India Times (Hindi)	Daman
5	January 19, 2020	Savera India Times (Hindi)	Daman
6	January 19, 2020	Gujarat Samachar (Gujarati)	Surat
7	January 19, 2020	Asli Azadi (Hindi)	Daman
8	January 19, 2020	Times of India (English)	Ahmedabad
9	January 19, 2020	Vartaman Pravah (Gujarati)	Surat

The notice was also uploaded on the Commission's website.

1.11. Public Hearing

The Public Hearing was held on January 21st, 2020 from 3 PM onwards at Swami Vivekanand Auditorium – kunta Rd, Near Government College, Dunetha, Daman and January 29th, 2020 from 10 AM onwards at The Auditorium, Malala, Diu to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the Stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The 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 comments from the Public as per the provisions of the MYT Regulations, 2014 and MYT Regulations, 2018.

The Public Hearing was held on January 21, 2019 from 3 PM onwards at Swami Vivekanand Auditorium – kunta Road, Near Government College, Dunetha, Daman and on January 29, 2019 from 10 AM onwards at The Auditorium, Malala, Diu on Petition for the True-up of FY 2018-19, Annual Performance Review of FY 2019-20 and Aggregate Revenue Requirements (ARR) for FY 2020-21. During the Public Hearing, stakeholders presented their views in person before the Commission. There were other participants from the general Public, who 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 to this Order.

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

The Commission is appreciative of the efforts of various Stakeholders in providing their suggestions/comments/observations to make the Electricity Distribution Sector responsive and efficient. The Commission has noted the concerns of all the Stakeholders and has tried to address them to the extent possible in determination of ARR, tariff design and Directives. Relevant observations have been suitably considered by the Commission while finalizing the Tariff Order. The submissions of the Stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. No Tariff Increase

Stakeholder's Comment:

It is surprising to note that till last year EDDD was in surplus and this year they have shown a loss (Revenue Gap). The Complete details of loss and Revenue Gap should be submitted on Affidavit by EDDD. There should not be any tariff increase and same tariff should be continued.

Petitioner's Response

The present tariff approved by the Commission is not adequate to meet the expenses of the EDDD and the Department is incurring operational losses in order to meet the power demand of Daman and Diu. The EDDD is not able to recover the power purchase cost from the present tariff and is incurring loss on every unit of power sold to the consumers of Daman and Diu. Therefore, the present tariff does not incentivize the Department to meet the full demand of the consumers of Daman and Diu. Further, there is a gap between the average cost of supply and the average revenue realization at existing tariff during the FY 2020-21 and therefore the tariff is required to be increased in the subsequent years to meet this gap. Hence, the EDDD has submitted a proposal for increase in tariff for the FY 2020-21.

Commission's View

The Commission appreciates the concern of the Stakeholder and informs that the Commission determines the tariff after thorough examination of the Petitioner's submissions, analysis of the audited/provisional accounts, prudence check and other relevant factors submitted before it. Accordingly, based on the resultant gap or surplus, the tariff is approved in a manner so that interest of both the consumers and the Utility are balanced. Taking the above into consideration, the Commission has dealt with this issue related to determination of tariff and change in tariff structure in *Chapter 6: Tariff Principles and Design*.

2.2.2. *Delayed Payment Surcharge*

Stakeholder's Comment

The Delayed Payment Surcharge of 2% is on the higher side and should be reduced to 1% as in the neighboring States like Gujarat and Rajasthan.

Petitioner's Response

The interest/Delayed Payment Surcharge levied on the electric bills is as per the Tariff Order issued by the Commission. It is a useful mechanism to ensure timely payment of bills and therefore the Department would like to request the Commission not to reduce the Delayed Payment Surcharge from the present level of 2%.

Commission's View

Delayed Payment Surcharge is being levied as a penalty/deterrent to discourage the consumers from delaying/defaulting in payment of the bill towards the energy consumption. Further, timely payment of bill leads to improved cash flows thus enabling the Petitioner to provide better services at reasonable charges. Thus, the Commission finds it appropriate to retain the delayed payment surcharge at the present level.

2.2.3. *Rebate on timely payment of bills*

Stakeholder's Comment

Rebate may be provided to the consumers for timely payment of the electricity bills.

Petitioner's Response

As per the Tariff Schedule approved by the Commission, there is a provision of Advance Payment Rebate and Prompt Payment Rebate, which is being given to the consumers of Daman and Diu by the Department.

Commission's View

The Commission has already made a provision for Advance Payment Rebate and Prompt Payment Rebate in the Tariff Schedule. The Commission directs the Petitioner to ensure that the Consumers are passed on the rebate accordingly.

2.2.4. *Load Limit for LT Category*

Stakeholder's Comment

The load limit for the LT Industry category may be increased from 99 HP to 150 HP as the existing slab often results in higher fixed charges that are not justifiable for small local industries like Ice factories for preservation etc.

Petitioner's Response

The Commission is empowered to take any decision in the matter of determination of tariff and its terms and conditions.

Commission's View

As per the Supply Code Regulations, 2018, the LT category shall include consumers with load upto 100 kVA. Applying a standard power factor of 0.9 for conversion from kVA to kW as per the Supply Code Regulations, 2018 and the factor of 0.746 for conversion from HP to kW as also mentioned in the Regulations, the load limit for LT category comes to 120 HP, which has been changed as such in the Terms and conditions of Tariff.

2.2.5. Solar Plant Benefit

Stakeholder's Comment:

The solar plant installed at Diu is functioning well. The domestic consumers of Diu should get its benefit by reduction in tariff.

Petitioner's Response:

The energy generated from the solar plant is directly fed into the grid and the energy is supplied to all the consumers, hence, the tariff of the Domestic consumers cannot be reduced due to solar generation.

Commission's View

The energy generated from Solar and other renewable energy sources has some cost and is not free. Further, the benefit of energy generated through renewable sources is being passed on to all the consumers of DD. Further, the Commission has dealt with matters related to change in the tariff structure in the Chapter 'Tariff Principles and Design' of this Order.

2.2.6. Issuance of bill for closed premises

Stakeholder's Comment:

ED-DD continuously issues bills even if the premises are closed for a long time and finally the bill amount becomes huge due to high interest rate. The department is requested to stop the billing if the house remains closed for more than 6 months.

Petitioner's Response:

The Department has made a provision for the consumers to intimate the Department regarding closure of the premises for a long period of time. In such case the Department shall charge only the minimum charges from the consumers and they will not be liable to pay any huge bill amount due to high interest rate.

Commission's View:

Stakeholders may inform the Petitioner in advance regarding the closure of premises for long periods of time. The issue of closed premises/non-accessibility of meter has been elaborated in regulation 6.23 to 6.29 of Supply Code, 2018. So, the petitioner is directed to follow the procedure.

2.2.7. *Reduction in tariff for fishing activities*

Stakeholder's View

In order to promote fishing activities, the tariff of related activities is required to be reduced. The stakeholder also submitted that some fishing related activities should be considered as agricultural activities.

Petitioner's Response

The fishing activity majorly consists of the ice factory which comes mostly under the LT industry category and the tariff rates applicable to them are at par with any other LT industry in Daman & Diu. The agriculture category consists of all consumer which are involved in the process of producing food, fiber and other desired products by the cultivation of certain plants and raising of domesticated animals. However, Ice Factory is a complete installation for the production and storage of ice and requires the associated refrigeration machinery, harvesting and storage equipment, and the building. Hence, levying the agriculture tariff on the ice factory would result in discrimination on the part of other LT industries and may not go down well with the other consumers. Also, the categorization of the consumers in the various consumer categories is the sole prerogative of the Commission.

Commission's View

The Commission in last tariff order had already allowed reduced Fixed Charges by 25% in the lean season from May to August for Fishery Industry. For determining the tariff for various categories of consumers the Commission is guided by the provisions of Section 61 of Electricity Act, 2003 and the Tariff Policy notified by Government of India and JERC Tariff Regulations 2018 and amendments issued therein. The fishing activities are not agriculture related activities and hence the agriculture tariff cannot be applied for fishing activities.

2.2.8. *Tariff benefits to the Hotel Industry*

Stakeholder's View

For the promotion of tourism, more benefits should be extended to the Hotel industry

Petitioner's Response

Hotel industry is billed under the commercial category and the tariff of the same is already quite low, the Commission is requested not to further reduce the tariff of the Commercial category.

Commission's View

For determining the tariff for various categories of consumers the Commission is guided by the provisions of Section 61 of Electricity Act, 2003, the Tariff Policy notified by Government of India and JERC Tariff Regulations 2018 and amendments issued therein. The Commission determines the category-wise tariff considering the average cost of supply and the Commission is gradually trying to reduce the Cross Subsidy as discussed in detail in the Chapter 'Tariff Principles and Design' of this Order.

2.2.9. *Promotion of Solar Power*

Stakeholder's View

Solar Power should be produced in Daman & Diu and benefits of reduction in cost of power should be transferred to consumers.

Petitioner's Response

The Petitioner has noted the observations regarding solar power and would like to submit that the department is installing solar plants in Daman and Diu to meet the Renewable Purchase Obligation (RPO) as per the JERC (Procurement of Renewable Energy) Regulations 2010.

Commission's View

The Commission notes the efforts of the Petitioner in terms of development of renewable energy sources and directs the petitioner to ensure compliance of Renewable Purchase Obligation (RPO) as per the JERC (Procurement of Renewable Energy) Regulations 2010. However, it is observed that the Petitioner has still not fulfilled its total RPO till FY 2018-19. Therefore, the Petitioner is directed to comply with RPO target as approved by the Commission in this order for FY 2019-20 and FY 2020-21 as far as possible with physical RE power.

2.2.10. Free Electricity

Stakeholders' Comment

The Department should provide free electricity to BPL, Farmers and up to 200 units for Domestic consumers as domestic consumption comprises only 2% of total consumption.

Petitioner's Response

The Department is not in favor to supply free electricity to any of the consumers as the same will result in additional burden on the remaining consumers.

Commission's View

For determining the tariff for various categories of consumers the Commission is guided by the provisions of Section 61 of Electricity Act, 2003, the Tariff Policy notified by Government of India and JERC Tariff Regulations 2018 and amendments issued therein. The Commission determines the category-wise tariff considering the average cost of supply and the Commission is gradually trying to reduce the Cross Subsidy as discussed in detail in the Chapter 'Tariff Principles and Design' of this Order. So any decision to approve the free electricity to BPL, farmers and Domestic category of consumers, will directly impact the tariff for other categories of consumers.

2.2.11. Solar Rooftop

Stakeholders' Comment

Installation of solar roof top for 5% of contract demand should be only for upcoming HT connections and not for existing HT consumers

Petitioner's Response

The EDDD has noted the observations. However, the installation of solar rooftop for 5% of the contract demand has been made mandatory for all the HT consumers of DD as per provisions the Solar Policy of Daman & Diu.

Commission's View

As per Solar Policy of Daman & Diu the installation of solar rooftop for 5% of the contract demand has been made mandatory for all the HT consumers and hence this issue does not fall under the purview of the Commission.

2.2.12. FPPCA

Stakeholders' Comment

FPPCA should not be levied for Domestic consumers

Petitioner's Response

The EDDD has noted the observations. However, the Hon'ble Commission is empowered to take any decision in this regard.

Commission's View

The FPPCA mechanism is for recovery of increase in power purchase cost. The stakeholder should understand that if FPPCA is not levied to any particular category of consumers then it will adversely impact the other category of consumers. Further FPPCA is already lower for domestic consumers as compared to other Industrial and Commercial consumers.

2.2.13. kVAh Based Tariff and Power Factor Incentive

Stakeholders' Comment

Some of the stakeholders raised the issue about the kVAh based tariff and submitted that if Power Purchase is done based on kWh, why the consumers are being billed on kVAh basis. Further, the stakeholder submitted that in view of kVAh based tariff, consumers are not getting power factor incentive.

Petitioner's Response

The EDDD has noted the observations. However, it is submitted that kVAh billing is a good mechanism to persuade the consumers in maintaining a good power factor which is an essential parameter in reduction of losses. Hence, the EDDD would like to submit to the Hon'ble Commission that the kVAh billing be continued to be levied in the future years.

Commission's View

The Commission in its Tariff Order dated May 20, 2019 approved kVAh based tariff for LT Industry, HT Industry and HT Commercial categories. In this regard the Commission would like to emphasize that the kVAh based billing has an inbuilt incentive/penalty mechanism and therefore separate mechanism for the PF incentive/penalty is no more required. It encourages the consumers to improve the power factor by way of reactive power compensation at the load point itself. Further, with better power factor, the line loading shall be lower for the same kW requirement and it helps in improving power supply quality.

2.2.14. Proper Assessment of Bills

Stakeholders' Comment

In case the BPL consumers are making payment of bills, their connection should not be disconnected as the bills are not raised based on proper assessment.

Petitioner's Response

The EDDD has noted the observations. However, the disconnection of consumer connection is as per the provisions of the Supply Code and the same have to be followed by the Department.

Commission's View

The provisions related to the disconnection of consumer connection are governed by Supply Code Regulations, 2018. In case if the bills raised by the EDDD are not appropriate, consumers can register their complaint with the EDDD for resolution of the matter.

2.2.15. Reduction in tariff for Floor Mills

Stakeholders' Comment

The tariff for Floor Mills is as per Industrial Tariff, which is very high. Since floor mill is a small-scale industry the tariff should be lower.

Petitioner's Response

The EDDD has noted the observations. The Department is not in favor to supply free electricity to any of the consumers as the same will result in additional burden on the remaining consumers.

Commission's View

For determining the tariff for various categories of consumers the Commission is guided by the provisions of Section 61 of Electricity Act, 2003 and the Tariff Policy notified by Government of India and JERC Tariff Regulations and amendments issued therein. The Commission determines the category-wise tariff considering the average cost of supply and the Commission is gradually trying to reduce the Cross Subsidy as discussed in detail in the Chapter 'Tariff Principles and Design' of this Order.

2.2.16. Pre-paid Meters

Stakeholders' Comment

Stakeholder requested for replacement of current meters with pre-paid meters for domestic category of consumers, specifically for those consumers who have houses in Daman & Diu but stay somewhere else (Outside DD) for work purpose.

Petitioner's Response

The EDDD has noted the observations. The Department has already prepared scheme for smart metering and the same has been submitted to PFC for approval.

Commission's View

The Commission appreciates the concern of the Stakeholder and informs that the replacement of current electric meters with pre-paid meters for domestic category of consumers are already in process. Scheme regarding the same was already prepared and submitted to Power Finance Corporation for approval as confirmed by the Electricity Department of Daman & Diu.

2.2.17. Billing Cycle

Stakeholders' Comment

Daman Industry Association (DIA) submitted that the industry consumers should get relaxation in payment of bills up to 2 months before disconnection since the consumers have already paid the security deposit.

Petitioner's Response

The EDDD has noted the observations. However, it is submitted that the present billing cycle followed by the Department itself gives a time period of 2 months before disconnection.

Commission's View

As per current billing cycle and rules followed by the Electricity Department of Daman & Diu, the Department already provides two-month time before disconnection for any category of consumer and hence no further relaxation is required.

2.2.18. Billing Demand

Stakeholders' Comment

Billing Demand should be reduced to 75% of Contract Demand instead of 85% of Contract Demand.

Petitioner's Response

The EDDD has noted the observations. The Department is not in favor to reduce the billing demand. However, the Hon'ble Commission is empowered to take any decision in this regard.

Commission's View

The Commission is of the view that ideally the consumer should specify its Contract Demand considering the actual Demand as the same will help the Utility for better planning. Accordingly, the provision i.e. the billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher is appropriate and does not need any modification.

3. Chapter 3: True-up for FY 2018-19

3.1. Background

The Tariff Order determining the True-up for FY 2015-16, Annual Performance Review of FY 2016-17 and Aggregate Revenue Requirement and tariff for FY 2017-18 was issued on May 29, 2017 (hereinafter referred to as the "MYT Order" for the purposes of True-up of FY 2018-19). The Tariff Order determining the True-up for FY 2016-17, Annual Performance review of FY 2017-18 and Aggregate Revenue Requirement and tariff for FY 2018-19 was issued on March 13, 2018 (hereinafter referred to as the "ARR Order" for the purposes of True-up of FY 2018-19). The Tariff Order determining the True-up for FY 2017-18, Annual Performance review of FY 2018-19 and Aggregate Revenue Requirement and tariff for FY 2019-20 was issued on May 20, 2019 (hereinafter referred to as the "APR Order" for the purposes of True-up of FY 2018-19).

The True-up for FY 2018-19 has to be carried out in accordance to Regulation 8 of the MYT Regulations, 2014, stated as follows:

"(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 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 indicate the manner in which the licensee proposes to meet the cost for such additional supply of power."

3.2. Approach for the True-Up of FY 2018-19

The petitioner has submitted audited accounts based on audit conducted by statutory auditor M/s Prakash Modi & Associates. The Commission in this Chapter now carries out the True-up of FY 2018-19, the third year of the first Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2018-19 as 2,433.91 MU as against approved energy sales quantum of 2,488.39 MU in the APR Order.

Commission's Analysis

Regulation 9.1 of the MYT Regulations, 2014 provides:

"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 Commission had approved the energy sales of 2,488.39 MU in the APR Order, against which actual energy sales of 2,433.91 MU have been submitted by the Petitioner now. The quantum of energy sales was verified from Energy Audit Report and billing data submitted by the Petitioner and the same were found to be in order.

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

Table 9: Energy Sales trued-up by the Commission (MU)

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	135.38	134.47	134.47
2	Low Income Group	0.03	0	0
3	Commercial	53.97	53.27	53.27
4	Agriculture	4.96	4.95	4.95
5	LT Industry	200.99	197.86	197.86
6	HT/EHT Industry	2,080.52	2,031.44	2,031.44
7	Public Lighting	8.51	8.26	8.26
8	Public Water Works	4.03	3.68	3.68
9	Temp. Supply	-	0	0
10	**Total**	**2,488.39**	**2,433.91**	**2,433.91**

The Commission approves 2,433.91 MU as energy sales in the true-up of FY 2018-19.

3.4. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted that there was no open access sales and purchase during the FY 2018-19.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner stipulates the nil Open Access Sales and Purchase for FY 2018-19. Accordingly, the Commission has approved the same.

3.5. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State transmission loss of 2.71%, as against the Commission's approved value of 3.66% in the APR of FY 2018-19.

Commission's Analysis

The Inter-State transmission loss submitted by the Petitioner for FY 2018-19 is 2.71%. It has been observed that the same has been computed on power purchase from energy exchange also. The Commission has determined the energy requirement from tied-up sources (2,049.57 MU) in Energy Balance approved in the *Section 3.8:*

Energy Balance of this Order. The energy available from tied-up sources (2,114.30 MU) has been considered as actual energy purchased as approved in *Section 3.6: Power Purchase Quantum and Cost* of this Order. The difference between the two has been considered as the Inter-State transmission loss.

The following table provides the Inter-State transmission loss as approved in the APR Order, the Petitioner's submission and now approved by the Commission:

Table 10: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State transmission loss	3.66%	2.71%	3.06%

The Commission approves the Inter-State transmission loss at 3.06% in the true-up of FY 2018-19.

3.6. Intra-State Distribution Loss

Petitioner's submission

Intra-State distribution loss for FY 2018-19 has been arrived at 6.19% as compared to 8.30% approved by the Commission in the APR Order.

The Petitioner has submitted that it has been constantly endeavoring to reduce the T&D losses. It has arrived at the distribution loss based on actual sales data.

Commission's Analysis

As per the Energy Audit Report submitted by the Petitioner, the Intra-State distribution loss is 6.19%, which is also the Petitioner's submission. Accordingly, the Commission has considered the Intra-State distribution loss as per the Energy Audit Report. Since, the Petitioner has been able to over-achieve the Intra-State distribution loss target of 8.30% for the year, the incentive for the same has been provided to the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in *"Section 3.21: Incentive/Disincentive towards over/under-achievement of norms of distribution losses*" of this Order.

The following table provides the Intra-State distribution loss approved in the APR of FY 2018-19, the Petitioner's submission and as approved by the Commission now:

Table 11: Intra-State distribution loss approved by the Commission (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State distribution loss	8.30%	6.19%	6.19%

The Commission approves Intra-State distribution loss at 6.19% in the true-up of FY 2018-19.

3.7. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner meets its power requirement from allocations from central generating stations like NTPC, NSPCL, NPCIL and other generating stations such as RGGPL including bilateral agreement and banking arrangements. The allocation from CGS consists of a fixed share of allocation for a year, and the Govt. of India changes the variable share of allocation from the unallocated quota, time to time. Since, during the peak summer seasons the allocation of power from various sources is inadequate, therefore the Petitioner procures power from short–term sources i.e. Power Exchange, UI, Banking etc.

The Petitioner has submitted that against the power purchase cost of INR 1,082.46 Cr approved by the Commission in the APR Order it has incurred a cost of INR 1,028.43 Cr (inclusive of cost incurred towards meeting the transmission charges, Renewable Purchase Obligation and UI, but excluding the revenue from sale of surplus power).

The EDDD purchased 273.57 MUs through the energy exchange at the cost of INR 104.63 Crore to meet its energy demand during FY 2018-19. The EDDD has requested to allow the UI purchase during FY 2018-19 without any penalty as the EDDD has already incurred that amount. The total UI purchase is 262.09 MU at the cost of INR 72.09 Cr. Further, the EDDD generated 19.02 MUs of solar energy from its rooftop and ground mounted solar plants during the FY 2018-19 to meet its solar obligation. Further, the EDDD procured 26,800 solar certificates to meet the solar obligation.

The power purchase quantum and cost for FY 2018-19 has been shown in the table below:

Table 12: Power Purchase quantum and cost submitted by the Petitioner

Particulars	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Rebate	Credit for URS	All Charges Total (INR Cr)	Per Unit Cost
NTPC Stations								
KSTPP	345.75	23.15	47.70	-0.14	0.00	0.00	70.71	2.05
KSTPP-III	43.10	5.52	5.98	-0.01	0.00	0.00	11.49	2.67
VSTPP-I	92.51	7.55	15.02	0.55	0.00	0.00	23.12	2.50
VSTPP-II	65.18	4.28	10.01	0.50	0.00	0.00	14.79	2.27
VSTPP- III	83.05	7.95	12.88	0.46	0.00	0.00	21.29	2.56
VSTPP- IV	94.66	13.32	14.78	0.66	0.00	0.00	28.75	3.04
VSTPP- V	59.64	9.37	9.26	0.34	0.00	0.00	18.97	3.18
KAWAS	130.09	20.22	35.69	0.37	0.00	0.00	56.28	4.33
JGPP	97.47	27.04	25.66	2.52	0.00	0.00	55.22	5.67
Sipat-I	182.84	22.14	24.29	0.25	0.00	0.00	46.68	2.55
Sipat-II	71.08	8.26	9.75	-0.06	0.00	0.00	17.95	2.52
MSTPS-I	87.59	18.01	25.92	0.52	0.00	0.00	44.45	5.07
MOUDA-II	126.31	18.94	36.11	0.07	0.00	0.00	55.12	4.36
KHSTPP-II	14.32	1.50	3.10	-0.01	0.00	0.00	4.60	3.21
SOLAPUR	45.67	20.38	18.08	-0.06	0.00	0.00	38.40	8.41
LARA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADARWARA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**1,539.26**	**207.65**	**294.21**	**5.95**	**13.02**	**(0.13)**	**494.65**	**3.21**
NSPCL Bhilai								
Bhilai Unit I & II	448.41	78.80	102.89	(2.61)	0.00	0.00	179.07	3.99
Subtotal	**448.41**	**78.80**	**102.89**	**(2.61)**	**0.00**	**0.00**	**179.07**	**3.99**
NPCIL								
KAPP &KAPS	15.65	0.00	3.25	0.00	0.00	0.00	3.25	2.08
TAPP 3&4	86.41	0.00	26.89	0.00	0.00	0.00	26.89	3.11
KAPPS (III & IV)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**102.05**	**0.00**	**30.14**	**0.00**	**0.00**	**0.00**	**30.14**	**2.95**
Others								
Ratnagiri	24.57	3.39	9.59	0.00	0.00	0.00	12.98	5.28
Subtotal	**24.57**	**3.39**	**9.59**	**0.00**	**0.00**	**0.00**	**12.98**	**5.28**
Power purchase from Other Sources								
Power purchase from Indian E. Exchange	273.57	0.00	105.93	0.20	1.50	0.00	104.63	3.82
UI	262.09	0.00	72.09	0.00	0.00	0.00	72.09	2.75
Solar	19.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Solar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar REC	0.00	0.00	5.25	0.00	0.00	0.00	5.25	0.00
Non-Solar REC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**554.68**	**0.00**	**183.27**	**0.20**	**1.50**	**0.00**	**181.97**	**3.28**
Misc. Arrears								
NTPC Rebate								
Gross Power Purchase	**2,668.98**	**289.83**	**620.11**	**3.53**	**13.02**	**-0.13**	**900.33**	**3.37**
Total Power Purchase	**2,668.98**	**289.83**	**620.11**	**3.53**	**13.02**	**-0.13**	**900.33**	**3.37**
PGCIL CHARGES							128.77	

Particulars	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Rebate	Credit for URS	All Charges Total (INR Cr)	Per Unit Cost
WRLDC							0.23	
MSETCL							0.58	
REC							0.02	
GETCO							0.00	
PGVCL							0.00	
POSCO							0.00	
Grand Total of Charges	**2,668.98**	**289.83**	**620.11**	**3.53**	**13.02**	**-0.13**	**1,028.43**	**3.85**

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;"

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, and IPPs. It has submitted the overall power purchase cost as INR 1,028.43 Cr, is inclusive of transmission cost and REC costs.

On examining the power purchase quantum and cost as per the monthly and station-wise bills submitted by the Petitioner for each source, the Commission found that the power purchase cost as per audited accounts amount to INR 1,028.43 Cr. The Commission has relied on the audited accounts and actual bills of the Petitioner for the purpose of true-up of power purchase cost. The Petitioner has not made any submission with regard to cost of own generation of Solar power of which 19.02 MU have been stated to be generated. Therefore, the Commission has been constrained not to consider any cost towards the same. The Commission directs the Petitioner to submit the tariff petition for determination of tariff of own generation of Solar Power.

The Petitioner has submitted that the total power purchase cost is inclusive of the cost incurred towards compliance of the Renewable Purchase Obligation (RPO) target for FY 2018-19. The compliance status of RPO has been discussed in detail in the subsequent section. The Commission has considered the total cost of INR 5.25 Crore towards purchase of REC by the Petitioner towards compliance of RPO target in the total power purchase cost approved for FY 2018-19. The Petitioner has submitted that it has received a rebate from NTPC on account of income tax and supervision charges and considered the same as the part of power purchase cost.

The following table provides the power purchase quantum and cost as approved by the Commission in true-up of FY 2018-19:

Table 13: Power Purchase quantum and cost as approved by the Commission for FY 2018-19

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Rebate	Credit for URS	All Charges Total (INR Cr)	Per Unit Cost
NTPC Stations								
KSTPP	345.75	23.15	47.70	-0.14	0.00	0.00	70.71	2.05
KSTPP-III	43.10	5.52	5.98	-0.01	0.00	0.00	11.49	2.67
VSTPP-I	92.51	7.55	15.02	0.55	0.00	0.00	23.12	2.50

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Other Charges (INR Cr)	Rebate	Credit for URS	All Charges Total (INR Cr)	Per Unit Cost
VSTPP-II	65.18	4.28	10.01	0.50	0.00	0.00	14.79	2.27
VSTPP- III	83.05	7.95	12.88	0.46	0.00	0.00	21.29	2.56
VSTPP- IV	94.66	13.32	14.78	0.66	0.00	0.00	28.75	3.04
VSTPP- V	59.64	9.37	9.26	0.34	0.00	0.00	18.97	3.18
KAWAS	130.09	20.22	35.69	0.37	0.00	0.00	56.28	4.33
JGPP	97.47	27.04	25.66	2.52	0.00	0.00	55.22	5.67
Sipat-I	182.84	22.14	24.29	0.25	0.00	0.00	46.68	2.55
Sipat-II	71.08	8.26	9.75	-0.06	0.00	0.00	17.95	2.52
MSTPS-I	87.59	18.01	25.92	0.52	0.00	0.00	44.45	5.07
MOUDA-II	126.31	18.94	36.11	0.07	0.00	0.00	55.12	4.36
KHSTPP-II	14.32	1.50	3.10	-0.01	0.00	0.00	4.60	3.21
SOLAPUR	45.67	20.38	18.08	-0.06	0.00	0.00	38.40	8.41
LARA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADARWARA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**1,539.26**	**207.65**	**294.21**	**5.95**	**13.02**	**-0.13**	**494.65**	**3.21**
NSPCL Bhilai								
Bhilai Unit I & II	448.41	78.80	102.89	(2.61)	0.00	0.00	179.07	3.99
Subtotal	**448.41**	**78.80**	**102.89**	**(2.61)**	**0.00**	**0.00**	**179.07**	**3.99**
NPCIL								
KAPP &KAPS	15.65	0.00	3.25	0.00	0.00	0.00	3.25	2.08
TAPP 3&4	86.41	0.00	26.89	0.00	0.00	0.00	26.89	3.11
KAPPS (III & IV)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**102.05**	**0.00**	**30.14**	**0.00**	**0.00**	**0.00**	**30.14**	**2.95**
Others								
Ratnagiri	24.57	3.39	9.59	0.00	0.00	0.00	12.98	5.28
Subtotal	**24.57**	**3.39**	**9.59**	**0.00**	**0.00**	**0.00**	**12.98**	**5.28**
Power purchase from Other Sources								
Power purchase from Indian E. Exchange	273.57	0.00	105.93	0.20	1.50	0.00	104.63	3.82
UI	262.09	0.00	72.09	0.00	0.00	0.00	72.09	2.75
Solar (Own generation)*	19.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Solar*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Solar REC*	0.00	0.00	0.00	0.00	0.00	0.00	5.25	0.00
Non-Solar REC*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**554.68**	**0.00**	**178.02**	**0.20**	**1.50**	**0.00**	**176.72**	**3.19**
Total Power Purchase	**2,668.98**	**289.83**	**614.86**	**3.53**	**13.02**	**-0.13**	**893.57**	**3.35**
PGCIL CHARGES							128.77	
WRLDC							0.23	
MSETCL							0.58	
REC							0.02	
GETCO							0.00	
PGVCL							0.00	
POSCO							0.00	
Grand Total of Charges	**2,668.98**	**289.83**	**614.86**	**3.53**	**13.02**	**-0.13**	**1,028.43**	**3.83**

* Cost for RPO approved in Section 3.7 has been included.

The Commission approves power purchase quantum of 2,668.98 MU (including own Solar generation) and cost of INR 1,028.43 Cr in the true-up of FY 2018-19.

3.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

It has procured 19.02 MUs from its own Solar generation and 26.80 MUs of the Solar RECs from the exchange towards the RPO compliance.

Commission's Analysis

As per Regulation 1 (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 August 22, 2016 and revised the RPO targets, according to which the Petitioner had to purchase 9.00% (Solar-3.60% and Non-Solar-5.40%) of its total consumption (excluding hydro) from renewable sources for FY 2018-19.

For FY 2018-19, the Petitioner had a standalone target of renewable procurement of 219.05 MU comprising of 87.62 MU Solar and 131.43 MU Non-Solar. Against the target, the Petitioner has generated 19.02 MU of physical Solar power and 26.80 MU of Solar RECs.

Based on the above, the Commission has computed the cumulative RPO compliance at the end of FY 2018-19 as shown in the following table:

Table 14: Compliance status of Renewable Purchase Obligation (RPO)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY19
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%	2.50%	3.60%
2	Non-Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%	4.20%	5.40%
	Total Target	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**	**6.70%**	**9.00%**
3	Sales Within UT	1,655.20	1,771.17	1,862.95	1,754.08	1,621.72	1,691.98	1,757.11	2,101.22	2,433.91
	RPO Target									
4	Solar	4.14	5.31	7.45	7.02	9.73	14.38	28.99	52.53	87.62
5	Non-Solar	12.41	30.11	48.44	45.61	43.79	45.68	56.23	88.25	131.43
	Total RPO Target	**16.55**	**35.42**	**55.89**	**52.62**	**53.52**	**60.07**	**85.22**	**140.78**	**219.05**
	RPO Compliance (Actual Purchase)									
6	Solar	0.00	0.00	0.00	0.20	0.40	4.42	14.48	18.63	19.02
7	Non-Solar	0.00	0.00	0.00	0.00	0.00	7.13	24.81	0.00	0.00
	Total RPO Compliance (Actual Purchase)	**0.00**	**0.00**	**0.00**	**0.20**	**0.40**	**11.55**	**39.29**	**18.63**	**19.02**
	RPO Compliance (REC Certificate Purchase)									
8	Solar	0.00	0.00	0.00	0.00	0.00	57.15	0.00	0.00	26.80
9	Non-Solar	0.00	0.75	4.70	13.20	79.73	108.23	13.33	85.01	0.00
	Total RPO Compliance (REC Certificate)	**0.00**	**0.75**	**4.70**	**13.20**	**79.73**	**165.38**	**13.33**	**85.01**	**26.80**
	RPO Compliance (REC+Actual)									
10	Solar	0.00	0.00	0.00	0.20	0.40	61.57	14.48	18.63	45.82
11	Non-Solar	0.00	0.75	4.70	13.20	79.73	115.36	38.14	85.01	0.00
	Total RPO Compliance	**0.00**	**0.75**	**4.70**	**13.40**	**80.13**	**176.93**	**52.62**	**103.64**	**45.82**

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY19
	Cumulative Requirement till current year									
12	Solar	4.14	9.45	16.90	23.92	33.65	48.03	77.02	129.55	217.18
13	Non-Solar	12.41	42.52	90.96	136.57	180.35	226.04	282.26	370.52	501.95
	Total	**16.55**	**51.98**	**107.86**	**160.49**	**214.00**	**274.07**	**359.29**	**500.07**	**719.12**
	Cumulative Compliance till current year									
14	Solar	0.00	0.00	0.00	0.20	0.60	62.17	62.51	81.13	126.96
15	Non-Solar	0.00	0.75	5.45	18.65	98.38	213.74	251.88	338.87	336.89
	Total	**0.00**	**0.75**	**5.45**	**18.85**	**98.98**	**275.91**	**314.39**	**418.03**	**463.85**
	Cumulative Shortfall till current year									
16	Solar	4.14	9.45	16.90	23.72	33.05	-14.14	14.51	48.41	90.21
17	Non-Solar	12.41	41.77	85.51	117.92	81.97	12.30	30.38	33.63	165.06
	Total	**16.55**	**51.23**	**102.41**	**141.64**	**115.02**	**-1.84**	**44.90**	**82.04**	**255.27**

As mentioned above, the Petitioner has failed to cover entire RPO shortfall till FY 2018-19 by March 31, 2019. The Commission notes that there is a net shortfall in RPO compliance till FY 2018-19 of 255.27 MU (Solar : 90.21 MU and Non-Solar: 165.06 MU). The following table provides the cost towards compliance of RPO approved in FY 2018-19.

Table 15: Cost towards compliance of Renewable Purchase Obligation (INR Crore)

S. No.	Description	RPO (MU)	Total Cost (INR Cr)
1	Solar Purchase (Own Generation)	19.02	0.00
2	Solar REC	26.80	5.25
3	Non-Solar Purchase	0.00	0.00
4	Non-Solar REC	0.00	0.00
5	**Total**	**45.82**	**5.25**

The Commission approves INR 5.25 Cr towards compliance of RPO in the true-up of FY 2018-19. The same has been included in Power Purchase Cost.

3.9. Energy Balance

Petitioner's submission

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

Table 16: Energy requirement submitted by the Petitioner (MU)

S. No.	Particulars	Formulae	Petitioner's Submission
(a)	Retail Sales		2,433.91
(b)	Open Access Sales		0.00
(c)	Less: Energy Savings		0.00
(d)	**Total Sales**	d = a+b-c	**2,433.91**
(e)	Distribution Loss	e = g-d	160.66
(f)	Distribution Loss (%)	f=e/g	6.19%
(g)	**Energy Required at Periphery**	g = d+e	**2,594.57**
(h)	Sale to common pool consumer/UI Sale		9.73
(i)	Own generation		19.02
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2,585.28**
(k)	Less: Energy Purchased through UI at Periphery		262.09
(l)	Less: Open Access Purchase at Periphery		0.00

S. No.	Particulars	Formulae	Petitioner's Submission
(m)	Less: Energy Purchased through Renewable Sources		0.00
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2,323.19**
(o)	Inter-state loss	o=q-n	64.67
(p)	Inter-state loss (%)	p = o/q	2.71%
(q)	**Energy requirement at state periphery from generator end**	q = n+o	**2,387.87**
(r)	**Total Energy requirement from tied up sources & UI at generator end**	r=q+k+i+m	**2,668.98**
(s)	**Total Energy requirement in UT including Open Access**	s=r+l	**2,668.98**

Commission's Analysis

The information submitted by the Petitioner on power purchase quantum, UI over/under drawl, IEX/ Bilateral purchase has been studied along with the Energy Audit Report and accordingly the energy balance has been derived for FY 2018-19.

The following table provides the energy balance submitted by the Petitioner and now approved by the Commission.

Table 17: Energy balance approved by the Commission for FY 2018-19 (MU)

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved
(a)	Energy sales within the State/UT		2,433.91	2,433.91
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales within the State/UT**	d=a+b-c	**2,433.91**	**2,433.91**
	Distribution losses			
(e)	In %	e=f/g	6.19%	6.19%
(f)	In MU	f=g-d	160.66	160.60
(g)	**Energy required at State Periphery**	g=d+f	**2,594.57**	**2,594.52**
(h)	Add: Sales in Unscheduled Interchange		9.73	9.73
(i)	Add: Sales in Power Exchanges		0.00	0.00
(j)	Less: Own Generation		19.02	19.02
(k)	Less: Purchase under UI		262.09	262.09
(l)	Less: Purchase from Exchange		0.00	273.57
(m)	Less: Open Access Purchase		0.00	0.00
(n)	**Total energy requirement at State Periphery from tied-up Sources**	n=g+h+i-j-k-l-m	**2,323.20**	**2,049.57**
	Transmission losses			
(o)	In %	o=p/q	2.71%	3.06%
(p)	In MU	p=q-n	64.67	64.73
(q)	**Total energy requirement from tied-up sources at generator end**	q=n+p	**2,387.87**	**2,114.30**
(r)	**Total requirement from Tied-up sources at generator end & UI/Traders/Banking/within State**	r=q+j+k+l+m	**2,668.98**	**2,668.98**

3.10. 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). The MYT Regulations, 2014 consider the variation of O&M Expenses to be controllable. Regulation 9.2 of the MYT Regulation, 2014 states the following:

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

3.10.1. Employee Expenses

Petitioner's submission

Employee expenses of INR 16.37 Cr have been incurred against approved expenses of INR 13.83 Cr including INR 0.87 Cr against impact of 7th Pay Commission in the APR Order. The employee expenses comprise of Salaries, Dearness allowance, Bonus, Terminal benefits in the form of Pension and Gratuity, Leave encashment and staff welfare expenses.

Commission's Analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during FY 2018-19 are reflected as INR 16.37 Cr. The Commission vide its deficiency note asked the Petitioner to submit the reasons for increase in employee expenses with respect to approved employee expenses. The Petitioner in its reply submitted that the Employee Cost for the FY 2018-19 as claimed in the true up petition is the actual cost incurred by the Department towards the salary of the employees of the Department and therefore requested to approve the Employee Cost for the FY 2018-19 as submitted in the Tariff Petition. The Petitioner has not submitted any specific reasons for increase in the employee expenses thereby not even attempting to justify the increase than the approved levels. Hence, the Commission is unable to accede to the request made to increase the employee expenses without proper justification.

The MYT Regulations, 2014 stipulate the variation in operation and maintenance expenditure to be a controllable factor. Thus, in accordance with the MYT Regulations, the Commission approves employee expenses as approved in the APR Order along with the impact of Seventh Pay Commission.

Table 18: Employee Expenses approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	12.96	16.37	12.96
2	Impact of 7th Pay Commission	0.87	0.00	0.87
3	Total Employee Expenses	13.83	16.37	13.83

The Commission approves Employee Expenses of INR 13.83 Cr in the true-up of FY 2018-19.

3.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 9.97 Cr as reflected in audited accounts against the approved expenses of INR 5.79 Cr in the APR Order. The Petitioner submitted that an increase in the A&G expenses can be attributed to the license fees paid to the JERC for INR 2.12 Crore and an amount of INR 1.09 Crore incurred towards celebration expenses during the FY 2018-19.

Commission's Analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. As per the audited accounts submitted by the Petitioner the A&G expenses for FY 2018-19 are reflected as INR 9.97 Cr. The Commission through the deficiency note asked the Petitioner to submit the details and write up on celebration expenses claimed by it in A&G expenses amounting to INR 1.09 Crore. The Petitioner in its reply submitted that the celebration expenses have increased during the FY 2018-19 as the Department had to incur expenses on illumination of various places during Independence Day, Raksha Bandhan and Diwali festival. Previously these expenses were borne by the Tourism Department. However, during the FY 2018-19, the Department had to bear the expenses and therefore the celebration expenses increased. The Petitioner requested the Commission to approve the celebration expenses of INR 1.09 Crore as claimed in the True up for the FY 2018-19.

The Commission approves the increase in A&G expenses to the extent of INR 2.12 Crore on account of increase in license fees. As regards the celebration expenses, the Commission is of view that increase in such expenses cannot be passed on to consumers as variation in the O&M expenses is controllable. These expenses are not justified. Celebratory illumination of various places is an anti-thesis to conservation of electricity. Moreover, these expenses do not benefit the general consumers. Accordingly, the A&G expenses approved by the Commission are as follows:

Table 19: A&G Expenses approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	5.79	9.97	7.91

The Commission approves the Administrative & General (A&G) expenses of INR 7.91 Cr in the true-up of FY 2018-19.

3.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of INR 16.23 Cr have been incurred against approved expenses of INR 17.30 Cr in the APR Order. R&M expenses are incurred towards day-to-day maintenance of the transmission and distribution network of the Petitioner and form an integral part of the Licensee's efforts towards providing reliable and quality power supply and reduction of losses in the system.

Commission's Analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same R&M Expenses as approved in the APR Order as variation in O&M expense is controllable.

Table 20: R&M Expenses approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	17.30	16.23	17.30

The Commission approves the Repair & Maintenance (R&M) expenses of INR 17.30 Cr in the true-up of FY 2018-19.

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

The following table provides the O&M expenses, approved by the Commission in the APR Order, Petitioners submission and O&M expenses now trued-up by the Commission.

Table 21: O&M Expenses approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	13.83	16.37	13.83
2	Administrative & General Expenses (A&G)	5.79	9.97	7.91
3	Repair & Maintenance Expenses	17.30	16.23	17.30
4	**Total Operation & Maintenance Expenses**	**36.92**	**42.57**	**39.04**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 39.04 Cr in the true-up of FY 2018-19.

3.11. Capital Expenditure and Capitalisation

Petitioner's submission

The actual capital expenditure incurred in FY 2018-19 was INR 48.00 Cr and capitalisation achieved during the year was INR 19.82 Cr, against the approved capital expenditure of INR 42.00 Cr and capitalization of INR 12.48 Cr in the APR Order.

Commission's Analysis

The Commission observes that the capitalisation achieved by the Petitioner is marginally higher than that approved by the Commission in the APR Order. The Commission through the deficiency note asked the Petitioner to submit the scheme wise details of the Capitalisation claimed by Petitioner amounting to Rs 19.82 Crore. The Petitioner in its reply submitted that the capitalization amounting to Rs. 19.82 Crore claimed in the true up petition pertains to various equipments like electric lines, solar equipment furniture and fixture, computers and printers etc. capitalised during the FY 2018-19 by the Department and the details of the assets capitalised during the FY 2018-19 have been provided in the fixed asset register submitted by the petitioner.

The Commission has examined the Fixed Asset Register (FAR) as submitted by the Petitioner and accordingly approves the capital expenditure and capitalisation as shown in the table below:

Table 22: Capital Expenditure and Capitalisation approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	42.00	48.00	48.00
2	Capitalisation	12.48	19.82	19.82

The Commission approves Capital Expenditure and Capitalisation of INR 48.00 Cr and INR 19.82 Cr respectively in the true-up of FY 2018-19.

3.12. Capital Structure

Petitioner's Submission

The entire capital deployment by the EDDD is through equity for FY 2018-19.

<u>Commission's Analysis</u>

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 normative loan. Regulation 24 of the MYT Regulations 2014 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."

In accordance with the MYT Regulations, 2014, the Commission has determined the capital structure for FY 2018-19. The opening Gross Fixed Assets for FY 2018-19 has been considered as closing Gross Fixed Assets approved in true-up of FY 2017-18 (net of value of Solar plants). Further the values of opening loan and equity has been considered as closing loan and equity approved in true-up of FY 2017-18. The loan and equity addition have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year.

Table 23: Funding Plan approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	12.48	19.82	19.82
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	8.74	13.87	13.87
5	Equity	3.74	5.95	5.95

Table 24: GFA addition approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	587.08	587.63	587.63
2	Addition during FY 2018-19	12.48	19.82	19.82
3	Adjustment/Retirement during FY 2018-19	-	-	-
4	Closing Gross Fixed Assets	599.56	607.45	607.45

Table 25: Normative Loan addition (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	160.70	160.70	160.70
2	Add: Normative Loan During the year	8.73	13.87	13.87
3	Less: Normative Repayment equivalent to Depreciation	30.47	30.33	30.99
4	Closing Normative Loan	138.96	144.24	143.58

Table 26: Normative Equity addition (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	78.23	78.23	78.23
2	Additions on account of new capitalisation	3.74	5.95	5.95
3	Closing Equity	81.98	84.18	84.18

3.13. Depreciation

Petitioner's submission

The Petitioner has submitted that for computation of depreciation, the opening GFA and actual addition during FY 2018-19 as per the annual accounts has been considered. Further, depreciation for the year has been considered based on the Fixed Asset Register prepared for FY 2018-19.

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 as provided in the table as follows:

Table 27: 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 2018-19. 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 up to 90% as reflected in the FAR of FY 2018-19 has been deducted from the opening GFA as approved in the previous section.

The revised GFA has then been considered and the deprecation 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 2018-19:

Table 28: Calculation of revised GFA (INR Crore)

Description	Opening GFA as per audited accounts	Less: Assets depreciated upto 90% till FY 2018-19	Revised Opening GFA	Addition/ Deletion during the year	Closing GFA
Plant & Machinery	524.87	0.00	524.87	17.93	542.80
Buildings	23.70	0.00	23.70	0.00	23.70
Vehicles	0.67	0.00	0.67	0.00	0.67
Furniture & Fixtures	2.62	0.00	2.62	0.20	2.82
Computers & Others	10.98	0.00	10.98	1.69	12.67
Land	24.79	0.00	24.79	0.00	24.79
Total	**587.63**	**0.00**	**587.63**	**19.82**	**607.45**

The following table provides the calculation of depreciation during the year FY 2018-19:

Table 29: Depreciation approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Closing GFA approved in the True-up of FY 2017-18	587.08	587.63	587.63
2	Revised Opening GFA for FY 2018-19	-	-	-
3	Less: Assets depreciated upto 90% till FY 2018-19	-	-	-
4	Opening Gross Fixed Assets for calculation of depreciation	587.08	587.63	587.63
5	Addition during FY	12.48	19.82	19.82
6	Adjustment/Retirement during FY	0.00	0.00	0.00
7	Closing Gross Fixed Assets	599.56	607.45	607.45
8	Average Gross Fixed Assets	593.32	597.54	597.54
9	Rate of Depreciation (%)	5.14%	5.08%	5.19%*
10	**Depreciation**	30.47	30.33	30.99

* The approved higher rate of depreciation is on the account of using the correct depreciation rate for Plant & Machinery, Vehicles and computers & others category

The Commission approves depreciation of INR 30.99 Cr in the true-up of FY 2018-19.

3.14. Interest on Loan

Petitioner's submission

The Petitioner has submitted the Interest on Loan on normative basis. The normative loan addition in FY 2018-19 has been computed as 70% of the capitalisation for FY 2018-19. The repayment of loans has been considered equal to the depreciation during FY 2018-19.

Further the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 13.45% on April 1, 2018.

Commission's Analysis

Regulation 24 of the MYT Regulations provides:

"

(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."*

The Commission has considered the values for opening loan and loan addition as approved in the *Section 3.11: Capital Structure* of this Order. Further, the repayment is considered the same as depreciation approved for the year. In line with past practice, the Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on April 1, 2018 (13.45%).

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

Table 30: Interest on Loan approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	160.70	160.70	160.70
2	Add: Normative Loan During the year	8.73	13.87	13.87
3	Less: Normative Repayment= Depreciation	30.47	30.33	30.99
4	Closing Normative Loan	138.96	144.24	143.59
5	Average Normative Loan	149.83	152.47	152.14
6	Rate of Interest (%)	13.45%	13.45%	13.45%
7	**Interest on Loan**	**20.15**	**20.51**	**20.47**

The Commission approves the Interest of Loan of INR 20.47 Cr in the true-up of FY 2018-19.

3.15. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the MYT Regulations 2014 and is computed on 30% of the capital base. The equity addition has been considered to the tune of 30% of assets capitalized during the year. The Petitioner has computed the Return on Equity at 16% on post tax basis.

Commission's Analysis

Regulation 27 of the MYT Regulations, 2014 provides:

"

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

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

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

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

The Commission has considered the values for opening equity and equity addition as approved in the *Section 3.11: Capital Structure* of this Order. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% post-tax basis. The following table provides the return on equity trued-up for FY 2018-19.

Table 31: RoE approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	78.23	78.23	78.23
2	Additions on account of new capitalisation	3.74	5.95	5.95
3	Closing Equity	81.98	84.18	84.18
4	Average Equity	80.10	81.20	81.20
5	Return on Equity (%)	16.00%	16.00%	16.00%
6	**Return on Equity**	**12.82**	**12.99**	**12.99**

The Commission approves a Return on Equity of INR 12.99 Cr in the true-up of FY 2018-19.

3.16. Interest on Security Deposits

Petitioner's submission

Payments of INR 4.08 Cr were released to the consumers towards interest on security deposits during FY 2018-19 against INR 4.24 Cr approved by the Commission in the APR Order.

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 Commission has considered the actual interest on security deposit disbursed to the consumers in their bills, as reflected in the audited accounts of FY 2018-19 for truing-up.

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

Table 32: Interest on Consumer Security Deposits approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**4.24**	**4.08**	**4.08**

The Commission approves interest on security deposit as INR 4.08 Cr in the true-up of FY 2018-19.

3.17. Interest on Working Capital

Petitioner's submission

The 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 has been computed considering the following parameters:

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The interest on working capital is computed at 9.30% (SBI base rate as on April 1, 2018 as has been shown in the table below:

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

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	156.57
2	Less: Power Purchase Cost for one month	85.70
3	Inventory Based on Annual Requirement for Previous FY for 2 months	2.66
4	Total Working Capital Requirement	73.53
5	Less: Security Deposit excluding BG/FDR	80.46
6	Net Working Capital	(6.93)
7	Rate of Interest (%)	9.30%
	Interest on Working Capital	**0.00**

<u>Commission's Analysis</u>

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

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

(i) Receivables of two months of billing

(ii) Less power purchase cost of one month

(iii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

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

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

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

With regards to the interest rate, the Petitioner has erroneously considered the SBI base rate as on April 1, 2018 as 9.30% instead of 8.70%. The Commission therefore has considered the correct SBI Base rate as on April 1, 2018 in line with the MYT Regulations, 2014, which is 8.70%.

The computation of Interest on Working Capital as shown in the table below:

Table 34: Interest on Working Capital approved by the Commission for FY 2018-19 (INR Crore)

S.No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	195.28	156.57	156.57
2	Less: Power Purchase Cost for one month	90.21	85.70	85.26

S.No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
3	Inventory Based on Annual Requirement for Previous FY for 2 months	2.46	2.66	2.66
4	Total Working Capital Requirement	107.54	73.53	73.97
5	Less: Security Deposit excluding BG/FDR	67.82	80.46	80.46
6	Net Working Capital	39.72	-6.93	-6.49
7	Rate of Interest (%)	8.70%	9.30%	8.70%
	Interest on Working Capital	**3.46**	**0.00**	**0.00**

As the net working capital works out to be negative, the Interest on Working Capital approved in the true-up of FY 2018-19 is Nil.

3.18. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's Analysis

Regulation 28 of the MYT Regulations, 2014, states the following:

"

(a) *Income Tax, if any, on the Licensed business of the Distribution Licensee shall be treated as expense and shall be recoverable from consumers through tariff. However, tax on any income other than that through its Licensed business shall not be a pass through, and it shall be payable by the Distribution Licensee itself.*

(b) *The income tax actually payable or paid shall be included in the ARR. The actual assessment of income tax should take into account benefits of tax holiday, and the credit for carry forward losses applicable as per the provisions of the Income Tax Act 1961 shall be passed on to the consumers.*

(c) *Tax on income, if any, liable to be paid shall be limited to tax on return on the equity component of capital employed. However, any tax liability on incentives due to improved performance shall not be considered."*

As the Regulation above stipulates that the income tax shall be approved as per actuals, the Commission considers the income tax expense for the year as Nil as no Income Tax was paid by the Petitioner for FY 2018-19.

Table 35: Income Tax approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Income Tax**	**0.00**	**0.00**	**0.00**

The Commission approves Income Tax liability as Nil for FY 2018-19.

3.19. Provision for Bad & Doubtful Debts

Petitioner's submission

No submission has been made in this regard.

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 actually written off any bad and doubtful debts for FY 2018-19.

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

3.20. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the actual Non-Tariff Income of INR 16.46 Cr for FY 2018-19 as against INR 18.82 Cr approved in APR for FY 2018-19. Out of the INR 16.46 Cr, INR 6.45 Cr is on account of delayed payment charges and INR 1.31 Cr on account of meter rent. The remaining INR 8.71 Cr is on account of various other components Misc. & Interest Income.

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

Table 36: Non- Tariff Income approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Delayed Payment Charges	**18.82**	**16.46**	6.45
2	Meter Rent			1.31
3	Interest on FD and Others			5.51
4	Others			3.20
5	**Non-tariff income**			**16.46**

The Commission approves Non-Tariff Income of INR 16.46 Cr in the true-up of FY 2018-19.

3.21. Revenue from sale of Surplus Power

Petitioner's submission:

The revenue on account of surplus power sale/UI underdrawal has been considered by the Petitioner and reduced from ARR to arrive at net ARR.

Commission's Analysis

In line with the Petitioner's submission, the Commission has considered revenue of Rs 6.95 Cr on account of surplus power sale/UI underdrawal as per the audited accounts of the Petitioner and the same has been subtracted from the power purchase cost and considered in the calculation of net Aggregate Revenue Requirement.

3.22. 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 APR for FY 2018-19, the Commission had approved the T&D loss level of 8.30%. The Petitioner has achieved T&D loss of 6.19% against the approved loss level of 8.30%. The Commission, in accordance with Regulation 10 of the JERC MYT Regulations, 2014 (reproduced below) has determined the incentive towards the over-achievement of the target of Intra-State distribution loss for FY 2018-19 as follows:

"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"

The incentive has been considered at INR 3.94/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the true-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (2,433.91 MU) with the actual Intra-State T&D Loss (6.19%).

The assessment of incentive for lower T&D losses is shown in the following table:

Table 37: Incentive due to over-achievement of Intra-State Distribution Loss target (INR Crore)

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	2433.91	2433.91
2	T&D Loss (%)	8.30%	6.19%
3	Power Purchase at State/UT Periphery	2654.21	2594.52
4	Gain/(Loss) (MU)		59.70
5	Average Power Purchase Cost (APPC)		3.94
6	Gain/ (Loss) (INR Cr)		23.54
7	Sharing of 30% of gain with the Petitioner		**7.06**

The Commission approves INR 7.06 Cr as incentive for over-achieving the Intra-State distribution loss target for FY 2018-19.

3.23. 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 1,115.49 Cr for approval in the true-up of FY 2018-19.

Commission's Analysis

The Commission based on the detailed analysis of the cost parameters of the ARR approves the Net Revenue Requirement in the true-up of FY 2018-19 as given in the following table:

Table 38: Aggregate Revenue Requirement approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	Reference Table
1	Power Purchase Cost including cost of Solar RECs purchased	1,082.46	1,028.43	1,028.43	*Table **13***
2	Operation & Maintenance Expenses	36.92	42.57	39.04	*Table **21***
3	Depreciation	30.47	30.33	30.99	*Table **29***
4	Interest and Finance charges	20.15	20.51	20.47	*Table **30***
5	Return on Equity	3.46	12.99	12.99	*Table **31***
6	Interest on Security Deposit	4.24	4.08	4.08	*Table **32***
7	Interest on Working Capital	12.82	0.00	0.00	*Table **34***
8	Income Tax	0.00	0.00	0.00	*Table **35***
9	Provision for Bad Debt	0.00	0.00	0.00	
10	Incentive/ (Disincentive)on achievement of norms	0.00	0.00	7.06	*Table **37***
11	**Total Revenue Requirement**	**1,190.52**	**1,138.93**	**1,143.05**	
12	Less: Non-Tariff Income	18.82	16.46	16.46	*Table **36***
13	Less: Revenue from Surplus Power Sale/UI	0.00	6.95	6.95	
14	**Net Revenue Requirement**	**1,171.70**	**1,115.49**	**1,119.64**	

The Commission approves net Aggregate Revenue Requirement of INR 1,119.64 Cr in the true-up of FY 2018-19.

3.24. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for FY 2018-19 is INR 939.45 Cr as against INR 987.73 Cr approved by the Commission in the APR Order. The Petitioner has also considered revenue recovered from RRAS charge of INR 1.38 Crore, SLDC & STU charges of INR 0.11 Cr, Prompt Rebate of INR (0.38) Cr and Other charges of INR (5.55) Cr. The detailed reconciled statement of revenue from the sale of power at existing tariff with reference to the final actual figures of income & expenditure as per the audited accounts of FY 2018-19 has also been submitted.

Commission's Analysis

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

Table 39: Revenue at existing tariff approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	24.79	-	-
2	Commercial	17.28	-	-
3	Agriculture	0.33	-	-
4	LTP Industrial supply	63.83	-	-
5	Public Lighting	3.19	-	-
6	Public Water Works	1.35	-	-
7	HT Industry Supply	876.96	-	-
8	Hoardings/ Signboards	0.00	-	-
9	Temporary	0.00	-	-
10	**Sub-total**	**987.73**	**943.89**	**943.89**

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
11	FPPCA Charges	0.00	0.00	0.00
12	Rebate	0.00	-0.38	-0.38
13	RRAS Charges	0.00	1.38	1.38
14	SLDC Charges	0.00	0.11	0.11
	Other Charges		-5.55	-5.55
15	**Total Revenue**	**987.73**	**939.45**	**939.45**
16	OA Charges	0.00	0.00	0.00
17	**Grand total**	**987.73**	**939.45**	**939.45**

The Commission approves the revenue from sale of power as INR 939.45 Cr in the true-up of FY 2018-19.

3.25. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 176.04 Cr is arrived in the true-up of FY 2018-19.

Commission's Analysis

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

Table 40: Standalone Revenue Gap/ (Surplus) for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1,171.70	1,115.49	1,119.64
2	Revenue from Retail Sales at Existing Tariff	987.73	939.45	939.45
3	Open Access Charges	-	-	-
4	**Total Revenue**	**987.73**	**939.45**	**939.45**
5	**Net Gap /(Surplus)**	**183.97**	**176.04**	**180.19**

The Commission, in the true-up of FY 2018-19 approves a standalone Gap of INR 180.19 Cr. This standalone Gap has been carried over in the subsequent years and has been dealt with while determining the tariff for FY 2020-21.

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

4.1. Background

The Tariff Order for FY 2019-20 was issued by the Commission on May 20, 2019 approving the Aggregate Revenue Requirement and retail tariff for FY 2019-20 (hereinafter referred to as "ARR Order" for the purposes of APR of FY 2019-20). This Chapter covers the Annual Performance Review for FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the ARR Order. The Annual Performance Review for FY 2019-20 is to be carried out as per the following provisions of Regulation 11 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2018:

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

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

11.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:
a) True-up: a comparison of the audited performance of the Applicant for the Financial Year for which the true up is being carried out with the approved forecast for such previous Financial Year, subject to the prudence check;
b) Annual Performance Review: a comparison of the revised performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;
c) Tariff determination for the ensuing Year of the Control Period based on the revised forecast of the Aggregate Revenue Requirement for the Year;
d) Review of compliance with directives issued by the Commission from time to time;
e) Other relevant details, if any."

4.2. Approach for the Review for 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 FY 2019-20 has been done based on actual Power Purchase Quantum and Cost of the first 9 months of FY 2019-20, actual Energy Sales for the first 9 months, etc. depending on which 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 based on the norms approved in the ARR Order dated May 20, 2019.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the revised estimates of 2,529.14 MUs of energy sales for FY 2019-20 based on actual sales for first six months and revised estimates for next six months against 2,627.17 MUs as approved by the Commission in the ARR Order for FY 2019-20. The Petitioner submitted that its overall energy sales are significantly dependent upon HT/EHT industries to the extent of 81%.

Commission's Analysis

The Commission through the deficiency note asked the Petitioner to submit the category-wise actual sales for first 9 months of FY 2019-20 i.e., from April 2019 to December 2019. The Commission has noted the audited figures for FY 2018-19 and provisional information provided by the Petitioner for the first 9 months of FY 2019-20. For all the categories, the Commission has estimated the proportion of actual energy sales till the month of December over total energy sales during the financial year, for the last three years. Using this average proportion of sales, the Commission has extrapolated the actual energy sales till the month of December for the full year to determine the annual energy sales for FY 2019-20.

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

Table 41: Energy Sales approved by the Commission for FY 2019-20 (MU)

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Domestic	135.57	165.37	150.96
2	LIG/ Kutir Jyoti	0.10	0.00	0.00
3	Commercial	65.87	59.94	55.63
4	Agriculture	5.39	5.08	4.65
5	LT Industry	220.08	194.58	192.64
6	HT/EHT Industry	2,178.22	2,094.75	2,125.12
7	Public Lighting	10.99	6.62	6.43
8	Public Water Works	4.55	2.80	2.84
9	Temp. Supply	6.40	0.00	0.00
	Gross Total	**2,627.17**	**2,529.13**	**2,538.27**

The Commission approves energy sales of 2,538.27 MUs in the APR of FY 2019-20.

4.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has considered the Inter-State transmission loss of 3.66%, same as approved in ARR of FY 2019-20.

Commission's Analysis

The Commission in the APR of FY 2019-20 considers the Inter-State transmission losses in line with the loss approved in the ARR of FY 2019-20. The same shall be revised based on actuals during the true-up exercise.

The following table provides the Inter-State transmission loss submitted and now approved by the Commission.

Table 42: Inter-State Transmission Loss approved by the Commission for FY 2019-20 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Inter-State transmission losses	3.66%	3.66%	3.66%

The Commission approves Inter-State transmission loss of 3.66% in the APR of FY 2019-20.

4.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has considered the Intra-State distribution loss of 6.10% in line with the loss of 6.19% submitted in the true-up of FY 2018-19 as against the approved Intra-State distribution loss of 6.70% in the ARR of FY 2019-20.

Commission's Analysis

As distribution loss is a controllable factor, the Commission approves the same as approved in the ARR Order. The Petitioner shall be allowed an incentive/disincentive in the true-up Order considering the actual distribution loss achieved by the Petitioner in the year. Hence, for FY 2019-20 the Commission retains the distribution loss level of 6.70% as approved in the ARR Order dated May 20, 2019.

The table below provides the Intra-State distribution loss approved in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 43: Intra-State Distribution Loss approved by the Commission for FY 2019-20 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Intra-State distribution loss	6.70%	6.10%	6.70%

The Commission approves Intra-State distribution loss of 6.70% in the APR of FY 2019-20.

4.6. Power Purchase Quantum & Cost

Petitioner's submission:

The EDDD has no generating stations of its own other than the Solar plants and relies on firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar, Sholapur etc. to meet its energy requirement.

The EDDD for the purpose of estimation of the power availability during FY 2019-20 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Private Sector Power Generating Companies
- Renewable energy sources - Solar and Non-Solar
- Other market sources

The Petitioner has allocation from western as well as eastern regions from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawl from the Grid.

For projecting of the energy availability for FY 2019-20, six months actual power purchase has been considered. For projection of remaining six months of power purchase for FY 2019-20, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification nos. WRPC/Comml-I/6/Alloc/2019/11859 dated 26/09/2019 of Western Regional Power Committee. The energy allocation from central generating station and revised estimated power purchase cost for FY 2019-20 as submitted by the Petitioner is presented in the following table:

Table 44: Energy Allocation to EDDD as submitted by the Petitioner

Name of plant	Plant Capacity (MW)	EDDD Allocation (MW)	Avg. EDDD Allocation (%)
NTPC Stations			
KSTPP	2,100	49	2.35%
KSTPP-III	500	5	1.03%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.92%
VSTPP- III	1,000	11	1.12%
VSTPP- IV	1,000	11	1.10%
VSTPS-V	500	7	1.48%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
BHILAI UNIT-I &II(NTPC)	500	70	14.00%
SIPAT-I	1,980	22	1.11%
SIPAT-II	1,000	10	0.99%
MSTPS-I	1,000	11	1.10%
MOUDA-II	1,320	15	1.13%
SOLAPUR	1320	24	1.81%
LARA	1600	7	0.46%
GADARWARA	800	13	1.65%
Subtotal	**18,194**	**341**	
Eastern Region			
KHSTPP-II	1,000	1.30	0.13%
Subtotal	**1,000**	**1.3**	
NPCIL			
KAPPS	440	9	1.94%
TAPP 3&4	1,080	13	1.22%
Subtotal	**1,520.00**	**22**	
Others			
Ratnagiri	582	38	6.53%
Subtotal	**582**	**38**	
Grand Total	**21,295.59**	**402**	

Table 45: Power Purchase quantum (MU) and cost (INR Crore) submitted by the Petitioner

Station	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
NTPC Stations							
KSTPP	353.86	23.78	51.47	0.05		75.29	2.13
KSTPP-III	34.46	4.55	4.84	-0.03		9.37	2.72
VSTPP-I	90.91	7.93	16.55	0.39		24.87	2.74
VSTPP-II	59.05	4.09	10.20	0.25		14.55	2.46

Station	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
VSTPP- III	82.69	8.39	14.74	0.29		23.42	2.83
VSTPP- IV	77.19	12.30	13.24	0.41		25.96	3.36
VSTPS-V	54.49	8.74	9.91	0.19		18.84	3.46
KAWAS	88.38	19.67	24.90	0.27		44.83	5.07
JGPP	60.23	24.56	16.94	0.35		41.86	6.95
Sipat-I	148.78	18.93	21.66	0.62		41.21	2.77
Sipat-II	68.73	8.77	11.34	0.12		20.24	2.94
MSTPS-I	61.10	15.21	19.48	0.71		35.40	5.79
MOUDA-II	70.28	16.47	22.31	2.42		41.20	5.86
KHSTPP-II	10.79	1.50	2.29	-0.06		3.73	3.46
SOLAPUR	70.42	29.25	23.82	0.01		53.08	7.54
LARA	24.53	0.00	7.87	0.00		7.87	3.21
GADARWARA	53.45	12.36	19.41	0.00		31.78	5.94
Subtotal	**1,409.33**	**216.51**	**290.99**	**6.01**	**0.66**	**512.84**	**3.64**
NTPC Bhilai							
Bhilai Unit-I &II(NTPC)	491.34	81.83	174.09	-0.50		255.42	5.20
Subtotal	**491.34**	**81.83**	**174.09**	**(0.50)**		**255.42**	**5.20**
NPCIL							
KAPPS	51.52	0.00	12.79	0.00		12.79	2.48
TAPP 3&4	91.12	0.00	26.90	0.00		26.90	2.95
Subtotal	**142.64**	**0.00**	**39.69**	**0.00**		**39.69**	**2.78**
Others							
Ratnagiri	95.57	20.14	37.07	0.00		57.21	5.99
Subtotal	**95.57**	**20.14**	**37.07**	**0.00**		**57.21**	**5.99**
Power purchase from Other Sources							
Power purchase from Indian E. Exchange	481.27	0.00	170.38	0.00		170.38	3.54
UI	69.97	0.00	21.97	0.00		21.97	3.14
Solar	29.82	0.00	0.00	0.00		0.00	0.00
Non Solar (Hydro)	70.00	0.00	31.36	0.00		31.36	4.48
Solar REC	0.00	0.00	8.90	0.00		8.90	0.00
Non Solar REC	0.00	0.00	10.20	0.00		10.20	0.00
Solar (SECI, NTPC)	0.00	0.00	0.00	0.00		0.00	0.00
Subtotal	**651.06**	**0.00**	**242.82**	**0.00**		**242.82**	**3.73**
Misc. Arrears							
NTPC Rebate							

Station	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
Gross Power Purchase	**2,789.93**	**318.48**	**784.65**	**5.51**	**0.66**	**1,107.97**	**3.97**
External Losses							
Total Power Purchase	**2,789.93**	**318.48**	**784.65**	**5.51**	**0.66**	**1,107.97**	**3.97**
PGCIL CHARGES						119.41	
WRLDC						0.59	
MSTCL						3.50	
REC						0.00	
Grand Total of Charges – Net	**2,789.93**					**1,231.48**	**4.41**

Further, the assumptions for estimating power purchase quantum and cost as submitted by the Petitioner are as below:

- Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2019.
- Power purchase arrear for the remaining six months has been considered as nil as EDDD has no prior information of arrear bills from the generators and transmission companies.
- For FY 19-20, till September 2019 the EDDD has procured 9.91 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 19.91 MU of solar power from its own generation and will purchase a further 89.05 MUs as solar certificates to meet its solar obligation till FY 2019-20.
- To meet its non-solar obligation for the FY 2019-20, the EDDD has considered purchase of non-solar energy of 70 MUs to meet its RPO target through this route. Further, to meet its RPO target EDDD has planned to purchase 101.98 MUs through non-solar certificates during the remaining six months of FY 2019-20.

Commission's Analysis

The data pertaining to power purchase quantum and cost for the period from October to December 2019 was sought from the Petitioner. The Commission considered the data for first nine months of FY 2019-20, as submitted by the Petitioner and estimated the power purchase quantum and cost for the remaining months of the year considering data and the firm and infirm allocation from various generating stations. The source wise methodology followed for estimation of quantum and cost of power procurement has been detailed as follows:

4.6.1. Availability of power

Availability of energy from NTPC Stations:

- Actual Power Purchase Quantum is available for first 9 months for FY 2019-20. From Jan to March 2020, power purchase quantum for 14 of the total 17 NTPC plants has been estimated based on 3 years average of quantum of energy purchased from the respective station during these months (FY 2016-17, FY 2017-18 and FY 2018-19).

- For Solapur, Lara and Gadarwara, the Petitioner's submission has been considered for projecting the power purchase quantum for last 3 months of the year due to irregular scheduling of power from these stations. The actual power purchase of first 9 months is subtracted from total Power Purchase quantum submitted by the petitioner for Solapur, Lara and Gadarwara plants. Remaining value of Power Purchase quantum from each plant is equally distributed in last 3 months to arrive at the month wise quantum purchased for FY 2019-20.

Availability of energy from NSPCL Bhilai station:

- Actual Power Purchase Quantum is available for first 9 months for FY 2019-20. From Jan to March 2020, the power purchase quantum has been estimated based on last 3-year average of quantum of energy purchase from the station during these months (FY 2016-17, FY 2017-18 and FY 2018-19).

Availability of energy from NPCIL stations:

- Daman and Diu receive supply from two NPCIL stations - Tarapur and Kakrapara atomic plants. The total power purchase for the year from these sources is considered at same level as that projected by the Petitioner.

Availability from RGPPL stations:

- In 2018-19, the State of Maharashtra (which has 95% share allocation from RGPPL) had not scheduled power because of non-availability of natural gas for this project and non-availability of technical minimum schedule to run the plant and therefore there was no generation from the plant in 2018-19.

- For FY 2019-20 the petitioner submitted purchase of 95.57 MU from RGPPL station. The actual Power purchase for first 9 months is ~ 71 MU. The total power purchase for the year from this source is considered at same level as that projected by the Petitioner.

Availability of power from the Open Market, Unscheduled Interchange and Banking

- The Open market purchase of 357.41 MUs for first 9 months has been considered as per actuals. For the remaining months the quantum for purchase/sale has been considered as 135.79 MUs as estimated in the energy balance, discussed in the subsequent section.

- Quantum under UI Overdrawal/ Underdrawal for first 9 months of FY 2019-20 has been considered as 112.75 MUs as per actuals. No quantum under UI has been considered for the remaining 3 months of FY 2019-20.

4.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by taking the average actual per unit variable cost during the first 9 months from April 2019 to December 2019 for all the stations
- The cost towards UI Over-drawal/ Underdrawal has been considered as per actuals incurred by the Petitioner in the first 9 months of FY 2019-20

Fixed Charges:

- Actual Fixed Costs have been considered for the first nine months for all stations

- The fixed costs for the remaining months have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations.
- Fixed cost has been apportioned as per the DD's share in each station and average of the annual plant availability factor achieved during the last three years. The plant availability factor has been limited to 85% for plants having higher availability, in line with the norms specified by CERC.

Other Charges:

- Actual charges have been considered for the first 9 months of FY 2019-20. No other charges have been considered for the remaining months of FY 2019-20.

4.6.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL for the whole year based on the actual transmission charges paid in the first nine months of the year. The same shall be trued-up as per actuals.

4.6.4. Total power purchase quantum and cost

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for FY 2019-20:

Table 46: Power Purchase Quantum (MU) and cost (INR Crore) approved by the Commission for FY 2019-20

Source	Power Purchase at generator periphery (MU)	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost (INR/kWh)
NTPC Stations						
KSTP	357.23	23.51	51.76	0.07	75.35	2.11
KSTP 3	39.15	5.03	5.51	-0.05	10.49	2.68
VSTPP-I	90.01	7.66	16.25	0.54	24.44	2.72
VSTPP-II	62.64	4.48	10.72	0.36	15.56	2.48
VSTPP- III	87.10	8.24	15.26	0.41	23.91	2.74
VSTPP- IV	88.37	12.11	15.07	0.43	27.61	3.12
KAWAS	82.12	19.25	22.54	0.10	41.89	5.10
JGPP	41.08	24.07	10.98	0.05	35.10	8.54
Sipat-I	164.39	20.27	24.79	0.57	45.63	2.78
Sipat-II	65.56	8.63	10.57	0.11	19.31	2.95
Mouda/ MSTPS 1	78.35	14.41	24.75	1.07	40.24	5.14
VSTPS-V	58.60	8.65	10.53	0.24	19.42	3.31
Mouda 2	85.52	14.89	26.92	2.66	44.47	5.20
Solapur	45.24	22.15	15.13	0.05	37.33	8.25
KHSTPP-II	14.16	1.49	2.99	-0.10	4.39	3.10
Lara	26.84	5.64	11.29	0.10	17.03	6.34
Gadarwara	10.38	12.36	3.75	-0.12	15.99	15.41
Subtotal	**1,396.74**	**212.83**	**278.82**	**6.49**	**498.14**	**3.57**
NTPC Bhilai						
Bhilai Unit-I &II(NTPC)	477.37	81.66	164.44	-0.81	245.29	5.14
Subtotal	**477.37**	**81.66**	**164.44**	**-0.81**	**245.29**	**5.14**
NPCIL						
KAPPS	51.52	0.00	12.79	0.00	12.79	2.48
TAPP 3&4	91.12	0.00	27.00	0.00	27.00	2.96

Source	Power Purchase at generator periphery (MU)	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost (INR/kWh)
Subtotal	**142.64**	**0.00**	**39.79**	**0.00**	**39.79**	**2.79**
Others						
Ratnagiri	95.57	18.64	37.24	0.00	55.88	5.85
Subtotal	**95.57**	**18.64**	**37.24**	**0.00**	**55.88**	**5.85**
Power purchase from Other Sources						
Power purchase from Energy Exchange	493.20	0.00	167.61	0.00	167.61	3.40
UI	112.75	0.00	29.84	0.00	29.84	2.65
Solar*	29.82	0.00	0.00	0.00	0.00	0.00
Non-Solar (Hydro)*	70.00	0.00	31.36	0.00	31.36	4.48
Solar REC*	0.00	0.00	0.21	0.00	0.21	0.00
Non-Solar REC*	0.00	0.00	10.99	0.00	10.99	0.00
Solar (SECI, NTPC)*	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**705.77**	**0.00**	**240.02**	**0.00**	**240.02**	**3.4**
Gross Power Purchase	**2,818.09**	**313.14**	**760.31**	**5.68**	**1,079.12**	**3.83**
External Losses						
Total Power Purchase	**2,818.09**	**313.14**	**760.31**	**5.68**	**1,079.12**	**3.83**
PGCIL CHARGES					119.40	
WRLDC					4.10	
MSTCL						
PGVCL						
POSCO						
Grand Total of Charges – Net	**2,818.09**	**313.14**	**760.31**	**5.68**	**1,202.62**	**4.27**

* Cost for RPO is approved in Section 4.7 & included above

The Commission approves the revised quantum of power purchase as 2,818.09 MU at the generator periphery with total cost of INR 1,202.62 Cr in the APR for FY 2019-20.

4.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

For FY 2019-20, till September 2019 the EDDD has procured 9.91 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the EDDD will further procure 19.91 MU of solar power from its own generation and will purchase a further 89.05 MUs as solar certificates to meet its solar obligation till FY 2019-20.

To meet its non-solar obligation for the FY 2019-20, the EDDD has considered purchase of non-solar energy of 70 MUs to meet its RPO target through this route. Further, to meet its RPO target EDDD has planned to purchase 101.98 MUs through non-solar certificates during the remaining six months of FY 2019-20.

The RPO requirement for FY 2019-20 and the compliance status as submitted by the Petitioner has been provided in the following table:

Table 47: RPO Requirement (Solar and Non-Solar) for FY 2019-20 as submitted by Petitioner (MU)

Particulars	RPO %	Sales (MU)	Units (MU)	Actual 2019-20 (Till Sep) (MU)	Balance to be Procured 2019-20 (MU)
Solar	4.70%	2,529.14	118.97	9.91	109.06
Non-Solar	6.80%	2,529.14	171.98	0.00	171.98
Total	**11.50%**		**290.85**	**13.17**	**202.70**

Commission's Analysis

As per Clause 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."

As per the Commission's Tariff Order dated 20th May 2019 regarding Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Determination of Retail Tariff for FY 2019-20, Petitioner has to purchase 11.50% of its total consumption through conventional sources (including 4.70% from Solar and 6.80% from Non-Solar) from renewable sources for FY 2019-20.

The Petitioner is also required to clear the backlog of 255.27 MU (Solar : 90.21 MU and Non-Solar: 165.06 MU) up to FY 2018-19 carried forward.

The Petitioner submitted that to meet the solar obligation for the FY 2019-20 and the FY 2020-21, it is in the process of purchasing 80 MW power from NTPC, 50 MW from Solar Energy Corporation of India (SECI) and 40 MW from open tender on long term basis (25 years) on Power Purchase Agreement (PPA) basis. Further, the EDDD has an installed capacity of 16.19 MW of solar plants which include 10 MW ground mounted plants and remaining 6.19 MW of rooftop solar plants. It is expected that an additional 27 MW of rooftop solar plant will be added to the existing capacity during the 2019-20.

The Commission asked the Petitioner to submit the details of actual RPO met from April 2019 to January 2020 and the Petitioner submitted the details of actual RPO met during the period April 2019 to January 2020 as follows:

- Solar – 16.04 MU
- Non-Solar – 52.69 MU

The Commission has considered the same towards meeting the RPO compliance for FY 2019-20.

The Commission in its previous Order dated May 20, 2019 while approving the APR for FY 2018-19 considered the backlog of RPO obligation up to FY 2017-18 and allowed the cost of REC purchase. However, in reality the Petitioner has not purchased the RECs in FY 2018-19 to meet the RPO backlog. Further, as discussed in above para, the Petitioner is making arrangements for entering into PPA for solar power on long term basis which will help in meeting the RPO backlog up to FY 2018-19. Hence, the Commission while approving the APR for FY 2019-20 has considered the actual cost of RPO claimed by the Petitioner till February 2019 for the FY 2019-20. The cumulative shortfall in RPO till FY 2020-21 and cost of meeting the same has been considered while approving the ARR for FY 2020-21.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for FY 2019-20 as follows:

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

S.No	Description	Formulae	FY 2019-20
A	Solar Target		4.70%
B	Non-Solar Target		6.80%
C	**Total RPO Target (in %)**	**C=A+B**	**11.50%**
D	Sales within UT		2,538.27
E	**RPO obligation for the year**	**E=F+G**	**291.90**
F	Solar	F=D*A	119.30
G	Non-Solar	G=D*B	172.60
H	**RPO compliance (proposed purchase)**	**H=I+J**	**99.82**
I	Solar		29.82
J	Non-Solar		70.00
K	**RPO compliance (REC certificate purchase)**	**K=L+M**	**50.41**
L	Solar		0.91
M	Non-Solar		49.50
N	**Total RPO Compliance for FY 2019-20 (REC+ Physical RE)**	**N=O+P**	**150.23**
O	Solar	O=I+L	30.73
P	Non-Solar	P=J+M	119.50
Q	**Standalone shortfall for FY 2019-20**	**Q=R+S**	**141.67**
R	- Solar	R=F-O	88.57
S	- Non-Solar	S=G-P	53.1
T	**Backlog upto FY 2018-19**	**T=U+V**	**255.27**
U	- Solar		90.21
V	- Non-Solar		165.06
W	**Total Shortfall in RPO Compliance for FY 2019-20**	**W=X+Y**	**397.24**
X	Solar	X=R+U	178.78
Y	Non-Solar	Y=S+V	218.16

The Commission has computed the cost towards compliance of RPO. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section and as shown in the following table:

Table 49: Cost towards compliance of Renewable Purchase Obligation approved by the Commission for FY 2019-20 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**30.73**	**0.21**	
(a)	*Generation*	29.82	0.00	0.00
(b)	*Renewable Energy Certificates*	0.91	0.21	2.31
2	**Non-Solar**	**122.69**	**42.35**	
(a)	*Generation/Procurement*	70.00	31.36	4.48
(b)	*Renewable Energy Certificates*	52.69	10.99	2.09
	Total	**153.42**	**42.56**	

The Commission approves INR 42.56 Cr towards compliance of RPO in the APR of FY 2019-20 and has been included in Power Purchase Cost.

4.8. Energy Balance

Petitioner's submission

The energy requirement as submitted by the Petitioner has been shown in the following table:

Table 50: Energy Requirement of the System (MU)

	Particulars	Formulae	ARR Order	Petitioner's Submission
(a)	Retail Sales		2,627.17	2,529.14
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales**	d = a+b-c	**2,627.17**	**2,529.14**
(e)	Distribution Loss	e = g-d	188.66	164.30
(f)	Distribution Loss (%)	f=e/g	6.70%	6.10%
(g)	**Energy Required at Periphery**	g = d+e	**2,815.83**	**2,693.44**
(h)	Sale to common pool consumer/UI Sale		0.00	0.61
(i)	Own generation		17.78	29.82
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2,798.05**	**2,664.23**
(k)	Less: Energy Purchased through UI at Periphery		0.00	69.97
(l)	Less: Open Access Purchase at Periphery		0.00	0.00
(m)	Less: Energy Purchased through Renewable Sources		352.95	70.00
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2,445.10**	**2,524.26**
(o)	Inter-state loss	o=q-n	92.89	95.90
(p)	Inter-state loss (%)	p = o/q	3.66%	3.66%
(q)	**Energy requirement at state periphery from generator end**	q = n+o	2,537.99	2,620.16
(r)	**Total Energy requirement from tied up sources & UI at generator end**	r=q+k+i+m	-	2,789.95
(s)	**Total Energy requirement in UT including Open Access**	s=r+l	**2,908.72**	**2,789.95**

Commission's Analysis

Based on the revised estimates of energy sales and power purchase quantum, the Commission approves the following energy balance:

Table 51: Energy Balance approved by the Commission for FY 2019-20 (MU)

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved by Commission
(a)	Retail Sales		2,529.14	2,538.27
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales**	d = a+b-c	**2,529.14**	**2,538.27**
(e)	Distribution Loss (%)		6.10%	6.70%
(f)	Distribution Loss in MU	f=g-d	164.30	182.28
(g)	**Energy Required at Periphery**	g=d/(1-e)	**2,693.44**	**2,720.55**
(h)	Sale to common pool consumer/UI Sale		0.61	0.61
(i)	Own generation		29.82	29.82
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2,664.23**	**2,691.34**
(k)	Less: Energy Purchased through UI at Periphery		69.97	69.97
(l)	Less: Open Access Purchase at Periphery		0.00	0.00
(m)	Less: Energy Purchased through Renewable Sources		70.00	70.00

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved by Commission
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2,524.26**	**2,551.37**
(o)	Inter-state loss (%)		3.66%	3.66%
(p)	Inter-state loss	p=q-n	95.90	96.93
(q)	Energy requirement at state periphery from generator end	q= n/(1-o)	2,620.16	2,648.30
(r)	**Total requirement from Tied-up sources at generator end & UI/Traders/Banking/within State**	r=q+i+k+l+m		**2,818.09**
(s)	**Total availability from tied up sources at generator end (MU)**			**2,324.89**
(t)	**Deficit/(surplus)**	**t=r-s**		**493.20**

The Commission approves the Total Energy Requirement at the generator end (including own generation) as 2,818.09 MU in the APR for FY 2019-20. The Commission has estimated a deficit of 493.20 MU and has assumed that the deficit power will be purchased from the Open Market.

4.9. Operation & Maintenance Expenses

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

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

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

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

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

d) Availability of transmission system;

e) Variations in performance parameters;

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

g) Variations in labor productivity;

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

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted the employee expenses of INR 17.06 Cr as against approved employee expenses of INR 17.61 Cr in the ARR Order for FY 2019-20.

Commission's Analysis

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.

Regulation 6 provides that the Commission may change the values for Base Year considering the actual figures from audited accounts. As the Commission in this Order has carried out the truing up for FY 2018-19 based on audited accounts, the Commission has considered the actual employee expenses for FY 2018-19 as base expenses and applied the CPI Inflation for approving the revised employee expenses for FY 2019-20.

The CPI Inflation has been computed as follows:

Table 52: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2016-17	275.92	4.12%	
2017-18	284.58	3.14%	
2018-19	299.92	5.39%	
		CPI Inflation	**4.22%**

Accordingly, the employee expenses approved by the Commission for the FY 2020-21 have been provided in the following table:

Table 53: Employee Expenses approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Employee Expenses for FY 2018-19	For FY 2019-20
1	Employee Expenses	16.37	
2	Growth in number of employees (Gn)		0.74%
3	CPI Inflation for preceding three years (CPI)		4.22%
	Employee Expenses	**16.37**	**17.19**

The Commission approves Employee Expenses of INR 17.19 Cr FY 2019-20.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the A&G expenses of INR 10.39 Cr as against approved A&G expenses of INR 7.13 Cr in the ARR Order for FY 2019-20.

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has considered the trued-up A&G expenses for FY 2018-19 as Base Year expenses and escalated the same with CPI Inflation for approving the revised trajectory of A&G expenses for FY 2019-20. The A&G expenses approved by the Commission for FY 2019-20 have been provided in the following table:

Table 54: A&G Expenses approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	A&G Expenses For FY 2018-19	FY 2019-20
1	A&G Expenses	7.91	
2	CPI Inflation		4.22%
3	**A&G Expenses**	**7.91**	**8.24**

The Commission approves the Administrative & General (A&G) expenses of INR 8.24 Cr for FY 2019-20.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted the R&M expenses of INR 19.35 Cr as against the approved R&M expenses of INR 19.62 Cr in the ARR Order for FY 2019-20.

Commission's Analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for FY 2016-17, FY 2017-18 and FY 2018-19 as per audited accounts, averaged for three years. The 'K' factor has been computed as follows:

Table 55: Computation of 'K' factor

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	17.50	14.83	16.23
2	Opening GFA	468.63	532.34	587.65
3	K Factor	3.73%	2.79%	2.76%
	K Factor Approved by the Commission (Average of 3 years)			**3.09%**

The 'K' factor calculated above is multiplied with the opening GFA approved for $(n-1)^{th}$ year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for FY 2019-20.

The WPI Inflation has been computed as follows:

Table 56: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2016-17	111.62	1.73%	
2017-18	114.88	2.92%	
2018-19	119.83	4.31%	
		WPI Inflation	**2.99%**

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

Table 57: R&M Expenses approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	FY 2019-20
1	Opening GFA (GFA_{n-1}) of previous year	607.45
2	K factor approved (K)	3.09%
3	WPI Inflation	2.99%
	R&M Expenses = **$(K \times (GFA_{n-1}) \times (1+WPI_{inflation})$**	**19.36**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 19.36 Cr for FY 2019-20.

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

The following table provides the O&M expenses, approved by the Commission in the ARR Order, Petitioners submission and O&M expenses now approved by the Commission.

Table 58: O&M Expenses approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	17.61	17.06	17.19
2	Administrative & General Expenses	7.13	10.39	8.24
3	Repair & Maintenance Expenses	19.62	19.35	19.36
	Total Operation & Maintenance Expenses	**44.36**	**46.80**	**44.79**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 44.79 Cr in the APR of FY 2019-20.

4.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has proposed the Capital expenditure and capitalisation as shown in the table below:

Table 59: Petitioner's submission for capitalisation (INR Crore)

Sr. No.	Particulars	Approved in ARR Order	Petitioner's Submission
1	Capital Expenditure	50.55	26.50
2	Capitalisation	9.55	10.00

Commission's Analysis

The Commission sought the details of capital expenditure already incurred by the utility in the first 9 months of the year. The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the scheme wise Detailed Project Reports (DPR) and the copy of the Technical Sanctions accorded to each scheme. The Petitioner in response, submitted the supporting documents with regard to the scheme wise capital expenditure and capitalisation along with the copy of the technical sanctions. Against an approved capital expenditure and capitalisation of INR 50.55 Cr and INR 9.55 Cr respectively, the Petitioner has envisaged a capital expenditure and capitalisation of INR 26.50 Cr and INR 10.00 Cr. Accordingly, the Commission has considered the capital expenditure and capitalization as submitted by the Petitioner in APR for FY 2019-20. The following table provides the approved capital expenditure and capitalisation for the year:

Table 60: Capitalisation approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	50.55	26.50	26.50
2	Capitalisation	9.55	10.00	10.00

The Commission approves capital expenditure of INR 26.50 Cr and capitalisation of INR 10.00 Cr in the APR for FY 2019-20.

4.11. Capital Structure

Petitioner's Submission

The entire capital deployment shall be through equity for FY 2019-20.

Commission's Analysis

The MYT Regulations, 2018 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 normative loan. The 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-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

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

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

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

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

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

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

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

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

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, thus equity higher than 30% of capitalisation has been considered as normative loan.

The opening Gross Fixed Assets for FY 2019-20 has been considered as closing Gross Fixed Assets approved in true-up of FY 2018-19. Further the values of opening loan and equity has been considered as closing loan and equity approved in true-up of FY 2018-19. The loan and equity addition have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year.

The Commission has accordingly determined the capital structure for FY 2019-20 as follows:

Table 61: Funding Plan approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	9.55	10.00	10.00
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	6.69	7.00	7.00
5	Equity	2.87	3.00	3.00

Table 62: GFA addition approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	599.56	607.45	606.88
2	Addition during FY 2019-20	9.55	10.00	10.00
3	Adjustment/Retirement during FY 2019-20	0.00	0.00	0.00
4	Closing Gross Fixed Assets	609.11	617.45	616.88

Table 63: Normative Loan addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	138.96	144.25	143.58
2	Add: Normative Loan During the year	6.69	7.00	7.00
3	Less: Normative Repayment equivalent to Depreciation	20.66	21.18	21.13
4	Closing Normative Loan	124.99	130.07	129.45

Table 64: Normative Equity addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	81.98	84.18	84.18
2	Additions on account of new capitalisation	2.87	3.00	3.00
3	Closing Equity	84.85	87.18	87.18

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of FY 2018-19 is taken as the opening GFA for FY 2019-20 and subsequently the proposed capitalisation during FY 2019-20 is added. Depreciation has been calculated as per the rates specified in the MYT Regulations, 2018.

Commission's Analysis

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

"

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."

As discussed in the True-up of FY 2018-19, the Commission has determined the revised GFA after deducting the value of assets that have achieved 90% depreciation. The closing GFA of FY 2018-19 as approved in the true-up has been considered as opening GFA of FY 2019-20. Further, deprecation has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during the year. The depreciation rate has been considered as weighted average rate of depreciation considering actual break-up of assets into various asset classes and depreciation rates in accordance with the MYT Regulations, 2018.

The following table provides the calculation of deprecation during FY 2019-20:

Table 65: Depreciation approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Closing GFA approved in the True-up of FY 2018-19 (a)	600.13	607.45	607.45
2	Less: Assets depreciated upto 90% till FY 2018-19 (b)	0.57	0.00	0.57
3	Opening Gross Fixed Assets (a-b)	599.56	607.45	606.88
4	Addition During FY	9.55	10.00	10.00
5	Adjustment/Retirement During FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	609.11	617.45	616.88
7	Average Gross Fixed Assets	604.34	612.45	611.88
8	Effective Rate of Depreciation (%)	3.42%	3.46%	3.45%
	Depreciation	**20.66**	**21.18**	**21.13**

The Commission now approves depreciation of INR 21.13 Cr in the APR for FY 2019-20.

4.13. Interest on Loan

Petitioner's submission

The Petitioner has calculated the Interest on Loan on normative basis according to the MYT Regulations, 2018. The closing balance of FY 2018-19 is taken as the opening balance of loans for FY 2019-20. The normative loan addition in FY 2019-20 has been computed as 70% of the capitalisation proposed during FY 2019-20.

The repayment of loans has been considered equivalent to the depreciation during FY 2019-20. Further, the rate of interest has been considered as SBI MCLR plus 100 basis points i.e., 9.55%.

Commission's Analysis

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

"28. Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission has considered the values for opening loan and loan addition as approved in the *Section 4.11: Capital Structure* of this Order. Further, the repayment is considered same as depreciation approved for the year. In line with past practice, the Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to 1-year SBI PLR as on April 1, 2019 plus 100 basis points (9.55%) as rate of interest, in accordance with the MYT Regulations, 2018. The following table provides the Interest on Loan approved by the Commission:

Table 66: Interest on Loan approved by the Commission for FY 2019-20 (INR Crore)

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	138.96	144.25	143.58
2	Add: Normative Loan During the year	6.69	7.00	7.00
3	Less: Normative Repayment equivalent to Depreciation	20.66	21.18	21.13
4	Closing Normative Loan	124.99	130.07	129.45
5	Average Normative Loan	131.98	137.16	136.52

S. No.	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	**12.60**	**13.10**	**13.04**

The Commission approves Interest on Loan of INR 13.04 Cr in the APR of FY 2019-20.

4.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018 and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for FY 2018-19 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. The Petitioner has segregated the average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. Accordingly, the Petitioner has computed the Return on Equity at 16% on post tax basis for Retail Supply Business and 15.50% on post tax basis for wires business.

Commission's Analysis

The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following

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

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

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business.

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

Table 67: RoE approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	81.98	84.18	84.18
2	Additions on account of new capitalisation	2.87	3.00	3.00
3	Closing Equity	84.85	87.18	87.18
4	Average Equity	83.42	85.68	85.68
5	Average Equity (Wires Business)	75.07	77.11	77.11
6	Average Equity (Retail Supply Business)	8.34	8.57	8.57
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	11.64	11.95	11.95
10	Return on Equity for Retail Supply Business	1.33	1.37	1.37
11	**Return on Equity**	**12.97**	**13.32**	**13.32**

The Commission approves the Return on Equity of INR 13.32 Cr in the APR of FY 2019-20.

4.15. Interest on Security Deposits

Petitioner's submission

The Petitioner has submitted the interest on security deposits of INR 4.08 Cr as against approved interest on security deposits of INR 4.24 Cr in the ARR Order for FY 2019-20.

Commission's Analysis

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

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

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations, 2018, based on the average of the opening and closing consumer security deposits during the year. Since the Petitioner has not submitted any data regarding the addition in the consumer security deposits, the Commission has not been able to factor any addition in the consumer security deposits during the year. The rate of interest has been considered equivalent to RBI Bank rate as on April 1, 2019 in accordance with the MYT Regulations 2018. The same shall be trued-up on the actual basis. The following table provides the calculation of interest on consumer security deposits for the year.

Table 68: Interest on Security Deposits approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	67.82	-	67.82
2	Net addition during the year	0.00	-	0.00
3	Deposits refund during the year	0.00	-	0.00
4	Closing Security Deposit	67.82	-	67.82
5	Average Security Deposit	67.82	-	67.82
6	Rate of Interest (%)	6.25%	-	6.25%
7	**Interest on Security Deposit**	**4.24**	**4.08**	**4.24**

The Commission approves Interest on Security Deposit as INR 4.24 Cr in the APR of FY 2019-20.

4.16. Interest on Working Capital

Petitioner's submission

The interest on working capital has been calculated based on the normative principles in the JERC (Multi-Year Distribution Tariff) Regulations, 2018.

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

(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) Consumer security but excluding Bank Guarantee/Fixed Deposit Receipt:

The Interest on Working Capital is computed at the interest rate of 10.55% (1-year SBI MCLR plus 200 basis points) in line with the MYT Regulations, 2018.

Commission's Analysis

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

52. Norms of Working Capital for Retail Supply Business

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

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

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

(c) Receivables equivalent to two (2) months of the expected revenue from 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."

In accordance with the MYT Regulations, 2018, the Commission has computed the Interest on Working Capital for FY 2019-20. The interest on working capital is considered as SBI MCLR rate as on April 1, 2018 plus 200 basis points (8.55%+2% = 10.55%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 69: Interest on Working Capital approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expenses for One Month	3.70	3.90	3.73
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.65	0.65	0.65
3	Receivables equivalent to two (2) months of the expected revenue requirement	204.60	173.16	194.33
4	Less: Amount, held as security deposits	67.82	80.46	67.82
5	Net Working Capital	141.13	97.25	130.90
6	Rate of Interest(%)	10.15%	10.55%	10.55%
7	**Interest on Working Capital**	**14.32**	**10.26**	**13.81**

The Commission approves the Interest on Working Capital as INR 13.81 Cr in the APR of FY 2019-20.

4.17. Income Tax

Petitioner's submission

No submissions have been made in this regard.

Commission's Analysis

Regulation 32 of the MYT Regulations, 2018 provides for allowance of provisional Income Tax based on the actual income tax paid in previous year, if any, as per the latest audited accounts available. The Commission has observed that the actual tax payment as per the latest audited accounts available for FY 2018-19 is nil. Accordingly, for FY 2019-20, no income tax liability has been considered and the same shall be trued-up based on the actual income tax paid by the Petitioner.

Table 70: Income tax approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Income Tax**	**0.00**	**0.00**	**0.00**

The Commission approved Nil income tax liability for FY 2019-20.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's Analysis

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

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for FY 2019-20 has been estimated with an increase of 5% p.a. on the actual non-tariff income of FY 2018-19.

Commission's Analysis

The 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 sought the reason from petitioner regarding submission of Non-Tariff Income which is INR

10.45 Cr only i.e. around 50% of what Commission approved in APR order for FY 2019-20. The petitioner submits that as per the MYT Regulations, 2018 the Delayed Payment Surcharge is not included in the non-tariff income. Due to this the non-tariff income has reduced.

The Commission agrees with the Petitioner that as per MYT Regulations, 2018, Delayed Payment Surcharge is not to be considered as Non-Tariff Income. Hence, for the APR of FY 2019-20, the Commission has considered the Non-Tariff Income as the same as submitted by the petitioner. The same shall be verified with the audited accounts at the time of truing up.

The NTI approved in the ARR Order, the Petitioner's submission and now approved by the Commission is shown in the following table:

Table 71: Non-Tariff Income approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Non-Tariff Income**	**19.76**	**10.45**	**10.45**

The Commission now approves Non-Tariff Income of INR 10.45 Cr in the APR for FY 2019-20.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 1,329.59 Cr is submitted after adjusting the Non -Tariff Income and revenue from sale of surplus power for FY 2019-20.

Commission's Analysis

Based on the detailed analysis of the cost parameters of the ARR, the revenue requirements in the APR of FY 2019-20 are approved as follows:

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission	Reference Table
1	Power Purchase Cost	1,138.20	1,231.48	1,202.62	*Table **46***
2	Operation & Maintenance Expenses	44.36	46.80	44.79	*Table **58***
3	Depreciation	20.66	21.18	21.13	*Table **65***
4	Interest and Finance charges	12.60	13.10	13.04	*Table **66***
5	Return on Equity	12.97	13.32	13.32	*Table **67***
6	Interest on Security Deposit	4.24	4.08	4.24	*Table **68***
7	Interest on Working Capital	14.32	10.26	13.81	*Table **69***
8	Income Tax	0.00	0.00	0.00	*Table **70***
9	Provision for Bad Debt	0.00	0.00	0.00	
10	**Total Revenue Requirement**	**1,247.35**	**1,340.22**	**1,312.95**	
11	Less: Non-Tariff Income	19.76	10.45	10.45	*Table **71***
12	Less: Revenue from sale of surplus power	0.00	0.18	0.00	
13	**Net Revenue Requirement**	**1,227.59**	**1,329.59**	**1,302.50**	

The Commission approves the net ARR of INR 1,302.50 Cr in the APR of FY 2019-20.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

Revenue from sale of power at existing tariff is estimated to be Rs. 1,038.94 Crore in FY 19-20. The estimated revenue for FY 19-20 is based on the six-month actual revenue at the exiting tariff. The revenue for remaining six months of FY 19-20 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the MYT Control Period FY 2019-20 to FY 2021-22 dated 20th May, 2019. As directed by the Hon'ble Commission in its Tariff Order dated 20th May, 2019, the fuel purchase adjustment surcharge approved by the Hon'ble Commission is being levied to the consumers of the EDDD. Further, the EDDD has considered the actual FPPCA for the second quarter billed to the consumers and has also considered the estimated FPPCA to be levied to the consumers during the third and fourth quarter while arriving at the total revenue for the 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 2019-20. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has considered suitable assumptions wherever necessary. The revenue 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 derived by the Commission for FY 2019-20 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
1	**DOMESTIC SUPPLY (DS)**		**1.44**	**27.62**	**29.06**	**1.92**
1	0-100 units	Single	0.37	4.90	5.27	1.27
2	101-200 units	Single	0.17	3.55	3.73	1.76
3	201-400 units	Single	0.27	3.30	3.56	2.24
4	401 and above units	Single	0.23	6.16	6.39	2.51
5	0-100 units	Three	0.15	0.92	1.07	1.37
6	101-200 units	Three	0.07	1.02	1.08	1.79
7	201-400 units	Three	0.10	1.49	1.59	2.21
8	401 and above units	Three	0.09	6.27	6.36	2.46
2	**Low Income Group**					
1	Low Income Group		**0.00**	**0.00**	**0.00**	**0.00**
3	**COMMERCIAL / NON-DOMESTIC**		**0.30**	**18.15**	**18.45**	**3.32**
1	0-100 units	Single	0.09	1.10	1.19	2.68
2	101 Units and Above	Single	0.09	4.86	4.95	3.43
3	0-100 units	Three	0.06	0.58	0.64	2.73
4	101 Units and Above	Three	0.06	11.61	11.67	3.39
4	**AGRICULTURAL**		**0.00**	**0.31**	**0.31**	**0.66**
1	For sanctioned load up to 10 HP		0.00	0.29	0.29	0.65
2	Beyond 10 HP and up to 99 HP sanctioned load		0.00	0.02	0.02	0.90
5	**LT INDUSTRY**		**3.89**	**68.14**	**72.03**	**3.74**
1	LT Industry		3.89	68.14	72.03	3.74

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
6	**INDUSTRY**		**147.24**	**776.26**	**923.50**	**4.35**
1	HT General		142.45	754.19	896.64	4.34
2	HT Industrial (Ferro)		4.80	22.06	26.86	4.42
7	**PUBLIC LIGHTING (PL)**		**0.00**	**2.54**	**2.54**	**3.95**
8	**PUBLIC WATER WORKS**		**0.02**	**1.01**	**1.03**	**3.63**
9	**TEMPORARY SUPPLY**		**0.00**	**0.00**	**0.00**	**0.00**
10	**Temporary Supply**		**0.00**	**0.00**	**0.00**	**0.00**
	TOTAL		**152.90**	**894.02**	**1,046.92**	**4.12**

The Commission has derived revenue from sale of power at existing tariff as INR 1,046.92 Cr in the APR of FY 2019-20.

4.22. FPPCA

Petitioner's submission

The Petitioner submitted that as per direction given by the Commission in its Tariff Order dated 20th May, 2019, the fuel power purchase adjustment surcharge is being levied to the petitioner's consumers. Further, the EDDD has considered the actual FPPCA for the second quarter billed to the consumers and has also considered the estimated FPPCA to be levied to the consumers during the third and fourth quarter while arriving at the total revenue for the FY 2019-20.

Commission's Analysis

The Commission has computed the revenue from FPPCA for FY 2019-20 considering FPPCA rate approved by the Commission for first three quarters of FY 2019-20 billed in second, third and fourth quarter of FY 2019-20, the actual quarterly sales for the corresponding quarters and the K factor approved in the MYT Order. The Commission has not considered FPPCA for the fourth quarter of the FY 2019-20 to be billed in FY 2020-21 , as the Commission has worked out the gap upon provisional truing up for FY 2019-20 and carried forward this gap to FY 2020-21.

The FPPCA rate approved by the Commission for FY 2019-20 is as follows:

Table 74: FPPCA Rate approved by the Commission (INR/kWh)

Sales (FY 2019-20)	FPPCA Rate (INR/Unit)
Quarter 1 (April – June 2019)	0.49
Quarter 2 (July – September 2019)	0.65
Quarter 3 (October – December 2019)	0.72

The computation of revenue from FPPCA is provided below:

Table 75: Revenue from FPPCA approved by the Commission

Category	Sales (MUs)			K Factor	Revenue (INR Crore)			Total Rev from FPPPCA
	Q2	Q3	Q4		Q2	Q3	Q4	
Domestic	39.34	34.12	34.16	0.47		1.20	1.15	
Commercial	13.75	12.41	13.26	0.8		0.72	0.71	
LT Industry	49.29	45.10	50.25	0.78		2.50	2.53	
HT/EHT Industry	526.33	513.65	564.10	1.06		36.26	39.20	
Public Lighting	1.53	1.59	1.54	0.96		0.10	0.11	
Public Water Works	0.62	0.73	0.71	0.88		0.04	0.05	
Total	**631.95**	**608.57**	**665.14**		**31.61***	**39.50**	**47.95**	**119.06**

* Actual Revenue collection against Q2 Sales in 2019-20 as submitted by the petitioner

The Commission has derived revenue from FPPCA as INR 119.06 Cr in the APR of FY 2019-20.

4.23. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 175.58 Cr is arrived at in the APR for FY 2019-20.

Commission's Analysis

The Standalone Revenue Gap/(Surplus) is arrived at and approved as follows:

Table 76: Standalone Revenue Gap/ (Surplus) at existing tariff approved by the Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioners submission	Now Approved	Reference Table
1	Net Revenue Requirement	1,227.59	1,329.59	1,302.50	*Table 72*
2	Revenue from Retail Sales at Existing Tariff	1,040.66	1,038.94	1,046.92	*Table 73*
3	Revenue from Open Access Charges	0.00	0.00	0.00	
4	Revenue from FPPCA	0.00	115.07	119.06	Table 75
5	Total Revenue	1,040.66	1,154.01	1,165.98	
6	**Net Gap/(Surplus)**	**186.93**	**175.58**	**136.52**	

The standalone gap at existing retail tariff is INR 136.52 Cr in the APR of FY 2019-20. The estimated gap is carried over to the next year and has been considered while determining the tariff for FY 2020-21.

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

5.1. Background

The ARR for the FY 2020-21 was approved in the MYT Order issued for the 2nd Control Period (the FY 2019-20 to the FY 2021-22). In this Chapter the Commission re-determines the Aggregate Revenue Requirement (ARR) for the FY 2020-21 based on truing up for FY 2018-19 and APR for FY 2019-20 in accordance with the provisions of MYT Regulations, 2018.

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

This Chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2020-21, approved in the MYT Order dated 20th May, 2019 and re-computes the same considering the actual information available of various parameters for the FY 2018-19 as per the audited accounts and the provisional information available as per APR of FY 2019-20. The revised ARR and revenue at existing tariff is determined for the FY 2020-21 to arrive at the revised revenue gap/surplus for the year.

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

Petitioner's Submission

The Petitioner submitted that the energy sales, connected load and number of consumers are projected for FY 2020-21 based on the historical trends observed in the last six years (the FY 2013-14 to the FY 2018-19) and the actual data for the first 6 months of the FY 2019-20.

The Petitioner submitted that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the utility including factors such as Government Policy, economic climate, weather conditions and force majeure events like natural disasters, etc. The Petitioner, therefore, for projecting the category-wise consumption for the FY 2020-21 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

Commission's Analysis

The Commission sought the details regarding basis and assumptions for projecting category-wise load growth, number of consumers and energy sales. In reply, the petitioner submitted that the category wise load growth and number of consumers for the FY 2020-21 have been considered as approved by the Hon'ble Commission in the Order for the Business Plan for the MYT Control Period FY 2019-20 to FY 2021-22. For projecting the category wise sales for the FY 2020-21 the EDDD has considered the growth in the sales for the preceding years and computed the CAGR. Based on the growth witnessed in different categories the sales for the FY 2020-21 has been projected.

The Commission is of the view that as the growth in actual sales in FY 2018-19 and in first nine months of FY 2019-20 is lower than that approved in Business Plan Order hence the sales for FY 2020-21 needs to be re-estimated based on actual sales in FY 2018-19 and in first nine months of FY 2019-20.

The Commission for projecting energy sales for each category has observed the historical trends in the past 6 years (the FY 2013-14 to the FY 2018-19). The Commission has analyzed the Compounded Annual Growth Rate (CAGR) and the Year on Year (Y-o-Y) variation for each category and using the appropriate growth rate has re-estimated the category wise energy sales for FY 2020-21. The table below provide the trends observed in the energy sales for the Petitioner.

Table 77: Trend Analysis of Energy sales

Category	Y-o-Y Growth					CAGR				
	FY15/ FY14	FY16/ FY15	FY17/ FY16	FY18/ FY17	FY19/ FY18	5 year	4 year	3 year	2 year	1 year
Domestic	(1.31%)	6.19%	10.99%	23.94%	10.84%	9.83%	12.80%	15.09%	17.20%	10.84%
Commercial	(11.08%)	20.11%	10.90%	4.28%	(7.74%)	2.65%	6.40%	2.18%	(1.91%)	(7.74%)
Agriculture	(24.59%)	6.96%	14.23%	71.89%	2.48%	10.17%	21.12%	26.25%	32.72%	2.48%
LT Industry	(9.37%)	4.45%	12.03%	8.76%	1.15%	3.13%	6.52%	7.22%	4.89%	1.15%
HT/EHT Industry	14.34%	8.93%	3.84%	6.45%	2.35%	7.10%	5.36%	4.20%	4.38%	2.35%
Public Lighting	24.65%	(15.57%)	6.19%	20.15%	(12.87%)	3.19%	(1.57%)	3.59%	2.32%	(12.87%)
Public Water Works	173.33%	(18.29%)	20.15%	8.39%	5.44%	25.12%	2.92%	11.15%	6.90%	5.44%
Total	10.72%	8.54%	5.01%	7.39%	2.38%	6.77%	5.81%	4.91%	4.86%	2.38%

The category-wise number of consumers and connected load were projected in Business Plan Order based on the detailed analysis. The Commission at this stage has not revised the projections for number of consumers and connected load approved in Business Plan Order.

Using the appropriate growth rate from the trends observed above, the energy sales have been estimated for the FY 2020-21. For all categories, the growth rate has been applied over the sales estimates of FY 2019-20, as determined in the previous Chapter.

The growth rate adopted and the revised energy sales for each category is tabulated below:

Table 78: Energy Sales (MU)

Category	Growth Rate (CAGR)		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	5 Year CAGR	9.83%	143.31	181.17	165.80
LIG/Kutir Jyoti	Subjective Rate	0.00%	0.10	0.00	0.00
Commercial	4 Year CAGR	6.40%	70.36	63.20	59.19
Agriculture	5 Year CAGR	10.17%	5.70	5.49	5.12
LT Industry	4 Year CAGR	6.52%	233.44	201.33	205.19
HT/EHT Industry	4 Year CAGR	5.36%	2,281.90	2,182.77	2,239.12
Public Lighting	3 Year CAGR	3.59%	11.83	6.89	6.66
Public Water Works	2 Year CAGR	6.90%	5.19	3.11	3.03
Temp. Supply	Subjective Rate	0.00%	6.40	0.00	0.00
Total			**2,758.22**	**2,643.95**	**2,684.12**

The Commission approves the energy sales of 2,684.12 MU in the ARR of the FY 2020-21.

5.4. Inter-State Transmission Loss

Petitioner's submission

The same Inter-State Transmission Loss of 3.66% is considered as approved in the MYT Order.

Commission's Analysis

The Commission has decided to continue with the loss trajectory as specified in the MYT Order for the FY 2020-21.

The table below provides the Inter-State Transmission Loss approved by the Commission.

Table 79: Inter-State transmission loss as approved by the Commission for FY 2020-21 (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Inter-State transmission loss	3.66%	3.66%	3.66%

The Commission approves an Inter-State Transmission Loss of 3.66% in the ARR of the FY 2020-21.

5.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted that it has achieved distribution loss level of 6.19% for the FY 2018-19. The Petitioner has further submitted that reduction in distribution loss involves significant amount of capital expenditure and that it will be EDDD's endeavor to bring the distribution loss level further down in the subsequent years. Accordingly, EDDD proposes to reduce the Distribution losses to 6.00% for FY 2020-21.

Commission's Analysis

As the distribution loss is a controllable factor, the Commission has approved the same distribution loss as approved for FY 2020-21 in the MYT Order. The Petitioner shall be allowed an incentive/disincentive in the true-up Order considering the actual distribution loss achieved by the Petitioner in the year.

The table below provides the Inter-State Distribution Loss approved by the Commission.

Table 80: Intra-State distribution loss as approved by the Commission for FY 2020-21 (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Intra-State distribution loss	6.60%	6.00%	6.60%

The Commission approves the Intra-State distribution loss of 6.60% in the ARR of FY 2020-21.

5.6. Power Purchase Quantum & Cost

Petitioners Submission

For projecting the energy availability for the FY 2020-21 the firm and infirm allocation from various generating stations is considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

Power Purchase Quantum

Daman & Diu has firm and infirm allocations in Central Sector Generating Stations of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), NTPC Sail Power Company Ltd (NSPCL) and Ratnagiri Gas and Power Private Limited (RGPPL).

For projecting the power availability in FY 2020-21, the Petitioner has considered allocation specified in the notification No. WRPC/Comml-I/6/Alloc/2019/11859 dated 26/09/2019 of Western Regional Power Committee. The energy allocation from various generating stations is summarized in table below:

Table 81: Energy Allocation as submitted by the Petitioner (MW)

Name of Plant	Plant Capacity (MW)	Avg. DD Allocation (MW)	Avg. DD Allocation (%)
NTPC Stations			
KSTPP	2,100	49	2.35%
KSTPP-III	500	5	1.03%
VSTPP-I	1,260	13	1.05%
VSTPP-II	1,000	9	0.92%
VSTPP- III	1,000	11	1.12%
VSTPP- IV	1,000	11	1.10%
VSTPS-V	500	7	1.48%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC)	500	70	14.00%
Sipat-I	1,980	22	1.11%
Sipat-II	1,000	10	0.99%
MSTPS-I	1,000	11	1.10%
MOUDA-II	1,320	15	1.13%
SOLAPUR	1320	24	1.81%
LARA	1600	7	0.46%
GADARWARA	800	13	1.65%
Subtotal	**18,194**	**341**	
Eastern Region			
KHSTPP-II	1000	1.30	0.13%
Subtotal	**1000**	**1.3**	
NPCIL			
KAPPS	440	9	1.94%
TAPP 3&4	1080	13	1.22%
Subtotal	**1,520.00**	**22**	
Others			
Ratnagiri	582	38	6.53%
Subtotal	**582**	**38**	
Grand Total	**21,295.59**	**402**	

The availability of power from various sources has been considered as per the following methodology:

- Actual power purchase in first six months of FY 2019-20 and power allocation of 70 MW from NTPC-SAIL Bhilai power plant has been considered while estimating the power availability from this plant during FY 2020-21.

- The EDDD received 47.78 MUs of power from Ratnagiri Gas Power Plant during the first six months of FY 2019-20. Hence, it is expected that EDDD will be getting power from Ratnagiri at the same level for the rest of the FY 2019-20 and therefore 95.57 MUs have been considered from the plant for the FY 2020-21.

- During the FY 2019-20 the EDDD will start getting power form Lara generating station. A capacity of 7.34 MW has been allocated to EDDD from Lara. The same has been considered for FY 2020-21.

- For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account.

- Additionally, EDDD has 70 MW allocations from NSPCL Bhilai power stations. Energy availability from NSPCL Bhilai power stations for FY 2020-21 has been considered by taking 70 MW allocation from the plant.

- Power purchase quantum from the NTPC stations for the FY 2020-21 has been calculated based on the installed capacity of each plant by applying the average PLF as approved by the Commission in MYT Order.

- For gas based generating stations i.e. Kawas (KGPP) and Gandhar (JGPP), the average PLF as approved by the Commission in MYT Order has been taken into account.

- Auxiliary consumption of 7.75% and 2.50% has been considered for estimating the net-generation from coal and gas based generating stations respectively.

- The NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost has been projected. However, the fixed charges have been considered for full allocation.

- For FY 2020-21, the EDDD has considered purchase of non-solar energy of 70 MUs to meet its RPO target through this route.

- To meet the solar obligation for the FY 2019-20 and the FY 2020-21, the department is in the process of purchasing 80 MW power from NTPC, 50 MW from Solar Energy Corporation of India (SECI) and 40 MW from open tender on long term basis (25 years) on Power Purchase Agreement (PPA) basis. Further, the EDDD has an installed capacity of 16.19 MW of solar plants which include 10 MW ground mounted plants and remaining 6.19 MW of rooftop solar plants. It is expected that an additional 27 MW of rooftop solar plant will be added to the existing capacity during the FY 2020-21.

The following table depicts the station wise power purchase quantum as submitted by the Petitioner for the FY 2020-21:

Table 82: Station wise power purchase submitted by Petitioner (MU)

Source	FY 2020-21
NTPC Stations	
KSTPP	354.43
KSTPP-III	36.97
VSTPP-I	88.35

Source	FY 2020-21
VSTPP-II	61.62
VSTPP- III	75.03
VSTPP- IV	73.52
VSTPS-V	49.70
KAWAS	82.19
JGPP	96.46
Sipat-I	156.45
Sipat-II	70.34
MSTPS-I	37.20
MOUDA-II	50.68
KHSTPP-II	8.09
SOLAPUR	117.63
LARA	49.73
GADARWARA	89.29
Subtotal	**1,497.71**
NTPC Bhilai	
Bhilai Unit-I &II(NTPC)	469.51
Subtotal	**469.51**
NPCIL	
KAPPS	48.37
TAPP 3&4	83.41
Subtotal	**131.79**
Others	
Ratnagiri	95.57
Subtotal	**95.57**
Power purchase from Other Sources	
Power purchase from Indian E. Exchange	294.00
UI	0.00
Solar	63.02
Non-Solar (Hydro)	70.00
Solar REC	0.00
Non-Solar REC	0.00
Solar (SECI, NTPC)	282.95
Subtotal	**709.97**
Gross Power Purchase	**2,904.54**
Total Power Purchase	**2,904.54**

Power Purchase Cost:

The cost of purchase from the central generating stations for FY 2020-21 has been estimated based on the following assumptions:

- Fixed cost for NTPC for the FY 2020-21 has been kept at the same level as estimated for the FY 2019-20.
- Variable cost for each NTPC generating stations for the FY 2020-21 has been projected at the same rate as received during the first six months of FY 2019-20.

- For nuclear plants i.e. KAPP and TAPP single part tariff, the actual average variable cost per unit has been considered at the same rate as received during the first six months of FY 2019-20 for projecting the power purchase cost for the FY 2020-21.

- For power purchase from renewable energy sources, the EDDD has considered the purchase of solar power at Rs. 3.00 per unit. For the non-solar power, the EDDD has considered a rate of Rs. 4.48 per unit. Further, the EDDD has considered the purchase of non-solar renewable energy certificates at Rs. 1.00 per unit.

- The average power purchase cost for procurement of power from the energy exchange has been considered at Rs. 3.54/unit.

The Total Power Purchase cost from various sources for the FY 2020-21 is summarized in the Table below:

Table 83: Power Purchase quantum and Cost submitted by Petitioner

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost (INR/kWh)
NTPC Stations					
KSTPP	354.43	23.78	51.55	75.33	2.13
KSTPP-III	36.97	4.55	5.19	9.75	2.64
VSTPP-I	88.35	7.93	16.09	24.02	2.72
VSTPP-II	61.62	4.09	10.65	14.73	2.39
VSTPP- III	75.03	8.39	13.38	21.76	2.90
VSTPP- IV	73.52	12.30	12.61	24.92	3.39
VSTPS-V	49.70	8.74	9.04	17.78	3.58
KAWAS	82.19	19.67	23.15	42.82	5.21
JGPP	96.46	24.56	27.13	51.70	5.36
Sipat-I	156.45	18.93	22.78	41.71	2.67
Sipat-II	70.34	8.77	11.61	20.38	2.90
MSTPS-I	37.20	15.21	11.86	27.07	7.28
MOUDA-II	50.68	16.47	16.09	32.57	3.17
KHSTPP-II	8.09	1.50	1.72	3.22	3.98
SOLAPUR	117.63	29.25	39.79	69.04	3.38
LARA	49.73	0.00	15.96	15.96	3.21
GADARWARA	89.29	12.36	32.43	44.79	3.63
Subtotal	**1497.71**	**216.51**	**321.03**	**537.54**	**3.59**
NTPC Bhilai					
Bhilai Unit-I &II(NTPC)	469.51	81.83	166.35	248.18	5.29
Subtotal	**469.51**	**81.83**	**166.35**	**248.18**	**5.29**
NPCIL					
KAPPS	48.37	0.00	14.28	14.28	2.95
TAPP 3&4	83.41	0.00	24.63	24.63	2.95
Subtotal	**131.79**	**0.00**	**38.91**	**38.91**	**2.95**
Others					
Ratnagiri	95.57	20.14	37.07	57.21	5.99
Subtotal	**95.57**	**20.14**	**37.07**	**57.21**	**5.99**
Power purchase from Other Sources					
Power purchase from Indian E. Exchange	294.00	0.00	104.08	104.08	3.54
UI	0.00	0.00	0.00	0.00	0.00
Solar	63.02	0.00	0.00	0.00	0.00
Non Solar (Hydro)	70.00	0.00	31.36	31.36	4.48
Solar REC	0.00	0.00	0.00	0.00	0.00
Non-Solar REC	0.00	0.00	14.15	14.15	0.00
Solar (SECI, NTPC)	282.95	0.00	84.88	84.88	3.00
Subtotal	**709.97**	**0.00**	**234.47**	**234.47**	**3.30**
Misc. Arrears					
NTPC Rebate					

Source	Units Purchased (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	All Charges Total (INR Cr)	Per Unit Cost (INR/kWh)
Gross Power Purchase	**2,904.54**	**318.48**	**797.83**	**1,116.31**	**3.84**
External Losses					
Total Power Purchase	**2,904.54**	**318.48**	**797.83**	**1,116.31**	**3.84**

Transmission Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. EDDD has a mix of firm and infirm capacity allocations from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Further, EDDD has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission charges for ensuing year. For projecting the PGCIL transmission charges for the FY 2020-21, an escalation of 5% over the estimated transmission charges of FY 2019-20, has been considered in view of the increase in transmission charges.

Table 84: Transmission charges submitted by Petitioner (INR Crore)

Particulars	FY 2021-22
Power Purchase Cost	**1,116.31**
PGCIL CHARGES	125.38
WRLDC	0.62
MSTCL	3.68
Total Power Purchase Cost	**1,245.99**

Commission's Analysis

The Commission for the purpose of estimating the quantum and cost of power purchase for each year has relied on the station wise actual month-wise energy availability for FY 2016-17, FY 2017-18 and FY 2018-19, provisional energy availability for first nine months of FY 2019-20, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for previous years for each station, allocated share to the Petitioner and norms and cost approved in Tariff Orders for Central Generating Stations by CERC.

Accordingly, the source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

5.6.1. Availability of power

Availability of power from NTPC & NTPC-SAIL Bhilai:

- The power purchase quantum from NTPC stations and NSPDCL has been estimated based on the month-wise average of quantum of energy availed during last 3 years and in first nine months of FY 2019-20.
- For Kawas, Gandhar & Solapur power plants, energy availability is considered same as submitted by the petitioner, due to irregular scheduling of power in last three financial years.
- Energy availability from Lara & Gadarwara was started from the FY 2019-20, therefore energy availability has been considered same as submitted by the petitioner.

Availability from NPCIL plants:

- For nuclear plants i.e. KAPP and TAPP, energy availability has been considered same as submitted by the petitioner, due to irregular scheduling of power in last three financial years.

Availability from RGPPL Plant:

- Due to irregular scheduling of power in last three financial years because of non-availability of natural gas, energy availability from RGPPL plant has been considered same as submitted by the petitioner for FY 2020-21.

Availability of power from Open Market

- The energy deficit for the FY 2020-21, as discussed in the section of energy balance has been assumed to be procured from open market.

- No power has been projected under UI for the FY 2020-21.

Availability of power from solar power plant

- The Commission sought status and details of the Petitioner's own generating stations as the energy availability from own generation is projected to increase substantially to 63.02 MU as against 27.78 MU approved in MYT Order. In this regard, the petitioner submitted that they have notified Renewable Energy Policy and according to its First Amendment all the existing as well as upcoming HT/EHT industrial consumers have to install rooftop solar plants having capacity of 5% of their contracted demand. Accordingly, 27 MW of additional capacity of rooftop solar plants shall be added to the present capacity by March 2020. Therefore, it is estimated that during the FY 2020-21, 63.02 MUs shall be generated from rooftop solar plants.

- The Commission considers the same value of 63.02 MUs generated from own/rooftop solar plants in projections of total power purchase quantum for FY 2020-21.

5.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by taking the actual per unit variable cost during the first nine months of FY 2019-20. No escalation has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for FY 2020-21.

Fixed Charges:

- The fixed costs have been determined based on the Tariff Orders issued by CERC for respective Central Generating Stations,

- The Fixed cost has been apportioned on the basis of EDDD's share in each station and average annual plant availability factor achieved during the last five years by the plant.

Other Charges:

- The petitioner has not claimed any other charges in relation to the expense head as above. Hence, such claim having not been made by the petitioner, no other charges have been considered,and the same shall be considered as per actuals during the True-up of each year.

5.6.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the charges determined for APR of FY 2019-20 without any escalation.

5.6.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for FY 2020-21 is shown in the following table:

Table 85: Power Purchase Quantum and Cost Approved by the Commission for FY 2020-21

Source	Units Purchased at generator periphery (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
NTPC					
KSTPS	354.68	23.51	51.89	75.40	2.13
KSTPS 3	42.03	5.03	5.98	11.00	2.62
VSTPP-I	92.79	7.66	16.91	24.57	2.65
VSTPP-II	65.52	4.48	11.33	15.81	2.41
VSTPP- III	85.77	8.24	15.17	23.40	2.73
VSTPP- IV	92.08	12.11	15.86	27.97	3.04
KGPP	82.19	19.25	22.80	42.04	5.12
JGPP	96.46	24.07	26.33	50.40	5.22
Sipat-I	176.59	20.27	26.92	47.19	2.67
Sipat-II	69.73	8.63	11.35	19.97	2.86
Mouda	73.74	14.41	23.47	37.88	5.14
VSTPS-V	60.91	8.65	11.04	19.68	3.23
Mouda 2	86.53	14.89	27.50	42.38	4.90
SLP	117.63	29.25	40.29	69.54	5.91
KHSTPP-II	14.52	1.06	3.10	4.15	2.86
Lara	49.73	0.00	12.66	12.66	2.55
Gadarwara	89.29	12.36	32.33	44.69	5.00
Subtotal - NTPC	**1,650.20**	**213.86**	**354.90**	**568.76**	**3.45**
NSPCL Bhilai	**478.20**	**81.66**	**166.25**	**247.91**	**5.18**
NPCIL					
KAPS	48.37	0.00	12.01	12.01	2.48
TAPP (3 & 4)	83.41	0.00	24.72	24.72	2.96
SUBTOTAL- NPCIL	**131.78**	**0.00**	**36.72**	**36.72**	**2.79**
OTHERS					
RATNAGIRI	95.57	20.14	37.24	57.38	6.00
Subtotal- Others	**95.57**	**20.14**	**37.24**	**57.38**	**6.00**
RPO*					

Source	Units Purchased at generator periphery (MU)	Fixed Charges (INR Cr)	Variable Charges (INR Cr)	Total Charges (INR Cr)	Per Unit Cost (INR/kWh)
Solar (Own Generation)	63.02	0.00	0.00	0.00	0.00
Non-Solar	70.00	0.00	31.36	31.36	4.48
Solar (SECI,NTPC)	282.95	0.00	74.98	74.98	2.65
Solar REC	0.00	0.00	0.00	0.00	0.00
Non-Solar REC	0.00	0.00	36.29	36.29	1.00
Subtotal- Others	**415.97**	**0.00**	**142.63**	**142.63**	**3.43**
Open market purchases	196.23	0.00	66.69	66.69	3.40
Unscheduled Interchange (UI) Over drawl/Under drawl	0.00	0.00	0.00	0.00	0.00
Total	**2,967.94**	**315.66**	**804.43**	**1,120.09**	**3.77**
Transmission Charges					
PGCIL CHARGES				119.40	
OTHER CHARGES				4.10	
Subtotal				**123.50**	
Total Power Purchase Cost	**2,967.94**	**315.66**	**804.43**	**1,243.59**	**4.19**
* Cost for RPO is approved in Section 5.7 & included above					

The Commission approves the quantum of power purchase as 2,967.94 MU at the generator periphery with a total cost of INR 1,243.59 Cr for FY 2020-21.

The APPC has been computed at the UT Periphery excluding the transmission charges and cost of purchase of renewable energy. The same shall be used for the purpose of compensation / payment of surplus power at the end of each settlement period in case of Net-metering consumers by the Petitioner. The Average Power Purchase Cost (APPC) for FY 2020-21 has been determined as provided in the table below:

Table 86: Average Power Purchase Cost (APPC) for FY 2020-21

Particular	FY 2020-21
Total Power Purchase Cost (INR Cr)	1243.59
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	266.13
Net Power Purchase Cost (INR Cr)	**977.46**
Total Power Purchase quantum (MU)	2881.72
Less: Quantum from renewable energy sources (MU)	415.97
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU)	**2465.75**
APPC (Rs/kWh)	**3.96**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.96/ kWh for the FY 2020-21

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner is required to procure power from renewable sources for meeting the RPO. For FY 2020-21, the Petitioner has considered purchase of non-solar energy of 70Mus to meet its RPO target through this route.

The Petitioner submitted that to meet the solar obligation for FY 2020-21, it is in the process of purchasing 80 MW power from NTPC, 50 MW from Solar Energy Corporation of India (SECI) and 40 MW from open tender on long term basis (25 years) on Power Purchase Agreement (PPA) basis. Further, the EDDD has an installed capacity of 16.186 MW of solar plants which include 10 MW ground mounted plants and remaining 6.186 MW of rooftop solar plants. It is expected that an additional 27 MW of rooftop solar plant will be added to the existing capacity during the FY 2019-20.

The RPO requirement for FY 2020-21 as submitted by the Petitioner has been provided in the following table:

Table 87: RPO Plan proposed by the Petitioner (MU)

Particular	FY 2020-21
Sales within State (MU)	**2,643.95**
RPO obligation (%)	**14.10%**
Solar	6.10%
Non-Solar	8.00%
RPO obligation for the year (MU)	**372.80**
Solar	161.28
Non-Solar	211.52
RPO Compliance (Procurement and own generation)	**415.97**
Solar	345.97
Non-Solar	70.00
RPO Compliance (REC certificate purchase)	**141.52**
Solar	0.00
Non-Solar	141.52

Commission's Analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 14.10% of its total consumption (including 6.10% from Solar) from renewable sources for the FY 2020-21.

In the current RPO compliance plan submitted by the Petitioner, the Commission acknowledges the efforts planned to procure more renewables from FY 2020-21 onwards. However, the Commission observes that, though the Petitioner is meeting/surpassing its Solar obligations, it is relying on the REC purchases to meet its Non-Solar purchase obligations. The Commission expects the Petitioner to make all efforts to increase procurement of power from Non-Solar sources.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for the FY 2020-21:

Table 88: RPO targets and compliance plan approved by the Commission for FY 2020-21 (MU)

S. No.	Description	Formulae	FY 2020-21
A	Solar Target		6.10%
B	Non-Solar Target		8.00%
C	**Total RPO Target**	**C=A+B**	**14.10%**
D	**Sales Within UT**		**2684.12**
E	**RPO Obligation for the year**	**E=F+G**	**378.46**
F	Solar	F=D*A	163.73
G	Non-Solar	G=D*B	214.73
H	**Physical RE Purchase**	**H=I+J**	**415.97**
I	Solar		345.97
J	Non-Solar		70.00
K	**REC Purchase**	**K=L+M**	**144.73**
L	Solar		0.00
M	Non-Solar		144.73
N	**Total RPO Compliance for FY 2020-21 (REC+ Physical RE)**	**N=O+P**	**560.70**
O	Solar	O=I+L	345.97
P	Non-Solar	P=J+M	214.73
Q	**Standalone shortfall/(surplus) for FY 2020-21**	**Q=R+S**	**(182.24)**
R	- Solar	R=F-O	**(182.24)**
S	- Non-Solar	S=G-P	0.00
T	**Backlog upto FY 2019-20**	**T=U+V**	**397.24**
U	- Solar		178.78
V	- Non-Solar		218.16
W	**Total Shortfall/(surplus in RPO Compliance for FY 2020-21**	**W=X+Y**	**215.00**
X	Solar	X=R+U	(3.46)
Y	Non-Solar	Y=S+V	218.16

Similar to the approach followed in the APR of FY 2019-20, the Commission has considered the gross energy generated from Solar rooftop plants while approving the RPO compliance for the year. The Commission has considered the cumulative shortfall till FY 2020-21 to be fulfilled by way of REC purchase and has assumed the rate of purchase for Non-Solar REC as INR 1.00/kWh (IEX Floor Price Rate). The same shall be trued-up on actual basis during the True-up.

The cost has already been considered in the total power purchase cost approved by the Commission in the previous section. The compliance and cost towards RPO for FY 2020-21 as approved by the Commission is provided in the following table:

Table 89: Cost towards standalone compliance & Net Shortfall of Renewable Purchase Obligation Approved by the Commission for FY 2020-21 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	0.00	0.00	0.00
2	**Non-Solar (Standalone for FY 2020-21)**	144.73	14.47	1.00
3	**Non-Solar (Net Shortfall)**	218.16	21.82	1.00
	Total	**362.89**	**36.29**	**1.00**

The Commission approves INR 36.29 Cr towards compliance of RPO in the ARR of FY 2020-21.

5.8. Energy Balance

Petitioner's submission

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

Table 90: Energy Balance submitted by Petitioner (MU)

	Particulars	Formulae	FY 2020-21
(a)	Retail Sales		2,643.95
(b)	Open Access Sales		0.00
(c)	Less: Energy Savings		0.00
(d)	**Total Sales**	d = a+b-c	**2,643.95**
(e)	Distribution Loss	e = g-d	168.76
(f)	Distribution Loss (%)	f=e/g	6.00%
(g)	**Energy Required at Periphery**	g = d+e	**2,812.71**
(h)	Sale to common pool consumer/UI Sale		0.75
(i)	Own generation		63.02
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2,748.94**
(k)	Less: Energy Purchased through UI at Periphery		0.00
(l)	Less: Open Access Purchase at Periphery		0.00
(m)	Less: Energy Purchased through Renewable Sources		352.95
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2,397.49**
(o)	Inter-state loss	o=q-n	3.66%
(p)	Inter-state loss (%)	p = o/q	91.08
(q)	**Energy requirement at state periphery from generator end**	q = n+o	2,488.57
(r)	**Total Energy requirement from tied up sources & UI at generator end**	r=q+k+i+m	2,904.54
(s)	**Total Energy requirement in UT including Open Access**	s=r+l	**2,904.54**

Commission's Analysis

Based on the revised estimates of energy sales and Power purchase quantum, the Commission approves the following energy balance:

Table 91: Energy Balance approved by the Commission for FY 2020-21 (MU)

S. No	Particulars	Formulae	Petitioner's Submission	Now Approved
(a)	Retail Sales		2,643.95	2,684.12
(b)	Open Access Sales		0.00	0.00
(c)	Less: Energy Savings		0.00	0.00
(d)	**Total Sales**	d = a+b-c	**2,643.95**	**2,684.12**
(e)	Distribution Loss (%)		6.00%	6.60%
(f)	Distribution Loss in MU	f=g-d	168.76	189.67
(g)	**Energy Required at Periphery**	g=d/(1-e)	**2,812.71**	**2,873.79**
(h)	Sale to common pool consumer/UI Sale		0.75	0.75
(i)	Own generation		63.02	63.02
(j)	**Total energy requirement at state periphery**	j=g+h-i	**2,748.94**	**2,811.52**
(k)	Less: Energy Purchased through UI at Periphery		0.00	0.00
(l)	Less: Open Access Purchase at Periphery		0.00	0.00
(m)	Less: Energy Purchased through Renewable Sources		352.95	352.95
(n)	**Energy requirement at state periphery from tied up sources**	n=j-k-l-m	**2,397.49**	**2,458.57**
(o)	Inter-state loss (%)		3.66%	3.66%
(p)	Inter-state loss	p=q-n	91.08	93.40
(q)	Energy requirement at state periphery from generator end	q= n/(1-o)	**2,488.57**	**2,551.97**
(r)	**Total requirement from Tied-up sources at generator end & UI/Traders/Banking/within State**	r=q+i+k+l +m	**2,904.54**	**2,967.94**
(s)	**Total availability from tied up sources at generator end (MU)**			**2,771.71**
(t)	**Deficit/(surplus)**	**t=r-s**		**196.23**

The Commission approves the Total Energy Requirement at the State/UT Periphery for FY 2020-21 as shown in the table above. The Commission has estimated a deficit of 196.23 MUs for FY 2020-21.

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M).

Regulation 51 of the MYT Regulation, 2018 states the following:

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

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

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

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

c) Repairs and Maintenance expenses.

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

51.4 O&M expenses for the 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 (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.

5.9.1. Employee Expenses

Petitioner's submission

The employee expenses comprise of basic salary, dearness allowances, medical cost, leave travel allowances, honorarium, etc. No cost related to leave salary contribution and pension of the employee is projected and the Commission is requested to consider the same at the time of True-up on actual basis.

Employee expenses have been estimated on normative basis, in accordance with the MYT Regulations and the methodology prescribed by the Commission in the MYT Order by considering the average CPI for last 3 years as 4.22%.

The table below provides the employee expenses projected for FY 2020-21 by the Petitioner:

Table 92: Employee Expenses submitted by Petitioner (INR Crore)

Particular	FY 2020-21
Employee Expenses	**17.78**

Commission's Analysis

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.

Regulation 6 provides that the Commission may change the values for Base Year considering the actual figures from audited accounts. As the Commission in this Order has carried out the truing up for FY 2018-19 based on audited accounts, the Commission has considered the actual employee expenses for FY 2018-19 as base expenses and applied the CPI Inflation for approving the revised employee expenses for FY 2020-21.

The CPI Inflation has been computed as follows:

Table 93: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2016-17	275.92	4.12%	
2017-18	284.58	3.14%	
2018-19	299.92	5.39%	
		CPI Inflation	**4.22%**

Accordingly, the employee expenses approved by the Commission for the FY 2020-21 have been provided in the following table:

Table 94: Employee Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Employee Expenses for FY 2018-19	Base Year (FY 2019-20)	FY 2020-21
1	Employee Expenses	16.37		
2	Growth in number of employees (Gn)		0.74%	0.37%
3	CPI Inflation for preceding three years (CPI)		4.22%	4.22%
	Employee Expenses	**16.37**	**17.19**	**17.98**

The Commission approves Employee Expenses of INR 17.98 Cr FY 2020-21.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has determined the A&G expenses for FY 2020-21 based on the norms specified in the MYT Regulations, 2018. The A&G expenses for FY 2018-19 have been taken as base. The average increase in Consumer Price Index (CPI) has been considered same as taken while projecting the employee expenses. The table below provides the A&G expenses projected for FY 2020-21.

Table 95: A&G submitted by Petitioner (INR Crore)

Particular	FY 2020-21
Projected A&G expenses	**10.83**

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has considered the trued-up A&G expenses for FY 2018-19 as Base Year expenses and escalated the same with CPI Inflation for approving the revised trajectory of A&G expenses for FY 2020-21. The A&G expenses approved by the Commission for FY 2020-21 have been provided in the following table:

Table 96: A&G Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	A&G Expenses For FY 2018-19	Base Year (FY 2019-20)	FY 2020-21
1	A&G Expenses	7.91		
2	CPI Inflation		4.22%	4.22%
3	**A&G Expenses**	**7.91**	**8.24**	**8.59**

The Commission approves the Administrative & General (A&G) expenses of INR 8.59 Cr for FY 2020-21.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses based on the norms specified in the MYT Regulations, 2018. The average increase in Wholesale Price Index (WPI) has been calculated based on the increase in the Wholesale Price Index (WPI) for FY 2016-17, FY 2017-18 & FY 2018-19 as 2.97%. The table below provides the R&M expenses proposed for FY 2020-21:

Table 97: R&M expenses submitted by Petitioner (INR Crore)

Particular	FY 2020-21
Projected R&M Expenses	**19.67**

Commission's Analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for FY 2016-17, FY 2017-18 and FY 2018-19 as per audited accounts, averaged for three years. The 'K' factor has been computed as follows:

Table 98: Computation of 'K' factor

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	17.50	14.83	16.23
2	Opening GFA	468.63	532.34	587.65
3	K Factor	3.73%	2.79%	2.76%
	K Factor Approved (Average of 3 years)			**3.09%**

The 'K' factor calculated above is multiplied with the opening GFA approved for (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for FY 2020-21.

The WPI Inflation has been computed as follows:

Table 99: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2016-17	111.62	1.73%	
2017-18	114.88	2.92%	
2018-19	119.83	4.31%	
		WPI Inflation	**2.99%**

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

Table 100: R&M Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA_{n-1}) of previous year	617.45
2	K factor approved (K)	3.09%
3	WPI Inflation	2.99%
	R&M Expenses = (K x (GFA $_{n-1}$) x (1+WPI$_{inflation}$)	**19.67**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 19.67 Cr for FY 2020-21.

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

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

Table 101: O&M Expenses approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Employee Expenses	18.43	17.78	17.98
2	Administrative & General Expenses (A&G)	7.44	10.83	8.59
3	Repair & Maintenance Expenses	19.93	19.67	19.67
4	**Total Operation & Maintenance Expenses**	**45.80**	**48.28**	**46.24**

5.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has requested the Commission to approve the capital expenditure and capitalization as given in the following Table:

Table 102: Capital Expenditure and Capitalisation proposed by the Petitioner

S. No.	Particulars	Total Scheme Amount
1	Capital Expenditure	95.00
2	Capitalisation	38.00

Commission's Analysis

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the scheme wise Detailed Project Reports (DPR) and the copy of the Technical Sanctions accorded to each scheme. The Petitioner in response, submitted the supporting documents w.r.t the scheme wise capital expenditure and capitalisation along with the copy of the technical sanctions. Against an approved capital expenditure and capitalisation of INR 53.10 Cr and INR 64.10 Cr respectively in the Business Plan Order, the Petitioner has envisaged a capital expenditure and capitalisation of INR 95.00 Cr and INR 38.00 Cr respectively. Based on the details submitted by the Petitioner, the Commission at this stage approves the Capital Expenditure and Capitalisation proposed by the Petitioner, which shall be subject to truing up based on actuals.

Table 103: Capital Expenditure and Capitalisation approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	53.10	95.00	95.00
2	Capitalisation	64.10	38.00	38.00

The Commission approves capital expenditure of INR 95.00 Cr and capitalisation of INR 38.00 Cr in the ARR of the FY 2020-21

5.11. Capital Structure

Petitioner's Submission

The Petitioner, as per the revised submission, submitted that capitalisation of Rs 38.00 Cr shall be undertaken in FY 2020-21. Further, the entire capital deployment at the ED DD shall be through equity.

Commission's Analysis

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

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

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

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

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

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

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

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

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

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, thus equity higher than 30% of capitalisation has been considered as normative loan. The opening Gross Fixed Assets for FY 2020-21 has been considered as the closing Gross Fixed Assets approved in the APR of FY 2019-20. Further, the values of opening loan and equity has been considered as closing loan and equity approved in APR of FY 2019-20. The loan and equity additions have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year. In accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for the FY 2020-21 as detailed as follows:

Table 104: GFA addition approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	609.68	617.45	616.88
2	Addition During FY	64.10	38.00	38.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	**673.78**	**655.45**	**654.88**

Table 105: Normative Loan addition approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	124.99	130.06	129.45
2	Add: Normative Loan During the year	44.87	26.60	26.60
3	Less: Normative Repayment equivalent to Depreciation	21.92	22.05	21.96
4	Closing Normative Loan	**147.94**	**134.61**	**134.09**

Table 106: Normative Equity addition approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	84.84	87.18	87.18
2	Additions on account of new capitalisation	19.23	11.40	11.40
3	Closing Equity	**104.07**	**98.58**	**98.58**

5.12. Depreciation

Petitioner's Submission

The Petitioner has determined the depreciation on normative basis while considering the depreciation rate as per MYT Regulations, 2018.

The following table provides the depreciation for FY 2020-21 as submitted by the Petitioner.

Table 107: Depreciation as submitted by the Petitioner (INR Crore)

S. No.	Particulars	FY 20-21
1	Opening GFA	617.45
2	Additions	38.00
3	Closing GFA	655.45
4	Average GFA	636.45
5	Depreciation Amount	22.05

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 based on 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 specified in MYT Regulations, 2018, provided in the table below:

Table 108: Depreciation Rate (%)

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

The opening and closing GFA has been considered as approved in the *Section 5.11: Capital Structure* of this Order, adjusted by value of assets that have achieved 90% depreciation. 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 2018-19.

The following table provides the calculation of deprecation for FY 2020-21.

Table 109: Depreciation approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA for FY 2019-20 (a)	609.68	617.45	617.45
2	Less: Assets depreciated upto 90% till FY 2017-18 (b)	0.00	0.00	0.57
3	Revised opening Gross Fixed Assets (a-b)	609.68	617.45	616.88
4	Addition During FY	64.10	38.00	38.00
5	Adjustment/Retirement During FY	0.00	0.00	0.00

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
6	Closing Gross Fixed Assets	673.78	655.45	654.88
7	Average Gross Fixed Assets	641.73	636.45	635.88
8	Effective Rate of Depreciation (%)	3.42%	3.46%	3.45%
9	**Depreciation**	**21.92**	**22.05**	**21.96**

The Commission approves depreciation of Rs 21.96 Cr in the ARR of the FY 2020-21.

5.13. Interest on Loan

Petitioner's submission

The Interest on Loan is determined on normative basis according to the MYT Regulations, 2018. The opening balance of loans for the FY 2020-21 is considered the same as the closing balance of the FY 2019-20. The normative loan addition in the FY 2020-21 has been computed as 70% of the capitalisation proposed during the FY 2019-20.

The repayment of loans has been considered equal to the depreciation during the FY 2020-21. Further the rate of interest has been considered at 9.55% equivalent to 1-year SBI PLF plus 100 basis points.

<u>Commission's Analysis</u>

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

28. Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission has considered the values for opening loan and loan addition as approved in the *Section 5.11: Capital Structure* of this Order. Further, the repayment is considered same as depreciation approved for the respective year. In absence of any actual loans, the Commission has considered the 1-year SBI MCLR as on January 10, 2019 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 110: Interest on loan approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	124.99	130.06	129.45
2	Add: Normative Loan During the year	44.87	26.60	26.60

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
3	Less: Normative Repayment equal to Depreciation	21.92	22.05	21.96
4	Closing Normative Loan	147.94	134.61	134.09
5	Average Normative Loan	136.47	132.34	131.77
6	Rate of Interest (%)	9.55%	9.55%	8.85%
	Interest on Loan	**13.03**	**12.64**	**11.66**

The Commission approves Interest on Loan as INR 11.66 Cr in the ARR of the FY 2020-21.

5.14. Return on Equity (RoE)

Petitioner's submission

As per the JERC (Multi Year Distribution Tariff) Regulations, 2018, EDDD is entitled for a Return on Equity (RoE). The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following:

"27.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.
27.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 26 for the assets put to use, at the rate of sixteen (16) per cent per annum."

The Petitioner has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Petitioner has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business.

The equity component has been determined in accordance with Regulation 26 of the MYT Regulations. The following table provides the ROE for the FY 2020-21 submitted by the Petitioner:

Table 111: Return on Equity as submitted by the Petitioner (INR Crore)

S. No	Return on Equity	FY 2020-21
1	Opening Equity	87.18
2	Addition in equity on account of new capitalization	11.40
3	**Closing Equity**	**98.58**
4	**Average Equity**	**92.88**
5	Average Equity (Wires Business)	83.59
6	Average Equity (Retail Supply Business) Business	9.29
7	Return on Equity for Wires Business (%)	15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%
9	Return on Equity for Wires Business	12.96
10	Return on Equity for Retail Supply Business	1.49
11	**Return on Equity**	**14.44**

Commission's Analysis

The Regulation 27.2 and 27.3 of the MYT Regulations, 2018 stipulates the following

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

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

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed above in *Section 5.11: Capital Structure*. The following table provides the Return on Equity approved for FY 2020-21.

Table 112: RoE approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	84.84	87.18	87.18
2	Additions on account of new capitalisation	19.23	11.40	11.40
3	Closing Equity	104.07	98.58	98.58
4	Average Equity	94.46	92.88	92.88
5	Average Equity (Wires Business)	85.01	83.59	83.59
6	Average Equity (Retail Supply Business) Business)	9.45	9.29	9.29
7	Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
8	Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
9	Return on Equity for Wires Business	13.18	12.96	12.96
10	Return on Equity for Retail Supply Business	1.51	1.49	1.49
11	**Total Return on Equity**	**14.69**	**14.44**	**14.44**

The Commission approves Return on Equity of INR 14.44 Cr in the ARR of the FY 2020-21.

5.15. Interest on Security Deposits

Petitioner's submission

A provision of Rs 4.08 Cr has been made towards payment of interest on consumer security deposits, which is the same as in the FY 2019-20.

Commission's Analysis

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

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

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. The Commission has not considered any addition in the consumer security deposits for FY 2020-21. The rate of interest has been considered equivalent to RBI Bank rate as on April 1, 2018 in accordance with the MYT Regulations 2018. The same shall be trued-up on the actual basis. The same is shown in the table below.

Table 113: Interest on Security Deposits approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Interest on Security Deposit**	**4.24**	**4.08**	**4.24**

The Commission approves Interest on Security Deposit as INR 4.24 Cr n the ARR for the FY 2020-21.

5.16. 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 has been computed considering the following

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

A rate of interest of 10.55% has been considered on the working capital requirement, being the 1-year SBI MCLR as on 1st April of the year plus 200 basis points in line with the MYT Regulations, 2018. The Interest on Working Capital submitted by Petitioner is given in Table below:

Table 114: Interest on Working Capital submitted by the Petitioner (INR Crore)

Particular	FY 2020-21
Two months receivables	180.89
Add: One Month O&M Expenses	4.02
Add: 40% of repair and maintenance expenses for one month	0.66
Less: Consumer Security Deposit excl. BG/FDR	80.46
Total Working after deduction of Security Deposit	**105.10**
Interest Rate (%)	10.55%
Interest on Working Capital	**11.09**

Commission's Analysis

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

52. Norms of Working Capital for Retail Supply Business

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

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

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

(c) Receivables equivalent to two (2) months of the expected revenue from 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."

In accordance with the MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for FY 2020-21. The interest on working capital has been considered as SBI MCLR rate as on April 1, 2019 plus 200 basis points (8.55%+2% = 10.55%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 115: Interest on Working Capital approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expense for 1 month	3.82	4.02	3.85
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.66	0.66	0.66
3	Receivables equivalent to two (2) months of the expected revenue requirement	222.04	180.89	219.36
4	Less: Amount, held as security deposits	67.82	80.46	67.82
5	**Net Working Capital**	**158.70**	**105.11**	**156.05**
6	Rate of Interest (%)	10.15%	10.55%	10.55%
7	**Interest on Working Capital**	**16.11**	**11.09**	**16.46**

The Commission approves the Interest on Working Capital of INR 16.46 Cr in the ARR of the FY 2020-21.

5.17. Income Tax

Petitioner's submission

No 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.

For the FY 2020-21 no income tax liability is computed and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 116: Income Tax approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	0.00	0.00

5.18. 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 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 realized from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realized."

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

5.19. Non-Tariff Income

Petitioner's submission

For projecting the non-tariff income for the FY 2020-21, an increase of 5% p.a. over the estimated non-tariff income for the FY 2019-20 has been considered.

Commission's Analysis

The 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 sought details regarding Non-Tariff income claimed by the petitioner of INR 10.91 Cr against INR 20.75 Cr as approved in MYT order for FY 2020-21. In response, the petitioner submitted that as per the MYT Regulations, 2018 the delayed payment surcharge is not to be considered as the non-tariff income and hence the non-tariff income has reduced.

The Commission agrees with the Petitioner that as per MYT Regulations, 2018, Delayed Payment Surcharge is not to be considered as Non-Tariff Income. Hence, for the ARR of the FY 2020-21, the Commission has considered Non-Tariff Income, same as submitted by the petitioner. The same shall be subject to True-up on actual basis. The NTI approved in the MYT Order, Petitioner's submission and now approved by the Commission is shown in the table below:

Table 117: Non -tariff Income approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Non- Tariff Income**	**20.76**	**10.91**	**10.91**

The Commission approves Non-Tariff Income of INR 10.91 Cr in the ARR of the FY 2020-21.

5.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement of Rs 1,347.43 Cr after adjusting the Non -Tariff Income for the FY 2020-21.

Commission's Analysis

On the basis of the detailed analysis of the cost parameters of the ARR the revenue requirement for the FY 2020-21 is approved as provided in the following table:

Table 118: Aggregate Revenue Requirement approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved	Reference Table
1	Power Purchase Cost inclusive of cost towards RPO	1,237.19	1,245.99	1,243.59	*Table 85*
2	Operation & Maintenance Expenses	45.80	48.28	46.24	*Table 101*
3	Depreciation	21.92	22.05	21.96	*Table 109*
4	Interest and Finance charges	13.03	12.64	11.66	*Table 110*
5	Interest on Working Capital	16.11	11.09	16.46	*Table 115*
6	Return on Equity	14.69	14.44	14.44	*Table 112*
7	Provision for Bad Debt	0.00	0.00	0.00	
8	Interest on Security Deposit	4.24	4.08	4.24	*Table 113*
9	Income Tax	0.00	0.00	0.00	*Table 116*
10	**Total Revenue Requirement**	**1,352.98**	**1,358.57**	**1,358.60**	
11	Less: Non-Tariff Income	20.75	10.91	10.91	*Table 117*
12	Less: Revenue from sale of surplus power	0.00	0.22	0.00	
13	**Net Revenue Requirement**	**1,332.23**	**1,347.44**	**1,347.69**	

The Commission approves net ARR of INR 1,347.69 Cr for the FY 2020-21.

5.21. Revenue at existing Retail Tariff

Petitioner's submission

The revenue from sale of power at existing tariff of Rs 1,085.27 Cr is based on the projected energy sales, connected load and number of consumers. The revenue for FY 2020-21 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2019-20.

Commission's Analysis

The category wise/ subcategory wise and slab wise revenue at retail tariff is determined as per the applicable tariff rates. The revenue from demand charges and the energy charges has been projected for each category/ subcategory and slab. The category/ subcategory/ slab wise revenue as computed by the Commission for the FY 2020-21 has been shown in the table below:

Table 119: Revenue at existing tariff computed by the Commission for FY 2020-21 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
1	**DOMESTIC SUPPLY (DS)**		**1.48**	**30.72**	**32.20**	**1.94**
1	0-100 units	Single	0.38	5.47	5.85	**1.28**
2	101-200 units	Single	0.18	3.95	4.12	**1.78**
3	201-400 units	Single	0.27	3.67	3.94	**2.26**
4	401 and above units	Single	0.23	6.85	7.08	**2.53**
5	0-100 units	Three	0.15	1.03	1.18	**1.37**
6	101-200 units	Three	0.07	1.13	1.20	**1.80**
7	201-400 units	Three	0.11	1.66	1.76	**2.23**
8	401 and above units	Three	0.09	6.97	7.06	**2.48**
2	**Low Income Group**					
1	Low Income Group		0.00	0.00	0.00	0.00
3	**COMMERCIAL / NON-DOMESTIC**		**0.30**	**19.48**	**19.78**	**3.34**
1	0-100 units	Single	0.09	1.18	1.27	**2.69**
2	101 Units and Above	Single	0.09	5.22	5.31	**3.46**
3	0-100 units	Three	0.06	0.62	0.68	**2.74**
4	101 Units and Above	Three	0.06	12.46	12.52	**3.42**
4	**AGRICULTURAL**		**0.00**	**0.34**	**0.34**	**0.66**
1	For sanctioned load up to 10 HP		0.00	0.32	0.32	0.65
2	Beyond 10 HP and up to 99 HP sanctioned load		0.00	0.02	0.02	0.90
5	**LT INDUSTRY**		**3.98**	**74.84**	**78.82**	**3.84**
1	LT Industry		3.98	74.84	78.82	3.84
6	**INDUSTRY**		**151.17**	**822.45**	**973.62**	**4.35**
1	HT General		146.25	799.03	945.28	4.35
2	HT Industrial (Ferro)		4.92	23.41	28.34	4.43
7	**PUBLIC LIGHTING (PL)**		**0.00**	**2.67**	**2.67**	**4.00**
8	**PUBLIC WATER WORKS**		**0.03**	**1.09**	**1.12**	**3.69**

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)
9	**TEMPORARY SUPPLY**		**0.00**	**0.00**	**0.00**	**0.00**
1	Temporary Supply		0.00	0.00	0.00	0.00
	TOTAL		**156.96**	**951.58**	**1,108.54**	**4.13**

The Commission has determined revenue from sale of power at existing tariff as INR 1,108.54 Cr in FY 2020-21.

5.22. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the Petitioner has submitted a standalone revenue gap of Rs 262.17 Cr for 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 120: Standalone Revenue Gap/ (Surplus) approved at existing tariff (INR Crore)

S. No	Particulars	Petitioners submission	Now Approved	Reference Table
1	Annual Revenue Requirement	1,347.44	1,347.69	*Table **118***
2	Revenue from sale of power	1,085.27	1,108.54	*Table **119***
3	**Revenue Gap/(Surplus)**	**262.17**	**239.15**	

The standalone revenue gap at existing retail tariff is INR 239.15 Cr for FY 2020-21. The estimated gap is considered while determining the retail tariff for FY 2020-21, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for FY 2020-21 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 interest of consumers, the supply of electricity to all areas and the rationalization 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 EDDD's submissions as well as the Public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. Since the majority of the energy sales within EDDD's jurisdiction is of industrial nature, the Commission has attempted to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society while keeping a balance that the subsidising consumers category should not be burdened beyond a point. The Commission has also tried to ensure regulatory consistency for all stakeholders and financial sustainability of the Petitioner.

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

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 MYT Regulations, 2018 states the following:

"

67. Determination of Tariff

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

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

67.3 The Commission shall endeavor 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."

6.3. Cumulative Revenue Gap/ Surplus at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a cumulative revenue gap of INR 306.87 Cr till FY 2020-21. The standalone and consolidated revenue Gap/(Surplus) as submitted by the Petitioner has been tabulated below:

Table 121: Standalone Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	1,115.49	1,329.59	1,347.43
Revenue on existing tariff (Including OA charges)	939.45	1,154.01	1,085.27
Gap/(Surplus) for the year	176.04	175.58	262.16

Table 122: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

Particular	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap/(Surplus)	(306.92)	(130.87)	44.70
Add: Gap/(Surplus) during the year	176.04	175.58	262.17
Closing Gap/(Surplus)	**(130.87)**	**44.70**	**(306.87)**
Additional Revenue at Proposed Tariff			308.46
Total Gap/(Surplus)			**(1.60)**

Commission's Analysis

Regulation 8.4 of the MYT Regulation, 2014 stipulates the following:

"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."

The Commission observes that the Petitioner has not taken any loan till date. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the Stakeholders while determining the tariff. Keeping in mind all of the above, the Commission has considered the Carrying Cost @ 8.00% which is the opportunity cost for the Petitioner for FY 2018-19.

Further, Regulation 11.5 (c) of the MYT Regulation, 2018 stipulates the following:

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

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

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

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

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

Since the Petitioner has not borrowed any loan, therefore the Commission allows Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR plus 100 basis points for FY 2019-20 and FY 2020-21.

Accordingly, the Commission determines the standalone revenue Gap/(Surplus) for each year and likewise taking into account the previous year's Gap/(Surplus), determines the cumulative revenue Gap/ (Surplus) at the end of FY 2020-21 as shown in the table as follows:

Table 123: Standalone Revenue Gap/ (Surplus) determined by the Commission at existing tariff (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	**1,119.64**	**1,302.50**	**1,347.69**
Revenue from Retail Sales at Existing Tariff	939.45	1,046.92	1,108.54
Revenue from FPPCA	0.00	119.06	0.00
Total Revenue	**939.45**	**1,165.98**	**1,108.54**
Standalone Gap/(Surplus) for the year	**180.19**	**136.52**	**239.15**

Table 124: Consolidated Revenue Gap/ (Surplus) determined by the Commission at existing tariff (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap/(Surplus)	(306.92)	(144.07)	(14.79)
Addition Gap/(Surplus) due to standalone year	180.19	136.52	239.15
Closing Gap/(Surplus)	(126.73)	(7.55)	224.36
Average Gap/(Surplus)	(216.82)	(75.81)	104.78
Rate of Interest	8.00%	9.55%	8.85%
Carrying cost	(17.35)	(7.24)	9.27
Closing Gap/ (Surplus)	**(144.07)**	**(14.79)**	**233.63**

The Commission determines a cumulative revenue gap of INR 233.63 Cr till FY 2020-21 at existing tariff.

6.4. Treatment of the cumulative Gap/ Surplus and Tariff Design

As derived from above, the resultant cumulative revenue gap is INR 233.63 Cr. In view of this gap, the Commission has made some modifications in the existing tariff schedule. The individual approach adopted and the applicability of the same has been discussed in the following sections.

6.4.1. Designing of Tariff

Petitioner's Submission

1. The Petitioner has proposed to increase Fixed charges for LT Industry by INR 25/HP/month and HT Industry by INR 60/kVA/month (General Industry) & by INR 75/kVA/month (Ferro Metallurgical).
2. The Petitioner also proposed to increase Energy charges of LT-D/Domestic (beyond 401 units) by INR 0.45/kWh, LT-C/Commercial (beyond 100 units) by INR 0.50/kWh, HT commercial by INR 0.60/kVAh, LT Industry by INR 0.80/kVAh, HT industry by INR 1.05/kVAh, resulting in an additional revenue of INR 308.46 Cr in FY 2020-21.
3. The Petitioner has proposed to add a new category of 220 kV in FY 2020-21 and also proposed Energy and Fixed charges as provided in table given below.

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 125: Retail tariff proposed by the Petitioner for FY 2020-21

S. No.	Category	Existing (FY 2019-20)		Proposed (FY 2020-21)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
1	0 to 100 Units	20 INR/Con/Month (single Phase) 45 INR/Con/Month (Three Phase)	1.20 INR/kWh	20 INR/Con/Month (single Phase) 45 INR/Con/Month (Three Phase)	1.20 INR/kWh
2	101 to 200 Units		1.70 INR/kWh		1.70 INR/kWh
3	201 to 400 Units		2.10 INR/kWh		2.10 INR/kWh
4	Beyond 401 Units		2.45 INR/kWh		2.90 INR/kWh
2	**Low Income Group**	INR 10/Con/month		INR 10/Con /month	
3	**LT-C/Commercial**				
1	1st 100 Units	25 INR/Con/Month (single Phase) 50 INR/Con/Month (Three Phase)	2.50 INR/kWh	25 INR/Con/Month (single Phase) 50 INR/Con/Month (Three Phase)	2.50 INR/kWh
2	Beyond 100 Units		3.40 INR/kWh		3.90 INR/kWh
4	**HT Commercial**	INR 100/kVA/month	3.60 INR/kVAh	INR 100/kVA/month	4.20 INR/kVAh
5	**LT- Ag/ Agriculture**				
1	For sanctioned load up to 10 HP		0.65 INR/kWh		0.65 INR/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		0.90 INR/kWh		0.90 INR/kWh

S. No.	Category	Existing (FY 2019-20)		Proposed (FY 2020-21)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
6	**LT-PL/Public Lighting**		4.00 INR/kWh		4.00 INR/kWh
7	**LT-Public Water Works**	INR 25/HP/month	3.60 INR/kWh	INR 25/HP/month	3.60 INR/kWh
8	**LT Industry**	INR 25/HP/month	3.10 INR/kVAh	INR 25/HP/month	3.90 INR/kVAh
9	**HT**				
1	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA	INR 240/kVA/month	3.60 INR/ kVAh	INR 300/kVA/month	4.65 INR/ kVAh
2	HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)	INR 425/kVA/month	3.55 INR/ kVAh	INR 500/kVA/month	4.60 INR/ kVAh
10	**Hoardings/Sign Boards**	INR 100/kVA/month	6.20 INR/kWh	INR 100/kVA/month	6.20 INR/kWh
11	**220kV**	-	-	INR 350/kVA/month	4.60/kVAh
12	**EV Charging Station**	100 INR/Con/month	4.00 INR/kWh	INR 100/kVA/month	4.00 INR/kWh

<u>Commission's Analysis</u>

As discussed above, the Commission has determined the retail tariff for 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. The Commission has made every effort to rationalize the tariffs so that they gradually reflect the true cost to service a category of consumer in accordance with the provisions of the Act. Accordingly, the Commission has approved relatively higher percentage increase in tariff for the cross-subsidized categories than the cross-subsidizing categories.
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 subsidize 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 used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply 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 does not indicate the costs incurred by consumers at different voltage levels using different assets of the network. Therefore, it does not 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 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 EDDD is to accurately determine the cost of supply is to attempt to determine Cost of Supply at category level. The Commission notes that states like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and EDDD 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 EDDD 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 is 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.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, the Commission has determined and restructured the Retail Tariff applicable for FY 2020-21 as per the following:

1. On account of the projected standalone revenue gap during FY 2020-21 at existing tariff, the Commission has decided to increase the tariff by way of increasing the Energy Charges of all the consumers categories except EV Charging Station and hoarding/signboards categories. The Commission has also decided to increase the Fixed Charges of few categories including Low Income Group, LT Industrial and HT Industrial. Details regarding the increase in tariff by categories as shown in ***Table 126***.

2. Further, the Commission has not considered the Petitioners submission for creation of a new category for Industrial consumers connected at 220 kV and above, as the same shall lead to increase in number of tariff categories, thereby making it complicated to comprehend, which is also against the principle laid down in the Tariff Policy, 2016.

3. The Commission has decided to continue the reduction of the Fixed Charges by 25% in the lean season from May to August to provide relief to the Fishery Industry as approved by the Commission in its Order dated May 20,2019.

6.4.2. Approved Final Tariff Schedule:

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

Table 126: Existing and Approved tariff by the Commission for FY 2020-21

S. No.	Category	Existing (FY 2019-20)		Approved (FY 2020-21)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
1	0 to 100 Units	20 INR/Con/Month (single Phase), 45 INR/Con/Month (Three Phase)	1.20 INR/kWh	20 INR/Con/Month (single Phase), 45 INR/Con/Month (Three Phase)	1.40 INR/kWh
2	101 to 200 Units		1.70 INR/kWh		2.00 INR/kWh
3	201 to 400 Units		2.10 INR/kWh		2.50 INR/kWh
4	Beyond 401 Units		2.45 INR/kWh		3.00 INR/kWh
2	**Low Income Group**	10 INR/Con/month		15 INR/Con/month	
3	**LT-C/Commercial**				
1	1st 100 Units	25 INR/Con/Month (single Phase), 50 INR/Con/Month (Three Phase)	2.50 INR/kWh	25 INR/Con/Month (single Phase), 50 INR/Con/Month (Three Phase)	3.00 INR/kWh
2	Beyond 100 Units		3.40 INR/kWh		4.05 INR/kWh
4	**HT Commercial**	100 INR/kVA/month	3.60 INR/kVAh	100 INR/kVA/month	4.20 INR/kVAh
5	**LT- Ag/ Agriculture**				
1	For sanctioned load up to 10 HP		0.65 INR/kWh		0.75 INR/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		0.90 INR/kWh		1.05 INR/kWh
6	**LT-PL/Public Lighting**		4.00 INR/kWh		4.50 INR/kWh
7	**LT-Public Water Works**	25 INR/HP/month	3.60 INR/kWh	25 INR/HP/month	4.10 INR/kWh
8	**LT Industry**	25 INR/HP/month	3.10 INR/kVAh	40 INR/HP/month	3.60 INR/kVAh
9	**HT**				
1	HTC General Industrial / Motive Power 11KV or 66KV having Contract Demand above 100KVA	240 INR/kVA/month	3.60 INR/ kVAh	315 INR/kVA/month	4.20 INR/ kVAh
2	HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel	425 INR/kVA/month	3.55 INR/ kVAh	505 INR/kVA/month	4.15 INR/ kVAh

S. No.	Category	Existing (FY 2019-20)		Approved (FY 2020-21)	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
	Rerolling Power Intensive)				
10	**Hoardings/Sign Boards**	100 INR/kVA/month	6.20 INR/kWh	100 INR/kVA/month	6.70 INR/kWh
11	**EV Charging Station**	100 INR/kVA/month	4.00 INR/kWh	-	4.50 INR/kWh

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

Based on the retail tariff approved above, the revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station and HT-Commercial categories due to unavailability of requisite data. The Commission as of now approves the k factor for the categories as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under this category.

Table 127: Revenue from approved retail tariff determined by the Commission for FY 2020-21 (INR Crore)

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)	k-Factor
1	**DOMESTIC SUPPLY (DS)**		**1.48**	**36.77**	**38.25**	**2.31**	**0.47**
(i)	0-100 units	Single	0.38	6.36	6.74	1.48	0.30
(ii)	101-200 units	Single	0.18	4.65	4.82	2.08	0.42
(iii)	201-400 units	Single	0.27	4.37	4.64	2.65	0.54
(iv)	401 and above units	Single	0.23	8.37	8.60	3.08	0.63
(v)	0-100 units	Three	0.15	1.20	1.35	1.57	0.32
(vi)	101-200 units	Three	0.07	1.33	1.40	2.10	0.43
(vii)	201-400 units	Three	0.11	1.98	2.08	2.64	0.54
(viii)	401 and above units	Three	0.09	8.53	8.62	3.03	0.62
2	**Low Income Group**						
(i)	Low Income Group		**0.00**	**0.00**	**0.00**	**0.00**	**-**
3	**COMMERCIAL / NON-DOMESTIC**		**0.30**	**23.23**	**23.53**	**3.98**	**0.81**
(i)	0-100 units	Single	0.09	1.42	1.51	**3.19**	**0.65**
(ii)	101 Units and Above	Single	0.09	6.21	6.30	**4.11**	**0.84**
(iii)	0-100 units	Three	0.06	0.75	0.81	**3.24**	**0.66**
(iv)	101 Units and Above	Three	0.06	14.85	14.91	**4.07**	**0.83**
4	**HT COMMERCIAL**		**0.00**	**0.00**	**0.00**	**0.00**	**1.00**
5	**AGRICULTURAL**		**0.00**	**0.39**	**0.39**	**0.77**	**0.16**
(i)	For sanctioned load up to 10 HP		0.00	0.37	0.37	0.75	0.15
(ii)	Beyond 10 HP and up to 99 HP sanctioned load		0.00	0.02	0.02	1.05	0.21
6	**LT INDUSTRY**		**6.37**	**86.79**	**93.16**	**4.54**	**0.93**
(i)	LT Industry		6.37	86.79	93.16	4.54	0.93

S. No	Category	Phase	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/unit)	k-Factor
7	**INDUSTRY**		**197.81**	**958.75**	**1156.56**	**5.17**	**1.05**
(i)	HT General		191.95	931.37	1123.33	5.16	1.05
(ii)	HT Industrial (Ferro)		5.85	27.38	32.23	5.19	1.06
8	**PUBLIC LIGHTING (PL)**		**0.00**	**3.00**	**3.00**	**4.50**	**0.92**
9	**PUBLIC WATER WORKS**		**0.03**	**1.24**	**1.27**	**4.19**	**0.85**
10	**HOARDINGS/SIGN BOARDS**		**0.00**	**0.0**	**0.00**	**0.00**	**1.00**
11	**ELECTRIC VEHICLE CHARGING STATION**		**0.00**	**0.00**	**0.00**	**0.00**	**1.00**
12	**TEMPORARY SUPPLY**		**0.00**	**0.00**	**0.00**	**0.00**	*
(i)	Temporary Supply		0.00	0.00	0.00	0.00	*
	TOTAL		**205.98**	**1,110.17**	**1,316.16**	**4.90**	**-**

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

The Commission approves revenue from approved Retail Tariff of INR 1,316.16 Cr for FY 2020-21 against a Net Revenue Requirement of INR 1,347.69 Cr.

The following table provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the change in tariff for each of the consumer categories.

Table 128: Tariff increase/decrease approved by the Commission for FY 2020-21

S. No	Category	ACOS (INR/kwh)	ABR at existing tariff for FY 2020-21 (INR/kwh)	ABR at approved tariff (INR/kwh)	Increase/ (Decrease) (%)
1	Domestic	5.02	1.94	2.31	18.78%
2	LIG/ Kutir Jyoti	5.02	0.00	0.00	0.00%
3	Commercial/Non-Domestic	5.02	3.34	3.98	18.97%
4	HT Commercial	5.02	0.00	0.00	0.00%
5	Agriculture	5.02	0.66	0.77	16.18%
6	LT Industry	5.02	3.84	4.54	18.20%
7	HT/EHT Industry	5.02	4.35	5.17	18.79%
8	Public Lighting	5.02	4.00	4.50	12.49%
9	Public Water Works	5.02	3.69	4.19	13.62%
10	EV Charging Station	5.02	0.00	0.00	0.00%
11	Temp. Supply	5.02	0.00	0.00	0.00%
12	**Total**	**5.02**	**4.13**	**4.90**	**18.73%**

The average increase in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2019-20 vide Order dated May 20, 2019 is 18.73%. Apart from the tariff for FY 2019-20, the Commission has approved the FPPCA to be levied by EDDD for 3 quarters during FY 2019-20. Hence, the consumers during FY 2019-20 have effectively paid tariffs approved vide Order dated May 20, 2019 and FPPCA approved during three quarters of FY 2019-20. Considering the average

FPPCA paid by consumers during FY 2019-20, the effective tariff increase for FY 2020-21 works out to only 8.49%.

6.4.4. Cumulative Revenue Gap/ Surplus at Approved Tariff

Accordingly, on upon consideration of the change in revenue on account of increase in tariff the resultant Revenue Gap/(Surplus) has been shown in the following table:

Table 129: Cumulative Revenue Gap/ (Surplus) approved by the Commission for FY 2020-21 (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement (a)	1,119.64	1,302.50	1,347.69
Revenue from Retail Sales at Approved Tariff (b)	939.45	1,046.92	1,316.16
Revenue from Open Access Charges (c)	0.00	0.00	0.00
Revenue from FPPCA (m)	0.00	119.06	0.00
Total Revenue (d= b+c+m)	939.45	1,165.98	1,316.16
Standalone Gap /(Surplus) for the year (e=a-d)	**180.19**	**136.52**	**31.53**
Opening Gap /(Surplus) (f)	(306.92)	(144.07)	(14.79)
Add: Gap/(Surplus) (g)	180.19	136.52	31.53
Closing Gap /(Surplus) (h=f+g)	(126.73)	-7.55	16.74
Average Gap/ (Surplus) (i=(f+h)/2)	(216.82)	(75.81)	0.98
Interest Rate on carrying cost (%, j)	8.00%	9.55%	8.85%
Carrying Cost (k=j*i)	(17.35)	(7.24)	0.09
Final Closing Gap/ (Surplus) (l=k+h)	**(144.07)**	**(14.79)**	**16.83**

The Commission approves a cumulative revenue gap of INR 16.83 Cr till FY 2020-21. The Commission has designed the category-wise tariffs to almost match the Revenue at approved tariffs to meet the ARR for FY 2020-21 including cumulative Revenue Gap. The estimated cumulative gap not met is about 1% which may get adjusted due to variation in actual sales mix during the year.

6.4.5. Highlights of the Tariff Structure

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

1. The Commission has decided to increase the tariff by an average of 8.49% with respect to the tariff approved by the Commission vide its Order May 20, 2019 and FPPCA levied during FY 2019-20 by way of increasing the energy charges of all consumers categories except LIG and increasing the fixed charges of LIG, LT Industrial and HT Industrial categories.

2. The Commission has decided to continue the reduction of the Fixed Charges by 25% in the lean season from May to August to provide relief to the Fishery Industry as approved by the Commission in its Order dated May 20,2019.

3. The Commission has decided to withdraw the Fixed Charges and rationalized the variable charges for EV Charging Station category for FY 2020-21.

7. Chapter 7. Open Access Charges for FY 2020-21

7.1. Determination of Wheeling Charges

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

Petitioner's submission:

The Petitioner has submitted the allocation of ARR into wheeling and retail supply of electricity as shown in the table below.

Table 130: Allocation matrix as submitted by Petitioner for FY 2020-21

Particulars	Allocation (%)		Allocation FY 2020-21	
	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0.00	0.00
Power Purchase Cost	0%	100%	0.00	1,245.99
Employee	40%	60%	7.11	10.67
R&M	90%	10%	17.70	1.97
A&G	50%	50%	5.41	5.41
Depreciation	90%	10%	19.84	2.20
Interest Cost on Long-term Capital Loans	90%	10%	11.37	1.26
Interest on Working Capital Loans	10%	90%	1.11	9.98
Interest on Security Deposit	10%	90%	0.41	3.67
Return on Equity	90%	10%	13.00	1.44
Provision for Bad Debt	0%	100%	-	-
Annual Revenue Requirement			75.96	1,282.60
Less: Non-Tariff Income	10%	90%	1.11	10.02
Income from Other Business	50%	50%	-	-
Net Revenue Requirement			74.85	1,272.58

Table 131: Voltage wise allocation of wheeling charges as submitted by the Petitioner

Category	Consumers	Sales (MU)	Asset Allocation (%)	Voltage wise losses (%)
LT	64,668	461.19	30%	21.34%
HT & EHT	810	2,182.77	70%	1.96%
Total	**65,478**	**2,643.96**	**100%**	**6.00%**

Accordingly, the Petitioner has submitted the following wheeling charges for FY 2020-21 as shown in the following table:

Table 132: Wheeling charges proposed for FY 2020-21 by the Petitioner

Category	O&M	Others	Total	Wheeling Charges (INR/kWh)
LT	29.85	13.39	43.24	0.74
HT & EHT	0.37	31.23	31.61	0.14
Total	**30.23**	**44.62**	**74.85**	**0.27**

Commission's Analysis

As per MYT Regulations 2018,

"48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable….."

The Petitioner has submitted the allocation matrix as per the MYT Regulations, 2018. The Commission as per the MYT Regulations, 2018 has calculated the wheeling charges while taking into consideration the allocation matrix and the ARR approved in the Tariff order for FY 2020-21. The allocation between wheeling and retail supply business for FY 2020-21 as per the ARR approved in this Order is provided in the table below:

Table 133: Allocation matrix approved by the Commission for FY 2020-21

Particulars	Allocation (%)		FY 2020-21		
	Wheeling	Supply	Wheeling	Supply	Total
Cost of power purchase for full year	*0%*	*100%*	0.00	1,243.59	1,243.59
Employee costs	*40%*	*60%*	7.19	10.79	17.98
Administration and General Expenses	*50%*	*50%*	4.30	4.30	8.59
Repair and Maintenance Expenses	*90%*	*10%*	17.71	1.97	19.67
Depreciation	*90%*	*10%*	19.77	2.20	21.96
Interest and Finance charges	*90%*	*10%*	10.50	1.17	11.66
Interest on Working Capital	*10%*	*90%*	1.65	14.82	16.46
Interest on consumer security deposit	*10%*	*90%*	0.42	3.81	4.24
Return on Equity			12.96	1.49	14.44
Provision of Bad & Doubtful Debt	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**74.48**	**1,284.12**	**1,358.60**
Less: Non-Tariff Income	*10%*	*90%*	1.09	9.82	10.91
Income from other Business	*50%*	*50%*	0.00	0.00	0.00
Net Revenue Requirement			**73.39**	**1,274.30**	**1,347.69**

In order to determine the wheeling charges prudently, the Commission has allocated the wheeling costs on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by Open Access consumers and primarily comprise of O&M Expenses and other costs as provided in the table above. The criteria for allocation of wheeling costs is elaborated as follows:

- O&M Expenses are allocated based on number of consumers under each category
- All expenses other than the O&M expenses are allocated based on voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation. However, the Petitioner has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.

The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

Table 134: Parameters assumed for voltage wise allocation of wheeling charges

Particulars	Energy Sales (MU)	Cumulative Loss (%)	Energy Input (MU)	Consumers	Voltage Wise Asset Allocation (%)
LT	445.00	24.56%	589.90	64,668	30.00%
HT & EHT	2,239.12	1.96%	2,283.89	810	70.00%
Total	**2,684.12**	**6.60%**	**2,873.79**	**65,478**	**100.00%**

HT/EHT wheeling charges have been allocated to HT/EHT and LT consumers based on the energy input at HT/EHT level for sale at HT/EHT and LT consumers. LT wheeling charges were allocated to LT consumers only. Accordingly, the Commission approves the Wheeling Charges as follows:

Table 135: Wheeling Charges approved by the Commission for FY 2020-21

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
LT	28.91	19.61	48.52	1.09
HT & EHT	0.29	24.59	24.87	0.11
Total	**29.19**	**44.20**	**73.39**	

The Commission approves wheeling charge of INR 1.09/ kWh at LT voltage level and INR 0.11/kWh at HT/EHT voltage level for FY 2020-21.

7.2. Determination of Additional Surcharge

Petitioner's Submission:

The Petitioner has submitted the additional surcharge for FY 2020-21 as determined in the tariff order FY 2019-20.

Table 136: Additional Surcharge submitted by the Petitioner for FY 2020-21

S. No.	Particulars	FY 2020-21
1	Total Power Purchase cost (INR Crores)	1,245.99
2	Fixed Cost component in Power Purchase Cost (INR Crores)	433.86
3	Energy Sales (MU)	2,643.95
4	**Additional Surcharge (INR/kWh)**	**1.68**

Commission's Analysis

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"*An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:*

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

"This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and

incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges."

Further, Regulation 5.2 (1) (b) states the following:

"The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Table 137: Additional Surcharge approved by the Commission for FY 2020-21

S. No.	Particulars	FY 2020-21
1	Total Power Purchase Fixed Cost (excluding transmission charges) (INR Crores)	315.66
2	Energy Sales (MU)	2,684.12
3	**Additional Surcharge (INR/kWh)**	**1.18**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, a consumer availing Open Access was required to pay full fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. **However, as per the "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 1.18/kWh for FY 2020-21.

The Commission directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyze the information and revise the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's Submission:

The Petitioner has determined the cross-subsidy charges on the basis of Voltage wise cost of supply and is shown in the following table:

Table 138: Cross Subsidy Surcharge as submitted by the Petitioner for FY 2020-21

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross Subsidy (INR/kWh)
LT	8.76	3.49	(5.27)
HT & EHT	4.32	5.65	1.33

Commission's Analysis

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for HT/EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State distribution losses at 6.60%, as approved in the ARR for FY 2020-21. Using these losses, the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 139: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
LT level	445.00	24.56%	589.90
HT/ EHT level	2,239.12	1.96%	2,283.89
Total	**2,684.12**	**6.60%**	**2,873.79**

Now the overall ARR approved for FY 2020-21 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

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

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

Table 140: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
LT level	589.90	30.00%	64,668
HT/EHT level	2,283.89	70.00%	810
Total	**2,873.79**	**100%**	**65,478**

The Variable component of the Power purchase cost is allocated based on energy input. The Voltage wise cost of supply (VCoS) is then determined based on energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the table below:

Table 141: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (INR/kwh)
LT level	161.60	165.12	326.73	445.00	7.34
HT/EHT level	381.65	639.30	1,020.96	2,239.12	4.56
Total	**543.26**	**804.43**	**1,347.69**	**2,684.12**	**5.02**

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge. Accordingly, the approved Cross-subsidy surcharge is shown in the table below.

Table 142: Cross-Subsidy Surcharge approved by the Commission for FY 2020-21

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
LT	7.34	3.59	**(3.76)**
HT & EHT	4.56	5.17	**0.61**

Therefore, the Commission approves Cross-Subsidy Surcharge of INR 0.61/kWh at HT/EHT Voltage level for FY 2020-21 & Nil for LT voltage level.

7.4. Other Charges

Commission's Analysis

All other charges would be determined as per the JERC Connectivity and Open Access in Intra-State Transmission and Distribution Regulations, 2017 as amended from time to time.

8. Chapter 8: Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Dadra & Nagar Haveli and Daman & Diu and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Dispatch Center (SLDC)/ Regional Load Dispatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within its territory/state (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawl/Under-drawl from the Grid and the Inter State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of the FY 2018-19 will be undertaken by the Commission once the audited accounts of the FY 2018-19 are available. If the audited accounts for the FY 2018-19 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2020-21, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

8.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

8.2. Existing Formula

The Commission first introduced the provision for adjustment of fuel surcharge in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) Regulations, 2009 notified on 08 February 2010. The relevant Clause 7 of the Regulations is provided below:
"7. Fuel Surcharge Formula
(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.
(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto."

The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 on 27 June, 2012 prescribing the methodology for determination and the recovery mechanism of Fuel & Power Purchase Cost Adjustment (FPPCA) formula. Subsequently on 18 January, 2013, the Commission issued a Corrigendum correcting the calculations of the FPPCA for certain consumer categories.

On 30 June, 2014 the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014 wherein the Commission proposed to adopt the same methodology as prescribed in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 in the MYT Period. Clause 19 of the Regulations is shown as follows
"*19. Treatment of Incremental Power procurement cost*
The Distribution Licensee shall recover the incremental cost on account of fuel & power purchase adjustment in accordance with FPPCA formula provided in JERC Terms & Condition for determination of Tariff (first amendment) Regulations, 2009."

On 19 October, 2016 JERC notified the Joint Electricity Regulatory Commission for the State of Goa and UT's (Multi Year Distribution Tariff) (Second Amendment) Regulations, 2016 according to which the Fuel and Power

Purchase cost adjustment charge shall be levied by distribution licensees on consumer electricity bills on account of the incremental power purchase cost incurred by the licensees and the Transmission charge recovery was also added to the formula.

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
   - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
   - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
   - Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
   - Variation on account of Central Transmission Charges including arrears/ revisions.
   - Variation on account of State Transmission charges including arrears/revisions

3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
   - Any adjustments /reversals due to over recovery of charges
   - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
   - Any other adjustments on account of factors not envisaged at the time of tariff fixation

4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA\left(\frac{Rs.}{Unit}\right) = .\left(\frac{(Pact + Tact + Oact - ASact) * 10}{\{[PPOact * (1 - TLapp) + PPIact - PSOact] * (1 - DLapp)\} - Zact}\right) - Rapp}$$

Where:

- $Pact(in\ Rs. Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,

  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM

- $Tact\ (in\ Rs.Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost
- $Oact\ (in\ Rs.Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ Rs.Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{Rs}{unit}) = \left(\frac{(Papp +\ Tapp\ ) * 10}{\{[PPOapp *\ (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ Rs.Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power
- $Tapp\ (in\ Rs.Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to a ±10% of the ABR of the consumer category. The distribution licensee shall be allowed to collect the ±10% FPPCA without obtaining prior approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers. In case FPPCA is more than ±10% of ABR the licensee shall charge full/higher FPPCA only with prior approval from the Commission.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
   - Step 1: Determination of Value of K

$$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ sub\ category\ (\frac{Rs.}{unit})}{Weighted\ Average\ Retail\ Tariff\ (WART)(\frac{Rs.}{unit})}$$

   The value of K for different consumer category or subcategory for the year in consideration is considered as approved in this Tariff Order.

   - Step 2: Determination of proportionate FPPCA (INR/unit) consumer category/sub-category wise

$$FPPCA\left(\frac{Rs.}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the Fuel and Power Purchase Cost Adjustment (FPPCA) formula notified by the Commission in this Order.

   For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.64 per unit for the FY 2020-21.

Table 143: $R_{approved}$ determined by the Commission for FY 2020-21

S.No.	Particulars	Amount
1	Total Power Purchase Cost (INR Cr), Papp	1,120.09
2	Transmission Charges (INR Cr), T_{app}	123.50
3	Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NPCIL, RGGPL) (MU), PPO_{app}	2,551.97
4	Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.66%
5	Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	415.97
6	Quantum of Sale of Surplus Power (MU), PSO_{app}	0.00
7	Approved Intra-State T&D Loss (%), DL_{app}	6.60%
8	Energy Sales for LIG and Agriculture consumer category (MU), Z_{app} (MU)	5.12
9	**R_{app} (INR/kWh)**	**4.64**

9. Chapter 9: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner has been making efforts to comply with 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 once again directs the Petitioner to submit the quarterly progress report along with the detailed action plan for all the directives issued in the subsequent section within 10 days of the end of each quarter of the financial year.

9.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate necessary action under Section 142 of the Electricity Act 2003 read with other provisions of the Act, and the Regulations made thereunder.

9.1.1. Assets created from consumer contribution

Originally Issued in Tariff Order dated March 13, 2018
Commission's Latest Directive in Tariff Order Dated May 20, 2019 *The Commission has noted with concern that Petitioner is yet to submit the details of assets created from consumer contribution. The absence of this data constraints the Commission in fair determination of average cost of supply and tariff. The Commission directs the petitioner to submit the data pertaining to the assets created from consumer contribution along with the Tariff petition for determination of retail Tariff for FY 2020-21.*
Petitioner's Response in the Present Tariff Petition *Assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2018-19. Further, the depreciation on the assets created out of consumer contribution is not included in the ARR being filed by the Department for determination of Tariff.*
Commission's Response *The Commission has noted that the Petitioner has submitted that the assets created out of consumer contribution are not included in the asset register being prepared by the Department for FY 2018-19 but as per Commissions direction petitioner has still failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation in future, once the details of the consumer contribution are made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by the Commission in future Tariff Orders.*

9.1.2. Creation of SLDC

Originally Issued in Tariff Order dated March 13, 2018
Commission's Latest Directive in Tariff Order Dated May 20, 2019 *The Commission appreciates the efforts of the Petitioner towards creating an independent SLDC. The Commission directs the Petitioner to expedite the process of creation of separate SLDC and submit a detailed implementation plan for the same within 3 months of the issuance of this Order.*
Petitioner's Response in the Present Tariff Petition *The EDDD would like to submit that the Department has provided a separate infrastructure for the functioning of the SLDC.*
Commission's Response *The Commission has noted with concern that Petitioner has not submit any report regarding detailed implementation plan to expedite the process of creation of separate SLDC. The Commission directs the petitioner to submit the detailed implementation plan along with the current status in regard to the creation of separate SLDC within 3 months of the issuance of this Order.*

9.1.3. kVAh based tariff

Originally Issued in Tariff Order dated March 13, 2018
Commission's Latest Directive in Tariff Order Dated March 13, 2018 *The Petitioner has already indicated its readiness for implementation of kVAh billing and that necessary changes in metering has been made by them. The Commission has accordingly approved kVAh based tariff for LT Industry, HT industry and HT commercial categories in FY 2019-20. The compliance report regarding implementation of kVAh billing in above categories may be submitted to the Commission accordingly within 3 months of the issuance of this Order.*
Petitioner's Response in the Present Tariff Petition *The EDDD would like to submit to the Hon'ble Commission that the Department has implemented kVAh billing in the LT Industry, HT Industry and HT commercial categories as approved in the Tariff Order for the FY 2019-20.*
Commission's Response *The Commission has noted the compliance to the above directive and accordingly drops the directive.*

9.2. New Directives issued in this Order

9.2.1. Timely submission of Reports and Compliance of directives

The Commission has noted that the Petitioner does not submit the quarterly reports and the reports related to compliance of directives in a regular and timely manner. The Commission directs the petitioner to submit the aforementioned report regularly.

9.2.2. Renewable Purchase Obligation

The Commission directs the petitioner to submit the quarterly RPO report including all the data related to the actual electricity generation/purchase from Solar & Non-Solar and data related to purchase of Solar & Non-Solar energy certificates within timeframe as decided by the Commission in earlier order and regulations.

9.2.3. Status of Metering

The Commission directs the petitioner to submit the metering status including status of defective meters for each category of consumers separately within three months from the issuance of this Tariff Order. Further, the petitioner is also directed to submit the status of the consumers for which billing is being done on actual reading basis or on assessment basis within three months from the issuance of this Tariff Order.

9.2.4. Open Access Consumers

The Commission directs the petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 144: Tariff Schedule

S. No.	Category	Fixed Charges	Energy Charges
1.	**DOMESTIC**		
(i)	0-100 units	INR/Consumer/Month Single Phase: INR 20 Three Phase: INR 45	1.40 INR/kWh
(ii)	101-200 units		2.00 INR/kWh
(iii)	201-400 units		2.50 INR/kWh
(iv)	401 and above		3.00 INR/kWh
(v)	Low Income Group (Up to 2x40 W bulbs only)	Power supply to low income group connections will be charged at INR 15 per service connection per month. For any unauthorized increase in the load beyond 2*40 watts, penal charges at the rate of INR 20 per month per point will be levied and the installation will be liable for disconnection.	
2.	**COMMERCIAL/NON-DOMESTIC**		
(i)	0-100 units	INR/Consumer/Month Single Phase: INR 25 Three Phase: INR 50	3.00 INR/kWh
(ii)	101 units and above		4.05 INR/kWh
3.	**HT COMMERCIAL**		
(i)	HT Commercial	100 INR/kVA/month	4.20 INR/kVAh
4.	**AGRICULTURE**		
(i)	For sanctioned load up to 10 HP	-	0.75 INR/kWh
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	-	1.05 INR/kWh
5.	**PUBLIC LIGHTING**		
(i)	For all units	-	4.50 INR/kWh
6.	**LT Public Water Works**		
(i)	LT Public Water Works	25 INR per HP or part thereof	4.10 INR/kWh
7.	**LT INDUSTRIAL**		
(i)	LTP Motive Power	40 INR per HP or part thereof	3.60 INR/kVAh
1) Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry			
8.	**HT/EHT Industry**		
(i)	High Tension Consumer (For all units)	315 INR/kVA/month	4.20 INR/kVAh

S. No.	Category	Fixed Charges	Energy Charges
(ii)	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units)	505 INR/kVA/month	4.15 INR/kVAh
• Fixed Charges shall be reduced by 25% in the lean season from May to August for Fishery Industry			
9.	**HOARDINGS/SIGNBOARDS**		
(i)	Hoarding/Signboards	100 INR/ kVA / Month or part thereof	6.70 INR/kWh
10.	**EV CHARGING STATION**	-	4.50 INR/kWh
11.	**Temporary Supply**		
	Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.		

10.2. Applicability

Table 145: Applicability of Tariff Schedule

S.No.	Category	Applicability
1.	**Domestic**	This schedule shall apply to private houses, hostels, hospitals run on Non-commercial lines, Religious Institutions, Government Schools & associated facilities for Light, Fans, Radios, Domestic Heating and other household appliances including water pumps up to 2 HP.
2.	**LT Commercial/Non-Domestic**	This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations. **Point of Supply/Notes:** This includes all categories which are not covered by other tariff categories including Domestic Category, Low Income Group, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.
3.	**HT Commercial**	This schedule shall apply to all the consumers falling under the LT Commercial category above but connected at 11 kV or above voltage level
4.	**Agriculture**	This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.
5.	**Public Lighting**	
6.	**LT Public Water Works**	
7.	**LT Industrial**	This schedule shall apply to all Low-Tension Industrial Motive Power Connections including water works/pumps with sanctioned load up to 120 HP.
8.	**HT/EHT consumers**	This schedule shall apply to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.
9.	**HHT Industrial (Ferro Metallurgical/ Steel Melting/**	

S.No.	Category	Applicability
	Steel Rerolling/Power Intensive (For all units)	
10.	**Hoardings / Signboards**	This schedule shall apply to electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.
11.	**Electric Vehicle Charging Stations**	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)
12.	**Temporary Supply**	The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations.

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 10th April, 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 and revenue. 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.

10.3. General Conditions of HT and LT Supply

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. Supply to consumers having contracted load between 100 KVA to 5000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 KV and for more than 5000 KVA up to 25000 KVA at 66 KV. For the consumer who requires load more than 25000 KVA, the supply voltage shall be at 220 KV level.

4. 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 a 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.

5. If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.

6. **Power Factor Charges -** LT and Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. 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. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice

7. If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days' notice as per the provisions of the Act and the Supply Code Regulations.

8. Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out. Similarly, slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.

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

10. Unless specifically stated to the contrary, the figures of energy charges relate to paisa per unit (kWh) charge for the energy consumed during the month.

11. 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. Amount less than 50 paisa shall be ignored and amount 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 up to the month of permanent disconnection.

12. **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

13. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment, a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

14. **TOD Tariff**: For the purpose of TOD Tariff, the peak/off-peak/normal hours and charges for the corresponding period provided in the table as follows:

Table 146: Definition of Time of Day and applicable Tariff

Time of use	Demand Charges	Energy Charges
Normal period (6:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 10.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (10:00 p.m to 6:00 a.m)	Normal Rate	90% of normal rate of energy charges

15. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula notified in Chapter 9 of this Order. Such charges shall be recovered/refunded in accordance with the terms and conditions specified in the FPPCA formula.

16. The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order.

10.4. Schedule of Miscellaneous Charges

Table 147: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges	
Single Phase LT meter	INR 10 per month or part thereof
Three Phase LT meter	INR 25 per month or part thereof
LT Meter with MD indicator	INR 200 per month or part thereof
Tri-vector Meter	INR 500 per month or part thereof
Note: The type of meters to be installed in consumer premises will be decided by the department. Generally, the consumers having connected load above 50 HP will be provided with L.T.M.D meters	
Reconnection Charges	
LT Services	
• Single Phase LT	INR 100/-
• Three Phase LT	INR 500/-
HT Services	INR 1500/-
Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges	
Testing Fee for Various Metering Equipment	
Single Phase	INR 200/-
Three Phase	INR 500/-
Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	INR 1,000/-
Three Phase Tri-vector Meter (0.5 Class) 11 kV HT Consumer	INR 1,000/-
Three Phase Tri-vector Meter (0.2 Class) 66 KV EHT Consumers	INR 1,500/-
ABT meter 0.2 class-66 kV/11kV Consumer	INR 3,000/-
Combined CT/PT Unit for 11 KV Consumer	INR 1,000/-

Description	Approved Charges
66 KV CT/ PT Unit	INR 1,000/-
Three Phase CT Block	INR 500/-
CT Coil	INR 500/-
Service Connection Charges	
Single Phase LT	INR 250/-
Three Phase LT	INR 1,000/-
HT (First 500 KVA)	INR 10,000/-
HT (Beyond 500 KVA)	INR 1,000/- per 100 KVA or part thereof
Extra Length - Single Phase	INR 50 /- per meter
Extra Length - Three Phase	INR 100/- per meter
Extra length chargeable will be beyond the permissible 30 metres free length from existing network for new connections for all categories except agriculture. Free length in respect of new agriculture consumer is 300 metres.	
Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by the EDDD.	
Fees (Non-refundable) for submission of Test Report of wiring Completion	
Single Phase Lighting / Domestic	INR 20/- Per Test Report
Three Phase Lighting / Domestic	INR 50/- Per Test Report
Single Phase Lighting / Non-Domestic	INR 100/- Per Test Report
Three Phase Lighting / Non-Domestic	INR 200/- Per Test Report
Three Phase LT Industries	INR 500/- Per Test Report
Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	INR 100/- Per Test Report
HT Industries up to 500 KVA	INR 2,000/- Per Test Report
HT Industries up to 2500 KVA	INR 8,000/- Per Test Report
HT Industries above 2500 KVA	INR 15,000/- Per Test Report

Annexures

Annexure 1: List of Stakeholders

The following is the list of the stakeholders who have submitted objections/ suggestions:

S. No.	Name of Stakeholders
1.	Mr. Umesh Patel, Youth Action Force.
2.	Mr. Jitender Desai, Siddhi packaging
3.	Mr. Prakash Tandel, General Secretary, BJP Daman
4.	Mr. Ramesh Kundnani, Polycab India Ltd. (President, Daman Industries Association)
5.	Bhavik Halpati, Vice-President, Daman Tribe Life
6.	Dr. Ramnikh bhai Bamania, Social Worker & Counsellor DMC
7.	Dr. Harish Ramgi Solanki, Hotel Association
8.	Dr. Umesh R Bamania, Ice Factory Association.