TARIFF ORDER

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

Petition No. 19/2019

For

DNH Power Distribution Corporation Limited

18th May, 2020

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

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
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
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPP	Independent Power Producer
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
LT	Low Tension
MU	Million Units
MOD	Merit Order Dispatch
MYT	Multi Year Tariff
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
REC	Renewable Energy Certificate

Abbreviation	Full Form
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
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory

Before the

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

CORAM

Shri. M. K. Goel, Chairperson

Petition No. 19/2019

In the matter of

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

And in the matter of

DNH Power Distribution Corporation Limited (DNHPDCL)..Petitioner

ORDER

Dated: 18th May, 2020

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 2018-19, Annual Performance Review of FY 2019-20, Aggregate Revenue Requirements (ARR) and Retail Tariff for FY 2020-21 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC").

2. The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 12th December, 2019. The Commission thereafter requisitioned further information/ clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/comments were invited from the Public/Stakeholders. A Public Hearing was also held at Silvassa on 21st January, 2020 and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard.

3. Ministry of Home Affairs (MHA), Govt. of India has imposed nationwide lockdown with certain exceptions in the entire country from 24th March, 2020 onwards to contain COVID-19 (Corona Virus Disease 2019). The Commission acknowledges that the prevailing situation due to outbreak of COVID-19 has led to complete shutdown of a number of commercial, industrial and Institutional establishments. COVID-19 outbreak has posed an unprecedented and unconceivable situation which is causing wide spread concern and economic hardship for communities, businesses and consumers across the country. The delay in issuance of this Order is due to the above uncontrollable factor, i.e., nationwide lockdown with effect from March 24, 2020 due to the pandemic COVID 19.

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

5. The Commission, vide its Order dated April 10, 2020 in SUO MOTU PETITION NO. JERC/LEGAL/SMP/27/2020 issued certain Directions to mitigate the hardship of Electricity consumers and DISCOMS/EDs in view of nationwide lockdown due to COVID-19. The Commission, in the said Order, ruled that the additional expenses that are likely to be incurred by the Distribution Licensees on

compliance with the directions issued in the said Order, will be taken into account while evaluating the APR of FY 2020-21.

6. The Commission is issuing this Order considering the "Business as Usual" scenario on the basis of the Petition submitted by the DNH Power Distribution Corporation Limited after detailed analysis of submissions made by the Petitioner for FY 2020-21 and without factoring the impact of lockdown. The Commission will duly consider the impact of lockdown on sales and ARR of the Petitioner for FY 2020-21 at the time of evaluating APR of FY 2020-21 and thereafter True-up of FY 2020-21.
7. The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter and after proper due diligence has approved the True-up of FY 2018-19, APR of FY 2019-20 and ARR for FY 2020-21 along with the Retail Tariff for FY 2020-21.
8. 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 2018-19:

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	3,040.21	2,986.23
2	Revenue from Retail Sales at Existing Tariff	3,027.77	2,982.03
3	Total Revenue	3,027.77	2,982.03
4	**Net Gap / (Surplus)**	**12.45**	**4.20**

(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 2019-20:

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

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Annual Revenue Requirement	3,596.00	3,601.97
2	Revenue from sale of power	2,969.37	2,993.57
3	Revenue from Surplus Power Sale	0.03	0.00
4	FPPCA	373.82	340.58
5	Regulatory Surcharge	42.74	42.74
6	Total Revenue	3,385.95	3,376.90
7	**Revenue Gap/(Surplus)**	**210.04**	**225.08**

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

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

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Net Revenue Requirement	3,637.49	3,463.28
2	Revenue from Retail Sales at Approved Tariff	3,172.01	3,589.67
3	Revenue from Surplus Power	-0.07	0.00
4	Total Revenue	3,171.94	3,589.67
5	**Revenue Gap / (Surplus)**	**465.55**	**(126.39)**

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

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

S. No.	Particulars	Formula	FY 2018-19	FY 2019-20	FY 2020-21
A	Opening Gap/ (Surplus)		(96.77)	(100.14)	126.12
B	Add: Gap/ (Surplus)		4.20	225.08	(126.39)
C	Closing Gap/ (Surplus)		(92.57)	124.94	(0.27)
D	Average Gap/ (Surplus)	D=(A+C)/2	(94.67)	12.40	62.93
E	Rate of Interest		8%	9.55%	8.85%
F	Carrying cost	F=D*E	(7.57)	1.18	5.57
G	**Closing Gap/ (Surplus)**	**G=C+F**	**(100.14)**	**126.12**	**5.30**

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

(f) The average increase in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2019-20 vide Order dated May 20, 2019 is 12.74%. However, the effective tariff hike considering the FPPCA paid by the consumers during FY 2019-20, works out to 1.44% only.

(g) The Commission has approved the Average Billing Rate (ABR) for FY 2020-21 as INR 5.37/kWh as against the approved Average Cost of Supply (ACoS) of INR 5.18/kWh.

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

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

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

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

-sd-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 18th May, 2020

(Certified Copy)

(Rakesh Kumar)
Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

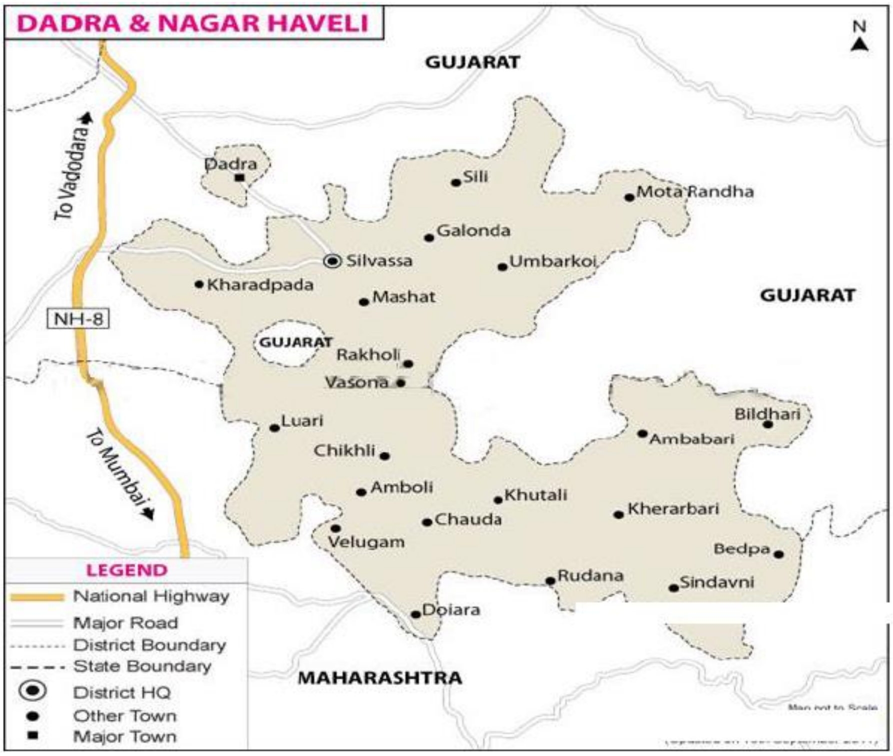
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R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

JERC is 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 816 MW (As of January 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 (other than a Solar plant) and procures power from its allocation from Central Generating Stations i.e. NTPC, NSPC and other IPPs.

Existing Network

The present distribution system of DNHPDCL consists of 280 km of 66 kV D/C lines, 834 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	834
2	66 kV Line (Double Circuit)	Km	280
3	220 kV (Double Circuit)	Km	37
4	Distribution Transformers	Nos.	1,102
5	66 kV Sub Stations	MVA	782

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. Filing and Admission of the Present Petition

The present Petition was admitted on December 12, 2019 and was marked as Petition no. 19/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.9. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were 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, 2019
2	Reply received from Petitioner	December 27, 2019
3	Technical Validation Session with Petitioner at JERC Office	January 7, 2020
4	Issuance of Second Deficiency Note	January 8, 2020
5	Reply received from Petitioner on queries raised during Technical Validation Session (TVS)	January 13, 2020
6	Public Hearing	January 21, 2020
7	Issuance of Third Deficiency Note	February 05, 2020
8	Reply received from the Petitioner	February 07 and 11, 2020
9	Issuance of data related Clarification Note	March 2, 2020
10	Reply Received from Petitioner	March 4. 2020

1.10. 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, 2019	UT Today (Hindi)	Silvassa
2	December 31, 2019	Daman Ganga Times (Gujarati)	Silvassa
3	January 3, 2020	Free Press Journal (English)	Mumbai
4	January 14, 2020	UT Today (Hindi)	Silvassa
5	January 17, 2020	Daman Ganga Times (Gujarati)	Silvassa

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 Public Hearing conducted by the Commission on January 21, 2020 from 10 AM onwards at Hotel Yatri Nivas in Silvassa:

Table 8: Details of Public Notices published by the Commission

S. No.	Date	Name of Newspaper	Place of Circulation
1	December 14, 2019	Indian Express, English	Ahmedabad
2	December 14, 2019	Gujarat Samachar, Gujarati	Surat
3	December 14, 2019	Nishpaksha Jansansar, Hindi	Silvassa
4	December 14, 2019	Navbharat Times, Hindi	Mumbai
5	January 18, 2020	Indian Express, English	Ahmedabad
6	January 18, 2020	Gujarat Samachar, Gujarati	Surat
7	January 18, 2020	Nishpaksha Jansansar, Hindi	Silvassa
8	January 18, 2020	Navbharat Times, Hindi	Mumbai

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

1.11. Public Hearing

The Public Hearing was held on January 21, 2020 from 10 AM onwards at Hotel Yatri Nivas in Silvassa to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The 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.

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

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the Public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments from the Public as per the provisions of the MYT Regulations, 2014 and MYT Regulations, 2018. The Petitioner complied with the direction of the Commission as detailed in Section 1.10 of this Order.

The Public Hearing was held on January 21, 2020 from 10 AM onwards at Hotel Yatri Nivas in Silvassa on Petition for the True-up of FY 2018-19, APR of FY 2019-20 and Aggregate Revenue Requirements (ARR) for FY 2020-21. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general Public, who had not submitted written 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. <u>True up of FY 2018-19</u>

2.2.1.1. Carrying Cost on Power Purchase Cost

Stakeholder's Comment:

In the ARR Petition, table 4, at page no. 18, carrying cost is mentioned as INR 1.24 Crore in power purchase cost. Basis of this carrying cost is not provided in Petition. If the said amount is carrying cost levied by a Generator, this amount needs to be included in the particular generator's power purchase cost in the petition

Petitioner's Response:

The carrying cost pertains to carrying cost levied by the generators on power purchase bills due to revision/true up methodology approved by the CERC. The Petitioner requested the Commission to consider the same under the total power purchase cost for the FY 2018-19.

Commission's View:

The Commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission directs the Petitioner to include the carrying cost, if levied by a particular generator, in its power purchase cost rather than a separate component to avoid any confusion in the future Petitions.

2.2.1.2. Revenue from sale of power for FY 2018-19

Stakeholder's Comment:

In ARR Petition for FY 2020-21, table 16, at page no 28, revenue from sale of power is given as INR 3,027.77 Crore but category wise details of revenue are not available in ARR petition. Many times, stakeholders have mentioned in their response that DNHPDCL should include category wise detail of revenue in their Petition but Petitioner has not complied with the same

Petitioner's Response:

The details of category wise revenue billed during the FY 2018-19 are given in the Audited Financial Statements for the FY 2018-19 and the details have also been separately submitted to the Commission.

Commission's View:

The Commission has examined the annual accounts and various formats attached with petition in accordance with the MYT Regulation 2014 to ascertain the category wise revenue from sale of power. The Commission has noted the concern of the Stakeholders and directs the Petitioner to include category wise revenue details in its future petitions.

2.2.1.3. Interest on Working Capital

Stakeholder's Comment:

In ARR Petition for FY 2020-21, table 9, Interest on working capital of INR 18.03 Crore is arrived on the basis of calculations only but not on actual basis. DNHPDCL need to give month wise/ date wise details for power bill paid to generator and revenue collected. From these details the actual working capital needs to be assessed.

DNHPDCL also needs to develop mechanism for generator bill payment & revenue collection which will show that minimum working capital /is used.

Petitioner's Response:

The Interest on Working Capital has been arrived at by computing the same on a normative basis as per the provisions of the MYT Regulations.

Commission's View:

As per MYT Regulations, 2014, the Petitioner is entitled to interest on working capital on normative basis notwithstanding that the Petitioner has not taken any working capital loan from any outside agency or has exceeded the working capital loan worked out on normative basis. Accordingly, the Commission has allowed normative interest on working capital based on the provisions of the MYT Regulations, 2014.

2.2.1.4. Solar Application Fee in Non-Tariff Income

Stakeholder's Comment:

The Petitioner has not considered the solar application charge in Non-tariff income, which is paid by many consumers in FY 2018-19 and FY 2019-20.

Petitioner's Response:

During FY 2018-19 no solar application fees was collected as the provisions of the Solar Policy itself were made applicable during the FY 2019-20. Further, the DNHPDCL will include the solar application fees in the non-tariff income from FY 2019-20 onwards.

Commission's View:

The Commission has noted the Stakeholder's concern and Petitioner's submission. The commission has examined the annual accounts and has considered the actual non-tariff income while carrying out the truing up for FY 2018-19. The Commission also directs the Petitioner to submit the amount of solar applications fees received as part of Non-Tariff Income in future tariff petitions.

2.2.2. *Annual Performance Review of FY 2019-20*

2.2.2.1. *Energy Requirement*

Stakeholder's Comments

In ARR Petition for FY 2020-21, DNHPDCL missed to consider that power purchase from EMCO is at DNH periphery. Hence, total power purchase is worked out as 6,836.14 MU in place of 6,890.38 MU which needs to be rectified. Energy sale to IEX has also not accounted for in the energy balance.

Petitioner's Response

The energy balance has been prepared based on the power scheduled to the DNHPDCL and the energy received by the Corporation at its boundary.

Commission's View

The Commission has noted the Stakeholder's concern and Petitioner's submission. The Commission has carried out the detailed analysis of Petitioner's submissions while approving the APR for FY 2019-20 as discussed in Chapter 4 of the Order.

2.2.2.2. *Fixed Cost Variation*

Stakeholder's Comments

Variation is observed in fixed charges of power plants as submitted in ARR Petition for FY 2020-21 as compared to that approved in tariff order of FY 2019-20. The table below compares the fixed cost in the approved tariff order and in the petition submitted by the Petitioner.

Table 9: Fixed Cost Comparison by Stakeholder (INR Crore)

S. No.	Generating Station	Fixed cost as per TO (Table 81)	Fixed cost as per RE of ARR of FY 2020-21 (Pg No. 117)	Variation
1	KSTPS	24.39	26.84	2.45
2	KSTPS 3	21.72	16.70	-5.02
3	VSTPP-I	24.64	27.26	2.62
4	VSTPP-II	15.74	15.60	-0.14
5	VSTPP- III	25.15	26.57	1.42
6	VSTPP- IV	49.89	43.81	-6.08
7	KGPP	51.17	50.29	-0.88
8	GGPP	43.87	45.97	2.1
9	Sipat-I	80.40	64.53	-15.87
10	Sipat-II	26.69	28.27	1.58

S. No.	Generating Station	Fixed cost as per TO (Table 81)	Fixed cost as per RE of ARR of FY 2020-21 (Pg No. 117)	Variation
11	Mauda	53.76	43.39	-10.37
12	VSTPS-V	29.60	26.40	-3.2
13	Mauda 2	50.15	55.78	5.63
14	Solapur	52.26	80.30	28.04
15	KHSTPP-II	2.45	2.31	-0.14
	Sub- total NTPC	**551.88**	**554.02**	**2.14**
16	NSPCL, Bhillai	108.55	116.90	8.35
17	EMCO Energy Ltd. (GMR Group)	398.08	432.34	34.26
	Grand Total	**1,058.51**	**1,103.26**	**44.75**
	New Generating Stn			
18	Lara	0.00	19.55	19.55
19	Gadarwara	0.00	43.02	43.02
20	Dhuwaran (Kharagaon)		19.55	19.55
	Grand Total	**0.00**	**82.12**	**82.12**

As can be seen from above table that there is a variation of INR 44.75 Crore in comparison to the cost approved in table 82 of the tariff order of FY 2019-20. Fixed cost variation in middle of year need proper justification. The new stations are added and their fixed cost might be on pro rata period of the year but not for whole year. This also needs to be verified.

Petitioner's Response

The fixed cost for the various generating stations includes the actual fixed cost paid by the generating stations during the first six months of FY 2019-20. Further, the fixed cost for the remaining period has been estimated based on the actual fixed cost paid during the first six months of FY 2019-20. It is also submitted that the actual fixed cost for the FY 2019-20 shall be submitted at the time of true up for the FY 2019-20.

Commission's View

While calculating the power purchase cost for FY 2019-20, the Commission has considered actual 9 Months (April to Dec, 2019) fixed cost and has calculated fixed cost for remaining three months of all power plants based on CERC Orders for Central Generating Stations. The detailed analysis of power purchase cost for FY 2019-20 is discussed in Chapter 4 of this Order.

2.2.2.3. Purchase Cost Optimization by adhering to Merit Order

Stakeholder's Comments

If the power purchase is strictly carried out following the principles of merit order, it will result into reduction in power purchase cost to the extent of INR 57.89 Crore.

Petitioner's Response

The Corporation has considered Merit Order Principles while determining the power purchase cost for the FY 2019-20.

Commission's View

While calculating the power purchase cost for FY 2019-20, the Commission has considered actual 9 Months (April to Dec, 2019) quantum and cost and estimated the power purchase quantum and costs for remaining three months. The detailed analysis of power purchase cost for FY 2019-20 is discussed in Chapter 4 of the Order.

2.2.2.4. Interest on Working Capital Calculation

Stakeholder's Comments

In table 9 of chapter true up in ARR Petition for FY 2020-21, "less power purchase cost one month" is taken in account but in table 29, for computing interest on working capital for FY 2019-20 same has not been considered by DNHPDCL.

Petitioner's Response

The interest on working capital for the Review of FY 2019-20 has been computed based on the provisions of the MYT Regulations, 2018.

Commission's View

The Commission informs the Stakeholders that True up for FY 2018-19 comes under the ambit of the MYT Regulations, 2014 while the Annual Performance Review for FY 2019-20 is governed by MYT Regulations, 2018. The Norms of Interest on working capital were changed in MYT Regulations, 2018 and hence the Interest on Working Capital for FY 2019-20 and FY 2020-21 is computed by the Commission in accordance with the provisions of MYT Regulations, 2018 as discussed in detail in Chapter 4 and 5 of this Order.

2.2.2.5. Non-Tariff Income

Stakeholder's Comments

The Non-tariff income of INR 5.12 Crore for FY 2019-20 in ARR Petition for FY 2020-21 is on a lower side. This year DNHPDCL has collected Solar application fee on 5% of contract demand @ INR 250/- per kW from all HT consumer, which may be more than 1.00 Crore, hence detailing of non-tariff is required. If solar, delay payment charges, supervision charges and other fees are not included in non-tariff income, then DNHPDCL need to show where these fees are accounted.

Petitioner's Response

The Non-tariff income has been estimated based on the provisions of the MYT Regulations, 2018

Commission's View

The Solar Application fees issue has been dealt with in Section 2.2.1.4 of this Order. The Commission has approved the Non-Tariff Income for FY 2019-20 considering the actual Non-Tariff Income for FY 2018-19 and in accordance with the provisions of JERC MYT Regulations, 2018 as discussed in detail in Chapter 4 of this Order.

2.2.3. ARR for FY 2020-21

2.2.3.1. Increase in Tariff for Industrial Consumers

Stakeholder's Comments

1. The industries in DNH are facing a tougher time. They are facing problems such as no market for selling products in DNH, rise in GST, etc., so the only advantage for industries in DNH is lower tariff as compared to other states. If that also increases, then the industries have no other option but to shift from DNH. Around 3 lakh people are employed in these industries. So, in interest of all, the electricity tariff should be maintained at present level, if not reduced. State Government should bear the subsidy and higher voltage consumers should not be burdened by cross subsidies of other lower voltage consumers.

2. The electricity tariff to be reduced to make industries cost competitive.

Petitioner's Response

The Tariff Proposal proposed for the FY 2020-21 has been determined to recover the revenue gap projected at the end of FY 2020-21. As submitted in Petition a considerable hike in the power purchase cost has been witnessed during the FY 2019-20 and the present tariff is not adequate to recover the same. Further, it is the endeavor of the DNHPDCL to provide continuous and reliable power to the consumers of DNHPDCL. The Petitioner requested to approve the cumulative revenue gap submitted by the DNHPDCL at the end of FY 2020-21 and accordingly approve the tariff proposal proposed for the FY 2020-21.

Commission's View

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

2.2.3.2. Deviation from Supply Code

Stakeholder's Comments

With regards to system of supply and classification of consumers, there is difference between the provision of JERC Supply Code, 2018 and the Petition filed by DNHPDCL for determination of tariff for FY 2020-21. Clause 4.3 of the Supply Code, 2018 provides as follows:

"4.3 The supply shall generally be given at the following voltages on the basis of contracted load for the States and Union Territories as per the tables given below:

Table 1: Standard Voltage of Supply

Category	*System of Supply*
Low Tension	
All installations (other than irrigation pumping and agricultural services) with a contracted load up to and including 5 kW	*Single phase at 220 V/ 230 V*
Irrigation pumping and agricultural services and all installations with a contracted load exceeding 5 kW and up to and including 100 kVA of contracted load	*3 Phase, 4 wire at 440 V*
High Tension	
Contracted load exceeding 100 kVA and up to and including 5000 kVA	*6.6 kV/11kV/22kV/33kV*
Extra High Tension	
Contracted load exceeding 5000 kVA	*66 kV and above*

..."

Further, the consumers who are classified under High Tension have maximum contracted load up to & including 5000 kVA shall have system of supply as 6.6 kV/11 kV/ 22 kV/ 33 kV. Whereas, in the proposed ARR Petition for FY 2020-21 it is mentioned that consumers with maximum contracted load up to & including 4000 kVA shall have supply at 11 kV, as shown below:

"Tariff Schedule

General Terms and Conditions:

....

3. Supply to consumers having contracted load between 100 KVA to 4000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 KV and for more than 4000 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."

It is requested to the Commission to direct DNHPDCL to consider consumers with contracted demand upto 5000 kVA as HT consumers in accordance with Supply Code, 2018 and allow them to draw power at 11 kV voltage supply.

Petitioner's Response

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

Commission's View

The Commission has noted the Stakeholder's concern and directs the Petitioner to strictly adhere to provisions of the Supply Code, 2018. The supply of power to consumers with contracted load from 100 KVA to 5000 KVA is to be provided at 6.6 kV/11kV/22kV/33kV and accordingly such consumers are to be considered as HT Consumers rather than Extra HT consumers, as per the provisions of Supply Code, 2018 and as detailed in Section 10.3 of this Order.

2.2.3.3. Energy Balance

Stakeholder's Comments

DNHPDCL in ARR Petition for FY 2020-21 missed to consider that the power purchased from EMCO and IEX Purchase is at DNH periphery. So total power purchase is worked out 7,166.67 MU in place of 7,134.42 MU which needs to be rectified. Energy sale to IEX has also not been considered in energy balance

Petitioner's Response

It is submitted that the energy balance has been prepared based on the power estimated to be scheduled to the DNHPDCL and the energy estimated to be received by the Corporation at its boundary during the FY 2020-21.

Commission's View

The Commission notes the Stakeholders concern and Petitioner's submission. The Commission has carried out the detailed analysis of power purchase as submitted by the Petitioner while approving the ARR for FY 2020-21 as discussed in Chapter 5 of the Order.

2.2.3.4. Power Purchase Cost Optimization by adhering to Merit Order

Stakeholder's Comments

In ARR Petition for FY 2020-21 if the power purchase is strictly carried out following the principles of merit order, it will result into reduction in power purchase cost to the extent of INR 47.16 Crore.

Petitioner's Response

It has considered Merit Order Principles while determining the power purchase cost for the FY 2020-21.

Commission's View

The Commission directs the Petitioner to strictly adhere to the MOD for procurement of power.

2.2.3.5. Interest on Working Capital Calculation

Stakeholder's Comments

In ARR Petition for FY 2020-21, table 9, of chapter true up "Less power purchase cost one month" is taken in account but in table 61, IWC for FY 2020-21 same has not been considered by DNHPDCL.

Petitioner's Response

The interest on working capital for the Review of FY 2020-21 has been computed based on the provisions of the MYT Regulations, 2018.

Commission's View

The Commission informs the Stakeholders that True up for FY 2018-19 is regulated according to the MYT Regulation, 2014 and the Aggregate Revenue Requirement for FY 2020-21 is regulated by MYT Regulations, 2018. The Norms of Interest on working capital were changed in MYT Regulations, 2018.

2.2.3.6. Revenue Gap for FY 2020-21

Stakeholder's Comments

According to ARR Petition for FY 2020-21 DNHPDCL need additional revenue of INR 300 Crore as per the proposed tariff for FY 2020-21. As shown at page no. 142 of the petition, DNHPDCL has collected INR 372.83 Crore towards FPPCA charge & INR 42.74 Crore towards Regulatory surcharge, totaling to INR 415.74 Crore.

Therefore, it is requested to not to raise any tariff for FY 2020-21 and additional revenue requirement of INR 300 Crore from proposed tariff may be collected through FPPCA charges.

Petitioner's Response

The Tariff Proposal for the FY 2020-21 has been determined to recover the revenue gap projected at the end of FY 2020-21. As submitted in the Tariff Petition a considerable hike in the power purchase cost has been witnessed during the FY 2019-20 and the present tariff is not adequate to recover the same. Further, it is the endeavor of the DNHPDCL to provide continuous and reliable power to the consumers of DNHPDCL. The Petitioner requested to approve the cumulative revenue gap submitted by the DNHPDCL at the end of FY 2020-21 and accordingly approve the tariff proposal proposed for the FY 2020-21.

Commission's View

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

2.2.3.7. Determination of Open Access Charges

Stakeholder's Comments

DNHPDCL for computing Additional Charges has taken Fixed Cost component of Power Purchase as INR 1,369.40 Crore, whereas at page no 59 of ARR (Tariff Petition for FY 2020-21) it is shown as INR 909.91 Crore and hence this needs to corrected.

Further as the open access consumers are paying all cost for T & D losses for CTU & STU for their OA power. Hence while calculating Additional Surcharge, Energy purchase needs to be considered instead of Energy Sales.

Petitioner's Response

The Petitioner crave leave to clarify any issues that the Commission may desire.

<u>Commission's View</u>

The Commission has noted the observation. The Commission in its Tariff Order dated May 20, 2019 for DNHPDCL computed the Additional surcharge on the basis of the fixed cost of power purchase fixed cost excluding transmission charges. The Commission has applied the same methodology while calculating Additional Surcharge for FY 2020-21 as discussed in Chapter 7 of this Order.

2.2.4. <u>Other Issues</u>

2.2.4.1. 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 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 tariff levy.

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.

<u>Commission's View</u>

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 submit 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 2018-19

3.1. Background

Under the first MYT control period (FY 2016-17 to FY 2018-19) of the JERC, Order on True up for FY 2014-15, Annual Performance Review (APR) of FY 2015-16 and Aggregate Revenue Requirement for 1st MYT Control Period was issued by the Commission on April 7, 2016. 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. Subsequently, 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 (hereinafter referred to as the "APR Order" for the purpose of true-up of FY 2018-19).

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

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

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

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

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

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

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

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

The Petitioner has submitted the audited accounts for FY 2018-19, audited by statutory auditor M/s S. Singhal & Co. The Commission in this Chapter now carries out the true-up of FY 2018-19, the third year of the first Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2018-19 as 6072.42 MU as against approved energy sales quantum of 6032.00 MU in the APR Order.

Commission's Analysis

Regulation 9.1 of the MYT Regulations, 2014 provides:

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

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

The Commission through a deficiency note asked the Petitioner to submit the Energy audit report for FY 2018-19. The Commission had approved the energy sales of 6032.00 MU in the APR Order, against which actual energy sales of 6072.42 MU has been submitted by the Petitioner now. The quantum of energy sales was verified from the energy audit report and found to be in line with the petitioner submission. 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 quantum of energy sales now trued-up by the Commission:

Table 10: Energy Sales trued-up by the Commission for FY 2018-19 (MU)

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	128.80	128.60	128.60
2	LIG/ Kutir Jyoti	0.00	0.00	0.00
3	Commercial / Non-Domestic	35.16	34.20	34.20
4	LT Industrial (Motive Power)	214.93	216.07	216.07
5	LT Public Water Works	6.46	6.24	6.24
6	HT/EHT	5629.52	5,670.85	5,670.85
7	Agriculture & Poultry	7.44	7.23	7.23
8	Public Lighting	6.11	5.80	5.80
9	Temp. Supply	3.58	3.43	3.43
	Total	**6,032.00**	**6,072.42**	**6,072.42**

The Commission approves Energy Sales of 6,072.42 MU in true-up of FY 2018-19.

3.4. Open Access Sales

Petitioner's Submission

The Petitioner submitted Nil Open Access Sales and Nil Open Access power Purchase for FY 2018-19.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner stipulates Nil Open Access Sales and power purchase for FY 2018-19. Accordingly, the Commission has considered the Nil Open Access Sales and power Purchase as per Energy Audit Report, which is in line with the Petitioner's submission.

The Commission approves Nil Open Access sales and Nil Open Access power Purchase in the true up of FY 2018-19.

3.5. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has submitted the Inter-State transmission loss of 4.24%, as against the approved value of 3.69% in the True Up of FY 2018-19.

Commission's Analysis

The Petitioner submitted Inter State Transmission loss as 4.24% against 3.69% approved in APR order for FY 2018-19. Through deficiency note the Petitioner was directed to submit reasons for such deviation in the transmission losses and also to submit PGCIL weekly losses. The Petitioner informed that the submitted losses are actual losses and agreed to submit PGCIL weekly losses, however, it was not submitted by the Petitioner. As the Petitioner did not submit PGCIL weekly losses, the Commission has computed the Inter-State Transmission losses as difference between power available from tied-up sources and energy scheduled at UT periphery from the tied-up sources. The Commission has determined the energy requirement from tied-up sources in Energy Balance approved in the *Section 3.8* of this Order. The energy available from tied-up source has been considered from the actual energy purchased as approved in *Section 3.6* 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 2018-19 (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State transmission loss	3.69%	4.24%	3.93%

The Commission approves the Inter-State transmission loss of 3.93% for FY 2018-19.

3.6. Intra-State Distribution Loss

Petitioner's Submission

The Petitioner has submitted that it has achieved an Intra-State distribution loss of 3.93% in FY 2018-19 against an approved loss of 4.70%.

Commission's Analysis

Through deficiency note the Commission asked the Petitioner to submit Energy Audit report. As per the Energy Audit Report submitted by the Petitioner, the Intra-State distribution loss is 3.93%. Accordingly, the Commission has considered the Intra-State distribution loss as per the Energy Audit Report. Since, the Petitioner has achieved a lower Intra-State distribution loss than approved for the FY 2018-19, the incentive for the same has to be shared between the Petitioner and the consumers in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in the "*Section 3.21.: Incentive/Disincentive towards over/under achievement of norms of distribution losses*" of this Order.

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

Table 12: Intra-State distribution loss approved by Commission for FY 2018-19 (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State Distribution Loss	4.70%	3.93%	3.93%

The Commission approves Intra-State distribution loss at 3.93% in the true up of FY 2018-19.

3.7. 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 (NTPC-SAIL Power Company Ltd)

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 2,881.22 Crore approved by the Commission in the APR Order, it has incurred a cost of INR 2,984.31 Crore. In the Annual Accounts for FY 2018-19 submitted to the Commission, power purchase cost is reflected as INR 3008.74 Crore.

An amount of INR 1.24 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 2018-19 as the same has already been incurred. The total UI over-drawl submitted by the Petitioner is 238.50 MU at a cost of INR 64.58 Crore.

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

Table 13: Power Purchase cost submitted by the Petitioner for FY 2018-19

S. No	Particulars	Petitioner's Submission					
		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**						
1	KSTPS	351.08	23.49	48.45	-0.17	71.77	2.04
2	KSTPS 3	161.69	20.70	22.44	-0.04	43.10	2.67
3	VSTPP-I	292.24	23.81	47.45	1.71	72.97	2.50
4	VSTPP-II	231.82	15.19	35.60	1.70	52.50	2.26
5	VSTPP- III	254.27	24.28	39.46	1.38	65.13	2.56
6	VSTPP- IV	343.03	48.14	53.59	6.62	108.35	3.16
7	KGPP	297.51	50.17	81.49	0.94	132.60	4.46
8	GGPP	123.87	44.65	31.04	0.09	75.78	6.12
9	Sipat-I	639.65	77.46	84.98	0.81	163.24	2.55
10	Sipat-II	221.48	25.70	30.38	-0.25	55.83	2.52
11	Mauda	213.98	54.83	63.34	4.08	122.25	5.71
12	VSTPS-V	182.80	28.67	28.39	1.01	58.07	3.18
13	Mauda 2	293.93	52.94	84.28	0.89	138.12	4.70
14	Solapur	72.74	52.56	28.36	1.45	82.37	11.32
15	LARA	0.00	0.00	0.00	0.00	0.00	0.00
16	Gadarwara	0.00	0.00	0.00	0.00	0.00	0.00
17	BARH	0.00	0.00	0.00	0.00	0.00	0.00
18	Dhuwaran	0.00	0.00	0.00	0.00	0.00	0.00
19	Kharagaon	0.00	0.00	0.00	0.00	0.00	0.00
20	FSTPS	0.00	0.00	0.00	0.00	0.00	0.00
21	KhSTPS I	0.00	0.00	0.00	0.00	0.00	0.00
22	RSTPS	0.00	0.00	0.00	0.00	0.00	0.00
23	TSTPS	0.00	0.00	0.00	0.00	0.00	0.00
24	KHSTPP-II	21.84	2.31	4.73	-0.00	7.03	3.22

S. No	Particulars	Petitioner's Submission					
		Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kWh)
	Subtotal - NTPC	**3,701.91**	**544.91**	**683.97**	**20.23**	**1249.11**	**3.37**
B	**NSPCL - Bhilai**	615.89	112.56	141.29	**-1.93**	**251.93**	**4.09**
C	**NPCIL**						
1	KAPS	22.63	0.00	5.83	0.00	5.83	2.58
2	TAPS	296.70	0.00	92.44	0.00	92.44	3.12
	Subtotal - NPCIL	**319.32**	**0.00**	**98.28**	**0.00**	**98.28**	**3.08**
D	**Others**						
1	EMCO Energy Ltd. (GMR Group)	1,491.14	454.67	307.36	0.41	762.45	5.11
	Subtotal - Others	1,491.14	454.67	307.36	0.41	762.45	5.11
	Sub-Total (energy purchased from tied-up sources)	**6,128.26**	**1,112.15**	**1,230.90**	18.71	2361.76	3.85
E	**Other Sources**						
1	Indian E. Exchange/Bilateral	294.41	0.00	114.95	0.00	114.85	3.90
2	UI	238.50	0.00	64.58	0.00	64.58	2.71
3	Solar	5.38	0.00	0.00	0.00	0.00	0.00
4	Non Solar	0.00	0.00	0.00	0.00	0.00	
5	Solar REC	0.00	0.00	39.58	0.00	39.58	
6	Non Solar REC	0.00	0.00	1.00	0.00	1.00	
	Subtotal - Other Sources	**538.29**	**0.00**	**220.08**	**0.00**	**220.08**	**4.09**
F	**Total Power Purchase**	**6,666.55**	**1,112.15**	**1450.90**	**18.71**	**2581.76**	**3.87**
G	**Other Charges**						
1	PGCIL CHARGES					344.42	
2	POSOCO					0.75	
3	WRPC					0.00	
4	Reactive charges					0.00	
5	MSTCL					0.11	
6	RPO Provision					0.00	
7	Intra-state transmission charges					42.02	
8	Rebate received					-58.82	
9	NTPC Rebate-February					-1.24	
10	NTPC RRAS Settlement					-4.48	
11	Credit/Debit for URS					-0.04	
12	NSPCL Bhilai Arrears-March					4.07	
13	NSPCL Bhilai RRAS Settlement					-3.05	
14	EMCO Rebate-July					-4.13	
15	Change in Law (GMR)					81.66	
16	Carrying Cost Levied by Generators					1.24	
	Grand Total of Charges after deduction of rebate	**6666.55**	**1112.15**	**1450.90**	**18.71**	**2984.31**	**4.48**

Commission's Analysis

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

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

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

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, NSPCL Bhilai and IPPs. The Petitioner submitted the overall power purchase cost as INR 2,984.37 Crore inclusive of transmission cost but exclusive of 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 source. The cost has been reconciled with the audited annual accounts of FY 2018-19. The amount of INR 1.24 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 9.1 (e) of the MYT Regulations and hence allowed by the Commission.

The Commission has observed that the Petitioner has submitted the cost towards RPO compliance of INR 34.87 Crore in Petition and INR 39.47 Crore in the formats, whereas, as per audited accounts it is INR 60.54 Crore. In reply to data gaps, the Petitioner submitted that INR 34.87 Crore is the cost towards purchase of REC's, while INR 39.47 Crore is the total cost inclusive of GST and INR 60.54 Crore is the provision made available for FY 2018-19. As INR 39.47 Crore is the total cost of RPO inclusive of GST, the Commission has considered the same as part of power purchase cost. The compliance status of RPO has been discussed in detail in the subsequent section.

The Commission observed from the annual accounts that the Petitioner earned revenue of INR 38.91 Crore from sale of 86.34 MUs of surplus power (INR 4.51 /kWh). However, quantum of sale of surplus power through power exchange as per the Energy Audit Report for FY 2018-19 submitted by Petitioner is 44.28 MU. Through a clarification note, the Commission asked the Petitioner to submit the reasons for this difference. The Petitioner did not submit any specific reason for such deviation. The petitioner has not been able to substantiate the discrepancy between the claimed power purchase and the figures stated in the energy audit report thereby failing to corroborate its own claim. This has an adverse inference. Hence, the Commission has considered the figures as per Energy Audit Report. The revenue from sale of power and through Deviation Settlement Mechanism has been reduced from the power purchase cost of the Petitioner.

The Commission observed that the power purchase through IEX submitted by the Petitioner is 294.41 MU, however, as per Energy Audit report, the purchase through exchange is 246.45 MU and sale through IEX is 44.28 MU. Through a clarification note, the Commission asked the Petitioner to submit the reasons for this difference. The Petitioner did not submit any specific reason for such deviation. The petitioner has not been able to substantiate the discrepancy between the claimed power purchase and the figures stated in the energy audit report thereby failing to corroborate its own claim. This has an adverse inference. Therefore, the Commission has considered Power Purchase and sale through IEX as per Energy Audit Report.

The Commission observed that the Power Purchase through UI is 238.50 MU submitted by the Petitioner, whereas the same as per the Energy Audit report is 225.44 MU. Through a clarification note, the Commission asked the Petitioner to submit the reason for this deviation. The Petitioner did not submit any specific reason for such deviation. The petitioner has not been able to substantiate the discrepancy between the claimed power purchase and the figures stated in the energy audit report thereby failing to corroborate its own claim. This has an adverse inference. Therefore, the Commission has considered the Power Purchase through UI as per Energy Audit Report.

The table below provides the summary of the power purchase quantum and the cost approved by the Commission during FY 2018-19:

Table 14: Power Purchase quantum and cost approved by the Commission for FY 2018-19

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	351.08	23.49	48.45	-0.17	71.77	2.04
	KSTPS 3	161.69	20.70	22.44	-0.04	43.10	2.67
	VSTPP-I	292.24	23.81	47.45	1.71	72.97	2.50
	VSTPP-II	231.82	15.19	35.60	1.70	52.50	2.26
	VSTPP- III	254.27	24.28	39.46	1.38	65.13	2.56
	VSTPP- IV	343.03	48.14	53.59	6.62	108.35	3.16
	VSTPP- V	0.00	0.00	0.00	0.00	0.00	0.00
	KAWAS	297.51	50.17	81.49	0.94	132.60	4.46
	JGPP	123.87	44.65	31.04	0.09	75.78	6.12
	Sipat-I	639.65	77.46	84.98	0.81	163.24	2.55
	Sipat-II	221.48	25.70	30.38	-0.25	55.83	2.52
	LARA	0.00	0.00	0.00	0.00	0.00	0.00
	Gadarwara	0.00	0.00	0.00	0.00	0.00	0.00
	Barh	0.00	0.00	0.00	0.00	0.00	0.00
	Dhuwaran	0.00	0.00	0.00	0.00	0.00	0.00
	Kharagaon	0.00	0.00	0.00	0.00	0.00	0.00
	KHSTPP-II	21.84	2.31	4.73	0.00	7.03	3.22
	MSTPL 1	213.98	54.83	63.34	4.08	122.25	5.71
	VSTPS-V	182.80	28.67	28.39	1.01	58.07	3.18
	Mauda 2	293.93	52.94	84.28	0.89	138.12	4.70
	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
	Solapur	72.74	52.56	28.36	1.45	82.37	11.32
	TSTPS	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal – NTPC	**3,701.91**	**544.91**	**683.97**	**20.23**	**1,249.11**	**3.37**
B	**NSPCL – Bhilai**	**615.89**	**112.56**	**141.29**	**-1.93**	**251.93**	**4.09**
C	**NPCIL**	**319.32**	**0.00**	**98.28**	**0.00**	**98.28**	**3.08**
	KAPS	22.63	0.00	5.83	0.00	5.83	2.58
	TAPS	296.70	0.00	92.44	0.00	92.44	3.12
D	EMCO Energy	1,491.14	454.67	307.36	0.41	762.45	5.09
	Total from Tied up sources	**6,128.26**	**1,112.15**	**1,230.90**	**18.71**	**2,361.76**	**3.85**
E	**Other Sources**						
	Indian E. Exchange/Bilateral	246.45	0.00	114.95	0.00	114.95	4.66
	UI	225.44	0.00	64.56	0.00	64.56	2.86
	Solar	5.38	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	39.58	0.00	39.58	0.00
	Solar (SECI)	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
	Non Solar REC	0.00	0.00	1.00	0.00	1.00	0.00

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)
	Subtotal - Other Sources	477.27	0.00	220.08	0.00	220.08	4.61
	Total	**6,605.53**	**1,112.15**	**1,450.98**	**18.71**	**2,581.84**	**3.89**
E	**Availability at ED-DNH Periphery**						
	PGCIL CHARGES	0.00	0.00	0.00	0.00	344.42	-
	POSOCO	0.00	0.00	0.00	0.00	0.75	
	WRPC	0.00	0.00	0.00	0.00	0.00	
	Reactive charges	-	-	-	-	0.00	
	MSTCL	-	-	-	-	0.11	
	Intra-state transmission charges	-	-	-	-	41.96	
	RPO Provison	-	-	-	-	-	
	Rebate received	-	-	-	-	-58.82	
	NTPC Rebate-February	-	-	-	-	-1.24	
	NTPC RRAS Settlement					-4.48	
	Credit/ Debit for URS					-0.04	
	NSPCL Bhilai Arrears-March					4.07	
	NTPC Bhilai RRAS Settlement					-3.05	
	EMCO Rebate July					-4.13	
	Add: Carrying cost levied by generators	-	-	-	-	1.24	
	Change In law-GMR	-	-	-	-	81.66	
	Grand Total of Charges after rebate	6,605.53	1,112.15	1,450.98	18.71	2,984.30	4.48
	Less: Revenue from Sale of Power at exchange	44.28				38.91	
	Less: DSM Receipts					0.01	
F	**Total Power Purchase cost**	**6,605.53**	**1,112.15**	**1,450.98**	**18.71**	**2,945.36**	**4.46**

The Commission approves power purchase cost of 2,945.36 INR Crore (adjusted for sale of surplus power/ DSM Settlement charges) and power purchase quantum of 6,605.53 MU in the true-up of FY 2018-19.

3.8. Renewable Purchase Obligation (RPO)

Petitioner's Submission

For FY 2018-19, the Petitioner purchased 5.38 MUs of electricity from its own Solar Generation plant and purchased 3,48,680 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:

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August, 2016 and revised the RPO targets, according to which the Petitioner had to purchase 9.00% of its total consumption (Solar: 3.60%% and Non-Solar: 5.40%%) from renewable sources for FY 2018-19.

For FY 2018-19, the Petitioner had a standalone RPO target of 546.52 MU quantum of energy comprising of 218.61 MU to be purchased from solar and 327.91 MU to be purchased from Non Solar. Against the target, the Petitioner has produced 5.76 MU of physical solar power. Further, the Petitioner has bought 338.68 MUs of Solar REC and 10 MUs of Non-Solar REC. The Petitioner could not meet the current year targets of Non-Solar RPO obligation and the cumulative shortfall for Solar and Non-solar up to FY 2018-19 now stands at 779.68 MUs.

The RPO target compliance up to FY 2018-19 has been provided in the following table:

Table 15: Summary of Renewable Purchase Obligation (RPO) for FY 2018-19 (MU)

Sr. No.	Particulars	Formulae	FY 2016-17	FY 2017-18	FY2018-19
A	Solar Target		1.65%	2.50%	3.60%
B	Non Solar Target		3.20%	4.20%	5.40%
C	**Total Target**	C=A+B	**4.85%**	**6.70%**	**9.00%**
D	Sales Within UT		3,752.91	5,676.30	6,072.42
	RPO Target				
E	Solar	E=D*A	61.92	141.91	218.61
F	Non Solar	F=D*B	120.09	238.40	327.91
G	**Total RPO Target**	G=E+F	**182.02**	**380.31**	**546.52**
	RPO Compliance (Actual Purchase)				
H	Solar		0.87	5.23	5.76
I	Non Solar		0.00	0.00	0.00
J	**Total RPO Compliance (Actual Purchase)**	J=H+I	**0.87**	**5.23**	**5.76**
	RPO Compliance (REC Certificate Purchase)				
K	Solar		60.00	0.00	338.68
L	Non Solar		150.00	0.00	10.00
M	**Total RPO Compliance (REC Certificate)**	M=K+L	**210.00**	**0.00**	**348.68**
	RPO Compliance (REC+ Actual)				
N	Solar	N=H+K	60.87	5.23	344.44
O	Non Solar	O=I+L	150.00	0.00	10.00
P	**Total RPO Compliance**	P=N+O	**210.87**	**5.23**	**354.44**
	Cumulative Requirement till current year				
Q	Solar		194.13	336.03	554.64
R	Non Solar		737.93	976.33	1,304.24

Sr. No.	Particulars	Formulae	FY 2016-17	FY 2017-18	FY2018-19
S	**Total**	S=Q+R	**932.06**	**1,312.37**	**1,858.89**
	Cumulative Compliance till current year				
T	Solar		121.01	126.25	470.69
U	Non Solar		598.52	598.52	608.52
V	**Total**	V=T+U	**719.53**	**724.77**	**1,079.21**
	Net Shortfall in RPO Compliance till current year				
V	Solar	V=Q-T	73.11	209.79	83.96
W	Non Solar	W=R-U	139.41	377.81	695.72
X	**Total**	X=V+W	**212.52**	**587.60**	**779.68**

The Commission has approved actual cost of INR 39.58 Crore towards compliance of RPO in the true-up of FY 2018-19 which is already considered as part of Power Purchase Cost.

3.9. Energy Balance

Petitioner's Submission

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

Table 16: Energy requirement submitted by the Petitioner for FY 2018-19 (MU)

Particulars	Petitioner's Submission
Sales	6,072.42
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	**6,072.42**
Add: Losses	248.21
T&D Losses	3.93%
Energy Required at Periphery	6320.63
Add: Sales to common pool consumer	0.00
Add: Sales through IEX	86.34
Less: Own Generation	5.38
Less: Energy Purchased through UI at Periphery	238.50
Less: Purchase from Renewable Sources	0.00
Less: Open Access Purchase	0.00
Less: Power Purchased from Power Exchange	294.41
Total Energy Required at Periphery	5,868.67
Transmission loss	259.59
Transmission loss (%)	**4.24%**
Total Energy to be purchased	6,128.26
Total Energy requirement from tied up sources + UI at generator end +renewable sources+ Energy Exchange	6,666.55
Total Energy requirement in UT including Open Access	6,666.55

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 and accordingly the energy balance has been derived for FY 2018-19.

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

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

Sr. No.	Particulars	Formulae	APR Order	Petitioner's Submission	Trued-up by Commission
A	Sales		6,032.00	6,072.42	6,072.42
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**	**6,032.00**	**6,072.42**	**6,072.42**
E	T&D Losses		4.70%	3.93%	3.93%
F	Add: Losses	F=G-D	297.49	248.21	248.21
G	**Energy Required at Periphery**	**G=D/(1-E)**	**6329.49**	**6320.63**	**6,320.63**
H	Add: Sales to common pool consumer		1.28	0.00	0.00
I	Add: Sales through IEX		0.00	86.34	44.28
J	Less: Own Generation		5.23	5.38	5.38
K	Less: Energy Purchased through UI at Periphery		217.02	238.50	225.44
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		178.62	294.41	246.45
O	Total Energy Required at Periphery	O=G+H+I-J-K-L-M-N	5,929.90	5,868.67	5,887.64
P	Transmission loss (%)		3.69%	4.24%	3.93%
Q	Transmission loss	Q=P-O	227.18	259.59	240.62
R	**Total Energy required to be purchased from tied up sources at generator end**	**R=O/(1-Q)**	**6,157.08**	**6,128.26**	**6,128.26**
S	**Total Energy to be purchased from tied up sources at generator end**		**6,157.08**	**6,128.26**	**6,128.26**
T	**Deficit / (Surplus)**	**T=R-S**	**0.00**	**0.00**	**0.00**

3.10. Operation & Maintenance Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

3.10.1. Employee Expenses

Petitioner's Submission

The actual Employee expenses of INR 11.54 Crore have been incurred against approved expenses of INR 13.21 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. Further, the Petitioner has submitted comparison of employee expenses with neighboring states and stated that its employee expenses are competitive and economical.

Commission's Analysis

The Commission had approved employee expenses of INR 12.41 Crore in the APR Order and allowance of INR 0.80 Crore on account of impact of seventh pay Commission, thereby approving a total figure of INR 13.21 Crore. The actual employee expenses for FY 2018-19 as per audited accounts is INR 11.54 Crore.

In accordance with the MYT Regulations, 2014, the O&M expenses are controllable expenses. Hence, the Commission has considered the same Employee Expenses as approved in the APR Order for FY 2018-19. However, the Commission has not considered any impact of 7^{th} pay commission in true up of FY 2018-19, as there was no actual payment on account of the same.

Accordingly, the employee expenses approved for FY 2018-19 is shown in the table below.

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	12.41	11.54	12.41
2	Impact of 7^{th} Pay Commission	0.80		0.00
3	**Total Employee Expenses**	**13.21**	**11.54**	**12.41**

The Commission approves Employee Expenses of INR 12.41 Crore in the true-up of FY 2018-19.

3.10.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has submitted the actual A&G expenses of INR 3.90 Crore against the approved expenses of INR 5.84 Crore in the APR Order.

Commission's Analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. As per the audited accounts submitted by the Petitioner, the A&G expenses for FY 2018-19 are reflected as INR 3.39 Crore, while INR 0.51 Crore, which the Petitioner has claimed as part of A&G expense is actually the provision for Bad and doubtful debt. In accordance with the MYT Regulations, 2014, variation in O&M expenses are controllable. Therefore, the Commission has approved the same A&G expenses as approved in the APR Order. Further, bad and doubtful debt being a separate expenses item as per the MYT Regulations 2014, 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 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	5.84	3.90	5.84

The Commission approves the Administrative & General (A&G) expenses of INR 5.84 Crore in the true-up of FY 2018-19.

3.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

Actual R&M expenses of INR 17.48 Crore have been incurred against approved expenses of INR 9.82 Crore in the APR Order. The Petitioner submitted that the R&M expenses have increase substantially as the DNHPDCL has started the operation and maintenance of lines, cables and transformers on the planned and systematic way by making time schedule of maintenance and this has contributed in the reduction of T&D loses by 77 basis points as compared to the approved T&D losses (the approved T&D loss was 4.70% and the actual T&D losses are 3.93%). In terms of rupees the resultant saving comes to INR 22.86 Crore (i.e. 51.59 MUs @ INR 4.40/unit). Further, the Petitioner has also taken all measures to maintain the assets required to supply quality power to the consumers including safety measures. As the said maintenance approach is resulting in reduction in T&D losses, hence, the increase in R&M expenses may be allowed as pass through in the ARR for the FY 2018-19.

Commission's Analysis

As the O&M expenses are controllable expenses as per MYT Regulations, 2014, similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same R&M Expenses as approved in the APR Order. The Commission would like to emphasize that under the normative regime, the Utility may gain on certain heads if the actual expenses are lower as compared to normative expenses and may loose on certain heads if the actual expenses are higher as compared to normative expenses. In this case, the actual employee and A&G expenses are lower than normative, however, the actual R&M expenses are higher as compared to normative expenses. The Commission in accordance with the MYT Regulations, 2014 has approved the normative R&M expenses. Further, as regards to Petitioner's submission regarding benefits achieved in terms of reduction in T&D losses, the Commission as discussed earlier has allowed an incentive for the same in accordance with the MYT Regulations, 2014.

The R&M Expenses approved by the Commission are show below:

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	9.82	17.48	9.82

The Commission approves the Repair & Maintenance (R&M) expenses of INR 9.82 Crore in the true-up of FY 2018-19.

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

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

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	13.21	11.54	12.41
2	Administrative & General Expenses (A&G)	5.84	3.90	5.84
3	Repair & Maintenance Expenses	9.82	17.48	9.82
	Total Operation & Maintenance Expenses	**28.87**	**32.92**	**28.07**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 28.07 Crore in the true-up of FY 2018-19.

3.11. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has achieved capitalization of INR 19.40 Crore during the year against Nil capitalization approved in the APR Order. The capital expenditure during the same period was INR 104.85 Crore against approved expenditure of INR 60.00 Crore.

Commission's Analysis:

The Commission observes that the Petitioner has capitalized INR 19.40 Crore when capitalization approved by the Commission in the APR Order was Nil. The Capitalization claimed by the Petitioner was not matching with Annual accounts and hence Commission asked for reconciliation of the same, which was provided by the Petitioner. The asset addition was verified from the audited annual accounts as well as the Fixed Asset Register for FY 2018-19 submitted by the Petitioner.

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

Table 22: Capitalization approved by Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	60.00	104.85	104.85
2	Capitalization	0.00	19.40	19.40

The Commission approves capital expenditure and capitalization of INR 104.85 and INR 19.40 Crore, respectively, in the true-up of FY 2018-19.

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 2018-19.

Commission's Analysis

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

"

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

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

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

In accordance with the MYT Regulations, 2014 the Commission has determined the Capital Structure for FY 2018-19. The closing GFA approved in FY 2017-18 has been considered as the opening GFA for FY 2018-19. The opening debt for FY 2018-19 has been considered as closing debt approved in true-up of FY 2017-18.

The petitioner has submitted the equity opening balance of INR 129.89 Crore in the True Up of FY 2018-19 instead of approved Closing equity balance for FY 2017-18 which is INR 94.26. Crore. The Commission is considering the opening equity for FY 2018-19 as per the closing balance of true-up of FY 2017-18.

The addition in debt and equity has been normatively considered as 70% and 30% of the capitalization during the year in accordance with the MYT Regulations, 2014. Accordingly, the Commission approves the capital structure for FY 2018-19 as shown in the tables as follows:

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalization	0.00	19.40	19.40
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	**Normative Loan**	**0.00**	**13.58**	**13.58**
5	**Normative Equity**	**0.00**	**5.82**	**5.82**

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	432.95	432.96	432.96
2	Addition During FY	0.00	19.40	19.40
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	**Closing Gross Fixed Assets**	**432.95**	**452.36**	**452.36**

Table 25: Normative Loan addition for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	35.10	35.10	35.10
2	Add: Normative Loan During the year	0.00	13.58	13.58
3	Less: Normative Repayment equivalent to Depreciation	22.64	14.73	22.57
4	**Closing Normative Loan**	**12.46**	**33.95**	**26.11**

Table 26: Normative Equity addition for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	94.26	129.89	94.26

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
2	Additions on account of new capitalization	0.00	5.82	5.82
3	**Closing Equity**	**94.26**	**135.71**	**100.08**

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 2018-19 has been considered at INR 432.96 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 Distribution Tariff) Regulations, 2014.

Commission's Analysis

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

"

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

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

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

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

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

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

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

Table 27: Depreciation Rate (%)

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

Based on the above deprecation rates specified in the CERC Tariff Regulations, 2014 and the actual asset addition during the year, the weighted average deprecation rate is 5.10% against a rate of 5.23% 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 3.11* 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 2018-19:

Table 28: Depreciation approved by Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed	432.95	432.96	432.96
2	Addition During FY	0.00	19.40	19.40
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	432.95	452.36	452.36
5	Average Gross Fixed Assets	432.95	442.66	442.66
6	Rate of Depreciation (%)	5.23%	3.33%	5.10%
7	**Depreciation**	**22.64**	**14.73**	**22.57**

The Commission approves depreciation of INR 22.57 Crore in the true-up of FY 2018-19.

3.14. Interest on Loan

Petitioner's submission

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

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

<u>Commission's Analysis</u>

Regulation 24 of the MYT Regulations provides as follows:

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete 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 PLR as on April 1, 2018 (13.45%).

Further, in accordance with the MYT Regulations 2014, 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 3.11* of this Order. The repayment has been considered equal to depreciation allowed for FY 2018-19.

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 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	35.10	35.10	35.10
2	Add: Normative Loan During the year	0.00	13.58	13.58
3	Less: Normative Repayment = Depreciation	22.64	14.73	22.57
4	Closing Normative Loan	12.46	33.95	26.11
5	Average Normative Loan	23.78	34.53	30.60
6	Rate of Interest (%)	13.45%	13.45%	13.45%
	Interest on Loan	**3.20**	**4.64**	**4.12**

The Commission approves the Interest of Loan of INR 4.12 Crore in the true-up of FY 2018-19.

3.15. Return on Equity (RoE)

Petitioner's submission

As per clause 27 of MYT regulation 2014, the return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower. The actual equity as on 31.03.2018 is INR 516.73 Crores as per the Annual Audited Accounts of the FY 2018-19. Whereas, the 30 percent of the capital base is INR 129.89 crore (i.e. 30% of opening GFA). Accordingly, the 30% of the capital base being lower has been considered as opening equity. The equity addition has been considered to the tune of 30% of assets capitalized during the year. Accordingly, the Petitioner has computed the Return on Equity at 16% on post-tax basis.

Commission's Analysis

Regulation 27 of the MYT Regulations, 2014 provides:

"

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

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

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

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

As the complete asset capitalization during the year has been funded by equity, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalization. The trued up closing equity of FY 2017-18 has been taken as opening equity of FY 2018-19. The RoE has been calculated on the average of the opening and the closing values of equity as approved in *Section 3.11* of this Order. The rate of return on equity has been considered as 16% on post-tax basis.

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 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	94.26	129.89	94.26
2	Additions on account of new capitalization	0.00	5.82	5.82
3	Closing Equity	94.26	135.71	100.08
4	Average Equity	94.26	132.80	97.17
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**15.08**	**21.25**	**15.55**

The Commission approves a Return on Equity of INR 15.55 Crore in the true-up of FY 2018-19.

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

Petitioner's Submission

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

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 allow the utility to claim ROE on 30% of the capital base or the actual equity whichever is lower. However, in the true up petition of FY 2016-17 and FY 2017-18 the Commission has allowed ROE on the basis of paid up equity share capital whereas the Regulation specifically provides that ROE should be allowed on the basis of equity and not on the basis of paid up equity capital. In this regard it is also worth mentioning 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 INR 5.70 Crore and INR 5.71 Crore respectively as additional ROE 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 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 die 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 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 and FY 2017-18, 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 2.70 Crore were released to the consumers towards interest on security deposits during FY 2018-19 against INR 2.45 Crore which was approved by the Commission in the APR Order.

Commission's Analysis

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

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

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 2018-19 for truing-up.

Table 31: Interest on security deposit approved by Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Interest on Security Deposit	2.45	2.70	2.70

The Commission approves Interest on Security Deposit of INR 2.70 Crore in the true-up of FY 2018-19.

3.18. Interest on Working Capital

Petitioner's Submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC (Multi Year Distribution Tariff) Regulations, 2014.

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

(a) Receivables of two months of billing
(b) Less power purchase cost of one month
(c) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit
(d) Inventory for two months based on annual requirement for previous year

The interest on working capital is computed at 8.70% as has been shown in the table below:

Table 32: Interest on Working Capital submitted by Petitioner for FY 2018-19 (INR Crore)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	504.63
2	Less: Power Purchase Cost for one month	245.79
3	Inventory Based on Annual Requirement for Previous FY for 2 months	1.51
4	Total Working Capital Requirement	260.35
5	Less: Security Deposit excluding BG/FDR	53.08
6	Net Working Capital	207.27
7	Rate of Interest (%)	8.70%
	Interest on Working Capital	**18.03**

Commission's Analysis

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

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

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

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

The Commission for determination of working capital requirements of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate and revenue from sale of surplus power, the consumer security deposit and the inventory for two months as per the audited accounts of FY 2018-19. The interest rate has been considered as 8.70%, the SBI Base Rate as on April 1, 2018.

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 2018-19 (INR Crore)

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	488.15	504.63	497.00
2	Less: Power Purchase Cost for one month	240.10	245.79	245.45
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.94	1.51	1.51
4	Total Working Capital Requirement	248.99	260.35	253.07
5	Less: Security Deposit excluding BG/FDR	39.19	53.08	53.08
6	Net Working Capital	209.80	207.27	199.99
7	Rate of Interest (%)	8.70%	8.70%	8.70%
	Interest on Working Capital	**18.25**	**18.03**	**17.40**

The Commission approves the Interest on Working Capital of INR 17.40 Crore in the true-up of FY 2018-19.

3.19. Income Tax

Petitioner's submission

The Petitioner submitted Income tax liability for FY 2018-19 as Nil.

Commission's Analysis:

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

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

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

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

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

Table 34: Income Tax approved by Commission for FY 2018-19 (INR Crore)

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

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

3.20. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not claimed any amount towards provision for bad and doubtful debts.

Commission's Analysis

As per Regulation 29 of the MYT Regulations, 2014:

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

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 2018-19.

3.21. Non-Tariff Income (NTI)

Petitioner's Submission

The Petitioner has submitted the actual Non-Tariff Income of INR 49.78 Crore for FY 2018-19.

Commission's Analysis

In accordance with the Regulations, the Commission has verified the submission of the Petitioner and observed that the Petitioner has included revenue from several heads of non-tariff like Reactive energy charges, service connection charges, and supervision charges etc. under the head of revenue from sale of power. Accordingly, the Commission has considered the income on account of all such heads while considering the Non-Tariff Income and deducted from Revenue. The NTI approved in the APR Order, Petitioner's submission and now trued-up by the Commission is shown in the following table:

Table 35: Non-Tariff Income Approved by Commission for FY 2018-19 (INR Crore)

S. No.	Particulars	Petitioner's Submission	Trued-up by Commission
1	Delayed Payment Charges	19.75	19.75
2	Reactive Charges Receivables		0.03
3	Capacitor Charges		0.00
4	Interest on FD and Others	22.68	22.68
5	Meter Testing Charges		0.10
6	Other Charges (Indirect)		0.00
7	Reconnection Charges		0.02
8	Registration Fees		0.79
9	Service Connection Charges		0.35
10	Supervision Charges		3.64
11	Tender Fees	0.03	0.03
12	Penalty Charges		0.00
13	STOA Application Receivables		1.83

S. No.	Particulars	Petitioner's Submission	Trued-up by Commission
14	Recovery of doubtful debt		0.00
15	Others	5.08	5.08
16	Provision for written back	1.13	1.13
17	Sale of scrap	1.11	1.11
18	Test report charges		0.07
	Gross Total	**49.78**	**56.60**

The Commission approves Non-Tariff Income of INR 56.60 Crore in the true-up of FY 2018-19.

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

Petitioner's Submission:

No submission has been made in this regard.

Commission's Analysis

In the APR for FY 2018-19, the Commission had approved the T&D loss level of 4.70%. The Commission in this Order has approved T&D loss of 3.93% against the approved loss level of 4.70% for FY 2018-19. The Commission, in accordance with Regulation 10 of the JERC MYT Regulations, 2014 (reproduced below) has determined the incentive towards the over-achievement of the target of Intra-State distribution loss for FY 2018-19 as follows:

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

Mechanism for pass through of gains or losses:

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

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

The incentive has been considered at INR 4.60/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner at the State Periphery derived by dividing the Power Purchase cost approved in the true-up and the energy at the State/UT Periphery computed after grossing up the retail energy sales (6072.42 MU) with the actual Intra-State T&D Loss (3.93%). The assessment of incentive for lower T&D losses is shown in the following table:

Table 36: Incentive due to over-achievement of Distribution Loss target for FY 2018-19 (INR Crore)

S. No	Particulars	As per approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	6072.42	6072.42
2	T&D Loss (%)	4.70%	3.93%
3	Power at State/UT Periphery	6371.90	6320.63
4	Gain/ (Loss) (MU)		51.26
5	Average Power Purchase Cost (INR/kWh)		4.60
6	Gain/ (Loss) (INR Crore)		23.56
7	**Sharing of Gain / (Loss) with Petitioner (INR Crore)**		**7.07**

The Commission approves INR 7.07 Crore as incentive for over-achieving the Intra-State distribution loss target for FY 2018-19.

3.23. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner has submitted the net Aggregate Revenue Requirement of INR 3040.19 Crore for approval in the True-up of FY 2018-19.

Commission's Analysis

The Commission on the basis of the detailed analysis of the cost parameters of the Aggregate Revenue Requirement approves the net revenue requirement in the true-up of FY 2018-19 as given in the following table:

Table 37: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	Reference Table
1	Power Purchase Cost	2,881.22	2,984.37	2,945.36	*Table 14*
2	RPO Cost Incurred	0.00			
3	Operation & Maintenance Expenses	28.87	32.92	28.07	*Table 21*
4	Depreciation	22.66	14.73	22.57	*Table 28*
5	Interest and Finance charges	3.20	4.64	4.12	*Table 29*
6	Return on Equity	15.08	21.25	15.55	*Table 30*
7	Additional ROE	0.00	11.41	0.00	
8	Interest on Security Deposit	2.45	2.70	2.70	*Table 31*
9	Interest on Working Capital	18.25	18.03	17.40	*Table 33*
10	Income Tax	0.00	0.00	0.00	*Table 34*
11	Provision for Bad Debt	0.00	0.00	0.00	
12	Incentive/ (Disincentive)on achievement of norms	0.00	0.00	7.07	*Table 36*
13	**Total Revenue Requirement**	**2,971.73**	**3,090.00**	**3,042.83**	
14	Less: Non-Tariff Income	42.85	49.78	56.60	*Table 35*
15	**Net Revenue Requirement**	**2,928.88**	**3,040.21**	**2,986.23**	

The Commission approves net Aggregate Revenue Requirement of INR 2,986.23 Crore in the true-up of FY 2018-19.

3.24. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for FY 2018-19 is INR 3,027.77 Crore as against INR 2,879.69.17 Crore approved by the Commission in the APR Order. The detailed reconciled statement of revenue from the sale of power at existing tariff with reference to the final actual figures of income & expenditure as per the audited accounts of FY 2018-19 has also been submitted.

Commission's Analysis

The Petitioner submitted INR 3,027.77 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.

The Petitioner has included non-tariff income like sale of power through power exchange, deviation settlement mechanism receipts, reactive energy income, STOA application fees, Supervision charges, meter testing charges, reconnection charges and name change, registration fees, test report charges and service connection charges in revenue from sale of power. Accordingly, the Commission dealt the same under the Non-Tariff Income.

The revenue from sale of power through exchanges and deviation settlement mechanism has been reduced from the power purchase cost for FY 2018-19.

The Revenue from sale of power as provided in the annual accounts is INR 2,983.09 Crore, out of which INR 1.07 Crore was provided as rebate to consumers. Hence, the net revenue from sale of power is INR 2,982.03 Crore.

The Commission approves the revenue from sale of power as INR 2,982.03 Crore (excluding revenue from sale of surplus power and certain non-tariff income components) in the true-up of FY 2018-19.

3.25. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 12.45 Crore is arrived in the true-up of FY 2018-19.

Commission's Analysis

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

Table 38: Standalone Revenue Gap/ (Surplus) for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission	Reference Table
1	Net Revenue Requirement	2,928.88	3,040.21	2,986.23	*Table 37*
2	Revenue from Retail Sales at Existing Tariff	2,977.60	3,027.77	2,982.03	
3	Revenue from Open Access Charges	0.00	0.00	0.00	
4	Total Revenue	2,977.60	3,027.77	2,982.03	
5	**Net Standalone Gap / (Surplus)**	**(48.72)**	**12.45**	**4.20**	

The Commission, in the true-up of FY 2018-19 approves a standalone gap of INR 4.20 Crore. This standalone gap has been carried over in the subsequent years and has been dealt with while determining the tariff for FY 2020-21.

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

4.1. Background

The Tariff Order for approval of true-up of FY 2017-18, Annual Performance Review of FY 2018-19 and Aggregate Revenue Requirements (ARR) for 2nd Control Period (FY 2019-20 to FY 2021-22) and determination of tariff for FY 2019-20 was issued by the Commission on May 20, 2019 (hereinafter referred to as 'ARR Order' for the purpose of APR of FY 2019-20). This Chapter covers the Annual Performance Review (APR) for FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the ARR Order. The Annual Performance Review for FY 2019-20 is to be carried out as per the following provisions of Regulation 11 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2018:

"

11.1 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 2019-20

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M expenses, interest on long term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for FY 2019-20 has been done based on actual Power Purchase Quantum and Cost of the first 9 months of FY 2019-20, actual Energy Sales for the first 9 months, etc., 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, the MYT Regulations, 2018 and on the basis of the norms approved in the ARR Order dated May 20, 2019.

4.3. Energy Sales

Petitioner's Submission

The sales for FY 2019-20 have been estimated based on actual power sold by the Corporation during the first six months of FY 2019-20. Total sales of 6402.60 MU have been estimated against the 6296.88 MU as approved by the Commission in the ARR Order for FY 2019-20.

Commission's Analysis

The Commission through the deficiency note asked the Petitioner to submit the category-wise actual sales for first 9 months of FY 2019-20 i.e., from April 2019 to December 2019 in both kWh and kVAh. The Commission has noted the audited figures for FY 2018-19 and provisional information provided by the Petitioner for the first 9 months of FY 2019-20. For all the categories, the Commission has estimated the proportion of actual energy sales till the month of December over total energy sales during the last financial year. Using this proportion of sales, the Commission has extrapolated the actual energy sales till the month of December for the full year to determine the annual energy sales for FY 2019-20.
The table below provides the energy sales approved by the Commission in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 39: Energy Sales (MU) approved by the Commission for FY 2019-20

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	136.04	153.11	140.11
2	Commercial/Non Domestic	35.40	38.38	37.00
3	Agriculture	7.32	5.58	6.62
4	LT Industry	215.89	221.66	224.93
5	Public Lighting	8.51	3.40	3.09
6	Public water works	7.72	5.15	5.04
7	HT/EHT Industry	5,882.61	5,971.71	6,001.23
8	Temp. Supply	3.39	3.59	2.73
	Gross Total	**6,296.88**	**6,402.60**	**6,420.75**

The Commission approves energy sales of 6,420.75 MU in the APR of FY 2019-20.

4.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.66%.

Commission's Analysis

The Commission in the APR of FY 2019-20 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.

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

Table 40: Inter-State Transmission Loss (%) for FY 2019-20

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 2019-20.

4.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted distribution losses of 3.90% for FY 2019-20 as against 4.30% 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 table below provides the Intra-State distribution loss approved in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 41: Intra-State distribution loss (%) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	4.30%	3.90%	4.30%

The Commission approves Intra-State distribution loss of 4.30% in the APR of FY 2019-20.

4.6. Power Purchase Quantum & Cost

4.6.1. 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 2019-20 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited (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 2019-20, the Petitioner has considered data for actual power purchase during the first six months. For projection of remaining six months of power purchase for FY 2019-20, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification no. WRPC/Comml-I/6/Alloc/2019/11859 dated: 26/09/2019 of Western Regional Power Committee as shown in the following table:

Table 42: Energy allocation as considered by the Petitioner (MW) for FY 2019-20

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	53.64	0.00	53.64
KSTPS -3	16.62	2.20	18.82
VSTPP-I	38.41	5.00	43.41
VSTPP-II	29.07	4.00	33.07
VSTPP- III	29.07	6.00	35.07
VSTPP- IV	33.25	5.55	38.80
KAWAS	56.23	25.00	81.23
GGPP	56.73	2.00	58.73
Sipat – I	65.83	9.00	74.83
Sipat – II	27.68	4.00	31.68
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	37.59	5.55	43.14
VSTPP-V	16.62	5.55	22.17
Mauda II	43.89	8.60	52.49
Solapur	43.89	21.57	65.46
Gadarwara	26.60	10.42	37.02
NPCIL – KAPS	11.86	2.00	13.86
NPCIL - TAPP 3&4	38.65	7.00	45.65
Total	629.13	123.44	752.57
NSPCL Bhilai		100.00	100.00
EMCO Energy Ltd. (GMR Group)		200.00	200.00

Additionally, DNHPDCL has considered allocation of 30 MW from Khargone generation stations for the period October 2019 to March 2020.

Commission's Analysis:

The data pertaining to power purchase quantum for the period from October to December 2019 was sought from the Petitioner. The Commission considered the data for first nine months of FY 2019-20 submitted by the Petitioner and estimated the power purchase quantum for the remaining months of the year considering data and the firm and infirm allocation from various generating stations. The source wise methodology followed for estimation of quantum 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 2019-20. From Jan to March 2020, power purchase quantum for 14 of the total 18 NTPC plants has been estimated based on 3 years average of quantum of energy purchased from the respective station during these months (FY 2016-17, FY 2017-18 and FY 2018-19).
- For Mauda 2 plant, power purchase quantum for Jan-Mar 2020 has been estimated based on 2 years average of quantum of energy purchased during these months.

- For Solapur, maximum power purchase quantum in the past nine months (upto December) has been taken for each of the remaining months, since there has been wide variation of power purchase from Solapur plants in last 2 years.
- For Lara power plant, there has been no power purchase in last six months since it's a new plant. The actual power purchase is observed in third quarter of FY 2019-20 i.e., October to December 2019. For Jan to March 2020, the average monthly power purchase during October to December 2019 has been considered.
- The Gadarwara Plant is also a new plant. The power purchase from this plant in first nine months has been 13.99 MUs. Hence, for this power plant, the Commission has considered the Petitioner's estimation of power purchase for entire year.
- The COD of Khargone power plant was declared on January 31, 2020. Hence, the power procurement has been considered for two months, i.e., February and March 2020.

Availability of energy from NSPCL Bhilai station:

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

Availability from NPCIL stations:

- DNH receives supply from two NPCIL stations - Tarapur and Kakrapara atomic plants. The power purchase quantum for first 9 months has been based on actuals. The purchase quantum for remaining 3 months has been projected based on average power procured during these months in last three years.

Availability from EMCO stations:

- The Commission has considered actual data for first 9 months and from Jan to March 2020 has projected purchase estimates based on 2 years average of quantum of energy purchased during these months.

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

- The Open market purchase for April'19 to December'19 has been considered as per actuals. For the remaining months the quantum for purchase has been considered to meet the total approved energy requirement.

Quantum under UI Overdrawl/ Underdrawl for April'19 to December'19 has been considered as per actuals. No quantum under UI has been considered for the remaining months of FY 2019-20.

4.6.2. Power Purchase Cost

Petitioner's submission:

Based on the actual power purchase cost of the first six months of FY 2019-20 and the remaining six months' projection, the revised estimated power purchase cost for FY 2019-20 as submitted by the Petitioner is presented in the following table:

Table 43: Power Purchase Quantum (MU) and Cost (INR Crore) submitted by Petitioner for FY 2019-20

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	All Charges Total	Per Unit Cost
NTPC Stations							
KSTPS	392.49	26.84	57.03	0.00	0.10	83.96	2.14
KSTPS 3	127.11	16.70	17.87	0.00	(0.09)	34.48	2.71

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	All Charges Total	Per Unit Cost
VSTPP-I	311.90	27.26	56.78	0.00	1.29	85.32	2.74
VSTPP-II	221.53	15.60	38.37	0.00	0.94	54.91	2.48
VSTPP- III	265.00	26.57	47.25	0.00	0.94	74.76	2.82
VSTPP- IV	278.59	43.81	47.79	0.00	1.47	93.07	3.34
KGPP	234.60	50.29	66.23	0.00	0.63	117.16	4.99
GGPP	48.29	45.97	14.09	0.00	0.67	60.73	12.57
Sipat-I	512.77	64.53	74.66	0.00	2.15	141.34	2.76
Sipat-II	232.69	28.27	35.36	0.00	0.39	64.02	2.75
Mauda	191.76	43.39	60.87	0.00	1.96	106.23	5.54
VSTPS-V	166.59	26.40	30.30	0.00	0.58	57.29	3.44
Mauda 2	240.51	55.78	76.38	0.00	8.20	140.36	5.84
Solapur	184.50	80.30	64.03	0.00	0.13	144.46	7.83
LARA	100.25	19.55	24.36	0.00	0.00	43.91	4.38
Gadarwara	137.00	43.02	50.24	0.00	0.33	93.60	6.83
Khargone	100.25	19.55	24.36	0.00	0.00	43.91	4.38
KHSTPP-II	21.34	2.31	4.53	0.00	(0.09)	6.75	3.16
Subtotal - NTPC	**3767.16**	**636.14**	**790.51**	**0.00**	**19.61**	**1446.21**	**3.84**
NSPCL - Bhilai	**632.22**	**116.90**	**219.62**	**0.00**	**-1.02**	**335.50**	**5.31**
NPCIL							
KAPS	83.59	0.00	20.87	0.00	0.00	20.87	2.50
TAPS	313.73	0.00	93.93	0.00	0.00	93.93	2.99
Subtotal	**397.32**	**0.00**	**114.80**	**0.00**	**0.00**	**114.80**	**2.89**
Others							
EMCO Energy Ltd. (GMR Group)	1427.67	432.34	332.11	0.00	(0.00)	764.45	5.35
Subtotal	**1427.67**	**432.34**	**332.11**	**0.00**	**0.00**	**764.45**	**5.35**
Power purchase from Other Sources							
Indian E. Exchange/Bilateral	603.54	0.00	201.93	0.00	0.00	201.93	3.35
UI	13.31	0.00	7.38	0.00	0.00	7.38	5.54
Solar	5.38	0.00	0.00	0.00	0.00	0.00	0.00
Non Solar	43.80	0.00	11.34	0.00	0.00	11.34	2.59
Solar REC	0.00	0.00	59.11	0.00	0.00	59.11	0.00
Non Solar REC	0.00	0.00	39.16	0.00	0.00	39.16	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

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	All Charges Total	Per Unit Cost
Subtotal	**666.02**	**0.00**	**318.91**	**0.00**	**0.00**	**318.91**	**4.79**
Rebate							
Total Power Purchase	**6890.40**	**1185.38**	**1775.95**	**0.00**	**18.59**	**2979.87**	**4.32**
External Losses							
Availability at ED-DNH Periphery	**6890.40**	**1185.38**	**1775.95**	**0.00**	**18.59**	**2979.87**	**4.32**
PGCIL CHARGES						394.95	
POSOCO						0.50	
WRPC						0.00	
Reactive charges						0.00	
MSTCL						0.00	
Intra-state transmission charges						42.66	
Grand Total of Charges	**6890.40**	**1185.38**	**1775.95**	**0.00**	**18.59**	**3417.98**	**4.96**
GMR - Change in Law						50.02	
Grand Total of All Charges	**6890.40**	**1185.38**	**1775.95**	**0.00**	**18.59**	**3468.00**	**5.03**

Commission's Analysis:

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

Variable Charges:

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

Fixed Charges:

- Actual Fixed Costs have been considered for the first nine months for all stations.
- The fixed costs for the remaining months have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations.
- 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 2020.

Other Charges:

- Actual charges have been considered for the first 9 months of FY 2019-20. No other charges have been considered for the remaining months of FY 2019-20.
- The Commission through the deficiency notes directed the Petitioner to provide with supporting documents and a write up regarding change in law claim of GMR amounting to INR 50.02 Crore. The Petitioner provided the same and the impact of change in law claim has been considered as claimed by the Petitioner at this stage, which shall be subject to true-up based on actuals.

4.6.3. Transmission Charges

Petitioner's submission:

PGCIL charges have increased substantially and the Corporation has received bills amounting to INR 183.70 Crore during the first six months of FY 2019-20 and it is increasing by more than 10% in each subsequently quarter. Accordingly, the DNHPDCL has projected the POC charges for the FY 2019-20 at INR 394.95 Crore.

Commission's Analysis:

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

4.6.4. Total power purchase quantum and cost approved by Commission

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

Table 44: Power Purchase Quantum (MU) and cost (INR Crore) approved by the Commission for FY 2019-20

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	383.82	25.55	56.12	0.13	81.80	2.13
2	KSTPS 3	145.75	18.42	20.68	-0.17	38.93	2.67
3	VSTPP-I	287.34	25.23	52.39	1.85	79.48	2.77
4	VSTPP-II	232.08	16.15	40.21	1.34	57.70	2.49
5	VSTPP- III	271.53	25.82	48.09	1.29	75.20	2.77
6	VSTPP- IV	312.34	42.87	53.83	1.54	98.25	3.15
7	KGPP	198.86	50.37	55.19	0.21	105.77	5.32
8	GGPP	65.79	45.07	19.55	0.08	64.70	9.83
9	Sipat-I	571.05	68.94	87.06	1.96	157.96	2.77
10	Sipat-II	218.04	27.63	33.51	0.35	61.48	2.82
11	Mauda	202.70	56.72	64.34	3.30	124.36	6.14
12	VSTPS-V	176.58	25.87	32.03	0.72	58.62	3.32
13	Mauda 2	240.88	52.38	76.53	9.19	138.10	5.73
14	Solapur	89.17	61.41	31.23	-0.50	92.14	10.33
15	LARA	86.42	25.15	21.93	0.36	47.43	5.49
16	Gadarwara	137.00	31.15	50.03	-0.01	81.18	5.93
17	BARH	0.00	0.00	0.00	0.00	0.00	
18	Dhuwaran	0.00	0.00	0.00	0.00	0.00	
19	Kharagaon	33.42	6.52	8.12	0.00	14.64	4.38
20	FSTPS	0.00	0.00	0.00	0.00	0.00	
21	KhSTPS I	0.00	0.00	0.00	0.00	0.00	
22	RSTPS	0.00	0.00	0.00	0.00	0.00	

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)
23	TSTPS	0.00	0.00	0.00	0.00	0.00	
24	KHSTPP-II	21.77	4.02	4.63	-0.15	8.50	3.91
25	**Subtotal – NTPC**	**3,674.54**	**609.26**	**755.46**	**21.52**	**1,386.24**	**3.77**
B	**NSPCL - Bhilai**	**468.32**	**116.66**	**161.50**	**-1.57**	**276.59**	**5.91**
C	NPCIL						
	KAPS	72.50	0.00	17.92	0.00	17.92	2.47
1	TAPS	314.44	0.00	94.78	0.00	94.78	3.01
2	**Subtotal**	**386.94**	**0.00**	**112.70**	**0.00**	**112.70**	**2.91**
	Others						
D	RGPPL	0.00	0.00	0.00	0.00	0.00	0.00
E	EMCO Energy Ltd. (GMR Group)	1522.25	460.98	357.07	0.35	818.41	5.38
	Subtotal	1,522.26	460.98	357.07	0.35	818.41	5.38
	Total	**6,052.0.5**	**1,186.90**	**1,386.72**	**20.30**	**2,593.93**	**4.29**
F	**Other Sources**						
1	Energy Exchange/ Bilateral	860.44	0.00	280.02	0.00	280.02	3.25
2	UI	13.31	0.00	7.38	0.00	7.38	5.54
3	Solar*	4.93	0.00	0.00	0.00	0.00	0
4	Non Solar	0.00	0.00	0.00	0.00	0.00	0
5	Solar REC	0.00	0.00	29.72	0.00	29.72	0
6	Non Solar REC	0.00	0.00	113.47	0.00	113.47	0
7	Open Market Purchase Sale	0.00	0.00	0.00	0.00	0.00	0.00
	Subtotal - Other Sources	878.67	0.00	430.58	0.00	430.58	4.90
	Total	**6,930.72**	**1,186.90**	**1,817.31**	**20.30**	**3,024.51**	**4.36**
G							
	PGCIL CHARGES					377.49	
1	POSOCO					1.00	
2	WRPC					0.00	
3	Reactive charges					0.00	
4	MSTCL					0.00	
5	Intra-state transmission charges					42.66	
H	**Grand Total of Charges**		**0.00**	**0.00**	**0.00**	**421.15**	
I	Other Charges (GMR Change in Law)					50.02	
J	**Grand Total of Charges**	**6,930.72**	**1,186.90**	**1,817.31**	**20.30**	**3,495.69**	**5.04**

* The details and cost for RPO is provided in Section 4.7

The Commission approves the revised quantum of power purchase as 6,930.72 MU at the generator periphery with total cost of INR 3,495.69 Crore in the APR for FY 2019-20.

4.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

As per the revised sales projections, the Petitioner has estimated requirement of 300.93 MUs of solar energy and 435.4 MUs of non-solar energy during FY 2019-20 to fulfill the RPO targets. The DNHPDCL plans to procure 43.80 MUs of Non-Solar power and generate 5.38 MUs of solar power through its own Solar generation plant. The Petitioner has considered the cost of the Non-Solar power purchase in the Overall Power Purchase cost submitted. 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:

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on August 22, 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 11.50% of its total consumption through conventional sources (Solar: 4.70% and non-solar: 6.80%) from renewable sources for FY 2019-20. This translates to requirement of procurement of 301.78 MU of solar energy and 436.61 MUs of non-solar energy in FY 2019-20.

The Commission asked the Petitioner to submit the details of actual RECs purchased from April 2020 to February 2020. In reply, the Petitioner submitted that it has purchased 109.60 MU of Solar RECs and 561.69 MUs of Non-Solar RECs at cost of INR 29.72 Crore and INR 113.47 Crore, respectively. The Commission has considered the same towards meeting the RPO compliance for FY 2019-20.

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

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

Table 45: Summary of Renewable Purchase Obligation (RPO) (MU) for FY 2019-20

Sr. No.	Particulars	Formulae	FY 2019-20
A	Solar Target		4.70%
B	Non-Solar Target		6.80%
C	**Total RPO Target**	**C=A+B**	**11.50%**
D	**Sales Within UT**		**6,420.75**

Sr. No.	Particulars	Formulae	FY 2019-20
E	**RPO Obligation for the year**	**E=F+G**	**738.39**
F	Solar	F=D*A	301.78
G	Non-Solar	G=D*B	436.61
H	**Physical RE Purchase (till Jan 2020)**	**H=I+J**	**4.93**
I	Solar		4.93
J	Non-Solar		0
K	**REC Purchase (till Feb 20)**	**K=L+M**	**671.29**
L	Solar		109.6
M	Non-Solar		561.69
N	**Total RPO Compliance for FY 2019-20 (REC+ Physical RE)**	**N=O+P**	**676.22**
O	Solar	O=I+L	114.53
P	Non-Solar	P=J+M	561.69
Q	**Stand alone shortfall for FY 2019-20**		**187.25**
R	- Solar	R=F-O	187.25
S	- Non-Solar	S=G-P	(125.08)
T	**Backlog upto FY 2018-19**	**T=U+V**	**779.68**
U	- Solar		83.96
V	- Non-Solar		695.72
W	**Total Shortfall in RPO Compliance for FY 2019-20**	**W=X+Y**	**841.85**
X	Solar	X=R+U	271.20
Y	Non-Solar	Y=S+V	570.64

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

Table 46: Cost towards compliance of Renewable Purchase Obligation (INR Crore) for FY 2019-20

S. No	Description	RPO (MU)	Total Cost (INR Crore)	Avg. Rate (INR/kWh)
1	**Solar**			
(a)	*Generation*	4.93	0.00	-
(b)	*Renewable Energy Certificates*	109.60	29.72	2.71
2	**Non-solar**			
(a)	*Generation/Procurement*	0.00	0.00	-
(b)	*Renewable Energy Certificates*	561.69	113.47	2.02
	Total	**676.22**	**143.19**	**2.12**

The Commission approves INR 143.19 Crore towards compliance of RPO in the APR of FY 2019-20 and the same has been considered in the total power purchase cost approved for FY 2019-20.

4.8. Energy Balance

Petitioner's submission

The energy requirement as submitted by the Petitioner for FY 2019-20 has been shown in the following table:

Table 47: Energy Balance as submitted by the Petitioner (MU) for FY 2019-20

Particulars	FY 2019-20
Sales	6,402.60
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	**6,402.60**
Add: Losses	259.83
T&D Losses (%)	**3.90%**
Energy Required at Periphery	**6,662.43**
Add: Sales to common pool consumer	0.15
Add: Sales through IEX	0.00
Less: Own Generation	5.38
Total energy requirement at state periphery	6,657.21
Less: Energy Purchased through UI at Periphery	13.31
Less: Purchase from Renewable Sources	43.80
Less: Open Access Purchase	0.00
Less; Power from Power Exchange	603.54
Total Energy Required at Periphery	**5,996.56**
Transmission loss	227.81
Transmission loss (%)	3.66%
Total Energy to be purchased	**6,224.37**
Total Energy requirement from tied up sources & UI at generator end	6,890.40
Total Energy requirement in UT including Open Access	6,890.40

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 Intra-State distribution losses approved for FY 2019-20, as shown below:

Table 48: Energy Balance as approved by the Commission (MU) for FY 2019-20

Sr. No.	Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
A	Energy sales within the State/UT		6,296.88	6,402.60	6,420.75
B	Open Access Sales		0.00	0.00	0.00

Sr. No.	Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
C	Less: Energy Savings		0.00	0.00	0.00
D	**Total Sales within the State/UT**	**D=A+B+C**	**6,296.88**	**6,402.60**	**6,420.75**
	Distribution losses				
E	in %		4.30%	3.90%	4.30%
F	In MU	F=G-D	282.93	259.83	288.50
G	**Energy required at State Periphery**	**G=D/(1-E)**	**6,579.81**	**6,662.43**	**6,709.25**
	Energy Transactions at Periphery				
H	Add: Sales to common pool consumer		0.00	0.15	0.00
I	Add: Sales through IEX		0.00	0.00	0.00
J	Less: Own Generation		5.23	5.38	4.93
K	Less: Energy Purchased through UI at Periphery		0.00	13.31	13.31
L	Less: Purchase from Renewable sources		175.20	43.80	0.00
M	Less: Open Access Purchase		0.00	0.00	0.00
N	Less: Purchase from Power Exchanges		0.00	603.54	860.44
O	**Total energy requirement at State Periphery from tied-up Sources**	**O=G+H+I-J-K-L-M-N**	**6,399.38**	**5,996.56**	**5,830.57**
	Transmission losses				
P	in %		3.66%	3.66%	3.66%
Q	in MU	**Q=R-O**	243.12	227.81	221.51
R	**Total requirement from tied-up sources at generator end (MU)**	**R=O/ (1-P)**	**6,642.50**	**6,224.37**	**6,052.07**
S	**Total availability from tied up sources at generator end (MU)**	**S**	**6,822.93**	**6,890.40**	**6,052.05**
T	**Deficit/(surplus)**	**T=R-S**			**0.02**

The Commission approves the Total Energy Requirement at the generator end (including own generation) as 6,052.07 MU in the APR for FY 2019-20.

4.9. Operation & Maintenance Expenses

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

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

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

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

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

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

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

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

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

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

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

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

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

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."

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted revised estimate for employee expenses of INR 14.51 Crore for FY 2019-20 same as approved by the Commission in the ARR Order of FY 2019-20.

Commission's Analysis

In accordance with the MYT Regulations, 2018, the Commission has determined the Employee expenses for FY 2019-20. 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."

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

Table 49:Average CPI Inflation Rate (%)

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

The Commission in its ARR Order dated May 20, 2019, considered the growth in number of employees as 11.91% for FY 2019-20. As per the details submitted by the Petitioner in the Petition, the estimated growth in number of employees for FY 2019-20 is -0.8%. Hence, the Commission has considered the revised growth in employee expenses for FY 2019-20 while projecting the employee expenses for FY 2019-20. The following table provides Employee expenses approved by the Commission for FY 2019-20:

Table 50: Employee Expenses approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	14.51	14.51	12.83

The Commission approves employee expenses of INR 12.83 Crore in the APR of FY 2019-20.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted revised estimate of INR 6.96 Crore towards A&G expenses same as approved by the Commission in the Tariff Order of FY 2019-20.

Commission's Analysis

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

Table 51: A&G Expenses approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	A&G Expense for previous year	6.14	-	5.84
2	CPI Inflation for preceding three years (CPI)	4.28%	-	4.22%
3	Administration & General Expenses (A&G)	6.96	6.96	6.09

The Commission now approves the Administrative & General (A&G) expenses of INR 6.09 Crore in the APR for FY 2019-20.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted revised estimate of INR 13.02 Crore towards R&M expenses against INR 8.81 Crore approved by the Commission in the ARR Order of FY 2019-20.

Commission's Analysis

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

Table 52: K-Factor Computation for MYT Period

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	9.82	10.76	9.82
2	Opening GFA	393.48	419.31	432.95
3	K Factor	2.50%	2.57%	2.27%
	K Factor Approved by the Commission (Average of 3 years)	**2.44%**		

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

The WPI Inflation has been computed as follows:

Table 53: Computation of WPI Inflation (%)

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

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

Table 54: R&M approved by the Commission for FY 2019-20

S. No	Particulars	FY 2019-20
1	Opening GFA (GFA_{n-1}) of previous year	452.36
2	K factor approved (K)	2.44%
3	WPI Inflation	2.99%
	R&M Expenses = (K x (GFA_{n-1}) x ($1+WPI_{inflation}$)	**11.38**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 11.38 Crore in the APR of FY 2019-20.

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

The following table provides the O&M expenses approved by the Commission in the ARR Order, Petitioner's submission and O&M expenses now approved by the Commission:

Table 55: O&M Expenses approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	14.51	14.51	12.83

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
2	Administrative & General Expenses (A&G)	6.96	6.96	6.09
3	Repair & Maintenance Expenses	8.81	13.02	11.38
	Total Operation & Maintenance Expenses	**30.28**	**34.49**	**30.30**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 30.30 Crore in the APR of FY 2019-20.

4.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has considered the capital expenditure at the same level as approved by the Commission for FY 2019-20 in its ARR Order dated May 20, 2019. Further, DNHPDCL has estimated an amount of INR 5.70 Crore to be capitalized during the FY 2019-20.

Commission's Analysis

The Petitioner has proposed the same capital expenditure and capitalization as approved by the Commission in its ARR Order dated May 20, 2019. Accordingly, the Commission at this stage has considered the same as shown in Table below and the same shall be trued up based on actuals:

Table 56: Capitalization approved by the Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	128.20	128.20	128.20
2	Capitalization	5.70	5.70	5.70

The Commission approves capital expenditure of INR 128.20 Crore and Capitalization of INR 5.70 Crore in the APR for FY 2019-20.

4.11. Capital Structure

Petitioner's Submission

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

Commission's Analysis

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

Accordingly, the Commission approves the capital structure for FY 2019-20 as shown in the tables below:

Table 57: Funding Plan approved by the Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalization	5.70	5.70	5.70
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	**Normative Loan**	**3.99**	**3.99**	**3.99**
5	**Equity**	**1.71**	**1.71**	**1.71**

Table 58: GFA addition approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	432.95	452.36	452.36
2	Addition During FY	5.7	5.7	5.70

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
3	Adjustment/Retirement During FY			0
4	**Closing Gross Fixed Assets**	**438.65**	**458.06**	**458.06**

Table 59: Normative Loan addition (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	12.44	33.94	26.11
2	Add: Normative Loan During the year	3.99	3.99	3.99
3	Less: Normative Repayment equivalent to Depreciation	16.87	17.83	15.76
4	**Closing Normative Loan**	**0.00**	**20.11**	**14.34**

Table 60: Normative Equity addition (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	94.26	135.71	100.08
2	Additions on account of new capitalization	1.71	1.71	1.71
3	**Closing Equity**	**95.97**	**137.42**	**101.79**

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of FY 2018-19 is taken as the opening GFA for FY 2019-20 and subsequently the proposed capitalization during FY 2019-20 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 deprecation 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 2019-20:

Table 61: Depreciation approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	432.95	452.36	452.36
2	Addition During FY	5.7	5.7	5.70
3	Adjustment/Retirement During FY			0
4	Closing Gross Fixed Assets	438.65	458.06	458.06
5	Average Gross Fixed Assets	435.8	455.21	455.21
6	Effective Rate of Depreciation (%)	3.87%	3.92%	3.46%
	Depreciation	**16.87**	**17.83**	**15.76**

The Commission now approves depreciation of INR 15.76 Crore in the APR for FY 2019-20.

4.13. Interest on Loan

Petitioner's submission

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

The repayment of loans has been considered equivalent to the depreciation during FY 2019-20. Further the rate of interest has been considered as 9.55%. (SBI MCLR @ 8.55% plus 100 basis points)

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 PLR as on April 1, 2019 plus 100 basis points (9.55%) as rate of interest, in accordance with the MYT Regulations, 2018. The following table provides the Interest on Loan approved by the Commission:

Table 62: Interest on Loan approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	12.44	33.94	26.11
2	Add: Normative Loan During the year	3.99	3.99	3.99
3	Less: Normative Repayment = Depreciation	16.87	17.83	15.76
4	Closing Normative Loan	0.00	20.11	14.34
5	Average Normative Loan	6.22	27.03	20.22
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	**0.59**	**2.58**	**1.93**

The Commission approves Interest on Loan of INR 1.93 Crore in the APR of FY 2019-20.

4.14. Return on Equity (RoE)

Petitioner's Submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, and 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:

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."

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 the year at the rate of 16% on post-tax basis for Retail Supply Business and 15.50% on post-tax basis for wires business, with the opening equity considered equivalent to the closing equity of FY 2018-19 approved in the True-up. The following table provides the Return on Equity approved in ARR order, Petitioner's submission and approved for the FY 2019-20 by the Commission.

Table 63: Return on Equity approved by Commission for FY 2019-20

S. No	Particulars	Approved in ARR order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	94.26	135.71	100.08
2	Additions on account of new capitalization	1.71	1.71	1.71
3	Closing Equity	95.97	137.42	101.79
4	Average Equity	95.12	136.56	100.94
5	Equity for wire business (90%)	85.61	122.91	90.84
6	Equity for Retail Supply Business (10%)	9.51	13.66	10.09
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	13.27	19.05	14.08
10	Return on Equity for Retail Supply Business	1.52	2.19	1.61
11	**Return on Equity**	**14.79**	**21.24**	**15.70**

The Commission approves the Return on Equity of INR 15.70 Crore in the APR of FY 2019-20.

4.15. Interest on Security Deposits

Petitioner's Submission

The Petitioner has submitted INR 2.70 Crore as revised estimates for interest on consumer security against INR 2.45 Crore approved by the Commission in the ARR Order.

Commission's Analysis:

The Commission approves the petitioner claim for Interest on security deposit. This amount will be trued up based on actuals. The table below provides approved consumer security deposits for the year FY 2019-20:

Table 64: Interest on Security Deposits approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Interest on Security Deposit	2.45	2.70	2.70

The Commission approves Interest on Security Deposit as INR 2.70 Crore in the APR of FY 2019-20.

4.16. Interest on Working Capital

Petitioner's submission

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

The working capital requirement for FY 2019-20 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 65:Interest on Working Capital submitted by Petitioner for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission
1	O&M expense for one month	2.52	2.87
2	Maintenance spares at 40% of R&M for one month	0.29	0.43
3	Receivables for 2 months	517.64	564.33
4	**Total**	**520.45**	**567.63**
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	53.08
6	Net Working Capital required after deduction of Security Deposit	481.26	514.55
7	**Interest on Working Capital**	**48.85**	**54.29**

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:

"31.3 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 2019-20. The interest on working capital is considered as SBI MCLR rate (1- year) as on April 1, 2019 plus 200 basis points (8.55%+2% = 10.55%).

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	O&M expense for one month	2.52	2.87	2.52
2	Maintenance spares at 40% of R&M for one month	0.29	0.43	0.38
3	Receivables for 2 months	517.64	564.33	562.82
4	Total	520.45	567.63	565.72
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	53.08	53.08
6	Net Working Capital required after deduction of Security Deposit	481.26	514.55	512.64

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
7	Interest (%)	10.55%	10.55%	10.55%
8	**Interest on Working Capital**	**48.85**	**54.29**	**54.08**

The Commission approves the Interest on Working Capital as INR 54.08 Crore in the APR of FY 2019-20.

4.17. Income Tax

Petitioner's submission

The Petitioner has not made any provision towards Income tax for FY 2019-20.

Commission's Analysis:

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

Table 67: Income tax approved by Commission (INR Crore) for FY 2019-20

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

The Commission approves Nil income tax liability in the APR of FY 2019-20.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's Analysis

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

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for FY 2019-20 has been estimated by considering elements like sale of scrap, reactive income, STOA application fees, supervision charges etc. However, one-time income like provision written back, interest earned on equity or RoE and Delayed Payment Surcharge 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 5.12 Crore has been submitted for FY 2019-20.

Commission's Analysis:

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

"64. Non-Tariff Income

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

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

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

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

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

(h) Income from advertisements, etc.;

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

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

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

(n) Miscellaneous receipts;

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

(p) Prior period income, etc.:

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

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

The 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."

The Regulation 64.2 of the MYT Regulations, 2018 stipulates the following:

"...

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:

"

The Commission agrees with the Petitioner that as per MYT Regulations, 2018, delayed Payment Surcharge and Interest on investments is not to be considered as Non-Tariff Income. Hence, for the APR of FY 2019-20, the Commission has considered the approved Non-Tariff Income for FY 2018-19 excluding Delayed Payment Surcharge and interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee which shall not be included in Non-Tariff Income. The same shall be considered at actuals at the time of truing up.

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

Table 68: Non-Tariff Income approved by Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Non-Tariff Income	44.99	5.12	14.17

The Commission now approves Non-Tariff Income of INR 14.17 Crore in the APR for FY 2019-20.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net Aggregate Revenue Requirement of INR 3596.00 Crore is submitted after adjusting the Non -Tariff Income for FY 2019-20.

Commission's Analysis

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

Table 69: Aggregate Revenue Requirement approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission	Reference Table
1	Power Purchase Cost	3,037.02	3,468.00	3,495.69	*Table 44*
2	Operation & Maintenance Expenses	30.28	34.49	30.30	*Table 55*
3	Depreciation	16.87	17.83	15.76	*Table 61*
4	Interest and Finance charges	0.59	2.58	1.93	*Table 62*
5	Interest on Working Capital	48.85	54.29	54.08	*Table 66*
6	Interest on Security Deposit	2.45	2.7	2.70	*Table 64*
7	Return on Equity	14.79	21.24	15.70	*Table 63*
8	Income Tax	0	0	0	*Table 67*
9	**Total Revenue Requirement**	**3,150.85**	**3,601.11**	**3,616.15**	
10	Less: Non-Tariff Income	44.99	5.12	14.17	*Table 68*
11	**Net Revenue Requirement**	**3,105.86**	**3,596.00**	**3,601.97**	

The Commission approves the net ARR of INR 3,601.97 Crore in the APR of FY 2019-20.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted total revenue of INR 3,385.95 Crore, which includes INR 2,969.37 Crore from sale of power at existing tariff, INR 373.82 Crore from FPPCA for the whole year and INR 42.74 Crore from Regulatory Surcharge. The revenue from sale of surplus power is INR 0.03 Crore.

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 September 2019 of FY 2019-20, which was 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 2019-20. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab.

The Commission while scrutinizing the revenue computation submitted by the Petitioner, observed some issues. Accordingly, the Petitioner through a clarification note was asked to submit the clarification on some issues which were submitted by the Petitioner as follows:

- Clarification for projecting the revenue from fixed/ demand charges in LT Industry category considering a factor of 75%. In reply, the Petitioner requested the Commission to use factor of 100% instead of 75%. Accordingly, the Commission has considered the appropriate factor.

- Reason for not considering a unit conversion factor in computation of fixed/ demand charges for categories LT Industry and LT Water Works since the Tariff approved by the Commission is in INR/HP/Month in both of these categories and the connected load approved by the Commission in MYT order was in KW. The Petitioner in its reply informed that the Connected load may be considered in HP and appropriate conversion factor should be used. Hence, the Commission has used Conversion factor (1.34) to convert connected load from KW to HP to compute the Fixed/ demand charges for these two categories.

- Basis for considering billing demand factor of 88.52%, 86.00% and 85.00% for 11kV, 66kV and 220kV respectively in revenue computation of demand charges for HT/EHT category. The petitioner in its reply submitted that the billing demand factor for HT/EHT category is based on the actual average billing demand. Hence, the Commission has considered the actual average billing demand for computing the demand charges for HT/EHT category.

The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2019-20 has been shown in the following table:

Table 70: Revenue at existing tariff computed by Commission for FY 2019-20

S. No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**DOMESTIC**	**0.30**	**30.80**	**31.28**	**2.23**
(i)	0-50 units	0.06	3.62	3.68	1.30
(ii)	51-200 units	0.14	9.81	9.95	1.99
(iii)	201-400 units	0.06	6.02	6.08	2.49
(iv)	401 and above	0.04	11.35	11.38	3.05
(v)	**Low Income Group**	**0.18**	**-**	**0.18**	
2	**COMMERCIAL/Non-Domestic**	**0.10**	**13.56**	**13.66**	**3.69**

S. No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
(i)	0-100 units	0.05	1.68	1.73	2.84
(ii)	101 Units and Above	0.05	11.88	11.93	3.86
3	**LT INDUSTRIAL**				
(i)	**LTP Motive Power (For All Units)**	**9.63**	**90.88**	**100.51**	**4.47**
	Up to 20 HP	0.05	2.32	2.37	3.99
	Above 20 HP	9.58	88.56	98.14	4.48
(ii)	**LT Public Water Works (For all units)**	**0.29**	**2.14**	**2.43**	**4.82**
	Up to 20 HP	0.01	1.74	1.75	4.25
	Above 20 HP	0.29	0.39	0.68	7.33
4	**HT/EHT**	**565.77**	**2276.30**	**2842.07**	**4.74**
(i)	11 kV	262.59	998.92	1261.51	4.84
(iii)	66 kV	158.10	625.90	784.00	4.68
(iv)	220 kV	565.77	2276.30	2842.07	4.74
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.52**	**0.52**	**0.79**
(i)	For sanctioned load upto 10 HP	0.00	0.32	0.32	0.70
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	0.00	0.20	0.20	1.00
6	**PUBLIC LIGHTING**	**0.00**	**1.15**	**1.15**	**3.72**
(i)	For all units		1.15	1.15	3.72
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	
(i)	For all units		0.00	0.00	
8	**TEMPRORARY***	**0.00**	**1.95**	**1.95**	**7.14**
	Total	**576.27**	**2417.30**	**2,993.57**	**4.66**

**Tariff is 1.5 Times the ABR of Revenue at existing tariff for FY 2019-20*

The Commission has determined revenue from sale of power at existing tariff as INR 2,993.57 Crore in the APR of FY 2019-20.

4.22. FPPCA Computation

Petitioner's submission

The Petitioner has submitted INR 373.92 Crore as revised estimates for FPPCA against Nil approved by the Commission in the ARR Order.

<u>Commission's Analysis</u>

The Commission has computed the revenue from FPPCA for FY 2019-20 considering FPPCA rate approved by the Commission for first three quarters of FY 2019-20 billed in second, third and fourth quarter of FY 2019-20 respectively, the actual quarterly sales for the corresponding quarters and the K factor approved in the MYT Order. The Commission has not considered FPPCA for the fourth quarter of the FY 2019-20 to be billed in FY

2020-21, as the Commission has worked out the gap upon provisional truing up for FY 2019-20 and carried forward this gap to FY 2020-21.

FPPCA rates approved by the Commission for FY 2019-20 are as given in following table:

Table 71: FPPCA Rates approved by Commission for FY 2019-20

S. No	Sales (FY 2019-20)	FPPCA Rates (INR/kWh)
1	Quarter 1 (April to June 2019)	0.45
2	Quarter 2 (July to September 2019)	0.66
3	Quarter 3 (October to November 2019)	0.99

The FPPCA Computation is provided in the table shown below:

Table 72: Computation of Revenue from FPPCA for FY 2019-20

Particulars	Sales for Q1 (MUs)	Sales for Q2 (MUs)	Sales for Q3 (MUs)	Sales for Q4 (MUs)	k-Factor	Total Revenue from FPPCA (INR Crore)
Domestic	41.15	35.40	33.90	29.66	0.49	3.32
Commercial	10.00	9.19	9.25	8.56	0.79	1.48
LT Industrial (Motive Power)	53.20	58.21	56.06	57.46	0.91	10.93
LT Public Water Works	1.33	1.24	1.20	1.27	0.93	0.24
HT/EHT	1459.92	1525.93	1486.43	1528.95	1.02	324.50
Agriculture & Poultry	1.62	1.17	1.08	2.74	0.16	-
Public Lighting	0.94	0.76	0.70	0.69	0.81	0.12
Temp. Supply	0.97	0.83	0.93	0.00		0.00
Total	**1,569.13**	**1,632.75**	**1,589.54**	**1,629.33**		**340.58**

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

Table 73: Revenue from FPPCA allowed by the Commission (INR Crore) for FY 2019-20

S. No	Particulars	Petitioner's Submission	Now Approved by Commission
1	FPPCA	373.82	340.58

The Commission has determined revenue from FPPCA as INR 340.58 Crore in the APR of FY 2019-20.

4.23. Regulatory Surcharge

Petitioner's submission

The Petitioner has submitted INR 42.74 Crore as revised estimates for Regulatory Surcharge against Nil approved by the Commission in the ARR Order.

Commission's Analysis

The Commission discontinued the Regulatory Surcharge in ARR order of FY 2019-20. However, due to delay in applicability of the new tariff from April 1, 2019 to June 1, 2019 the Petitioner had asked for Regulatory surcharge to be continued for April & May. The Commission approved the continuance of the Regulatory surcharge for April and May months of FY 2019-20.

The Petitioner has submitted INR 42.74 Crore as revenue from Regulatory surcharge. Hence, the Commission approves the revenue from regulatory surcharge as submitted by the Petitioner. The following table provide Regulatory Surcharge allowed by the Commission in ARR, Petitioner's submission and now approved by the Commission:

Table 74: Regulatory Surcharge approved by the Commission (INR Crore) for FY 2019-20

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Regulatory Surcharge	0.00	42.74	42.74

The Commission has approved revenue from Regulatory Surcharge as INR 42.74 Crore in the APR of FY 2019-20.

4.24. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, a standalone revenue gap of INR 210.04 Crore is arrived in the APR for FY 2019-20.

Commission Analysis

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

Table 75: *Standalone Revenue Gap/ (Surplus) at existing tariff (INR Crore) for FY 2019-20*

S. No	Particulars	Approved in ARR Order	Petitioners submission	Now Approved by Commission	Reference Table
1	Annual Revenue Requirement	3,105.86	3,596.00	3,601.97	Table 69
2	Revenue from sale of power	2,970.56	2,969.37	2,993.57	Table 70
3	FPPCA	0.00	373.82	340.58	Table 73
4	Regulatory Surcharge	0.00	42.74	42.74	Table 74
5	Total Revenue	2,970.56	3,385.95	3,376.90	
	Revenue Gap/(Surplus)	**135.30**	**210.04**	**225.08**	

The standalone gap at existing retail tariff is INR 225.08 Crore in the APR of FY 2019-20.

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

5.1. Background

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

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

This Chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2020-21, approved in the MYT Order dated 20th May, 2019 and re-computes the same considering the actual information available of various parameters for the FY 2018-19 as per the audited accounts and the provisional information available for first 9 months of the FY 2019-20. The revised ARR and revenue at existing tariff is determined for the FY 2020-21 to arrive at the revised revenue gap/surplus for the year.

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

Petitioner's Submission

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

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

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 2020-21, it has considered the growth in the sales for the preceding years and computed the CAGR. Based on the growth witnessed in different categories the sales for the FY 2020-21 have been projected.

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

The Commission for projecting the number of energy sales for each category has observed the historical trends in the past 6 years (the FY 2013-14 to the FY 2018-19). The Commission has calculated the Compounded Annual Growth Rate (CAGR) and the Year on Year (Y-o-Y) increase for each category and using the appropriate growth rate has estimated the category energy sales. The tables below provide the trends observed in the growth of energy sales for the Petitioner:

Table 76: Growth of Sales

Category	Y-o-Y Growth					CAGR			
	FY15/ FY14	FY16/ FY15	FY17/ FY16	FY18/ FY17	FY19/ FY18	5 year	4 year	3 year	2 year
Domestic	15.49%	9.01%	2.89%	11.92%	10.00%	9.78%	8.40%	8.20%	10.96%
Commercial / Non-Domestic	(9.21%)	6.41%	5.49%	7.77%	4.52%	2.80%	6.04%	5.92%	6.13%
LT Industrial (Motive Power)	6.22%	7.12%	5.40%	(1.63%)	3.76%	4.13%	3.61%	2.46%	1.03%
LT Public Water Works	-	9.98%	27.92%	19.79%	6.42%	0.00%	15.72%	17.70%	12.91%
HT/EHT	3.85%	(8.66%)	(23.46%)	56.47%	7.10%	4.00%	4.04%	8.65%	29.45%
Agriculture & Poultry	(2.10%)	33.92%	7.50%	4.84%	11.23%	10.45%	13.83%	7.82%	7.99%
Public Lighting	31.73%	(3.84%)	10.86%	(3.68%)	(27.23%)	(0.32%)	(7.02%)	(8.06%)	(16.28%)
Temp. Supply	29.43%	13.33%	8.71%	5.77%	1.18%	11.28%	7.16%	5.18%	3.45%
Total	4.15%	(7.62%)	(21.36%)	51.25%	6.97%	4.13%	4.12%	8.36%	27.20%

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

Table 77: Approved Consumers and Connected Load for FY 2020-21

S. No	Category	Consumers (No.)	Connected Load (KW)
1	Domestic	52,121	1,13,470
2	LIG/ Kutir Jyoti	15,517	1,801
3	Commercial/ Non-Domestic	8,333	30,371
4	Agriculture	1,479	6,260
5	LT Industry	2,104	1,25,566
6	HT/EHT Industry	955	12,18,170
7	Public Lighting	451	3,281
8	Public Water Works	516	4,207
9	Temp. Supply	379	2,537
10	**Total**	**81,856**	**15,05,663**

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

The growth rate adopted and the revised energy sales for each category are tabulated as follows:

Table 78: Energy Sales projected by the Commission (MUs) for FY 2020-21

Category	Growth Rate (CAGR)		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	5 years CAGR	9.78 %	146.74	168.09	153.82
Commercial /Non-Domestic	4 Years CAGR	6.04 %	36.83	39.45	39.23
Agriculture	3 Years CAGR	7.82 %	7.77	6.02	7.14
LT Industry	5 Years CAGR	4.13 %	219.82	232.65	234.21
HT/EHT Industry	4 Years CAGR	4.04 %	6074.97	6248.10	6243.48
Public Lighting		0.00 %	8.80	3.55	3.09
Public Water Works	2 Years CAGR	12.91 %	9.20	5.41	5.69
Temp. Supply	2 Years CAGR	3.45%	3.39	3.63	2.82
Total			**6,507.52**	**6,706.90**	**6,689.48**

The Commission approves energy sales of 6,689.48 MUs in the ARR of the FY 2020-21.

5.4. Inter-State Transmission Loss

Petitioner's submission

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

Commission's Analysis

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

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

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved 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 2020-21.

5.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted that it has achieved distribution loss level of 3.93 % for the FY 2018-19. It further submitted that reduction in distribution loss involves significant amount of capital expenditure and that it will be its endeavor to bring the distribution loss level further down in the subsequent years. Accordingly, Petitioner proposes to reduce the Distribution losses to 3.85 % for FY 20-21.

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 as approved in the MYT Order. The Petitioner shall be allowed an incentive/disincentive in the true-up Order considering the actual distribution loss achieved by the Petitioner in the year. Hence, for FY 2020-21 the Commission retains the distribution loss level of 4.20% as approved in the MYT Order dated May 20, 2019.

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

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	4.20%	3.85%	4.20%

The Commission approves the Intra-State distribution loss of 4.20 % in the ARR of FY 2020-21.

5.6. Power Purchase Quantum & Cost

5.6.1. Availability of power

Petitioners 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/2019/11859 dated 26/09/2019 of Western Regional Power Committee. The energy allocation from various generating stations is summarized in table below:

Table 81: Energy Allocation as submitted by the Petitioner (MW) for FY 2020-21

Name of Plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	53.64	0.00	53.64
KSTPS -3	16.62	2.20	18.82
VSTPP-I	38.41	5.00	43.41
VSTPP-II	29.07	4.00	33.07
VSTPP- III	29.07	6.00	35.07
VSTPP- IV	33.25	5.55	38.80
KAWAS	56.23	25.00	81.23
GGPP	56.73	2.00	58.73
Sipat – I	65.83	9.00	74.83
Sipat – II	27.68	4.00	31.68
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	37.59	5.55	43.14
VSTPP-V	16.62	5.55	22.17
Mauda II	43.89	8.60	52.49
Solapur	43.89	21.57	65.46
Gadarwara	26.60	10.42	37.02

Name of Plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
NPCIL – KAPS	11.86	2.00	13.86
NPCIL - TAPP 3&4	38.65	7.00	45.65
Total	629.13	123.44	752.57
NSPCL Bhilai		100	100.00
EMCO Energy Ltd. (GMR Group)		200.00	200.00

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

- During the FY 2020-21 the Petitioner will start getting power form Khargone generating station. A capacity of 30 MW has been allocated to Petitioner from Khargone generating station. The same has been considered for the FY 2020-21.
- It is expected that Petitioner will not be getting any power from Ratnagiri during the FY 2020-21 and therefore no power purchase from the plant has been considered.
- Power purchase quantum from the NTPC stations for the FY 2020-21 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.
- DNHPDCL had signed a seven year PPA with EMCO Energy Limited (GMR) and the same will come to an end by June, 2020. Hence, power purchase from EMCO has been considered for the period April 2020 to June 2020 for the FY 2020-21. For projection of power purchase from EMCO, Petitioner has considered 90% PLF and 7.75% auxiliary consumption.
- The Petitioner is in the process to sign long term PPA with the Solar Energy Corporation of India (SECI) for receiving Round the Clock (RTC) power from the FY 2020-21. The Petitioner will be signing the PPA for procuring 200 MW power from SECI which shall comprise of solar and wind energy. Additionally, Petitioner will be getting 50 MW of wind energy from SECI from FY 2019-20 for which the agreement has already been signed. Further, the Petitioner 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 2020-21:

Table 82: Station wise power purchase submitted by Petitioner (MUs) for FY 2020-21

Source	FY 2020-21
NTPC Stations	
KSTPS	385.75
KSTPS 3	136.90
VSTPP-I	301.71
VSTPP-II	227.17
VSTPP- III	243.74
VSTPP- IV	269.63
KGPP	277.51
GGPP	210.69
Sipat-I	544.25

Source	FY 2020-21
Sipat-II	230.41
Mauda	167.34
VSTPS-V	154.10
Mauda 2	203.59
Solapur	17.37
LARA	203.28
Gadarwara	0.00
Khargone	203.28
KHSTPP-II	22.06
Subtotal – NTPC	**3798.76**
NSPCL – Bhilai	**703.06**
NPCIL	
KAPS	79.13
TAPS	289.49
Subtotal	**368.62**
Others	
EMCO Energy Ltd. (GMR Group)	363.65
Subtotal	**363.65**
Power purchase from Other Sources	
Indian E. Exchange/Bilateral	0.00
UI	0.00
Solar	5.38
Non Solar	175.20
Solar REC	0.00
Non Solar REC	0.00
Solar (SECI)	876.00
Wind (SECI)	876.00
Subtotal	**1932.58**
Rebate	
Total Power Purchase	**7166.67**
External Losses	
Availability at ED-DNH Periphery	**7166.67**

Commission's Analysis

The Commission for the purpose of estimating the quantum of power purchase for FY 2020-21 has relied on the station wise actual month-wise energy availability for FY 2016-17, FY 2017-18 and FY 2018-19, provisional energy availability for first nine months of FY 2019-20, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for previous years for each station, allocated share to the Petitioner. 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 and NTPC Bhilai has been estimated based on the month-wise average of quantum of energy availed during last 3 years and in first nine months of FY 2019-20.
- For Solapur and Gadarwara power plant, energy availability has been considered equal to power purchase quantum approved by the Commission from the plants in FY 2019-20.
- Energy availability from Lara & Khargone was started during last FY 2019-20, therefore energy availability is considered same as submitted by the petitioner.

Availability from NPCIL plants:

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

Availability from GMR EMCO

- The Petitioner submitted that 7-year PPA signed between the Petitioner and the GMR-EMCO will come to an end in June 2020. The Commission directed the Petitioner to submit the details of alternative arrangements for acquiring power. The Petitioner in reply submitted that various alternate sources of power like various NTPC plants like Lara, Gadarwara and Khargone have started supplying power to DNHPDCL from FY 2019-20. The Petitioner further mentioned that it is in process of signing PPA with SECI for 200 MW Round the Clock power.

- For EMCO, the Commission has considered availability as the Petitioner's submission for power purchase quantum.

Availability from SECI plants:

- The Petitioner submitted that it is in process to sign a long term PPA with SECI for receiving Round the Clock power from FY 2020-21. The Petitioner will be signing the PPA for procuring 200 MW power from SECI which shall comprise of solar and wind energy. Through a deficiency note the Commission directed the Petitioner to submit the status of the SECI PPA. The Petitioner submitted that SECI is carrying out bidding process to select the developers.

- Considering the current status, for SECI plants, the Commission has considered 85% (744.60 MUs each from Wind and Solar) of the petitioner submission of 876 MUs each from Wind and Solar since it is highly unlikely that power supply will commence from April 2020 itself.

Availability of power from Open Market

- The estimated energy deficit for the FY 2020-21 has been assumed to be procured from open market.

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

5.6.2. Power Purchase Cost

Petitioners Submission

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

- Fixed cost for the FY 2020-21 has been projected at the same level as estimated for various stations for the FY 2019-20.
- Variable cost for each NTPC generating stations for the FY 2020-21 has been projected considering the actual variable cost incurred during the first six months of FY 2019-20 for various stations.
- For nuclear plants i.e. KAPP and TAPP single part tariff, the actual average variable cost per unit for the first six months of FY 2019-20 has been considered for projecting the power purchase cost for the FY 2020-21.
- For NTPC-SAIL Bhilai unit 1 & 2, the fixed has been projected at the same level as estimated for the FY 2019-20 and for projecting the variable cost the actual average variable cost per unit for the first six months of FY 2019-20 has been taken into consideration.
- For power purchase from renewable energy sources, for the FY 2020-21, the Petitioner has outsourced the maintenance cost of the solar plants to BHEL.
- For purchase of RTC power from SECI, a rate of INR 4.70 per unit has been considered for projecting the cost during FY 2020-21.

- For purchase of 50 MW wind power, a rate of INR 2.59 per unit has been considered.

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

Table 83: Power Purchase quantum (MU) and Cost (INR Crore) submitted by Petitioner for FY 2020-21

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	All Charges Total	Per Unit Cost
NTPC Stations						
KSTPS	385.75	26.84	56.05	0.00	82.88	2.15
KSTPS 3	136.90	16.70	19.24	0.00	35.95	2.63
VSTPP-I	301.71	27.26	54.92	0.00	82.18	2.72
VSTPP-II	227.17	15.60	39.35	0.00	54.95	2.42
VSTPP- III	243.74	26.57	43.46	0.00	70.03	2.87
VSTPP- IV	269.63	43.81	46.25	0.00	90.07	3.34
KGPP	277.51	50.29	78.35	0.00	128.65	4.64
GGPP	210.69	45.97	61.48	0.00	107.44	5.10
Sipat-I	544.25	64.53	79.25	0.00	143.77	2.64
Sipat-II	230.41	28.27	35.01	0.00	63.28	2.75
Mauda	167.34	43.39	53.12	0.00	96.51	5.77
VSTPS-V	154.10	26.40	28.03	0.00	54.43	3.53
Mauda 2	203.59	55.78	64.66	0.00	120.43	5.92
Solapur	17.37	80.30	6.03	0.00	86.33	49.70
LARA	203.28	39.64	49.40	0.00	89.03	4.38
Gadarwara	0.00	51.63	0.00	0.00	51.63	0.00
Kharagaon	203.28	39.64	49.40	0.00	89.03	4.38
KHSTPP-II	22.06	2.31	4.69	0.00	6.99	3.17
Subtotal – NTPC	**3798.76**	**684.92**	**768.67**	**0.00**	**1453.60**	**3.83**
NSPCL – Bhilai	**703.06**	**116.90**	**244.22**	**0.00**	**361.12**	**5.14**
NPCIL						
KAPS	79.13	0.00	19.76	0.00	19.76	2.50
TAPS	289.49	0.00	86.67	0.00	86.67	2.99
Subtotal	**368.62**	**0.00**	**106.43**	**0.00**	**106.43**	**2.89**
Others						
EMCO Energy Ltd. (GMR Group)	363.65	108.09	84.59	0.00	192.68	5.30
Subtotal	**363.65**	**108.09**	**84.59**	**0.00**	**192.68**	**5.30**
Power purchase from Other Sources						
Indian E. Exchange/Bilateral	0.00	0.00	0.00	0.00	0.00	0.00
UI	0.00	0.00	0.00	0.00	0.00	0.00
Solar	5.38	0.00	0.00	0.00	0.00	0.00
Non Solar	175.20	0.00	45.38	0.00	45.38	2.59
Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
Non Solar REC	0.00	0.00	0.00	0.00	0.00	0.00
Solar (SECI)	876.00	0.00	432.74	0.00	432.74	4.94
Wind (SECI)	876.00	0.00	432.74	0.00	432.74	4.94
Subtotal	**1932.58**	**0.00**	**910.86**	**0.00**	**910.86**	**4.71**
Rebate						
Total Power Purchase	**7166.67**	**909.91**	**2114.78**	**0.00**	**3024.69**	**4.22**
External Losses						
Availability at ED-DNH Periphery	**7166.67**	**909.91**	**2114.78**	**0.00**	**3024.69**	**4.22**

Commission's Analysis

The Commission for the purpose of estimating the cost of power purchase for FY 2020-21 has relied on the station wise actual energy charges for 9 months of FY 2019-20 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 have been computed by taking the actual per unit variable cost during the first nine months of FY 2019-20. No escalation has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for FY 2020-21.

- For the purchase of RTC power from SECI a rate of INR 4.94 per unit has been considered for projecting the cost during the FY 2020-21. For the purchase of 50 MW wind power the Petitioner signed Power Sale Agreement (PSA) in August 2018 with SECI to purchase power at the rate of INR 2.59 per unit (INR 2.52/kWh as fixed cost and INR 0.07/kWh as trading margin) for the FY 2020-21.

Fixed Charges:

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

- The Fixed cost approved by the Commission in APR FY 2019-20 has been considered for FY 2020-21 for respective plants. No escalation has been considered for fixed costs for FY 2020-21 over previous year.

Other Charges:

No other charges have been considered, the same shall be considered as per actuals during the True-up of each year.

5.6.3. 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 2020-21, the transmission charges payable to ED-DNH (Transmission Division) have also been considered.

The Petitioner has projected the POC charges for the FY 2020-21 at INR 414.70 Crore, which have been projected by considering the average monthly bill being received from PGCIL.

Further an amount of INR 13.76 Crore has been considered for claim towards change in law allowed by CERC for GMR to arrive at the power purchase cost for FY 2020-21.

The transmission charges along with the total power purchase cost for the FY 2020-21 has been given in the table below:

Table 84: Transmission and other Charges submitted by Petitioner (INR Crore) for FY 2020-21

Particulars	FY 2021-22
Total Power Purchase Cost	3024.69
PGCIL CHARGES	414.70
POSOCO	0.52
WRPC	0.00
Reactive charges	0.00
MSTCL	0.00
Intra-state transmission charges	44.79
Grand Total of Charges	3484.70
GMR - Change in Law	13.76
Grand Total of All Charges	**3,498.46**

Commission's Analysis

The Commission has projected the transmission charges payable to PGCIL based on the charges determined for APR of FY 2019-20 without any escalation. The same shall be trued up as per actuals. Further, the Intrastate Transmission charges are allowed as per the DNH transmission ARR Order for FY 2020-21.

5.6.4. 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 2020-21 have been shown in the following table:

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

Details of The Stations	Units Purchased (MUs)	Variable Charges (INR Crore)	Fixed Charges (INR Crore)	Total Charges (INR Crore)	Per Unit Cost (INR/KWh)
KSTPS	374.95	54.82	25.55	80.37	2.14
KSTPS 3	158.36	22.47	18.42	40.89	2.58
VSTPP-I	300.13	54.72	25.23	79.95	2.66
VSTPP-II	238.75	41.37	16.15	57.52	2.41
VSTPP- III	268.23	47.50	25.82	73.33	2.73
VSTPP- IV	334.39	57.63	42.87	100.50	3.01
KGPP	261.11	72.46	50.37	122.83	4.70
GGPP	153.24	45.53	45.07	90.60	5.91
Sipat-I	621.37	94.73	68.94	163.67	2.63
Sipat-II	224.43	34.49	27.63	62.11	2.77
Mauda	193.86	61.53	56.72	118.25	6.10
VSTPS-V	190.06	34.48	25.87	60.35	3.18
Mauda 2	218.26	69.34	52.38	121.72	5.58
Solapur	89.15	31.22	61.41	92.63	10.39
LARA	203.28	51.58	25.15	76.73	3.77
Gadarwara	137.00	50.04	31.15	81.19	5.93
BARH	0.00	0.00	0.00	0.00	0.00
Dhuwaran	0.00	0.00	0.00	0.00	0.00
Kharagaon	203.28	49.40	6.52	55.91	2.75
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	20.88	4.44	4.02	8.46	4.05
Subtotal - NTPC	**4,190.73**	**877.75**	**609.26**	**1,487.01**	**3.55**
NSPCL - Bhilai	**575.92**	**198.60**	**116.66**	**315.26**	**5.47**
NPCIL					
KAPS	79.13	19.55	0.00	19.55	2.47
TAPS	289.49	87.26	0.00	87.26	3.01
Subtotal	**368.62**	**106.82**	**0.00**	**106.82**	**2.90**
Others					
RGPPL	0.01	0.00	0.00	0.00	
EMCO Energy Ltd. (GMR Group)	363.65	85.30	108.09	193.39	5.32
Subtotal	**363.66**	**85.30**	**108.09**	**193.39**	**5.32**
Total	**5,498.93**	**1,268.47**	**834.01**	**2,102.48**	**3.82**
Other Sources					
Indian E. Exchange/Bilateral	0.00	0.00	0.00	0.00	

Details of The Stations	Units Purchased (MUs)	Variable Charges (INR Crore)	Fixed Charges (INR Crore)	Total Charges (INR Crore)	Per Unit Cost (INR/KWh)
UI	0.00	0.00	0.00	0.00	
Solar	5.38	0.00	0.00	0.00	
Non Solar	175.20	45.38	0.00	45.38	2.59
Solar REC	0.00	0.00	0.00	0.00	
Non Solar REC	0.00	18.60	0.00	18.60	
Solar (SECI)	744.60	367.83		367.83	4.94
Wind (SECI)	744.60	367.83		367.83	4.94
Open Market Operation	15.89	5.17	0.00	5.17	3.25
Subtotal - Other Sources	**1,685.67**	**804.81**	**0.00**	**804.81**	**4.77**
Power Purchase Cost Total	**7,184.60**	**2,073.28**	**834.01**	**2,907.29**	**4.05**
PGCIL CHARGES				377.49	
POSOCO				1.00	
WRPC				0	
Reactive charges				0	
MSTCL				0	
Intra-state transmission charges				41.45	
Subtotal				419.94	
Grand Total of Charges	**7,184.60**			**3,327.23**	**4.63**
Other Charges (GMR Change in Law)				13.76	
Grand Total of Charges	**7,184.60**	**2,073.28**	**834.01**	**3,340.99**	**4.65**

The Commission approves the quantum of power purchase as 7,184.60 MU at the generator periphery with a total cost of INR 3340.99 Crore for FY 2020-21.

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

The APPC for FY 2020-21 has been determined as provided in the table below:

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

Particulars	Value
Total Power Purchase Cost (INR Crore)	3,340.99
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Crore)	1,219.59
Net Power Purchase Cost (INR Crore)	2,121.41
Total Power Purchase quantum (MU)	7,184.60
Less: Quantum from renewable energy sources (MU)	1,669.78
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU)	5,514.82
APPC (INR/kWh)	**3.85**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.85/kWh for the FY 2020-21.

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner is required to procure power from renewable sources for meeting the RPO. The RPO requirement for FY 2020-21 as submitted by the Petitioner has been provided in the following table:

Table 87: RPO Plan proposed by the Petitioner for FY 2020-21 (MU)

Particulars	Value
Sales within State (MU)	6,706.90
RPO obligation (%)	14.10%
Solar	6.10%
Non-Solar	8.00%
RPO obligation for the year (MU)	**945.67**
Solar	409.12
Non-Solar	536.55
RPO Compliance (Procurement and own generation)	**1932.58**
Solar	881.38
Non-Solar	1051.20
RPO Compliance (REC certificate purchase)	0.00
Solar	0.00
Non-Solar	0.00

Commission's Analysis

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

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

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

The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

In FY 2020-21, the Petitioner has projected fulfillment of the RPO obligation by complete actual purchase of renewable power. The Petitioner projected to purchase (& Generate) 881.38 MU of solar power and 1051.20 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 the 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 2020-21:

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

Sr. No.	Particulars	Formulae	FY 2020-21
A	Solar Target		6.10%
B	Non-Solar Target		8.00%
C	**Total RPO Target**	**C=A+B**	**14.10%**
D	**Sales Within UT**		**6,689.48**
E	**RPO Obligation for the year**	**E=F+G**	**943.22**
F	Solar	F=D*A	408.06
G	Non-Solar	G=D*B	535.16
H	**Physical RE Purchase**	**H=I+J**	**1,669.78**
I	Solar		749.98
J	Non-Solar		919.8
K	**REC Purchase**	**K=L+M**	**0.00**
L	Solar		0.00
M	Non-Solar		0.00
N	**Total RPO Compliance for FY 2020-21 (REC+ Physical RE)**	**N=O+P**	**1,669.78**
O	Solar	O=I+L	749.98
P	Non-Solar	P=J+M	919.8
Q	**Stand alone shortfall/(surplus) for FY 2020-21**	**Q=R+S**	**(726.56)**
R	- Solar	R=F-O	(341.92)
S	- Non-Solar	S=G-P	(384.64)
T	**Backlog upto FY 2019-20**	**T=U+V**	**841.85**
U	- Solar		271.20
V	- Non-Solar		570.64
W	**Total Shortfall/(surplus) in RPO Compliance for FY 2020-21**	**W=X+Y**	**115.28**
X	Solar	X=R+U	(70.72)
Y	Non-Solar	Y=S+V	186.00

Similar to the approach followed in the APR of FY 2019-20, the Commission has considered the gross energy generated from Solar rooftop plants while approving the RPO compliance for the year. The Commission has considered the cumulative shortfall till FY 2020-21 to be fulfilled by way of REC purchase and has assumed the rate of purchase for Non-Solar REC as INR 1.00/kWh (IEX Floor Price Rate). Accordingly, the Commission has approved cost for INR 18.60 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.

5.8. Energy Balance

Petitioner's submission

The Petitioner has submitted the energy balance for FY 2020-21 as shown below:

Table 89: Energy Balance submitted by Petitioner (MU) for FY 2020-21

Particulars	FY 2020-21
Sales	6,706.90
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	**6,706.90**
Add: Losses	268.56
T&D Losses	3.85%
Energy Required at Periphery	**6,975.46**
Add: Sales to common pool consumer	(0.35)
Add: Sales through IEX	-
Less: Own Generation	5.38
Total energy requirement at state periphery	6969.73
Less: Energy Purchased through UI at Periphery	0.00
Less: Energy Purchased through Renewable Sources	1927.20
Less: Open Access Purchase	0.00
Less: Purchase from Power Exchange	0.00
Total Energy Required at Periphery	**5,042.53**
Transmission loss	191.57
Transmission loss (%)	3.66%
Total Energy to be purchased	**5,234.09**
Total Energy requirement from tied up sources & UI at generator end	7,166.67
Total Energy requirement in UT including Open Access	7,166.67

Commission's Analysis

Based on the revised estimates of energy sales and Power purchase quantum, the Commission approves the following energy balance for FY 2020-21:

Table 90: Energy Balance approved by Commission (MU) for FY 2020-21

Sr. No.	Particulars	Formulae	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
A	Sales		6,507.52	6,706.90	6,689.48
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**	**6,507.52**	**6,706.90**	**6,689.48**
	T&D Losses				
E	in %		4.20%	3.85%	4.20%
F	in MU	E=G-D	285.3	268.56	293.28

Sr. No.	Particulars	Formulae	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
G	**Energy Required at Periphery**	**G=D/(1-E)**	**6,792.82**	**6,975.46**	**6,982.76**
H	Add: Sales to common pool consumer		0.00	(0.35)	0.00
I	Add: Sales through IEX		0.00	0.00	0.00
J	Less: Own Generation		5.23	5.38	5.38
K	Total energy requirement at state periphery	K=G+H+I-J	6,787.59	6,969.73	6,977.38
L	Less: Energy Purchased through UI at Periphery		0.00	0.00	0.00
M	Less: Energy Purchased through Renewable Sources		1,927.2	1,927.2	1,664.4
N	Less: Open Access Purchase		0.00	0.00	0.00
O	Less: Purchase from Power Exchange		0.00	0.00	0.00
P	Total Energy Required at Periphery	P=K-L-M-N-O	4,860.39	5,042.53	5,312.98
R	Transmission loss (%)		3.66%	3.66%	3.66%
Q	Transmission loss		184.65	191.57	201.84
S	**Total requirement from Tied-up sources at generator end (MU)**	**S=P/(1-R)**	**5,045.04**	**5,234.09**	**5,514.82**
T	**Total availability from tied up sources at generator end (MU)**				**5,498.93**
U	**Deficit/(surplus)**	**U=S-T**			**15.89**

The Commission allows the Petitioner to purchase 15.89 MUs from open market sources. The Commission has considered a price of INR 3.25/ kWh for such power, considering the actual per unit price of power purchased by the Petitioner in first nine months of FY 2019-20 from open market sources (Energy Exchange/ Bilateral). This cost has been included in the Power Purchase cost allowed by the Commission.

5.9. Operation & Maintenance Expenses

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

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

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

R&Mn = K x GFAn-1 x (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 is projected and the Commission is requested to consider the same at the time of True-up on actual basis.

The Petitioner has kept the employee cost at the same level as approved by the Commission for the FY 2020-21 in its Tariff Order dated 20th May, 2019

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

Table 91: Employee Expenses submitted by Petitioner (INR Crore) for FY 2020-21

Particular	FY 2020-21
Employee Expenses	**16.60**

<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 stipulates the following:

"6. Values for Base Year

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

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

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

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

The CPI Inflation has been computed as follows:

Table 92: Computation of CPI Inflation (%)

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

The Commission in its MYT Order dated May 20, 2019, considered the growth in number of employees as 11.91% and 9.65% for FY 2019-20 and FY 2020-21 respectively. As per the details submitted by the Petitioner, the estimated growth in number of employees for FY 2019-20 is -0.8% and for FY 2020-21 it is 0.27%. Hence, the Commission has considered the revised growth in employee expenses for FY 2019-20 and FY 2020-21 while projecting the employee expenses for FY 2020-21.

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

Table 93: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	Employee Expenses	12.41		
2	Growth in number of employees (Gn)		-0.80%	0.27%
3	CPI Inflation for preceding three years (CPI)		4.22%	4.22%
	Employee Expenses	**12.41**	**12.83**	**13.41**

The Commission approves Employee Expenses of INR 13.41 Crore FY 2020-21.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has kept the A&G Expenses at the same level as approved by the Commission for FY 2020-21 in its MYT order for 2nd Control Period.

Table 94: A&G Expenses submitted by Petitioner (INR Crore) for FY 2020-21

Particular	FY 2020-21
A&G expenses	**7.26**

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has considered the trued-up A&G expenses for FY 2018-19 as Base Year expenses and escalated the same with CPI Inflation for approving the revised trajectory of A&G expenses for FY 2020-21.

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

Table 95: A&G Expenses approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Actual A&G Expenses FY 2018-19	FY 2019-20	FY 2020-21
1	A&G Expenses	5.84		
2	CPI Inflation		4.22%	4.22%
3	**A&G Expenses**	**5.84**	**6.09**	**6.34**

The Commission approves the Administrative & General (A&G) expenses of INR 6.34 Crore for FY 2020-21.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses based on the norms specified in the MYT Regulations, 2018. The average increase in Wholesale Price Index (WPI) has been calculated based on the increase in the Wholesale Price Index (WPI) for FY 2015-16, FY 2016-18 & FY 2018-19 as 2.97%.

Table 96: R&M expenses submitted by Petitioner (INR Crore) for FY 2020-21

Particular	FY 2020-21
R&M Expenses	**13.18**

Commission's Analysis

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

Table 97: Computation of 'K' factor for the MYT Control Period (INR Crore)

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	9.82	10.76	9.82
2	Opening GFA	393.48	419.31	432.95
3	K Factor	2.50%	2.57%	2.27%
	K Factor Approved by the Commission (Average of 3 years)	**2.44%**		

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

The WPI Inflation has been computed as follows:

Table 98: Computation of WPI Inflation (%)

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

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

Table 99: R&M Expenses approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	FY 2020-21
1	Opening GFA (GFA_{n-1}) of previous year	458.06
2	K factor approved (K)	2.44%
3	WPI Inflation	2.99%
	R&M Expenses = (K x (GFA_{n-1}) x ($1+WPI_{inflation}$)	**11.53**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 11.53 Crore for FY 2020-21.

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

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

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	16.60	16.60	13.41
2	A&G Expenses	7.26	7.26	6.34
3	R&M Expenses	8.92	13.18	11.53
4	**Total O&M Expenses**	**32.78**	**37.04**	**31.28**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 31.28 Crore for FY 2020-21.

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 101: Capital Expenditure and Capitalization proposed by the Petitioner for FY 2020-21

S. No.	Particulars	Total Scheme Amount
1	Capital Expenditure	30.19
2	Capitalization	182.69

<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 30.19 Crore and INR 182.69 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 102: Capital Expenditure and Capitalization approved by the Commission (INR Crore) for FY 2020-21

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

The Commission approves capital expenditure of INR 30.19 Crore and capitalization of INR 182.69 Crore in the ARR of the FY 2020-21

5.11. Capital Structure

Petitioner's Submission

The Petitioner submitted that capitalization of INR 182.69 Crore shall be undertaken in FY 2020-21. Further, the entire capital deployment by Petitioner shall be through equity.

<u>Commission's Analysis</u>

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

In accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for the FY 2020-21 as detailed below:

Table 103: GFA addition approved by the Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	438.65	458.06	458.06
2	Addition During FY	182.69	182.69	182.69
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	**Closing Gross Fixed Assets**	**621.34**	**640.75**	**640.75**

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	0.00	20.11	14.34
2	Add: Normative Loan During the year	127.883	127.88	127.88
3	Less: Normative Repayment equivalent to Depreciation	20.52	21.22	19.19
4	**Closing Normative Loan**	**107.37**	**126.77**	**123.03**

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	95.97	137.42	101.79

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
2	Additions on account of new capitalization	54.81	54.81	54.81
3	**Closing Equity**	**150.78**	**192.23**	**156.60**

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 2020-21:

Table 106: Depreciation as submitted by the Petitioner (INR Crore) for FY 2020-21

S. No.	Particulars	FY 2020-21
1	Opening GFA	458.06
2	Additions	182.69
3	Closing GFA	640.75
4	Average GFA	549.41
5	**Depreciation Amount**	**21.22**

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 table below:

Table 107: Depreciation Rate (%)

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

The opening and closing GFA has been considered as approved in *Section 5.11: Capital Structure* of this Order, adjusted by value of assets that have achieved 90% depreciation. Further, deprecation for FY 2020-21 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 for FY 2020-21:

Table 108: Depreciation approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening GFA for FY 2019-20	438.65	458.06	458.06
2	Addition During FY	182.69	182.69	182.69
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	621.34	640.75	640.75
5	Average Gross Fixed Assets	530	549.41	549.40

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
6	Effective Rate of Depreciation (%)	3.87%	3.86%	3.49%
7	**Depreciation**	**20.52**	**21.22**	**19.19**

The Commission approves depreciation of INR 19.19 Crore in the ARR of the FY 2020-21.

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

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

Commission's Analysis

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

"28. Interest on Loan

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

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

Provided, further that in case of De-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 the respective year. In absence of any actual loans, the Commission has considered the 1-year SBI MCLR as on February 10, 2020 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 for FY 2020-21:

Table 109: Interest on loan approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	0.00	20.11	14.34
2	Add: Normative Loan During the year	127.883	127.88	127.88
3	Less: Normative Repayment equal to Depreciation	20.52	21.22	19.19
4	Closing Normative Loan	107.37	126.77	123.03
5	Average Normative Loan	53.68	73.44	68.69
6	Rate of Interest (%)	9.55%	9.55%	8.85%
	Interest on Loan	**5.13**	**7.01**	**6.08**

The Commission approves Interest on Loan as INR 6.08 Crore in the ARR of the FY 2020-21.

5.14. Return on Equity (RoE)

Petitioner's submission

As per the JERC (Multi Year Distribution Tariff) Regulations, 2018, 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 2020-21:

Table 110: Return on Equity as submitted by the Petitioner (INR Crore) for FY 2020-21

S. No.	Particulars	FY 2020-21
1	Opening Equity	137.42
2	Addition in equity on account of new capitalization	54.81
3	Closing Equity	192.23
4	Average Equity	164.82
5	Equity for wire business (90%)	148.34
6	Equity for Retail Supply Business (10%)	16.48
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	22.99
10	Return on Equity for Retail Supply Business	2.64
11	**Return on Equity**	**25.63**

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."

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 (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	95.97	137.42	101.79
2	Additions on account of new capitalization	54.81	54.81	54.81
3	Closing Equity	150.78	192.23	156.60
4	Average Equity	123.38	164.82	129.19
5	Average Equity (Wires Business)	111.04	148.34	116.27
6	Average Equity (Retail Supply Business) Business)	12.34	16.482	12.92
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**	**17.21**	**22.99**	**18.02**
10	**Return on Equity for Retail Supply Business**	**1.97**	**2.64**	**2.07**
11	**Total Return on Equity**	**19.18**	**25.63**	**20.09**

The Commission approves Return on Equity of INR 20.09 Crore in the ARR of the FY 2020-21.

5.15. Interest on Security Deposits

Petitioner's submission

A provision of INR 2.70 Crore has been made towards payment of interest on consumer security deposits, which is same as for FY 2019-20.

Commission's Analysis

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

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

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

The Commission at this stage approves the Interest on Security Deposit as claimed by the Petitioner, which shall be subject to true-up based on actuals.

Table 112: Interest on Security Deposits approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Interest on Security Deposit	2.45	2.70	2.70

The Commission approves Interest on Security Deposit as INR 2.70 Crore in the ARR for the FY 2020-21.

5.16. Interest on Working Capital

Petitioner's submission

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

The working capital requirement 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 10.55% has been considered on the working capital requirement, being the 1 year SBI MCLR as on 1st April of FY 2019-20plus 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 (INR Crore) for FY 2020-21

Particular	FY 2020-21
O&M expense for one month	3.09
Maintenance spares at 40% of R&M for one month	0.44
Receivables for 2 months	528.66
Total	**532.18**
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	53.08
Net Working Capital required after deduction of Security Deposit	**479.10**
Interest on Working Capital	**50.54**

<u>Commission's Analysis</u>

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

52. Norms of Working Capital for Retail Supply Business

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

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

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

(c) Receivables equivalent to two (2) months of the expected revenue from charges for use of distribution

wires at the prevailing tariff;

Less:

(d) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from distribution system users except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be re-calculated on the basis of the values of components of working capital approved by the Commission in the truing up.

Further, Regulation 31.3 of the MYT Regulation, 2018 stipulates the following:

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

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

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

Table 114: Interest on Working Capital approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	O&M Expenses for One Month	2.73	3.09	2.73
2	Maintenance spares at 40% of R&M expenses for one (1) month	0.3	0.44	0.30
3	Receivables equivalent to two (2) months of the expected revenue Requirement	536.61	528.66	598.28
4	Less: Amount, held as security deposits	39.19	53.08	53.08
5	**Net Working Capital**	**500.45**	**479.1**	**548.23**
6	Rate of Interest(%)	10.55%	10.55%	10.55%
7	**Interest on Working Capital**	**50.8**	**50.54**	**57.84**

The Commission approves the Interest on Working Capital of INR 57.84 Crore in the ARR of the FY 2020-21.

5.17. Income Tax

Petitioner's submission

The Petitioner has not made any provision towards Income Tax

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

Table 115: Income Tax approved by Commission (INR Crore) for FY 2020-21

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

The Commission approves Nil income tax liability in the ARR of FY 2020-21.

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's Analysis

The Regulation 62 of the MYT Regulations, 2018 stipulates the following:

"62. Provision for bad and doubtful debts

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

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

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

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

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

5.19. Non-Tariff Income

Petitioner's submission

For projecting the non-tariff income for the FY 2020-21, INR 5.12 Crore has been considered.

Commission's Analysis:

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

"64. Non-Tariff Income

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

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

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

(a) Income from rent of land or buildings;

(b) Income from sale of scrap;

(c) Income from statutory investments;

(d) Interest on advances to suppliers/contractors;

(e) Rental from staff quarters;

(f) Rental from contractors;

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

(h) Income from advertisements, etc.;

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

(j) Service charges;

(k) Consumer charges;

(l) Recovery for theft and pilferage of energy;

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

(n) Miscellaneous receipts;

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

(p) Prior period income, etc.:

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

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

The commission sought details regarding Non-Tariff income claimed by the Petitioner of INR 5.12 Crore against INR 47.24 Crore as approved in MYT order for FY 2020-21. In response, the Petitioner submitted that as per the MYT Regulations, 2018 the delayed payment surcharge and Interest on equity investment are not to be included in the non-tariff income. Therefore, the non-tariff income has reduced.

The Commission agrees with the Petitioner that as per MYT Regulations, 2018, delayed Payment Surcharge and 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. Hence, for FY 2020-21, the Commission has considered the approved Non-Tariff Income for FY 2019-20 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 table below:

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

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Non- Tariff Income	47.24	5.12	14.88

The Commission approves Non-Tariff Income of INR 14.88 Crore in the ARR of the FY 2020-21.

5.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement of INR 3637.49 Crore after adjusting the Non -Tariff Income for the FY 2020-21.

Commission's Analysis

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

Table 117: Aggregate Revenue Requirement approved by Commission (INR Crore) for FY 2020-21

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission	Reference Table
1	Power Purchase Cost	3,136.03	3,498.46	3,340.99	*Table 85*
2	O&M Expense	32.78	37.04	31.28	*Table 100*
3	Depreciation	20.52	21.22	19.19	*Table 108*
4	Interest Cost on Long-term Capital Loans	5.13	7.01	6.08	*Table 109*
5	Interest on Working Capital Loans	50.80	50.54	57.84	*Table 114*
6	Return on Equity	19.18	25.63	20.09	*Table 111*
7	Provision for Bad Debt	0.00	0.00	0.00	
8	Interest on security deposit	2.45	2.70	2.70	*Table 112*
9	Income Tax	0.00	0.00	0.00	*Table 115*
10	**Total**	**3,266.89**	**3,642.61**	**3,478.16**	
11	Less: Non-Tariff Income	47.24	5.12	14.88	*Table 116*
12	**Annual Revenue Requirement**	**3,219.65**	**3,637.49**	**3,463.28**	

The Commission approves net ARR of INR 3,463.28 Crore for FY 2020-21.

5.21. Revenue at existing Retail Tariff

Petitioner's submission

The revenue from sale of power at existing tariff of INR 3,171.94 Crore is based on the projected energy sales, connected load and number of consumers. The revenue for FY 2020-21 has been computed based on the retail tariff notified by the Commission in the Tariff Order dated May 20, 2019 for the FY 2019-20.

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 Commission while scrutinizing the revenue computation submitted by the Petitioner, observed some issues. Accordingly, the Petitioner through a clarification note was asked to submit the clarification on some issues which were submitted by the Petitioner as follows:

- Clarification for projecting the revenue from fixed/ demand charges in LT Industry category considering a factor of 75%. In reply, the Petitioner requested the Commission to use factor of 100% instead of 75%. Accordingly, the Commission has considered the appropriate factor.

- Reason for not considering a unit conversion factor in computation of fixed/ demand charges for categories LT Industry and LT Water Works since the Tariff approved by the Commission is in INR/HP/Month in both of these categories and the connected load approved by the Commission in MYT order was in KW. The Petitioner in its reply agreed that the Connected load may be considered in HP and appropriate conversion factor should be used. Hence, the Commission has used Conversion factor (1.34) to convert connected load from KW to HP to compute the Fixed/ demand charges for these two categories.

- Basis for considering billing demand factor of 90.00%, 90.60% and 90.45% for 11kV, 66kV and 220kV respectively in revenue computation of demand charges for HT/EHT category. The petitioner in its reply submitted that the billing demand for HT/EHT category is based on the actual average billing demand. Hence, the Commission has considered the 90.00% as the billing demand for computing the demand charges for HT/EHT category.

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

Table 118: Revenue at existing tariff computed by Commission (INR Crore) for FY 2020-21

S. No	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**Domestic**	**0.31**	**34.44**	**34.94**	**2.27**
1	Ist 50 Units	0.07	4.04	4.10	1.32
2	51 to 200 Units	0.14	10.99	11.13	2.03
3	201 to 400 Units	0.07	6.72	6.78	2.52
4	Beyond 401 Units	0.04	12.70	12.74	3.11
5	**LIGH**	**0.19**		**0.19**	
2	**Commercial/Non Domestic**	**0.10**	**14.59**	**14.69**	**3.74**
1	1st 100 Units	0.05	1.81	1.86	2.88
2	Beyond 100 Units	0.05	12.78	12.83	3.92
3	**Agriculture**	**0.00**	**0.56**	**0.56**	**0.79**
1	Upto 10 HP per unit	0.00	0.35	0.35	0.70
2	Beyond 10 HP per unit	0.00	0.22	0.22	1.00
4	**LT Industry**	**9.89**	**95.93**	**105.82**	**4.52**
1	Upto 20 HP Connected Load	0.05	2.44	2.49	4.04
2	Above 20 HP Connected Load	9.84	93.49	103.33	4.53
5	**Public Lighting**	**0.00**	**1.17**	**1.17**	**3.80**
6	**Public Water Works**	**0.19**	**2.45**	**2.64**	**4.64**
1	Upto 20 HP Connected Load	0.14	2.00	2.14	4.61
2	Above 20 HP Connected Load	0.05	0.45	0.50	4.79
7	**HT Category**	**596.20**	**2,425.87**	**3,022.07**	**4.84**
1	11 kV	271.55	1,064.27	1,335.82	4.93
2	66 kV	154.38	694.33	848.71	4.74
3	220 kV	170.27	667.27	837.54	4.80
8	**Temporary**	**0.00**	**2.01**	**2.01**	**7.14**
9	**Total**	**606.88**	**2,577.03**	**3,183.91**	**4.76**

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

The Commission has determined revenue from sale of power at existing tariff as INR 3,183.91 Crore in FY 2020-21.

5.22. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the Petitioner has submitted a standalone revenue gap of INR 465.55 Crore for FY 2020-21.

Commission's Analysis

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

Table 119: Standalone Revenue Gap/ (Surplus) approved at existing tariff (INR Crore) for FY 2020-21

S. No	Particulars	Petitioners submission	Now Approved by Commission	Reference Table
1	Annual Revenue Requirement	3,637.49	3,463.28	***Table 117***
2	Revenue from sale of power	3,172.01	3,183.91	***Table 118***
3	**Revenue Gap/(Surplus)**	**465.55**	**279.37**	

The standalone revenue gap at existing retail tariff is INR 279.37 Crore for FY 2020-21. The estimated gap is considered while determining the retail tariff for FY 2020-21, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for FY 2020-21 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of 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.

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

6.2. Applicable Regulations

Regulation 19 of MYT Regulations, 2018 states the following:

"***19. Annual determination of tariff***

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

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

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

Further, Regulation 67 of MYT Regulations, 2018 states the following:

"67. Determination of Tariff

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

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

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

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

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

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

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

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

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

6.3. Cumulative Revenue Gap/ Surplus at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a cumulative revenue gap of INR 591.27 Crore at existing tariff for FY 2020-21. 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	FY 2018-19	FY 2019-20	FY 2020-21
1	Total ARR	3,040.21	3,596.00	3,637.49
2	Revenue @ Existing Tariff	3,027.77	3,385.92	3,172.01
3	Revenue from Surplus Power Sale	0.00	0.03	(0.07)
4	**Total Revenue (2+3)**	**3,027.77**	**3,385.95**	**3,171.94**
5	Revenue Gap /(Surplus) (4-1)	12.45	210.04	465.55
	Covered By:			
6	Previous year's Gap/(Surplus) carried over	(96.77)	(84.32)	125.72
7	Total Gap/(Surplus) (5+6)	(84.32)	125.72	591.27
8	Additional Revenue @ Proposed Tariff	0.00	0.00	533.94
9	**Net Gap/(Surplus) (7+8)**	**(84.32)**	**125.72**	**57.33**

<u>Commission's Analysis</u>

Regulation 8.4 of the MYT Regulation, 2014 stipulates the following:

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

The Commission observes that the Petitioner has not taken any loan till date. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. Keeping in mind all of the above, the Commission has considered the carrying cost @ 8.00% which is the opportunity cost for the Petitioner for FY 2018-19.

Further, Regulation 11.5 (c) of the MYT Regulation, 2018 stipulates the following:

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

.....

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

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

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

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

Since the Petitioner has not borrowed any loan, therefore the Commission allows Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR plus 100 basis points for FY 2019-20 and FY 2020-21.

Accordingly, the Commission determines the standalone revenue gap/surplus for each year and likewise taking into account the previous year's gap/surplus, determines the cumulative revenue gap/ surplus at the end of FY 2020-21 as shown in the table as follows:

Table 121: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Net Revenue Requirement	**2,986.23**	**3,601.97**	**3,463.28**
Revenue from Retail Sales at Existing Tariff	2,982.03	2,993.57	3,183.91
Revenue from FPPCA	0.00	340.58	0.00
Revenue from Regulatory Surcharge	0.00	42.74	0.00
Total Revenue	**2,982.03**	**3,376.90**	**3,183.91**
Standalone Gap/(Surplus) for the year	**4.20**	**225.08**	**279.37**

Table 122: Consolidated Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gap/(Surplus)	(96.77)	(100.14)	126.12
Addition Gap/(Surplus) of standalone year	4.20	225.08	279.37
Closing Gap/(Surplus)	(92.57)	124.94	405.49
Average Gap/(Surplus)	(94.67)	12.40	265.80
Rate of Interest	8.00%	9.55%	8.85%*
Carrying cost	(7.57)	1.18	23.52
Closing Gap/ (Surplus)	**(100.14)**	**126.12**	**429.01**

** SBI MCLR (1 Year) as on 10.02.2020*

The Commission determines a cumulative revenue gap of INR 429.01 Crore till FY 2020-21 at existing tariff.

6.4. Treatment of the cumulative Gap/Surplus and Tariff Design

As derived above, the resultant consolidated revenue gap is INR 429.01 Crore, signifies that the existing tariff is not commensurate with the costs incurred by the Petitioner. In this present situation, in order to fulfill this revenue deficit and to be financially sustainable, the Petitioner requires additional revenue from consumers. In order to achieve the same, the Commission has no other option but to raise tariff so that the distribution licensee is not cash starved or continuously faces financial hardship. 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 recover the proposed cumulative gap of INR 591.27 for FY 2018-19, 2019-20 & FY 2020-21 Crore through tariff hike in FY 2020-21.

1. The Petitioner proposed to keep the fixed charges of all the categories of consumers same as that approved in previous Tariff order. Hence the Petitioner proposed no change in fixed charges.
2. The Petitioner proposed an increase in energy charges of consumer categories like Domestic (Above 400 Units), Commercial/ Non domestic (Beyond 100 Units), LT Industrial, HT Category. The Petitioner does not propose any increase in Agriculture, Public Lighting and Public Water works.
3. The Petitioner also requested the Commission to approve the fuel purchase adjustment formula including the "k" factor for FY 20-21 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 2020-21

S. No	Category /Consumption Slab	Existing FY 2019-20		Proposed FY 2020-21	
		Energy Charges (INR/ kWh)	Fixed Charges	Energy Charges (INR/ kWh)	Fixed Charges
1	**LT-D/Domestic**				
	Ist 50 Units	1.30	5.00 INR./Con/Month	1.30	5.00 INR./Con/Month
	51 to 200 Units	2.00	5.00 INR./Con/Month	2.00	5.00 INR./Con/Month
	201 to 400 Units	2.50	5.00 INR./Con/Month	2.50	5.00 INR./Con/Month
	Beyond 401 Units	3.10	5.00 INR./Con/Month	3.60	5.00 INR./Con/Month
	LIGH		10.00 INR./Con/month		10.00 INR./Con/month
2	**LT-C/Commercial/Non Domestic**				
	1st 100 Units	2.80	5.00 INR./Con/Month	2.80	5.00 INR./Con/Month
	Beyond 100 Units	3.90	5.00 INR./Con/Month	4.40	5.00 INR./Con/Month
3	**LT- Ag/ Agriculture**				
	Upto 10 HP per unit	0.70		0.70	
	Beyond 10 HP per unit	1.00		1.00	
4	**LTP Industrial**				
	Upto 20 HP Connected Load	3.95	10.00 INR./HP/month	4.80/kVAH	10.00 INR./HP/month
	Above 20 HP Connected Load	4.10	50.00 INR./HP/month	4.95/kVAh	50.00 INR./HP/month
5	**LT-PL/Public Lighting**				
	Public Lighting	3.80		3.80	
6	**LT Public Water Works**				
	Upto 20 HP Connected Load	4.30	25.00 INR./HP/month	4.30	25.00 INR./HP/month

S. No	Category /Consumption Slab	Existing FY 2019-20		Proposed FY 2020-21	
		Energy Charges (INR/ kWh)	Fixed Charges	Energy Charges (INR/ kWh)	Fixed Charges
	Above 20 HP Connected Load	4.30	50.00 INR./HP/month	4.30	50.00 INR./HP/month
7	**HT**				
	HT Category				
	11 kV	3.85 INR /kVAh	375.00 INR./kVA/month	4.65 INR /kVAh	375.00 INR./kVA/month
	66 kV	3.80 INR /kVAH	500.00 INR./kVA/month	4.60 INR /kVAh	500.00 INR./kVA/month
	220 kV	3.75 INR /kVAh	550.00 INR./kVA/month	4.55 INR/kVAh	550.0 INR/kVA/month
8	**Hoardings/Advertisements**				
	For all units	7.00	100.00 INR./kVA/month	7.00	100.00 INR./kVA/month
9	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**	4.50	100.00 INR./kVA/month	4.50	100.00 INR./kVA/month

Commission's Analysis

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

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

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

1. *Cost of Supply*

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Discom. For example, in order to ensure that tariffs are kept in check for residential consumers, while still allowing cost recovery for Discoms, cross subsidy is built in between categories. The tariffs so determined, are skewed, with tariff for industrial and commercial consumers being higher and for other categories being lower than their respective costs of supply. The implications of this imbalance in tariffs is twofold – 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 2020-21:

1. On account of the projected cumulative revenue gap during FY 2020-21 at existing tariff, the Commission has decided to increase the tariff. The energy charge of all consumer categories has been increased.

2. The fixed charge has been increased for all categories except for Hoarding/ Advertisements while maintaining no Fixed Charge on Agriculture category consumer.

3. For Charging Station for E-Rickshaw / E-Vehicle on Single point delivery, fixed charges has been removed and Energy charge has been rationalized based on APPC at Discom periphery to INR 4.80/kWh.

6.4.2. Approved Final Tariff Schedule

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the following table:

Table 124: Existing and Approved Tariff for FY 2020-21

S. No.	Category	Existing for FY 2019-20		Approved for FY 2020-21	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
(i)	0-50 Units	5.00 INR/Con/Month	1.30 INR/kWh	10.00 INR/ Con/ Month	1.50 INR/ kWh
(ii)	51 to 200 Units		2.00 INR/kWh		2.20 INR/kWh
(iii)	201 to 400 Units		2.50 INR/kWh		2.75 INR/ kWh
(iv)	Beyond 401 Units		3.10 INR/kWh		3.40 INR/kWh
(v)	LIG	10.00 INR/Con/month	-	20.00 INR/ Con/ Month	-
2	**LT-Non Domestic/Commercial**				
(i)	0 - 100 Units	10.00 INR/Con/Month	2.80 INR/kWh	20.00 INR/ Con/ Month	3.20 INR/kWh
(ii)	Beyond 100 Units		3.90 INR/kWh		4.35 INR/ kWh
3	**LT- Ag/ Agriculture and Poultry**				
(i)	Upto 10 HP	0.70 INR/kWh			0.80 INR/kWh
(ii)	Beyond 10 HP	1.00 INR/kWh			1.15 INR/ kWh
4	**LTP Industrial**				
	(a) LTP Motive Power				
(i)	Upto 20 HP Connected Load	10.00 INR/HP/month	3.95 INR/kWh	20.00 INR/HP/ Month	4.40 INR/kWh
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	4.10 INR/kWh	80.00 INR/HP/ Month	4.60 INR/kWh
	(b) LT Public Water Works				
(i)	Upto 20 HP Connected Load	25.00 INR/HP/month	4.30 INR/kWh	50.00 INR/HP/Month	4.80 INR/kWh
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	4.30 INR/kWh	100.00 INR/HP/Month	4.80 INR/kWh
5	**LT-PL/Public Lighting**				
	Public Lighting	-	3.80 INR/kWh	-	4.25 INR/kWh
6	**HT INDUSTRIAL**				
(i)	11 Kv	375.00 INR/kVA/month	3.85 INR/ kVAh	400.00 INR/kVA/month	4.40 INR/ kVAh
(ii)	66 Kv	500.00 INR/kVA/month	3.80 INR/ kVAh	525.00 INR/kVA/month	4.35 INR/ kVAh
(iii)	220 kV	550.00 INR/kVA/month	3.75 INR/ kVAh	575.00 INR/kVA/month	4.30 INR/ kVAh
7	**Hoardings/Advertisements**				
	For all units	100.00 INR/kVA/month	7.00 INR/kWh	100.00 INR/kVA/month	7.55 INR/kWh
8	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**	100 INR/kVA/month	4.50 INR/kWh	-	4.80 INR/kWh

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

Based on the retail tariff approved above, the revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle (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 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 2020-21 as computed is shown below:

Table 125: Revenue from Approved Retail Tariff for FY 2020-21

S. No	Category	Fixed Charges (INR Cr)	Energy charges (INR Cr)	Total (INR Cr)	ABR (INR/ unit)	k-factor
1	**DOMESTIC**	**0.62**	**38.08**	**39.07**	**2.54**	**0.47**
(i)	0-50 units	0.13	4.67	4.80	1.55	0.29
(ii)	51-200 units	0.29	12.11	12.40	2.26	0.42
(iii)	201-400 units	0.13	7.37	7.51	2.79	0.52
(iv)	401 and above	0.08	13.92	14.00	3.42	0.64
(v)	**Low Income Group**	**0.37**	**0.00**	**0.37**	**-**	**-**
2	**COMMERCIAL/Non-Domestic**	**0.20**	**16.34**	**16.54**	**4.22**	**0.79**
(i)	0-100 units	0.10	2.07	2.17	3.36	0.63
(ii)	101 Units and Above	0.10	14.27	14.37	4.38	0.82
3	**LT INDUSTRIAL**					
(i)	**LTP Motive Power (For All Units)**	**15.85**	**107.67**	**123.52**	**5.27**	**0.98**
	Up to 20 HP	0.11	2.72	2.83	4.57	0.85
	Above 20 HP	15.74	104.95	120.69	5.29	0.99
(ii)	**LT Public Water Works (For all units)**	**0.39**	**2.73**	**3.12**	**5.49**	**1.02**
	Up to 20 HP	0.29	2.23	2.52	5.42	1.01
	Above 20 HP	0.10	0.50	0.60	5.78	1.08
4	**HT/EHT INDUSTRIAL**	**629.76**	**2773.73**	**3403.49**	**5.45**	**1.02**
(i)	11 Kv	289.65	1215.30	1504.95	5.56	1.04
(ii)	66 kV	162.10	794.04	956.15	5.34	1.00
(iii)	220 kV	178.01	764.38	942.39	5.40	1.01
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.65**	**0.65**	**0.91**	**0.17**
(i)	For sanctioned load upto 10 HP	0.00	0.40	0.40	0.80	0.15
(ii)	Beyond 10 HP	0.00	0.25	0.25	1.15	0.21
6	**PUBLIC LIGHTING**	**0.00**	**1.31**	**1.31**	**4.25**	**0.79**
7	**HOARDINGS/SIGNBOARDS**	0.00	0.00	0.00	-	-
8	**TEMPRORARY***	**0.00**	**2.01**	**2.01**	**7.14**	**1.33**
9	**EV CHARGING STATION**	**0.00**	**0.00**	**0.00**	**-**	**-**
	Total	**647.19**	**2,942.48**	**3,589.67**	**5.37**	**1.00**

**Tariff will be 1.5 Times the ABR of relevant category for FY 2020-21*

The Commission approves revenue from approved Retail Tariff of INR 3,589.67 Crore for the FY 2020-21.

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 2020-21

S. No	Category	ACOS (INR /kwh)	ABR at existing tariff (INR /kwh)	ABR at approved tariff (INR /kwh)	Increase/ (Decrease) in ABR (%)
1	Domestic	5.18	2.27	2.54	**11.70%**
2	Commercial /Non-Domestic	5.18	3.74	4.22	**12.58%**
3	Agriculture and Poultry	5.18	0.79	0.91	**14.58%**
4	LT Industry	5.18	4.52	5.27	**16.72%**
5	HT/EHT Industry	5.18	4.84	5.45	**12.62%**
6	Public Lighting	5.18	3.80	4.25	**11.83%**
7	Public Water Works	5.18	4.64	5.49	**18.20%**
8	Temp. Supply	5.18	7.14	7.14	**0.00%**
10	**Total**	**5.18**	**4.76**	**5.37**	**12.74%**

The average increase in the retail tariff now approved by the Commission vis-à-vis tariff approved for FY 2019-20 vide Order dated May 20, 2019 is 12.74%. Apart from the tariff for FY 2019-20, the Commission has approved the FPPCA to be levied by DNHPDCL for 3 quarters during FY 2019-20. Hence, the consumers during FY 2019-20 have effectively paid tariffs approved vide Order dated May 20, 2019 and FPPCA approved during three quarters of FY 2019-20. Considering the average FPPCA paid by consumers during FY 2019-20, the effective tariff increase for FY 2020-21 works out to only 1.44%.

6.4.4. Revenue Gap/ Surplus at Approved Tariff

On considering the additional revenue from Regulatory Surcharge, the resultant Revenue Gap/ (Surplus) has been shown in the table below:

Table 127: Cumulative revenue Gap/ (Surplus) at approved Tariff for FY 2020-21

S.No.	Particulars	FY 2018-19	FY 2019-20	FY 2020-21
1	**Net Revenue Requirement**	**2,986.23**	**3,601.97**	**3,463.28**
2	Revenue from Retail Sales at Proposed Tariff	2,982.03	2,993.57	3,589.67
3	Revenue from Regulatory Surcharge	0.00	42.74	0.00
4	Revenue from FPPCA Charges	0.00	340.58	0.00
6	**Total Revenue**	**2,982.03**	**3,376.90**	**3,589.67**
7	**Standalone Gap/ (Surplus) for the year**	**4.20**	**225.08**	**(126.39)**
8	**Opening Gap/ (Surplus)**	**(96.77)**	**(100.14)**	**126.12**
9	Addition Gap/ (Surplus) of standalone year	4.20	225.08	(126.39)
10	**Closing Gap/ (Surplus)**	**(92.57)**	**124.94**	**(0.27)**
11	Average Gap/ (Surplus)	(94.67)	12.40	62.93
12	Rate of Interest	8.00%	9.55%	8.85%
13	Carrying cost	(7.57)	1.18	5.57
14	**Closing Gap/ (Surplus)**	**(100.14)**	**126.12**	**5.30**

The Commission approves a cumulative revenue gap of INR 5.30 Crore till FY 2020-21. The Commission has designed the category-wise tariffs to almost match the Revenue at approved tariffs to meet the ARR for FY 2020-21 including cumulative Revenue Gap. The approved cumulative closing gap of INR 5.30 Crore is less than 1% of the approved ARR for FY 2020-21 which may get adjusted due to variation in actual sales mix during the year.

6.4.5. Highlights of the Tariff Structure

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

1. On account of the projected cumulative revenue gap during FY 2020-21 at existing tariff, the Commission has decided to increase the tariff. The energy charge of all consumer categories has been increased.

2. The fixed charge has been increased for all categories except for Hoarding/ Advertisements while maintaining no Fixed Charge on Agriculture category consumer.

3. For Charging Station for E-Rickshaw / E-Vehicle on Single point delivery, fixed charges has been removed and Energy charge has been rationalized based on APPC at Discom periphery to INR 4.80/kWh.

7. Chapter 7 Open Access Charges for the FY 2020-21

7.1. Determination of Additional Surcharge

Petitioner's submission:

The Petitioner has submitted the following calculations for Additional Surcharge for FY 2020-21:

Table 128: Additional Surcharge submitted by Petitioner for FY 2020-21

Particulars	FY 2020-21
Total Power Purchase cost (INR Crores)	3,498.46
Fixed Cost component in Power Purchase Cost (including Transmission Charges) (INR Crores)	1,369.40
Energy Sales (MU)	6,706.90
Additional Surcharge (INR/kWh)	**2.04**

Commission's Analysis

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"*An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:*

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

"This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges."

Further, Regulation 5.2 (1) (b)of the aforesaid regulation the following:

"*The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.*

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

In order to compute the Additional Surcharge, the Petitioner considered Fixed cost including the transmission cost which is incorrect method of calculating the Additional surcharge. The Commission has computed additional surcharge for FY 2020-21 by considering fixed charges excluding the Transmission charges.

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 2020-21

S. No.	Particulars	FY 2020-21
1	Total Power Purchase Fixed Cost (excluding transmission charges) (INR Crores)	834.01
2	Energy Sales (MUs)	6,689.48
3	**Additional Surcharge (INR/kWh)**	**1.25**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 1.25/kWh for FY 2020-21.

The Commission directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyze the information and revise the applicable Additional Surcharge, if required.

7.2. 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 2020-21

Annual Revenue Requirement	Allocation (%)		Allocation FY 2019-20	
Particular	**Wheeling**	**Supply**	**Wheeling**	**Supply**
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	3,498.46
Employee	40%	60%	6.64	9.96
R&M	90%	10%	11.86	1.32
A&G	50%	50%	3.63	3.63
Depreciation	90%	10%	19.10	2.12
Interest Cost on Long-term Capital Loans	90%	10%	6.31	0.70
Interest on Working Capital Loans	10%	90%	5.05	45.49
Interest on Security Deposit	10%	90%	0.27	2.43
Return on Equity	90%	10%	23.07	2.56
Income Tax	90%	10%	-	-
Provision for Bad and Doubtful Debt	0%	100%	-	-
Annual Revenue Requirement			**75.94**	**3,566.67**

Annual Revenue Requirement	Allocation (%)		Allocation FY 2019-20	
Particular	**Wheeling**	**Supply**	**Wheeling**	**Supply**
Less: Non-Tariff Income	10%	90%	0.51	4.60
Less: Revenue from Surplus Power Sale	50%	50%	-	-
Net Revenue Requirement			75.42	3,562.07

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	80900	458.80	40%	20.89%	579.94
11 kV	921	2,653.07	30%	3.80%	2,757.87
66 kV	32	2,275.84	20%	1.50%	2,310.49
220 kV	2	1,319.19	10%	0.60%	1,327.16
Total	**81855**	**6,706.90**	**100%**	**3.85%**	**6,975.46**

The wheeling charges submitted by the Petitioner are as below:

Table 132: Wheeling charges proposed by Petitioner for FY 2020-21

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11 kV-LT	21.88	21.32	43.19	0.74
11 kV	0.25	15.99	16.24	0.06
66 kV	0.01	10.66	10.67	0.05
220 kV	0.00	5.33	5.33	0.04
Total	**22.13**	**53.29**	**75.42**	

Commission's Analysis:

As per Regulation 48.1 of MYT Regulations 2018:

"48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable….."

The 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 2019-20. The allocation between wheeling and retail supply business for FY 2020-21 as per the ARR approved in this Order is provided in the table 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	3,340.99	3,340.99
Employee costs	*40%*	*60%*	5.36	8.04	13.41
Administration and General Expenses	*50%*	*50%*	3.17	3.17	6.34
Repair and Maintenance Expenses	*90%*	*10%*	10.37	1.15	11.53
Depreciation	*90%*	*10%*	17.27	1.92	19.19
Interest and Finance charges	*90%*	*10%*	5.47	0.61	6.08
Interest on Working Capital	*10%*	*90%*	5.78	52.05	57.84
Interest on consumer security deposit	*10%*	*90%*	0.27	2.43	2.70
Return on Equity			18.02	2.07	20.09
Provision of Bad & Doubtful Debt	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**65.72**	**3,412.44**	**3,478.16**
Less: Non-Tariff Income	*10%*	*90%*	1.49	13.39	14.88
Income from other Business	*50%*	*50%*	0.00	0.00	0.00
Net Revenue Requirement			**64.235**	**3,399.044**	**3,463.28**

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	446.00	24.32%	594.47	80903	40%
11kV	2,709.05	3.80%	2,816.06	920	30%
66kV	1,790.63	1.50%	1,817.90	28	20%
220 kV	1,743.80	0.60%	1,754.33	3	10%
Total	**6,689.48**	**4.20%**	**6,982.76**	**81,855**	**100%**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 135: Wheeling Charges approved by Commission for FY 2020-21

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11kV	18.69	18.13	36.82	0.83
11kV	0.21	13.60	13.81	0.05

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
66kV	0.01	9.07	9.07	0.05
220 kV	0.00	4.53	4.53	0.03
Total	**18.91**	**45.33**	**64.23**	

The Commission approves wheeling charge of INR 0.83/kWh at LT voltage level, INR 0.05/kWh at 11 kV, INR 0.05/kWh at 66 kV voltage level and INR 0.03/kWh at 220kV for FY 2020-21.

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 Intra-State distribution losses at 3.85%, as proposed in the ARR for FY 2020-21

Table 136: Cross-subsidy Surcharge for FY 2020-21 submitted by Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross-Subsidy (INR/kWh)
Below 11 kV-LT	8.00	3.99	-4.02
11 kV	5.31	5.66	0.35
66 kV	5.16	5.56	0.40
220 kV	5.10	5.55	0.45

<u>Commission's Analysis</u>

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 4.20%, as approved in the ARR for FY 2020-21. 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	24.98%	24.98%
11kV	3.80%	5.90%
66kV	1.50%	2.10%
220 kV	0.60%	0.60%
Total	**4.20%**	**4.20%**

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	446.00	24.98%	594.47
11kV	2,709.05	5.90%	2,816.06
66kV	1,790.63	2.10%	1,817.90
220 kV	1,743.80	0.60%	1,754.33
Total	**6,689.48**	**4.20%**	**6,982.76**

Now the overall ARR approved for FY 2020-21 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	594.47	80,903	40.00%
11kV	2,816.06	920	30.00%
66kV	1,817.90	28	20.00%
220 kV	1,754.33	3	10.00%
Total	**6,982.76**	**81,855**	**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	175.24	176.51	351.75	446.00	**7.89**
11kV	538.91	836.13	1375.03	2709.05	**5.08**
66kV	348.25	539.76	888.01	1,790.63	**4.96**
220 kV	327.60	520.89	848.49	1,743.80	**4.87**
Total	**1,390.00**	**2,073.28**	**3,463.28**	**6,689.48**	

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 2020-21

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Below 11kV	7.89	4.17	**(3.71)**
11kV	5.08	5.56	**0.48**
66kV	4.96	5.34	**0.38**
220 kV	4.87	5.40	**0.54**

Therefore, the Commission approves INR 0.48/kWh for 11 kV, INR 0.38/kWh for 66 kV, INR 0.54/kWh for 220 kV consumers and Nil for below 11 kV consumers as Cross-Subsidy Surcharge for FY 2020-21.

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 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 2017-18 will be undertaken by the Commission once the audited accounts of the FY 2017-18 are available. If the audited accounts for the FY 2017-18 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2019-20, 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:

$$\boldsymbol{FPPCA\left(\frac{Rs.}{Unit}\right) =. \left(\frac{(Pact + Tact + Oact - ASact) * 10}{\{[PPOact * (1 - TLapp) + PPIact - PSOact] * (1 - DLapp)\} - Zact}\right) - Rapp}$$

Where:

- $Pact(in\ Rs.Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ Rs.Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost

- $Oact\ (in\ Rs. Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ Rs. Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ \ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ \ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{Rs}{unit}) = \left(\frac{(Papp + Tapp\ ) * 10}{\{[PPOapp * \ (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ Rs. Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power
- $Tapp\ (in\ Rs. Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

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 BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to a $\pm$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 $\pm$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 2020-21.

Table 142: $R_{approved}$ determined by Commission for FY 2020-21

S. No.	Particulars	Amount
1	Total Power Purchase Cost (INR Crore), Papp	2,921.05
2	Transmission Charges (INR Crore), T_{app}	419.94
3	Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NSPCL, NPCIL, EMCO) (MU), PPO_{app}	5,498.93
4	Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.66%
5	Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	1,669.78
6	Quantum of Sale of Surplus Power (MU), PSO_{app}	-
7	Approved Intra-State T&D Loss (%), DL_{app}	4.20%
8	Energy Sales for LIG and Agriculture consumer category (MU), Z_{app} (MU)	7.14
9	**R_{app} (INR/kWh)**	**5.01**

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 10 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. Enforcement Cell

Originally Issued in Tariff Order dated 31st July 2012
Commission's Directive in Tariff Order Dated 20th May 2019: *With regards to submission of quarterly report on the cases detailed by enforcement cell and revenue recovered from FY 2016-17 and FY 2018-19, the Commission directed as follows:* *The Commission has noted with concern that the 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 2 months of issuance of this Order and submit the desired details for the FY 2016-17 and FY 2018-19.*
Petitioner's Response in the Present Tariff Petition: *The DNHPDCL would like to submit to the Commission that the progress report detailing number of cases, amount involved, amount of revenue fines recovered for the FY 2018-19 and the first two quarters of FY 2019-20 is being enclosed along with this petition as Annexure IV.*
Commission's Response: The Commission notes the compliance to the above Directive and accordingly drops the directive. However, the Commission directs Petitioner to ensure submission of quarterly report on regular basis.

9.1.2. 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 in the Present Tariff Petition *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.

9.1.3. 100% Metering

Originally Issued in Tariff Order dated 15th December 2015
Commission's Directive in Tariff Order Dated 20th May 2019 *The Commission has noted the Petitioner's response and directs the Petitioner to report status of metering within two months of issuance of this Order. Further, the Petitioner is also directed to submit a quarterly report on status of metering in the UT, till 100% metering is achieved.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL would like to submit to the Commission that 100% metering has been achieved in the UT of Dadra & Nagar Haveli.*
Commission's Response The Commission notes the compliance to the above Directive and accordingly drops the directive.

9.1.4. 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 in the Present Tariff Petition *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.

9.1.5. 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 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 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.

9.1.6. Capital Expenditure

Originally Issued in Tariff Order dated 30th January 2018
Commission's Directive in Tariff Order Dated 20th May 2019 *The Commission observed that though the Petitioner has submitted that INR 60 Crore would be capitalized in FY 2018-19, the capitalization submitted in Annual Performance Review is only INR 20.65 Crore. However, the Petitioner has not been able to submit any supporting documents for the same. Therefore, the Petitioner is directed to ramp up its efforts towards capital expenditure and further take steps towards strengthening the distribution network. Further, the Petitioner is directed to submit the claim for capitalization in line with the capitalization already carried out in the first half of the year and provide the supporting documents for same along with the Tariff Petition.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL would like to submit that the details of the capitalization achieved during the FY 2018-19 are being submitted along with this petition in the Fixed Asset Register for the FY 2018-19.*
Commission's Response The Commission notes the Compliance of the Petitioner and accordingly drops the directive. The Commission in the MYT order FY 2018-19 approved INR 83.18 Crore for Capitalization out of which the Petitioner Capitalized INR 19.40 Crore. Lower Capital Expenditure has direct impact on the reliability and quality of supply to consumers. Therefore, the Petitioner is directed to ramp up its efforts towards capital expenditure and further take steps towards strengthening the distribution network.

9.1.7. Assets created from consumer contribution

Originally Issued in Tariff Order dated 30th January 2018
Commission's Latest Directive in Tariff Order Dated 20th May 2019 *The Commission notes the Petitioner's submission. The Commission directs the Petitioner to submit a separate list of assets created out of Consumer Contribution to the Commission within two months of issuance of this Order.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL would like to submit that the fixed assets register containing the details of assets created from consumer contribution and recognized at a nominal value of Re 1 is already submitted to the JERC through mail. Further, the fixed assets register for the FY 2018-19 has also been audited by the statutory auditor and the Govt. Auditor. Accordingly, this directive may kindly be treated as complied with.*
Commission's Response The Commission notes the Petitioner's submission and drops the directive.

9.2. New Directives Issued

9.2.1. Timely Submission of Reports

Commission's Directive
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.

9.2.2. Quarterly RPO Compliance Report Submission

Commission's Directive
The Commission directs the Petitioner to submit quarterly RPO report henceforth timely within 15 days of the subsequent quarter.

9.2.3. Quarterly details of Stranded Power (Open Access)

Commission's Directive
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.

9.2.4. Status of Metering

Commission's Directive
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.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 143: Tariff Schedule for FY 2020-21

S. No.	Category	Fixed Charges	Energy Charges
1.	**DOMESTIC**		
(i)	0-50 units	10.00 INR/Con/Month	1.50 INR/kWh
(ii)	51-200 units		2.20 INR/kWh
(iii)	201-400 units		2.75 INR/kWh
(iv)	401 and above		3.40 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	3.20 INR/kWh
(ii)	101 units and above	20.00 INR/Con/Month	4.35 INR/kWh
3.	**LT INDUSTRIAL**		
(a)	LTP Motive Power		
(i)	Up to 20 HP	20.00 INR/HP/Month	4.40 INR/kWh
(ii)	Above 20 HP	80.00 INR/HP/Month	4.60 INR/kWh
(b)	LT Public Water Works		
(i)	*Up to 20 HP*	50.00 INR/HP/Month	4.80 INR/kWh
(ii)	*Above 20 HP*	100.00 INR/HP/Month	4.80 INR/kWh
4.	**HT/EHT INDUSTRIAL**		
(i)	11 kV supply	400.00 INR/kVA/month	4.40 INR/kVAh
(ii)	66 kV supply	525.00 INR/kVA/month	4.35 INR/kVAh
(iii)	220 kV supply	575.00 INR/kVA/month	4.30 INR/kVAh
5.	**AGRICULTURE AND POULTRY**		
(i)	For sanctioned load up to 10 HP	-	0.80 INR/kWh
(ii)	Beyond 10 HP	-	1.15 INR/kWh
6.	**PUBLIC LIGHTING**		
(i)	For all units	-	4.25 INR/kWh
7.	**HOARDINGS/ SIGNBOARDS**		
(i)	Hoarding/ Signboards	INR 100 per kVA per Month or part thereof	7.55 INR/kWh

S. No.	Category	Fixed Charges	Energy Charges
8.	**ELECTRIC VEHICLE CHARGING**		
(i)	Electric Charging Vehicle	-	4.80 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 2020-21

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**	-

S. No	Category	Applicability
9.	Hoardings / Signboards	This schedule shall apply to electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.
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).

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

10.3. General Conditions of HT and LT Supply

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

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

3. Supply to consumers having contracted load between 100 KVA to 5000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 KV and for more than 5000 KVA up to 25000 KVA at 66 KV. For the consumer who requires load more than 25000 KVA, the supply voltage shall be at 220 KV level.

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

5. If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.

6. **Power Factor Charge**s - LT and Agriculture Connection running without proper capacitors installed so as to maintain Power Factor of 0.85 as per the Supply Code Regulations 2018 shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply. 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 Supply Code Regulation. If such over-drawal is more than 20% of the contract demand, then the connections shall be disconnected immediately.

   Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

10. Unless specifically stated to the contrary, the figures of energy charges relate to paisa per unit (kWh) charge for the energy consumed during the month.

11. Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paisa shall be ignored and amount of 50 paisa or more shall be rounded off to the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only up to the month of permanent disconnection.

12. **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

13. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment, a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.

14. 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.

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/-

Description	Approved Charges
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.	
Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by DNHPDCL.	
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 Public Hearing on January 21, 2020 in Silvassa:

Table 146: List of participants in Public Hearing

S. No.	Name of Stakeholder
1	Shri Atul R Shah, Federation of Industries Association
2	Shri Mahipal Solanki, APCPI
3	Shri H.B. Pandal, RIL-SMD
4	Shri K. J. Mody, APCPI
5	Shri R.N. Purohit, APCPI
6	Shri Ravi N. Pandey, Federation of Industries Association
7	Shri A.K. Shivhare, Sanathan
8	Shri Chandrakant M Parekh, Federation of Industries Association
9	Shri DSR Raju, Precision Wires Ind. Ltd.
10	Shri DR. Shelka, Federation of Industries Association
11	Shri P. Gajjar, Sterlite
12	Shri Rajesh Gupta
13	Shri Sanjay Gupta
14	Shri Shubham Goyal
15	Shri K.J. Deshi, Apar Industries Limited
16	Shri P.K. Jadia
17	Shri Sumit Jain, Arihant Polysacks
18	Shri Pankaj
19	Shri S.C. Choudhary, Balaji Castings
20	Shri Anshu, Vaishno Castings
21	Shri Vijay G, Sterlite Copper