TARIFF ORDER

True-up of FY 2019-20, Annual Performance Review of FY 2020-21, Aggregate Revenue Requirements (ARR) and Determination of Retail Tariff for FY 2021-22

Petition No. 37/2020

For

DNH Power Distribution Corporation Limited

23rd March, 2021

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
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Secretary, JERC
(For Goa & UTs)

Secretary, JERC
(For Goa & UTs)

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List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
Discom	Distribution Company
DNHPDCL	DNH Power Distribution Corporation Limited
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
ED	Electricity Department
EHT	Extra High Tension
FAR	Fixed Asset Register
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
Gadarwara	Gadarwara Super Thermal Power Plant
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPP	Independent Power Producer
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
JGPP or GGPP	NTPC Jhanor –Gandhar Gas Based power plants
KAPS	Kakrapar Atomic Power Station
Kawas/KGPP	NTPC Kawas Gas Based Power Station
Kharagaon/Khargone	Khargone Super Thermal Power Plant
KHSTPP	Kahalgaon Super Thermal Power Station
KSTPP	Korba Super Thermal Power Station
Lara	Lara Super Thermal Power Plant
LT	Low Tension
MSTPL 1	Mauda Super Thermal Power Station
MU	Million Units
MOD	Merit Order Dispatch
MYT	Multi Year Tariff
NTPC	National Thermal Power Corporation Ltd
O&M	Operation and Maintenance

Abbreviation	Full Form
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
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
SBI PLR	SBI Prime Lending Rate
SECI	Solar Energy Corporation of India
SERC	State Electricity Regulatory Commission
Sipat	Sipat Super Thermal Power Station
SLDC	State Load Despatch Center
Solapur or SLP	Solapur Super Thermal Power Station
SOP	Standard of Performance
TAPS	Tarapur Atomic Power Station
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
VSTPP	Vindhyachal Super Thermal Power Station

Before the

Joint Electricity Regulatory Commission
For the State of Goa and Union Territories, Gurugram

CORAM

Shri. M. K. Goel, Chairperson

Petition No. 37/2020

In the matter of

Approval of true-up of FY 2019-20, Annual Performance Review of FY 2020-21, Aggregate Revenue Requirements (ARR) and Retail Tariff for FY 2021-22.

And in the matter of

DNH Power Distribution Corporation Limited (DNHPDCL)..**Petitioner**

ORDER

Dated: 23rd March, 2021

1. This Order is passed in respect of a Petition filed by the DNH Power Distribution Corporation Limited (DNHPDCL) (herein after referred to as "The Petitioner" or "DNHPDCL" or "The Licensee") for approval of True- Up of FY 2019-20, Annual Performance Review of FY 2020-21, Aggregate Revenue Requirements (ARR) and Retail Tariff for FY 2021-22 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2. The Commission scrutinized the said Petition and generally found it in order. The Commission admitted the Petition on 8th December, 2020. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/comments were invited from the Public/Stakeholders. Further, due to the COVID-19 pandemic that had adversely impacted the movement of people as per the guidelines of GoI which had suggested avoiding of travel and gathering of people as far as possible, the Commission had decided to conduct the Public Hearing virtually. The virtual Public Hearing was held on 29th January, 2021 and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

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

4. The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter and after proper due diligence has approved the True-up of FY 2019-20, APR of FY 2020-21 and ARR for FY 2021-22 along with the Retail Tariff for FY 2021-22.

5. The summary has been provided as follows:

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

Table 1: Standalone Revenue Gap/ (Surplus) approved for FY 2019-20 (INR Crore)

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	3,646.81	3,614.28
2	Revenue from Retail Sales at Existing Tariff	3,369.82	3,369.82
3	**Net Gap / (Surplus)**	**276.99**	**244.46**

(b) The following table provides ARR, Revenue and gap/(surplus) as submitted by the Petitioner and approved by the Commission in the APR of FY 2020-21:

Table 2: Standalone Revenue Gap/ (Surplus) approved for FY 2020-21 (INR Crore)

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Annual Revenue Requirement	2,861.15	2,752.29
2	Revenue from sale of power	2,843.02	2,872.78
3	Revenue from Surplus Power Sale	18.22	0.00
4	Revenue from FPPCA	46.09	72.39
5	Total Revenue	2,907.33	2,945.17
6	**Revenue Gap/(Surplus)**	**(46.18)**	**(192.88)**

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

Table 3: Standalone Revenue Gap/ (Surplus) approved for FY 2021-22 (INR Crore)

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Net Revenue Requirement	3,289.01	3,379.76
2	Revenue from Retail Sales at approved Tariff	3,440.39	3,340.08
2	**Revenue Gap / (Surplus)**	**(151.38)**	**39.68**

(d) Accordingly, the following table provides the cumulative revenue gap/ (surplus) at approved tariff at the end of FY 2021-22:

Table 4: Cumulative Revenue Gap/ (Surplus) approved by Commission (INR Crore)

S. No.	Particulars	Formula	FY 2019-20	FY 2020-21	FY 2021-22
a	Opening Gap/ (Surplus)		(100.14)	146.43	(42.08)
b	Add: Gap/ (Surplus)		244.46	(192.88)	39.68
c	Closing Gap/ (Surplus)	c=a+b	144.32	(46.45)	(2.40)
d	Average Gap/ (Surplus)	d=(a+c)/2	22.09	49.99	(22.24)
e	Rate of Interest		9.55%	8.75%	8.00%
f	Carrying/Holding cost	f=d*e	2.11	4.37	(1.78)
g	**Closing Gap/ (Surplus)**	**g=f+c**	**146.43**	**(42.08)**	**(4.18)**

(e) The average decrease in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2020-21 vide Order dated May 18, 2020 is 5.53%. However, the effective tariff reduction considering the FPPCA paid by the consumers during FY 2020-21, works out to be 7.93%.

(f) The Commission has approved the Average Billing Rate (ABR) for FY 2021-22 as INR 5.11/kWh as against the approved Average Cost of Supply (ACoS) of INR 5.17/kWh.

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

6. 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.

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

Sd/-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 23rd March, 2021

Certified Copy

RKumar.

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

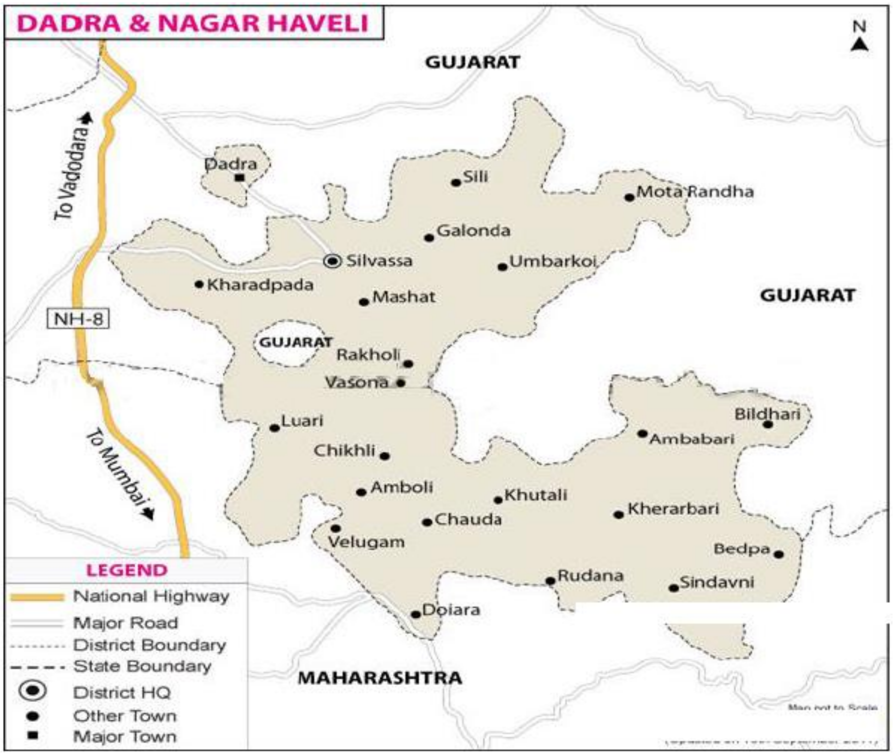
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R 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 a statutory body responsible for regulation of the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, 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 Dadra and Nagar Haveli

Dadra and Nagar Haveli (hereinafter referred to as "DNH") is spread over 491 sq. km, has 72 villages with a population of 3,42,853 as per Census 2011. The natural attractions of this region have made it a popular tourist destination in the Western region of India. Additionally, due to liberalized policies of Central Government of tax benefits, the UT has also developed into a highly industrialized area.

The rapid development of the DNH has led to a tremendous increase in the demand for power. Currently, ~97% of total sales are to HT and LT industrial consumers. The present peak demand of DNH is 835 MW (As of December, 2020). DNH has also achieved 100% electrification which further contributes to the increasing demand for power.



1.3. DNH Power Distribution Corporation Ltd.

Dadra & Nagar Haveli Power Distribution Corporation Limited (hereinafter referred to as "DNHPDCL" or "Utility") was created from the erstwhile Electricity Department of Dadra & Nagar Haveli (ED-DNH) and started its operation from April 1, 2013. It is a distribution licensee engaged in distribution of electricity in Dadra & Nagar Haveli.

The key duties being discharged by DNHPDCL are:

- Laying and operating of electric line, sub-station and electrical plant that is primarily maintained for the purpose of distributing electricity in the area of supply of DNHPDCL;
- Arranging, in-coordination with the Generating Company (ies) operating in or outside DNH, for the supply of electricity required within the DNH 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 DNH.

DNHPDCL does not have its own generation (except some Solar Generation) and procures power from its allocation from Central Generating Stations i.e. NTPC, NSPC, EMCO and other IPPs.

Existing Network

The present distribution system of DNHPDCL consists of 36.88 circuit km of 220 kV double circuit (D/C) lines, 279.90 km of 66 kV D/C lines, 833.70 circuit km of 11 kV lines along with 1102 distribution transformers.

At present, DNH gets power from 400/220 kV Vapi Substation of POWERGRID and 400/220 kV Kala Substation of POWERGRID. DNHPDCL has total sub-transmission capacity of 1000 MVA, including 520 MVA in Kharadpada and 420 MVA Khadoli sub-stations. The total installed capacity at 66/11 kV sub-stations is 782 MVA.

The details of the transmission and distribution system of DNHPDCL are as follows:

Table 5: Transmission & Distribution System of DNHPDCL

S. No.	Description	UOM	Length in Circuit (in km)
1	11 kV Line	Km	833.70
2	66 kV Line (Double Circuit)	Km	279.90
3	220 kV (Double Circuit)	Km	36.88
4	Distribution Transformers	Nos.	1102

1.4. Multi Year Distribution Tariff Regulations, 2014

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (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 (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 & 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 & Daman and 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, 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 August 31, 2018. The Commission issued the Business Plan Order for the MYT Control Period (hereinafter referred to as 'Business Plan Order') on November 5, 2018.

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

In accordance with the Regulation 9.1 of the JERC MYT Regulations, 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. Approval of True Up for FY 2018-19, APR for FY 2019-20 and ARR & Tariff for FY 2020-21

In accordance with the Regulation 11 of the JERC MYT Regulations, 2018 the Petitioner filed the Petition for approval of True-up of FY 2018-19, Annual Performance Review for FY 2019-20, Aggregate Revenue Requirements (ARR) for FY 2020-21 and Retail Tariff for FY 2020-21. The Commission issued the Order on this Petition on May 18, 2020.

1.9. Filing and Admission of the Present Petition

The present Petition was admitted on December 8, 2020 and was marked as Petition no. 37/2020. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.10. 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 sought from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalization, tariff proposal etc. The Petitioner submitted its response 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 16, 2020
2	Reply received from Petitioner	January 05, 2021
3	Technical Validation Session (TVS) with Petitioner at JERC Office	January 12, 2021
4	Issuance of Second Deficiency Note	January 14, 2021
5	Reply received from Petitioner on queries raised during TVS	February 20, 2021
6	Public Hearing	January 29, 2021

1.11. Notice for Public Hearing

Public notices were published by the Petitioner for inviting suggestions/comments from stakeholders on the Tariff Petition details of which are given below:

Table 7: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Place of Circulation
1	December 31, 2020	Nishpaksha Jansansar, Hindi	Silvasa
2	January 01, 2021	Janadesh, Gujarati	Silvasa

The Public Notice was also uploaded on the Petitioner's website.

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the Public at large about the Virtual Public Hearing conducted by the Commission on January 29, 2021 from 11 AM:

Table 8: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Place of Circulation
1	December 29, 2020	Indian Express, English	Ahmedabad
2	December 29, 2020	Gujarat Samachar, Gujarati	Surat
3	December 29, 2020	Nishpaksha Jansansar , Hindi	Silvassa
4	December 29, 2020	Samana Times, Hindi	Silvassa
5	January 24, 2021	Indian Express, English	Ahmedabad
6	January 24, 2021	Gujarat Samachar, Gujarati	Surat
7	January 24, 2021	Nishpaksha Jansansar, Hindi	Silvassa
8	January 24, 2021	Samana Times, Hindi	Silvassa

The Public Notice was also uploaded on the Commission's website.

1.12. Public Hearing

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

Accordingly, the Virtual Public Hearing was held on January 29, 2021 from 11 AM to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

2. Chapter 2: Summary of Suggestions/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 its website and also publish the same in the newspapers in an abridged form duly inviting comments from the Public as per the provisions of the JERC MYT Regulations, 2018.

The Virtual Public Hearing was held on January 29, 2021 from 11 AM onwards on Petition for the True-up of FY 2019-20, APR of FY 2020-21 and Aggregate Revenue Requirements (ARR) for FY 2021-22. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general Public, who had not submitted written comments earlier, were also given an equal opportunity to present their views/suggestions in respect to the Petition.

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 the Chapters on 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. True up of FY 2019-10

2.2.1.1. Return on Equity

Stakeholder's Comment:

In the ARR Petition, table 12 (page no. 26), Opening equity is mentioned as INR 135.71 Crore instead of INR 100.08 Cr which was approved in True up of FY 2018-19 as closing equity. Further the petitioner has claimed unjustified additional RoE of INR 17.11 Cr resulting in high return on equity.

Petitioner's Response:

As per the JERC (Multi Year Tariff) Regulations, 2018, DNHPDCL is entitled for a Return on Equity (RoE). As per the Regulation 26, the prescribed Debt to Equity Ratio is 70:30 and the equity on the capital assets to be computed as 30% of capitalized assets. Accordingly, the return on equity is to be allowed on the basis of equity deployed in the business. The closing Gross Fixed Assets till 31.03.2019 has been approved by the Commission as Rs. 452.36 crore and accordingly, the 30% equity as Rs. 135.71 crore has been considered for the computation of return on equity as per the Regulation.

Commission's View:

The Commission has noted the concern of the stakeholders and the submission of the Petitioner. The Commission informs the Stakeholders that for true up of FY 2019-20, as shown in *Section 3.15* the Opening equity of FY 2019-20 have been taken as closing equity of FY 2018-19.

2.2.1.2. Interest on finance charges

Stakeholder's Comment:

Normative numbers are used for future projections/estimation where actual expense incurred details cannot be available. Similar methodology must not be used for true up. The interest of INR 2.46 Cr on normative loan of INR 10.13 Cr is overstating of costs and results in overestimation of tariff.

Petitioner's Response:
DNHPDCL submitted that the interest and finance charges have been considered on a normative basis. The rate of interest has been considered equal to the SBI PLR as on 1st April, 2019 plus 100 basis points.

Commission's View:

As per JERC MYT Regulations, 2018, the Petitioner is entitled to interest on loans on normative basis notwithstanding that the Petitioner has not taken any loan from any outside agency or has exceeded the loan worked out on normative basis. As DNHPDCL has funded the entire capital expenditure through equity. The Commission instead of allowing Return on Equity on entire capitalization amount has allowed Return on Equity on 30% of total capitalization amount and has considered balance 70% as normative loan. Accordingly, the Commission has allowed normative interest on loan as per SBI MCLR + 100 bps which is based on the provisions of the JERC MYT Regulations, 2018.

2.2.1.3. Non-Tariff Income

Stakeholder's Comment:

In ARR Petition for FY 2021-22, table 16, at page no 29, Non-Tariff income claimed is INR 8.22 Cr. However, in balance sheet other income is INR 42.65 Cr.

Petitioner's Response:

DNHPDCL submitted that as per the MYT Regulations, 2018, interest income on own fund and delayed payment surcharge are not required to be considered as non-tariff income. As such, said observation is not proper and against the applicable JERC Regulations. Further, other operating income of Rs. 5.57 Crore has been included in the non-tariff income for the FY 2019-20 as per the pervious pattern of practice adopted by the Commission.

Commission's View:
The Commission has approved the Non-Tariff Income for FY 2019-20 considering the Regulation 64 of the JERC MYT Regulations, 2018, as discussed in detail in Section 3.21 of this Order.

2.2.1.4. Income Tax

Stakeholder's Comment:

In ARR Petition for FY 2021-22, table 14 on page 28, Income tax is INR 2.63 Cr. If corporation is in loss how expenditure on income tax is possible.

DNHPDCL has paid INR 2.63 Cr of income tax in FY 2019-20 while in true-up it has shown a gap of INR 180.51 Cr. This proves that true up doesn't objectively bring out the financial performance and has many provisions of undue overstating of expenses. It is requested to the Commission to critically view the systemic deficiencies in true up process and take corrective measure.

Petitioner's Response:

DNHPDCL submitted that income tax liability under the applicable income tax is determined as per the normal provision of taxation and also as per special provision of taxation (i.e. Minimum Alternative Tax). Moreover, it may also be noticed that separate books of accounts / records is required to be kept in compliance to the provisions of Income Tax Act, Companies Act and regulatory regime. Further, it may also be noticed under the Income Tax Act that abnormally higher depreciation is allowed in initial years, whereas, in the Companies Act / regulatory requirement depreciation is allowed on lesser rate (i.e. useful life) and this result into difference in between books' profit and taxable profits for discharge of tax liability on year to year basis. There is no co-relation between income tax liability and deficit being carried in the regulatory books. Hence, the said observation is not proper.

The Corporation has paid the income tax of Rs. 2.63 crore and the proof of the payment of income tax has also been submitted to the Commission.

Commission's View:

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that the approval of Income-Tax has been done considering the JERC MYT Regulations, 2018 and after proper scrutiny of proofs submitted by the petitioner. The detailed analysis may be seen in *Section 3.19* of this Tariff Order.

2.2.1.5. Interest on Working Capital

Stakeholder's Comment:

In ARR Petition for FY 2021-22, Table 11, petitioner included receivables of two months to compute Interest on working capital which is high as consumers in the DNH district pay their dues by 20th day of succeeding month. The receivables allowed calculating total working capital must be only for 1 month.

Further, INR 53.27 Cr of interest on working capital is arrived on normative basis and not on actual basis. The petitioner has rarely relied on debt financing for its operational needs resulting in nil expense as interest expense on working capital. The interest on working capital must be based on actual incurrence basis as normative basis causes unreasonable and undue overstatement of expenses which leads to over estimation of tariff.

Petitioner's Response:

DNHPDCL has computed the Interest on Working Capital on principles outlined by the Commission in the JERC (Multi Year Tariff) Regulations, 2018. The tariff principles have been outlined after following the due process and further the interest on working loan in electricity business is allowed as per the provision contained in respective Regulations (i.e. CERC / JERC / State Regulations). Hence, it is requested to allow the interest on working capital for the FY 2019-20 as submitted in the Tariff Petition, which has been computed as per the applicable JERC regulations.

Commission's View:

As per the JERC MYT Regulations, 2018, the Petitioner is entitled to interest on working capital on normative basis computed in accordance with Regulation 52.1 of the JERC MYT Regulations, 2018. The Regulations is reproduced as follows:

"52. Norms of Working Capital for Distribution Wires Business

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

…

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

….."

Hence the Interest on Working Capital is computed by the Commission in accordance with the provisions of the JERC MYT Regulations, 2018.

2.2.1.6. Revenue from sale of power

Stakeholder's Comment:

In Annual accounts of FY 2019-20 the revenue earned from sale of power is INR 3,384.58 and not INR 3,369.82. The Commission should approve INR 3384.58 Cr as revenue from sale of power.

Petitioner's Response:

The said difference is on account of deduction of revenue from sale of power through exchange, Deviation settlement mechanism receipts and Security constrained Economic dispatch (SCED NLDC) Income amounting to INR 13.50 Crore from the purchase cost and further non consideration of rebate to consumers of INR 1.26 crore. The said practice is being followed as per the previous pattern. The total of above two figures is INR 14.76 crore. Hence, the said observation is not proper as the same is not resulting any gain to DNHPDCL.

Commission's View:

The Commission has noted the Stakeholder's concern and Petitioner's submission. The Commission informs the Stakeholders that instead of adding revenue from Deviation settlement mechanism, SECD Income & sale through exchange in total revenue, the Commission has deducted such revenue from power purchase cost approved for FY 2019-20 as detailed in *Section 3.8* of this tariff order.

2.2.1.7. Revenue Gap/ Surplus

Stakeholder's Comment:

Power purchase cost shown by the petitioner includes INR 162 Cr on account of RPO whereas the balance sheet does not show this expense. Note 17 of the audited accounts shows that there was no liability on account of RPO whereas the balance sheet does not show this expense.

Petitioner's Response:

DNHPDCL submitted that under the current Regulations, in true up of any year, the cost incurred on meeting the RPO compliance by purchasing the REC is allowed on cash basis (i.e. in the year in which the cost has been incurred by the DNHDPCL). The bills against the purchase of REC in the FY 2019-20 have already been submitted to the Commission. Hence, the above submission is not proper.

Commission's View:

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that the approval of amount against RPO has been allowed considering the JERC MYT Regulations, 2018 and after proper scrutiny of proofs submitted by the petitioner.

2.2.2. Annual Performance Review of FY 2020-21

2.2.2.1. Distribution Losses

Stakeholder's Comments

It is appreciable that DNHPDCL has made effort to reduce the distribution losses to 3.47% for FY 2019-20. However, the Petitioner for FY 2020-21 proposed distribution losses as 4.20% when there is a good scope to further reduce losses to 3.47% for FY 2020-21.

Petitioner's Response

The matter of Distribution losses is factual statement, hence, does not require any clarification.

Commission's View

The Commission in the Business Plan Order had approved the distribution loss trajectory for the Second MYT Control Period (FY 2019-20 to FY 2021-22). The Commission at this stage has considered the distribution loss of 4.20% as approved in business plan order for DNHPDCL. As Distribution Loss is a controllable factor, the benefit of lower loss level as compared to target will be shared between the Petitioner and the consumers in accordance with the Regulations 14.1 of the JERC MYT Regulation, 2018 at the time of truing up of FY 2020-21.

2.2.2.2. Power Requirement

Stakeholder's Comments

In ARR Petition for FY 2021-22, table 23 on page 35, DHNPDCL estimated the requirement of energy @ 5,629.63 MU for FY 2020-21. This requirement has been based on loss @ 4.20% instead of @3.47% which will result in lesser requirement. Energy requirement should be based on lower losses.

Petitioner's Response

DNHPDCL has considered the line losses approved by the Commission for the FY 2020-21. Further, the actual line losses for the FY 2020-21 shall be submitted to the Commission at the time of truing up for the FY 2020-21.

Commission's View

The Commission in the Business Plan Order had approved the distribution loss trajectory for the Second MYT Control Period (FY 2019-20 to FY 2021-22). The Commission calculated the energy requirement of FY 2020-21 with 4.20% normative distribution loss as approved in business plan order for DNHPDCL. Energy requirement for FY 2020-21 has been computed in *Section 4.6* of this order. As Distribution Loss is a controllable factor, the benefit of lower loss level as compared to target will be shared between the Petitioner and the consumers in accordance with the provisions of the JERC MYT Regulation, 2018 at the time of truing up of FY 2020-21.

2.2.2.3. Power Purchase Cost

Stakeholder's Comments

As per para 2.2.2.2, if the requirement of energy has come down (by reducing the approved losses to 3.47% from 4.20%) the power purchase cost will also come down.

Petitioner's Response

The said matter is factual statement, hence, does not require any clarification.

Commission's View

The Commission in *Section 4.7* of this order has computed the power purchase cost and quantum. The power purchase quantum is based on normative distribution at 4.20% which was approved in Business plan order for FY 2020-21.

2.2.2.4. Return on equity

Stakeholder's Comments

In table 33, page 44-45 the opening equity for FY 2020-21 is INR 140.05, whereas it should be INR 104.42. Petitioner's opening equity will increase the return on equity since ROE calculated on average equity (Average of Opening and closing equity).

Petitioner's Response

As per the JERC (Multi Year Tariff) Regulations, 2018, DNHPDCL is entitled for a Return on Equity (RoE). As per the Regulations 26 of the MYT Regulations, 2018, the prescribed Debt: Equity Ratio is 70:30 and the equity on the capital assets to be computed as 30% of capitalized assets. Accordingly, the return on equity is to be allowed on the basis of equity deployed in the business. Hence, DNHPDCL has arrived at the opening Equity of INR 140.05 Crore for the FY 2020-21.

Commission's View

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that for APR of FY 2020-21, as shown in *Section 4.14* the approved closing equity of FY 2019-20 have been taken as Opening equity of FY 2020-21.

2.2.2.5. Non-Tariff Income

Stakeholder's Comments

In table 36, page 46 the claimed non-tariff income is INR 8.22 Cr for FY 2020-21, however, in FY 2019-20 according to the balance sheet NTI is INR 42.65 for FY 2019-20. Hence, Non-tariff income should also increase for FY 2020-21.

Petitioner's Response

DNHPDCL submitted that as per the MYT Regulations, 2018, interest income on own fund and delayed payment surcharge are not required to be considered as non-tariff income. As such, said observation is not proper and against the applicable JERC Regulations. Further, other operating income of Rs. 5.57 Crore has been included in the non-tariff income for the FY 2019-20 as per the pervious pattern of practice adopted by the Commission.

Commission's View

The Commission has approved the Non-Tariff Income for FY 2020-21 considering the Regulation 64 of the JERC MYT Regulations, 2018 as discussed in detail in *Section 4.19* of this Order.

2.2.2.6. Income Tax

Stakeholder's Comments

In Tariff Order dated 18th May 2020, the approved income tax was Nil for FY 2020-21. However, the petitioner has now claimed INR 26.51 Cr under income tax provision. Also, the petitioner has shown net gap of INR

180.51 Cr for FY 2020-21 and hence there is no liability on the petitioner for income tax. The Commission should disallow this claim.

Further the Petitioner declares revenue gap on the one hand and declares profit before IT department and pay the income tax. The petitioner then hopes that it can recover this income tax from the consumers.

Petitioner's Response

DNHPDCL submitted that income tax liability under the applicable income tax is determined as per the normal provision of taxation and also special provision of taxation (i.e. Minimum Alternative Tax). Moreover, it may also be noticed that separate books of accounts / records are required to be kept in compliance to the provisions of Income Tax Act, Companies Act and regulatory regime. Further, it may also be noticed under the Income Tax Act abnormally higher depreciation is allowed in initial years, whereas, in the Companies Act / regulatory requirement depreciation is allowed on lesser rate (i.e. useful life) and this result into difference in between books profit and taxable profits for discharge of tax liability on year to year basis. There is no co-relation between income tax liability and deficit being carried in the regulatory books. Hence, the said observation is not proper.

The income tax liability of Rs. 26.21 crore has been determined on the basis of provisions of Income Tax Act and further an amount of Rs. 15.00 crore has already been paid to income tax department as advance tax for FY 2020-21. The remaining liability of income tax for FY 2020-21 would be paid on or before 15/03/2021 (i.e. last installment payment due date). The challan of advance tax paid for FY 2020-21 has already been submitted to Commission. The payment of proof in the matter of income tax liability is already submitted to Commission, in view of above, it is being requested that the income tax liability of Rs. 26.21 crore as proposed for review of FY 2020-21 may please be allowed by the Commission.

Commission's View

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that the approval of Income-Tax has been done considering the JERC MYT Regulations, 2018 and after proper scrutiny of proofs submitted by the petitioner.

2.2.2.7. Interest on Working Capital

Stakeholder's Comment:

In ARR Petition for FY 2021-22, table 32, petitioner included receivables of two months to compute Interest on working capital which is high as consumers in DNH district pay their dues by 20th day of succeeding month. The receivables allowed to calculate total working capital must be only for 1 month.

Petitioner's Response:

DNHPDCL has computed the Interest on Working Capital on principles outlined by the Commission in the JERC (Multi Year Tariff) Regulations, 2018. The tariff principles have been outlined after following the due process and further the interest on working loan in electricity business is allowed as per the provision contained in respective Regulations (i.e. CERC / JERC / State Regulations). Hence, it is requested to allow the interest on working capital for the FY 2020-21 as submitted in the Tariff Petition, which has been computed as per the applicable JERC Regulations.

Commission's View:

As per the JERC MYT Regulations, 2018, the Petitioner is entitled to interest on working capital on normative basis computed in accordance with Regulation 52.1 of the JERC MYT Regulations, 2018, as shown below:

"52. Norms of Working Capital for Distribution Wires Business

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

……

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

…….”

Hence the Interest on Working Capital is computed by the Commission in accordance with the provisions of the JERC MYT Regulations, 2018.

2.2.3. ARR for FY 2021-22

2.2.3.1. Distribution Losses

Stakeholder's Comments

For FY 2021-22, the Petitioner has proposed a distribution loss of 4.10% when there is a good scope to further reduce the losses below 3.47%. Distribution losses on HT/ET & LT industry sales will be negligible. So, the whole distribution loss, if only projected on remaining non industrial sales, of 4.10% is higher than national average of distribution loss.

Petitioner's Response

The said matter is factual statement, hence, does not require any clarification.

Commission's View

The Commission has noted the submission of the Stakeholders. The Commission acknowledges the fact that the present loss levels are one of lowest in the country and the Petitioner is putting in constant efforts to maintain them at a level less than 4%. **The Commission directs the Petitioner to make further efforts towards reduction/maintenance of the same.**

2.2.3.2. Power Purchase Cost

Stakeholder's Comments

The requirement of energy if calculated based on 3.47% loss will be less than the requirement if calculated on 4.10% loss. Subsequently with less requirement the power purchase cost will also go down.

Petitioner's Response

DNHPDCL has noted the observations regarding Power Purchase Cost. DNHPDCL submitted that it has considered the distribution losses approved by the Commission for the FY 2021-22. Further, the actual line losses and Power Purchase Cost for the FY 2021-22 shall be submitted to the Commission at the time of truing up for the FY 2021-22.

Commission's View

The Commission in *Section 5.7* of this order has computed the power purchase cost and quantum. The power purchase quantum is based on normative distribution loss at 4.10% which was approved in Business plan Order for FY 2021-22.

2.2.3.3. Return on equity

Stakeholder's Comments

Likewise, previous two years the opening equity for FY 2021-22 is claimed wrongly INR 194.86 whereas it should be INR 159.23 Cr which has increased the petitioner's opening equity that in turn will increase the return on equity since ROE is calculated on average equity (Average of Opening and closing equity).

Petitioner's Response

As per the JERC (Multi Year Tariff) Regulations, 2018, DNHPDCL is entitled for a Return on Equity (RoE). As per the Regulations 26 of the MYT Regulations, the prescribed Debt: Equity Ratio is 70:30 and the equity on the capital assets to be computed as 30% of capitalized assets. Accordingly, the return on equity is to be allowed on the basis of equity deployed in the business. Hence DNHPDCL has arrived at the opening Equity of Rs. 194.86 Crore for the FY 2021-22.

Commission's View

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that for ARR of FY 2021-22, as shown in *Section 5.14* the closing equity of FY 2020-21 have been taken as Opening equity of FY 2021-22.

2.2.3.4. Non-Tariff Income

Stakeholder's Comments

The proposed non-tariff income for FY 2021-22 is INR 8.22 Cr however in FY 2019-20 according to the balance sheet NTI is INR 42.65. So, Non-tariff income for FY 21-22 should increase appropriately wrt that of FY 2019-20.

Petitioner's Response

DNHPDCL submitted that as per the JERC MYT Regulations, 2018, interest income on own fund and delayed payment surcharge are not required to be considered as non-tariff income. As such, the aforesaid observation is not proper and against the applicable JERC Regulations. Further, other operating income of Rs. 5.57 Crore has been included in the non-tariff income for the FY 2019-20 as per the pervious pattern of practice adopted by the Commission.

Commission's View

The Commission has approved the Non-Tariff Income for FY 2021-22 considering the Regulation 64 of the JERC MYT Regulations, 2018 as discussed in detail in *Section 5.19* of this Order.

2.2.3.5. Income Tax

Stakeholder's Comments

In ARR petition FY 2021-22 table 67- page 74, the petitioner has claimed INR 26.21 Cr under income tax provision. However, no income tax was approved for FY 2021-22 in tariff order dated 20th May 2019. So, the Commission should disallow this claim.

APCPI submitted that petitioner declares revenue gap on the one hand and declares profit before IT deptt. On the other hand and pays the income tax. The petitioner then hopes that it can recover this income tax from consumers.

Petitioner's Response

The income tax liability has been proposed to be recovered on the basis of computation of income tax liability as per the applicable income tax act. There is already liability of income tax in FY 2019-20 and further, the payment of advance tax to the tune of Rs. 15.00 crore for FY 2020-21. In view of above, DNHPDCL requested that the income tax liability of Rs. 26.21 crore as proposed for ARR of FY 2021-22 may please be allowed by the Commission.

Commission's View

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission informs the Stakeholders that the approval of Income-Tax has been done considering the Regulation 32 of the JERC MYT Regulations, 2018. In accordance with regulation 32.2, the Commission approved Nil income tax for FY 2021-22 since there is no actual income tax paid and the Commission will consider the actual income tax paid during FY 2021-22 at the time of truing up subject to prudence check.

In this regard, 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."

2.2.3.6. Interest on working capital

Stakeholder's Comments

In Interest on working capital computation for FY 2021-22 petitioner included receivables of two months which is high as consumers in DNH district pay their dues by 20th day of succeeding month. The receivables allowed by calculating total working capital must be only for 1 month.

Petitioner's Response

The said matter is already clarified and the said understanding is not proper.

Commission's View

As per the JERC MYT Regulations, 2018, the Petitioner is entitled to interest on working capital on normative basis computed in accordance with Regulation 52.1 of the JERC MYT Regulations, 2018.

"***52. Norms of Working Capital for Distribution Wires Business***

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

…

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

….."

Hence the Interest on Working Capital is computed by the Commission in accordance with the provisions of the JERC MYT Regulations, 2018.

2.2.3.7. Computation of Renewable Purchase obligation

Stakeholder's Comments

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

Petitioner's Response

DNHPDCL submitted that the Renewable Purchase Obligation has been computed as per the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010. The same basis is being adopted from the applicability of said regulations. Hence, the submission is not proper.

Commission's View

Clause 1.1 of JERC (Procurement of Renewable Energy) (Second Amendment), Regulations, 2015, provides as shown below:

"1.1 Every obligated entity shall purchase electricity from renewable energy sources for fulfillment of a defined minimum percentage of its total consumption of electricity under the Renewable Purchase Obligation…"

Further in JERC (Procurement of Renewable Energy) (Third Amendment), Regulations, 2016, the minimum percentage of the total consumption of electricity that the distribution licensee has to procure under the RPO is defined for FY 2019-20, FY 2020-21 & FY 2021-22. Accordingly, the Commission for FY 2019-20, FY 2020-21 & FY 2021-22 has computed the quantum of RPO on basis of above provided Regulations.

2.2.3.8. Computation of Cross Subsidy Surcharge

Stakeholder's Comments

In petition for FY 2021-22 the Petitioner has proposed a decrease in the energy charges @20 paise/ unit for the HT category. However, the petitioner while computing the cross subsidy surcharge has considered the Average Billing Rate (ABR) as approved by the Commission in the Tariff Order for FY 2020-21, which was computed on the basis of the existing electricity tariff. The Commission is requested to consider the impact of the proposed decrease in electricity tariff on the computation of ABR while determining the cross subsidy surcharge.

Petitioner's Response

DNHPDCL has noted the observations regarding Cross Subsidy Surcharge. The direction, if any, of the Commission would be followed by DNHPDCL.

Commission's View

The Commission has noted the stakeholder's observations regarding Cross Subsidy Surcharge. The Commission in *Section 7.3* has computed the Cross Subsidy surcharge on the basis of ABR computed after necessary tariff reduction. Hence the Cross Subsidy surcharge for FY 2021-22 has been computed duly factoring the impact of approved reduction in electricity tariff.

2.2.3.9. Computation of Additional Surcharge

Stakeholder's Comments

Petitioner has not conclusively demonstrated the computation of Additional Surcharge (ASC) on stranded power due to Open Access. The Tariff policy inter-alia provides for a conclusive demonstration of stranded obligations by the Discom for establishing its claim of Additional Surcharge consequent to open access contracts. The Commission is requested to allow ASC on stranded power due to Open Access.

Also, petitioner while working out the power purchase, has considered the energy projections on reduced PLF (as approved by the Commission vide Business Plan Order for FY 2019-20 to FY 2023-24 dated 31st Oct 2018) which takes into account the average PLF of past years till FY 2018-19. Consequently, this leads to a higher implication of fixed cost if seen on Rs. /kWh basis which effects per unit additional surcharge. The same fixed cost per unit will drastically reduce if the PLF projections are considered higher upto normative levels. If fixed cost is reduced then additional surcharge will also reduce. The Commission is requested to propose methodology for additional surcharge which is scientific.

Petitioner's Response

The Additional Surcharge has been computed based on the Joint Electricity regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. The additional surcharge has been determined on the basis of fixed cost associated with the power purchase cost obligations.

Commission's View

The Commission has noted the concerns of the Stakeholders. The methodology adopted by the Commission for calculation of additional surcharge is detailed in the *Chapter 7* of this Order.

2.2.3.10. Power Exchange as a part of Merit Order Despatch

Stakeholder's Comments

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

Petitioner's Response

DNHPDCL has noted the observations. However, the Commission is empowered to take any decision in this regard.

Commission's View

The Commission appreciates the concern of the stakeholder and informs that the concept of Merit Order Dispatch is applicable on power purchased. **The petitioner is directed to ensure procuring power efficiently and follow the Merit Order Despatch.**

2.2.3.11. Renewable Power from GTAM market

Stakeholder's Comments

The Petitioner has projected fulfillment of RPO by way of REC purchase during FY 21-22. In this regard, it is pertinent to bring to the notice of the Commission that the petitioner can fulfill its pending RPO obligations as well as the targets in forthcoming years by procuring RE power through the GTAM market also. The Commission may therefore allow an explicit provision of RE power purchase through GTAM market to the petitioner.

Petitioner's Response

DNHPDCL has noted the observations regarding procurement of Renewable power from the G-TAM market.

Commission's View

The Commission notes the stakeholder's observation and the petitioner's reply. **The Commission directs the Petitioner to explore the possibility of procuring Renewable Power for ensuring RPO compliances.**

2.2.4. Other Issues

2.2.4.1. Non Utilization of Interest on Normative loan

Stakeholder's Comments

The petitioner gets interest on normative loan every year and they cannot spend it unless approved by the Commission. It is blocking of sum of money every year by charging higher tariffs The Commission should stop giving interest on normative loan or should direct the petitioner to spend it on the expenses which will ultimately bring down the tariff.

Petitioner's Response

The said matter is a factual statement, hence, does not require any clarification.

Commission's View

The Petitioner is entitled to return on its investments, which includes return on equity and interest on loan. If the Petitioner is not borrowing funds from outside, a normative portion is considered as loan by the Commission as per the provisions of the JERC MYT Regulations, 2018 and so, interest on normative loan is allowed thereon.

2.2.4.2. Sharing of the benefits of savings made by reduction in line loss

Stakeholder's Comments

In new CERC rules, petitioner can take out 50% of the savings made on account of reduction in line loss. It is an unjustified proposition as it is a burden on honest consumers. Also, the petitioner can propose higher rate of line loss and can then reduce it to draw their share.

Petitioner's Response

The said matter is factual statement, hence, does not require any clarification.

Commission's View

The Commission has noted the concern of the Stakeholders. The Commission has made provision for sharing of benefits for controllable factors in Regulation 14.1 of the JERC MYT Regulations, 2018. This issue has been further dealt with in *Section 3.22* of this order.

2.2.4.3. Asset by contribution of consumers

Stakeholder's Comments

No depreciation should be charged over component of consumer contribution on assets. Fixed asset register should be made public inviting anyone to identify the assets in which they have contributed.

Petitioner's Response

As per the approved Accounting policy of the corporation, an item of Property acquired on contribution made by consumer which requires an obligation to provide the electricity to the consumers is recognized at nominal value of Rs. 1. Hence, the aspect of the calculation of the depreciation on these assets and adjustments thereof would not arise.

Commission's View

The Commission notes the concern of the Stakeholder. The Commission informs the petitioner that the issue of assets created with consumer contribution was taken up by the Commission in tariff order of FY 2018-19 under a directive. Therein the Commission directed the petitioner to submit detailed scheme wise consumer contributions. The petitioner submitted the fixed asset register containing of details of assets created from consumer contribution. The Commission verified the information and was satisfied with the petitioner's submission. Hence this direction was dropped in tariff order of FY 2020-21 dated 18th May 2020.

2.2.4.4. Performance Standards reports to be uploaded on website.

Stakeholder's Comments

The performance standards report which is submitted to the Commission by petitioner should also be made available to public. The petitioner should upload performance standards report on their website too.

Petitioner's Response

DNHPDCL has noted the observations regarding Performance Standard Reports.

Commission's View

The Commission has taken note of the submission made by the Stakeholder and the response thereon by the Petitioner.

2.2.4.5. Cross Subsidization between EHT/ HT & LT Consumers

Stakeholder's Comments

The Cross subsidization of power purchase cost is occurring between EHT/HT and LT consumers though both are industrial consumers with profit motive, which need to be addressed.

It has been requested to address this long- standing issue of cross- subsidization of power purchase cost amongst industrial consumers of different voltage levels for fair and judicious levy of tariff.

Petitioner's Response

The Commission is empowered to take any decision in this regard and the Petitioner craves leave to clarify any issues that the Commission may desire.

Commission's View

The Commission has noted the concern of the Stakeholders. The Commission would like to inform that the Commission determines the tariff based on the submission of the Petitioner, documents places on record and other relevant factors duly balancing the interest of all stakeholders. The Commission would like to inform that it has made appropriate efforts and has dealt with the issue of tariff determination and Cross Subsidy in *Chapter 6: Tariff Principles and Design* of this Order.

3. Chapter 3: True-up for FY 2019-20

3.1. Background

The Order on True up of FY 2016-17, Annual Performance Review (APR) of FY 2017-18 and Aggregate Revenue Requirement (ARR) and tariff for FY 2018-19 was issued on January 30, 2018. The Order on True-up of FY 2017-18, Annual Performance review (APR) of FY 2018-19 and Aggregate Revenue Requirement (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22), was issued on May 20, 2019. Subsequently, the Order on True-up of FY 2018-19, Annual Performance review (APR) of FY 2019-20 and Aggregate Revenue Requirement (ARR) for FY 2020-21, was issued on May 18, 2020 (hereinafter referred to as the "APR Order" for the purpose of true-up of FY 2019-20).

As per Regulation 11 of the JERC (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018, the review and true-up of revenue and expenses of the Petitioner shall be carried out as follows:

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

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

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

"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*
....."

The Commission now in this Chapter carries out the true-up for FY 2019-20 as per the JERC (Generation, Transmission & Distribution Multi Year Tariff) Regulations, 2018.

3.2. Approach for the True-Up of FY 2019-20

The Petitioner has submitted the audited accounts for FY 2019-20, audited by statutory auditor M/s S. Singhal & Co. The Commission in this Chapter now carries out the true-up of FY 2019-20 which is the first year of the second Control Period (FY 2019-20 to FY 2021-22)), in accordance with the principles laid down in the JERC MYT Regulations, 2018.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2019-20 as 6,288.00 MU as against approved energy sales quantum of 6,420.75 MU in the APR Order, as shown in the following Table:

Table 9: Energy Sales submitted by the Petitioner for FY 2019-20 (MU)

S. No	Category	Approved in APR Order	Petitioner's Submission
1	Domestic	140.11	143.57
2	LIG/ Kutir Jyoti	0.00	10.45
3	Commercial / Non-Domestic	37.00	36.60
4	LT Industrial	224.93	219.44
5	LT Public Water Works	5.04	5.01
6	HT/EHT	6,001.23	5,860.85
7	Agriculture & Poultry	6.62	5.25
8	Public Lighting	3.09	3.06
9	Temp. Supply	2.73	3.75
	Total	**6,420.75**	**6,288.00**

Commission's Analysis

In this regard, Regulation 12.1 of the JERC MYT Regulations, 2018 provides:

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

(a) Force Majeure events:
(b) Change in law;
(c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;
……"

The Commission through a deficiency note asked the Petitioner to submit the Energy audit report for FY 2019-20. Along with the Energy Audit Report for FY 2019-20, the petitioner submitted that the category wise sales for the FY 2019-20 submitted as part of the ARR and Tariff Petition for the FY 2021-22 was considered based upon the data frozen at the time of closing of the FY 2019-20. The data was revalidated to get the slab wise details of the various consumer categories. During validation of the data some discrepancies came to light and the same have now been rectified. Accordingly, the petitioner submitted the revised category-wise sales which are now considered by the Commission.

The Commission had approved the energy sales of 6,420.75 MU in the APR Order, against which actual energy sales of 6,288.00 MU has been submitted by the Petitioner for FY 2019-20. Accordingly, the Commission approves the energy sales as submitted by the Petitioner. The table below provides the energy sales approved by the Commission in the APR Order, the Petitioner's submission and now trued-up by the Commission:

Table 10: Energy Sales trued-up by the Commission for FY 2019-20 (MU)

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	140.11	154.02	149.62
2	LIG/ Kutir Jyoti	0.00	0.00	0.00
3	Commercial / Non-Domestic	37.00	36.60	36.68
4	LT Industrial (Motive Power)	224.93	219.44	222.59
5	LT Public Water Works	5.04	5.01	5.01
6	HT/EHT	6,001.23	5,860.85	5,860.85
7	Agriculture & Poultry	6.62	5.25	5.73
8	Public Lighting	3.09	3.06	3.06
9	Temp. Supply	2.73	3.75	4.45
	Total	**6,420.75**	**6,288.00**	**6,288.00**

The Commission approves Energy Sales of 6,288.00 MU in true-up of FY 2019-20.

3.4. Open Access Sales

Petitioner's Submission

The Petitioner submitted Nil Open Access Sales and Nil Open Access power Purchase for FY 2019-20.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner specifies Nil Open Access Sales and Open Access Purchase for FY 2019-20.

Accordingly, the Commission approves Nil Open Access sales and Nil Open Access power Purchase in the true up of FY 2019-20.

3.5. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner for FY 2019-20 has submitted the Inter-State transmission loss of 3.96%, as against the approved value of 3.66% in the APR.

Commission's Analysis

The Petitioner submitted Inter State Transmission loss as 3.96% against 3.66% approved in APR order for FY 2019-20. Through deficiency note the Petitioner was directed to submit the justification for claiming higher transmission losses. The Petitioner informed that the submitted losses are actual losses.

The Commission has used the Inter-State Transmission losses as provided in Energy Audit report for FY 2019-20 under 'Total grid losses in %' in Table no. 17. The Commission has determined the energy requirement from tied-up sources in Energy Balance approved in the *Section 3.7* of this Order. The energy available from tied-up source has been considered from the actual energy purchased as approved in *Section 3.8* 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 approved in the APR Order, the Petitioner's submission and as approved by the Commission now:

Table 11: Inter-State Transmission Loss for FY 2019-20 (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State transmission loss	3.66%	3.96%	3.96%

The Commission approves the Inter-State transmission loss of 3.96% for FY 2019-20.

3.6. Distribution Loss

Petitioner's Submission

The Petitioner has submitted that it has achieved a distribution loss of 3.47% in FY 2019-20 against an approved loss of 4.30%.

Commission's Analysis

Through deficiency note the Commission asked the Petitioner to submit Energy Audit report for FY 2019-20. As per the Energy Audit Report submitted by the Petitioner, the distribution loss is 3.47%. Accordingly, the Commission has considered the distribution loss as per the table 17 of the Energy Audit Report.

Since, the Petitioner has achieved a lower distribution loss than approved for the FY 2019-20, the incentive for the same has to be shared between the Petitioner and the consumers in accordance with the JERC MYT Regulations, 2018. The calculation of the same has been discussed in detail in the *"Section 3.22: Incentive/Disincentive towards over/under achievement of norms of distribution losses"* of this Order.

The following table provides the distribution loss approved in the APR of FY 2019-20, the Petitioner's submission and as approved by the Commission now:

Table 12: Distribution loss approved by Commission for FY 2019-20 (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Distribution Loss	4.30%	3.47%	3.47%

The Commission approves Distribution loss at 3.47% in the true up of FY 2019-20.

3.7. Energy Balance

Petitioner's Submission

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

Table 13: Energy requirement submitted by the Petitioner for FY 2019-20 (MU)

Particulars	Petitioner's Submission
Sales	6288.00
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	**6,288.00**
Add: Losses	225.85
T&D Losses	3.47%
Energy Required at State Periphery	**6,513.85**
Add: Sales to common pool consumer	19.42
Add: Sales through IEX	*16.81*
Less: Own Generation	6.18
Less: Energy Purchased through UI at Periphery	*18.95*
Less: Purchase from Renewable Sources	0.00
Less: Open Access Purchase	0.00
Less: Power Purchased from Power Exchange	*999.80*
Total Energy Required at State Periphery	**5525.14**
Inter State Transmission loss	227.75
Inter State Transmission loss (%)	3.96%
Total Energy to be purchased	5,752.88
Total Energy requirement from tied up sources + UI at generator end + Renewable sources+ Energy Exchange	6,777.82
Total Energy requirement in UT including Open Access	6,777.82

Commission's Analysis:

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase has been studied according to the Energy audit report for FY 2019-20 and accordingly the energy balance has been derived for FY 2019-20.

The following table provides the energy balance approved in the APR Order, submitted by the Petitioner and now approved by the Commission:

Table 14: Energy balance approved by Commission for FY 2019-20 (in MU)

Sr. No.	Particulars	Formulae	APR Order	Petitioner's Submission	Trued-up by Commission
A	Sales		6420.75	6288.00	6288.00
B	Open Access Sales		0.00	0.00	0.00
C	Less: Energy Savings		0.00	0.00	0.00
D	**Total Sales**	**D=A+B-C**	**6420.75**	**6288.00**	**6288.00**
E	T&D Losses (%)		4.30%	3.47%	3.47%
F	Add: Losses	F=G-D	288.50	225.85	225.85
G	**Energy Required at Periphery**	**G=D/(1-E)**	**6709.25**	**6513.85**	**6513.85**
H	Add: Sales to common pool consumer		0.00	19.42	19.42
I	Add: Sales through IEX		0.00	16.81	16.81
J	Less: Own Generation		4.93	6.18	6.18
K	Less: Energy Purchased through UI at Periphery		13.31	18.95	18.95
L	Less: Purchase from Renewable Sources		0.00	0.00	0.00
M	Less: Open Access Purchase		0.00	0.00	0.00
N	Less: Power Purchased from Power Exchange		860.44	999.80	999.82
O	**Total Energy Required at State Periphery**	**O=G+H+I-J-K-L-M-N**	**5830.57**	**5525.14**	**5525.14**
P	Transmission loss (%)		3.66%	3.96%	3.96%
Q	Transmission loss	Q=P-O	221.51	227.75	227.74
R	**Total Energy required to be purchased from tied up sources at generator end**	**R=O/(1-Q)**	**6052.07**	**5752.88**	**5752.88**
S	**Total availability from tied up sources at generator end (MU)**		**6052.05**	**5752.88**	**5752.88**
T	**Deficit/ (Surplus)**	**T=R-S**	**0.02**	**0.00**	**0.00**

The Commission approves the Total Energy Requirement from tied sources at the generator end (including own generation) as 5,752.88 MU in the True- Up for FY 2019-20.

3.8. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner has submitted that it primarily procures power from the following sources:

a) National Thermal Power Corporation Limited (NTPC) stations

b) NSPCL Bhilai

c) Nuclear Power Corporation of India Limited (NPCIL) stations

d) Independent Power Producers

The plant wise details of the power purchase quantum and total power purchase cost incurred has been provided in the Petition. The Petitioner has submitted that against the power purchase cost of INR 3,495.69 Crore approved by the Commission in the APR Order, it has incurred a cost of INR 3,488.16 Crore.

An amount of INR 0.63 Crore given under the finance charges has been included in the power purchase cost as the same pertains to carrying cost levied by the generators on power purchase bills due to revision/true up methodology approved by the CERC. The Petitioner also requested to allow the UI purchase during FY 2019-20 as the same has already been incurred. The total UI over-drawl submitted by the Petitioner is 18.95 MU at a cost of INR 9.00 Crore.

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

Table 15: Power Purchase cost submitted by the Petitioner for FY 2019-20

S. No	Particulars	Submitted by Petitioner					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
A	**NTPC Stations**						
	KSTPS	366.68	24.47	53.88	0.43	78.78	2.15
	KSTPS 3	144.14	19.59	20.75	-0.03	40.31	2.80
	VSTPP-I	291.20	24.89	53.34	2.22	80.44	2.76
	VSTPP-II	218.05	15.73	38.00	1.68	55.41	2.54
	VSTPP- III	251.24	24.84	43.31	1.62	69.77	2.78
	VSTPP- IV	305.67	43.66	50.68	1.85	96.18	3.15
	KGPP	178.23	49.96	49.10	0.55	99.61	5.59
	GGPP	30.97	45.56	9.18	0.32	55.06	17.78
	Sipat-I	558.84	72.52	85.65	2.15	160.31	2.87
	Sipat-II	220.84	26.30	34.66	0.47	61.44	2.78
	Mauda	206.62	49.66	65.34	4.14	119.15	5.77
	VSTPS-V	182.78	28.70	34.85	1.30	64.85	3.55
	Mauda 2	256.79	57.80	80.92	9.72	148.44	5.78
	Solapur	42.40	82.53	14.66	-0.50	96.69	22.80
	LARA	104.08	23.92	26.20	0.42	50.54	4.86
	Gadarwara	39.07	45.06	13.02	0.15	58.24	14.91
	BARH	0.00	0.00	0.00	0.00	0.00	0.00
	Kharagaon	25.48	7.89	7.60	0.00	15.49	6.08
	Dhuwaran	0.00	0.00	0.00	0.00	0.00	0.00
	FSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	KhSTPS I	0.00	0.00	0.00	0.00	0.00	0.00
	RSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	TSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	KHSTPP-II	21.62	2.30	4.62	-0.15	6.77	3.13
	Subtotal – NTPC	**3444.71**	**645.38**	**685.77**	**26.34**	**1346.10***	**3.91**
B	**NSPCL – Bhilai**	**416.95**	**115.38**	**142.35**	**-5.53**	**247.13^**	**5.93**
C	**NPCIL**	**397.30**	**0.00**	**121.06**	**0.00**	**121.06**	**3.05**
	KAPS	93.72	0.00	23.80	0.00	23.80	2.54
	TAPS	303.58	0.00	97.26	0.00	97.26	3.20
D	**EMCO Energy**	**1493.92**	**471.99**	**352.87**	**0.82**	**825.67**	**5.53**
	Total from Tied up sources	**5752.88**	**1232.75**	**1302.04**	**21.62**	**2,539.96**	**4.42**

S. No	Particulars	Submitted by Petitioner					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
E	**Other Sources**						
	Indian E. Exchange/Bilateral	999.80	**0.00**	**319.70**	0.00	319.70	3.20
	UI	18.95	**0.00**	**9.00**	**0.00**	9.00	4.75
	Solar	6.18	0.00	0.00	0.00	0.00	0.00
	Non Solar	0.00	0.00	0.00	0.00	0.00	0.00
	Solar REC	0.00	0.00	29.72	0.00	29.72	-
	Solar (SECI)	0.00	0.00	0.00	0.00	0.00	-
	Wind (SECI)	0.00	0.00	0.00	0.00	0.00	-
	Non Solar REC	0.00	0.00	132.79	0.00	132.79	-
	Subtotal - Other Sources	**1024.94**	**0.00**	**491.21**	**0.00**	**491.21**	**4.79**
E	**Total**	**6777.82**	**1232.75**	**1793.25**	**21.62**	**3031.16**	**4.47**
F	**Availability at ED-DNH Periphery**						
	PGCIL CHARGES					431.91	
	POSOCO					1.09	
	Reactive charges					0.22	
	Intra-state transmission charges					42.59	
	Less: Rebate received					53.50	
	Add: Carrying cost levied by generators					0.63	
	Add: Change In law-GMR					47.56	
	Less: Revenue from Sale of Power at exchange					5.73	
	Less: DSM Receipts					3.74	
	Less: Sale through SECD					4.04	
G	**Total Power Purchase cost**	**6,777.82**				**3,488.16**	

** Including INR -11.39 Cr of amount regarding Credit/Debit for URS & RRAS Settlement*
^ Including INR -5.07 Cr of amount regarding RRAS Settlement

Commission's Analysis

Regulation 12.1 of the JERC MYT Regulations, 2018 provides:

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

(a) Force Majeure events;

(b) Change in law

(c) Variation in the number or mix of Consumers or quantities of electricity supplied to Consumers;

(d) Transmission loss;

(e) Variation in the cost of power purchase due to variation in the rate of power purchase from approved sources, subject to clauses in the power purchase agreement or arrangement approved by the Commission;

…”

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, NSPCL Bhilai and IPPs. The Petitioner submitted the overall power purchase cost as INR 3,488.16 Crore inclusive of transmission cost and after adjusting revenue due to sale of surplus power and DSM receipts.

The Commission has verified the power purchase quantum and cost as per the monthly station-wise bills submitted by the Petitioner for each station. The cost has been reconciled with the audited annual accounts of FY 2019-20. The amount of INR 0.63 Crore pertains to the carrying cost levied by the generators on power purchase bills due to revision/true up methodology approved by the CERC, which falls under the definition of uncontrollable factors as per clause 12.1 (b) of the JERC MYT Regulations ,2018 and hence allowed by the Commission.

The Petitioner has claimed purchase of non-solar REC’s worth INR 132.79 Cr equivalent to 711.69 MU & solar REC’s worth INR 29.72 Cr equivalent to 109.70 MU. The Commission has verified this purchase of Solar & Non-solar renewable energy certificates from the audited annual accounts of FY 2019-20.

The Commission verified the petitioner claims of revenue earned from sale to common pool consumers, Deviation settlement Mechanism receipts & Security constrained Economic dispatch (SCED NLDC) from Note 19 audited balance sheet for FY 2019-20. These revenues are subtracted from the approved power purchase for FY 2019-20.

The petitioner claimed Power Purchase through UI as 18.95 MU. The Commission verified quantum of power purchase through UI from energy audit report for FY 2019-20 (Table 17). The Commission has approved the Power Purchase through UI as per petitioner’s claim.

Further, the Petitioner claimed INR 47.56 Crore under Change in law claims by GMR Warora Energy Limited (GWEL, formerly EMCO Energy Limited). These claims are based on the multiple orders issued by the Central Electricity Regulatory Commission (CERC), details for some such orders are provided below:

- CERC Order dated 18/12/2019 in Petition 39/MP/2019 - On Account of coal/railway terminal surcharge for period July 2018 to September 2019.
- CERC order dated April 02, 2019 in Petition 71/MP/2018 - On account of Evacuation Facility Charges approved for period December 2017 to March 2019 & May 2019 to December 2019.
- CERC Order dated May 16, 2019 in Petition 284/MP/2018 - On Account of Change in Law during the Operating Period as per the mechanism provided in the PPA and without any separate mechanism required to be prescribed.

Accordingly, the Commission verified this amount from the supplementary invoices (issued by GMR to petitioner) submitted by the Petitioner and observed that the total amount as per invoice is Rs 53.44 Cr. On enquiry, the petitioner submitted that only INR 47.56 Crore has been released in FY 2019-20 and the same has been claimed. Accordingly, the Commissions approve INR 47.56 Crore as expenses for change in law claims by GMR Warora Energy Limited.

The following table provides the summary of the power purchase quantum and the cost approved by the Commission during FY 2019-20:

Table 16: Power Purchase quantum and cost approved by the Commission for FY 2019-20

S. No	Particulars	Approved by Commission					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges# (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
A	**NTPC Stations**						
	KSTPS	366.68	24.47	53.88	0.43	78.78	2.15

S. No	Particulars	Approved by Commission					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges# (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
	KSTPS 3	144.14	19.59	20.75	-0.03	40.31	2.80
	VSTPP-I	291.20	24.89	53.34	2.22	80.44	2.76
	VSTPP-II	218.05	15.73	38.00	1.68	55.41	2.54
	VSTPP- III	251.24	24.84	43.31	1.62	69.77	2.78
	VSTPP- IV	305.67	43.66	50.68	1.85	96.18	3.15
	KGPP	178.23	49.96	49.10	0.55	99.61	5.59
	GGPP	30.97	45.56	9.18	0.32	55.06	17.78
	Sipat-I	558.84	72.52	85.65	2.15	160.31	2.87
	Sipat-II	220.84	26.30	34.66	0.47	61.44	2.78
	Mauda	206.62	49.66	65.34	4.14	119.15	5.77
	VSTPS-V	182.78	28.70	34.85	1.30	64.85	3.55
	Mauda 2	256.79	57.80	80.92	9.72	148.44	5.78
	Solapur	42.40	82.53	14.66	-0.50	96.69	22.80
	LARA	104.08	23.92	26.20	0.42	50.54	4.86
	Gadarwara	39.07	45.06	13.02	0.15	58.24	14.91
	BARH	0.00	0.00	0.00	0.00	0.00	0.00
	Kharagaon	25.48	7.89	7.60	0.00	15.49	6.08
	Dhuwaran	0.00	0.00	0.00	0.00	0.00	0.00
	FSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	KhSTPS I	0.00	0.00	0.00	0.00	0.00	0.00
	RSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	TSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	KHSTPP-II	21.62	2.30	4.62	-0.15	6.77	3.13
	Subtotal – NTPC	**3444.71**	**645.38**	**685.77**	**26.34**	**1346.10***	**3.91**
B	**NSPCL – Bhilai**	**416.95**	**115.38**	**142.35**	**-5.53**	**247.13^**	**5.93**
C	**NPCIL**	**397.30**	**0.00**	**121.06**	**0.00**	**121.06**	**3.05**
	KAPS	93.72	0.00	23.80	0.00	23.80	2.54
	TAPS	303.58	0.00	97.26	0.00	97.26	3.20
D	**EMCO Energy**	**1493.92**	**471.99**	**352.87**	**0.82**	**825.67**	**5.53**
E	**Total from Tied up sources**	**5752.88**	**1232.75**	**1302.04**	**21.62**	**2,539.96**	**4.42**
F	**Other Sources**						
	Indian E. Exchange/Bilateral	999.80	**0.00**	**319.70**	0.00	319.70	3.20
	UI	18.95	**0.00**	**9.00**	**0.00**	9.00	4.75
	Solar	6.18	0.00	0.00	0.00	0.00	0.00
	Non Solar	0.00	0.00	0.00	0.00	0.00	0.00
	Solar REC	0.00	0.00	29.72	0.00	29.72	-
	Solar (SECI)	0.00	0.00	0.00	0.00	0.00	-
	Wind (SECI)	0.00	0.00	0.00	0.00	0.00	-
	Non Solar REC	0.00	0.00	132.79	0.00	132.79	-
	Subtotal - Other Sources	**1024.94**	**0.00**	**491.21**	**0.00**	**491.21**	**4.79**
	Total	**6777.82**	**1232.75**	**1793.25**	**21.62**	**3031.16**	**4.47**
	PGCIL CHARGES					431.91	
	POSOCO					1.09	

S. No	Particulars	Approved by Commission					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges# (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
	Reactive charges					0.22	
	Intra-state transmission charges					42.59	
	Less: Rebate received					53.50	
	Add: Carrying cost levied by generators					0.63	
	Add: Change In law-GMR-EMCO					47.56	
	Less: Revenue from Sale of Power at exchange					5.73	
	Less: DSM Receipts					3.74	
	Less: Sale through SECD					4.04	
G	**Total Power Purchase cost**	**6,777.82**				**3,488.15**	

** Including INR -11.39 Cr of amount regarding Credit/Debit for URS & RRAS Settlement*
^ Including INR -5.07 Cr of amount regarding RRAS Settlement
 # Other Charges includes ED & Cess on APC/Sales, Energy Charges Revision, ECR Gain Sharing, Insurance charges, Nuclear Liability Fund, sharing of benefits etc.

The Commission approves power purchase cost of INR 3,488.15 Crore and power purchase quantum of 6,777.82 MU in the true-up of FY 2019-20.

3.9. Renewable Purchase Obligation (RPO)

Petitioner's Submission

For FY 2019-20, the Petitioner purchased 6.18 MUs of electricity from its own Solar Generation plant and purchased 821.29 MU (109.60 MU of Solar & 711.69 MU of Non-Solar) equivalent of Renewable Energy Certificates.

Commission's Analysis

In this regard, Regulation 1.1 of the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 provides:

"(1.1) 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."

Further, the Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August, 2016 and revised the RPO targets, according to which the Petitioner had to purchase 11.50% (Solar-4.70% and Non-Solar-6.80%) of its total consumption (excluding hydro) from renewable sources for FY 2019-20.

As per the above Regulations for FY 2019-20, the Petitioner had a standalone RPO target of 723.12 MU quantum of energy comprising of 295.54 MU to be purchased from solar and 427.58 MU to be purchased from Non Solar. Against the target, the Petitioner has produced 6.18 MU of physical solar power. Further, the Petitioner has bought Solar & Non-Solar RECs equivalent to 109.60 MUs and 711.69 MUs respectively. So, the Petitioner could not meet the current year targets of Solar RPO and the cumulative shortfall for Solar and Non-solar up to FY 2019-20 now stands at 675.33 MUs.

The RPO target compliance up to FY 2019-20 has been provided in the following table:

Table 17: Summary of Renewable Purchase Obligation (RPO) for FY 2019-20 (MU)

Sr. No.	Particulars	Formulae	FY 2017-18	FY2018-19	FY2019-20
A	Solar Target		2.50%	3.60%	4.70%
B	Non Solar Target		4.20%	5.40%	6.80%
C	**Total Target**	C=A+B	**6.70%**	**9.00%**	**11.50%**
D	Sales Within UT		5,676.30	6,072.42	6,288.00
	RPO Target				
E	Solar	E=D*A	141.91	218.61	295.54
F	Non Solar	F=D*B	238.40	327.91	427.58
G	**Total RPO Target**	G=E+F	**380.31**	**546.52**	723.12
	RPO Compliance (Actual Purchase)				
H	Solar		5.23	5.76	6.18
I	Non Solar		0.00	0.00	0.00
J	**Total RPO Compliance (Actual Purchase)**	J=H+I	**5.23**	**5.76**	**6.18**
	RPO Compliance (REC Certificate Purchase)				
K	Solar		0.00	338.68	109.60
L	Non Solar		0.00	10.00	711.69
M	**Total RPO Compliance (REC Certificate)**	M=K+L	**0.00**	**348.68**	**821.29**
	RPO Compliance (REC+ Actual)				
N	Solar	N=H+K	5.23	344.44	115.78
O	Non Solar	O=I+L	0.00	10.00	711.69
P	**Total RPO Compliance**	P=N+O	**5.23**	**354.44**	**827.47**
	Cumulative Requirement till current year				
Q	Solar		336.03	554.64	850.18
R	Non Solar		976.33	1,304.24	1731.83
S	**Total**	S=Q+R	**1,312.37**	**1,858.89**	**2582.01**
	Cumulative Compliance till current year				
T	Solar		126.25	470.69	586.47
U	Non Solar		598.52	608.52	1320.21
V	**Total**	V=T+U	**724.77**	**1,079.21**	**1906.68**
	Net Shortfall in RPO Compliance till current year				
V	Solar	V=Q-T	209.79	83.96	263.71
W	Non Solar	W=R-U	377.81	695.72	411.62
X	**Total**	X=V+W	**587.60**	**779.68**	**675.33**

As mentioned above in S. No. K & L, the Commission approved actual cost of INR 29.72 Crore for purchase of Solar REC equivalent to 109.60 MUs at an average cost of INR 2.71/unit and INR 132.79 Crore for purchase of Non-Solar REC equivalent to 711.69 MUs at an average cost of INR 1.87/unit.

Accordingly, the Commission has approved actual cost of INR 162.51 Crore towards compliance of RPO in the true-up of FY 2019-20 which is already considered as part of Power Purchase Cost.

3.10. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprises of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). As per the JERC MYT Regulations, 2018 variation in Expenses is controllable. Regulation 12.2 and Regulation 14 of the JERC MYT Regulation, 2018 states the following:

*"12. **Uncontrollable and Controllable factors***

……

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:

…

(h) Variation in O&M Expenses, except to the extent 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.

"14. Mechanism for sharing of gains or losses on account of controllable factors

14.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers:

Provided that the mechanism for sharing of gains or losses on account of controllable factors for a Generating Company shall be as specified in the prevalent CERC Tariff Regulations.

14.2 Approved aggregate loss, if any to the Transmission Licensee or Distribution Licensee on account of controllable factors shall be on account of the Licensee, and shall not be passed to the Consumers."

Therefore, any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers in accordance with the JERC MYT Regulations, 2018. Further Regulations 51.6 provides as follows:

"51. Operation and Maintenance (O&M) expenses for Distribution Wires Business

"….

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." (Emphasis supplied)***

3.10.1. Employee Expenses

Petitioner's Submission

The actual Employee expenses of INR 12.95 Crore have been incurred against approved expenses of INR 12.83 Crore 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

The Commission had approved employee expenses of INR 12.83 Crore in the APR Order. The actual employee expenses for FY 2019-20 as per audited accounts are INR 12.95 Crore.

In accordance with the clause 51.6 of the JERC MYT Regulations, 2018, the Commission has determined the revised Normative Employee Expenses for FY 2019-20. The revised normative employee expenses are calculated based on the approved employee expenses (INR 12.41 Cr) for FY 2018-19 approved in order dated 18th May, 2020 and CPI inflation (7.53%) & actual Gn (Employee growth, i.e., 0%) for the FY 2019-20 with respect to FY 2018-19. Accordingly, the Commission has determined the revised employee expenses as INR 13.34 Crore for FY 2019-20.

Further, in accordance with the JERC MYT Regulations, 2018, the O&M expenses are controllable expenses. Hence, the Commission has considered the revised normative Employee Expenses as determined above for FY 2019-20. Accordingly, the employee expenses approved for FY 2019-20 is shown in the table below.

Table 18: Employee Expenses approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative EE	Trued-up by Commission
1	**Employee Expenses (EE)**	12.83	12.95	13.34	13.34

The Commission approves Employee Expenses of INR 13.34 Crore in the true-up of FY 2019-20.

3.10.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has submitted the actual A&G expenses of INR 7.31 Crore against the approved expenses of INR 6.09 Crore in the APR Order.

Commission's Analysis

A&G expenses mainly comprises 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 2019-20 are reflected as INR 7.31 Crore, while INR 0.63 Crore, which the Petitioner has claimed as part of A&G expense is actually the provision for Bad and doubtful debt. Similar to the approach followed while approving the revised normative Employee expenses the Commission has determined revised Normative A&G expenses which is based on the approved A&G expenses (INR 5.84 Cr) of FY 2018-19 and actual CPI Inflation for FY 2019-20 with respect to FY 2018-19. Accordingly, the Commission has determined the revised A&G expenses as INR 6.28 Crore.

In accordance with the JERC MYT Regulations, 2018, variation in O&M expenses are controllable. Therefore, the Commission has approved the same revised A&G expenses as approved in above para. Further, bad and doubtful debt being a separate expenses item as per the JERC MYT Regulations 2018, is dealt with in *Section 3.20* of this Order. Accordingly, the A&G expenses approved by the Commission are as follows:

Table 19: A&G Expenses approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative A&G	Trued-up by Commission
1	Administration & General Expenses (A&G)	6.09	7.31	6.28	6.28

The Commission approves the Administrative & General (A&G) expenses of INR 6.28 Crore in the true-up of FY 2019-20.

3.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

Actual R&M expenses of INR 19.50 Crore have been incurred against approved expenses of INR 11.38 Crore in the APR Order. The Petitioner submitted that Power Load Management of DNHPDCL is higher by 150% as compared to EDDD and Chandigarh & distribution area of DNHPDCL is greater than both the other utilities. Also, line length maintained by DNHPDCL is materially higher than as compared to EDDD and Chandigarh. Accordingly, the R&M expenses should be higher for DNHPDCL as compared to both the other utilities.

Commission's Analysis

Similar to the approach followed while approving the revised normative Employee expenses the Commission has determined revised Normative R&M expenses which is based on the approved closing GFA of FY 2018-19, actual WPI Inflation for FY 2019-20 (1.68%) with respect to FY 2018-19 and 'K' factor which was approved in MYT order dated 20th May, 2019, for the second (FY 20 to FY 22) control period. Accordingly, the Commission determined the revised R&M expenses as INR 9.34 Crore.

As the O&M expenses are controllable expenses as per the JERC MYT Regulations, 2018, similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same revised R&M Expenses as approved in above para.

The R&M Expenses approved by the Commission are as follows:

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Normative R&M	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	11.38	19.50	9.34	9.34

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.34 Crore in the true-up of FY 2019-20.

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, Petitioner's submission and O&M expenses now trued-up by the Commission.

Table 21: O&M Expenses approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Revised Expenses	Trued-up by Commission
1	Employee Expenses	12.83	12.95	13.34	13.34
2	Administrative & General Expenses (A&G)	6.09	7.31	6.28	6.28
3	Repair & Maintenance Expenses	11.38	19.50	9.34	9.34
	Total Operation & Maintenance Expenses	**30.30**	**39.76**	**28.96**	**28.96**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 28.96 Crore in the true-up of FY 2019-20.

3.11. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has achieved capitalization of INR 14.48 Crore during the year against INR 5.70 Cr capitalization approved in the APR Order. The capital expenditure during the same period was INR 42.89 Crore against approved capital expenditure of INR 128.20 Crore.

Commission's Analysis:

The Commission observes that the Petitioner has capitalized INR 16.22 Crore as per FAR while the capitalization approved by the Commission in the APR Order was INR 5.70 Cr. The petitioner further submitted that out of INR 16.23 Crores, INR 1.66 Crore is pertaining to solar assets of the department (DNHPDCL). Accordingly, the Commission reduced the INR 1.66 Crore pertaining to solar plant from the total capitalization of INR 16.23 Crore. Further the Commission also reduced an amount of INR 0.10 Crore pertaining to assets retired in FY 2019-20 as per FAR.

The Commission accordingly approves the capitalization as shown in the table below:

Table 22: Capitalization approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	128.20	42.89	42.89
2	Capitalization	5.70	14.48	14.48

The Commission approves capital expenditure and capitalization of INR 42.89 and INR 14.48 Crore respectively in the true-up of FY 2019-20.

3.12. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the entire capital addition has been funded through its own funds. Further, the Petitioner has also submitted that no assets were created through consumer contribution, nor any grants were received from the Government during FY 2019-20.

Commission's Analysis

The JERC 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. Regulation 26.2 of the JERC MYT Regulations 2018 states the following:

"*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:
……"

In accordance with the JERC MYT Regulations, 2018 the Commission has determined the Capital Structure for FY 2019-20. The closing GFA approved in FY 2018-19 has been considered as the opening GFA for FY 2019-20. The opening debt for FY 2019-20 has been considered as closing debt approved in true-up of FY 2018-19.

The petitioner has submitted the equity opening balance of INR 135.71 Crore in the True Up of FY 2019-20 instead of approved Closing equity balance for FY 2018-19 which is INR 100.08 Crore. The Commission is considering the opening equity for FY 2019-20 as per the closing balance of true-up of FY 2018-19.

The addition in debt and equity has been normatively considered as 70% and 30% respectively of the capitalization during the year in accordance with the JERC MYT Regulations, 2018. Accordingly, the Commission approves the capital structure for FY 2019-20 as shown in the tables as follows:

Table 23: Funding Plan approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalization	5.70	14.48	14.48
2	Debt (%)	70.00%	70.00%	70.00%
3	Equity (%)	30.00%	30.00%	30.00%
4	**Normative Loan**	**3.99**	**10.14**	**10.14**
5	**Normative Equity**	**1.71**	**4.34**	**4.34**

Table 24: GFA addition approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	452.36	452.36	452.36
2	Addition During FY	5.70	14.48	14.48
3	Adjustment/Retirement During FY	0.00	0.00	0.10
4	**Closing Gross Fixed Assets**	**458.06**	**466.84**	**466.84**

Table 25: Normative Loan addition for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	26.11	26.11	26.11
2	Add: Normative Loan During the year	3.99	10.13	10.14
3	Less: Normative Repayment equivalent to Depreciation	15.76	10.82	16.14
4	**Closing Normative Loan**	**14.34**	**25.42**	**20.11**

Table 26: Normative Equity addition for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	100.08	135.71	100.08
2	Additions on account of new capitalization	1.71	4.34	4.34
3	**Closing Equity**	**101.79**	**140.05**	**104.42**

3.13. Depreciation

Petitioner's Submission

The Petitioner has submitted that for computation of depreciation, the opening GFA as per the annual accounts for FY 2019-20 have been considered at INR 452.36 Crore. Further, the Petitioner has submitted that the depreciation for the year has been worked out after applying the Depreciation rates as per the JERC (Multi Year Tariff) Regulations, 2018.

Commission's Analysis

Regulation 30 of the JERC MYT Regulations 2018, states 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.
..."

As per the norms specified in the JERC MYT Regulations, 2018, the Commission has verified the asset wise capitalization of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the JERC MYT Tariff Regulations, 2018, provided in the table below:

Table 27: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Underground cables	2.57%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%
Software-Intangible assets	15.00%

Based on the above deprecation rates specified in the JERC MYT Tariff Regulations, 2018 and the actual asset addition during the year, the weighted average deprecation rate is 3.51% against a rate of 3.46% approved in the APR Order. The Commission has calculated the deprecation on average Gross Fixed Assets (GFA) considering the opening and closing values approved in *Section 3.12* of this Order. The net addition during the year has been calculated after deducting the value of retired assets. The following table provides the calculation of depreciation during the year FY 2019-20:

Table 28: Depreciation approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed	452.36	452.36	452.36
2	Addition During FY	5.70	14.48	14.58
3	Adjustment/Retirement During FY	-	-	-0.10
4	Closing Gross Fixed Assets	458.06	466.84	466.84
5	Average Gross Fixed Assets	455.21	459.60	459.60
6	Rate of Depreciation (%)	3.46%	2.35%	3.51%
7	**Depreciation**	**15.75**	**10.82**	**16.14**

The petitioner while calculating the Depreciation used incorrect opening GFA of various assets groups such as Plant & Machinery & Computers & Others. This has resulted in less estimation of depreciation by the petitioner as shown in the above table. Hence the significant difference is observed in the depreciation as claimed by the petitioner & as approved by the Commission for FY 2019-20.

The Commission approves depreciation of INR 16.14 Crore in the true-up of FY 2019-20.

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 2019-20 has been computed as 70% of the capitalization for FY 2019-20. The repayment of loans has been considered equal to the depreciation during FY 2019-20.

Further, the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) as on April 1, 2019 plus 100 bp, i.e., 9.55%.

Commission's Analysis

In this regard, Regulation 28 of the JERC MYT Regulations provides:

"***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."

As per the above Regulation, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete capitalization during the year has been funded by the equity and no loan has been taken against any of the capitalized assets. Accordingly, the Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI MCLR as on April 1, 2019 (8.55%) plus 100 basis points.

Further, in accordance with the JERC MYT Regulations 2018, the interest has been calculated on the average normative loan during the year with the opening and closing values for loan as approved in *Section 3.12* of this Order. The repayment has been considered equal to depreciation allowed for FY 2019-20.

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	26.11	26.11	26.11
2	Add: Normative Loan During the year	3.99	10.14	10.14
3	Less: Normative Repayment = Depreciation	15.76	10.82	16.14
4	Closing Normative Loan	14.34	25.42	20.11
5	Average Normative Loan	20.22	25.77	23.11
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	**1.93**	**2.46**	**2.21**

The Commission approves the Interest of Loan of INR 2.21 Crore in the true-up of FY 2019-20.

3.15. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the JERC MYT Regulations 2018 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 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. Petitioner further submitted that 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 the Regulation 26 of the MYT Regulations, 2018.

<u>Commission's Analysis</u>

Regulation 27.2 and 27.3 of the JERC MYT Regulations, 2018 specifies the following:

*"***27. Return on Equity**

....

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.

.........''

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

....

30.2 Return on equity shall be computed at the base rate of ***15.50%*** *for thermal generating station,* ***transmission system*** *including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
........" ***(Emphasis supplied)***

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2018, i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations mentioned above) 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 of the same. The following table provides the Return on Equity approved by the Commission in the APR Order, Petitioner's submission and now trued-up by the Commission.

Table 30: Return on Equity approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	100.08	135.71	100.08
2	Additions on account of new capitalization	1.71	4.34	4.34
3	Closing Equity	101.79	140.05	104.42
4	Average Equity	100.94	137.88	102.25
5	Avg. Equity for wire business (90%)	90.84	124.09	92.03
6	Avg. Equity for Retail Supply Business (10%)	10.09	13.79	10.23
7	Return on Equity for Wire 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 Wire Business	14.08	19.23	14.26
10	Return on Equity for Retail Supply Business	1.61	2.21	1.64
11	**Return on Equity**	**15.70**	**21.44**	**15.90**

The petitioner while calculating Return on Equity considered average equity of FY 2018-19 instead of considering closing equity of FY 2018-19 as opening equity of FY 2019-20. This resulted in higher estimation of average equity by the petitioner for FY 2019-20. Hence for FY 2019-20 there is a significant difference in the return on equity claimed by the petitioner and approved by the Commission.

The Commission approves a Return on Equity of INR 15.90 Crore in the true-up of FY 2019-20.

3.16. Additional ROE for FY 2016-17, FY 2017-18 and FY 2018-19

Petitioner's Submission

The Petitioner submitted that Regulation 27 of MYT Regulations, 2014 provide as follows:

"**27. Return on equity**

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

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

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

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

As given above, the MYT Regulations, 2014, allow the utility to claim ROE on 30% of the capital base or the actual equity whichever is lower. However, in the true up order of FY 2016-17, FY 2017-18 & FY 2018-19 the Commission had allowed ROE on the basis of paid up equity share capital whereas the Regulations specifically provides that ROE should be allowed on the basis of equity and not on the basis of paid up equity capital. The

Petitioner further submitted that Regulation specifically states that ROE should be allowed irrespective of whether the Distribution Licensee has claimed return on equity in the ARR Petition.

Accordingly, the Petitioner has claimed a total of INR 17.11 Cr as additional ROE for FY 2016-17 FY 2017-18 & FY 2018-19 (INR 5.70 Crore for FY 2018-19 and INR 11.41 Crore for FY 2016-17 & FY 2017-18).

Commission's Analysis

The Petitioner had also raised the same issue of variation in Opening Equity for FY 2017-18 in the Review Petition filed on the Commission's Order dated May 20, 2019. In this regard, the Commission in its Order dated September 24, 2019, on the Review Petition ruled as follows:

"The Review Petitioner's contention is about difference in equity base upon which return on equity is allowed. The opening level of equity base for FY 2017-18 is the same as approved closing value of equity for FY 2016-17. The Review Petitioner did not file any Review Petition on the True-up Order for FY 2016-17 regarding the closing equity value of FY 2016-17. There is no merit in changing the opening value of equity for FY 2017-19 as per 30% of opening value of GFA. The Commission has considered the equity addition @30% for the approved capitalization for FY 2017-18 which is in line with the extant MYT Regulations.

As can be seen above, due to the Review Petitioner's inability to submit the project wise equity infusion details, the Commission was forced to consider opening equity value for FY 2017-18 equal to approved closing value of equity for FY 2016-17 as the part of methodology followed. The Commission is of the opinion that this issue does not warrant a review as there is no error in impugned order."

The Commission in the true up orders of FY 2016-17, FY 2017-18 & FY 2018-19 had allowed Return on equity on the basis of paid up equity share capital instead of entire equity.

Accordingly, in line with the approach followed by the Commission in true up of FY 2016-17, FY 2017-18 & FY 2018-19 the Commission has not considered the Petitioner's submission to allow additional Return on equity.

3.17. Interest on Security Deposits

Petitioner's Submission

Payments of INR 4.20 Crore were released to the consumers towards interest on security deposits during FY 2019-20 against INR 2.70 Crore which was approved by the Commission in the APR Order.

Commission's Analysis

As per Regulation 5.135 of the JERC Electricity Supply Code Regulations, 2018-

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

Accordingly, 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 2019-20 for truing-up.

The interest on consumer's Security Deposits approved by the Commission in APR Order, Petitioner's submission and now Trued- up by the Commission are shown in the following Table:

Table 31: Interest on security deposit approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Interest on Security Deposit	**2.70**	**4.20**	**4.20**

The Commission approves Interest on Security Deposit of INR 4.20 Crore in the true-up of FY 2019-20.

3.18. Interest on Working Capital

Petitioner's Submission

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

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

a. O&M expense for one month
b. Maintenance spares at 40% of R&M for one month
c. Receivables for 2 months
d. Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

DNHPDCL has computed interest on working capital at 10.55% (SBI base rate as on 1st April, 2019 plus 200 basis points) as has been shown in the table below:

Table 32: Interest on Working Capital submitted by Petitioner for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission
1	O&M expense for one month	2.52	3.31
2	Maintenance spares at 40% of R&M for one month	0.38	0.65
3	Receivables for 2 months	562.82	561.64
4	**Total**	**565.72**	**565.60**
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	53.08	60.63
6	Net Working Capital required after deduction of Security Deposit	512.64	504.97
7	**Interest on Working Capital**	**54.08**	**53.27**

Commission's Analysis

The computation of working capital requirements and the rate of interest to be considered are stipulated in the JERC MYT Regulations, 2018. Regulation 52.1 & 31 of the JERC MYT Regulations 2018 states the following:

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

(a) O&M Expense for 1 month; plus
(b) Maintenance spares at 40% of R&M 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, held as security deposits

………

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 1stApril of the Financial Year in which the Petition is filed plus 200 basis points."

As above, the Commission for determination of working capital requirements of the Petitioner during the year, has considered the receivables equivalent to two months of the expected revenue requirement, the consumer security deposit, the O&M Expenses for one month & Maintenance spares as 40% of R&M expenses as per the audited accounts of FY 2019-20.

With regards to the interest rate, the Commission has considered the SBI MCLR rates (One Year) as on April 1, 2019 plus 200 basis points which is 10.55%.

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

Table 33: Interest on Working Capital approved by Commission for FY 2019-20 (INR Crore)

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	2.52	3.31	2.41
2	Less: Power Purchase Cost for one month	0.38	0.65	0.31
3	Inventory Based on Annual Requirement for Previous FY for 2 months	562.82	561.64	561.64
4	Total Working Capital Requirement	**565.72**	**565.60**	**564.36**
5	Less: Security Deposit excluding BG/FDR	53.08	60.63	60.63
6	Net Working Capital	512.64	504.97	503.73
7	Rate of Interest (%)	10.55%	10.55%	10.55%
	Interest on Working Capital	**54.08**	**53.27**	**53.14**

The Commission approves the Interest on Working Capital of INR 53.14 Crore in the true-up of FY 2019-20.

3.19. Income Tax

Petitioner's submission

The Petitioner submitted Income tax liability for FY 2019-20 as INR 2.63 Cr.

<u>Commission's Analysis:</u>

In this regard, Regulation 32 of the JERC MYT Regulations, 2018, states 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."

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

*"**64. Non-Tariff Income***

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

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

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

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

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

(h) Income from advertisements, etc.;

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

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

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

(n) Miscellaneous receipts;

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

(p) Prior period income, etc.:

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

*……." **(Emphasis supplied)***

Further, the Regulation 34.2 of the JERC MYT Regulations, 2018 stipulates the following:

"34.2 The delayed payment charge earned by the Transmission Licensee or the Distribution Licensee shall not be considered under its Non-Tariff Income."

The Petitioner has claimed INR 2.63 Cr as the income tax paid. The income tax paid was verified by the payment receipts provided by the petitioner and also from the audited annual accounts for FY 2019-20. The Commission has observed that the actual tax payment is as per the latest audited accounts available (Note 36 P&L Accounts) for FY 2019-20.

But the Commission has observed that the Petitioner has paid the income tax on total income comprising of income from sale of power & other income like interest income, delayed payment charge, etc. As per the above Regulations, since interest income & income by delayed payment charges are not to be considered as non-tariff income, the income tax on interest income and income from delayed payment charges is proportionately reduced from total income tax while allowing the income tax in ARR, which has been shown in the following table:

Table 34: Income Tax approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Income Tax	**0.00**	**2.63**	**2.60**

The Commission approves Income Tax liability as INR 2.60 Cr for FY 2019-20.

3.20. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not claimed any amount towards provision for bad and doubtful debts for FY 2019-20.

Commission's Analysis

As per Regulation 62.1 of the MYT Regulations, 2018:

"62.1 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."

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

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

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

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

As the Petitioner has not claimed any amount towards Bad Debts, the Commission therefore has not considered any bad and doubtful debts in the true-up of FY 2019-20.

3.21. Non-Tariff Income (NTI)

Petitioner's Submission

The Petitioner has submitted the actual Non-Tariff Income of INR 8.22 Crore for FY 2019-20.

Commission's Analysis

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

*"**64. Non-Tariff Income***

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

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

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

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

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

(h) Income from advertisements, etc.;

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

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

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

(n) Miscellaneous receipts;

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

(p) Prior period income, etc.:

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

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

In accordance with the above, Delayed Payment Surcharge & Interest on FD & others are not to be considered as Non-Tariff Income (NTI). The NTI claimed by Petitioner and now trued-up by the Commission is shown in the following table:

Table 35: Non-Tariff Income Approved by Commission for FY 2019-20 (INR Crore)

S. No.	Particulars	Petitioner's Submission	Trued-up by Commission
1	Delayed Payment Charges	-	0.00
2	Reactive Charges Receivables	-	0.03
3	Capacitor Charges	-	-
4	Interest on FD and Others	-	0.00
5	Meter Testing Charges	-	0.08
6	Other Charges (Indirect)	-	-
7	Reconnection Charges	-	0.02
8	Registration Fees	-	2.00
9	Service Connection Charges	-	0.34
10	Supervision Charges	-	2.08
11	Tender Fees	0.02	0.02
12	Penalty Charges	-	-
13	STOA Application Receivables	-	0.97
14	Recovery of doubtful debt	-	-
15	Others	-	-
16	Provision for written back	0.09	0.09
17	sale of scrap	0.23	0.23
18	Test report charges	-	0.05
19	Assessment Charges from consumers	-	2.26
20	Licensee Fees	-	0.00
21	Operating Income	5.57	-
22	Other Miscellaneous Income	2.30	3.30
23	**Gross Total**	**8.22**	**11.48**

The Commission further observed that the petitioner did not include revenue from some of the sources in Non-tariff income as provided in annual accounts of FY 2019-20, as shown in the above Table. For instance, the revenue from sources like Assessment charges from consumers, supervision charges, registration fees, etc. are not considered by the Petitioner. But the Commission has included revenue from all the appropriate sources in Non-Tariff income as per Regulation 64 of the JERC MYT Regulations, 2018. Hence the significant variation is observed in petitioner proposed and Commission approved Non-tariff income for FY 2019-20.

Accordingly, the Commission approves Non-Tariff Income of INR 11.48 Crore in the true-up of FY 2019-20.

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

Petitioner's Submission:

The Incentive towards over achievement of norms of distribution losses has been considered INR 15.18 Cr by the Petitioner and added to ARR.

Commission's Analysis

In the APR for FY 2019-20, the Commission had approved the T&D loss level of 4.30%. The Petitioner has achieved T&D loss of 3.47% against the approved loss level of 4.30%. The Commission, in accordance with

Regulation 14.1 of the JERC MYT Regulations, 2018 (reproduced below) has determined the incentive towards the over-achievement of the target of distribution loss for FY 2019-20 as follows:

"14.1 Approved aggregate gain to the Transmission Licensee or Distribution Licensee on account of controllable Factor shall be shared equally between Licensee and Consumers:
........."

The incentive has been considered at INR 5.11/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner for FY 2019-20. The APPC has been derived at State/UT Periphery based on the Power Purchase cost less cost of renewable energy certificates to meet RPO approved in the true-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (6,513.85 MU) with the actual Intra-State T&D Loss (3.47%).

Further the JERC MYT Regulations, 2018, stipulate the variation in distribution losses to be a controllable factor and any approved gain to the Distribution Licensee on account of controllable factors shall be shared equally between Licensee and Consumers.

The assessment of incentive for lower T&D losses and O&M Expenses is as shown in the following table:

Table 36: Incentive due to over-achievement of Distribution Loss target for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR	Trued-up by Commission
1	Retail Sales (MU)	6288.00	6288.00
2	T&D Loss (%)	4.30%	3.47%
3	Power at State/UT Periphery (MU)	6570.53	6513.85
4	Gain/ (Loss) (MU)		56.68
5	Average Power Purchase Cost (INR/kWh)		5.11
6	Gain/ (Loss) (INR Crore)		28.94
7	**Sharing of Gain / (Loss) with Petitioner (INR Crore)**		**14.47**

The Commission approves INR 14.47 Crore as incentive for over-achieving the distribution loss target for FY 2019-20.

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 3,646.81 Crore for approval in the True-up of FY 2019-20.

Commission's Analysis

The Commission on the basis of the detailed analysis of the cost parameters of the Aggregate Revenue Requirement approves the net revenue requirement in the true-up of FY 2019-20 as given in the following table:

Table 37: Aggregate Revenue Requirement approved by Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	3,495.69	3,488.16	3,488.15
2	Operation & Maintenance Expenses	30.30	39.76	28.96
3	Depreciation	15.76	10.82	16.14
4	Interest and Finance charges	1.93	2.46	2.21
5	Return on Equity	15.70	21.44	15.90

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
6	Additional ROE	0.00	17.11	0.00
7	Interest on Security Deposit	2.70	4.20	4.20
8	Interest on Working Capital	54.08	53.27	53.14
9	Income Tax	0.00	2.63	2.60
10	Provision for Bad Debt	0.00	0.00	0.00
11	Incentive/ (Disincentive)on achievement of norms	0.00	15.18	14.47
13	**Total Revenue Requirement**	**3,616.15**	**3,655.03**	**3,625.76**
14	Less: Non-Tariff Income	14.17	8.22	11.48
15	**Net Revenue Requirement**	**3,601.97**	**3,646.81**	**3,614.28**

The Commission approves net Aggregate Revenue Requirement of INR 3,614.28 Crore in the true-up of FY 2019-20.

3.24. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for FY 2019-20 is INR 3,369.82 Crore as against INR 3,376.89 Crore approved by the Commission in the APR Order.

Commission's Analysis

The Petitioner submitted INR 3,369.82 Crore as revenue from sale of power. The Commission analyzed the sales and revenue figures for each consumer category and checked the revenue from audited accounts of FY 2019-20. The Revenue from sale of power as provided in the annual accounts is INR 3,371.08 Crore, out of which INR 1.26 Crore was provided as rebate to consumers. Hence, the net revenue from sale of power is INR 3,369.82 Crore.

The Commission approves the revenue from sale of power as INR 3,369.82 Crore in the true-up of FY 2019-20.

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 276.99 Crore is arrived in the true-up of FY 2019-20.

Commission's Analysis

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

Table 38: Standalone Revenue Gap/ (Surplus) for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	**3,601.97**	**3,646.81**	**3,614.28**
2	Revenue from Retail Sales at Existing Tariff	3,376.90	3,369.82	3,369.82
3	Revenue from Open Access Charges	0.00	0.00	0.00
4	Total Revenue	**3,376.90**	**3,369.82**	**3,369.82**
5	**Net Standalone Gap / (Surplus)**	**225.08**	**276.99**	**244.46**

The Commission, in the true-up of FY 2019-20 approves a standalone gap of INR 244.46 Crore. This standalone gap has been carried over in the subsequent years and has been dealt with while determining the tariff for FY 2021-22.

4. Chapter 4: Annual Performance Review for FY 2020-21

4.1. Background

The Tariff Order for approval of true-up of FY 2018-19, Annual Performance Review of FY 2019-20 and Aggregate Revenue Requirements (ARR) for FY 2020-21 and determination of tariff for FY 2020-21 was issued by the Commission on May 18, 2020 (hereinafter referred to as 'ARR Order' for the purpose of APR of FY 2020-21). This Chapter covers the Annual Performance Review (APR) for FY 2020-21 vis-à-vis the cost parameters approved by the Commission in the ARR Order. The Annual Performance Review for FY 2020-21 is to be carried out as per the following provisions of Regulation 11 of the JERC (Multi Year Tariff) Regulations, 2018:

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

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

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

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

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

.....

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;

.....

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

e) Other relevant details, if any.

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

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

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

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

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

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

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

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

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

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

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

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

4.2. Approach for the Review for FY 2020-21

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 2020-21 has been done based on actual Power Purchase Quantum and Cost of the first 9 months of FY 2020-21, actual Energy Sales for the first 9 months, etc., based 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 for 9 first months of FY 2020-21, the JERC MYT Regulations, 2018 and on the basis of the norms approved in the ARR Order dated May 18, 2020.

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

4.3. Energy Sales

Petitioner's Submission

The Petitioner in its Petition submitted that the sales for FY 2020-21 have been estimated based on actual sales by the Corporation during the first six months of FY 2020-21. Total sales of 5153.96 MU have been estimated against the 6689.48 MU as approved by the Commission in the ARR Order for FY 2020-21.

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 2020-21 i.e., from April 2020 to December 2020, in both kWh and kVAh. The Commission has noted the audited figures for FY 2019-20 and provisional information provided by the Petitioner for the first 9 months of FY 2020-21. For all the consumers' 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 2020-21.

However, while applying the method as mentioned in above Para, the Commission has re-calculated the sales for March 2020. Since the national lockdown was announced on March 22nd 2020, the sales for remaining part of the month of March, i.e., from 22.03.2020 to 31.03.2020, were not included in the sales for FY 2019-20. The Commission decided to project sales for FY 2020-21 considering business as usual scenario in FY 2019-20. Hence it was necessary to 'normalize' the sales for the month of March' 2020.

The Commission calculated 'Expected sales for March' 2020 by escalating the sales of February' 2020 by a percentage to arrive at normal sales for March 2020. After escalating for category wise sales the Commission has considered the higher number between the actual and the escalated number. This percentage is growth percentage of sales for month of Mar 2019 over sales of Feb 2019. This has resulted in projection of sales for FY 2020-21 in business as usual scenario.

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 for FY 2020-21.

Table 39: Energy Sales (MU) approved by the Commission for FY 2020-21

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	153.82	154.19	146.07
2	Low Income Group (LIG)	0.00	10.45	0.00
3	Commercial/Non Domestic	39.23	33.78	38.84
4	Agriculture	7.14	5.01	6.21
5	LT Industry	234.21	181.50	186.94
6	Public Lighting	3.09	2.68	3.26
7	Public water works	5.69	5.00	5.18
8	HT/EHT Industry	6,243.48	4,757.71	4,753.10
9	Temp. Supply	2.82	3.62	3.30
	Gross Total	**6,689.48**	**5,153.96**	**5,142.89**

The Commission approves energy sales of 5,142.89 MU in the APR of FY 2020-21.

4.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.66% in FY 2020-21.

Commission's Analysis

The Commission in the APR of FY 2020-21 considers the Inter-State transmission losses in line with those approved in the ARR Order. The same shall be revised based on actuals during the true-up exercise of FY 2020-21.

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

Table 40: Inter-State Transmission Loss for FY 2020-21 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
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 2020-21.

4.5. Distribution Loss

Petitioner's submission

The Petitioner has submitted distribution losses of 4.20% for FY 2020-21 same as approved by the Commission in the ARR Order.

Commission's Analysis

Regulation 12.2 (c) of the JERC, MYT Regulations, 2018, provides as follows:

"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:

.....

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

.........."

As per Regulation 12.2 (c) of the JERC, MYT Regulations, 2018, distribution loss is a controllable factor. The Commission approves the same loss level as approved in the MYT Order dated May 20, 2019.

Further, in accordance to Regulation 14 of the JERC, MYT Regulations, 2018, mechanism for sharing of gains or losses on account of controllable factors, 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 following table provides the Distribution loss approved in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 41: Distribution loss for FY 2020-21 (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Distribution Loss	4.20%	4.20%	4.20%

The Commission approves distribution loss of 4.20% in the APR of FY 2020-21.

4.6. Energy Balance

Petitioner's submission

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

Table 42: Energy Balance as submitted by the Petitioner for FY 2020-21 (MU)

Particulars	Value
Sales	5,153.96
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	**5153.96**
Add: Losses	225.96
T&D Losses (%)	**4.20%**
Energy Required at Periphery	**5379.91**
Add: Sales to common pool consumer	0.79
Add: Sales through IEX	67.30
Less: Own Generation	6.18
Total energy requirement at state periphery	5441.82
Less: Energy Purchased through UI at Periphery	11.73
Less: Purchase from Renewable Sources	000
Less: Open Access Purchase	0.00
Less; Power from Power Exchange	646.55
Total Energy Required at Periphery	**4783.54**
Transmission loss	181.73
Transmission loss (%)	3.66%
Total Energy to be purchased	**4965.27**
Total Energy requirement from tied up sources & UI at generator end	5629.73
Total Energy requirement in UT including Open Access	5629.73

The Petitioner has estimated the Total Energy requirement from the tied-up sources & UI at generator end as 5,629.73 MU in the APR for FY 2020-21.

Commission's Analysis

The energy requirement at State/UT Periphery is derived based on the energy sales estimate and the Intra-State transmission losses and Distribution losses approved for FY 2020-21, as shown in the following Table:

Table 43: Energy Balance as approved by the Commission for FY 2020-21 (MU)

Sr. No.	Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
A	Energy sales within the State/UT		6,689.48	5,153.96	5142.89
B	Open Access Sales		0.00	0.00	0.00
C	Less: Energy Savings		0.00	0.00	0.00
D	**Total Sales within the State/UT**	**D=A+B+C**	**6689.48**	**5153.96**	**5142.89**
	Distribution losses				
E	in %		4.20%	4.20%	4.20%
F	In MU	F=G-D	293.28	225.96	225.47
G	**Energy required at State Periphery**	**G=D/(1-E)**	**6982.76**	**5379.91**	**5368.37**
	Energy Transactions at Periphery				
H	Add: Sales to common pool consumer		0.00	0.79	0.00
I	Add: Sales through IEX		0.00	67.30	0.00
J	Less: Own Generation		5.38	6.18	6.18
K	Less: Energy Purchased through UI at Periphery		**6977.38**	**5441.82**	**5362.19**
L	Less: Purchase from Renewable sources		1664.40	0.00	28.25
M	Less: UI Overdrawl		0.00	11.73	24.13
N	Less: Purchase from Power Exchanges		0.00	646.55	463.74
O	**Total energy requirement at State Periphery from tied-up Sources**	**O=G+H+I-J-K-L-M-N**	5312.98	4783.54	4846.06
	Transmission losses				
P	in %		3.66%	3.66%	3.66%
Q	in MU	**Q=R-O**	201.84	181.73	184.10
R	Total requirement from tied-up sources at generator end (MU)	R=O/ (1-P)	5514.82	4965.27	5030.16
S	**Total requirement from Tied-up sources including purchase from Power Exchange**	**S=R+N**	**5514.82**	**5611.82**	**5493.90**
T	**Total availability from tied up sources at generator end (MU)**				**5030.16**
U	**Deficit/(surplus)**	**U=S-T**			**463.74**

The Commission approves the Total Energy available at the generator end (from firm sources) as 5,030.16 MU in the APR for FY 2020-21. The Commission has estimated a deficit of 463.74 MU and has assumed that the deficit power will be purchased from the Open Market. The Commission has considered a price of INR 2.88/kWh for such power, considering the same as actual average per unit rate of first nine months of FY 2020-21. This has been included in the Power Purchase cost allowed by the Commission.

4.7. Power Purchase Quantum & Cost

4.7.1. Availability of power

Petitioner's submission:

Dadra & Nagar Haveli has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like NTPC Korba, NTPC Vindhyachal, NTPC Kahalgaon, NTPC Kawas, NTPC Sipat, NPCIL Tarapur, NPCIL Kakrapar, etc., to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during FY 2020-21 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL Bhilai
- Nuclear Power Corporation of India Limited (NPCIL)
- 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 region 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 (UI).

For projecting of the energy availability for FY 2020-21, six months actual power purchase has been considered by the Petitioner in its Petition. For projection of remaining six months of power purchase for FY 2020-21, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no. WRPC/Comml-I/6/Alloc/2020 dated: 15/10/2020 of Western Regional Power Committee as shown in the following table:

Table 44: Energy allocation as considered by the Petitioner for FY 2020-21 (MW)

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	51.20	0.00	51.20
KSTPS -3	19.68	2.20	21.88
VSTPP-I	37.03	5.00	42.03
VSTPP-II	27.97	4.00	31.97
VSTPP- III	27.97	6.00	33.97
VSTPP- IV	39.36	5.55	44.91
KAWAS	56.18	25.00	81.18
GGPP	56.74	2.00	58.74
Sipat – I	77.93	9.00	86.93
Sipat – II	26.56	4.00	30.56
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	39.36	5.55	44.91
VSTPP-V	19.68	5.55	25.23
Mauda II	51.95	8.60	60.55
Solapur	51.95	21.57	73.52
Gadarwara	31.49	10.42	41.91

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
NPCIL – KAPS	10.36	2.00	12.36
NPCIL - TAPS 3&4	35.03	7.00	42.03
Total	747.07	145.50	892.57
NSPCL Bhilai		100.00	100.00

Commission's Analysis:

The data pertaining to actual power purchase quantum for the period from October 2020 to December 2020 was sought from the Petitioner. The Commission considered the data for first nine months of FY 2020-21 as submitted by the Petitioner and estimated the power purchase quantum for the remaining months of the financial year considering data of the firm and infirm allocation from various generating stations. The source wise methodology followed for estimation of quantum of power procurement has been detailed as follows:

Availability of energy from NTPC Stations:

- Actual Power Purchase Quantum is available for first 9 months for FY 2020-21. From January to March 2021, power purchase quantum for 17 of the total 24 NTPC plants has been estimated based on 3 years average (FY 2017-18 FY 2018-19 and FY 2019-20) of quantum of energy purchased from the respective station during these months.
- For NTPC Mauda 2, Solarpur, Lara & Gadarwara for the power purchase quantum for January-March 2021 the Commission has considered the Petitioner's estimation of power purchase for entire 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. Remaining value of Power Purchase quantum from each plant is equally distributed in last 3 months of the FY to arrive at the month wise quantum purchased for FY 2020-21
- For NTPC Khargone, the power procurement for each month (January, February & March 2021) is considered equal to average of power procurement in six months of FY 2020-21 (July 2020 to December 2020) as there was no power is purchased in first three month (April 2020 to June 2020) of the FY 2020-21 as it is a new plant.

Availability of energy from NSPCL Bhilai station:

- Actual Power Purchase Quantum is available for first 9 months for FY 2020-21. From January to March 2021, the Commission has considered power purchase quantum same as the petitioner's estimation since in FY 2019-20 the power procurement had drastically reduced from previous two years. The actual power purchase of first 9 months is subtracted from total Power Purchase quantum submitted by the petitioner. 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 2020-21

Availability from NPCIL stations:

- DNHPDCL 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 of power from the Open Market, Unscheduled Interchange and Banking

- The Open market purchase of 361.75 MUs for first 9 months has been considered as per actuals. For the remaining months the quantum for purchase/sale has been considered as 101.99 MUs as estimated in the energy balance, discussed in the previous section.

- Quantum under UI Overdrawal/ Underdrawal for first 9 months of FY 2020-21 has been considered as 24.13 MUs as per actuals. Further due to availability of Power from firm and other sources, no quantum is approved under UI Overdrawal by the Commission for last quarter (January-March) of FY 2020-21.

4.7.2. Power Purchase Cost

Petitioner's submission:

Based on the actual power purchase cost of the first six months of FY 2020-21 and the remaining six months' projection, the revised estimated power purchase cost for FY 2020-21 as submitted by the Petitioner is presented in the following table:

Table 45: Power Purchase Quantum (MU) and Cost (INR Crore) submitted by Petitioner for FY 2020-21

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
NTPC Stations							
KSTPP 1&2	362.67	21.83	56.53	-0.82	0.00	77.54	2.14
KSTPS 3	163.93	20.10	25.32	-0.29	0.00	45.13	2.75
VSTPP-I	257.12	19.83	46.52	-1.00	0.00	65.35	2.54
VSTPP-II	208.62	13.22	36.69	-0.43	0.00	49.47	2.37
VSTPP- III	229.60	21.80	40.44	-0.90	0.00	61.34	2.67
VSTPP- IV	298.17	45.77	50.93	-0.25	0.00	96.44	3.23
KAWAS	202.23	47.99	42.08	3.00	0.00	93.07	4.60
JGPP	164.52	44.38	35.56	2.78	0.00	82.72	5.03
Sipat-I	614.68	72.71	100.62	-0.29	0.00	173.03	2.82
Sipat-II	215.11	23.44	36.41	-0.82	0.00	59.03	2.74
MSTPL 1	111.88	55.86	33.53	0.87	0.00	90.26	8.07
VSTPS-V	163.91	26.50	29.13	-0.29	0.00	55.34	3.38
Mauda 2	126.30	59.60	38.69	1.25	0.00	99.53	7.88
Solapur	199.51	84.68	59.81	0.49	0.00	144.97	7.27
LARA	184.82	46.10	39.36	-0.06	0.00	85.39	4.62
Gadarwara	204.90	55.63	53.68	0.18	0.00	109.49	5.34
BARH	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dhuwaran	289.88	96.32	84.00	0.30	0.00	180.61	6.23
Kharagaon	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSTPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KhSTPS I	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RSTPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TSTPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KHSTPP-II	18.15	1.82	3.92	0.02	0.00	5.76	3.17
Subtotal	**4,016.02**	**757.58**	**813.19**	**3.69**	**48.99**	**1,525.47**	3.80
NSPCL - Bhilai	**580.44**	**115.38**	**154.68**	**-1.31**	**0.00**	**268.75**	**4.63**
NSPCL - Rourkela							

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	All Charges Total	Per Unit Cost
NPCIL							
KAPS	80.59	0.00	19.11	0.00	9.11	10.00	1.24
TAPS 3&4	288.22	0.00	99.96	44.54	0.00	144.50	5.01
Subtotal	**368.82**	**0.00**	**119.07**	**44.54**	**9.11**	**154.50**	4.19
Power purchase from Other Sources							
Indian E. Exchange/Bilateral	646.55	0.00	218.97	0.00	0.00	218.97	3.39
UI	11.73	0.00	3.69	0.00	0.00	3.69	3.15
Solar	6.18	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
Solar REC	0.00	0.00	36.37	0.00	0.00	36.37	0.00
Non Solar REC	0.00	0.00	48.65	0.00	0.00	48.65	0.00
Solar (SECI)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wind (SECI)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	**664.46**	**0.00**	**307.68**	**0.00**	**0.00**	**307.68**	4.63
Misc. Arrears							
Power Purchase Cost	**5,630**	**873**	**1,395**	**47**	**58.10**	**2,256**	4.01
Availability at ED-DNH Periphery	**5629.73**	**872.96**	**1394.62**	**46.92**	**58.10***	**2256.40**	
PGCIL CHARGES						399.47	
POSOCO						0.56	
Reactive charges						2.43	
Others						41.45	
Grand Total of Charges	**5,629.73**	**872.96**	**1,394.62**	**46.92**		**2,700.30**	
GMR - Change in Law						6.64	
Total PP Cost						**2,706.94**	

** As informed by the petitioner this total Rebate includes Rebate for early payment for NTPC/NPCIL plants and also includes Rebate due to COVID-19 provided by NTPC, NSPCL & Power Grid.*

Commission's Analysis:

The data pertaining to power purchase cost for the period from October to December 2020 was sought from the Petitioner. The Commission considered the data for first nine months of FY 2020-21 as submitted by the Petitioner and estimated the power purchase cost for the remaining months of the year considering data of the firm and infirm allocation from various generating stations. The source wise methodology followed for estimation of cost of power procurement has been detailed as follows:

Variable Charges:

- The per unit variable costs for various power stations, UI Over-drawal/ Under-drawal and Open Market have been computed by taking the average of the actual per unit variable cost during the first 9 months from April 2020 to December 2020 for all the stations.

Fixed Charges:

- Actual Fixed Costs have been considered for the first nine months for all stations for FY 2020-21.
- The fixed costs for the remaining months of the FY have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations.
- The remaining fixed cost, after deducting the fixed cost already paid by the Petitioner during first nine months from the Annual Fixed Cost share of Petitioner for a plant for whole year has been considered for the period January to March 2021.
- For few plants like NTPC Khargone, Gadarwara Kahalgaon and Solapur, fixed cost for January 2020 to March 2020 has been calculated in proportion to actual fixed cost in first nine months of FY 2020-21.

Other Charges:

- Actual charges have been considered for the first 9 months of FY 2020-21. No other charges have been considered for the remaining months of FY 2020-21.

Rebate (COVID-19):

In view of the prevailing conditions of COVID-19 pandemic in the country and the difficulties faced by various sections of society, MoP vide letter dated 15.05.2020 & Corrigendum dtd 16.05.2020 decided that all Central Public Sector Generating Companies under MoP and Central Public Sector Transmission Company may consider to offer Rebate to Discoms as specified in the aforementioned letters. In accordance with the same, DNHPDCL has been offered rebate by the following:

- **NTPC:** NTPC has decided to pass a Rebate of Rs. 23.29 Crore on capacity charges billed for lockdown period due to COVID-19.
- **Power Grid:** Power grid has decided to offer a one-time consolidated rebate of Rs. 14.42 Cr against the ISTS charges for the months of Apr'20 and May'20.
- **NSPCL:** NSPCL has decided to pass a Rebate of Rs. 3.69 Crore on capacity charges billed for lockdown period due to COVID-19.

The Commission has considered this rebate while approving the power purchase cost for FY 2020-21.

Change in law (GMR) Expenses:

- The Petitioner has claimed Rs 6.64 Cr under Change in law by GMR. The Commission verified from the supplementary invoices (issued by GMR to petitioner) submitted by Petitioner and observed that the invoices are amounting to Rs 6.40 Cr only. Accordingly, the Commission has approved INR 6.40 Crore under Change in law claims by GMR.
- As already discussed in *Section 3.8*, these claims are based on the multiple orders issued by the Central Electricity Regulatory Commission (CERC).

4.7.3. Transmission Charges

Petitioner's submission:

For PGCIL charges the Corporation has received bills amounting to INR 351.20 Crore during the first nine months of FY 2020-21. Accordingly, DNHPDCL has projected the POC charges for the FY 2020-21 at INR 399.47 Crore.

Commission's Analysis:

The Commission has estimated the transmission charges payable to PGCIL, WRLDC & MSTCL for FY 2020-21 based on the actual transmission charges paid in the first nine months of the financial year and transmission charges for the remaining months of the FY have been considered based on the average of the actual transmission charges paid in the first nine months. The same shall be trued-up as per actuals.

4.7.4. Total power purchase quantum and cost approved by Commission

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for FY 2020-21:

Table 46: Power Purchase Quantum (MU) and cost (INR Crore) approved by the Commission for FY 2020-21

S. No.	Source	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges# (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
A	**NTPC**						
1	KSTPS	358.05	24.43	55.20	-0.53	79.10	2.21
2	KSTPS 3	172.26	21.40	26.69	-0.16	47.93	2.78
3	VSTPP-I	255.97	24.43	44.53	-0.79	68.17	2.66
4	VSTPP-II	210.49	15.61	34.86	-0.26	50.21	2.39
5	VSTPP- III	240.77	25.01	40.69	-0.71	64.99	2.70
6	VSTPP- IV	317.35	49.62	52.43	-0.02	102.03	3.22
7	KGPP	202.23	50.34	38.58	3.11	92.03	4.55
8	GGPP	164.52	45.08	34.47	2.79	82.34	5.00
9	Sipat-I	613.11	80.08	95.17	-0.48	174.76	2.85
10	Sipat-II	202.16	26.65	31.89	-0.92	57.62	2.85
11	Mauda	154.72	59.04	42.80	1.45	103.29	6.68
12	VSTPS-V	172.21	29.44	29.64	-0.15	58.93	3.42
13	Mauda 2	126.30	60.43	36.74	1.65	98.82	7.82
14	Solapur	199.51	84.68	57.68	0.90	143.25	7.18
15	LARA	184.82	61.08	38.86	0.23	100.16	5.42
16	Gadarwara	204.90	56.38	52.76	0.02	109.16	5.33
17	BARH	0.00	-	-	0.00	0.00	0.00
18	Kharagaon	285.14	83.87	79.51	0.63	164.01	5.75
19	KHSTPP-II	16.39	1.72	3.51	0.09	5.32	3.24
	Subtotal – NTPC	**4080.91**	**799.27**	**796.00**	**6.86**	**1602.13**	**3.93**
B	**NSPCL – Bhilai**	**580.44**	**116.66**	**150.54**	**0.43**	**267.64**	**4.61**
C	**NPCIL**						
1	KAPS	80.59	-	18.61	0.00	18.61	2.31
2	TAPS	288.22	-	97.74	44.54	142.28	4.94
	Subtotal	368.82	0.00	116.35	44.54	160.89	4.36
	Total of all Firm Sources	**5030.16**	**915.93**	**1062.90**	**51.83**	**2030.66**	**4.04**
E	**Other Sources**						
1	Energy Exchange/ Bilateral	463.74	0.00	133.40	0.00	133.40	2.88
2	UI	24.13	0.00	7.32	0.00	7.32	3.03
3	Solar*	25.95	0.00	9.61	0.00	9.61	3.70
4	Non Solar	2.30	0.00	0.82	0.00	0.82	3.55

S. No.	Source	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges# (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
5	Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
6	Non Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
7	Solar SECI	0.00	0.00	0.00	0.00	0.00	0.00
8	Wind SECI	0.00	0.00	0.00	0.00	0.00	0.00
9	Own Solar	6.18	0.00	0.00	0.00	0.00	0.00
	Subtotal - Other Sources	522.31	0.00	151.14	0.00	151.14	2.89
	Total	**5552.47**	**915.93**	**1214.04**	**51.83**	**2181.80**	**3.93**
F	**Charges**						
1	PGCIL CHARGES					468.27	
2	POSOCO					0.54	
3	WRPC					0.00	
4	Reactive charges					1.63	
5	MSTCL					0.00	
6	Intra-state transmission charges					27.63	
G	**Grand Total of Charges**					**2679.87**	
H	GMR Change in Law					6.40	
I	Early payment Rebate					**-16.46**	
J	Power Grid - Rebate COVID-19					**-14.42**	
K	NTPC Limited - Rebate COVID-19					**-23.29**	
L	NSPCL - Rebate COVID-19					**-3.69**	
M	**Total Charges & Quantum**	**5,552.47**	**915.93**	**1214.04**	**51.83**	**2628.41**	**4.73**

* The details and cost for RPO is provided in Section 4.8

 # Other Charges includes ED & Cess on APC/Sales, Energy Charges Revision, ECR Gain Sharing, Insurance charges, Nuclear Liability Fund, sharing of benefits etc.

The Commission approves the revised quantum of power purchase as 5,552.47 MU at the generator periphery with total cost of INR 2,628.41 Crore in the APR for FY 2020-21.

4.8. Renewable Purchase Obligation (RPO)

Petitioner's submission:

As per the revised sales projections, the Petitioner has estimated requirement of 314.39 MUs of solar energy and 412.32 MUs of non-solar energy during FY 2020-21 to fulfill the RPO targets. The DNHPDCL plans to generate 6.18 MUs of solar power through its own Solar generation plant. The Petitioner submitted that the rest of the RPO shall be fulfilled by purchase of Renewable Energy Certificates.

Commission's Analysis:

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

"(1.1) 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."

Further, the Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on August 22, 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 14.10% of its total consumption through conventional sources (Solar: 6.10% and non-solar: 8.00%) from renewable sources for FY 2020-21. This translates to the requirement of procurement of 313.72 MU of solar energy and 411.43 MUs of non-solar energy in FY 2020-21.

Also the Petitioner is required to clear the backlog of 675.33 MU (Solar: 263.71 MU and Non-Solar: 411.62 MU) up to FY 2019-20 that has been carried forward.

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

- Solar – 25.95 MU
- Non-Solar – 2.30 MU
- Own Solar- 4.64 MU

The Commission asked the Petitioner to submit the details of actual RECs purchased from April 2020 to December 2020. In reply, the Petitioner submitted that it has not purchased any REC's.

In accordance with the JERC (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 2020-21 as shown below:

Table 47: Summary of Renewable Purchase Obligation (RPO) for FY 2020-21 (MU)

Sr. No.	Particulars	Formulae	Value
A	Solar Target		6.10%
B	Non-Solar Target		8.00%
C	**Total RPO Target**	**C=A+B**	**14.10%**
D	**Sales Within UT**		**5142.89**
E	**RPO Obligation for the year**	**E=F+G**	**725.15**
F	Solar	F=D*A	313.72
G	Non-Solar	G=D*B	411.43
H	**Physical RE Purchase (till Jan 2020)**	**H=I+J**	**34.43**
I	Solar		32.13
J	Non-Solar		2.30
K	**REC Purchase (till December 2020)**	**K=L+M**	**0.00**

Sr. No.	Particulars	Formulae	Value
L	Solar		0.00
M	Non-Solar		0.00
N	**Total RPO Compliance for FY 2020-21 (REC+ Physical RE)**	**N=O+P**	**34.43**
O	Solar	O=I+L	32.13
P	Non-Solar	P=J+M	2.30
Q	**Standalone shortfall for FY 2020-21**		**690.72**
R	- Solar	R=F-O	281.59
S	- Non-Solar	S=G-P	409.13
T	**Backlog upto FY 2019-20**	**T=U+V**	**675.33**
U	- Solar		263.71
V	- Non-Solar		411.62
W	**Total Shortfall in RPO Compliance for FY 2020-21**	**W=X+Y**	**1,366.05**
X	Solar	X=R+U	545.30
Y	Non-Solar	Y=S+V	820.75

The Commission has computed the cost towards compliance of RPO. The Commission has considered actual purchase for FY 2020-21 till Jan 2021, based on the information provided by the Petitioner. Trading of RECs was suspended in July 2020 after the Appellate Tribunal for Electricity (APTEL) decided to postpone the trading by four weeks while hearing three separate petitions related to issue of fixing floor and forbearance prices of RECs by the Central Electricity Regulatory Commission (CERC). Later, the trading was not resumed as APTEL directed to enforce the interim order on suspension of REC trade till final judgment. Accordingly, the Commission has considered actual numbers as submitted by the petitioner and not considered any cost towards meeting shortfall of RPO target.

The Commission also feels that the petitioner has failed to cover not only the entire RPO shortfall till FY 2020-21 but also the standalone RPO target set for the year. Accordingly, the **Commission directs the petitioner to fulfill the RPO obligation in future years by either purchasing power from Renewable energy sources or by purchasing RECs.**

The Commission will consider the actual cost incurred towards meeting RPO at the time of truing up subject to prudence check.

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

Table 48: Cost towards compliance of Renewable Purchase Obligation for FY 2020-21 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Crore)	Avg. Rate (INR/kWh)
1	**Solar**			
(a)	*Generation*	25.95	9.61	3.70
(b)	*Renewable Energy Certificates*	0.00	0.00	-
(c)	*Own Solar*	6.18	0.00	-
2	**Non-solar**			

S. No	Description	RPO (MU)	Total Cost (INR Crore)	Avg. Rate (INR/kWh)
(a)	*Generation/Procurement*	2.30	0.82	3.55
(b)	*Renewable Energy Certificates*	0.00	0.00	-
	Total	**34.43**	**10.43**	**3.02**

The Commission approves INR 10.43 Crore towards compliance of RPO in the APR of FY 2020-21 and the same has been considered in the total power purchase cost approved for FY 2020-21.

4.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprises 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 12.2 of the MYT Regulation, 2018, which recognizes O&M expenses as controllable, 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 capitalization 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 capitalization, 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;

……."

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

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

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

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

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

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

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

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

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

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

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

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

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 nth Year. 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, and 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 – CPI inflation and WPI inflation shall be used for all Years of the Control Period.** However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation 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."*

(Emphasis supplied)

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted revised estimate for employee expenses of INR 13.65 Crore for FY 2020-21 against INR 13.41 Cr as approved by the Commission in the ARR Order of FY 2020-21.

<u>Commission's Analysis</u>

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for FY 2020-21. The Regulation 6 of the MYT Regulations, 2018 specifies 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.

........"

As shown above, 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 2019-20 based on audited accounts, the Commission has considered the trued-up employee expenses for FY 2019-20 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 49: Average CPI Inflation Rate (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2017-18	284.58	3.14%	
2018-19	299.92	5.39%	
2019-20	322.50	7.53%	
		CPI Inflation	**5.35%**

As per the details submitted by the Petitioner in the Petition, the estimated growth in number of employees for FY 2020-21 is -0.80%. Hence, the Commission has considered the revised growth in employee expenses for FY 2020-21 while projecting the employee expenses for FY 2020-21. The following table provides Employee expenses approved by the Commission for FY 2020-21:

Table 50: Employee Expenses approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses of previous year (EMPn-1)	12.83	-	13.34
2	Growth in number of employees (Gn)	0.27%		-0.80%
3	CPI Inflation for preceding three years (CPI)	4.22%		5.35%
4	Employee Expenses (EMPn) = (EMPn-1)x(1+Gn)x(1+ CPI inflation)	**13.41**	**13.65**	**13.95**

The Commission approves employee expenses of INR 13.95 Crore in the APR of FY 2020-21.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted revised estimate of INR 7.70 Crore towards A&G expenses against INR 6.34 Cr as approved by the Commission in the Tariff Order of FY 2020-21.

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 2019-20 as Base Year expenses and escalated the same with CPI Inflation for approving the revised trajectory of A&G expenses for FY 2020-21 as shown in the following table:

Table 51: A&G Expenses approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	A&G Expense for the previous year **(A&Gn-1)**	5.84	7.31	6.28
2	CPI Inflation for preceding three years (CPI)	4.22%	5.35%	5.35%
3	Administration & General Expenses **(A&Gn) = (A&Gn-1) x (1+CPI inflation)**	**6.34**	**7.70**	**6.62**

The Commission now approves the Administrative & General (A&G) expenses of INR 6.62 Crore in the APR for FY 2020-21.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted revised estimate of INR 22.41 Crore towards R&M expenses against INR 11.53 Crore approved by the Commission in the ARR Order of FY 2020-21.

Commission's Analysis

As shown above and as provided in clause 51.4 of the JERC MYT Regulations, 2018, the Commissions has considered the same value of 'K' factor, i.e., 2.03% which was approved by the Commission in MYT order dated 20th May 2019 for FY 2020-21.

Further, as provided in Regulations 51.6, the WPI Inflation has been computed as follows:

Table 52: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2017-18	114.88	2.92%	
2018-19	119.79	4.28%	
2019-20	121.80	1.68%	
		WPI Inflation	**2.96%**

Further the approved closing GFA for the FY 2019-20 have been considered for computation of R&M expenses for FY 2020-21. Hence, the R&M expenses approved by the Commission for FY 2020-21 are as provided in the following table:

Table 53: R&M approved by the Commission for FY 2020-21

S. No	Particulars	Value
1	GFA (GFA_{n-1}) of the previous year	466.84
2	K factor approved (K)	2.03%
3	WPI Inflation	2.96%
	R&M Expenses = (K x (GFA $_{n-1}$) x (1+$WPI_{inflation}$)	**9.76**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.76 Crore in the APR of FY 2020-21.

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, Petitioner's submission and O&M expenses now approved by the Commission:

Table 54: O&M Expenses approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	13.41	13.65	13.95
2	Administrative & General Expenses (A&G)	6.34	7.70	6.62
3	Repair & Maintenance Expenses	11.53	22.41	9.76
	Total Operation & Maintenance Expenses	**31.28**	**43.76**	**30.32**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 30.32 Crore in the APR of FY 2020-21.

4.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has considered the capital expenditure & capitalization at the same level as approved by the Commission for FY 2020-21 in its ARR Order.

Commission's Analysis

The Petitioner has proposed the same capital expenditure and capitalization as approved by the Commission in its ARR Order dated May 18, 2020. The Commission through a deficiency note directed petitioner to submit details like physical progress, financial progress and expected completion date for scheme(s) proposed to be capitalized in FY 2020-21. The Petitioner submitted that the scheme *"Establishment on Turnkey Basis of 66/11kV GIS substation at Zanda Chawk Silvassa with associated 66kV Underground Transmission Line & 11kV /LT Underground Distribution Network for Silvassa City with Operation & Maintenance of above installation for the period of 5 years"* will be capitalized in FY 2020-21 as the scheme is completed and only electrical certificate for this scheme is awaited. The cost of this project is INR 158.96 Cr.

Accordingly, the Commission at this stage has only considered the scheme which is likely to be capitalised in FY 2020-21 as shown in Table below:

Table 55: Capitalization approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	30.19	30.19	30.19
2	Capitalization	182.69	182.69	158.69

The Commission approves capital expenditure of INR 30.19 Crore and Capitalization of INR 158.69 Crore in the APR for FY 2020-21.

4.11. Capital Structure

Petitioner's Submission

The petitioner has submitted that the entire capital deployment shall be through equity for FY 2020-21.

<u>Commission's Analysis</u>

The MYT Regulations, 2018 specifies 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 26 of the MYT Regulations 2018 states the following:

"26. Debt to Equity Ratio

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

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

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

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

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalized 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 modernization expenditure for life extension shall be serviced in the manner specified in this Regulation."

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

The opening Gross Fixed Assets for FY 2020-21 has been considered as closing Gross Fixed Assets approved in true-up of FY 2019-20. Further the values of opening loan and equity has been considered as closing loan and equity approved in true-up of FY 2019-20. The loan and equity addition have been considered on normative basis as 70% and 30% respectively of the approved capitalization for the year.

Accordingly, the Commission approves the capital structure for FY 2020-21 as shown in the tables below:

Table 56: Funding Plan approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalization	182.69	182.69	158.69
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	**Normative Loan**	**127.88**	**127.88**	**111.08**
5	**Equity**	**54.81**	**54.81**	**47.61**

Table 57: GFA addition approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	458.06	466.84	466.84
2	Addition During FY	182.69	182.69	158.69
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	**Closing Gross Fixed Assets**	**640.75**	**649.53**	**625.53**

Table 58: Normative Loan addition for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	14.34	25.42	20.11
2	Add: Normative Loan During the year	127.88	127.88	111.08
3	Less: Normative Repayment equivalent to Depreciation	19.19	19.93	18.44
4	**Closing Normative Loan**	**123.03**	**133.38**	**112.75**

Table 59: Normative Equity addition for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	101.79	140.05	104.42
2	Additions on account of new capitalization	54.81	54.81	47.61
3	**Closing Equity**	**156.60**	**194.86**	**152.03**

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of FY 2019-20 is taken as the opening GFA for FY 2020-21 and subsequently the proposed capitalization during FY 2020-21 is added. Depreciation has been calculated based on depreciation rates in accordance with the MYT Regulations, 2018.

Commission's Analysis

Regulation 30 of the MYT Regulations, 2018 specifies 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 capitalized at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalized by the Applicant, subject to the prudence check of the Commission.

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

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

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

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

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

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

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

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

The Commission has considered the opening GFA, addition during the year and closing GFA as approved in *Section 4.10 and Section 4.11* of this Order. The depreciation has been computed on average Gross Fixed Assets (GFA). Effective Depreciation rate has been computed by calculating asset wise depreciation with the depreciation rates as specified in Appendix I of MYT Regulation, 2018.

The following table provides the calculation of deprecation during FY 2020-21:

Table 60: Depreciation approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	458.06	466.84	466.84
2	Addition During FY	182.69	182.69	158.69
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	640.75	649.53	625.53
5	Average Gross Fixed Assets	**549.40**	**558.19**	**546.18**
6	Effective Rate of Depreciation (%)	3.49%	-	3.38%
	Depreciation	**19.19**	**19.93**	**18.44**

Accordingly, the Commission now approves depreciation of INR 18.44 Crore in the APR for FY 2020-21.

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 2019-20 is taken as the opening balance of loans for FY 2020-21. The normative loan addition in FY 2020-21 has been computed as 70% of the capitalization proposed during FY 2020-21.

The repayment of loans has been considered equivalent to the depreciation during FY 2020-21. Further the rate of interest has been considered as 9.55%.

Commission's Analysis:

Regulation 28 of the MYT Regulations, 2018 provides:

"***28. Interest on Loan***

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 MCLR (as on 01.04.2020, i.e., 7.75%) 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 61: Interest on Loan approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	14.34	25.42	20.11
2	Add: Normative Loan During the year	127.88	127.88	111.08
3	Less: Normative Repayment = Depreciation	19.19	19.93	18.44
4	Closing Normative Loan	123.03	133.38	112.75
5	Average Normative Loan	68.69	79.40	66.43
6	Rate of Interest (%)	8.85%	9.55%	8.75%
	Interest on Loan	**6.08**	**6.95**	**5.81**

The Interest on Loan approved by the Commission is lower in comparison to claimed by the petitioner is due to less opening GFA which is closing GFA of previous year (FY 2019-20) and less Rate of interest has been considered by the Commission is as per JERC MYT Regulations, 2018.

Accordingly, the Commission approves Interest on Loan of INR 5.81 Crore in the APR of FY 2020-21.

4.14. Return on Equity (RoE)

Petitioner's Submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, and the average equity is segregated into Distribution wires business and retails supply business based on allocation statement provided in MYT regulation 2018. The Petitioner has considered the rate of Return on Equity as 15.50% for distribution wires business and 16.00% for retail supply business.

Commission's Analysis:

In this regard the Regulation 27.2 and 27.3 of the MYT Regulations, 2018 specifies 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."

(Emphasis supplied)

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

………

30.2 Return on equity shall be computed at the base rate of ***15.50%*** *for thermal generating station,* ***transmission system*** *including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
……..” ***(Emphasis supplied)***

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 4.11: Capital Structure* of this Order.

The RoE has been calculated on the average of opening and closing of equity during FY 2020-21 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 2019-20 as approved in the True-up chapter of this order. The following table provides the Return on Equity approved in ARR order, Petitioner's submission and approved for the FY 2020-21 by the Commission.

Table 62: Return on Equity approved by Commission for FY 2020-21

S. No	Particulars	Approved in ARR order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	101.79	140.05	104.42
2	Additions on account of new capitalization	54.81	54.81	47.61
3	Closing Equity	156.60	194.86	152.03
4	Average Equity	129.19	167.46	128.23
5	Equity for wire business (90%)	116.27	150.71	115.40
6	Equity for Retail Supply Business (10%)	12.92	16.75	12.82
7	Return on Equity for Wire 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 Wire Business	18.02	23.36	17.89
10	Return on Equity for Retail Supply Business	2.07	2.68	2.05
11	**Return on Equity**	**20.09**	**26.04**	**19.94**

Return on Equity approved by the Commission is lower in comparison to as claimed by the petitioner because the Commission has considered less opening equity than that of Petitioner. In FY 2019-20 the petitioner has claimed wrong opening equity (i.e. average of closing equity of FY 2018-19 instead of closing equity of FY 2018-19) due to which the opening equity for subsequent years considered by Petitioner is higher in comparison to that approved by the Commission.

Accordingly, the Commission approves the Return on Equity of INR 19.94 Crore in the APR of FY 2020-21.

4.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner has submitted INR 4.20 Crore as revised estimates for interest on consumer security against INR 2.70 Crore approved by the Commission in the ARR Order.

Commission's Analysis:

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

"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 Petitioner has not submitted any data regarding the Opening, addition & closing in the consumer security deposits. So, the Commission approves the interest on security deposit as proposed by the petitioner. The same shall be trued-up on the actual basis. The table below provides approved consumer security deposits for the year FY 2020-21:

Table 63: Interest on Security Deposits approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Interest on Security Deposit	**2.70**	**4.20**	**4.20**

The Commission approves Interest on Security Deposit as INR 4.20 Crore in the APR of FY 2020-21.

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 Tariff) Regulations, 2018.

The working capital requirement for FY 2020-21 has been computed considering the following parameters:

(a) Receivables for two months

(b) O&M Expenses for one month.

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

(d) Maintenance Spares at 40% of R&M for one Month

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

Table 64: Interest on Working Capital submitted by Petitioner for FY 2020-21

S. No	Particulars	Approved in ARR Order	Petitioner's Submission
1	O&M expense for one month	2.73	3.65
2	Maintenance spares at 40% of R&M for one	0.30	0.75

S. No	Particulars	Approved in ARR Order	Petitioner's Submission
	month		
3	Receivables for 2 months	598.28	484.55
4	**Total**	601.31	488.95
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	53.08	60.63
6	Net Working Capital required after deduction of Security Deposit	**548.23**	**428.32**
7	**Interest on Working Capital**	**57.84**	**41.76**

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 and 31.4 of the MYT Regulation, 2018 stipulates the following:

"***31 Interest on Working Capital***

....

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 rate of interest on working capital is considered as 1-year SBI MCLR rate as on April 1, 2020 plus 200 basis points (7.75%+2% = 9.75%).

The following table provides the interest on working capital approved by the Commission in the ARR Order, Petitioner's submission and now approved by the Commission.

Table 65: Interest on Working Capital approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M expense for one month	2.73	3.65	2.53
2	Maintenance spares at 40% of R&M for one month	0.30	0.75	0.33
3	Receivables equivalent to two (2) months of the expected revenue requirement	598.28	484.55	490.86
4	Total Working Capital	601.31	488.95	493.71
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	53.08	60.63	60.63
6	Net Working Capital required after deduction of Security Deposit	**548.23**	**428.32**	**433.08**
7	Interest (%)	10.55%	9.75%	9.75%
8	**Interest on Working Capital**	**57.84**	**41.76**	**42.23**

The Interest on WC approved by the Commission is higher as compared to Petitioner's claim due to higher revenue (receivables) approved by the Commission for FY 2020-21. The same shall be accounted for as per actuals in the true-up of FY 2020-21.

Accordingly, the Commission approves the Interest on Working Capital as INR 42.23 Crore in the APR of FY 2020-21.

4.17. Income Tax

Petitioner's submission

The Petitioner has proposed INR 26.21 Cr towards Income tax for FY 2020-21.

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 directed the petitioner to submit actual income tax payment receipt, if any. The Petitioner submitted bank's taxpayer's counter foil (advance tax payment) amounting to INR 15.00 Cr. Accordingly, for FY 2020-21, actual paid income tax has been considered at this stage which will be trued up based on actuals subject to prudence check.

Table 66: Income tax approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	0.00	26.21	15.00

The Commission approves INR 15.00 Cr for actual income tax paid in the APR of FY 2020-21.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's Analysis

As per the petitioner submission, 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 2020-21.

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for FY 2020-21 has been estimated by considering elements like sale of scrap, reactive income, STOA application fees, supervision charges etc. However, one-time income like provision written back has not been considered to estimate the non-tariff income for FY 2019-20 in accordance to MYT Regulations, 2018. Accordingly, a revised estimate of INR 8.22 Crore has been submitted for FY 2020-21.

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."

Further, the Regulation 34.2 of the MYT Regulations, 2018 stipulates the following:

"34.2 The delayed payment charge earned by the Transmission Licensee or the Distribution Licensee shall not be considered under its Non-Tariff Income."

For the APR of FY 2020-21, the Commission has considered escalation of 5% over the approved Non-Tariff Income for FY 2019-20 (INR 11.48 Crore). The same shall be considered at actuals at the time of truing up of FY 2020-21.

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

Table 67: Non-Tariff Income approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Non-Tariff Income	**14.88**	**8.22**	**12.06**

The Commission now approves Non-Tariff Income of INR 12.06 Crore in the APR for FY 2020-21.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net Aggregate Revenue Requirement of INR 2,861.15 Crore is submitted after adjusting the Non -Tariff Income for FY 2020-21.

Commission's Analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the revenue requirements in the APR of FY 2020-21 are approved as follows:

Table 68: Aggregate Revenue Requirement approved by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	3,340.99	2,700.54	2628.41
2	Operation & Maintenance Expenses	31.28	43.75	30.32
3	Depreciation	19.19	19.93	18.44
4	Interest and Finance charges	6.08	6.95	5.81
5	Interest on Working Capital	57.84	41.76	42.23

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
6	Interest on Security Deposit	2.70	4.20	4.20
7	Return on Equity	20.09	26.04	19.94
8	Income Tax	0.00	26.21	15.00
9	**Total Revenue Requirement**	**3,478.17**	**2,869.37**	**2,764.35**
10	Less: Non-Tariff Income	14.88	8.22	12.06
11	**Net Revenue Requirement**	**3,463.28**	**2,861.15**	**2,752.29**

The Commission approves the net ARR of INR 2,752.29 Crore in the APR of FY 2020-21.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner in its Petition submitted that the total revenue of INR 2,907.33 Crore, which includes INR 2,843.02 Crore from sale of power at existing tariff, INR 46.09 Crore from FPPCA and INR 18.22 Crore from revenue from sale of surplus power. The estimated revenue for FY 20-21 is based on the six months actual revenue at the exiting tariff. The revenue for remaining six months of FY 20-21 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2020-21 dated 18th May, 2020. The total revenue estimated for the FY 2020-21 includes the actual FPPCA billed during the first six months.

Commission's Analysis

The Commission through a deficiency note directed the Petitioner to provide actual revenue from sale of power for months of April to December 2020 of FY 2020-21, which was accordingly submitted by the Petitioner. The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2020-21. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab.

The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2020-21 have been shown in the following table:

Table 69: Revenue at existing tariff computed by Commission for FY 2020-21

S. No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**DOMESTIC**	**0.99**	**35.41**	**36.41**	**2.49**
(i)	0-50 units	0.11	4.30	4.41	**1.50**
(ii)	51-200 units	0.27	11.26	11.52	**2.21**
(iii)	201-400 units	0.13	6.88	7.01	**2.75**
(iv)	401 and above	0.14	12.98	13.12	**3.37**
(v)	**Low Income Group**	**0.34**	**-**	**0.34**	
2	**COMMERCIAL/Non-Domestic**	**0.18**	**15.93**	**16.12**	**4.15**
(i)	0-100 units	0.11	2.02	2.13	**3.33**
(ii)	101 Units and Above	0.07	13.92	13.99	**4.31**
3	**LT INDUSTRIAL**				
(i)	**LTP Motive Power (For All Units)**	14.85	85.24	100.09	**5.35**
	Up to 20 HP	0.10	2.15	2.25	**4.57**

S. No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
	Above 20 HP	14.75	83.09	97.84	**5.38**
(ii)	**LT Public Water Works (For all units)**	**0.61**	**2.44**	**3.05**	**5.90**
	Up to 20 HP	0.01	2.44	2.46	**4.74**
	Above 20 HP	0.60	0.00	0.60	**0.00**
4	**HT/EHT**	**606.76**	**2105.72**	**2712.48**	**5.71**
(i)	11 kV	280.27	919.79	1200.05	**5.82**
(iii)	66 kV	153.71	601.01	754.71	**5.54**
(iv)	220 kV	172.79	584.93	757.72	**5.71**
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.55**	**0.55**	**0.89**
(i)	For sanctioned load upto 10 HP	0.00	0.34	0.34	**0.79**
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	0.00	0.21	0.21	**1.13**
6	**PUBLIC LIGHTING**	**0.00**	**1.37**	**1.37**	**4.20**
(i)	For all units		1.37	1.37	**4.20**
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	
(i)	For all units		0.00	0.00	
8	**TEMPORARY***	**0.00**	**2.71**	**2.71**	**8.20**
	Total	**623.40**	**2249.38**	**2872.78**	**5.59**

**Tariff is 1.5 Times the ABR of Revenue at existing tariff for FY 2020-21*

The Revenue from retail sales approved by the Commission is higher as compared to Petitioner's claim firstly due to change in sales mix, although the sales considered by the Commission is marginally less but in individual category the sales is higher for categories having higher tariff rates. Secondly, the petitioner has considered the wrong Connected Load numbers in HT Industry category for the calculation of revenue.

The Commission has determined revenue from sale of power at existing tariff as INR 2,872.78 Crore in the APR of FY 2020-21.

4.22. FPPCA Computation

Petitioner's submission

The Petitioner has submitted INR 46.09 Crore as revised estimates for FPPCA against Nil approved by the Commission in the ARR Order.

Commission's Analysis

The Commission has computed the revenue from FPPCA for FY 2020-21 considering FPPCA rate approved by the Commission for first quarter of FY 2020-21 and billed in third quarter of FY 2020-21 respectively, the actual quarterly sales for the corresponding quarters and the K factor approved in the MYT Order. Further due to unavailability of data the Commission has not considered FPPCA for any other quarter of the FY 2020-21.

FPPCA rates approved by the Commission for FY 2020-21 are as given in following table:

Table 70: FPPCA Rates approved by Commission for FY 2020-21

S. No	FY 2020-21	FPPCA Rates (INR/kWh)
1	Quarter 1 (April to June 2020)	0.53

The FPPCA Computation is provided in the table shown below:

Table 71: Computation of Revenue from FPPCA for FY 2020-21

Particulars	Sales for Q3 (MUs)	k-Factor	Total Revenue from FPPCA (INR Crore)
Domestic	33.85	0.47	0.95
Commercial	8.79	0.79	0.32
LT Industrial (Motive Power)	59.33	0.98	2.40
LT Public Water Works	1.26	1.02	0.07
HT/EHT	1489.51	1.02	68.56
Agriculture & Poultry	1.18	0.17	0.00
Public Lighting	0.66	0.79	0.02
Temp. Supply	0.92	1.33	0.07
Total	**1,595.50**		**72.39**

The following table provides revenue from FPPCA as per Petitioner's submission and as approved by the Commission:

Table 72: Revenue from FPPCA allowed by the Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Petitioner's Submission	Now Approved by Commission
1	FPPCA	46.09	72.39

The Commission has determined revenue from FPPCA as INR 72.39 Crore in the APR of FY 2020-21.

4.23. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, a standalone revenue surplus of INR 46.18 Crore is observed the APR for FY 2020-21.

Commission Analysis

The Standalone Revenue Gap/ (Surplus) approved in the ARR Order, as submitted by the Petitioner and now approved by the Commission is arrived at and approved as follows:

Table 73: *Standalone Revenue Gap/ (Surplus) at existing tariff for FY 2020-21 (INR Crore)*

S. No	Particulars	Approved in ARR Order	Petitioner's submission	Now Approved by Commission
1	Annual Revenue Requirement	3,463.28	2,861.15	2752.29
2	Revenue from sale of power at existing tariff	3,589.67	2,843.02	2,872.78
3	FPPCA	0.00	46.09	72.39
4	Revenue from sale of surplus power	0.00	18.22	0.00*

S. No	Particulars	Approved in ARR Order	Petitioner's submission	Now Approved by Commission
5	Total Revenue	3,589.67	2,907.33	2,945.17
	Revenue Gap/(Surplus)	**(126.39)**	**(46.18)**	**(192.88)**

**As provided in Table 43 of section 4.6 Energy Balance, as per the projections made by the Commission, the Energy Requirement is more than the Energy available from firm and non-firm sources. The remaining energy will be procured from open market/exchanges and no surplus power is available for sale in Open Market. So, the Commission did not consider any revenue from Sale of surplus power unlike the Petitioner.*

The standalone surplus at existing retail tariff is INR 192.88 Crore in the APR of FY 2020-21. This estimated surplus is carried over to the next year and has been considered while determining the tariff for FY 2021-22.

5. Chapter 5: Determination of Aggregate Revenue Requirement for FY 2021-22

5.1. Background

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

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

This Chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2021-22, 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 2019-20 as per the audited accounts and the provisional information available for first 9 months of the FY 2020-21. The revised ARR and revenue at existing tariff is determined for the FY 2021-22 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 is projected for FY 2021-22 based on the historical trends observed in the last six years (the FY 2014-15 to the FY 2019-20)

The Petitioner further 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 2021-22 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

The Petitioner submitted that the number of consumers and connected load growth has been considered same as number of consumers and connected load approved by the Commission in its Business Plan Order for 2nd Control Period.

Commission's Analysis

The Commission sought the details regarding basis and assumptions for projecting category-wise energy sales. In reply, the Petitioner submitted that for projecting the category wise sales for the FY 2021-22, it has considered the growth in the sales for the preceding years and has also considered CAGR. Based on the growth witnessed in different categories the sales for the FY 2021-22 have been projected.

Since in APR of FY 2020-21, the sales projected by the Petitioner (5,153.96 MUs) and sales approved by the Commission (5,142.89 MU) are almost same, hence for FY 2021-22 the Commission considered the sales same as projected by petitioner which is 6,540.77 MU.

The category-wise number of consumers and connected load were projected in Business Plan Order dated 5th November 2018 that were based on some detailed analysis. The Commission at this stage has not revised the projections for number of consumers and connected load and has considered same as approved in Business Plan Order.

Table 74: Number of Consumers approved by the Commission for FY 2021-22

Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	54,654	54,654	54,654
LIG/Kutir Jyoti	15,736	15,736	15,736
Commercial /Non-Domestic	8,516	8,516	8,516
Agriculture	1,538	1,538	1,538
LT Industry	2,117	2,117	2,117
HT/EHT Industry	968	968	968
Public Lighting	480	480	480
Public Water Works	563	563	563
Temp. Supply	379	379	379
Total	**84,952**	**84,951**	**84,952**

Table 75: Connected Load approved by the Commission for FY 2021-22 (kW)

Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	113,470	113,470	113,470
LIG/Kutir Jyoti	1,801	1,801	1,801
Commercial /Non-Domestic	30,371	30,371	30,371
Agriculture	6,260	6,260	6,260
LT Industry	125,566	125,566	125,566
HT/EHT Industry	1,218,170	1,218,170	1,218,170
Public Lighting	3,281	3,281	3,281
Public Water Works	4,207	4,207	4,207
Temp. Supply	2,537	2,537	2,537
Total	**1,505,663**	**1,505,663**	**1,505,663**

The revised energy sales for each category are tabulated as follows:

Table 76: Energy Sales projected by the Commission for FY 2021-22 (MUs)

Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	158.29	167.74	167.74
Commercial /Non-Domestic	38.31	38.89	38.89
Agriculture	8.25	5.46	5.46
LT Industry	223.82	227.55	227.55
HT/EHT Industry	6,273.63	6,088.87	6,088.87
Public Lighting	9.1	3.22	3.22
Public Water Works	10.95	5.26	5.26
Temp. Supply	3.39	3.79	3.79
Total	**6,725.73**	**6,540.77**	**6,540.77**

The Commission approves energy sales of 6,540.77 MUs in the ARR of the FY 2021-22.

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 2021-22

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

Table 77: Inter-State transmission loss as approved by the Commission for FY 2021-22 (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
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 2021-22.

5.5. Distribution Loss

Petitioner's submission

The Petitioner has submitted that it has achieved distribution loss level of 3.45 % for the FY 2019-20. It further submitted that reduction in distribution loss involves significant amount of capital expenditure and that it will endeavor to bring the distribution loss level further down in the subsequent years. The petitioner further submitted that the Commission had set a T&D loss level target of 4.10% for the FY 2021-22 in the Tariff Order dated 20th May, 2019. The petitioner has kept the T&D losses at the same level as approved by the Commission for FY 21-22.

Accordingly, Petitioner has proposed to keep the Distribution losses same as Commission's approved distribution losses for FY 2021-22, i.e., 4.10 %.

Commission's Analysis

Regulation 12.2 (c) of the JERC, MYT Regulations, 2018, provides as follows:

"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:

.....

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

......."

As per Regulation 12.2 (c) of the JERC, MYT Regulations, 2018, distribution loss is a controllable factor, so the Commission now approves the same distribution losses as approved in the MYT Order for FY 2021-22. The Petitioner shall be allowed an incentive/disincentive in the true-up Order for FY 2021-22 considering the actual distribution loss achieved by the Petitioner in the year. Hence, for FY 2021-22 the Commission retains the distribution loss level of 4.10% as approved in the MYT Order dated May 20, 2019.

The following table provides Distribution Loss approved by the Commission:

Table 78: Distribution loss as approved by the Commission for FY 2021-22 (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Distribution loss	4.10%	4.10%	4.10%

The Commission approves the Distribution loss of 4.10 % in the ARR of FY 2021-22.

5.6. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2021-22 as shown in following table:

Table 79: Energy Balance submitted by Petitioner for FY 2021-22 (MU)

Particulars	Value
Sales	6540.77
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	6540.77
Add: Losses	279.64
T&D Losses	4.10%
Energy Required at Periphery	**6820.41**
Add: Sales to common pool consumer	0.63
Add: Sales through IEX	0.00
Less: Own Generation	6.18
Total energy requirement at state periphery	6814.86
Less: Energy Purchased through UI at Periphery	**0.00**
Less: Energy Purchased through Renewable Sources	175.20
Less: Open Access Purchase	0.00
Less: Purchase from Power Exchange	**927.00**
Total Energy Required at Periphery	**5712.66**
Transmission loss	217.03
Transmission loss (%)	3.66%
Total Energy to be purchased	**5929.69**
Total Energy requirement from tied up sources & UI at generator end	**7038.07**
Total Energy requirement in UT including Open Access	**7038.07**

Commission's Analysis

Based on the revised estimates of energy sales and Power purchase quantum, the Commission approves the following energy balance for FY 2021-22:

Table 80: Energy Balance approved by Commission for FY 2021-22 (MU)

Sr. No.	Particulars	Formulae	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
A	Sales		6,725.74	6,540.77	6540.77
B	Open Access Sales		0	0	0

Sr. No.	Particulars	Formulae	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
C	Less: Energy Savings		0	0	0
D	**Total Sales**	**D=A+B-C**	**6,725.74**	**6,540.77**	**6540.77**
	T&D Losses				
E	in %		4.10%	4.10%	4.10%
F	in MU	F=G-D	287.54	279.64	279.64
G	**Energy Required at Periphery**	**G=D/(1-E)**	**7,013.28**	**6,820.41**	**6820.41**
H	Add: Sales to common pool consumer		0	0.63	0
I	Add: Sales through IEX		0	0	0
J	Less: Own Generation		5.23	6.18	6.18
K	Total energy requirement at state periphery	K=G+H+I-J	7,008.05	6,814.86	6814.23
L	Less: Energy Purchased through UI at Periphery		0	0	0.00
M	Less: Energy Purchased through Renewable Sources		1927.2	175.2	175.20
N	Less: Open Access Purchase		0.00	0.00	0.00
O	Less: Purchase from Power Exchange		0.00	927.00	927.00
P	Total Energy Required at Periphery	P=K-L-M-N-O	5,080.85	5,712.66	5712.03
R	Transmission loss (%)		3.66%	3.66%	3.66%
Q	Transmission loss	Q=S-P	193.02	217.03	217.00
S	**Total requirement from Tied-up sources at generator end (MU)**	**S=P/(1-R)**	**5,273.88**	**5,929.69**	**5,929.03**
T	**Total availability from tied up sources at generator end (MU)**		5,185.22	-	**5,920.42**
U	**Deficit/(surplus)**	**U=S-T**	**88.66**	**-**	**8.61**

The Commission has considered power purchase of 927 MUs from open market sources as per petitioner submission. Further the Commission has approved an additional power purchase of 8.61 MUs from open market to meet the deficit as approved in table above. Accordingly, the Commission has approved 935.61 MUs from Open Market/Power Exchange. The Commission has considered a price of INR 3.02/ kWh for such power, considering the escalation of 5% over the actual per unit price of power purchased by the Petitioner in first nine months of FY 2020-21 from open market sources (Energy Exchange/ Bilateral). This cost has been included in the Power Purchase cost allowed by the Commission.

5.7. Power Purchase Quantum & Cost

5.7.1. Availability of power

Petitioner's Submission

Petitioner 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), etc.

The power availability has been estimated based on the revised allocation specified in the notification No. WRPC/Comml-I/6/Alloc/2020 dated 15/10/2020 of Western Regional Power Committee.

Table 81: Energy Allocation as submitted by the Petitioner for FY 2021-22 (MW)

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	51.20	0.00	51.20
KSTPS -3	19.68	2.20	21.88
VSTPP-I	37.03	5.00	42.03
VSTPP-II	27.97	4.00	31.97
VSTPP- III	27.97	6.00	33.97
VSTPP- IV	39.36	5.55	44.91
KAWAS	56.18	25.00	81.18
GGPP	56.74	2.00	58.74
Sipat – I	77.93	9.00	86.93
Sipat – II	26.56	4.00	30.56
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	39.36	5.55	44.91
VSTPP-V	19.68	5.55	25.23
Mauda II	51.95	8.60	60.55
Solapur	51.95	21.57	73.52
Gadarwara	31.49	10.42	41.91
LARA	31.20	5.23	36.43
Kharagaon	51.95	16.83	68.78
NPCIL – KAPS	10.36	2.00	12.36
NPCIL - TAPS 3&4	35.03	7.00	42.03
Total	**747.07**	**145.50**	**892.57**
NSPCL Bhilai		100.00	100.00

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

- It is expected that Petitioner will not be getting any power from Ratnagiri during the FY 2021-22 and therefore no power purchase from the plant has been considered.
- Power purchase quantum from the NTPC stations for the FY 2021-22 has been calculated based on the installed capacity of each plant and by applying the PLF approved by the Commission vide Order for the Business Plan dated 5th November, 2018.

- Auxiliary consumption of 7.75% and 2.5% has been considered for coal and gas based generating stations, respectively.

- Additionally, the DNHPDCL was procuring power from EMCO Energy Limited (GMR) power plant in Maharashtra. DNHPDCL had signed a seven year PPA with EMCO Energy Limited (GMR) and the same came to an end on June, 2020. Hence, power purchase from EMCO has not been considered for the FY 2021-22.

- DNHPDCL will be getting 50 MW of wind energy from SECI from FY 2021-22 for which the agreement has already been signed. Further, the DNHPDCL has already installed 4.585 MW of solar plants in its territory for generation of solar energy out of which 4.1 MW is ground mounted and 485 KW is solar rooftop.

The following table depicts the source wise power purchase quantum for the FY 2021-22:

Table 82: Station wise power purchase submitted by Petitioner for FY 2021-22 (MUs)

Source	Power Purchase Quantum
NTPC Stations	
KSTPP 1&2	368.22
KSTPS 3	159.12
VSTPP-I	292.12
VSTPP-II	219.61
VSTPP- III	236.09
VSTPP- IV	312.08
KAWAS	277.35
JGPP	210.72
Sipat-I	632.20
Sipat-II	222.27
MSTPL 1	174.18
VSTPS-V	175.33
Mauda 2	234.87
Solapur	356.47
LARA	246.81
Gadarwara	283.95
Kharagaon	466.04
KHSTPP-II	22.06
Subtotal	**4,889.52**
NSPCL – Bhilai	703.06
NSPCL – Rourkela	
NPCIL	
KAPS	70.53
TAPS 3&4	266.59
Subtotal	**337.12**
Total Firm	**5,929.69**
Power purchase from Other Sources	
Indian E. Exchange/Bilateral	927.00
UI	0.00
Solar	6.18
Non Solar	175.20
Solar REC	0.00

Source	Power Purchase Quantum
Non Solar REC	0.00
Solar (SECI)	0.00
Wind (SECI)	0.00
Subtotal	**1,108.38**
Misc. Arrears	
Power Purchase Cost	**7,038.00**
External Losses	0.00
Availability at ED-DNH Periphery	**7,038.07**

Commission's Analysis

The approach followed for projecting the availability from various generating stations is as follows:

Availability of power from NTPC & NTPC-SAIL Bhilai:

- The power purchase quantum from NTPC stations has been estimated based on the average of quantum of energy availed during last 3 financial years (FY 2018-19, FY 2019-20 & FY 2020-21).
- For NTPC VSTPP-I, Kawas, JGPP, Sipat-II, Solapur, Lara, Gadarwara & Bhilai power plant, energy availability has been considered same as submitted by the petitioner, due to irregular scheduling of power in past years or due to higher purchase projected by the petitioner in FY 2021-22.

Availability from NPCIL plants:

- For nuclear plant KAPS energy availability is considered same as submitted by the petitioner, due to irregular scheduling of power in last three financial years (FY 2018-19, FY 2019-20 & FY 2020-21).
- The power purchase quantum of TAPS has been estimated based on the average of quantum of energy availed during last 3 years (FY 2018-19, FY 2019-20 & FY 2020-21).

Availability of power from Open Market

- The estimated energy deficit for the FY 2021-22 discussed in section of "Energy Balance" has been assumed to be procured from open market.
- No power has been allowed under UI for the FY 2021-22.

5.7.2. Power Purchase Cost

Petitioner's Submission

The cost of purchase from the central generating stations for FY 2021-22 has been estimated based on the following assumptions:

- Fixed cost for the FY 2021-22 has been projected by considering an escalation of 5% on the fixed cost estimated for various stations for the FY 2020-21.
- Variable cost for each NTPC generating stations for the FY 2021-22 has been projected by giving an escalation of 5% on the actual variable cost incurred during the first six months of FY 2020-21 for various stations.
- For nuclear plants, i.e., KAPS and TAPS single part tariff, an escalation of 5% has been given on the actual average variable cost per unit incurred for the first six months of FY 2020-21 for projecting the cost for the FY 2021-22.

- For NTPC-SAIL Bhilai unit 1 & 2, the fixed has been projected by giving an escalation of 5% on fixed cost estimated for the FY 2020-21 and for projecting the variable cost an escalation of 5% has been given on the actual average variable cost per unit incurred for the first six months of FY 2020-21.
- For power purchase from renewable energy sources, for the FY 2021-22, the DNHPDCL has outsourced the maintenance cost of the solar plants to BHEL. For the purchase of 50 MW wind power a rate of Rs. 2.59 per unit has been considered for the FY 2021-22.

The Total Power Purchase cost from various sources for the FY 2021-22 is summarized in the table below:

Table 83: Power Purchase quantum (MU) and Cost (INR Crore) submitted by Petitioner for FY 2021-22

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
NTPC Stations						
KSTPP 1&2	368.22	22.93	58.79	0.00	81.72	2.22
KSTPS 3	159.12	21.10	25.20	0.00	46.31	2.91
VSTPP-I	292.12	20.82	53.98	0.00	74.81	2.56
VSTPP-II	219.61	13.88	39.53	0.00	53.40	2.43
VSTPP- III	236.09	22.89	42.58	0.00	65.47	2.77
VSTPP- IV	312.08	48.06	54.56	0.00	102.62	3.29
KAWAS	277.35	50.39	58.62	0.00	109.01	3.93
JGPP	210.72	46.60	46.36	0.00	92.96	4.41
Sipat-I	632.20	76.35	105.97	0.00	182.32	2.88
Sipat-II	222.27	24.61	38.52	0.00	63.13	2.84
MSTPL 1	174.18	58.65	52.79	0.00	111.44	6.40
VSTPS-V	175.33	27.82	31.88	0.00	59.70	3.41
Mauda 2	234.87	62.58	72.23	0.00	134.81	5.74
Solapur	356.47	88.91	107.47	0.00	196.38	5.51
LARA	246.81	48.40	53.43	0.00	101.83	4.13
Gadarwara	283.95	58.41	75.52	0.00	133.94	4.72
BARH	0.00	0.00	0.00	0.00	0.00	-
Dhuwaran	466.04	101.14	136.39	0.00	237.52	5.10
Kharagaon	0.00	0.00	0.00	0.00	0.00	-
FSTPS	0.00	0.00	0.00	0.00	0.00	-
KhSTPS I	0.00	0.00	0.00	0.00	0.00	-
RSTPS	0.00	0.00	0.00	0.00	0.00	-
TSTPS	0.00	0.00	0.00	0.00	0.00	-
KHSTPP-II	22.06	1.91	4.85	0.00	6.76	3.07
Subtotal	**4,889.52**	**795.46**	**1,058.65**	**0.00**	**1,854.12**	3.79
NSPCL - Bhilai	**703.06**	**121.15**	**181.93**	**0.00**	**303.07**	**4.31**
NSPCL - Rourkela						-
						-
NPCIL						-
KAPS	70.53	0.00	17.19	0.00	17.19	2.44
TAPS 3&4	266.59	0.00	94.91	0.00	94.91	3.56
Subtotal	**337.12**	**0.00**	**112.10**	**0.00**	**112.10**	3.33
Others						-
RGPPL	0.00	0.00	0.00	0.00	0.00	-
Tata Power - Haldia	0.00	0.00	0.00	0.00	0.00	-
EMCO	0.00	0.00	0.00	0.00	0.00	-
Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	-
Total Firm	**5,929.69**	**916.61**	**1,352.68**	**0.00**	**2,269.29**	3.83
Power purchase from Other Sources						-
Indian E. Exchange/Bilateral	927.00	0.00	315.18	0.00	315.18	3.40
UI	0.00	0.00	0.00	0.00	0.00	-
Solar	6.18	0.00	0.00	0.00	0.00	0.00
Non Solar	175.20	0.00	45.38	0.00	45.38	2.59

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
Solar REC	0.00	0.00	61.02	0.00	61.02	-
Non Solar REC	0.00	0.00	48.79	0.00	48.79	-
Solar (SECI)	0.00	0.00	0.00	0.00	0.00	-
Wind (SECI)	0.00	0.00	0.00	0.00	0.00	-
Subtotal	**1,108.38**	**0.00**	**470.36**	**0.00**	**470.36**	4.24
Misc. Arrears						-
Power Purchase Cost	**7,038**	**917**	**1,823**	**0**	**2,740**	3.89
External Losses	0.00					-
Availability at ED-DNH Periphery	**7038.07**	**916.61**	**1823.04**	**0.00**	**2739.65**	3.89
PGCIL CHARGES					319.58	-
POSOCO					0.58	-
WRPC					0.00	-
Reactive charges					2.55	-
MSTCL					0.00	-
Others					36.00	-
Grand Total of Charges	**7,038.07**	**916.61**	**1,823.04**	**0.00**	**3,098.36**	4.40
GMR - Change in Law					0.00	-
Total Power Purchase Cost					**3,098.36**	-

Commission's Analysis

The Commission for the purpose of estimating the cost of power purchase for FY 2021-22 has relied on the station wise actual energy charges for 9 months of FY 2020-21 and cost approved in Tariff Orders for Central Generating Stations by CERC, which is detailed as follows:

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by considering the actual per unit variable cost computed for FY 2020-21. 5% escalation has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for FY 2021-22.

Fixed Charges:

- The fixed costs have been determined based on the Tariff Orders issued by CERC for respective Central Generating Stations. The fixed costs approved in FY 2020-21 have been escalated by 2% to arrive at fixed cost of FY 2021-22.

Other Charges:

The petitioner has not claimed any other charges in relation to the Power Purchase Cost. Since, such claim has 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 FY 2021-22.

Purchase form Power Exchanges:

- For FY 2021-22, the Commission has considered an escalation of 5% on actual average rate of power purchase from power exchange for first nine months of FY 2020-21.

Purchase form Non-Solar:

- For FY 2021-22, the Commission has considered petitioner estimated variable charges for Non-Solar power purchase.

Purchase form Solar (Own Generation):

- The Commission vide Order dated 05.03.2021 determined the Levelized Tariff for Power from Ground Mounted Solar PV Plants and Roof Top Solar PV Plants for the petitioner.

- In the above said order the Commission further clarified that petitioner has failed to file the petition for determination of Levelized Tariff of Ground Mounted Solar PV Plants and Roof Top Solar PV Plants in time. Accordingly, the Commission has allowed the tariff for these plants only prospectively, i.e., from 1st April 2021 onwards. Accordingly, the levelized Tariff for power from ground mounted & rooftop solar PV plants have been determined by the Commission for FY 2021-22 onwards.

- For FY 2021-22, the Commission has considered a purchase of 6.18 MUs from own solar generation. Accordingly, in the ARR of FY 2021-22 the Commission has considered the rates approved by the Commission vide its Order dated 05.03.2021 of solar plants and computed the total power purchase cost against the approved MUs purchased from solar own generation. Details regarding the same is provided in table below:

Table 84: Cost of Solar own generation for FY 2021-22 (INR Crore)

DETAILS OF SOLAR OWN GENERATION 2021-22					
(I) Ground Mounted Grid Connected Plant					
Sr. No	**Name of Station**	**Plant Installed Capacity (kWp)**	**Total Generation**	**Tariff Rate (INR/kWh)**	**Total Cost (INR Crore)**
1	Velugam Solar Plant	3000	4150900	**6.82**	2.83
2	Kala Solar Plant	900	1172440	**7.12**	0.83
3	Athal Solar Plant - Harsha Abakus	200	167364	**6.82**	0.11
4	Athal Solar Plant - Goldi Green	200	300651	**4.98**	0.15
	Total-I	**4300**	**5791355**		**3.93**
(II) ROOF TOP PLANTS					
Total-II		**485**	**394145**	7.12	**0.28**
Grand Total (I +II)		**4785**	**6185500**		**4.21**

5.7.3. Transmission Charges

Petitioner's Submission

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. DNHPDCL 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. Therefore, considering the changing capacity allocation, DNHPDCL has estimated the transmission charges. For FY 2021-22, the transmission charges payable to ED-DNH (Transmission Division) have also been considered.

The Petitioner has projected the POC charges for the FY 2021-22 at INR 319.58 Crore, which have been projected by considering the average monthly bill being received from PGCIL for first 6 months of FY 2020-21. The transmission charges along with the total power purchase cost for the FY 2021-22 as submitted by the Petitioner has been given in the following table:

Table 85: Transmission and other Charges submitted by Petitioner for FY 2021-22 (INR Crore)

Particulars	Value
Total Power Purchase Cost	**2,739.65**
PGCIL CHARGES	319.58
POSOCO	0.58
WRPC	0.00
Reactive charges	2.55
MSTCL	0.00
Intra-state transmission charges	36.00
Grand Total of Charges	**3,098.36**
GMR - Change in Law	0.00
Grand Total of All Charges	**3,098.36**

Commission's Analysis

In Technical Validation Session, petitioner informed the Commission that they have claimed lower Transmission (PGCIL) charges for FY 2021-22 in comparison to actual Transmission (PGCIL) charges for FY 2019-20 & claimed for FY 2020-21 in expectation that the charges will decrease after issuing of new CERC Sharing of Inter-State Transmission Charges and Losses Regulations 2020. However, the Petitioner further submitted that the actual impact of New Regulation is very minor than the expected. Petitioner requested the Commission to reconsider the Transmission Charges and approve the same as claimed for FY 2020-21.

Accordingly, the Commission has considered the same transmission charges payable to PGCIL for FY 2021-22 as approved for FY 2020-21 without any escalation. The transmission charges for FY 2021-22 have been given in the table below:

Table 86: Transmission charges (INR Crore) approved for FY 2021-22

Particulars	Value
Total Power Purchase Cost	**2,711.97**
PGCIL CHARGES	468.27
POSOCO	0.54
WRPC	0.00
Reactive charges	1.63
MSTCL	0.00
Intra-state transmission charges	51.73
Grand Total of Charges	**3234.13**
GMR - Change in Law	0.00
Grand Total of All Charges	**3234.13**

The Intra-state Transmission Charges are considered from the Transmission Order of DNH-T for FY 2021-22 and other charges are kept same as that estimated by Commission for FY 2020-21. Further, the same shall be trued up as per actuals.

5.7.4. Total power purchase quantum and cost approved by Commission

Accordingly, based on the above, the energy availability and the power purchase cost approved by the Commission for FY 2021-22 have been shown in the following table:

Table 87: Power Purchase Quantum and Cost approved by the Commission for FY 2021-22

Sl. No.	Details of The Stations	Units Purchased (MUs)	Variable Charges (INR Crore)	Fixed Charges (INR Crore)	Total Charges (INR Crore)	Per Unit Cost (INR/kWh)
A	**NTPC Stations**					
1	KSTPP 1&2	358.60	58.05	24.91	82.97	2.31
2	KSTPS 3	159.36	25.92	21.83	47.76	3.00
3	VSTPP-I	292.12	53.36	24.92	78.28	2.68
4	VSTPP-II	220.12	38.28	15.92	54.20	2.46
5	VSTPP- III	248.76	44.14	25.51	69.65	2.80
6	VSTPP- IV	322.02	55.86	50.61	106.47	3.31
7	KAWAS	277.35	55.56	51.35	106.90	3.85
8	JGPP	210.72	46.36	45.98	92.33	4.38
9	Sipat-I	603.87	98.42	81.68	180.10	2.98
10	Sipat-II	222.27	36.82	27.18	64.00	2.88
11	MSTPL 1	191.77	55.70	60.22	115.92	6.04
12	VSTPS-V	179.26	32.40	30.03	62.43	3.48
13	Mauda 2	225.67	68.92	61.63	130.56	5.79
14	Solapur	356.47	108.21	86.37	194.58	5.46
15	LARA	246.81	54.48	62.30	116.78	4.73
16	Gadarwara	283.95	76.77	57.50	134.27	4.73
17	BARH	0.00	0.00	0.00	0.00	0.00
18	Kharagaon	466.04	136.46	85.55	222.01	4.76
19	KHSTPP-II	19.95	4.48	1.75	6.24	3.13
	Subtotal NTPC	**4,885.13**	**1,050.19**	**815.26**	**1,865.45**	**3.82**
B	**NSPCL Bhilai**	**703.06**	**191.46**	**118.99**	**310.46**	**4.42**
C	**NPCIL**					
1	KAPS	65.65	15.92	0.00	15.92	2.42
2	TAPS	266.59	94.92	0.00	94.92	3.56
	Subtotal NPCIL	**332.23**	**110.84**	**0.00**	**110.84**	**3.34**
D	**Others**					
	EMCO	0.00	0.00	0.00	0.00	0.00
	Subtotal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Total Firm Sources	**5,920.42**	**1,352.49**	**934.25**	**2286.74**	**3.86**

Sl. No.	Details of The Stations	Units Purchased (MUs)	Variable Charges (INR Crore)	Fixed Charges (INR Crore)	Total Charges (INR Crore)	Per Unit Cost (INR/kWh)
E	Power purchase from Other Sources					
1	Indian E. Exchange/Bilateral	927.00	279.98	0.00	279.98	3.02
2	UI	0.00	0.00	0.00	0.00	0.00
3	Solar	0.00	0.00	0.00	0.00	0.00
4	Non Solar	175.20	45.38	0.00	45.38	2.59
5	Solar REC	0.00	51.71	0.00	51.71	0.00
6	Non Solar REC	0.00	41.35	0.00	41.35	0.00
7	Solar (SECI)	0.00	0.00	0.00	0.00	0.00
8	Wind (SECI)	0.00	0.00	0.00	0.00	0.00
9	Own Solar	6.18	4.21	0.00	4.21	6.81
10	Open Market	8.61*	2.60	0.00	2.60	3.02
	Subtotal	**1,116.99**	**425.22**	**0.00**	**425.22**	**3.81**
F	**Other Charges**					
1	PGCIL CHARGES				468.27	
2	POSOCO				0.54	
3	WRPC				0.00	
4	Reactive charges				1.63	
5	MSTCL				0.00	
6	Intra State Transmission Charges				51.73	
	Subtotal				**522.17**	
	Grand Total of Charges	**7,037.41**			**3,234.13**	**4.60**

* This power is purchase from Open Market to meet the deficit as approved in Table 81 (Energy Balance approved by the Commission).

The Commission approves the quantum of power purchase as 7,037.41 MU at the generator periphery with a total cost of INR 3,234.13 Crore for FY 2021-22.

The Average Power Purchase Cost (APPC) for FY 2021-22 has been computed at the DNH Periphery excluding the transmission charges and cost of purchase of renewable energy (including the costs for Renewable energy certificates). 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 APPC for FY 2021-22 has been determined as provided in the following table:

Table 88: Average Power Purchase Cost (APPC) approved for FY 2021-22

Particulars	Value
Total Power Purchase Cost (INR Crore)	3234.13
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Crore)	664.80
Net Power Purchase Cost (INR Crore)	2569.33
Total Power Purchase quantum (MU)	7037.41
Less: Quantum from renewable energy sources (MU)	181.38
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU)	6856.03
APPC (INR/kWh)	**3.75**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.75/kWh for the FY 2021-22.

5.8. Renewable Purchase Obligation (RPO)

Petitioner's submission

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

Table 89: RPO Plan proposed by the Petitioner for FY 2021-22 (MU)

Particulars	Value
Sales within State (MU)	6,540.77
RPO obligation (%)	**17.00%**
Solar	8.00%
Non-Solar	9.00%
RPO obligation for the year (MU)	**1,111.93**
Solar	523.26
Non-Solar	588.67
RPO Compliance (Procurement and own generation)	**180.38**
Solar	6.18
Non-Solar	175.20
RPO Compliance (REC certificate purchase)	930.55
Solar	517.08
Non-Solar	413.47

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:

"(1.1) 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

17.00% of its total consumption (including 8.00% from Solar & 9.00% from Non Solar) from renewable sources for the FY 2021-22.

The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

In FY 2021-22, the Petitioner has projected fulfillment of the RPO obligation completely by actual purchase of renewable power. The Petitioner projected to purchase (& Generate) 523.26 MU of solar power and 588.67 MU of non-solar power. The Commission acknowledges the effort on the Petitioner part to plan to purchase the renewable power from actual power plants instead of only relying on RECs and also focusing on fulfilling the RPO obligation for the year.

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 2021-22:

Table 90: RPO targets and compliance plan approved by the Commission for FY 2021-22 (MU)

Sr. No.	Particulars	Formulae	Value
A	Solar Target		8.00%
B	Non-Solar Target		9.00%
C	**Total RPO Target**	**C=A+B**	**17.00%**
D	**Sales Within UT**		**6,540.77**
E	**RPO Obligation for the year**	**E=F+G**	**1111.93**
F	Solar	F=D*A	523.26
G	Non-Solar	G=D*B	588.67
H	**Physical RE Purchase**	**H=I+J**	**181.38**
I	Solar		6.18
J	Non-Solar		175.20
K	**REC Purchase**	**K=L+M**	**930.55**
L	Solar		517.08
M	Non-Solar		413.47
N	**Total RPO Compliance for FY 2021-22 (REC+ Physical RE)**	**N=O+P**	**1111.93**
O	Solar	O=I+L	523.26
P	Non-Solar	P=J+M	588.67
Q	**Standalone shortfall/(surplus) for FY 2021-22**	**Q=R+S**	**0.00**
R	- Solar	R=F-O	0.00
S	- Non-Solar	S=G-P	0.00
T	**Backlog upto FY 2020-21**	**T=U+V**	**1366.05**
U	- Solar		545.30
V	- Non-Solar		820.75
W	**Total Shortfall/(surplus) in RPO Compliance for FY 2021-22**	**W=X+Y**	**1366.05**

Sr. No.	Particulars	Formulae	Value
X	Solar	X=R+U	545.30
Y	Non-Solar	Y=S+V	820.75

Similar to the approach followed in the APR of FY 2020-21, the Commission has considered the gross energy generated from solar rooftop plants while approving the RPO compliance for the year.

In last Tariff Order for FY 2020-21 dated 18th May 2020, the Commission had approved cost against cumulative RPO shortfall till FY 2020-21. However, as per the actual data submitted by the petitioner for FY 2020-21 till Jan'21, the petitioner did not purchase any quantity of Solar & Non-Solar RECs. Secondly for FY 2021-22 in power purchase cost petitioner claimed purchase of RE certificates for standalone gap only.

The Commission has considered the standalone shortfall for FY 2021-22 to be fulfilled by way of REC purchase and has assumed the rate of purchase for Non-Solar REC & Solar REC as INR 1.00/kWh (IEX Capping Rate). Accordingly, the Commission has approved cost for INR 93.06 Crore towards compliance of RPO shortfall. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section. The same shall be trued-up on actual basis during the True-up. **Further, the Commission directs the petitioner to fulfill the RPO obligation in future years by either purchasing power from Renewable energy sources or by purchasing RECs.**

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. Operation and Maintenance (O&M) expenses for the Distribution Wires Business

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

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

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

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

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

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

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

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

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

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

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 nth Year. 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, and 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 – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation 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 has been projected by the petitioner and the Commission has been requested to consider the same at the time of True-up on actual basis.

The table below provides the employee expenses projected for FY 2021-22 by the Petitioner:

Table 91: Employee Expenses submitted by Petitioner for FY 2021-22 (INR Crore)

Particular	Approved in ARR order	Petitioner Submission
Employee Expenses	**18.95**	**14.38**

<u>Commission's Analysis</u>

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for FY 2021-22. 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."

As above, 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 2019-20 based on audited accounts, the Commission has considered the trued-up employee expenses for FY 2019-20 as base expenses and applied the CPI Inflation for approving the revised employee expenses for FY 2020-21 and then for FY 2021-22.

The CPI Inflation has been computed as follows:

Table 92: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2017-18	284.58	3.14%	
2018-19	299.92	5.39%	
2019-20	322.50	7.53%	
		CPI Inflation	**5.35%**

As per the details submitted by the Petitioner, the estimated growth in number of employees for FY 2021-22 is 0.27%. Hence, the Commission has considered the revised growth in employee expenses for FY 2021-22 while projecting the employee expenses for FY 2021-22.

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

Table 93: Employee Expenses approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Value
1	Employee Expenses approved for FY 2020-21 (EMPn-1)	13.95
2	Growth in number of employees (Gn)	0.27%
3	CPI Inflation for preceding three years (CPI)	5.35%
	Employee Expenses **(EMPn) = (EMPn-1) x (1+Gn) x (1+CPI inflation)**	**14.73**

The Commission approves Employee Expenses of INR 14.73 Crore FY 2021-22.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted that the Administrative and General (A&G) expense comprise of various sub-heads including the following:

- Telephone, postage & telegrams charges;
- Travel and conveyance expenses;
- Consultancy and regulatory fees; and
- Consumer indexing fee

For projecting the A&G Expenses for FY 2021-22, the petitioner has been used formula as given in MYT Regulations. The A&G Expenses as submitted by the Petitioner & as approved by the Commission for FY 2021-22 in its MYT order for FY 2021-22 are given below:

Table 94: A&G Expenses submitted by Petitioner for FY 2021-22 (INR Crore)

Particular	Approved in ARR order	Petitioner Submission
A&G expenses	7.57	8.11

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 2019-20 as Base Year expenses and escalated the same with CPI Inflation for approving the revised trajectory of A&G expenses for FY 2020-21 and then for FY 2021-22.

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

Table 95: A&G Expenses approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Value
1	A&G Expenses approved for FY 2020-21 (A&Gn-1)	6.62
2	CPI Inflation	5.35%
3	**A&G Expenses** **A&Gn = (A&Gn-1) x (1+CPI inflation)**	**6.97**

The Commission approves the Administrative & General (A&G) expenses of INR 6.97 Crore for FY 2021-22.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner submitted that Repairs and Maintenance expense comprise of expenses incurred by them with regard to maintenance and upkeep of the transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and breakdowns in the system.

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 2017-18, FY 2018-19 & FY 2019-20 as 2.96%.

Table 96: R&M expenses submitted by Petitioner for FY 2021-22 (INR Crore)

Particular	Approved in ARR order	Petitioner Submission
R&M Expenses	12.64	25.61

Commission's Analysis

Regulation 51.4 of the JERC MYT Regulation, 2018 states as shown below:

"........

'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;

......"

As provided in clause 51.4 of the JERC MYT Regulations, 2018 the Commissions has considered the value of 'K' factor as 2.03% which was approved by the Commission in MYT order dated 20th May 2019 for FY 2021-22.

Further as per the provisions of the JERC MYT Regulations, 2018, the WPI Inflation has been computed as follows:

Table 97: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2017-18	114.88	2.92%	
2018-19	119.79	4.28%	
2019-20	121.80	1.68%	
		WPI Inflation	**2.96%**

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

Table 98: R&M Expenses approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Value
1	GFA of previous year, i.e., FY 2020-21 (GFA_{n-1})	625.53
2	K factor approved (K)	2.03%
3	WPI Inflation	2.96%
	R&M Expenses = (K x (GFA_{n-1}) x (1+$WPI_{inflation}$)	**13.07**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 13.07 Crore for FY 2021-22.

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 2021-22:

Table 99: O&M Expenses approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	18.95	14.38	14.73
2	A&G Expenses	7.57	8.11	6.96
3	R&M Expenses	12.64	25.61	13.07
4	**Total O&M Expenses**	**39.16**	**48.10**	**34.78**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 34.78 Crore for FY 2021-22.

5.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

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

Table 100: Capital Expenditure and Capitalization proposed by the Petitioner for FY 2021-22 (INR Crore)

S. No.	Particulars	Total Scheme Amount
1	Capital Expenditure	18.00
2	Capitalization	**48.00**

<u>Commission's Analysis</u>

The Commission with regard to the capital expenditure and capitalization 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 capitalization along with the copy of the technical sanctions. The Petitioner has considered the approved capex and capitalization of INR 18.00 Crore and INR 48.00 Crore respectively as approved in the Business Plan Order dated November 5, 2018. Based on the details submitted by the Petitioner, the Commission at this stage approves the Capital Expenditure and Capitalization as proposed by the Petitioner, which shall be subject to truing up based on actuals.

The Capitalization and Capital Expenditure approved by The Commission is given below:

Table 101: Capital Expenditure and Capitalization approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	18.00	18.00	18.00
2	**Capitalization**	**48.00**	**48.00**	**48.00**

The Commission approves capital expenditure of INR 18.00 Crore and capitalization of INR 48.00 Crore in the ARR of the FY 2021-22.

5.10.1. Analysis of GFA and capitalization for the control period (FY 2019-20 to FY 2021-22)

As per MYT order dated 20th May 2019, the Commission approved total Capital Expenditure of INR 176.39 Crore and Capitalization of INR 236.39 Crore for the control period from FY 2019-20 to FY 2021-22. In this tariff order the Commission has approved total Capital Expenditure of INR 91.08 Crore and total Capitalization of INR 221.17 Crore only. Hence the Capital Expenditure & Capitalization approved till now is within limit of the capitalization approved in Business plan order/MYT order.

The year wise details of Capital Expenditure & Capitalization are provided below:

Table 102: Analysis of GFA and capitalization for the control period (FY 2019-20 to FY 2021-22)

S. No	Particulars	Approved in MYT Order				Now Approved by Commission			
		FY 2019-20	FY 2020-21	FY 2021-22	Total	FY 2019-20	FY 2020-21	FY 2021-22	Total
1	Capital Expenditure	128.20	30.19	18.00	**176.39**	42.89	30.19	18.00	**91.08**
2	Capitalization	5.70	182.69	48.00	**236.39**	14.48	158.69	48.00	**221.17**

5.11. Capital Structure

Petitioner's Submission

The Petitioner submitted that capitalization of INR 48.00 Crore shall be undertaken in FY 2021-22. Further, the entire capital deployment by Petitioner shall be through equity.

Commission's Analysis

The Regulation 26 of the MYT Regulations, 2018 stipulates the following:

26. Debt to Equity Ratio

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

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

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

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

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalized 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 modernization 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 capitalization is funded through equity, thus equity higher than 30% of capitalization has been considered as normative loan. The opening Gross Fixed Assets for FY 2021-22 has been considered as closing Gross Fixed Assets approved in the APR of FY

2020-21. Further, the values of opening loan and equity has been considered as closing loan and equity approved in APR of FY 2020-21. The loan and equity addition 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 2021-22 as detailed below:

Table 103: GFA addition approved by the Commission (INR Crore) for FY 2021-22

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	621.34	649.53	625.53
2	Addition During FY	48.00	48.00	48.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	**Closing Gross Fixed Assets**	**669.34**	**649.53**	**673.53**

Table 104: Normative Loan addition approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	107.37	133.38	112.75
2	Add: Normative Loan During the year	33.6	33.6	33.60
3	Less: Normative Repayment equivalent to Depreciation	24.98	24.27	21.34
4	**Closing Normative Loan**	**115.99**	**142.71**	**125.01**

Table 105: Normative Equity addition approved by the Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	150.78	194.86	152.03
2	Additions on account of new capitalization	14.40	14.40	14.40
3	**Closing Equity**	**165.18**	**209.26**	**166.43**

5.12. Depreciation

Petitioner's submission

The Petitioner has submitted the depreciation considering the depreciation rate as per MYT Regulations, 2018.

The following table provides the depreciation for FY 2021-22:

Table 106: Depreciation as submitted by the Petitioner for FY 2021-22 (INR Crore)

S. No.	Particulars	Value
1	Opening GFA	649.53
2	Additions	48.00
3	Closing GFA	649.53
4	Average GFA	649.53
5	**Depreciation Amount**	**24.27**

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 capitalized at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalized by the Applicant, subject to the prudence check of the Commission.

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

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

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

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

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

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

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

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

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

Table 107: Depreciation Rate (%)

Description	Rate
Plant & Machinery	3.60%
Underground cables	2.57%
Buildings	1.80%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Computers & Others	6.00%
Land	0.00%
Software-Intangible assets	15.00%

The opening and closing GFA has been considered as approved in *Section 5.11: Capital Structure* of this Order, adjusted by value of assets that have achieved 90% depreciation. Further, deprecation for FY 2021-22 has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during the year. The overall depreciation rate is considered as the weighted average depreciation rate calculated based on the computed asset wise depreciation and average GFA.

The following table provides the calculation of deprecation approved for FY 2021-22:

Table 108: Depreciation approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA for FY 2021-22	621.34	649.53	625.53
2	Addition During FY	48.00	48.00	48.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	669.34	649.53	673.53
5	Average Gross Fixed Assets	645.34	649.53	649.53
6	Effective Rate of Depreciation (%)	3.87%	3.74%	3.29%
7	**Depreciation**	**24.98**	**24.27**	**21.34**

The Depreciation approved by the Commission is lower as compared to the Petitioner's claim due to difference in opening GFA as considered by the Commission and as taken by the Petitioner. The Commission has considered the opening GFA for FY 2021-22 same as the closing GFA of previous year, i.e., FY 2020-21, as per MYT Regulations, 2018.

Accordingly, the Commission approves depreciation of INR 21.34 Crore in the ARR of the FY 2021-22.

5.13. Interest on Loan

Petitioner's submission

The Interest on Loan has been computed on normative basis according to the MYT Regulations, 2018. The normative loan addition in the FY 2021-22 has been computed as 70% of the capitalization proposed during the FY 2021-22.

The repayment of loans has been considered equal to the depreciation during the FY 2021-22. Further the rate of interest has been considered as SBI MCLR @ 8.75%.

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-capitalization or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the de-capitalized or retired or replaced assets, based on documentary evidence.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 FY 2021-22. In absence of any actual loans, the Commission has considered the 1-year SBI MCLR as on March 10, 2021 (7.00%) plus 100 basis points as rate of interest, in accordance with the JERC MYT Regulations, 2018.

The following table provides the Interest on Loan approved by the Commission for FY 2021-22:

Table 109: Interest on loan approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	107.37	133.38	112.75
2	Add: Normative Loan During the year	33.60	33.60	33.60
3	Less: Normative Repayment equal to Depreciation	24.98	24.27	21.34
4	Closing Normative Loan	115.99	142.71	125.01
5	Average Normative Loan	111.68	138.05	118.88
6	Rate of Interest (%)	9.55%	9.75%	8.00%
	Interest on Loan	**10.67**	**12.08**	**9.51**

The Interest on Loan approved by the Commission is lower than the Petitioner's claim due to difference in opening normative loan as considered by the Commission and as taken by the Petitioner. The Commission has considered the opening normative loan for FY 2021-22 same as closing normative loan of previous year, i.e., FY 2020-21, as per MYT Regulations, 2018.

Accordingly, the Commission approves Interest on Loan as INR 9.51 Crore in the ARR of the FY 2021-22.

5.14. Return on Equity (RoE)

Petitioner's submission

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

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

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

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, 2018. The following table provides the ROE for the FY 2021-22, as submitted by the Petitioner:

Table 110: Return on Equity as submitted by the Petitioner for FY 2021-22 (INR Crore)

S. No.	Particulars	Value
1	Opening Equity	194.86
2	Addition in equity on account of new capitalization	14.40
3	Closing Equity	209.26
4	Average Equity	202.06
5	Average Equity for wire business (90%)	181.85
6	Average Equity for Retail Supply Business (10%)	20.21
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	28.19
10	Return on Equity for Retail Supply Business	3.23
11	**Return on Equity**	**31.42**

Commission's Analysis

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

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

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

Further, in this regard, the Regulation 30(2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 stipulates the following:

"30. Return on Equity:

....

*30.2 Return on equity shall be computed at the base rate of **15.50%** for thermal generating station, **transmission system** including communication system and run-of river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run-of river generating station with pondage:*
*........" **(Emphasis supplied)***

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 pre-tax rate of return on transmission system in 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* of this Order. The following table provides the Return on Equity approved for the Control Period:

Table 111: RoE approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	150.78	194.86	152.03
2	Additions on account of new capitalization	14.40	14.40	14.40
3	Closing Equity	165.18	209.26	166.43
4	Average Equity	157.98	202.06	159.23
5	Average Equity (Wires Business)	142.18	181.85	143.31
6	Average Equity (Retail Supply Business) Business)	15.80	20.21	15.92
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**	22.04	28.19	22.21
10	**Return on Equity for Retail Supply Business**	2.53	3.23	2.55
11	**Total Return on Equity**	**24.57**	**31.42**	**24.76**

The Return on Equity approved by the Commission is lower than the petitioner's claim due to difference in opening equity as considered by the Commission and as taken by the Petitioner. The Commission has considered the opening equity for FY 2021-22 same as closing equity of previous year, i.e., FY 2020-21, as per MYT Regulations, 2018. In FY 2019-20, the petitioner has claimed wrong opening equity (i.e. average of closing equity of FY 2018-19 instead of closing equity of FY 2018-19).

Accordingly, the Commission approves Return on Equity of INR 24.76 Crore in the ARR of the FY 2021-22.

5.15. Interest on Security Deposits

Petitioner's submission

Interest on security deposit of INR 4.20 Crore has been claimed towards payment of interest on consumer security deposits.

Commission's Analysis

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

"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 Interest on security deposits as claimed by the petitioner has been approved by the Commission and the same shall be trued-up on the actual basis. The following table provides the interest on security deposits:

Table 112: Interest on Security Deposits approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Interest on Security Deposit	**2.45**	**4.20**	**4.20**

The Commission approves Interest on Security Deposit as INR 4.20 Crore in the ARR for the FY 2021-22.

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 for the Control Period 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 9.75% has been considered on the working capital requirement, being the 1 year SBI MCLR plus 200 basis points. This is in line with the MYT Regulations, 2018 which states as follows:

"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."

Table 113: Interest on Working Capital submitted by the Petitioner for FY 2021-22 (INR Crore)

Particular	Value
O&M expense for one month	4.01
Maintenance spares at 40% of R&M for one month	0.85
Receivables for 2 months	595.15
Total	**600.01**
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	60.63
Net Working Capital required after deduction of Security Deposit	**539.28**
Interest on Working Capital	**52.59**

Commission's Analysis

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

52. Norms of Working Capital for Distribution Wires Business

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

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

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

(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution

wires at the prevailing tariff;

Less:

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

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

Further, Regulation 31 of the MYT Regulation, 2018 stipulates the following:

"31. Interest on Working Capital

....

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 2021-22. The rate of interest on working capital is considered as 1-yr SBI MCLR rate as on April 1, 2020 plus 200 basis points (7.75%+2.00% = 9.75%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 114: Interest on Working Capital approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expenses for One Month	3.26	4.01	2.90
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.42	0.85	0.44
3	Receivables equivalent to two (2) months of the expected revenue Requirement	566.67	595.15	556.68
4	Less: Amount, held as security deposits	39.19	60.63	60.63
5	**Net Working Capital**	**531.17**	**539.38**	**499.38**
6	Rate of Interest (%)	10.15%	9.75%	9.75%
7	**Interest on Working Capital**	**53.91**	**52.59**	**48.69**

The reason of lesser interest on Working Capital approved by the Commission is due to difference in 'Receivables equivalent to two (2) months of the expected revenue requirement', which is calculated on the estimated revenue at revised tariff whereas the petitioner has considered the same on existing tariff.

Accordingly, the Commission approves the Interest on Working Capital of INR 48.69 Crore in the ARR of the FY 2021-22.

5.17. Income Tax

Petitioner's submission

The Petitioner has made provision towards Income Tax amounting to INR 26.21 Cr for FY 2021-22.

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 FY 2021-22 the Commission has considered INR 15 Crore towards Income Tax same as approved for FY 2020-21 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 115: Income Tax approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income Tax	**0**	**26.21**	**15.00**

The Commission approves the Income Tax of INR 15 Crore in the ARR of the FY 2021-22.

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not earmarked any provision for bad and doubtful debts for the FY 2021-22.

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."

As above, 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 the FY 2021-22.

5.19. Non-Tariff Income

Petitioner's submission

For projecting the non-tariff income for the FY 2021-22, INR 8.22 Crore has been considered by the petitioner.

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."

Further, the Regulation 34.2 of the MYT Regulations, 2018 stipulates the following:

"34.2 The delayed payment charge earned by the Transmission Licensee or the Distribution Licensee shall not be considered under its Non-Tariff Income."

For FY 2021-22, the Commission has considered the approved Non-Tariff Income (NTI) for FY 2020-21 excluding Delayed Payment Surcharge and Interest on investments and escalated the same by 5%. The same shall be considered at actuals at the time of truing up.

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

Table 116: Non -tariff Income approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Non- Tariff Income	**49.60**	**8.22**	**12.66**

The Commission approves Non-Tariff Income of INR 12.66 Crore in the ARR of the FY 2021-22.

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 INR 3,289.01 Crore after adjusting the Non -Tariff Income for the FY 2021-22.

Commission's Analysis

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

Table 117: Aggregate Revenue Requirement approved by Commission for FY 2021-22 (INR Crore)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	3,293.91	3,098.36	3234.13
2	O&M Expense	39.15	48.10	34.78
3	Depreciation	24.98	24.27	21.34
4	Interest Cost on Long-term Capital Loans	10.67	12.08	9.51
5	Interest on Working Capital Loans	53.91	52.59	48.69
6	Return on Equity	24.57	31.42	24.76
7	Provision for Bad Debt	0.00	0.00	0.00
8	Interest on security deposit	2.45	4.20	4.20
9	Income Tax	0.00	26.21	15.00
10	**Total**	3,449.64	3,297.22	3,392.42
11	Less: Non-Tariff Income	49.6	8.22	12.66
12	**Annual Revenue Requirement**	**3,400.04**	**3,289.01**	**3,379.76**

The Annual Revenue Requirement approved by the Commission is higher as compared to ARR claimed by the petitioner mainly due to increase in power purchase cost (Transmission Cost). In Technical Validation Session, petitioner informed the Commission that they have claimed lower Transmission (PGCIL) charges for FY 2021-22 in comparison to actual Transmission charges for FY 2019-20 & claimed for FY 2020-21 in expectation that the charges will decreased after issuing of new Sharing of Inter-State Transmission Charges and Losses Regulations, 2020. However, the Petitioner further submitted that the actual impact of new CERC Regulation is very minor than the expected. The Petitioner requested the Commission to reconsider the Transmission Charges and approved the same as claimed for FY 2020-21. Accordingly, the Commission has approved the revised transmission charges same as that approved for FY 2020-21 which impacted the total PPC approved for FY 2021-22.

The Commission approves net ARR of INR 3,379.76 Crore for FY 2021-22.

5.21. Revenue at existing Retail Tariff

Petitioner's submission

The revenue from sale of power at existing tariff is INR 3,570.87 Crore which is based on the projected energy sales, connected load and number of consumers. The revenue for FY 2021-22 has been computed based on the retail tariff notified by the Commission in the Tariff Order dated May 18, 2020 for the FY 2020-21.

Commission's Analysis

The category wise/ sub category 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/ sub category and slab.

The category/ sub category/ slab wise revenue as computed by the Commission for the FY 2021-22 has been shown in the table below:

Table 118: Revenue at existing tariff computed by Commission for FY 2021-22 (INR Crore)

S. No	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**Domestic**	**1.03**	**41.50**	**42.54**	**2.54**
1	Ist 50 Units	0.13	5.08	5.21	**1.54**
2	51 to 200 Units	0.26	13.18	13.44	**2.24**
3	201 to 400 Units	0.15	8.06	8.21	**2.80**
4	Beyond 401 Units	0.12	15.19	15.31	**3.43**
5	**LIG**	**0.38**		**0.38**	
2	**Commercial/ Non Domestic**	**0.20**	**16.18**	**16.38**	**4.21**
1	1st 100 Units	0.13	2.05	2.18	**3.40**
2	Beyond 100 Units	0.08	14.13	14.20	**4.37**
3	**Agriculture**	**0.00**	**0.50**	**0.50**	**0.91**
1	Upto 10 HP per unit	**0.00**	0.30	0.30	**0.80**
2	Beyond 10 HP per unit	**0.00**	0.19	0.19	**1.15**
4	**LT Industry**	**16.27**	**104.55**	**120.82**	**5.31**
1	Upto 20 HP Connected Load	0.11	2.64	2.75	**4.58**
2	Above 20 HP Connected Load	16.16	101.91	118.07	**5.33**
5	**Public Lighting**	**0.00**	**1.37**	**1.37**	**4.25**
6	**Public Water Works**	**0.44**	**2.53**	**2.97**	**5.64**
1	Upto 20 HP Connected Load	0.33	2.53	2.85	5.42
2	Above 20 HP Connected Load	0.12	0.00	0.12	-
7	**HT Category**	**640.53**	**2707.52**	**3348.05**	**5.50**
1	11 kV	294.61	1186.19	1480.79	**5.60**
2	66 kV	164.88	775.14	940.01	**5.38**
3	220 kV	181.05	746.19	927.24	**5.45**
8	**Temporary**	**0.00**	**3.07**	**3.07**	**8.11**
9	**Total**	**658.48**	**2877.21**	**3535.69**	**5.41**

**Tariff is 1.5 Times the ABR of Revenue at existing tariff for FY 2021-22*

For FY 2021-22 the Commission has approved INR 3,535.69 Cr for revenue from sale of power which is less than the revenue claimed (INR 3,570.87 Crore) by the petitioner. The reason for higher revenue claimed by the petitioner is because of incorrect assumption taken like incorrect billing demand factor while calculating fixed charge of HT sales, HP to kW factor in calculation for LT sales revenue etc.

The Commission has determined revenue from sale of power at existing tariff as INR 3,535.69 Crore in FY 2021-22.

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 surplus of INR 281.87 Crore for FY 2021-22.

Commission's Analysis

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

Table 119: Standalone Revenue Gap/ (Surplus) approved at existing tariff for FY 2021-22 (INR Crore)

S. No	Particulars	Petitioner's submission	Now Approved by Commission
1	Annual Revenue Requirement	3,289.01	3,379.76
2	Revenue from sale of power	3,570.87	3,535.69
3	**Revenue Gap/(Surplus)**	**(281.87)**	**(155.94)**

The approved standalone revenue surplus at existing retail tariff is INR 155.94 Crore for FY 2021-22 in comparison to Rs. 281.87 Cr of surplus as claimed by the Petitioner**.** The reason of this variation is the higher ARR approved by the Commission which is mainly because of increased Power Purchase Cost. Detail regarding the same is already provided in Power Purchase Cost/Transmission Charges section**.**

The estimated surplus is considered while determining the retail tariff for FY 2021-22, 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 2021-22 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the 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 DNHPDCL'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 influences social and economic change. Since, the area served by DNHPDCL has 97% of industrial sales, 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 the balance that the subsidising consumer 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.

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 surplus of INR 133.13 Crore at existing tariff for FY 2021-22. The standalone and consolidated revenue gap/surplus as submitted by the Petitioner has been tabulated below:

Table 120: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

S. No.	Particulars	Formulae	FY 2019-20	FY 2020-21	FY 2021-22
1	Total ARR		3,646.81	2,861.15	3,289.01
2	Revenue @ Existing Tariff		3,369.82	2,889.11	3,570.87
3	Revenue from Surplus Power Sale		0.00	18.22	0.00
4	**Total Revenue**	4=2+3	3,369.82	2,907.33	3,570.87
5	Revenue Gap /(Surplus)	5=4-1	276.99	(46.18)	(281.87)
	Covered By:				
6	Previous year's Gap/(Surplus) carried over		(100.14)	180.51	148.11
7	Total Gap/(Surplus)	7=5+6	176.85	134.34	(133.75)
8	Holding Cost		3.66	13.77	0.63
9	Net Gap/ (surplus)	9=7+8	180.51	148.11	(133.13)
10	**Reduction in tariff @proposed tariff**		**0.00**	**0.00**	**130.52**
11	**Net Gap/(Surplus)**	11=9+10	180.51	148.11	(2.61)

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. Regulation 11.5 of the MYT Regulation, 2018 stipulates the following:

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

.....

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, as on 1st April of the relevant FY plus 100 basis points for FY 2019-20 and FY 2020-21 and 1-yr SBI MCLR as on 10.03.2021 for FY 2021-22.

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 2021-22 as shown in the tables as follows:

Table 121: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Net Revenue Requirement	3614.28	2752.29	3379.76
Revenue from Retail Sales at Existing Tariff	3369.82	2872.78	3,535.69
Revenue from FPPCA	-	72.39	0.00
Total Revenue	**3,369.82**	**2,945.17**	**3,535.69**
Standalone Gap/(Surplus) for the year	**244.46**	**(192.88)**	**(155.94)**

Table 122: Consolidated Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Opening Gap/(Surplus)	(100.14)	146.43	(42.08)
Addition Gap/(Surplus) of standalone year	244.46	(192.88)	(155.94)
Closing Gap/(Surplus)	144.32	(46.45)	(198.01)
Average Gap/(Surplus)	22.09	49.99	(120.05)
Rate of Interest	9.55%	8.75%	8.00%
Carrying cost	2.11	4.37	(9.60)
Closing Gap/ (Surplus)	**146.43**	**(42.08)**	**(207.62)**

The Commission determines a cumulative revenue surplus of INR 207.62 Crore till FY 2021-22 at existing tariff.

6.4. Treatment of the cumulative Gap/Surplus and Tariff Design

As derived above, the resultant consolidated **revenue surplus** at the end of FY 2021-22 **is INR 207.62 Crore**, signifies that the existing tariff is excessive as compared to the costs incurred by the Petitioner. In order to achieve the same, the Commission has decided to reduce the tariff in all of the consumer categories for FY

2021-22. 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

The Petitioner has proposed to reduce the cumulative surplus of INR 133.13 crore for FY 2021-22 through tariff reduction in FY 2021-22.

1. The Petitioner proposed to keep the fixed charges of all the consumer categories same as that approved in the previous Tariff order. Hence the Petitioner has proposed no change in the fixed charges.
2. The Petitioner proposed a reduction in energy charges of consumer categories like Domestic, Commercial/ Non domestic, LT Industrial, HT Category, agriculture, & public lighting.
3. The Petitioner has also requested the Commission to approve kVAh based tariff for LT Industry which was earlier billed in kWh.
4. The Petitioner also requested the Commission to approve the fuel purchase adjustment formula including the "k" factor for FY 2021-22 as well.

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 123: Retail Tariff proposed by Petitioner for FY 2021-22

S. No	Category /Consumption Slab	Existing FY 2020-21		Proposed FY 2021-22	
		Energy Charges (INR/ kWh)	Fixed Charges	Energy Charges (INR/ kWh)	Fixed Charges
1	**LT-D/Domestic**				
	Ist 50 Units	1.50	10.00 INR./Con/Month	1.30	10.00 INR./Con/Month
	51 to 200 Units	2.20	10.00 INR./Con/Month	2.00	10.00 INR./Con/Month
	201 to 400 Units	2.75	10.00 INR./Con/Month	2.55	10.00 INR./Con/Month
	Beyond 401 Units	3.40	10.00 INR./Con/Month	3.20	10.00 INR./Con/Month
	LIG		20.00 INR./Con/month		20.00 INR./Con/month
2	**LT-C/Commercial/Non Domestic**				
	1st 100 Units	3.20	20.00 INR./Con/Month	3.00	20.00 INR./Con/Month
	Beyond 100 Units	4.35	20.00 INR./Con/Month	4.15	20.00 INR./Con/Month
3	**LT- Ag/ Agriculture**				
	Upto 10 HP per unit	0.80		0.60	
	Beyond 10 HP per unit	1.15		0.95	
4	**LTP Industrial**				
	Upto 20 HP Connected Load	4.40	20.00 INR./HP/month	4.20/kVAh	20.00 INR./HP/month
	Above 20 HP Connected Load	4.60	80.00 INR./HP/month	4.40/kVAh	80.00 INR./HP/month
5	**LT-PL/Public Lighting**				
	Public Lighting	4.25		4.05	
6	**LT Public Water Works**				
	Upto 20 HP Connected Load	4.80	50.00 INR./HP/month	4.60	50.00 INR./HP/month
	Above 20 HP Connected Load	4.80	100.00 INR./HP/month	4.60	100.00 INR./HP/month

S. No	Category /Consumption Slab	Existing FY 2020-21		Proposed FY 2021-22	
		Energy Charges (INR/ kWh)	Fixed Charges	Energy Charges (INR/ kWh)	Fixed Charges
7	**HT**				
	HT Category				
	11 kV	4.40 INR /kVAh	400.00 INR./kVA/month	4.20 INR /kVAh	400.00 INR./kVA/month
	66 kV	4.35 INR /kVAh	525.00 INR./kVA/month	4.15 INR /kVAh	525.00 INR./kVA/month
	220 kV	4.30 INR/kVA h	575.0 INR/kVA/month	4.10 INR/kVAh	575.0 INR/kVA/month
8	**Hoardings/Advertisements**				
	For all units	7.55	100.00 INR./kVA/month	7.35	100.00 INR./kVA/month
9	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**	4.80	-	4.60	-

Commission's Analysis

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

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to 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. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges.
5. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs.
6. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.
7. 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 – jeopardizing the competitiveness of industries owing to higher input costs and inability of Discoms to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

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

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

b) Approach:

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply 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 DNHPDCL 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 DNHPDCL 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 DNHPDCL 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 reform 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 stakeholder's will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers, which would be beneficial especially for Domestic category consumers. Additionally, this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

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

Keeping in view the above principles, the Commission has made the following amendment in the retail tariff applicable for FY 2021-22:

1. On account of the projected cumulative revenue surplus during FY 2021-22 at existing tariff, the Commission has decided to reduce the tariff. The energy charge of all consumer categories has been reduced.

2. The fixed charge has not been altered for any of the categories for FY 2021-22.

3. For LT Industrial categories, the Commission has modified the Energy Charge, earlier payable on kWh basis to kVAh basis now.

6.4.2. Approved Final Tariff Schedule

6.4.2.1. Approval of kVAh based billing for LT Industrial Consumers

As per the submission of the Petitioner, the Commission in this Tariff Order has approved kVAh based tariff for LT Industries. 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.

6.4.2.2. Existing and retail Tariff for FY 2021-22

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

Table 124: Existing and Approved Tariff for FY 2021-22

S. No.	Category	Existing for FY 2020-21		Approved for FY 2021-22	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
(i)	0-50 Units	10.00 INR/ Con/ Month	1.50 INR/ kWh	10.00 INR/ Con/ Month	1.40 INR/ kWh
(ii)	51 to 200 Units		2.20 INR/kWh		2.10 INR/kWh
(iii)	201 to 400 Units		2.75 INR/ kWh		2.60 INR/ kWh
(iv)	Beyond 401 Units		3.40 INR/kWh		3.20 INR/kWh
(v)	LIG	20.00 INR/ Con/ Month	-	20.00 INR/ Con/ Month	-
2	**LT-Non Domestic/Commercial**				
(i)	0 - 100 Units	20.00 INR/ Con/ Month	3.20 INR/kWh	20.00 INR/ Con/ Month	3.10 INR/kWh
(ii)	Beyond 100 Units		4.35 INR/ kWh		4.10 INR/ kWh
3	**LT- Ag/ Agriculture and Poultry**				
(i)	Upto 10 HP		0.80 INR/kWh		0.75 INR/kWh
(ii)	Beyond 10 HP		1.15 INR/ kWh		1.10 INR/ kWh
4	**LTP Industrial**				
	(a) LTP Motive Power				
(i)	Upto 20 HP Connected Load	20.00 INR/HP/month	4.40 INR/kWh	20.00 INR/HP/month	3.50 INR/kVAh
(ii)	Above 20 HP Connected Load	80.00 INR/HP/month	4.60 INR/kWh	80.00 INR/HP/month	3.70 INR/kVAh
	(b) LT Public Water Works				
(i)	Upto 20 HP Connected Load	50.00 INR/HP/Month	4.80 INR/kWh	50.00 INR/HP/Month	4.60 INR/kWh
(ii)	Above 20 HP Connected Load	100.00 INR/HP/Month	4.80 INR/kWh	100.00 INR/HP/Month	4.60 INR/kWh
5	**LT-PL/Public Lighting**				
	Public Lighting	-	4.25 INR/kWh	-	4.05 INR/kWh
6	**HT INDUSTRIAL**				
(i)	11 kV	400.00 INR/kVA/month	4.40 INR/ kVAh	400.00 INR/kVA/month	4.10 INR/ kVAh
(ii)	66 kV	525.00 INR/kVA/month	4.35 INR/ kVAh	525.00 INR/kVA/month	4.05 INR/ kVAh
(iii)	220 kV	575.00 INR/kVA/month	4.30 INR/ kVAh	575.00 INR/kVA/month	4.00 INR/ kVAh
7	**Hoardings/Advertisements**				
	For all units	100.00 INR/kVA/month	7.55 INR/kWh	100.00 INR/kVA/month	7.30 INR/kWh
8	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**	-	4.80 INR/kWh	-	4.70 INR/kWh

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

Based on the retail approved tariff as shown above, the revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle (EV) Charging Station and Hoarding / Advertisements category due to unavailability of requisite data. The Commission as of now approves the k factor for these two categories as shown in the following table, however, **directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under these two categories**. Further, due to unavailability of EV charging station as on date, k-Factor of 1.00 is considered for the same. The revenue from approved Retail Tariff for FY 2021-22 is shown in the Table below:

Table 125: Revenue from Approved Retail Tariff for FY 2021-22

S. No	Category	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/ unit)	k-factor
1	**DOMESTIC**	**1.03**	**39.23**	**40.27**	**2.40**	**0.47**
(i)	0-50 units	0.13	4.74	4.87	**1.44**	0.28
(ii)	51-200 units	0.26	12.58	12.84	**2.14**	0.42
(iii)	201-400 units	0.15	7.62	7.77	**2.65**	0.52
(iv)	401 and above	0.12	14.29	14.41	**3.23**	0.63
(v)	Low Income Group (LIG)	0.38	0.00	0.38		
2	**COMMERCIAL/Non-Domestic**	**0.20**	**15.30**	**15.51**	**3.99**	**0.78**
(i)	0-100 units	0.13	1.99	2.11	**3.30**	0.65
(ii)	101 Units and Above	0.08	13.32	13.39	**4.12**	0.81
3	**LT INDUSTRIAL**					
(i)	**LTP Motive Power (For All Units)**	**16.27**	**98.84**	**115.12**	**5.06**	**0.99**
	Up to 20 HP	0.11	2.47	2.58	**4.30**	0.84
	Above 20 HP	16.16	96.37	112.53	**5.08**	0.99
(ii)	**LT Public Water Works (For all units)**	**0.44**	**2.42**	**2.86**	**5.44**	**1.07**
	Up to 20 HP	0.33	2.42	2.75	**5.22**	1.02
	Above 20 HP	0.12	0.00	0.12	**-**	-
4	**HT/EHT INDUSTRIAL**	**640.53**	**2521.12**	**3161.65**	**5.19**	**1.02**
(i)	11 kV	294.61	1105.31	1399.92	**5.30**	1.04
(ii)	66 kV	164.88	721.68	886.56	**5.08**	0.99
(iii)	220 kV	181.05	694.13	875.18	**5.15**	1.01
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.47**	**0.47**	**0.86**	**0.17**
(i)	For sanctioned load upto 10 HP	0.00	0.28	0.28	**0.75**	0.15
(ii)	Beyond 10 HP	0.00	0.18	0.18	**1.10**	0.22
6	**PUBLIC LIGHTING**	**0.00**	**1.30**	**1.30**	**4.05**	**0.79**
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**-**	**-**
8	**TEMPORARY***	**0.00**	**2.90**	**2.90**	**7.66**	**1.50**
9	**EV CHARGING STATION**	**0.00**	**0.00**	**0.00**	**-**	**-**
	Total	**658.48**	**2681.60**	**3340.08**	**5.11**	**1.00**

**Tariff will be 1.5 Times the ABR of relevant category for FY 2021-22*

The Commission approves revenue from approved Retail Tariff of INR 3,340.08 Crore for the FY 2021-22.

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 126: Tariff increase/decrease approved by Commission for FY 2021-22

S. No	Category	ACOS (INR /kwh)	ABR at existing tariff (INR /kwh)	ABR at approved tariff (INR /kwh)	Decrease in ABR (%)
1	Domestic	5.17	2.54	2.40	-5.34%
2	LT Commercial	5.17	4.21	3.99	-5.35%
3	Agriculture	5.17	0.91	0.86	-5.51%
4	LT Industrial	5.17	5.31	5.06	-4.72%
5	Public Lighting	5.17	4.25	4.05	-4.71%
6	Public Water Works	5.17	5.64	5.44	-3.55%
7	HT Industrial	5.17	5.50	5.19	-5.57%
8	Temporary	5.17	8.11	7.66	-5.53%
9	**Total**	5.17	**5.41**	**5.11**	**-5.53%**

The average reduction in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2020-21 vide Order dated May 18, 2020 is 5.53%.

6.4.4. Revenue Gap/ Surplus at Approved Tariff

On considering the revenue at approved tariffs, the resultant cumulative Revenue Gap/(Surplus) has been shown in the table below:

Table 127: Cumulative revenue Gap/ (Surplus) at approved Tariff for FY 2021-22

S. No.	Particulars	Formulae	FY 2019-20	FY 2020-21	FY 2021-22
a	Net Revenue Requirement		3,614.28	2,752.29	3,379.76
b	Revenue from Retail Sales at Proposed Tariff		3369.82	2,872.78	3,340.08
c	Revenue from FPPCA Charges		-	72.39	0.00
d	Total Revenue	(d=b+c)	3,369.82	2,945.17	3,340.08
e	**Standalone Gap/ (Surplus) for the year**	(e=a-d)	**244.46**	**(192.88)**	**39.68**
f	Opening Gap/ (Surplus)		(100.14)	146.43	(42.08)
g	Closing Gap/ (Surplus)	(g=e+f)	144.32	(46.45)	(2.40)
h	Average Gap/ (Surplus)	h=(g+f)/2	22.09	49.99	(22.24)
i	Rate of Interest		9.55%	8.75%	8.00%
j	Carrying cost	j=i*h	2.11	4.37	(1.78)
k	**Closing Gap/ (Surplus)**	k=g+j	**146.43**	**(42.08)**	**(4.18)**

After reduction in Tariff by 5.53%, the Commission approves a cumulative revenue surplus of INR 4.18 Crore till FY 2021-22. The Commission has designed the category-wise tariffs to almost match the Revenue at approved (reduced) tariff to meet the ARR for FY 2021-22 including cumulative revenue surplus. The approved cumulative closing surplus of INR 4.18 Crore is only 0.1% of the approved ARR for FY 2021-22 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 2021-22 are as follows:

1. On account of the projected cumulative revenue surplus during FY 2021-22 at existing tariff, the Commission has decided to reduce the tariff. The energy charge of all consumer categories has been reduced.

2. The fixed charge has not been altered for any categories.

3. For LT Industrial categories, the Commission has modified the Energy Charge, payable earlier on kWh basis to kVAh basis now.

7. Chapter 7 Open Access Charges for the FY 2021-22

7.1. Determination of Additional Surcharge

Petitioner's submission:

The Petitioner has submitted the following calculations for Additional Surcharge for FY 2021-22:

Table 128: Additional Surcharge submitted by Petitioner for FY 2021-22

Particulars	Value
Total Power Purchase cost (INR Crores)	3098.36
Fixed Cost component in Power Purchase Cost (including Transmission Charges) (INR Crores)	1272.19
Energy Sales (MU)	6540.77
Additional Surcharge (INR/kWh)	**1.95**

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:

"**4.5 Additional Surcharge**

1. *1. 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"*

2. *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 of the aforesaid JERC Regulations states the following:

"**5.2 Imbalance Charges**

1. Settlement of Energy at Drawal Point in Respect of Open Access Consumer, or Trading Licensee on Behalf of Open Access Consumer

…….

b. Open Access Consumer, who is also a Consumer of the Distribution Licensee

……

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 129: Additional Surcharge approved by Commission for FY 2021-22

S. No.	Particulars	Value
1	Total Power Purchase Fixed Cost approved for (excluding transmission charges) (INR Crores)	934.25
2	Energy Sales (MUs)	6540.77
3	**Additional Surcharge (INR/kWh)**	**1.43**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, which is repealed now, 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 "JERC (Connectivity and Open Access in Intra-State Transmission and Distribution) 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 Regulations.**

The Commission approves an Additional Surcharge of INR 1.43/kWh for FY 2021-22.

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.

7.2. Determination of Wheeling Charges

7.2.1. 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 of ARR between Wheeling and Retail Supply as submitted by Petitioner for FY 2021-22

Annual Revenue Requirement	Allocation (%)		Allocation FY 2019-20	
Particular	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	3,098.36
Employee	40%	60%	5.75	8.63
R&M	90%	10%	23.05	2.56
A&G	50%	50%	4.06	4.06
Depreciation	90%	10%	21.85	2.43
Interest Cost on Long-term Capital Loans	90%	10%	10.87	1.21
Interest on Working Capital Loans	10%	90%	5.26	47.33
Interest on Security Deposit	10%	90%	0.42	3.78
Return on Equity	90%	10%	28.28	3.14

Annual Revenue Requirement	Allocation (%)		Allocation FY 2019-20	
Particular	**Wheeling**	**Supply**	**Wheeling**	**Supply**
Income Tax	90%	10%	23.58	2.62
Provision for Bad and Doubtful Debt	0%	100%	-	-
Annual Revenue Requirement			**123.11**	**3174.11**
Less: Non-Tariff Income	10%	90%	0.82	7.40
Less: Revenue from Surplus Power Sale	50%	50%	-	-
Net Revenue Requirement			122.29	3166.72

In order to determine the wheeling charges the Petitioner has allocated the wheeling cost on the basis of voltage levels. The criteria for allocation of wheeling costs are elaborated as follows:

- O&M Expenses are allocated on the basis of number of consumers under each category.
- All expenses other than the O&M expenses are allocated on the basis of voltage wise asset allocation.

The voltage wise asset allocation assumed and the number of consumers in each category as submitted by the Petitioner is shown in table below:

Table 131: Parameters assumed by Petitioner for voltage wise allocation of wheeling charges

Category	Consumers (nos.)	Sales (MU)	Asset Allocation (%)	Voltage wise losses (%)	Energy Input (MU)
Below 11 kV-LT	83983	452.64	40%	23.42%	590.32
11 kV	934	2,641.96	30%	3.80%	2746.32
66 kV	32	1746.29	20%	1.50%	1772.88
220 kV	2	1700.62	10%	0.60%	1710.88
Total	**84951**	**6,541.51**	**100%**	**4.10%**	**6,820.41**

The wheeling charges submitted by the Petitioner are as below:

Table 132: Wheeling charges proposed by Petitioner for FY 2021-22

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11 kV-LT	32.48	35.77	68.26	1.16
11 kV	0.36	26.83	27.19	0.10
66 kV	0.01	17.89	17.90	0.10
220 kV	0.00	8.94	8.94	0.05
Total	**32.86**	**89.44**	**122.29**	

<u>Commission's Analysis:</u>

In this regard, the Regulations 48 of the JERC MYT Regulations, 2018 specifies as follows:

*"**48. Separation of Accounts of Distribution License***

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 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 2021-22 as per the ARR approved in this Order is provided in the table as follows:

Table 133: Allocation matrix approved by Commission for FY 2020-21

Particulars	Allocation (%)		Values		
	Wheeling	Supply	Wheeling	Supply	Total
Cost of power purchase for full year	0%	100%	0.00	3234.13	3234.13
Employee costs	40%	60%	5.89	8.84	14.73
Administration and General Expenses	50%	50%	3.49	3.49	6.97
Repair and Maintenance Expenses	90%	10%	11.77	1.31	13.07
Depreciation	90%	10%	19.21	2.13	21.34
Interest and Finance charges	90%	10%	8.56	0.95	9.51
Interest on Working Capital	10%	90%	4.87	43.82	48.69
Interest on consumer security deposit	10%	90%	0.42	3.78	4.20
Return on Equity			22.21	2.55	24.76
Provision of Bad & Doubtful Debt	0%	100%	0.00	0.00	0.00
Income Tax	90%	10%	13.50	1.50	15.00
Total Revenue Requirement			**89.92**	**3302.50**	**3392.42**
Less: Non-Tariff Income	10%	90%	1.27	11.39	12.66
Income from other Business	50%	50%	0.00	0.00	0.00
Net Revenue Requirement			**88.65**	**3291.11**	**3379.76**

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 are elaborated as follows:

- O&M Expenses are allocated on the basis of number of consumers under each category
- All expenses other than the O&M expenses are allocated on the basis of voltage wise asset allocation. The same has been considered based on Petitioner's submission in this regard.

The Commission had issued directive in Tariff Order dated April 7, 2016, to the Petitioner regarding actual voltage wise expenses and assets allocation which has not been made available. Since the actual Voltage wise allocation of expenses and asset allocation for all voltages are not yet available, it is being assumed.

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)	Line Loss (%)	Energy Input (MU)	Consumers	Voltage Wise Asset Allocation (%)
Below 11kV	451.90	23.45%	590.32	83983	40%
11kV	2641.96	3.80%	2746.32	936	30%
66kV	1746.29	1.50%	1772.88	29	20%
220 kV	1700.62	0.60%	1710.89	3	10%
Total	**6540.77**	**4.10%**	**6820.41**	**84951**	**100%**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 135: Wheeling Charges approved by Commission for FY 2021-22

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11kV	20.90	27.00	47.91	**1.06**
11kV	0.23	20.25	20.48	**0.08**
66kV	0.01	13.50	13.51	**0.08**
220 kV	0.00	6.75	6.75	**0.04**
Total	**21.14**	**67.50**	**88.65**	

The Commission approves wheeling charge of INR 1.06/kWh at LT voltage level, INR 0.08/kWh at 11 kV, INR 0.08/kWh at 66 kV voltage level and INR 0.04/kWh at 220kV for FY 2021-22.

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. Voltage Wise losses at each voltage level are assumed for 11 kV, 66 kV and 220 kV voltage levels. The remaining losses are adjusted in the LT voltage level in order to maintain the Distribution losses at 4.10%, as proposed in the ARR for FY 2021-22

Table 136: Cross-subsidy Surcharge for FY 2021-22 submitted by Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross-Subsidy (INR/kWh)
Below 11 kV-LT	8.25	4.09	-4.16
11 kV	4.89	5.66	0.77
66 kV	4.78	5.34	0.56
220 kV	4.65	5.40	0.75

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 11kV, 66kV & 220 kV voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 4.10%, as approved in the ARR for FY 2021-22. Voltage wise losses assumed at each level have been shown in the table below:

Table 137: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Below 11kV	23.45%	23.45%
11kV	3.80%	5.90%
66kV	1.50%	2.10%
220 kV	0.60%	0.60%
Total	**4.10%**	**4.10%**

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 138: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Below 11kV	451.90	23.45%	590.32
11kV	2641.96	5.90%	2746.32

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
66kV	1746.29	2.10%	1772.88
220 kV	1700.62	0.60%	1710.89
Total	**6540.77**	**4.10%**	**6820.41**

Now the overall ARR approved for FY 2021-22 is divided into variable and fixed ARR with variable ARR comprising of variable component of power purchase cost and fixed ARR comprising of all the other costs.

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

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to 220 kV level is then further allocated to 66 kV, 11 kV & LT level on the basis of input energy, as the 220 kV network is utilized by remaining network consumers. Similarly, 66 kV and 11 kV costs are allocated to the lower levels following the same approach.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 139: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Number of Consumers	Voltage wise Asset Allocation (%)
Below 11kV	590.32	83983	40.00%
11kV	2746.32	936	30.00%
66kV	1772.88	29	20.00%
220 kV	1710.89	3	10.00%
Total	**6820.41**	**84951**	**100.00%**

The variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise Cost of Supply (VCoS) is then determined on the basis of energy sales of respective categories. Accordingly, the VCoS is determined as shown in the table below:

Table 140: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR Crore)	Allocated Variable Cost (INR Crore)	Total Cost (INR Crore)	Energy Sales (MU)	VCoS (INR/kwh)
Below 11kV	204.78	145.81	350.59	451.90	**7.76**
11kV	620.08	678.35	1298.43	2641.96	**4.91**
66kV	400.76	437.91	838.67	1746.29	**4.80**
220 kV	376.43	422.59	799.02	1700.62	**4.70**
Total	**1602.04**	**1684.66**	**3286.70**	**6540.77**	

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge as shown in table below:

Table 141: Cross-Subsidy Surcharge approved by the Commission for FY 2021-22

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Below 11kV	7.76	3.95	**(3.81)**
11kV	4.91	5.30	**0.38**
66kV	4.80	5.08	**0.27**
220 kV	4.70	5.15	**0.45**

Therefore, the Commission approves INR 0.38/kWh for 11 kV, INR 0.27/kWh for 66 kV, INR 0.45/kWh for 220 kV consumers and Nil for below 11 kV consumers as Cross-Subsidy Surcharge for FY 2021-22.

7.4. Other Charges

All other charges would be 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 & 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 of JERC 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 20220-21 will be undertaken by the Commission once the audited accounts of the FY 2020-21 are available. If the audited accounts for the FY 2020-21 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2022-23, 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 judgment 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. The relevant amendment to the Regulation has been shown as follows:

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.

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.

1. 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:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{Rs.}}{\boldsymbol{Unit}}\right) =. \left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \mathbf{10}}{\{[\boldsymbol{PPOact} * (\mathbf{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\mathbf{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

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 LIG 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 LIG category consumers for a quarter as approved in the relevant Tariff Order

2. 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 LIG and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to a ±10% of the ABR of the consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers. 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 per unit for the FY 2021-22 as shown in following table.

Table 142: $R_{approved}$ determined by Commission for FY 2021-22

S. No.	Particulars	Value
1	Total Power Purchase Cost (INR Crore), Papp	2711.97
2	Transmission Charges (INR Crore), T_{app}	522.17
3	Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NSPCL, NPCIL, EMCO) (MU), PPO_{app}	6847.42
4	Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.66%
5	Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	175.20
6	Quantum of Sale of Surplus Power (MU), PSO_{app}	-
7	Approved Intra-State T&D Loss (%), DL_{app}	4.10%
8	Energy Sales for LIG and Agriculture consumer category (MU), Z_{app} (MU)	5.46
9	**R_{app} (INR/kWh)**	**4.98**

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 is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- **The detailed action plan for compliance of all the directives within 1 month of the issuance of this Order.**
- The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 15 days of the end of each quarter of the calendar year.

9.1. Directives Continued/ Dropped 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. Quarterly Statement of Capital Expenditure

Originally Issued in Tariff Order dated 31st July 2012
Commission's Directive in Tariff Order Dated 20th May 2019 With regards to non-submission of quarterly report on capital expenditure and capitalization, the Commission directed the Petitioner as follows: The Commission has noted with concern that Petitioner is yet to submit the details as sought by the Commission. The Commission now directs the Petitioner to ensure compliance of this directive and submit the desired reports on quarterly basis, failing which the Commission will be constrained to take appropriate action against the Petitioner.
Petitioner's Response *The DNHPDCL would like to submit that the Quarterly report will be submitted to the Commission shortly.*
Commission's Response The Commission has noted with concern that Petitioner is yet to submit the details as sought by the Commission. The Commission now directs the Petitioner to ensure compliance of this directive within three months from the date of issuance of this order and submit the desired reports regularly on quarterly basis, failing which the Commission will be constrained to take appropriate action against the Petitioner.
Petitioner's Response in the Present Tariff Petition The DNHPDCL would like to submit that the Quarterly report will be submitted to the Commission shortly.
Commission's direction in this Tariff Order *The Commission has noted with concern that Petitioner is yet to submit the details as sought by the Commission. The Commission now directs the Petitioner to ensure compliance of this directive within three months from the date of issuance of this order and submit the desired reports regularly on quarterly basis, failing which the Commission will be constrained to take appropriate action against the Petitioner.*

9.1.2. Implementation of Smart Grid

Originally Issued in Tariff Order dated 07th April 2016

Commission's Directive in Tariff Order Dated 20th May 2019

The Commission notes the submission of the Petitioner with concern and directs it to submit a detailed action plan by 30th September 2019 for roll out of smart grid in DNH within this MYT Control Period.

Petitioner's Response

The DNHPDCL would like to submit that the possibility of implementation of Smart Grid in UT of DNH will be explored in due course.

Commission's Response

The Commission notes the submission of the Petitioner with concern and directs it to submit a detailed action plan by 30th September 2020 for rolling out of the smart grid in DNH within this MYT Control Period.

Petitioner's Response in the Present Tariff Petition

The DNHPDCL would like to submit the Silvassa town is declared as a Smart City. Accordingly, measures will be taken up for implementation of Smart Grid projects.

Commission's direction in this Tariff Order

The Commission notes the submission of the Petitioner with concern and directs it to submit a detailed action plan by 30th September 2021 for rolling out of the smart grid in DNH district within this MYT Control Period.

9.1.3. Information for determination of Voltage-wise Wheeling Charges

Originally Issued in Tariff Order dated 07th April 2016

Commission's Directive in Tariff Order Dated 20th May 2019

The Commission notes the compliance by the Petitioner. However, the Petitioner has shown no allocation at EHT level though a few consumers are being supplied at 220 kV. The Commission directs the Petitioner to carry out allocation in scientific manner and submit revised allocation along with Tariff Petition for FY 20-21.

Petitioner's Response

The DNHPDCL would like to submit that the details for the EHT consumers shall be submitted to the Commission shortly.

Commission's Response

The Commission notes the submission of the Petitioner with concern and directs it to submit details of voltage wise assets and expenses along with the allocation methodology including allocation at EHT level along with next Tariff Petition.

Petitioner's Response in the Present Tariff Petition

The DNHPDCL would like to submit that the details for the EHT consumers shall be submitted to the Commission shortly.

Commission's direction in this Tariff Order

The Commission notes the submission of the Petitioner with concern and directs it to submit details of voltage wise assets and expenses along with the allocation methodology including allocation at EHT level along with next Tariff Petition

9.1.4. Timely Submission of Reports

Originally Issued in Tariff Order dated 18th May 2020

Commission's Directive in Tariff Order Dated 18th May 2020

The Commission has observed that the Petitioner do not submit the quarterly or any other report within time as specified by the Commission in previous Orders. Accordingly, the Petitioner is directed to comply with the

timelines decided by the Commission for all such reports.
Petitioner's Response in the Present Tariff Petition
The DNHPDCL would like to submit that the reports pertaining to RPO, metering, FPPCA, SAIFI, SAIDI are submitted to the Commission on a regular basis.
Commission's direction in this Tariff Order
The Commission has noted the compliance to the above directive and noticed that the petitioner has not submitted the report related to SAIFI/SAIDI in past on regular basis. Accordingly, the Commission directs the petitioner to submit the aforementioned reports regularly in future.

9.1.5. Quarterly RPO Compliance Report Submission

Originally Issued in Tariff Order dated 18th May 2020
Commission's Directive in Tariff Order Dated 18th May 2020
The Commission directs the Petitioner to submit quarterly RPO report henceforth timely within 15 days of the subsequent quarter.
Petitioner's Response in the Present Tariff Petition
The DNHPDCL would like to submit that RPO reports are being submitted quarterly to the Commission.
Commission's direction in this Tariff Order
The Commission has noted the compliance to the above directive and directs the petitioner to submit the aforementioned quarterly report regularly in future also. Accordingly, the Commission now drops this directive.

9.1.6. Quarterly details of Stranded Power (Open Access)

Originally Issued in Tariff Order dated 18th May 2020
Commission's Directive in Tariff Order Dated 18th May 2020
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.
Petitioner's Response in the Present Tariff Petition
The DNHPDCL would like to submit that at present there is no open access consumer and therefore there is no stranded power.
Commission's direction in this Tariff Order
The Commission has noted the compliance to the above directive and directs the petitioner to submit the aforementioned report in future if the power is availed by the consumers through open access.

9.1.7. Status of Metering

Originally Issued in Tariff Order dated 18th May 2020
Commission's Directive in Tariff Order Dated 18th May 2020
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 metered basis and assessment basis within three months from the issuance of this Tariff Order.
Petitioner's Response in the Present Tariff Petition
The DNHPDCL would like to submit that the details regarding metering have submitted to the Commission as per the format provided to the utilities. Further, all the details were also submitted during the course of Suo-moto hearing to the Commission.
Commission's direction in this Tariff Order
The Commission has noted the compliance to the above directive and directs the petitioner to submit the aforementioned report regularly in future also. Accordingly, the Commission now drops this directive.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 143: Tariff Schedule for FY 2021-22

S. No.	Category	Fixed Charges	Energy Charges
1.	**DOMESTIC**		
(i)	0-50 units	10.00 INR/Con/Month	1.40 INR/kWh
(ii)	51-200 units		2.10 INR/kWh
(iii)	201-400 units		2.60 INR/kWh
(iv)	401 and above		3.20 INR/kWh
(v)	Low Income Group (Up to 2x40 W bulbs only)	Power supply to low income group connections will be charged at INR 20 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.	**NON DOMESTIC/COMMERCIAL**		
(i)	0-100 units	20.00 INR/Con/Month	3.10 INR/kWh
(ii)	101 units and above	20.00 INR/Con/Month	4.10 INR/kWh
3.	**LT INDUSTRIAL**		
(a)	LTP Motive Power		
(i)	Up to 20 HP	20.00 INR/HP/Month	3.50 INR/kVAh
(ii)	Above 20 HP	80.00 INR/HP/Month	3.70 INR/kVAh
(b)	LT Public Water Works		
(i)	*Up to 20 HP*	50.00 INR/HP/Month	4.60 INR/kWh
(ii)	*Above 20 HP*	100.00 INR/HP/Month	4.60 INR/kWh
4.	**HT/EHT INDUSTRIAL**		
(i)	11 kV supply	400.00 INR/kVA/month	4.10 INR/kVAh
(ii)	66 kV supply	525.00 INR/kVA/month	4.05 INR/kVAh
(iii)	220 kV supply	575.00 INR/kVA/month	4.00 INR/kVAh
5.	**AGRICULTURE AND POULTRY**		
(i)	For sanctioned load up to 10 HP	-	0.75 INR/kWh
(ii)	Beyond 10 HP	-	1.10 INR/kWh
6.	**PUBLIC LIGHTING**		
(i)	For all units	-	4.05 INR/kWh
7.	**HOARDINGS/ SIGNBOARDS**		
(i)	Hoarding/ Signboards	INR 100 per kVA per Month or part thereof	7.30 INR/kWh

S. No.	Category	Fixed Charges	Energy Charges
8.	**ELECTRIC VEHICLE CHARGING**		
(i)	Electric Charging Vehicle	-	4.70 INR/kWh
9.	**Temporary Supply**		
(i)	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 144: Applicability of Tariff Schedule for FY 2021-22

S. No	Category	Applicability
1.	**Domestic**	This schedule shall apply to private houses, hospitals run on Non-commercial lines, Government Schools (including Government Schools Hostels), Charitable Religious Institutions for Light, Fans, Radios, Domestic Heating and other household appliances including water pumps up to 2 HP.
2.	**Non Domestic/ Commercial**	This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, Schools (other than Govt. schools & their hostels), Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations. 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.	**LT Industrial**	This schedule shall apply to all Low Tension Industrial Motive Power Connections including water works/pumps with sanctioned load up to 99 HP.
4.	**HT 11 kV supply**	This schedule shall apply to all Industrial/Motive power/ Ferro Metallurgical / Steel Melting / Steel Rerolling / Power Intensive consumers drawing through 11 kV systems
5.	**HT 66 kV supply**	This schedule shall apply to all Industrial/Motive power/ Ferro Metallurgical / Steel Melting / Steel Rerolling / Power Intensive consumers drawing through 66 kV systems
6.	**HT 220 kV supply**	This schedule shall apply to all Industrial/Motive power/ Ferro Metallurgical / Steel Melting / Steel Rerolling / Power Intensive consumers drawing through 220 kV systems
7.	**Agriculture and Poultry**	This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.
8.	**Public Lighting**	-
9.	**Hoardings / Signboards**	This schedule shall apply to electricity for lighting external advertisements, external hoardings and displays at departments

S. No	Category	Applicability
		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.
10.	**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.
11.	**Electric Charging Station**	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT).

10.3. 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 Charge**s - LT Commercial and Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the JERC Supply Code Regulations, 2018 and subsequent amendment thereof 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. DNHPDCL may 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 JERC Supply Code Regulations. 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. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula notified in Chapter 8 of this Order. Such charges shall be recovered/refunded in accordance with the terms and conditions specified in the FPPCA formula.

15. 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 for the FY 2020-21.

Secretary, JERC
(For Goa & UTs)

10.4. Schedule of Miscellaneous Charges

Table 145: Schedule of Miscellaneous Charges for FY 2020-21

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 50/-
• Three Phase LT	INR 100/-
HT Services	INR 1000/-
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 Equipments	
Single Phase	INR 100/-
Three Phase	INR 300/-
Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	INR 500/-
Three Phase Tri-vector Meter (0.5 Class) 11 kV HT Consumer	INR 500/-
Three Phase Tri-vector Meter (0.2 Class) 66 KV EHT Consumers	INR 1000/-
Combined CT/PT Unit for 11 KV Consumer	INR 500/-
66 KV CT/ PT Unit	INR 500/-
Three Phase CT Block	INR 300/-
CT Coil	INR 100/-
Service Connection Charges	
Single Phase LT	INR250/-
Three Phase LT	INR1,000/-
HT (First 500 KVA)	INR10,000/-
HT (Beyond 500 KVA)	INR1,000/- per 100 KVA or part thereof
Extra Length - Single Phase	INR25/- per meter
Extra Length - Three Phase	INR50/- per meter
Extra length chargeable will be beyond the permissible 30 meters' free length from existing network for new connections for all categories except agriculture. Free length in respect of new agriculture consumer is 300 meters.	

Description	Approved Charges
Entire Cost of setting up HT connection would be borne by the consumer and 15% supervision charges shall be recovered by DNHPDCL on labor component only as per JERC Supply Code 2018.	
Fees (Non-refundable) for submission of Test Report of wiring Completion	
Single Phase Lighting / Domestic	INR 10/- Per Test Report
Three Phase Lighting / Domestic	INR 25/- Per Test Report
Single Phase Lighting / Non Domestic	INR 50/- Per Test Report
Three Phase Lighting / Non Domestic	INR 100/- Per Test Report
Three Phase LT Industries	INR 250/- Per Test Report
Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	INR 50/- Per Test Report
HT Industries upto 500 KVA	INR 1,000/- Per Test Report
HT Industries upto 2500 KVA	INR 5,000/- Per Test Report
HT Industries above 2500 KVA	INR 10,000/- Per Test Report
Registration for Change of Name	
1 Phase Domestic / commercial	
3 Phase Domestic / commercial	200
LT Industries	500
HT Industries	1000
EHV Industries	2000
Shifting of meter	
1 Phase Domestic / commercial	100
3 Phase Domestic / commercial	200
LT Industries	500

Annexures

Annexure I: List of Stakeholders

The following is the list of the participants who have attended the Virtual Public Hearing on January 29, 2021:

Table 146: List of participants in Public Hearing

S. No.	Name of Stakeholder	Designation
1	Mr. Chandrakant M. Parekh	President FIA, Silvassa
2	Mr. Ravi N. Pandey	Vice-President SIMA, Silvassa
3	Dr. R. Shelke	Secretary, DNH Industries Association
4	Mr. P. K. Jadia	Executive Secretary, FIA, Silvassa
5	Adv. R. N. Purohit	Advocate (Consultant)
6	Mr. K. J. Mody	Executive President
7	Mr. H. B. Panchal	Member Representative
8	Mr. Atul R Shah	Rachna Plasticizers