TARIFF ORDER

True-up of FY 2017-18, Annual Performance Review of 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

Petition No. 270/2018

For

DNH Power Distribution Corporation Limited

20th May, 2019

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
3rd and 4th Floor, Plot No. 55-56,
Sector -18, Udyog Vihar - Phase IV
Gurugram, (122015) Haryana
Telephone: +91(124) 4684705 Telefax: +91(124) 4684706
Website: www.jercuts.gov.in
E-mail: secy-jerc@nic.in

Table of Contents

List of Tables

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
CGRF	Consumer Grievance Redressal Forum
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
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
JKPDD	Power Development Department , Jammu and Kashmir
LC	Letter of Credit
LT	Low Tension
MU	Million Units
MOD	Merit Order Dispatch
MoP	Ministry of Power
MYT	Multi Year Tariff
NFA	Net Fixed Assets
NRS	Non-Residential Supply
NTPC	National Thermal Power Corporation

Abbreviation	Full Form
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
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
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
WART	Weighted Average Retail Tariff

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Shri. M. K. Goel, Chairperson

Smt. Neerja Mathur, Member

Petition No. 270/2018

In the matter of

Approval for the 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 Retail Tariff for FY 2019-20.

And in the matter of

DNH Power Distribution Corporation Limited (DNHPDCL)..Petitioner

ORDER

Dated: 20th May 2019

1. This Order is passed in respect of a Petition filed by the DNH Power Distribution Corporation Limited for approval of true-up of FY 2017-18, Annual Performance Review of FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Retail Tariff for FY 2019-20.

2. On receipt of the Petition, the Commission scrutinised its contents and requisitioned further information/clarifications on the data gaps observed in the Petition to take a prudent view of the Petition. Further, suggestions/comments were invited from the Public/Stakeholders. A Public Hearing was also held and the Stakeholders/Public were heard.

3. The tariff, as detailed in the Chapter "Tariff Schedule", Open Access Charges and other provisions as approved in this Order shall come into force from 1st June 2019 and shall remain valid till further Orders of the Commission.

4. The licensee shall publish the revised Tariff Schedule and the salient features of tariff 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.

5. 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 2017-18, APR of FY 2018-19 and ARR for the 2nd MYT Control Period along with the Retail Tariff for FY 2019-20.

The summary of each year has been provided as follows:

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

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	2,324.80	2,232.58
2	Revenue from Retail Sales at Existing Tariff	2,280.44	2,224.80
3	Total Revenue	2,280.44	2,224.80
4	**Net Gap / (Surplus)**	**44.36**	**7.78**

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

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

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Annual Revenue Requirement	2,942.09	2,928.88
2	Revenue from sale of power	2,541.89	2,620.32
3	FPPCA	103.11	103.11
4	Regulatory Surcharge	246.54	254.17
5	Total Revenue	2,892.06	2,977.60
6	**Revenue Gap/ (Surplus)**	**50.04**	**(48.72)**

iii) The following table provides ARR, Revenue and gap as submitted by the Petitioner and approved by the Commission for FY 2019-20:

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

S. No	Particulars	Petitioner's submission	Approved by Commission
1	Net Revenue Requirement	3,037.65	3,105.86
2	Revenue from Retail Sales at Approved Tariff	3,036.10	2,953.66
3	**Net Gap / (Surplus)**	**1.55**	**152.20**

iv) Accordingly , the following table provides the cumulative revenue gap/ surplus at approved tariff by the end of FY 2019-20:

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

S.No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	Opening Gap/ (Surplus) (a)	(97.09)	(96.77)	(155.18)
2	Add: Gap/ (Surplus) (b)	7.78	(48.72)	152.20
3	Closing Gap/ (Surplus) (c)	(89.31)	(145.49)	(2.98)
4	Average Gap/ (Surplus) (d=a+c/2)	(93.20)	(121.13)	(79.08)
5	Rate of Interest (e)	8.00%	8.00%	9.55%
6	Carrying cost (f=d*e)	(7.46)	(9.69)	(7.55)
7	**Closing Gap/ (Surplus) (c+f)**	**(96.77)**	**(155.18)**	**(10.53)**

6. The Commission discontinues the Regulatory Surcharge of 9.70% as approved in the Tariff Order of FY 2018-19. Further, on account of the projected standalone revenue gap during FY 2019-20 at existing tariff, the Commission has decided to increase the tariff by an average of 8.53%. The energy charges of

all consumers' categories has been increased except for LIG, Agriculture and hoarding/signboards categories. The fixed charges have been increased from INR 5/connection/month to INR 10/connection/month in both the slabs of commercial category and from INR 5/HP/month to INR 10/HP/month in up to 20 HP slab of LT Motive Industry.

7. The Commission believes that the demand for charging infrastructure for electric vehicles will increase in the near future due to increased commercialization. Furthermore, the Commission is of the opinion that to impart the necessary impetus for the adoption of E-Vehicles in the Territory a sustainable framework has to be developed and having a designated electricity tariff is the first step towards achieving it. Therefore, keeping in view the anticipated demand and need, the Commission introduces a new category namely Electric Vehicle Charging Stations for consumers setting up infrastructure for charging of Electric vehicles/ Electric rickshaws etc. and has fixed the tariff as per the guidelines of Ministry of Power, Govt. of India.

8. Ordered as above, read with the attached document giving detailed reasons, grounds and conditions.

-Sd-	-Sd-
(Neerja Mathur)	**(M.K. Goel)**
Member	**Chairperson**

Place: Gurugram
Date: 20th May 2019

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

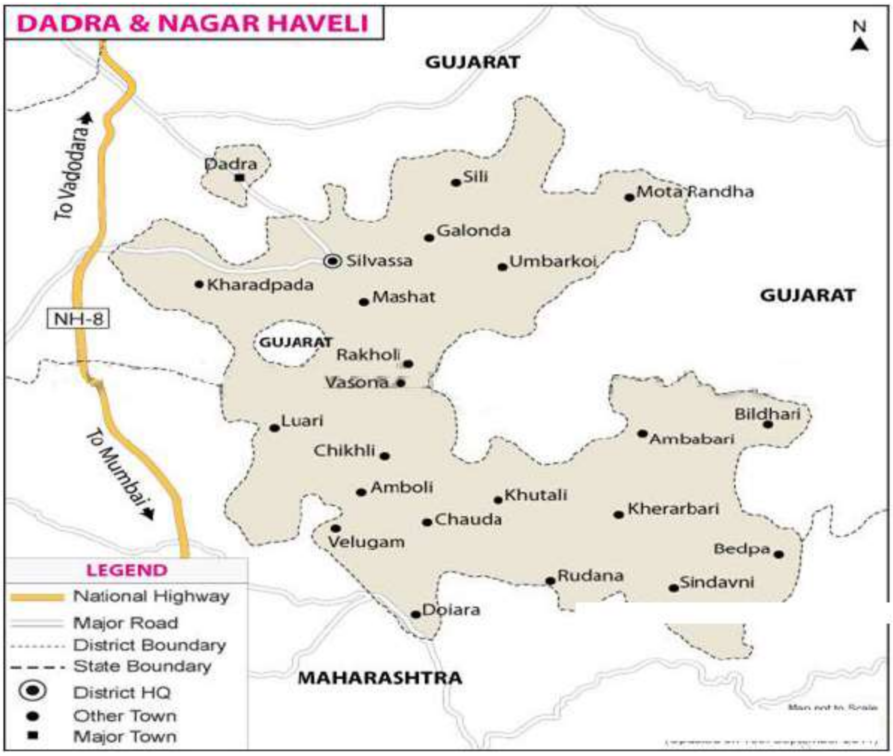
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R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

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

1.2. About Union Territory of Dadra and Nagar Haveli

The Union Territory of Dadra and Nagar Haveli (hereinafter referred to as "UT" or "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 Territory 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 average demand of this territory is 740 MW to 760 MW and peak demand is 801 MW. The UT 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 the UT of 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 the UT, for the supply of electricity required within the UT and for the distribution of the same in the most economical and efficient manner;
- Supplying electricity, as soon as practicable to any person requiring such supply, within its competency to do so under the said Act;
- Preparing and carrying out schemes for distribution and generally for promoting the use of electricity within the UT.

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, the UT gets power from 400/220 kV Substation of POWERGRID Vapi and 400/220 kV Kala Substation of POWERGRID (DNH). DNHPDCL has total sub-transmission capacity of 1000 MVA, including 520 MVA in Kharadpada and 480 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	66 kV Line (Double Circuit)	km	280
2	11 kV Line	km	834
3	LT Line	km	1,778
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 (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 on June 20, 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on August 10, 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Multi Year Tariff Regulations, 2018

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 on August 10, 2018. These Regulations are applicable in the 2nd MYT Control Period comprising of three financial years from FY 2019- 20 to FY 2021-22. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.6. 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 September 4, 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. Filing and Admission of the Present Petition

As per Regulation 9.1 of the JERC MYT Regulations, the Petitioner is required to file for approval of the Commission, the Multi-Year Tariff application with the forecast of Aggregate Revenue Requirement for each year of the Control Period and tariff proposal for the first year of the Control Period.

The Petitioner has submitted the current Petition for approval of True-up of the FY 2017-18, Annual Performance Review of FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Retail Tariff proposal for the FY 2019-20 vide letter no. 1-1(568)/PDCL-AE(Comml)/2018/3518 dated December 7, 2018.

The letter was received from the Petitioner on December 10, 2018 and after initial scrutiny/analysis, the Petition was admitted on December 14, 2018 and was marked as Petition no. 270/2018.

1.8. Interaction with the Petitioner

The Order has referred at numerous places to various actions taken by the "Commission." It may be mentioned for the sake of clarity that the term "Commission", except for the Hearing and Orders, denotes the Secretariat of the Commission responsible for carrying out technical due diligence and validation of data of the Petitions filed by the utilities, obtaining and analysing information/clarifications received from the utilities, and submitting relevant issues for consideration of the Commission.

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalisation, tariff proposal etc. The Petitioner submitted its response on the issues through various letters/emails. The 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 14, 2018
2	Reply received from Petitioner	January 25, 2019 / February 7, 2018 / February 8, 2018 / February 12, 2018 / February 16, 2018 / February 21, 2018
3	Public Hearing	February 6, 2019
4	Issuance of Second Deficiency Note	February 25, 2019
5	Reply received from Petitioner	February 25, 2018 / February 26, 2018

1.9. Public Notice for Public Hearing

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

Table 7: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Place of Circulation
1	December 27, 2018	Silvassa Mirror (English)	Silvassa
2	December 27, 2018	Nispaksh Jansansar (Hindi)	Silvassa
3	December 27, 2018	Daman Ganga Times (Gujarati)	Surat
4	January 10, 2019	Nispaksh Jansansar (Hindi)	Silvassa
5	January 10, 2019	Gujarat Samachar (Gujarati)	Surat

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 February 6, 2019 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	January 10, 2019	Nispaksh Jansansar (Hindi)	Silvassa
2	January 10, 2019	Indian Express (English)	Ahmedabad
3	January 10, 2019	Gujrata Samachar (Gujarati)	Surat
4	February 2, 2019	Nispaksh Jansansar (Hindi)	Silvassa
5	February 2, 2019	Indian Express (English)	Ahmedabad
6	February 2, 2019	Gujrata Samachar (Gujarati)	Surat

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

1.10. Public Hearing

The Public Hearing was held on February 6, 2019 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 major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

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

2.1. Regulatory Process

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

The Public Hearing was held on February 6, 2019 from 10 AM onwards at Hotel Yatri Nivas in Silvassa on Petition for the True-up of FY 2017-18, APR of FY 2018-19 and Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22). During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general Public, who had not submitted written comments earlier, were also given an equal opportunity to present their views/suggestions in respect to the Petition.

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

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

2.2.1. True up of FY 2017-18

2.2.1.1. Gross Fixed Assets and Depreciation

Stakeholder's Comment:

The Fixed Asset Register should be made Public for inspection by the various stakeholders so as to identify various assets created through consumer contributions. It has also been requested to follow the Commission's Regulations for the computation of depreciation rather than the accounting policies of the Petitioner.

Petitioner's Response:

The Corporation has already submitted the asset verification report prepared by an independent third party agency to the Commission and the same has also been uploaded on the website of the Corporation. Further, the same can also be verified from the annual report of the Corporation which has also been uploaded on the website of the Corporation.

Commission's View:

The Commission has noted the concern of the Stakeholders and the submission of the Petitioner. The Commission has examined the Fixed Asset Register submitted by the Petitioner and computed the Gross Fixed Assets and depreciation in accordance to MYT Regulations, 2018.

2.2.1.2. Interest on Loan and Interest on Working Capital

Stakeholder's Comment:

The Petitioner is not required to borrow funds from various financial institutions and hence, the Interest and Finance Charges and the Interest on Working Capital should not be considered as components of ARR.

Petitioner's Response:

The interest and finance charges and the Interest on Working Capital have been considered on a normative basis. Hence, it is requested to please approve the interest and finance charges as submitted in the Tariff Petition.

Commission's View:

The Petitioner is entitled to return on its investments, which includes return on equity and interest on loan as well as interest on the working capital required for running of the business. If the Petitioner is not borrowing funds from outside, a normative portion is considered as loan by the Commission as per the provisions of the MYT Regulations, 2018. As a part of prudence check, the Commission has considered the various interest rates strictly as per the provisions of applicable Regulations.

2.2.1.3. Rebate received from NTPC

Stakeholder's Comment:

The Stakeholders have raised the issue of non-consideration of INR 100.09 Cr rebate received from NTPC. It was requested that the rebate be considered in the true up of FY 2017-18.

Petitioner's Response:

The power purchase cost submitted as part of the true up for the FY 2017-18, has been arrived at after deducting the rebate of INR 100.09 Crores received from NTPC from the total power purchase cost of FY 2017-18.

Commission's View:

The Commission has noted the concern of the Stakeholders. The Commission has considered the rebate of INR 100.09 Cr received from NTPC while determining the net power purchase cost in the true up of FY 2017-18.

2.2.1.4. Surplus to be set aside

Stakeholder's Comment:

The Stakeholders have raised the issue of setting aside of an amount of INR 180 Cr from the surplus for FY 2016-17. It was requested that the said amount be considered in the true up of FY 2017-18.

Petitioner's Response:

As per the directions from the Commission, the Corporation has already submitted a letter from DNH administration in this regards to the Commission.

Commission's View:

The Commission has noted the concern of the stakeholders. The Commission has set aside the surplus of INR 180 Cr in accordance with the submission made by the DNH UT Administration.

2.2.1.5. Revenue Components

Stakeholder's Comment:

The Regulatory Surcharge levied from February 2018 to March 2018 has not been considered for the computation of the Revenue for FY 2017-18. The same be considered in the true up of FY 2017-18.

Petitioner's Response:

The regulatory surcharge for the period February 2018 to March 2018 has been considered as part of the total revenue in the true up for the FY 2017-18.

Commission's View:

The commission has noted the concern of the stakeholders and submission of the Petitioner. The Commission has considered the revenue from Regulatory Surcharge for determining the total revenue in true-up of FY 2017-18.

2.2.1.6. Asset Verification

Stakeholder's Comment:

The Stakeholders expressed concern at the inordinate delay in the submission of the asset verification report by the Petitioner as the Commission has been reiterating a directive on the same for the past 5 years.

Petitioner's Response:

The asset verification report has been submitted to the Commission along with the MYT Petition.

Commission's View:

The Commission notes the compliance by the made by the Petitioner and informs the stakeholders that the Asset Verification Report has been received and examined by the Commission and the depreciation has been allowed accordingly.

2.2.2. Annual Performance Review of FY 2018-19

2.2.2.1. REC Cost Estimate

Stakeholder's Comments

The Stakeholders have estimated the REC cost at INR 54.32 Cr for FY 2018-19 as opposed to the figure of INR 70.77 Cr submitted by the Petitioner, which amounts to an overestimate by INR 16.45 Cr.

Petitioner's Response

The REC cost has been estimated by considering the shortfall in the energy to be purchased under the solar and non-solar RPO. Further, the Corporation also has to pay GST of 12% on the certificates being purchased. Hence, it is requested to please approve the REC cost as submitted by the Corporation as part of the review for the FY 2018-19.

Commission's View

The Commission has considered the cost of REC as per Floor Price Rate approved by CERC. The same shall be trued-up based on actual cost incurred by the Licensee.

2.2.2.2. Revenue from Regulatory Surcharge

Stakeholder's Comments

The Regulatory surcharge at INR 253.12 Cr for FY 2018-19 against the figure of INR 246.54 Cr submitted by the Petitioner, which amounts to an underestimate by INR 6.58 Cr.

Petitioner's Response

The regulatory surcharge has been estimated as 9.70% of the total revenue estimated for the FY 2018-19 as part of the review for the FY 2018-19. Hence, it is submitted that the regulatory surcharge be approved as submitted by the Corporation for the FY 2018-19 in the MYT Petition.

Commission's View

The commission has noted the concern of the stakeholders and the Petitioner. The Commission has considered the revenue from Regulatory Surcharge @9.70% of the total revenue from retail sales at approved tariff in Annual Performance Review of FY 2018-19.

2.2.2.3. Transmission and Distribution Losses

Stakeholder's Comments

The Stakeholders have appreciated the efforts made by the Petitioner in bringing the transmission and distribution losses down to 4.40%. However, as around 70% of the power consumption is by the HT industrial category which experiences losses lesser than 1%, some stakeholders feel that figure of 4.40% still appears high and efforts can be made to bring it down further.

Petitioner's Response

The observations regarding transmission and distribution losses is noted.

Commission's View

The Commission has noted the submission of the Stakeholders. The Commission acknowledges the fact that the present loss levels are one of lowest in the country and the Petitioner is putting in constant efforts to maintain them at the level less than 5%. The Commission directs the Petitioner to make further efforts towards reduction/maintenance of the same.

2.2.2.4. Power Purchase Cost

Stakeholder's Comments

The Petitioner has not specified whether the high PGCIL charges of INR 295.43 Cr is temporary or inclusive of past arrears and have requested allowance of the increase in power Purchase through FPPCA in case of the latter of the two. The Stakeholders have further opposed purchase of power from the Mauda Thermal Station at the exorbitant rate of INR 5.67/unit and have suggested adherence to the principle of Merit Order Despatch (MOD). Details on the estimated figure of INR 72 Cr on account of change in law pertaining to GMR have also been requested.

Petitioner's Response

The PGCIL charges are not inclusive of past arrears. Further, the DNHPDCL would like to submit that it always follows the principle of MOD while purchasing power for the various generating station allocated to it by the MOP. The estimated figure of INR 72 Cr on account of change in law pertaining to GMR is on account of change in taxes and duties and allowed by CERC for payment to the GMR as per the terms and conditions agreed in the PPA.

Commission's View

The Commission has noted the Stakeholder's concern. The Commission has estimated the PGCIL charges for the full year based on actual charges for the first 9 months and the same shall be trued-up based on actuals.

The Commission directs the Petitioner to look for cheaper alternative long-term sources of power to reduce the cost of power purchase. The Commission also recognizes that the Petitioner has to honor the long term PPA's signed with generating stations and the opportunity for the Petitioner to save the variable cost of these generating stations is limited.

The charges of INR 72 Cr towards change in law are as per the Order of the CERC and thus are required to be considered for determining the Power Purchase Cost.

2.2.2.5. Energy Savings

Stakeholder's Comments

The Petitioner should reconsider its Revised Estimate of 0% energy savings and should aspire to save more energy.

Petitioner's Response

The Corporation is taking all the measures to save energy and the energy balance submitted in the MYT Petition has been finalized after considering the energy savings made by the Corporation.

Commission's View

The Commission has noted the concern of the stakeholders. The Commission directs the Petitioner to take all measures to save energy, formulate an action plan in this regards.

2.2.3. ARR for FY 2019-20 to FY 2021-22

2.2.3.1. Sales Growth Projections

Stakeholder's Comments

The sales growth projections are higher than the actual growth of sales in the last three years, which may lead to over-estimation of ARR and an increase in Tariffs.

Petitioner's Response

The sales projected for the MYT Control Period is in line with the sales approved by the Commission in the Business Plan Order for the MYT Control Period.

Commission's View

The Commission has estimated the sales based on actual sales in first 9 months of FY 2018-19 and the actuals sales in last three years.

2.2.3.2. REC Purchase

Stakeholder's Comments

The REC purchase cost is estimated at INR 54.34 Cr against INR 67.02 submitted by the Petitioner, which amounts to an overestimate by INR 12.68 Cr.

Petitioner's Response

The REC cost has been estimated by considering the shortfall in the energy to be purchased under the solar and non-solar RPO. Further, the Corporation also has to pay GST of 12% on the certificates being purchased. Hence, it is requested to approve the REC cost as submitted by the Corporation for the MYT control Period.

Commission's View

The Commission has considered the cost of REC as per Floor Price Rate approved by CERC. The same shall be trued-up based on the actual cost incurred by the Licensee.

2.2.3.3. Voltage Wise power Cost

Stakeholder's Comments

Amongst the Commercial and Industrial categories, some voltage categories are charged tariffs that is not in proportion to their consumption. They have further opposed such cross-subsidization among voltage categories with a profit motive.

Petitioner's Response

The DNHPDCL has noted the observations. However, the Commission is empowered to take any decision in the matter of fixation of tariff and reduction in the cross subsidies.

Commission's View

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

2.2.4. Other Issues

2.2.4.1. Optimization of Power Purchase Costs

Stakeholder's Comments

The Stakeholders believe that improving requisitions/dispatches on merit order with the help of technology can result in further optimization of the Power Purchase Costs.

Petitioner's Response

The Petitioner always follows the principle of MOD while purchasing power from the various generating station allocated to it by the MoP.

Commission's View

The Commission directs the Petitioner to strictly adhere to the MOD for procurement of power and explore technology/software solutions for further optimization of power purchase costs. The Petitioner is directed to explore the available options and submit the proposal along with the cost implications in the next Tariff Petition.

2.2.4.2. FPPCA Formula

Stakeholder's Comments

The FPPCA computation is not provided with the Petition and it is requested to provide the same with the electricity bill to the consumers.

Petitioner's Response

The computation of the FPPCA is submitted to the Commission on a quarterly basis.

Commission's View

The Commission directs the Petitioner to upload the computation of FPPCA charges on its website before its implementation every quarter and display the link of the same prominently on its website. Further, the Petitioner may include the website link in the bill as well for information of the Stakeholders.

2.2.4.3. Rebate to Consumers

Stakeholder's Comments

A rebate on the electricity tariff is provided to the consumers in the neighboring States like Gujarat and the same may be provided to consumers in their territory also.

Petitioner's Response

The Commission has approved advance payment rebate and prompt payment rebate in the Tariff Schedule, which the Corporation is giving to its consumers.

Commission's View

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

2.2.4.4. Incentive for maintaining Power Factor

Stakeholder's Comments

The incentive for maintaining Power Factor be restored to 1% from the current 0.50% as a higher power factor not only helps in reduction of losses but also helps in averting need to install capacitors by the Petitioner to that extent.

Petitioner's Response

As per the Tariff Order issued by the Commission for the FY 2018-19 the Corporation is already billing the HT consumers on kVAh basis, which is a scientific method of billing and has been adopted in other States as well. Hence, all the consumers who are maintaining a higher power factor are benefiting from the same. Therefore, the Commission is requested not to restore the incentive for maintaining the power factor to 1%.

Commission's View

The Commission has noted the concern of the Stakeholders. The Commission has provided kVAh Tariff for HT categories, which ensures built in benefit to consumers with high power factor.

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

3.1. Background

Under the first MYT control period 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 from FY 2016-17 to FY 2018-19 was issued by the Commission on April 7, 2016 (hereinafter referred to as the "MYT Order"). The Order on True up of FY 2015-16, Annual Performance Review (APR) of FY 2016-17 and Aggregate Revenue Requirement (ARR) and tariff for FY 2017-18 was issued on June 9, 2017 (hereinafter referred to as the "ARR Order"). Subsequently, 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 (hereinafter referred to as the "APR Order").

The true-up for FY 2017-18 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."

The Commission in this Chapter now carries out the true-up of FY 2017-18, the second year of the first Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

3.2. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2017-18 as 5,676.30 MU as against approved energy sales quantum of 5,594.60 MU in the APR Order.

Commission's Analysis

Regulation 9.1 of the MYT Regulations, 2014 provides:

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

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

The Commission had approved the energy sales of 5,594.60 MU in the APR Order, against which actual energy sales of 5,676.30 MU has been submitted by the Petitioner now. The quantum of energy sales was verified from the audited annual accounts and the energy audit report. 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 9: Energy Sales trued-up by the Commission (MU)

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	121.45	116.91	116.91
2	Commercial	32.19	32.72	32.72
3	LT Industrial (Motive Power)	207.09	208.24	208.24
4	LT Public Water Works	5.25	5.45	5.45
5	HT/EHT	5,210.59	5,295.13	5,295.13
6	Agriculture & Poultry	6.36	6.50	6.50
7	Public Lighting	8.43	7.97	7.97
8	Temp. Supply	3.24	3.39	3.39
	Total	**5,594.59**	**5,676.30**	**5,676.30**

The Commission approves Energy Sales of 5,676.30 MU in true-up of FY 2017-18.

3.3. Open Access Sales

Petitioner's Submission

The Petitioner submitted the total Open Access Sales and Open Access Purchase of 220.84 MU and 227.95 MU for FY 2017-18.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner stipulates the Open Access Sales of 220.85 MU, instead 220.84 MU. Accordingly, the Commission considers the Open Access Sales as per Energy Audit Report submitted by the Petitioner. Further, the Commission sought the computation of Open Access Purchase from the Petitioner through a deficiency note. The Petitioner submitted the same in response to the note. The Commission considers the Petitioner's submission and approves Open Access Purchase of 227.95 MU.

The following table provides the Open Access sales approved by the Commission in the APR Order, the Petitioner's submission and now trued-up by the Commission.

Table 10: Open Access sales and purchase trued up by the Commission (MU)

S. No	Particular	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Sales	220.84	220.84	220.85
2	Open Access Purchase	227.35	227.95	227.95

The Commission approves Open Access sales of 220.85 MU and Open Access Purchase of 227.95 MU in the true up of FY 2017-18.

3.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State transmission loss of 3.01%, as against the approved value of 3.69% in the APR of FY 2017-18.

Commission's analysis

The Energy Audit Report submitted by the Petitioner for FY 2017-18 stipulates the Inter-State transmission loss of 2.80%. The Petitioner was directed to submit a detailed working of the Inter-State losses based on the week wise losses published by PGCIL. The Petitioner in turn submitted revised inter-State transmission loss of 3.01%. As the Petitioner could not submit the desired information, the Commission has considered the same based on 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 (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State transmission loss	3.69%	3.01%	2.98%

The Commission approves the Inter-State transmission loss of 2.98% for FY 2017-18.

3.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State distribution loss of 4.42% in FY 2017-18 against an approved loss of 4.70%.

Commission's analysis

As per the Energy Audit Report submitted by the Petitioner, the Intra-State distribution loss is 4.48%. The Commission enquired about this discrepancy from the Petitioner to which the Petitioner submitted that while computing the distribution loss for FY 2017-18, the Corporation has also considered sales with regards to the LIG category on an assessment basis. However, it was observed that the same has already been considered in the energy audit report as well. 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 during the year, 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 3.20.: 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 2017-18, the Petitioner's submission and as approved by the Commission now:

Table 12: Intra-State distribution loss approved by Commission (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State Distribution Loss	4.70%	4.42%	4.48%

The Commission approves Intra-State distribution loss at 4.48% in the true up of FY 2017-18.

3.6. 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 2,465.45 Cr approved by the Commission in the APR Order, it has incurred a cost of INR 2,333.08 Cr. In the Annual Accounts for FY 2017-18 submitted to the Commission, power purchase cost is reflected as INR 2333.22 Cr. An amount of INR 1.17 Cr. 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 2017-18 as the same has already been incurred. The total UI over-drawal submitted by the Petitioner is 215.38 MU at a cost of INR 49.03 Cr. The Petitioner has requested to consider the same as the effective cost of UI is lower than the approved per unit cost.

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

Table 13: Power Purchase cost submitted by the Petitioner for FY 2017-18

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	389.95	24.11	52.95	5.60	82.66	2.12
2	KSTPS 3	167.65	22.41	22.38	2.29	47.08	2.81
3	VSTPP-I	320.80	24.31	50.58	2.40	77.28	2.41
4	VSTPP-II	252.37	15.78	38.10	2.07	55.95	2.22
5	VSTPP- III	278.89	25.82	42.58	2.11	70.51	2.53
6	VSTPP- IV	347.80	51.16	52.09	3.66	106.91	3.07
7	KGPP	286.95	49.80	69.73	2.44	121.96	4.25
8	GGPP	270.07	44.74	59.45	8.80	113.00	4.18
9	Sipat-I	653.42	83.04	84.98	3.47	171.48	2.62
10	Sipat-II	233.77	27.72	31.51	1.20	60.43	2.59
11	Mauda	164.91	55.24	44.83	1.67	101.74	6.17
12	VSTPS-V	210.81	29.16	32.71	1.46	63.33	3.00
13	Mauda 2	119.97	24.05	30.91	-0.47	54.48	4.54
14	Solapur	42.57	16.34	13.26	0.32	29.92	7.03
15	KHSTPP-II	19.02	2.32	4.49	-0.08	6.74	3.54
	Subtotal - NTPC	**3,758.95**	**495.99**	**630.56**	**36.94**	**1,163.49**	**3.10**
B	**NSPCL - Bhilai**	**643.54**	**117.36**	**127.29**	**1.38**	**246.03**	**3.82**

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)
C	**NPCIL**						
1	KAPS	-2.19	0.00	0.00	0.00	0.00	0.00
2	TAPS	202.01	0.00	62.84	0.00	62.84	3.11
	Subtotal - NPCIL	**199.82**	**0.00**	**62.84**	**0.00**	**62.84**	**3.14**
D	**Others**						
1	EMCO Energy Ltd. (GMR Group)	1435.05	468.85	267.21	0.00	736.06	5.13
	Subtotal - Others	**1,435.05**	**468.85**	**267.21**	**(0.00)**	**736.06**	**5.13**
	Sub-Total (energy purchased from tied-up sources)	**6,037.35**	**1,082.20**	**1,835,82**	**38.32**	**2,208.42**	**3.66**
E	**Other Sources**						
1	Indian E. Exchange/Bilateral	63.30	0.00	20.29	0.00	20.29	3.20
2	UI	215.38	0.00	49.03	0.00	49.03	2.28
3	Solar	5.23	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	0.00	0.00	0.00	
6	Non Solar REC	0.00	0.00	0.00	0.00	0.00	
	Subtotal - Other Sources	**283.91**	**0.00**	**69.32**	**0.00**	**69.32**	**2.44**
F	**Total Power Purchase**	**6,321.27**	**1,082.21**	**1,157.21**	**38.32**	**2,277.74**	**3.60**
G	**Other Charges**						
1	PGCIL CHARGES					139.23	
2	POSOCO					0.46	
3	WRPC					0.00	
4	Reactive charges					0.08	
5	MSTCL					0.00	
6	RPO Provision					37.48	
7	Intra-state transmission charges					29.05	
8	Rebate received					-45.42	
9	Net received amount of NTPC for refund of taxes & RRAS settlement amount					-105.55	
	Grand Total of Charges after deduction of rebate	**6,321.27**	**1,082.21**	**1,157.21**	**38.32**	**2,333.08**	**3.69**

Commission's analysis

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

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

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

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, NSPCL Bhilai and IPPs. The Petitioner submitted the overall power purchase cost as INR 2,334.38 Cr. inclusive of transmission cost but exclusive of revenue due to sale of surplus power.

Upon scrutiny of the power purchase cost submitted by the Petitioner, various data gaps were observed by the Commission. All these data gaps were communicated to the Petitioner. The Petitioner was also asked to submit the power purchase bills for each of the sources.

The Commission has verified the power purchase quantum and cost as per the monthly and station-wise bills submitted by the Petitioner for each source. The cost has been reconciled with the audited annual accounts of FY 2017-18. As per the submissions of the Petitioner, the Commission has also considered the rebate due to early payments of power purchase bills and the interest cost booked under the finance charges in the annual accounts as part of the power purchase cost. Further, the Central and State transmission charges along with the POSOCO charges have been considered in accordance with the supporting bills submitted by the Petitioner.

The amount of INR 1.17 Cr 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. Further, revenue from sale of power at exchange and Deviation Settlement Mechanism receipts has been deducted from the total power purchase cost to compute the net power purchase cost.

The Petitioner submitted that the total power purchase cost is inclusive of the provision towards compliance of Renewable Purchase Obligation (RPO) target for FY 2017-18. The compliance status of RPO has been discussed in detail in the subsequent section. The Commission has not considered the RPO provision as no actual amount has been spent by the Petitioner on purchase of Renewable Power or RECs towards RPO compliance.

The table below provides the summary of the power purchase quantum and the cost approved by the Commission during FY 2017-18.

Table 14: Power Purchase quantum and cost approved by the Commission for FY 2017-18

S. No	Particulars	Now 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**						
1	KSTPS	389.95	24.11	52.95	5.60	82.66	2.12
2	KSTPS 3	167.65	22.41	22.38	2.29	47.08	2.81
3	VSTPP-I	320.80	24.31	50.58	2.40	77.28	2.41
4	VSTPP-II	252.37	15.78	38.10	2.07	55.95	2.22
5	VSTPP- III	278.89	25.82	42.58	2.11	70.51	2.53
6	VSTPP- IV	347.80	51.16	52.09	3.66	106.91	3.07
7	KGPP	286.95	49.80	69.73	2.44	121.96	4.25
8	GGPP	270.07	44.74	59.45	8.80	113.00	4.18
9	Sipat-I	653.42	83.04	84.98	3.47	171.48	2.62
10	Sipat-II	233.77	27.72	31.51	1.20	60.43	2.59
11	Mauda	164.91	55.24	44.83	1.67	101.74	6.17
12	VSTPS-V	210.81	29.16	32.71	1.46	63.33	3.00
13	Mauda 2	119.97	24.05	30.91	-0.47	54.48	4.54

S. No	Particulars	Now 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)
14	Solapur	42.57	16.34	13.26	0.32	29.92	7.03
15	KHSTPP-II	19.02	2.32	4.49	-0.08	6.74	3.54
	Subtotal - NTPC	**3,758.95**	**495.99**	**630.56**	**36.94**	**1,163.49**	**3.10**
B	**NSPCL - Bhilai**	**643.54**	**117.36**	**127.29**	**1.38**	**246.03**	**3.82**
C	**NPCIL**						
1	KAPS	-2.19	0.00	0.00	0.00	0.00	0.00
2	TAPS	202.01	0.00	62.84	0.00	62.84	3.11
	Subtotal - NPCIL	**199.82**	**0.00**	**62.84**	**0.00**	**62.84**	**3.14**
D	**Others**						
1	EMCO Energy Ltd. (GMR Group)	1,435.05	468.85	267.21	0.00	736.06	5.13
	Subtotal - Others	**1,435.05**	**468.85**	**267.21**	**0.00**	**736.06**	**5.13**
E	**Other Sources**						
1	Indian E. Exchange/Bilateral	63.30	0.00	20.29	0.00	20.29	3.20
2	UI	215.38	0.00	49.03	0.00	49.03	2.28
3	Solar*	5.23	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	0.00	0.00	0.00	
6	Non Solar REC*	0.00	0.00	0.00	0.00	0.00	
	Subtotal - Other Sources	**283.91**	**0.00**	**69.32**	**0.00**	**69.32**	**2.44**
F	**Total**	**6,321.27**	**1,082.21**	**1,157.21**	**38.32**	**2,277.74**	**3.60**
G	**Other Charges**						
1	PGCIL CHARGES					139.23	
2	POSOCO					0.46	
3	WRPC					0.00	
4	Reactive charges					0.08	
5	MSTCL					0.00	
6	RPO Provision					0.00	
7	Intra-state transmission charges					31.59	
8	Rebate received					-45.42	
9	Net received amount of NTPC for refund of taxes & RRAS settlement amount					-105.55	
10	Add: Carrying cost levied by generators					1.17	
H	**Grand Total of Charges after rebate**	**6,321.27**	**1,082.21**	**1,157.21**	**38.32**	**2,299.31**	**3.64**
I	**Revenue from Sale of Surplus Power**						
1	Revenue from Sale of Power at exchange					52.30	
2	DSM Receipts					3.34	
3	Income from penalty levied on GMR Warora Energy Limited					8.81	

S. No	Particulars	Now 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)
J	**Net Power Purchase Cost**	**6,321.27**	**1,082.21**	**1,157.21**	**38.32**	**2,234.86**	**3.54**

* The details and cost for RPO is provided in Section 3.7

The Commission approves power purchase cost of INR 2,234.86 Cr (adjusted for sale of surplus power/UI Under-drawl) and power purchase quantum of 6,321.27 MU in the true-up of FY 2017-18.

3.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

No submission has been made by the Petitioner in respect of compliance to Renewable Purchase Obligation.

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 6.70% of its total consumption (Solar: 2.50% and Non-Solar: 4.30%) from renewable sources for FY 2017-18.

For FY 2017-18, the Petitioner had a standalone target of 380.31 MU quantum of energy comprising of 141.91 MU solar and 238.40 MU Non Solar. Against the target, the Petitioner has purchased 5.23 MU of physical solar power. The Petitioner could not meet the current year targets and the cumulative shortfall up to FY 2017-18 now stands at 587.60 MU.

The RPO target compliance up to FY 2017-18 has been provided in the following table:

Table 15: Summary of Renewable Purchase Obligation (RPO) (MU)

S. No	Particulars	FY 16	FY 17	FY 18
1	Solar Target	0.85%	1.65%	2.50%
2	Non Solar Target	2.70%	3.20%	4.20%
	Total Target	**3.55%**	**4.85%**	**6.70%**
3	Sales Within UT	4,772.40	3,752.91	5,676.30
	RPO Target			
5	Solar	40.57	61.92	141.91
6	Non Solar	128.85	120.09	238.40
	Total RPO Target	**169.42**	**182.02**	**380.31**
	RPO Compliance (Actual Purchase)			
7	Solar	0.00	0.87	5.23
8	Non Solar	56.16	0.00	0.00

S. No	Particulars	FY 16	FY 17	FY 18
	Total RPO Compliance (Actual Purchase)	**56.16**	**0.87**	**5.23**
	RPO Compliance (REC Certificate Purchase)			
9	Solar	30.00	60.00	0.00
10	Non Solar	50.00	150.00	0.00
	Total RPO Compliance (REC Certificate)	**80.00**	**210.00**	**0.00**
	RPO Compliance (REC+ Actual)			
11	Solar	30.00	60.87	5.23
12	Non Solar	106.16	150.00	0.00
	Total RPO Compliance	**136.16**	**210.87**	**5.23**
	Cumulative Requirement till current year			
13	Solar	132.20	194.13	336.03
14	Non Solar	617.84	737.93	976.33
	Total	**750.04**	**932.06**	**1,312.37**
	Cumulative Compliance till current year			
15	Solar	60.14	121.01	126.25
16	Non Solar	448.52	598.52	598.52
	Total	**508.66**	**719.53**	**724.77**
	Net Shortfall in RPO Compliance till current year			
17	Solar	72.06	73.11	209.79
18	Non Solar	169.32	139.41	377.81
	Total	**241.38**	**212.52**	**587.60**

It is important to mention here that the Petitioner has neither procured any physical power from renewable sources nor purchased any Renewable Energy Certificates. **Accordingly, the Commission has not approved any amount towards compliance of RPO in the true-up of FY 2017-18.**

3.8. Energy Balance

Petitioner's submission

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

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

Particulars	Petitioner's Submission
Sales	5,676.30
Open Access Sales	220.84
Less: Energy Savings	0.00
Total Sales	**5,897.14**
Add: Losses	4.42%
T&D Losses	272.93
Energy Required at Periphery	**6,170.07**
Add: Sales to common pool consumer	43.60
Less: Own Generation	5.23
Total energy requirement at state periphery	6,208.44

Particulars	Petitioner's Submission
Less: Energy Purchased through UI at Periphery	215.38
Less: Purchase from Renewable Sources	0.00
Less: Open Access Purchase	227.95
Add: Energy sold through IEX	151.74
Total Energy Required at Periphery	**5,916.84**
Transmission loss	183.81
Transmission loss (%)	3.01%
Total Energy to be purchased	6,100.65
Total Energy requirement from tied up sources + UI at generator end +renewable sources	**6,321.27**
Total Energy requirement in UT including Open Access	**6,549.22**

Commission's analysis:

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase has been studied and accordingly the energy balance has been derived for FY 2017-18.

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 (in MU)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Now Approved by Commission
1	Energy sales within the State/UT	5,594.59	5,676.30	5,676.30
2	Open Access Sales	220.84	220.84	220.85
3	Less: Energy Savings	0.00	0.00	-
4	Total Sales within the State/UT	5,815.43	5,897.14	5,897.15
	Distribution losses			
5	%	4.70%	4.42%	4.48%
6	MU	286.81	272.93	276.58
7	Energy required at UT Periphery	6,102.24	6,170.07	6,173.73
	Energy Transactions at Periphery			
8	Add: UI under-drawal	0.00	43.60	43.60
9	Add: Sales in Power Exchanges	84.77	151.74	151.74
10	Less: Own Generation	0.00	5.23	5.23
11	Less: UI Over-drawal	48.68	215.38	215.38
12	Less: Purchase from Traders	0.00	0.00	0.00
13	Less: Open Access Purchase	227.35	227.95	227.95
14	Less: Purchase from Power Exchanges	0.00	-	63.30
14	Total energy required to be scheduled at UT Periphery from tied-up Sources	5,910.97	5,916.84	5,857.20
	Transmission losses			
15	%	3.69%	3.01%	2.98%
16	MU	226.47	183.81	180.15
17	**Total energy purchased from tied-up sources at generator end (MU)**	**6,137.44**	**6,100.65**	**6,037.35**
18	**Total requirement from Tied-up sources at generator end & UI/Traders/Banking/within State (MU)**	**6,413.46**	**6,321.27**	**6,321.27**

3.9. 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, 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;"

3.9.1. Employee Expenses

Petitioner's submission

The actual Employee expenses of INR 11.44 Cr have been incurred against approved expenses of INR 11.64 Cr 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 10.84 Crore in the APR Order and allowance of 0.80 Cr on account of impact of seventh pay Commission, thereby approving a total figure of INR 11.64 Cr. The actual employee expenses for FY 2017-18 as per audited accounts is INR 11.44 Cr.

In accordance with the MYT Regulations, the Commission has considered the same Employee Expenses as approved in the APR Order for FY 2017-18. However, since, the impact of Seventh Pay Commission was considered to be an uncontrollable expense while approving the Annual Performance Review of FY 2017-18 in the APR Order, it shall be allowed separately based on the actual impact of the Seventh Pay Commission in the year. The impact of the Seventh Pay Commission for FY 2017-18 was sought from the Petitioner separately.

Accordingly, the employee expenses approved for FY 2017-18 is shown in the table below.

Table 18: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	10.84	11.44	10.84
2	Impact of 7th Pay Commission	0.80		0.66
3	**Total Employee Expenses**	**11.64**	**11.44**	**11.50**

The Commission approves Employee Expenses of INR 11.50 Cr in the true-up of FY 2017-18.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 8.28 Cr as reflected in audited accounts against the approved expenses of INR 5.10 Cr in the APR Order. The Petitioner has submitted that the variation is mainly on account of provision of bad and doubtful debt amounting to INR 3.08 Cr.

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 2017-18 are reflected as INR 5.19 Cr. However, as variation in the O&M expenses is controllable, the Commission approves 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 3.18*. Accordingly, the A&G expenses approved by the Commission are as follows:

Table 19: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	5.10	8.28*	5.10

* Includes A&G Expenses of INR 5.19 Cr. and Provision for bad and doubtful debt of INR 3.09 Cr.

The Commission approves the Administrative & General (A&G) expenses of INR 5.10 Cr in the true-up of FY 2017-18.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of INR 13.17 Cr have been incurred against approved expenses of INR 8.71 Cr in the APR Order. The Petitioner has further submitted that the variation is mainly on account of payment of JERC license fee amounting to INR 4.10 Cr.

Commission's analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same R&M Expenses as approved in the APR Order. However, the Commission in response to Petitioner's submission that the R&M expenses have increased due to higher license fee paid to JERC sought further details from the Petitioner. The Petitioner submitted the details of the fee paid in FY 2017-18, corresponding to FY 2015-16, FY 2016-17 and FY 2017-18.

It is important to note that the JERC License Fees is governed by the Joint Electricity Regulatory Commission (Conduct of Business) Regulations, 2009 as amended from time to time. At the time of approving the MYT Order, the JERC License Fee was computed at 0.05% of the revenue (excluding taxes and duties) from the sale of electricity. With the Fourth Amendment to Joint Electricity Regulatory Commission (Conduct of Business) Regulations, 2009 dated February 11, 2015, the JERC License Fee was revised to 0.10% of the revenue (excluding taxes and duties) from the sale of electricity.

Accordingly, the Commission now approves 50% of the licensee fee paid to the Commission (as an additional expenses due to amendment in Regulations) amounting to INR 2.05 Cr.

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

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	8.71	13.17	10.76

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.76 Cr in the true-up of FY 2017-18.

3.9.4. 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 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	11.64	11.44	11.50
2	Administrative & General Expenses (A&G)	5.10	8.28	5.10
3	Repair & Maintenance Expenses	8.71	13.17	10.76
	Total Operation & Maintenance Expenses	**25.45**	**32.89**	**27.36**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 27.36 Cr in the true-up of FY 2017-18.

3.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has achieved capitalisation of INR 13.65 Cr during the year against approved capitalisation of INR 7.22 Cr in the APR Order. The capital expenditure during the same period was INR 15.31 Cr against approved expenditure of INR 7.22 Cr.

Commission's analysis:

The Commission observes that the capitalisation achieved by the Petitioner is higher than that approved by the Commission in the APR Order. The asset addition was verified from the audited annual accounts as well as the Fixed Asset Register for FY 2017-18 submitted by the Petitioner. The Commission accordingly approves the capitalisation as shown in the table below:

Table 22: Capitalisation approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	7.22	15.31	15.30
2	Capitalisation	7.22	13.65	13.64

The Commission approves capital expenditure and capitalisation of INR 15.30 and INR 13.64 Cr respectively in the true-up of FY 2017-18.

3.11. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the entire capitalization has been funded through its own funds.

Commission's analysis

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 2017-18.

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 2017-18 as follows. The closing GFA approved in FY 2016-17 after excluding value of solar plants amounting to INR 8.05 Crore has been considered as the opening GFA for FY 2017-18. The opening debt for FY 2017-18 has been considered as closing debt approved in true-up of FY 2016-17.

The petitioner has submitted the equity opening balance of INR 90.17 crore in the APR of FY 2017-18 as per the audited accounts for FY 2016-17 and the capitalisation in FY 2016-17 while the Petitioner has submitted the equity opening balance of INR 125.80 crore in the true-up petition of FY 2017-18 considering 30% of the opening GFA. In view of differences between Petitioner's own submissions in two subsequent Tariff Petitions, the Commission directed the Petitioner to submit the scheme wise breakup of capital structure - equity, debt, consumer contribution and grant. However, the Petitioner could not submit the same. In absence of any submission from the Petitioner, the Commission is considering the opening equity for FY 2017-18 as per the closing balance of true-up of FY 2016-17.

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 2017-18 as shown in the tables below.

Table 23: Funding Plan approved by the Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	7.22	13.65	13.64
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	5.05	9.56	9.55
5	Normative Equity	2.17	4.10	4.09

Table 24: GFA addition approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	427.37	419.32	419.31
2	Addition During FY	7.22	13.65	13.64
3	Adjustment/Retirement During FY	-	-	-
4	Closing Gross Fixed Assets	434.59	432.97	432.95

Table 25: Normative Loan addition (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	47.85	47.85	47.85
2	Add: Normative Loan During the year	5.05	9.56	9.55
3	Less: Normative Repayment equivalent to Depreciation	22.51	13.55	22.30
4	Closing Normative Loan	30.39	43.86	35.10

Table 26: Normative Equity addition (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	90.17	125.80	90.17
2	Additions on account of new capitalisation	2.17	4.10	4.09
3	Closing Equity	92.33	129.90	94.26

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted that for computation of depreciation, the opening GFA as per the annual accounts for FY 2017-18 excluding the amounts pertaining to Solar Plants (INR 8.05 Cr) has been considered at INR 419.32 Cr. 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 capitalisation of the Petitioner and has accordingly derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in the CERC Tariff Regulations, 2014, provided in the table below:

Table 27: Depreciation Rate (%)

Description	Rate
Buildings	3.34%
IT Equipment	15.00%
Laboratory Equipment	5.28%
Land	0.00%
Lines & Networks	5.28%
Office Equipment	6.33%
Other Equipment	5.28%
Software	15.00%
Transformer Centres	5.28%
HT/EHT Connections	5.28%
Vehicles	9.50%
Furniture & Fixture	6.33%
Buildings	3.34%

Based on the above deprecation rates stipulated in the CERC Tariff Regulations, 2014 and the actual asset addition during the year, the weighted average deprecation rate is 5.23% against a rate of 5.22% 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*. 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 2017-18

Table 28: Depreciation approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed	427.37	419.32	419.32
2	Addition During FY	7.22	13.65	13.64
3	Adjustment/Retirement During FY	-	-	-
4	Closing Gross Fixed Assets	434.59	432.97	432.95
5	Average Gross Fixed Assets	430.98	426.15	426.13
6	Rate of Depreciation (%)	5.22%	3.18%	5.23%
7	**Depreciation**	**22.51**	**13.55**	**22.30**

The Commission approves depreciation of INR 22.30 Cr in the true-up of FY 2017-18.

3.13. Interest on Loan

Petitioner's submission

The Petitioner has submitted the Interest on Loan on normative basis. The normative loan addition in FY 2017-18 has been computed as 70% of the capitalisation for FY 2017-18. The repayment of loans has been considered equal to the depreciation during FY 2017-18.

Further, the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 13.85% (rate as on 1st April 2017).

Commission's analysis:

Regulation 24 of the MYT Regulations provides:

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete capitalisation during the year has been funded by the equity and no loan has been taken against any of the capitalised 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, 2017 (13.85%).

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 the Order. The repayment is considered the same as depreciation during the year.

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 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	47.85	47.85	47.85
2	Add: Normative Loan During the year	5.05	9.56	9.55
3	Less: Normative Repayment = Depreciation	22.51	13.55	22.30
4	Closing Normative Loan	30.39	43.86	35.10
5	Average Normative Loan	39.12	45.86	41.47
6	Rate of Interest (%)	13.85%	13.85%	13.85%
	Interest on Loan	**5.42**	**6.35**	**5.75**

The Commission approves the Interest of Loan of INR 5.75 Cr in the true-up of FY 2017-18.

3.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the MYT Regulations 2014, and is computed on 30% of the capital base. The equity addition has been considered to the tune of 30% of assets capitalized during the year. 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 capitalisation 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 capitalisation. 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 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	90.17	125.80	90.17
2	Additions on account of new capitalisation	2.17	4.10	4.09
3	Closing Equity	92.33	129.90	94.26
4	Average Equity	91.25	127.85	92.22
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**14.60**	**20.45**	**14.75**

The Commission approves a Return on Equity of INR 14.75 Cr in the true-up of FY 2017-18.

3.15. Interest on Security Deposits

Petitioner's submission

Payments of INR 2.11 Cr were released to the consumers towards interest on security deposits during FY 2017-18 against INR 2.14 Cr approved by the Commission in the APR Order.

Commission's analysis:

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

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

The Commission has considered the actual interest on security deposit disbursed to the consumers in their bills, as reflected in the audited accounts of FY 2017-18 for truing-up.

Table 31: Interest on security deposit approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Interest on Security Deposit**	**2.14**	**2.11**	**2.11**

The Commission approves Interest on Security Deposit of INR 2.11 Cr in the true-up of FY 2017-18.

3.16. Interest on Working Capital

Petitioner's submission

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

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The interest on working capital is computed at 9.10% as has been shown in the table below:

Table 32: Interest on Working Capital submitted by Petitioner (INR Crore)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	380.07
2	Less: Power Purchase Cost for one month	194.53
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.94
4	Total Working Capital Requirement	186.49
5	Less: Security Deposit excluding BG/FDR	39.19
6	Net Working Capital	147.30
7	Rate of Interest (%)	9.10%
	Interest on Working Capital	**13.40**

Commission's analysis:

The computation of working capital requirements and the rate of interest to be considered are stipulated in the MYT Regulations, 2014. Regulation 25 of the MYT Regulations 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 has considered 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 2017-18. The interest rate has been considered as 9.10%, the SBI Base Rate as on April 1, 2017.

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 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	417.24	380.07	372.10
2	Less: Power Purchase Cost for one month	205.45	194.53	186.24
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.61	0.94	0.94
4	Total Working Capital Requirement	212.40	186.48	186.80
5	Less: Security Deposit excluding BG/FDR	32.96	39.19	39.19

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
6	Net Working Capital	179.44	147.29	147.61
7	Rate of Interest (%)	9.30%	9.10%	9.10%
	Interest on Working Capital	**16.69**	**13.40**	**13.43**

The Commission approves the Interest on Working Capital of INR 13.43 Cr in the true-up of FY 2017-18.

3.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

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

"

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

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

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

As the Regulation above stipulates that the income tax shall be approved as per actuals, the Commission considers the income tax payable for the year as Nil as no Income Tax has been paid by the Petitioner for FY 2017-18.

Table 34: Income Tax approved by Commission (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 2017-18.

3.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner Rs 3.08 Cr as 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."

It is observed that as per the audited accounts, the licensee has not actually written off any bad and doubtful debts for FY 2017-18.

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

3.19. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the actual Non-Tariff Income of INR 98.34 Cr for FY 2017-18. .

Commission's analysis:

The Commission has verified the submission of the Petitioner from the audited accounts and found the same to be correct. The income on account of penalty levied on GMR Warora Energy Limited has been considered in determining the net power purchase cost and accordingly deducted from Non-Tariff Income. 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 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Non-tariff income**	48.80	98.34	89.53

The Commission approves Non-Tariff Income of INR 89.53 Cr in the true-up of FY 2017-18.

3.20. 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 2017-18, the Commission had approved the T&D loss level of 4.70%. The Commission has approved T&D loss of 4.48% against the approved loss level of 4.70%. 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 2017-18 as follows:

As per Regulation 10 of the MYT Regulations 2014,
"10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.
10.2 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations"

The incentive has been considered at INR 3.76/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 (5676.30 MU) with the actual Intra-State T&D Loss (4.48%).

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

Table 36: Incentive due to over-achievement of Intra-State Distribution Loss target (INR Crore)

S. No	Particulars	As per approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	5,676.30	5,676.30
2	T&D Loss (%)	4.70%	4.48%
3	Power at State/UT Periphery	5,956.24	5,942.52
4	Gain/ (Loss) (MU)		13.72
5	Average Power Purchase Cost (INR/kWh)		3.76
6	Gain/ (Loss) (INR Cr)		5.15
7	**Sharing of Gain / (Loss) with Petitioner (INR Cr)**		**1.55**

The Commission approves INR 1.55 Cr as incentive for over-achieving the Intra-State distribution loss target for FY 2017-18.

3.21. 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 2,324.80 Cr for approval in the True-up of FY 2017-18.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR approves the net revenue requirement in the true-up of FY 2017-18 as given in the following table:

Table 37: Aggregate Revenue Requirement approved by Commission for FY 2017-18 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	2,465.44	2,334.38	2,234.86
2	Operation & Maintenance Expenses	25.45	32.89	27.36
3	Depreciation	22.51	13.55	22.30
4	Interest and Finance charges	5.42	6.35	5.75
5	Return on Equity	14.60	0.00	14.75
6	Interest on Security Deposit	2.14	20.45	2.11
7	Interest on Working Capital	16.69	13.40	13.43
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	-	2.11	0.00
10	Incentive/ (Disincentive)on achievement of norms	0.00	0.00	1.55
11	**Total Revenue Requirement**	**2,552.25**	**2,423.14**	**2,322.11**
12	Less: Non-Tariff Income	48.79	98.34	89.53
13	**Net Revenue Requirement**	**2,503.46**	**2,324.80**	**2,232.58**

The Commission approves net Aggregate Revenue Requirement of INR 2,232.58 Cr in the true-up of FY 2017-18.

3.22. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for FY 2017-18 is INR 2,280.44 Cr as against INR 2,188.17 Cr 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 2017-18 has also been submitted.

Commission's analysis

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

Table 38: Revenue at existing tariff approved by Commission for FY 2017-18 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	23.85	-	22.83
2	Commercial	10.35	-	11.14
3	Agriculture	0.47	-	0.52
4	LTP Industry	71.98	-	79.98
5	Public Lighting	2.53	-	2.56
6	Public Water Works	1.95	-	2.11
7	High Tension	2,060.84	-	2,104.73
8	Hoardings/ Signboards	0.00	-	0.00
9	Temporary	1.62	-	1.46
10	**Sub-total**	**2,173.59**	**2,277.10**	**2,225.69**
11	OA Charges	14.61	3.34	0.00
12	Less: Rebate Allowed to Consumers		-	0.89
13	**Grand total**	**2,188.20**	**2,280.44**	**2,224.80**

The Commission approves the revenue from sale of power as INR 2,224.80 Cr (excluding revenue from sale of surplus power) in the true-up of FY 2017-18.

3.23. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 44.36 Cr is arrived at in the true-up of FY 2017-18.

Commission analysis

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

Table 39: Standalone Revenue Gap/ (Surplus) for FY 2017-18 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	2,503.46	2,324.80	2,232.58
2	Revenue from Retail Sales at Existing Tariff	2,173.56	2,280.44	2,224.80
3	Revenue from Open Access Charges	14.61	0.00	0.00
4	**Total Revenue**	2,188.17	2,280.44	2,224.80

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
5	Net Standalone Gap / (Surplus)	315.29	44.36	7.78

The Commission, in the true-up of FY 2017-18 approves a standalone gap of INR 7.78 Cr. This standalone gap has been carried over in the subsequent years and has been dealt with while determining the tariff for FY 2019-20.

4. Chapter 4: Annual Performance Review for FY 2018-19

4.1. Background

The Tariff Order for approval of true-up of FY 2016-17, Annual Performance Review of FY 2017-18 and Aggregate Revenue Requirements (ARR) and determination of tariff for FY 2018-19 was issued by the Commission on January 30, 2018 (hereinafter referred to as 'ARR Order'). This Chapter covers the Annual Performance Review (APR) for FY 2018-19 vis-à-vis the cost parameters approved by the Commission in the ARR Order. The Annual Performance Review for FY 2018-19 is to be carried out as per the following provisions of Regulation 8 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2014:

"(1) The Commission shall undertake a review along with the next Tariff Order of the expenses and revenue approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review'.

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

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

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

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

4.2. Approach for the Review for FY 2018-19

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 2018-19 has been done based on actual Power Purchase Quantum and Cost of the first 9 months of FY 2018-19, actual Energy Sales for the first 9 months, etc. depending on which the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the MYT Regulations, 2014 and on the basis of the norms approved in the ARR Order dated January 30, 2018.

4.3. Energy Sales

Petitioner's Submission

The sales for FY 2018-19 have been estimated based on the CAGR of the actual sales approved by the Commission for FY 2011-12 to FY 2017-18. The CAGR for the past five/three/two/one-year growth has been applied appropriately on the actual sales for FY 2017-18 to arrive at the estimated sales for FY 2018-19. A total sales of 6,093.54 MU has been estimated against the 5,940.89 MU as approved by the Commission in the ARR Order for FY 2018-19.

Commission's Analysis

The Commission has noted the audited figures for FY 2017-18 and provisional information provided by the Petitioner for the first 9 months of FY 2018-19. For all the categories, the Commission has estimated the proportion of actual energy sales till the month of December over total energy sales during the financial year, for the last three years. Using this average proportion of sales, the Commission has extrapolated the actual energy sales till the month of December to determine the annual energy sales for FY 2018-19.

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 40: Energy Sales (MU) approved by the Commission for FY 2018-19

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Domestic	128.34	126.11	128.80
2	Commercial	34.11	34.04	35.16
3	Agriculture	7.13	6.90	7.44
4	LT Industry	220.02	212.03	214.93
5	Public Lighting	9.44	8.24	6.11
6	Public water works	6.22	6.49	6.46
7	HT/EHT Industry	5,532.39	5,696.34	5,629.52
8	Temp. Supply	3.24	3.39	3.58
	Gross Total	**5,940.89**	**6,093.54**	**6,032.00**

The Commission approves energy sales of 6,032.00 MU in the APR of FY 2018-19.

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 2018-19 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 41: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Inter-State Transmission Losses	3.69%	3.66%	3.69%

The Commission approves Inter-State transmission loss of 3.69% in the APR of FY 2018-19.

4.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted distribution losses of 4.40% for FY 18-19 as against 4.70% approved by the Commission in the ARR Order.

Commission's analysis

In the ARR Order dated January 30, 2018, the Commission had maintained the loss levels as approved in the MYT Order dated April 7, 2016. The Commission now approved the same loss level as approved in the ARR Order.

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 42: Intra-State distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Intra-State Distribution Loss	4.70%	4.40%	4.70%

The Commission approves Intra-State distribution loss of 4.70% in the APR of FY 2018-19.

4.6. Power Purchase Quantum & Cost

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 Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during FY 18-19 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
- 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-drawal from the Grid (UI).

For projecting of the energy availability for FY 18-19, 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 18-19, 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/2018/5733 dated June 28, 2016 of Western Regional Power Committee as shown in the following table:

Table 43: Energy allocation as considered by the Petitioner (MW)

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	48.60	0.00	48.60
KSTPS -3	18.80	2.20	21.00
VSTPP-I	35.13	5.00	40.13
VSTPP-II	26.50	4.00	30.50
VSTPP- III	26.50	6.00	32.50
VSTPP- IV	37.59	5.55	43.14
KAWAS	56.22	25.00	81.22
GGPP	56.73	2.00	58.73
Sipat – I	74.44	9.00	83.44
Sipat – II	25.13	4.00	29.13
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	37.59	5.55	43.14
VSTPP-V	18.80	5.55	24.35
Mauda II	49.62	8.60	58.22
Solapur	24.82	10.79	35.61
NPCIL – KAPS	13.93	2.00	15.93
NPCIL - TAPP 3&4	34.13	7.00	41.13
Total	**588.01**	**102.24**	**690.25**
NSPCL Bhilai		**100.00**	**100.00**
EMCO Energy Ltd. (GMR Group)		**200.00**	**200.00**

Additionally DNHPDCL has considered allocation of 10.46 MW from Lara and 20.83 MW from Gadarwara generation stations for the period December 2018 to March 2019. Based on the actual power purchase cost of the first six months of FY 18-19 and the remaining six months projection, the revised estimated power purchase cost for FY 18-19 as submitted by the Petitioner is presented in the following table:

Table 44: Power Purchase Quantum (MU) and Cost (INR Crore) as submitted by Petitioner

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	Credit/ Debit for URS	All Charges Total	Per Unit Cost
NTPC Stations								
KSTPS	343.50	23.49	46.89	(0.63)	0.00		69.75	2.03
KSTPS 3	155.61	20.82	21.45	(0.25)	0.00		42.02	2.70
VSTPP-I	277.97	23.91	43.63	0.53	0.00		68.08	2.45
VSTPP-II	212.09	15.19	31.15	0.81	0.00		47.15	2.22
VSTPP- III	245.39	24.49	37.77	0.50	0.00		62.76	2.56
VSTPP- IV	315.43	48.52	47.79	5.38	0.00		101.69	3.22
KGPP	271.54	50.33	71.12	0.41	0.00		121.87	4.49
GGPP	198.37	44.04	48.73	(7.68)	0.00		85.08	4.29
Sipat-I	604.72	77.96	80.93	0.08	0.00		158.97	2.63
Sipat-II	223.38	25.84	32.02	(0.49)	0.00		57.37	2.57
Mauda	186.24	45.50	58.19	1.72	0.00		105.40	5.66
VSTPS-V	182.66	28.88	28.71	0.21	0.00		57.80	3.16

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	Credit/ Debit for URS	All Charges Total	Per Unit Cost
Mauda 2	287.24	51.41	84.07	(0.14)	0.00		135.34	4.71
Solapur	144.95	45.69	54.15	1.59	0.00		101.43	7.00
LARA	34.95	0.00	11.22	0.00	0.00		11.22	3.21
Gadarwara	69.60	0.00	25.61	0.00	0.00		25.61	3.68
KHSTPP-II	21.26	2.28	4.62	(0.01)	0.00		6.89	3.24
Subtotal – NTPC	**3,774.90**	**528.34**	**728.04**	**2.05**	**0.11**	**-0.04**	**1,258.28**	**3.33**
NSPCL – Bhilai	**690.01**	**97.42**	**128.92**	**-3.32**	**0.00**	**0.00**	**223.01**	**3.23**
NPCIL								
KAPS	44.47	0.00	14.18	0.00	0.00		14.18	3.19
TAPS	285.20	0.00	87.65	0.00	0.00		87.65	3.07
Subtotal	**329.67**	**0.00**	**101.83**	**0.00**	**0.00**		**101.83**	**3.09**
Others								
EMCO Energy Ltd. (GMR Group)	1,420.79	438.30	276.50	0.00	0.00		714.80	5.03
Subtotal	**1,420.79**	**438.30**	**276.50**	**0.00**	**0.00**		**714.80**	**5.03**
Power purchase from Other Sources								
Indian E. Exchange/Bilateral	240.97	0.00	80.47	0.00	0.00		80.47	3.34
UI	150.02	0.00	34.33	0.00	0.00		34.33	2.29
Solar	5.23	0.00	0.00	0.00	0.00		0.00	0.00
Non Solar	0.00	0.00	0.00	0.00	0.00		0.00	0.00
Solar REC	0.00	0.00	21.41	0.00	0.00		21.41	0.00
Non Solar REC	0.00	0.00	49.36	0.00	0.00		49.36	0.00
Subtotal	**396.21**	**0.00**	**185.58**	**0.00**	**0.00**		**185.58**	**4.68**
Total Power Purchase	**6,611.58**	**1,064.06**	**1,420.86**	**-1.27**	**0.11**		**2,483.50**	**3.76**
Availability at ED-DNH Periphery	**6,611.58**	**1,064.06**	**1,420.86**	**-1.27**	**0.11**		**2,483.50**	**3.76**
PGCIL CHARGES							295.43	
POSOCO							0.64	
WRPC							0.00	
Reactive charges							0.18	
MSTCL							0.00	
Intra-state transmission charges							42.84	

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	Credit/ Debit for URS	All Charges Total	Per Unit Cost
Grand Total of Charges	**6,611.58**	**1,064.06**	**1,420.86**	**-1.27**			**2,822.60**	**4.27**
GMR - Change in Law							**72.00**	
Grand Total of All Charges							**2,894.60**	

Commission's Analysis:

The Commission for projecting the revised estimates of power availability and cost for FY 2018-19 has considered the actual plant wise power purchase quantum and cost for April 2018 to December 2018. Further, the firm and infirm allocation from various generating stations has also been considered while estimating the source wise availability. The source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

4.6.1. Availability of power

Availability of energy from NTPC Stations:

- Power purchase quantum for 10 of the total 15 NTPC plants has been estimated based on 3 years (FY 2015-16, FY 2016-17 and FY 2017-18) average of quantum of energy scheduled from the station
- For Kawas and Gandhar gas power plants average of quantum purchase of first 9 months till December-2018 has been considered for projecting the power purchase quantum in remaining months as the power purchase trends in FY 2018-19 have shown marked increase as compared to purchases in preceding years
- For Mauda Phase I, the energy availability has been projected based on average of quantum purchase of first 9 months as the power purchase quantum in FY 2015-16, FY 2016-17 and FY 2017-18 was much lower than actual purchases in FY 2018-19
- Mauda Phase II and Solapur thermal station began operations in mid of FY 2017-18, the power purchase quantum for last 3 months has been projected based on actual energy purchase from April 2018-December 2018.
- For Lara and Gadarwara, the Petitioner's submission has been considered for projecting the power purchase quantum for last 3 months of the year.

Availability from NPCIL stations:

- DNH receives supply from two NPCIL stations - Tarapur and Kakrapara atomic plants. Since Kakrapara plant energy has started operating again from September 2018, the purchase quantum for remaining 3 months has been projected based on actual energy purchases from October 2018-December 2018.
- There is a steady purchase of energy from Tarapur atomic plant. The energy projected to be scheduled in the remaining months of FY 2018-19 has been estimated based on the 3 years average of quantum of energy scheduled in FY 2015-16, FY 2016-17 and FY 2017-18.

Availability from RGPPL stations:

- The State of Maharashtra (which has 95% share allocation from RGPPL) is not scheduling power because of non-availability of natural gas for this project and non-availability of technical minimum schedule to run the plant and therefore presently there is no generation from the plant. Therefore, for the period from April'18 to December'18 no power was purchased from RGPPL, and hence no power purchase has been projected for the remaining months as well.

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

- The Open market purchase and sale for April'18 to December'18 has been considered as per actuals. For the remaining months the quantum for purchase/sale has been considered as estimated in the approved energy requirement discussed in the subsequent section
- Quantum under UI Overdrawal/ Underdrawal for April'18 to December'18 has been considered as per actuals. No quantum under UI has been considered for the remaining months of FY 2018-19.

4.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by taking the average of the actual per unit variable cost during the first 9 months from April 2018 to December 2018 for all the stations
- The cost towards UI Over-drawal/ Underdrawal has been considered as per actuals incurred by the Petitioner in the first 9 months of FY 2018-19

Fixed Charges:

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

Other Charges:

- Actual charges have been considered for the first 9 months of FY 2018-19. No other charges have been considered for the remaining months of FY 2018-19.

4.6.3. Transmission Charges

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

4.6.4. Total power purchase quantum and cost

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for FY 2018-19:

Table 45: Power Purchase Quantum (MU) and cost (INR Crore) approved by the Commission for FY 2018-19

S.No.	Particulars	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	359.65	23.91	49.30	-0.46	72.75	**2.02**
2	KSTPS 3	164.54	21.29	22.77	-0.18	43.88	**2.67**
3	VSTPP-I	279.46	24.15	44.52	0.86	69.54	**2.49**
4	VSTPP-II	234.17	15.43	35.03	1.07	51.53	**2.20**
5	VSTPP- III	255.71	24.66	39.00	0.81	64.47	**2.52**
6	VSTPP- IV	329.39	48.91	50.49	5.69	105.09	**3.19**
7	KGPP	289.48	50.16	80.53	0.79	131.49	**4.54**

S.No.	Particulars	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
8	GGPP	139.42	43.01	34.71	-6.52	71.21	**5.11**
9	Sipat-I	650.51	78.82	86.44	0.52	165.78	**2.55**
10	Sipat-II	233.51	26.17	32.72	-0.32	58.57	**2.51**
11	Mauda	190.58	52.71	58.38	4.28	115.37	**6.05**
12	VSTPS-V	186.15	29.02	29.20	0.45	58.66	**3.15**
13	Mauda 2	304.22	49.17	88.50	0.65	138.32	**4.55**
14	Solapur	96.98	51.24	37.82	1.73	90.79	**9.36**
15	Lara	34.95	0.00	11.22	0.00	11.22	**3.21**
16	Gadarwara	69.60	0.00	25.61	0.00	25.61	**3.68**
17	KHSTPP-II	21.57	2.40	4.67	0.00	7.07	**3.28**
	Subtotal - NTPC	**3,839.90**	**541.07**	**730.90**	**9.37**	**1,281.34**	**3.34**
B	**NSPCL Bhillai**	**624.93**	**106.42**	**98.15**	**-3.23**	**201.35**	**3.22**
C	**NPCIL**						
1	KAPS	22.49	0.00	5.83	0.00	5.83	**2.59**
2	TAPS	297.84	0.00	90.82	0.00	90.82	**3.05**
	Subtotal - NPCIL	**320.33**	**0.00**	**96.65**	**0.00**	**96.65**	**3.02**
D	**Others**						
1	RGPPL	0.00	0.00	0.00	0.00	0.00	**-**
2	EMCO Energy Ltd. (GMR Group)	1,316.27	390.28	282.51	0.00	672.78	**5.11**
	Subtotal - Others	**1,316.27**	**390.28**	**282.51**	**0.00**	**672.78**	**5.11**
E	**Other Sources**						
1	Indian E. Exchange/Bilateral	178.62	0.00	64.97	0.00	64.97	**3.64**
2	UI	217.02	0.00	51.87	0.00	51.87	**2.39**
3	Solar*	5.23	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	21.41	0.00	21.41	**-**
6	Non Solar REC*	0.00	0.00	32.91	0.00	32.91	**-**
7	Open Market Purchase	55.64	0.00	20.24	0.00	20.24	**3.64**
	Subtotal - Other Sources	**456.52**	**0.00**	**191.40**	**0.00**	**191.40**	**4.19**
	Total	**6,557.96**	**1,037.77**	**1,399.61**	**6.14**	**2,443.52**	**3.73**
F	**Other Charges**						
1	PGCIL CHARGES					337.62	
2	POSOCO					0.64	
3	WRPC					0.00	
4	Reactive charges					0.18	
5	MSTCL					0.00	

S.No.	Particulars	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Other Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
6	Intra-state transmission charges					27.26	
G	**Grand Total of Charges**	**6,557.96**	**1,037.77**	**1,399.61**	**6.14**	**2,809.22**	**4.28**
H	**Other Charges (GMR Change in Law)**					**72.00**	
I	**Grand Total of Charges**	**6,557.96**	**1,037.77**	**1,399.61**	**6.14**	**2,881.22**	**4.39**

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

The Commission approves the revised quantum of power purchase as 6,557.96 MU at the generator periphery with total cost of INR 2,881.22 Cr in the APR for FY 2018-19.

4.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

As per the revised sales projections by the Petitioner, the Petitioner has estimated requirement of 219.37 MUs of solar energy and 329.05 MUs of non-solar energy during FY 2018-19 to fulfill the RPO targets. The DNHPDCL plans to fulfil the RPO target through purchase of Renewable energy certificates. The Petitioner has considered the cost of the same in the Overall Power Purchase cost submitted by the Petitioner.

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 9.00% of its total consumption through conventional sources (Solar: 3.60% and non-solar: 5.40%) from renewable sources for FY 2018-19. This translates to requirement of procurement of 217.15 MU of solar energy and 325.73 MU of non-solar energy in FY 2018-19. Further, the Petitioner is also required to clear the backlog of 587.60 MU (Solar: 209.79 MU and Non-Solar: 377.81 MU) upto FY 2017-18 carried forward.

The Petitioner has also submitted that it plans to fulfill the RPO target for FY 2018-19 by March 31, 2019 through procurement of Renewable Energy Certificates. Hence, 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 2018-19.

Table 46: Summary of Renewable Purchase Obligation (RPO) (MU)

S. No	Particulars	FY 2017-18	FY 2018-19
1	Solar Target	2.50%	3.60%
2	Non Solar Target	4.20%	5.40%
	Total Target	**6.70%**	**9.00%**

S. No	Particulars	FY 2017-18	FY 2018-19
3	Sales Within UT	5,676.31	6,032.00
	RPO Target		
5	Solar	141.91	217.15
6	Non-Solar	238.41	325.73
	Total RPO Target	**380.31**	**542.88**
	RPO Compliance (Actual Purchase)		
7	Solar	5.23	5.23
8	Non-Solar	0.00	0.00
	Total RPO Compliance (Actual Purchase)	**5.23**	**5.23**
	RPO Compliance (REC Certificate Purchase)		
9	Solar	0.00	214.13
10	Non-Solar	0.00	329.05
	Total RPO Compliance (REC Certificate)	**0.00**	**543.18**
	RPO Compliance (REC+ Actual)		
11	Solar	5.23	219.36
12	Non-Solar	0.00	329.05
	Total RPO Compliance	**5.23**	**548.41**
	Cumulative Requirement till current year		
13	Solar	336.03	553.19
14	Non-Solar	976.33	1,302.06
	Total	**1,312.37**	**1,855.25**
	Cumulative Compliance till current year		
15	Solar	126.25	345.61
16	Non-Solar	598.52	927.57
	Total	**724.77**	**1,273.18**
	Net Shortfall in RPO Compliance till current year		
17	Solar	209.79	207.58
18	Non-Solar	377.81	374.49
	Total	**587.60**	**582.07**

The cost towards compliance of RPO has been approved as provided in the table below. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section.

The Commission has assumed the rate of purchase for Solar and Non-Solar REC as INR 1.00 per kWh. The Commission has computed the cost towards compliance of RPO as shown in the following table. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section.

Table 47: Cost towards compliance of Renewable Purchase Obligation (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**219.36**	**21.41**	**0.98**
(a)	*Generation*	5.23	0.00	0.00
(b)	*Renewable Energy Certificates*	214.13	21.41	1.00
2	**Non-solar**	**329.05**	**32.91**	**1.00**
(a)	*Generation/Procurement*	0.00	0.00	0.00
(b)	*Renewable Energy Certificates*	329.05	32.91	1.00
	Total	**548.41**	**54.32**	**0.99**

The Commission approves INR 54.32 Cr towards compliance of RPO in the APR of FY 2018-19 and the same has been considered in the total power purchase cost approved for FY 2018-19.

4.8. Energy Balance

Petitioner's submission

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

Table 48: Energy Balance as submitted by the Petitioner (MU)

Particulars	FY 18-19
Sales	6,093.54
Open Access Sales	0.00
Less: Energy Savings	0.00
Total Sales	6,093.54
Add: Losses	***280.46***
T&D Losses	4.40%
Energy Required at Periphery	6,374.00
Add: Sales to common pool consumer	1.28
Less: Own Generation	5.23
Total energy requirement at state periphery	6,370.05
Less: Energy Purchased through UI at Periphery	150.02
Less: Purchase from Renewable Sources	0.00
Less: Open Access Purchase	0.00
Total Energy Required at Periphery	6,220.03
Transmission loss	236.30
Transmission loss (%)	3.66%
Total Energy to be purchased	6,456.33
Total Energy requirement from tied up sources & UI at generator end	6,611.58
Total Energy requirement in UT including Open Access	6,611.58

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 2018-19.

Table 49: Energy Balance as approved by the Commission (MU)

S. No	Particulars	Formula	Approved in Tariff Order	Petitioner's Submission	Now Approved by Commission
1	Energy sales within the State/UT	a	4,228.16	6,093.54	6,032.00
2	Open Access Sales	b	2,129.68	0.00	0.00
3	Less: Energy Savings	c	-5.77	0.00	0.00
4	**Total Sales within the State/UT**	**d=a+b+c**	**6352.07**	**6,093.54**	**6,032.00**
	Distribution losses				
5	%	e	4.70%	4.40%	4.70%
6	MU	f=g-d	313.27	280.46	297.49
7	**Energy required at State Periphery**	**g=d/(1-e)**	**6,665.34**	**6,374.00**	**6,329.49**
	Energy Transactions at Periphery				
8	Add: UI under-drawal	h	0.00	1.28	1.28
9	Add: Sales in Power Exchanges	i	0.00	0.00	0.00
10	Less: Own Generation	j	0.00	5.23	5.23
11	Less: UI Over-drawal	k	0.00	150.02	217.02
12	Less: Purchase from Traders	l	0.00	0.00	0.00
13	Less: Open Access Purchase	m	2,195.55	0.00	0.00
14	Less: Purchase from Power Exchanges	n		0.00	178.62
14	Total energy requirement at State Periphery from tied-up Sources	o=g+h+i-j-k-l-m-n	4,469.79	6,220.02	5,929.88
	Transmission losses				
15	%	p	3.69%	3.66%	3.69%
16	MU	q=r-o	171.25	236.30	227.20
17	**Total requirement from tied-up sources at generator end (MU)**	**r=o/(1-p)**	**4,641.05**	**6,456.32**	**6,157.08**
18	**Total availability from tied up sources at generator end (MU)**	**s**		**6,215.37**	**6,101.44**
19	**Deficit/(surplus)**	**t=r-s**			**55.64**

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, 2014 recognise 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;"

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted revised estimate for employee expenses of INR 13.21 Cr for FY 2018-19 same as approved by the Commission in the Tariff Order of FY 2018-19.

Commission's analysis

The Commission had approved INR 12.41 Cr towards base employee expenses and INR 0.80 Cr towards impact of Seventh Pay Commission. The impact of Seventh Pay Commission, however, shall be trued-up based on actuals. According to the regulations, the Commission doesn't allow any deviation in the employee expenses approved and considers the same Employee Expenses as approved in the ARR Order for FY 2018-19 as shown in the following table:

Table 50: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	12.41	12.41	12.41
2	Impact of 7th Pay Commission	0.80	0.80	0.80
3	**Total Employee Expenses**	**13.21**	**13.21**	**13.21**

The Commission approves employee expenses of INR 13.21 Cr in the APR of FY 2018-19.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted revised estimate of INR 8.31 Cr towards A&G expenses against INR 5.84 Cr approved by the Commission in the Tariff Order of FY 2018-19.

Commission's analysis

The MYT Regulations, 2014 stipulate the O&M expenses to be controllable. Accordingly, the Commission now approves the same A&G Expenses as approved in the ARR Order for FY 2018-19 as shown in the following table:

Table 51: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	5.84	8.31	5.84

The Commission now approves the Administrative & General (A&G) expenses of INR 5.84 Cr in the APR for FY 2018-19.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted revised estimate of INR 11.40 Cr towards R&M expenses against INR 9.82 Cr approved by the Commission in the Tariff Order of FY 2018-19.

Commission's analysis

The Commission in a similar approach adopted while approving the employee expenses and A&G expenses above, has considered the same R&M expenses as approved by the Commission in the ARR Order.

The table below provides the R&M expenses, approved by the Commission in the ARR Order, Petitioner's submission and R&M expenses now approved by the Commission.

Table 52: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Repair & Maintenance Expenses (R&M)	9.82	11.40	9.82

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

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	13.21	13.21	13.21
2	Administrative & General Expenses (A&G)	5.84	8.31	5.84
3	Repair & Maintenance Expenses	9.82	11.40	9.82
	Total Operation & Maintenance Expenses	**28.87**	**32.91**	**28.87**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 28.87 Cr in the APR of FY 2018-19.

4.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has considered the capital expenditure at the same level as approved by the Commission for FY 2018-19 in its Tariff Order dated January 30, 2018. Further, DNHPDCL has estimated an amount of INR 20.00 Cr to be capitalized during the FY 2018-19.

Commission's analysis

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. However, the Petitioner did not submit the details as sought by the Commission. The

Commission in absence of actual information for first half of the year, considers the capital expenditure and capitalization as approved by the Commission in Tariff Order for FY 2018-19 dated January 30 2018 as shown in the following table:

Table 54: Capitalisation approved by the Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	60.00	60.00	60.00
2	Capitalisation	0.00	20.65	0.00

The Commission approves capital expenditure of INR 60.00 Cr and Nil capitalisation in the APR for FY 2018-19.

4.11. Capital Structure

Petitioner's Submission

The entire capital deployment shall be through equity for 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 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 as follows. The closing GFA approved in true-up of FY 2017-18 has been considered as the opening GFA for FY 2018-19. The opening debt and equity for FY 2018-19 has been considered as closing debt and equity approved in 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 Regulations. Accordingly, the Commission approves the capital structure for FY 2018-19 as shown in the tables below.

Table 55: Funding Plan approved by the Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	0.00	20.65	0.00
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	0.00	14.46	0.00
5	Equity	0.00	6.20	0.00

Table 56: GFA addition approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	434.59	432.97	432.95

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
2	Addition During FY	0.00	20.65	0.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	434.59	453.62	432.95

Table 57: Normative Loan addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	30.39	43.86	35.10
2	Add: Normative Loan During the year	0.00	14.45	0.00
3	Less: Normative Repayment equivalent to Depreciation	22.70	23.05	22.66
4	Closing Normative Loan	7.69	35.26	12.44

Table 58: Normative Equity addition (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	91.25	129.89	94.26
2	Additions on account of new capitalisation	0.00	6.20	0.00
3	Closing Equity	91.25	136.09	94.26

4.12. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of FY 2017-18 is taken as the opening GFA for FY 2018-19 and subsequently the proposed capitalisation during FY 2018-19 is added. Depreciation has been calculated based on depreciation rates in accordance with the MYT Regulations, 2014.

Commission's analysis

Regulation 23 of the MYT Regulations, 2014 stipulates 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."*

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) with depreciation rate equal to weighted average depreciation rate considered in true-up of FY 2017-18.

The following table provides the calculation of deprecation during FY 2018-19.

Table 59: Depreciation approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	434.59	432.97	432.95
2	Addition During FY	0.00	20.65	0.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	434.59	453.62	432.95
5	Average Gross Fixed Assets	434.59	443.29	432.95
6	Effective Rate of Depreciation (%)	5.22%	5.20%	5.23%
	Depreciation	**22.70**	**23.05**	**22.66**

The Commission now approves depreciation of INR 22.66 Cr in the APR for FY 2018-19.

4.13. Interest on Loan

Petitioner's submission

The Petitioner has calculated the Interest on Loan on normative basis according to the MYT Regulations, 2014. The closing balance of FY 2017-18 is taken as the opening balance of loans for FY 2018-19. The normative loan addition in FY 2018-19 has been computed as 70% of the capitalisation proposed during FY 2018-19.

The repayment of loans has been considered equivalent to the depreciation during FY 2018-19. Further the rate of interest has been considered as SBI PLR @ 13.45%.

Commission's analysis:

Regulation 24 of the MYT Regulations, 2014 provides:

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that the complete capitalisation during the year shall be funded by equity and no loan is proposed to be taken against any of the capitalised 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 4.11* of the Order. The repayment is considered the same as depreciation during the year.

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

Table 60: Interest on Loan approved by Commission (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	30.39	43.86	35.10
2	Add: Normative Loan During the year	0.00	14.45	0.00
3	Less: Normative Repayment = Depreciation	22.70	23.05	22.66
4	Closing Normative Loan	7.69	35.26	12.44
5	Average Normative Loan	19.04	39.56	23.77
6	Rate of Interest (%)	13.40%	13.45%	13.45%
	Interest on Loan	**2.55**	**5.32**	**3.20**

The Commission approves Interest on Loan of INR 3.20 Cr in the APR of FY 2018-19.

4.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2014, and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for FY 2017-18 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. The Petitioner has considered the rate of Return on Equity as 16.00%.

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"*

In accordance with the above provisions of the Regulation, the RoE has been calculated on the average of the opening and the closing values of equity as approved in *Section 4.11* 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 ARR Order, Petitioner's submission and now approved by the Commission.

Table 61: RoE approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	91.25	129.89	94.26
2	Additions on account of new capitalisation	0.00	6.20	0.00
4	Closing Equity	91.25	136.09	94.26
5	Average Equity	91.25	132.99	94.26
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**14.60**	**21.28**	**15.08**

The Commission approves the Return on Equity of INR 15.08 Cr in the APR of FY 2018-19.

4.15. Interest on Security Deposits

Petitioner's submission

The Petitioner has submitted INR 2.11 Cr as revised estimates for interest on consumer security against INR 2.06 Cr approved by the Commission in the ARR Order.

Commission's analysis:

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2014, based on the average of the opening and closing consumer security deposits during the year. The Commission has considered the opening balance of the consumer security deposits in FY 2018-19 same as the closing balance in FY 2017-18. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The table below provides the calculation of interest on consumer security deposits for the year.

Table 62: Interest on Security Deposits approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	32.96	-	39.19
2	Add: Addition during the year	0.00	-	0.00
3	Less: Refund during the year	0.00	-	0.00
4	Closing Security Deposit	32.96	-	39.19
5	Average Security Deposit	32.96	-	39.19
6	Rate of Interest (%)	6.25%	-	6.25%
	Interest on Security Deposit	**2.06**	**2.11**	**2.45**

The Commission approves Interest on Security Deposit as INR 2.45 Cr in the APR of FY 2018-19.

4.16. Interest on Working Capital

Petitioner's submission

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

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The Interest on Working Capital is computed considering interest rate of 9.10%.

Commission's analysis:

For calculating the working capital requirements of the Petitioner during the year the receivables have been considered as the proportionate ARR for 2 months, the proportionate revised power purchase cost of FY 2018-19 for one month as determined above and the consumer security deposit. The inventory for two months has been considered on the same levels as per the audited accounts of FY 2017-18.

With regards to the interest rate, the SBI Base rate as on April 1, 2018 @ 8.70% has been considered, as stipulated in the MYT Regulations 2014.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	433.53	423.69	488.15
2	Less: Power Purchase Cost for one month	0.00	241.22	240.10
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.61	0.94	0.94
4	Total Working Capital Requirement	220.56	183.42	248.99
5	Less: Security Deposit excluding BG/FDR	32.96	39.19	39.19
6	Net Working Capital	187.60	144.23	209.80
7	Rate of Interest (%)	8.65%	9.10%	8.70%
	Interest on Working Capital	**16.23**	**13.13**	**18.25**

The Commission approves the Interest on Working Capital as INR 18.25 Cr in the APR of FY 2018-19.

4.17. Income Tax

Petitioner's submission

No submissions have been made in this regard.

Commission's analysis:

For FY 2018-19 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 64: Income tax approved by Commission (INR Crore)

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

The Commission approves Nil income tax liability in the APR of FY 2018-19.

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 2018-19.

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for FY 18-19 has been estimated at the same level as determined for the FY 2017-18 by considering elements like interest income, delayed payment surcharge, sale of scrap, reactive income, STOA application fees, supervision charges etc. However, one time income like provision written back has not been considered to estimate the non-tariff income for FY 2018-19. Accordingly, a revised estimate of INR 50.30 Cr has been submitted for FY 2018-19.

Commission's analysis:

For the APR of FY 2018-19 the Commission has considered the Non-Tariff Income the same as approved by the Commission in the true-up of FY 2017-18 after exclusion of revenue items including STOA application fee, provisions written back etc. The same shall be trued-up on actual basis.

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

Table 65: Non-Tariff Income approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Non-Tariff Income**	**48.79**	**50.30**	**42.85**

The Commission now approves Non-Tariff Income of INR 42.85 Cr in the APR for FY 2018-19.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 2,942.09 Cr is submitted after adjusting the Non -Tariff Income for FY 2018-19.

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 2018-19 are approved as follows:

Table 66: Aggregate Revenue Requirement approved by the Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost (inclusive of cost towards RPO and sale of surplus power)	2,562.98	2,894.60	2,881.22
2	Operation & Maintenance Expenses	28.87	32.91	28.87
3	Depreciation	22.70	23.05	22.66
4	Interest and Finance charges	2.55	5.32	3.20
5	Return on Equity	14.60	21.28	15.08
6	Interest on Security Deposit	2.06	2.11	2.45
7	Interest on Working Capital	16.23	13.13	18.25
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	0.00	0.00	0.00
10	**Total Revenue Requirement**	**2,649.99**	**2,992.39**	**2,971.73**
11	Less: Non-Tariff Income	48.79	50.30	42.85
12	**Net Revenue Requirement**	**2,601.20**	**2,942.09**	**2,928.88**

The Commission approves the net ARR of INR 2,928.88 Cr in the APR of FY 2018-19.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted total revenue of INR 2,892.06 Cr, which includes INR 2,542.15 Cr from sale of power at existing tariff, INR 103.11 Cr from FPPCA for the whole year and INR 246.54 Cr from Regulatory Surcharge. The revenue is net of INR 0.26 Cr revenue from sale of surplus power.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2018-19. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not considered the revenue from Regulatory Surcharge along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for FY 2018-19. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2018-19 has been shown in the following table.

Table 67: Revenue at existing tariff computed by Commission for FY 2018-19

S.No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**DOMESTIC**	**0.27**	**26.52**	**26.97**	**2.09**
(i)	0-50 units	0.06	0.22	0.28	1.53
(ii)	51-200 units	0.12	4.77	4.88	1.59
(iii)	201-400 units	0.06	5.73	5.79	1.85
(iv)	401 and above	0.04	15.79	15.83	2.44
(v)	Low Income Group	0.18	-	0.18	0.28
2	**COMMERCIAL**	**0.04**	**12.03**	**12.08**	**3.44**
(i)	0-100 units	0.02	0.31	0.33	2.74
(ii)	101 Units and Above	0.02	11.73	11.75	3.46
3	**LT INDUSTRIAL**	**4.30**	**83.09**	**87.39**	**3.95**
(i)	LTP Motive Power (For All Units)	4.24	80.54	84.78	3.94
	Up to 20 HP	0.02	2.16	2.18	3.68
	Above 20 HP	4.22	78.38	82.60	3.95
(ii)	LT Public Water Works (For all units)	0.06	2.55	2.62	4.05
	Up to 20 HP	0.05	2.12	2.17	4.04
	Above 20 HP	0.02	0.43	0.45	4.11
4	**HT/EHT**	**526.51**	**1,962.93**	**2,489.44**	**4.42**
(i)	11 kV- Load upto 1 MW	112.92	317.92	430.84	5.05
(ii)	11 kV- 1 MW and above	123.91	605.00	728.91	4.49
(iii)	66 kV	180.22	662.71	842.92	4.22
(iv)	220 kV	109.47	377.30	486.77	4.21

S.No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.55**	**0.55**	**0.74**
(i)	For sanctioned load upto 10 HP	0.00	0.45	0.45	0.70
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	0.00	0.10	0.10	1.00
6	**PUBLIC LIGHTING**	**0.00**	**2.11**	**2.11**	**3.45**
(i)	For all units		2.11	2.11	3.45
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**-**
(i)	For all units		0.00	0.00	-
8	**TEMPRORARY**	**0.00**	**1.78**	**1.78**	**4.99**
(i)	For all units		1.78	1.78	4.99
	Total	**531.13**	**2,089.01**	**2,620.32**	**4.34**

The Commission has determined revenue from sale of power at existing tariff as INR 2,620.32 Cr in the APR of FY 2018-19.

4.22. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, a standalone revenue gap of INR 50.04 Cr is arrived at in the APR for FY 2018-19.

Commission analysis

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

Table 68: Standalone Revenue Gap/ (Surplus) at existing tariff (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioners submission	Now Approved
1	Annual Revenue Requirement	2,601.20	2,942.09	2,928.88
2	Revenue from sale of power	2,532.09	2,541.89	2,620.32
3	FPPCA	0.00	103.11	103.11
4	Regulatory Surcharge	245.61	246.54	254.17
5	Total Revenue	2,777.70	2,892.06	2,977.60
	Revenue Gap/(Surplus)	**(176.50)**	**50.04**	**(48.72)**

The standalone surplus at existing retail tariff is INR 48.72 Cr in the APR of FY 2018-19. The estimated surplus is carried over to the next year and has been considered while determining the tariff for FY 2019-20.

5. Chapter 5: Determination of Aggregate Revenue Requirement for FY 2019-20, FY 2020-21 and FY 2021-22 (2nd MYT Control Period)

5.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for FY 2019-20, FY 2020-21 and FY 2021-22 (2nd MYT Control Period). The determination of Aggregate Revenue Requirement has been done in accordance with the MYT Regulations, 2018.

5.2. Approach for determination of ARR for each year of the 2nd MYT Control period

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for each year based on figures approved in the Business Plan Order dated November 5, 2018, the actual information available of various parameters for FY 2017-18 as per the audited accounts and the provisional information available for FY 2018-19. The ARR has been determined for each year of the Control Period whereas the revenue at existing tariff is determined only for FY 2019-20 to arrive at the revenue gap/surplus for FY 2019-20.

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

Petitioner's Submission

The Petitioner has considered the same energy sales, connected load and number of consumers as approved by the Commission in the Business Plan Order as follows:

Table 69: Number of consumers submitted by the Petitioner for the MYT Control Period

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	49,706	52,121	54,654
LIG/ Kutir Jyoti	15,302	15,517	15,736
Commercial	8,155	8,333	8,516
Agriculture	1,421	1,479	1,538
LT Industry	2,091	2,104	2,117
HT/EHT Industry	943	955	968
Public Lighting	424	451	480
Public Water Works	473	516	563
Temp. Supply	379	379	379
Total	**78,894**	**81,855**	**84,951**

Table 70: Connected load submitted by the Petitioner for the MYT Control Period (kW)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	109,253	113,470	117,850
LIG/ Kutir Jyoti	1,690	1,801	1,921

Category	FY 2019-20	FY 2020-21	FY 2021-22
Commercial	29,091	30,371	31,707
Agriculture	6,095	6,260	6,429
LT Industry	122,265	125,566	128,957
HT/EHT Industry	1,197,690	1,218,170	1,239,001
Public Lighting	3,077	3,281	3,499
Public Water Works	3,710	4,207	4,770
Temp. Supply	2,537	2,537	2,537
Total	**1,475,408**	**1,505,663**	**1,536,671**

Table 71: Energy sales submitted by the Petitioner for the MYT Control Period (MU)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	136.04	146.74	158.29
Commercial	35.40	36.83	38.31
Agriculture	7.32	7.77	8.25
LT Industry	215.89	219.82	223.82
HT/EHT Industry	5,882.61	6,074.97	6,273.63
Public Lighting	8.51	8.80	9.10
Public Water Works	7.72	9.20	10.95
Temp. Supply	3.39	3.39	3.39
Total	**6,296.88**	**6,507.52**	**6,725.74**

Commission's Analysis

The Commission in the Business Plan Order had approved the category wise energy sales, number of consumers and connected load based on historical trends and actual data available for last 4-5 years. The detailed methodology has been discussed in the Business Plan Order. The Commission retains the same energy sales, number of consumers and connected load as approved in the Business Plan Order.

Table 72: Number of consumers approved by the Commission for the MYT Control Period

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	49,706	52,121	54,654
LIG/Kutir Jyoti	15,302	15,517	15,736
Commercial	8,155	8,333	8,516
Agriculture	1,421	1,479	1,538
LT Industry	2,091	2,104	2,117
HT/EHT Industry	943	955	968
Public Lighting	424	451	480
Public Water Works	473	516	563
Temp. Supply	379	379	379
Total	**78,893**	**81,856**	**84,952**

Table 73: Connected load approved by the Commission for the MYT Control Period (kW)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	105,192	109,253	113,470
LIG/Kutir Jyoti	1,585	1,690	1,801
Commercial	27,865	29,091	30,371
Agriculture	5,935	6,095	6,260
LT Industry	119,051	122,265	125,566
HT/EHT Industry	1,177,554	1,197,690	1,218,170
Public Lighting	2,886	3,077	3,281
Public Water Works	3,272	3,710	4,207

Category	FY 2019-20	FY 2020-21	FY 2021-22
Temp. Supply	2,537	2,537	2,537
Total	**1,445,876**	**1,475,407**	**1,505,663**

Table 74: Energy sales approved by the Commission for MYT Control Period (MU)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	136.04	146.74	158.29
Commercial	35.40	36.83	38.31
Agriculture	7.32	7.77	8.25
LT Industry	215.89	219.82	223.82
HT/EHT Industry	5,882.61	6,074.97	6,273.63
Public Lighting	8.51	8.80	9.10
Public Water Works	7.72	9.20	10.95
Temp. Supply	3.39	3.39	3.39
Total	**6,296.89**	**6,507.52**	**6,725.73**

The Commission approves the number of consumer, connected load and energy sales as shown in the table above for FY 2019-20, FY 2020-21 and FY 2021-22.

5.4. Inter-State transmission loss

Petitioner's submission

The Petitioner has considered the Inter-State transmission loss of 3.66% for each year.

Commission's analysis

The Commission considers the transmission loss levels for each year of the control period in line with those considered in the Business Plan Order. The same shall be revised based on actuals during the true-up exercise.

The following table provides the Inter-State transmission loss approved by the Commission for the MYT Control Period.

Table 75: Inter-State transmission loss (%)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Inter-State Transmission Losses	3.66%	3.66%	3.66%

The Commission approves an Inter-State Transmission Loss of 3.66% for each year of the MYT Control Period.

5.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted the T&D lost trajectory for the next Control Period same as the trajectory approved by the Commission in the Business Plan Order.

Commission's analysis

The Commission, in the Business Plan Order, had discussed this issue in detail and had approved the Intra-State distribution loss trajectory for the MYT Control Period. The Petitioner has not made any additional submission to substantiate the year-wise intra-state T&D loss trajectory for the second Control Period. Hence, the Commission approves the same intra-state T&D Loss trajectory as approved in the Business Plan Order.

The following table provides the Intra-State distribution loss approved for the MYT Control Period.

Table 76: Intra-State distribution loss (%)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Intra-State Distribution Loss	4.30%	4.20%	4.10%

The Commission approves the Intra-State distribution loss of 4.30%, 4.20% and 4.10% for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.6. Power Purchase Quantum & Cost

Petitioners Submission

The Petitioner for projecting the energy availability during the MYT Control Period has considered the firm and infirm allocation from various generating stations. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized as follows:

1. **Power Purchase Quantum:**

Dadra & Nagar Haveli has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), and NTPC Sail Power Company Ltd (NSPCL).

The power availability for the MYT Control Period FY 2019-20 to FY 2021-22 has been estimated based on the revised allocation issued by the Western Region Power Committee (WRPC) vide no's. WRPC/Comml-I/6/Alloc/2018/5733 dated June 28, 2018. The energy allocation from various generating stations submitted by the Petitioner is as below:

Table 77: Energy Allocation as submitted by the Petitioner (MW)

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	48.60	0.00	48.60
KSTPS -3	18.80	2.20	21.00
VSTPP-I	35.13	5.00	40.13
VSTPP-II	26.50	4.00	30.50
VSTPP- III	26.50	6.00	32.50
VSTPP- IV	37.59	5.55	43.14
KAWAS	56.22	25.00	81.22
GGPP	56.73	2.00	58.73
Sipat – I	74.44	9.00	83.44
Sipat – II	25.13	4.00	29.13
KHSTPP – II	3.50	0.00	3.50
Mauda I (MSTPS)	37.59	5.55	43.14
VSTPP-V	18.80	5.55	24.35
Mauda II	49.62	8.60	58.22
Solapur	24.82	10.79	35.61
NPCIL – KAPS	13.93	2.00	15.93
NPCIL - TAPP 3&4	34.13	7.00	41.13
Total	**588.01**	**102.24**	**690.25**
NSPCL Bhilai		**100**	**100.00**
EMCO Energy Ltd. (GMR Group)		**200.00**	**200.00**

The Petitioner has submitted that DNHPDCL will start getting power form Lara and Gadarwara generating stations in FY 2018-19. A capacity of 10.46 MW has been allocated to DNHPDCL from Lara and a capacity of 20.83 MW has been allocated from Gadarwara Unit I. The Petitioner has considered the same for the MYT Control Period. Further, the Petitioner has assumed no purchase from Ratnagiri during the MYT Control Period FY 2019-20 to FY 2021-22.

The Petitioner has computed the Power purchase quantum from NTPC stations based on the installed capacity of each plant and by applying the PLF approved by the Commission in the Business Plan Order. It has considered auxiliary consumption of 7.75% and 2.5% for coal and gas based generating stations, respectively. Further, DNHPDCL had has considered 200 MW power from EMCO during the FY 2018-19 and FY 2019-20 as per the signed PPA with the company. For projection of power purchase from EMCO, DNHPDCL has considered 90% PLF and 7.75% auxiliary consumption.

The Petitioner has submitted that it is in the process signing long term PPA for procuring 200 MW power comprising of solar and wind with the Solar Energy Corporation of India (SECI) for receiving Round The Clock (RTC) power from the FY 2020-21. Additionally, DNHPDCL will be getting 50 MW of wind energy from SECI from FY 2019-20 for which the agreement has already been signed. Further, DNHPDCL has already installed 4.585 MW of solar plants in its territory for generation of solar energy out of which 4.1 MW is ground mounted and 485 KW is solar rooftop.

Accordingly, the Petitioner has submitted Power Purchase Quantum as shown in the table below.

Table 78: Power purchase quantum as projected by the Petitioner for the MYT Control Period (MU)

Source	FY 19-20	FY 20-21	FY 21-22
NTPC Stations			
KSTPS	349.50	349.50	349.50
KSTPS 3	152.73	152.73	152.73
VSTPP-I	278.90	278.90	278.90
VSTPP-II	209.50	209.50	209.50
VSTPP- III	225.87	225.87	225.87
VSTPP- IV	299.81	299.81	299.81
KGPP	277.48	277.48	277.48
GGPP	210.68	210.68	210.68
Sipat-I	606.83	606.83	606.83
Sipat-II	211.86	211.86	211.86
Mauda	167.34	167.34	167.34
VSTPS-V	169.23	169.23	169.23
Mauda 2	225.84	225.84	225.84
Solapur	172.64	172.64	172.64
LARA	70.88	70.88	70.88
Gadarwara	141.14	141.14	141.14
KHSTPP-II	22.06	22.06	22.06
Subtotal - NTPC	**3,792.30**	**3,792.30**	**3,792.30**
NSPCL - Bhilai	**703.06**	**703.06**	**703.06**
NPCIL			
KAPS	90.90	90.90	90.90

Source	FY 19-20	FY 20-21	FY 21-22
TAPS	260.84	260.84	260.84
Subtotal	**351.74**	**351.74**	**351.74**
Others			
EMCO Energy Ltd. (GMR Group)	1,454.60	0.00	0.00
Subtotal	**1,454.60**	**0.00**	**0.00**
Power purchase from Other Sources			
Indian E. Exchange/Bilateral	342.00	200.00	430.00
UI	0.00	0.00	0.00
Solar	5.23	5.23	5.23
Non Solar	175.20	175.20	175.20
Solar REC	0.00	0.00	0.00
Non Solar REC	0.00	0.00	0.00
Solar (SECI)	0.00	876.00	876.00
Wind (SECI)	0.00	876.00	876.00
Subtotal	**522.43**	**2,132.43**	**2,362.43**
Total Power Purchase	**6,824.12**	**6,979.52**	**7,209.52**

2. Power Purchase Cost:

The cost of purchase from the central generating stations for the MYT Control Period is estimated based on the following assumptions:

- Fixed cost for the MYT Control Period has been projected at the same level as estimated for various stations for the FY 2018-19.
- Variable cost for each NTPC generating stations for the MYT Control Period has been projected considering the actual variable cost incurred during the first six months of FY 2018-19 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 2018-19 has been considered for projecting the power purchase cost for the MYT Control Period.
- For NTPC-SAIL Bhilai unit 1 & 2, the fixed has been projected at the same level as estimated for the FY 2018-19 and for projecting the variable cost the actual average variable cost per unit for the first six months of FY 2018-19 has been taken into consideration.
- For power purchase from renewable energy sources, for the Control Period, the DNHPDCL has outsourced the maintenance cost of the solar plants to BHEL. For the purchase of RTC power from SECI a rate of INR 4.70 per unit has been considered with a 5% escalation every year for projecting the cost during the Control Period. For the purchase of 50 MW wind power a rate of INR 2.59 per unit has been considered for the Control Period. For purchasing the non-solar renewable certificates, a rate of INR 1.50 per unit has been considered and for purchasing the solar certificates, a rate of INR 1 per unit has been considered for the MYT Control Period.

The projected power purchase cost is as illustrated in the table below:

Table 79: Power purchase cost submitted by Petitioner for the MYT Control Period (INR Crore)

Source	FY 19-20	FY 20-21	FY 21-22
NTPC Stations			
KSTPS	71.19	71.19	71.19
KSTPS 3	41.87	41.87	41.87
VSTPP-I	67.69	67.69	67.69
VSTPP-II	45.96	45.96	45.96
VSTPP- III	59.26	59.26	59.26
VSTPP- IV	93.94	93.94	93.94
KGPP	123.01	123.01	123.01
GGPP	95.79	95.79	95.79
Sipat-I	159.17	159.17	159.17
Sipat-II	56.20	56.20	56.20
Mauda	97.78	97.78	97.78
VSTPS-V	55.48	55.48	55.48
Mauda 2	117.51	117.51	117.51
Solapur	110.19	110.19	110.19
LARA	20.41	20.41	20.41
Gadarwara	47.28	47.28	47.28
KHSTPP-II	7.07	7.07	7.07
Subtotal - NTPC	**1,269.81**	**1,269.81**	**1,269.81**
NSPCL - Bhilai	**228.77**	**228.77**	**228.77**
NPCIL			
KAPS	26.36	26.36	26.36
TAPS	80.16	80.16	80.16
Subtotal	**106.52**	**106.52**	**106.52**
Others			
EMCO Energy Ltd. (GMR Group)	721.38	0.00	0.00
Subtotal	**721.38**	**0.00**	**0.00**
Power purchase from other sources			
Indian E. Exchange/Bilateral	114.21	90.00	193.50
UI	0.00	0.00	0.00
Solar	0.00	0.00	0.00
Non Solar	45.38	45.38	45.38
Solar REC	29.07	0.00	0.00
Non Solar REC	37.95	0.00	0.00
Solar (SECI)	0.00	432.31	453.92
Wind (SECI)	0.00	432.31	453.92
Subtotal	**226.61**	**999.99**	**1,146.72**
Total Power Purchase	**2,553.09**	**2,605.09**	**2,751.82**

Transmission Charges

The transmission charges payable to PGCIL are projected based on the total capacity allocation in the transmission network. PGCIL transmission charges for the MYT Control Period have been projected by considering the average monthly bill being received from PGCIL. The transmission charges along with the total power purchase cost for the MYT Control Period has been given in the table below:

Table 80: Transmission charges and total power purchase cost submitted by Petitioner (INR Crore)

Source	FY 19-20	FY 20-21	FY 21-22
Power Purchase Cost	**2,553.09**	**2,605.09**	**2,751.82**
PGCIL Charges	312.00	312.00	312.00
POSOCO	0.64	0.64	0.64
WRPC	0.00	0.00	0.00
Reactive charges	0.18	0.18	0.18
MSTCL	0.00	0.00	0.00
Intra-state transmission charges	42.84	42.84	42.84
Grand Total of Charges	**2,908.75**	**2,960.75**	**3,107.48**
GMR - Change in Law	18.00	0.00	0.00
Grand Total of All Charges	**2,926.75**	**2,960.75**	**3,107.48**

Commission's Analysis

The Commission for the purpose of estimating the quantum and cost of power purchase for each year has relied on the station wise quantum approved in the Business Plan Order, actual energy availability for FY 2015-16, FY 2016-17 and FY 2017-18, provisional energy availability for first nine months of FY 2018-19, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for previous years for each station, allocated share to the Petitioner and norms and cost approved in Tariff Orders for Central Generating Stations approved by CERC.

The overall methodology followed for projection of quantum and cost of power procurement has been discussed below.

5.6.1. Availability of power

The availability of power has been considered as approved by the Commission in the Business Plan Order dated November 5, 2018. The Power availability for KAPS station has been considered in accordance with Petitioner's submission, since the same was not approved in the Business Plan Order due to unavailability of past data. The deficit as approved in the *Section 5.8: Energy Balance* has been proposed to be procured from open market by the Petitioner.

5.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by taking the average of the actual per unit variable cost during the first nine months from April 2018 to December 2018. An y-o-y escalation of 5% has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for each year

Fixed Charges:

- The station wise fixed cost determined for FY 2018-19 has been escalated 2% to determine the fixed cost for each station

Other Charges:

- No other charges have been considered for the MYT Control Period. The same shall be considered as per actuals during the true-up of each year.

5.6.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the charges determined for APR of FY 2018-19 with y-o-y escalation of 2%. The intra-state transmission charges have been considered same as the charges approved by the Commission for the Transmission Division for the next Control Period.

5.6.4. Total power purchase quantum and cost

The energy availability and the power purchase cost approved by the Commission for each year of the Control Period have been shown in the following tables:

Table 81: Power Purchase Quantum (MU) and cost (INR Crore) approved for FY 2019-20

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
NTPC					
KSTPS	379.74	24.39	54.66	79.05	2.08
KSTPS 3	169.60	21.72	24.64	46.36	2.73
VSTPP-I	299.84	24.64	50.15	74.79	2.49
VSTPP-II	227.94	15.74	35.80	51.54	2.26
VSTPP- III	240.89	25.15	38.58	63.73	2.65
VSTPP- IV	318.18	49.89	51.21	101.10	3.18
KGPP	279.61	51.17	81.67	132.84	4.75
GGPP	211.81	43.87	55.37	99.24	4.69
Sipat-I	647.43	80.40	90.33	170.73	2.64
Sipat-II	228.14	26.69	33.57	60.26	2.64
Mauda	177.49	53.76	57.09	110.85	6.25
VSTPS-V	176.85	29.60	29.13	58.72	3.32
Mauda 2	239.99	50.15	73.30	123.45	5.14
Solapur	175.68	52.26	71.93	124.19	7.07
Lara	169.40	-	57.10	57.10	3.37
Gadarwara	169.40	-	65.45	65.45	3.86
KHSTPP-II	22.17	2.45	5.04	7.49	3.38
Subtotal - NTPC	**4,134.16**	**551.89**	**875.02**	**1,426.91**	**3.45**
NSPCL Bhillai	**699.43**	**108.55**	**115.35**	**223.90**	**3.20**
NPCIL					
KAPS	90.90	-	24.74	24.74	2.72
TAPS	260.73	-	83.48	83.48	3.20
Subtotal - NPCIL	**351.63**	**-**	**108.22**	**108.22**	**3.08**
Others					
EMCO Energy Ltd. (GMR Group)	1,163.19	398.08	262.13	660.21	5.68
Subtotal - Others	**1,163.19**	**398.08**	**262.13**	**660.21**	**5.68**
Other Sources					
UI	-	-	-	-	-
Solar (Own-generation)	5.23	-	-	-	-

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
Solar (SECI)	-	-	-	-	-
Non-Solar	175.20	-	45.38	45.38	2.59
Non-Solar (SECI)	-	-	-	-	-
Solar REC	-	-	29.07*	29.07	-
Non-Solar REC	-	-	25.30*	25.30	-
Open Market Purchase	294.09	-	112.32	112.32	3.82
Subtotal - Other Sources	**474.52**	**-**	**212.07**	**212.07**	**4.47**
Total	**6,822.93**	**1,059**	**1,573**	**2,631.31**	**3.86**
PGCIL Charges				344.37	
POSOCO				0.64	
WRPC				-	
Reactive charges				0.18	
MSTCL				-	
Intra-state transmission charges				42.52	
Grand Total of Charges	**6,822.93**			**3,019.02**	**4.42**
Other Charges (GMR Change in Law)				18.00	
Grand Total of Charges	**6,822.93**			**3,037.02**	**4.45**

* The details and cost for RPO is provided in Section 5.7

The Commission approves the quantum of power purchase as 6,822.93 MU at the generator periphery with a total cost of INR 3,037.02 Cr for FY 2019-20.

The APPC has been computed at the UT Periphery excluding the transmission charges and cost of purchase of renewable energy. The same shall be used for the purpose of compensation / payment of surplus power at the end of each settlement period in case of Net-metering consumers by the Petitioner. The Average Power Purchase Cost (APPC) for FY 2019-20 has been determined as provided in the table below:

Table 82: Average Power Purchase Cost (APPC) for FY 2019-20

Particular	FY 2019-20
Total Power Purchase Cost (INR Cr)	3,037.02
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	487.46
Net Power Purchase Cost (INR Cr)	**2,549.56**
Total Power Purchase quantum (MU)	6590.58
Less: Quantum from renewable energy sources (MU)	180.43
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU)	**6,410.15**
APPC (Rs/kWh)	**3.98**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.98/ kWh for the FY 2019-20

Table 83: Power Purchase Quantum (MU) and cost (INR Crore) approved for FY 2020-21

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
NTPC					
KSTPS	379.74	24.88	57.39	82.27	2.17
KSTPS 3	169.60	22.15	25.88	48.03	2.83
VSTPP-I	299.84	25.13	52.66	77.79	2.59
VSTPP-II	227.94	16.06	37.59	53.65	2.35
VSTPP- III	240.89	25.66	40.51	66.17	2.75
VSTPP- IV	318.18	50.89	53.77	104.66	3.29
KGPP	279.61	52.19	85.76	137.94	4.93
GGPP	211.81	44.75	58.14	102.89	4.86
Sipat-I	647.43	82.01	94.84	176.85	2.73
Sipat-II	228.14	27.23	35.24	62.47	2.74
Mauda	177.49	54.84	59.94	114.78	6.47
VSTPS-V	176.85	30.19	30.58	60.77	3.44
Mauda 2	239.99	51.16	76.97	128.12	5.34
Solapur	175.68	53.31	75.53	128.84	7.33
Lara	169.40	-	59.96	59.96	3.54
Gadarwara	169.40	-	68.72	68.72	4.06
KHSTPP-II	22.17	2.50	5.29	7.79	3.51
Subtotal - NTPC	**4,134.16**	**562.93**	**918.77**	**1,481.70**	**3.58**
NSPCL Bhillai	**699.43**	**110.72**	**121.12**	**231.84**	**3.31**
NPCIL					
KAPS	90.90	-	25.97	25.97	2.86
TAPS	260.73	-	87.66	87.66	3.36
Subtotal - NPCIL	**351.63**	**-**	**113.63**	**113.63**	**3.23**
Others					
EMCO Energy Ltd. (GMR Group)	-	-	-	-	-
Subtotal - Others	**-**	**-**	**-**	**-**	**-**
Other Sources					
UI	-	-	-	-	-
Solar (Own-generation)*	5.23	-	-	-	-
Solar (SECI)*	876.00	-	432.31	432.31	4.94
Non-Solar*	175.20	-	45.38	45.38	2.59
Non-Solar (SECI)*	876.00		432.31	432.31	4.94
Open Market Purchase	-	-	-	-	-
Subtotal - Other Sources	**1,932.43**	**-**	**909.99**	**909.99**	**4.71**
Total	**7,117.65**	**674**	**2,064**	**2,737.16**	**3.85**
PGCIL CHARGES				351.26	
POSOCO				0.64	
WRPC				-	
Reactive charges				0.18	
MSTCL				-	

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
Intra-state transmission charges				46.80	
Grand Total of Charges	**7,117.65**			**3,136.03**	**4.41**

* The details and cost for RPO is provided in Section 5.7

The Commission approves the quantum of power purchase as 7,117.65 MU at the generator periphery with a total cost of INR 3,136.03 Cr for FY 2020-21.

Table 84: Power Purchase Quantum (MU) and cost (INR Crore) approved for FY 2021-22

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
NTPC					
KSTPS	379.74	25.37	60.26	85.63	2.26
KSTPS 3	169.60	22.60	27.17	49.77	2.93
VSTPP-I	299.84	25.63	55.29	80.93	2.70
VSTPP-II	227.94	16.38	39.47	55.85	2.45
VSTPP- III	240.89	26.17	42.54	68.71	2.85
VSTPP- IV	318.18	51.91	56.46	108.36	3.41
KGPP	279.61	53.23	90.04	143.28	5.12
GGPP	211.81	45.65	61.04	106.69	5.04
Sipat-I	647.43	83.65	99.59	183.24	2.83
Sipat-II	228.14	27.77	37.01	64.78	2.84
Mauda	177.49	55.93	62.94	118.87	6.70
VSTPS-V	176.85	30.79	32.11	62.90	3.56
Mauda 2	239.99	52.18	80.82	132.99	5.54
Solapur	175.68	54.38	79.30	133.68	7.61
Lara	169.40	-	62.95	62.95	3.72
Gadarwara	169.40	-	72.16	72.16	4.26
KHSTPP-II	22.17	2.55	5.56	8.11	3.66
Subtotal - NTPC	**4,134.16**	**574.19**	**964.71**	**1,538.89**	**3.72**
NSPCL Bhillai	**699.43**	**112.94**	**127.17**	**240.11**	**3.43**
NPCIL					
KAPS	90.90	-	27.27	27.27	3.00
TAPS	260.73	-	92.04	92.04	3.53
Subtotal - NPCIL	**351.63**	**-**	**119.31**	**-**	**119.31**
Others					
EMCO Energy Ltd. (GMR Group)	-	-	-	-	-
Subtotal - Others	-	-	-	-	-
Other Sources					
UI	-	-	-	-	-
Solar (Own-generation)*	5.23	-	-	-	-
Solar (SECI)*	876.00	-	453.92	453.92	5.18
Non-Solar*	175.20	-	45.38	45.38	2.59
Non-Solar (SECI)*	876.00		453.92	453.92	5.18

Station	Energy Units (MU)	Fixed Charges (INR Crore)	Variable Charges (INR Crore)	Total Charges (INR Crore)	Per Unit (INR/kwh)
Open Market Purchase	88.66	-	37.33	37.33	4.21
Subtotal - Other Sources	**2,021.09**	**-**	**990.55**	**990.55**	**4.90**
Total	**7,206.31**	**687.13**	**2,201.74**	**-**	**2,888.87**
PGCIL Charges				358.29	
POSOCO				0.64	
WRPC				-	
Reactive charges				0.18	
MSTCL				-	
Intra-state transmission charges				45.94	
Grand Total of Charges	**7,206.31**	**687.13**	**2,201.74**	**3,293.91**	**4.57**

* The details and cost for RPO is provided in Section 5.7

The Commission approves the quantum of power purchase as 7,206.31 MU at the generator periphery with a total cost of INR 3,293.91 Cr for FY 2021-22.

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

The Petitioner is required to procure power from renewable sources for meeting the RPO. The Petitioner has submitted that it is in the process signing long term PPA with the Solar Energy Corporation of India (SECI) for receiving Round The Clock (RTC) power from the FY 2020-21. The DNHPDCL will be signing the PPA for procuring 200 MW power from SECI which shall comprises of solar and wind energy. Additionally, DNHPDCL will be getting 50 MW of wind energy from SECI from FY 2019-20 for which the agreement has already been signed. Further, DNHPDCL has already installed 4.585 MW of solar plants in its territory for generation of solar energy out of which 4.1 MW is ground mounted and 485 KW is solar rooftop. The RPO requirement and compliance plan for each year of the Control Period as submitted by the Petitioner has been provided in the following table:

Table 85: RPO requirement and Compliance for MYT Control Period as submitted by Petitioner (MU)

Description	FY 2019-20	FY 2020-21	FY 2021-22
Sales within State (MU)	**6,296.88**	**6,507.52**	**6,725.74**
RPO obligation (%)	**11.50%**	**14.10%**	**17.00%**
Solar	4.70%	6.10%	8.00%
Non-Solar	6.80%	8.00%	9.00%
RPO obligation for the year (MU)	**724.14**	**917.56**	**1,143.38**
Solar	295.95	396.96	538.06
Non-Solar	428.19	520.60	605.32
RPO Compliance (Procurement and own generation)	**180.43**	**1,932.43**	**1,932.43**
Solar	5.23	881.23	881.23
Non-Solar	175.20	1051.20	1051.20
RPO Compliance (REC certificate purchase)	**543.71**	**0.00**	**0.00**
Solar	290.72	0.00	0.00
Non-Solar	252.99	0.00	0.00

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%, 14.10% and 17.00% of its total consumption through conventional sources from renewable sources for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This translates to requirement of procurement of 724.14 MU, 917.56 MU and 1,143.38 MU in FY 2019-20, FY 2020-21 and FY 2021-22 respectively. Further, the Petitioner is also required to clear the backlog of 582.07 MU upto FY 2018-19 carried forward (in accordance with compliance plan approved in APR of FY 2019-20). 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 the each year of the Control Period.

Table 86: Summary of Renewable Purchase Obligation (RPO) (MU)

Particulars	FY 2019-20	FY 2020-21	FY2021-22
Solar Target	4.70%	6.10%	8.00%
Non Solar Target	6.80%	8.00%	9.00%
Total Target	**11.50%**	**14.10%**	**17.00%**
Sales Within UT	6,296.88	6,507.52	6,725.74
RPO Target			
Solar	295.95	396.96	538.06
Non Solar	428.19	520.60	605.32
Total RPO Target	**724.14**	**917.56**	**1,143.38**
RPO Compliance (Actual Purchase)			
Solar	5.23	881.23	881.23
Non Solar	175.20	1,051.20	1,051.20
Total RPO Compliance (Actual Purchase)	**180.43**	**1,932.43**	**1,932.43**
RPO Compliance (REC Certificate Purchase)			
Solar	290.72	-	-
Non Solar	252.99	-	-
Total RPO Compliance (REC Certificate)	**543.71**	**-**	**-**
RPO Compliance (REC+ Actual)			
Solar	295.95	881.23	881.23
Non Solar	428.19	1,051.20	1,051.20
Total RPO Compliance	**724.14**	**1,932.43**	**1,932.43**
Cumulative Requirement till current year			
Solar	849.14	1,246.10	1,784.16
Non Solar	1,730.25	2,250.85	2,856.17
Total	**2,579.39**	**3,496.95**	**4,640.33**
Cumulative Compliance till current year			

Particulars	FY 2019-20	FY 2020-21	FY2021-22
Solar	641.56	1,522.79	2,404.02
Non Solar	1,355.76	2,406.96	3,458.16
Total	**1,997.32**	**3,929.75**	**5,862.18**
Net Shortfall in RPO Compliance till current year			
Solar	207.58	-	-
Non Solar	374.49	-	-
Total	**582.07**	**-**	**-**

The cost has already been considered in the total power purchase cost approved by the Commission in the previous section.

Similar to the approach followed in the APR of FY 2018-19, the Commission has considered the gross generated power from solar rooftop plants while approving the RPO compliance for the year. The quantum for each year has been considered same as approved in the Business Plan Order. The Commission has considered the shortfall to be fulfilled by way of REC purchase and has assumed the rate of purchase for Solar and Non-Solar REC as INR 1.00/kWh (IEX Floor Price Rate).

The cost towards RPO for each year of the MYT Control Period as approved by the Commission is provided in the table below:

Table 87: Cost towards compliance of Renewable Purchase Obligation for FY 2019-20 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**295.95**	**29.07**	**0.98**
(a)	*Solar power generation*	5.23	-	-
(b)	*Solar power procurement*	-	-	
(c)	*Solar RECs*	*290.72*	*29.07*	*1.00*
2	**Non-solar**	**428.19**	**70.68**	**1.65**
(a)	*Non-solar power generation*	-	-	-
(b)	*Non-solar power procurement*	*175.20*	*45.38*	*2.59*
(c)	*Non-solar RECs*	*252.99*	*25.30*	*1.00*
	Total	**724.14**	**99.75**	**1.38**

The Commission approves INR 99.75 Cr towards compliance of RPO in the ARR of FY 2019-20 and the same has been considered in the total power purchase cost as approved for FY 2019-20.

Table 88: Cost towards compliance of Renewable Purchase Obligation for FY 2020-21 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**604.54**	**295.76**	**4.89**
(a)	*Solar power generation*	5.23	0.00	0.00
(b)	*Solar power procurement*	*599.31*	*295.76*	*4.94*
(c)	*Solar RECs*	*0.00*	*0.00*	*0.00*
2	**Non-solar**	**895.09**	**406.74**	**4.54**
(a)	*Non-solar power generation*	*0.00*	*0.00*	*0.00*
(b)	*Non-solar power procurement*	*895.09*	*406.74*	*4.54*

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
(c)	*Non-solar RECs*	*0.00*	*0.00*	*0.00*
	Total	**1,499.63**	**702.50**	**4.68**

The Commission approves INR 702.50 Cr towards compliance of RPO in the ARR of FY 2020-21 and the same has been considered in the total power purchase cost as approved for FY 2020-21.

Table 89: Cost towards compliance of Renewable Purchase Obligation for FY 2021-22 (INR Crore)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**538.06**	**276.10**	**5.13**
(a)	*Solar power generation*	5.23	0.00	0.00
(b)	*Solar power procurement*	*532.83*	*276.10*	*5.18*
(c)	*Solar RECs*	*0.00*	*0.00*	*0.00*
2	**Non-solar**	**605.32**	**287.51**	**4.75**
(a)	*Non-solar power generation*	*0.00*	*0.00*	*0.00*
(b)	*Non-solar power procurement*	*605.32*	*287.51*	*4.75*
(c)	*Non-solar RECs*	*0.00*	*0.00*	*0.00*
	Total	**1,143.38**	**563.61**	**4.93**

The Commission approves INR 563.61 Cr towards compliance of RPO in the ARR of FY 2021-22 and the same has been considered in the total power purchase cost as approved for FY 2021-22.

5.8. *Energy Balance*

Petitioner's submission

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

Table 90: Energy Balance submitted by Petitioner (MU)

Particulars	FY 19-20	FY 20-21	FY 21-22
Sales	6,296.88	6,507.52	6,725.74
Open Access Sales	0.00	0.00	0.00
Less: Energy Savings	0.00	0.00	0.00
Total Sales	6,296.88	6,507.52	6,725.74
Add: Losses	*282.93*	*285.30*	*287.54*
T&D Losses	4.30%	4.20%	4.10%
Energy Required at Periphery	**6,579.81**	**6,792.82**	**7,013.28**
Add: Sales to common pool consumer	1.15	1.98	3.10
Less: Own Generation	5.23	5.23	5.23
Total energy requirement at state periphery	6,575.73	6,789.57	7,011.15
Less: Energy Purchased through UI at Periphery	0.00	0.00	0.00
Less: Purchase from Renewable Sources	175.20	1,927.20	1,927.20
Less: Open Access Purchase	0.00	0.00	0.00
Total Energy Required at Periphery	6,400.53	4,862.37	5,083.95

Particulars	FY 19-20	FY 20-21	FY 21-22
Transmission loss	243.16	184.72	193.14
Transmission loss (%)	3.66%	3.66%	3.66%
Total Energy to be purchased	**6,643.69**	**5,047.09**	**5,277.09**
Total Energy requirement from tied up sources + UI at generator end + renewable sources	6,824.12	6,979.52	7,209.52
Total Energy requirement in UT including Open Access	6,824.12	6,979.52	7,209.52

Commission's analysis

Based on the Energy sales, Power Procurement and Inter & Intra- State Loss as approved above the Energy Balance for each year of the MYT Control Period has been shown in following table:

Table 91: Energy Balance approved by Commission (MU)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Energy sales within the State/UT	6,296.88	6,507.52	6,725.74
Open Access Sales	-	-	-
Less: Energy Savings	-	-	-
Total Sales within the State/UT	6,296.88	6,507.52	6,725.74
Distribution losses			
%	4.30%	4.20%	4.10%
MU	282.93	285.30	287.54
Energy required at State Periphery	**6,579.81**	**6,792.82**	**7,013.28**
Energy Transactions at Periphery			
Add: UI under-drawal	-	-	-
Add: Sales in Power Exchanges	-	-	-
Less: Own Generation	5.23	5.23	5.23
Less: UI Over-drawal	-	-	-
Less: Purchase from Traders	-	-	-
Less: Open Access Purchase	-	-	-
Less: Purchase from Power Exchanges	-	-	-
Less: Purchase from Renewable Sources	175.20	1,927.20	1,927.20
Total energy scheduled at State Periphery from Tied-up Sources	6,399.38	4,860.39	5,080.85
Transmission losses			
%	3.66%	3.66%	3.66%
MU	243.12	184.65	193.02
Total requirement from Tied-up sources at generator end (MU)	**6,642.50**	**5,045.04**	**5,273.88**
Total availability from tied up sources at generator end (MU)	**6,348.41**	**5,185.22**	**5,185.22**
Deficit/(Surplus)	**294.09**	**(140.18)**	**88.66**

The Commission approves the Total Energy Requirement at the generator Periphery for each year of the Control Period as shown in the table above. The Commission further estimates deficit/(surplus) power for each year of the control period as shown in the table above, with deficit assumed to be procured from Open Market and surplus to be sold off in Open Market by the Petitioner.

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 nthYear of the Control Period shall be approved based on the formula given below:

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

Where,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.9.1. Employee Expenses

Petitioner's submission

The Petitioner has determined the employee expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2018. The employee expenses for FY 2018-19 has been taken as base. The growth factor (Gn) has been calculated on the basis projected growth in the number of employees year over year during the control period. The average increase in Consumer Price Index (CPI) has been calculated based on the average increase in the Consumer Price Index (CPI) for FY 2015-16, FY 2016-17 & FY 2017-18 as 4.28%. The table below provides the employee expenses projected for each year of the MYT Control Period.

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

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Employee Expenses	**15.78**	**16.45**	**17.16**

Commission's analysis

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

6. Values for Base Year

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

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

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

The Commission has averaged the actual employee expenses after deducting the impact of Seventh Pay Commission for FY 2015-16 to FY 2017-18 to arrive at the employee expenses for the median year. Thereafter, the employee expenses, thus, arrived have been escalated by the CPI inflation twice to arrive at employee expenses for the base year, FY 2018-19. The impact of Seventh Pay Commission has been calculated separately by escalating the impact of FY 2017-18 by the average CPI inflation from FY 2015-16 to FY 2017-18. The resultant employee expenses (employee expenses plus impact of Seventh Pay Commission) have been escalated by Growth Factor determined based on the manpower plan approved in the Business Plan Order and CPI Inflation to arrive upon the employee expenses of each year of the Control Period.

The CPI Inflation has been computed as follows:

Table 93: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2015-16	265.00	5.65%	
2016-17	275.92	4.12%	

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2017-18	284.42	3.08%	
		CPI Inflation	**4.28%**

The growth factor has been computed based on manpower plan approved by the Commission in the Business Plan Order.

Table 94: Growth factor approved by the Commission

Particular	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Closing no. of employees	361	404	443	485
Gn		11.91%	9.65%	9.48%

Accordingly, the employee expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 95: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Average of preceding three years	Base Year	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	10.80				
2	Growth in number of employees (Gn)			11.91%	9.65%	9.48%
3	CPI Inflation for preceding three years (CPI)		4.28%	4.28%	4.28%	4.28%
	Employee Expenses	**10.80**	**12.44**	**14.51**	**16.60**	**18.95**

The Commission approves Employee Expenses of INR 14.51 Cr, INR 16.60 Cr and INR 18.95 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

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

Table 96: A&G submitted by Petitioner (INR Crore)

Particular	Unit	FY 2019-20	FY 2020-21	FY 2021-22
A&G Expenses of Previous Year	INR Crore	8.31	8.66	9.03
CPI Inflation	%	4.28%	4.28%	4.28%
Projected A&G expenses	**INR Crore**	**8.66**	**9.03**	**9.42**

Commission's analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has determined the A&G expenses for the median year after taking the average of actual A&G expenses of FY 2015-16, FY 2016-17 and FY 2017-18. The resultant A&G expenses have been escalated by CPI Inflation twice to arrive upon the A&G expenses for the base year. Thereafter, the A&G expenses are escalated by CPI Inflation to determine the A&G expenses for each year of the Control Period.

The A&G expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 97: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Average of preceding three years	Base Year	FY 2019-20	FY 2020-21	FY 2021-22
1	A&G Expenses	6.14				
2	CPI Inflation		4.28%	4.28%	4.28%	4.28%
3	**A&G Expenses**	**6.14**	**6.67**	**6.96**	**7.26**	**7.57**

The Commission approves the Administrative & General (A&G) expenses of INR 6.96 Cr, INR 7.26 Cr and INR 7.57 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2018. The R&M expenses for FY 2018-19 have been taken as base. 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 2016-17 & FY 2017-18 as 0.33%.

The table below provides the R&M expenses proposed for each year of the MYT Control Period along with various parameters considered.

Table 98: R&M expenses submitted by Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
R&M Expenses	**11.32**	**11.47**	**16.24**

Commission's analysis

The 'K' factor has been determined as the ratio of R&M to opening GFA for FY 2015-16, FY 2016-17 and FY 2017-18 as per audited accounts, averaged for three years. The 'K' factor has been computed as follows:

Table 99: Computation of 'K' factor for the MYT Control Period (INR Crore)

S. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	R&M Expenses	4.56	7.20	13.17
2	Opening GFA	389.77	393.48	427.37
3	K Factor	1.17%	1.83%	3.08%
	K Factor Approved by the Commission (Average of 3 years)			**2.03%**

The 'K' factor is kept constant for all the years and 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 each year of the Control Period.

The WPI Inflation has been computed as follows:

Table 100: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2015-16	109.72	-3.65%	
2016-17	111.62	1.73%	
2017-18	114.88	2.92%	
		WPI Inflation	**0.33%**

The R&M expenses approved by the Commission for each year of the MYT Control Period have been provided in the following table:

Table 101: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA (GFA_{n-1}) of previous year	432.95	438.65	621.34
4	K factor approved (K)	2.03%	2.03%	2.03%
5	WPI Inflation	0.33%	0.33%	0.33%
	R&M Expenses = (K x (GFA_{n-1}) x (1+$WPI_{inflation}$)	**8.81**	**8.92**	**12.64**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 8.81, INR 8.92 Cr and INR 12.64 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

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

The following table provides the total O&M expenses approved by the Commission for the MYT Control Period

Table 102: O&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	14.51	16.60	18.95
2	Administrative & General Expenses (A&G)	6.96	7.26	7.57
3	Repair & Maintenance Expenses	8.81	8.92	12.64
	Total Operation & Maintenance Expenses	**30.28**	**32.79**	**39.15**

The Commission approves Operation & Maintenance (O&M) expenses of INR 30.28 Cr, INR 32.79 Cr and INR 39.15 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.10. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has proposed capital expenditure and capitalisation plan as approved by the Commission in the Business Plan Order.

Commission's analysis:

The Commission had approved the capital expenditure and capitalization for the next Control Period in the Business Plan Order dated November 5, 2018. The Commission considers the same for the Control Period and approves the capital expenditure and capitalization as shown in the table below.

Table 103: Capital Expenditure and Capitalisation approved by the Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Capital Expenditure	128.20	30.19	18.00
2	Capitalisation	5.70	182.69	48.00

The Commission approves the capital expenditure and capitalisation as shown in the table above.

5.11. Capital Structure

Petitioner's Submission

The Petitioner has proposed that the entire capitalisation for the MYT Control Period shall be through deployment of capital equity.

Commission's analysis

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

26. Debt to Equity Ratio

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

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

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

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

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

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

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

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

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

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

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, thus equity higher than 30% of capitalisation has been considered as normative loan. The opening Gross Fixed Assets for FY 2019-20 has been considered as closing Gross Fixed Assets approved in the APR of FY 2018-19. Further, the values of opening loan and equity has been considered as closing loan and equity approved in APR of FY 2018-19. The loan and equity addition has been considered on normative basis as 70% and 30%

respectively of the approved capitalization for the year. Accordingly, the Commission has determined the capital structure for each year of the MYT Control Period as follows:

Table 104: Funding Plan approved by the Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Capitalisation	5.70	182.69	48.00
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	3.99	127.88	33.60
5	Equity	1.71	54.81	14.40

Table 105: GFA addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Gross Fixed Assets	432.95	438.65	621.34
2	Addition During FY	5.70	182.69	48.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	438.65	621.34	669.34

Table 106: Normative Loan addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	12.44	0.00	107.37
2	Add: Normative Loan During the year	3.99	127.88	33.60
3	Less: Normative Repayment equivalent to Depreciation	16.87	20.52	24.98
4	Closing Normative Loan	0.00	107.37	115.99

Table 107: Normative Equity addition approved by the Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Equity	94.26	95.97	150.78
2	Additions on account of new capitalisation	1.71	54.81	14.40
3	Closing Equity	95.97	150.78	165.18

5.12. Depreciation

Petitioner's submission

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

The following table provides the depreciation submitted by the Petitioner for each year of the Control Period.

Table 108: Depreciation for the Control Period as submitted by Petitioner (INR Crore)

Particulars	FY 19-20	FY 20-21	FY 21-22
Opening GFA	453.62	459.32	642.01
Addition during the year	5.70	182.69	48.00
Closing GFA	459.32	642.01	690.01
Average GFA	456.47	550.66	666.01
Depreciation during the year	**17.23**	**20.62**	**24.78**

Commission's analysis

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

30. Depreciation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 109: Depreciation Rate (%)

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

The opening and closing GFA has been considered as approved in the *Section 5.11: Capital Structure* of this Order. Further, deprecation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year. The overall depreciation rate is considered as the weighted average depreciation rate calculated based on the asset wise depreciation rates and asset classification as per the true-up of FY 2017-18.

The following table provides the calculation of deprecation during the MYT Control Period.

Table 110: Depreciation approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Gross Fixed Assets	432.95	438.65	621.34
2	Addition During FY	5.70	182.69	48.00
3	Adjustment/Retirement During FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	438.65	621.34	669.34
5	Average Gross Fixed Assets	435.80	530.00	645.34
6	Effective Rate of Depreciation (%)	3.87%	3.87%	3.87%
	Depreciation	**16.87**	**20.52**	**24.98**

The Commission approves a depreciation of INR 16.87 Cr, INR 20.52 Cr and INR 24.98 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.13. Interest on Loan

Petitioner's submission

In line with the methodology adopted for computation of depreciation, the Petitioner has determined the Interest on Loan on normative basis. The Petitioner has considered funding of assets based on normative debt-equity ratio of 70:30 as per the MYT Regulations, 2018 for the MYT Control Period FY 2019-20 to FY 2021-22.

Repayment of the normative loan has been considered equivalent to the depreciation for the respective years in line with the MYT Regulations, 2018.

The interest at the SBI MCLR plus 100 basis at the rate of 9.00% has been applied on the average normative debt in order to project the interest on normative loans for the control period.

The following table provides the Interest on Loan projected for each year of the Control Period.

Table 111: Interest on Loan submitted by the Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Opening Loan	35.26	22.01	129.27
Loan for additional Capex (70:30 debt-equity)	3.99	127.88	33.60
Loan Repayment	17.23	20.62	24.78
Closing Loan	22.01	129.27	138.10
Interest Cost on Avg. Loans	**2.62**	**6.92**	**12.23**

Commission's analysis:

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

28. Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission has considered the values for opening loan and loan addition as approved in the Section 5.11: Capital Structure of this Order. Further, the repayment is considered same as depreciation approved for the respective year. In absence of any actual loans, the Commission has considered the 1-year SBI MCLR as on January 10, 2019 plus 100 basis points as rate of interest, in accordance with the MYT Regulations, 2018.

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

Table 112: Interest on loan approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	12.44	0.00	107.37
2	Add: Normative Loan During the year	3.99	127.88	33.60
3	Less: Normative Repayment equal to Depreciation	16.87	20.52	24.98
4	Closing Normative Loan	0.00	107.37	115.99
5	Average Normative Loan	6.22	53.68	111.68
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	**0.59**	**5.13**	**10.67**

The Commission approves Interest on Loan as INR 0.59 Cr, INR 5.13 Cr and INR 10.67 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2018, wherein RoE is computed on 30% of the capital base. The opening equity for the Control Period is considered equivalent to the closing equity for FY 2018-19. Further, equity addition is considered to the tune of 30% of assets capitalized during the year. The Petitioner has computed the Return on Equity at 16% on post tax basis.

Table 113: Return on Equity for Control Period submitted by the Petitioner (INR Crore)

Return on Equity	FY 2019-20	FY 2020-21	FY 2021-22
Opening Equity	136.09	137.80	192.60
Addition in Equity on account of new capitalization (70:30 debt-equity)	1.71	54.81	14.40
Post tax equity	137.80	192.60	207.00
Average Equity	136.94	165.20	199.80
Return on Equity	**21.91**	**26.43**	**31.97**

Commission's analysis:

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

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

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

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

Table 114: Return on Equity approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Equity	94.26	95.97	150.78
2	Additions on account of new capitalisation	1.71	54.81	14.40
3	Closing Equity	95.97	150.78	165.18
4	Average Equity	95.12	123.38	157.98
5	Equity for wire business (90%)	85.61	111.04	142.18
6	Equity for Retail Supply Business (10%)	9.51	12.34	15.80
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	17.21	22.04

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
10	Return on Equity for Retail Supply Business	1.52	1.97	2.53
11	**Return on Equity**	**14.79**	**19.18**	**24.57**

The Commission approves Return on Equity of INR 14.79 Cr, INR 19.18 Cr and INR 24.57 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.15. Interest on Security Deposits

Petitioner's submission

The Petitioner has considered INR 2.11 Cr as interest on consumer security deposits for each year of the MYT Control period.

Commission's analysis:

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

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

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. The Commission has not considered any addition in the consumer security deposits during the control period. The rate of interest has been considered equivalent to RBI Bank rate as on April 1, 2018 in accordance with the MYT Regulations 2018. The same shall be trued-up on the actual basis. The following table shows the interest on security deposits approved by the Commission for the next Control Period.

Table 115: Interest on Security Deposits approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Security Deposit	39.19	39.19	39.19
2	Add: Deposits During the year	-	-	-
3	Less: Deposits refunded	-	-	-
4	Closing Security Deposit	39.19	39.19	39.19
5	Average Security Deposit	39.19	39.19	39.19
6	Rate of Interest (%)	6.25%	6.25%	6.25%
7	**Interest on Security Deposit**	**2.45**	**2.45**	**2.45**

The Commission approves Interest on Security Deposit as INR 2.45 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

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

- O&M Expenses for one (1) month; plus
- Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus
- Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff;

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

The SBI 1 Year MCLR as on April 1, 2018 plus 200 basis points i.e. 10% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for each year of the Control Period.

Table 116: Interest on Working Capital submitted by the Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
O&M expense for one month	3.00	3.10	3.58
Maintenance spares at 40% of R&M for one month	0.39	0.39	0.55
Receivables for 2 months	437.52	451.92	466.82
Total	440.92	455.42	470.95
Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	39.19	39.19
Net Working Capital required after deduction of Security Deposit	401.73	416.23	431.77
Interest on Working Capital	**40.78**	**42.25**	**43.82**

Commission's analysis:

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

52. Norms of Working Capital for Retail Supply Business

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

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

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

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

wires at the prevailing tariff;

Less:

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

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

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

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

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

In accordance with the MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for each year of the Control Period. The interest rate is considered as SBI MCLR rate as on April 1, 2018 plus 200 basis points (8.15%+2% = 10.15%). Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 117: Interest on Working Capital approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	O&M Expense for one month	2.52	2.73	3.26
2	Maintenance spares at 40% of R&M for one month	0.29	0.30	0.42
3	Receivables for 2 months	517.64	536.61	566.67
4	**Total working capital**	**520.46**	**539.64**	**570.36**
5	Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt	39.19	39.19	39.19
6	Net Working Capital required after deduction of Security Deposit	481.27	500.45	531.17
7	Rate of Interest (%)	10.15%	10.15%	10.15%
	Interest on Working Capital	**48.85**	**50.80**	**53.91**

The Commission approves the Interest on Working Capital as INR 48.85 Cr, INR 50.80 Cr and INR 53.91 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

Regulation 32 of MYT Regulations, 2018 stipulates the following:

32. Tax on Income

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

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

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

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

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

Since no Income tax has been paid by the Petitioner in the previous years, Nil income tax liability is assumed for the MYT Control Period and the same shall be trued-up based on the actual income tax paid by the Petitioner.

Table 118: Income Tax approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Income Tax	0.00	0.00	0.00

The Commission approves Nil Income Tax expense for each year of the 2nd Control Period.

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner has not proposed and provision for bad and doubtful debts during the MYT Control Period.

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

The Commission also has not considered any Provision for Bad & Doubtful Debts for the MYT Control Period. The same shall be accounted for as per actuals in the true-up of respective years.

5.19. Non-Tariff Income

Petitioner's submission

The Petitioner has estimated the non-tariff income for the each year of the Control Period as shown in the following table:

Table 119: Non-Tariff Income submitted by the Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Non-Tariff Income	12.07	12.07	12.07

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 has considered a y-o-y escalation of 5% on each component of NTI as approved in APR of FY 2018-19 for each year of the Control Period. The same shall be trued-up on actual basis.

The NTI approved for each year of the MYT Control Period has been shown in the following table:

Table 120: Non -tariff Income approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	**Non- Tariff Income**	**44.99**	**47.24**	**49.60**

The Commission approves Non-Tariff Income of INR 44.99 Cr, INR 47.24 Cr and INR 49.60 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.20. Contribution towards Contingency Reserve

Petitioner's submission

The Petitioner has proposed to make an appropriation towards contingency reserve for a sum of 0.5 % of the original cost of fixed assets as provided in the MYT Regulations, 2014. The Petitioner has proposed to utilize contingency reserve to meet such charges as may be approved by the Commission including:

- Expenses or loss of profits arising out of accidents, strikes, or circumstances which the management could not have prevented
- Expenses on replacement or removal of plant or works other than expenses requisite for normal maintenance or renewal
- Compensation payable under any law for the time being in force and for which no other provision is made.

Table 121: Contribution towards Contingency Reserve during the MYT Control Period (INR Crore)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Contingency Reserve	**2.27**	**2.30**	**3.21**

Commission's analysis

Considering the expected revenue gap in FY 2019-20, the Commission has not considered any contribution towards contingency reserve in the Control period.

5.21. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement for each year as shown in the following table:

Table 122: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (INR Crore)

S. No.	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Power Purchase Cost	2,926.75	2,960.75	3,107.48
2	O&M Expense	36.06	37.25	43.02
3	Depreciation	17.23	20.62	24.78
4	Interest Cost on Long-term Capital Loans	2.62	6.92	12.23
5	Return on Equity	21.91	26.43	31.97

S. No.	Particular	FY 2019-20	FY 2020-21	FY 2021-22
6	Interest on Security Deposit	2.11	2.11	2.11
7	Interest on Working Capital Loans	40.78	42.25	43.82
8	Income Tax	-	-	-
9	Provision for Bad Debt	0.00	0.00	0.00
10	Contribution towards Contingency Reserve	2.27	2.30	3.21
	Less:			
11	Non-Tariff Income	12.07	12.07	12.07
12	Refund to consumers			
13	**Annual Revenue Requirement**	**3,037.65**	**3,086.55**	**3,256.54**

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for each year of the MYT Control Period is approved as provided in the following table:

Table 123: Aggregate Revenue Requirement approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Power Purchase Cost	3,037.02	3,136.03	3,293.91
2	Operation & Maintenance Expenses	30.28	32.79	39.15
3	Depreciation	16.87	20.52	24.98
4	Interest on Loan	0.59	5.13	10.67
5	Return on Equity	14.79	19.18	24.57
6	Interest on Security Deposit	2.45	2.45	2.45
7	Interest on Working Capital	48.85	50.80	53.91
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad Debt	0.00	0.00	0.00
10	Contribution towards Contingency Reserve	0.00	0.00	0.00
11	**Total Revenue Requirement**	**3,150.85**	**3,266.89**	**3,449.64**
12	Less: Non-Tariff Income	44.99	47.24	49.60
13	**Net Revenue Requirement**	**3,105.86**	**3,219.65**	**3,400.04**

The Commission approves net ARR of INR 3,105.86 Cr, INR 3,219.65 Cr and INR 3,400.04 Cr in the ARR of FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5.22. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has estimated revenue from sale of power at existing tariff of INR 2,625.38 Cr for FY 2019-20 based on the projected energy sales, connected load and number of consumers.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The same has been considered while approving the revenue gap/ surplus for FY 2019-20. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2019-20 has been shown in the following table:

Table 124: Revenue at existing tariff computed by Commission (INR Crore) for FY 2019-20

S.No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)
1	**DOMESTIC**	**0.29**	**28.04**	**28.52**	**2.10**
(i)	0-50 units	0.07	0.23	0.30	1.55
(ii)	51-200 units	0.13	5.04	5.17	1.60
(iii)	201-400 units	0.06	6.07	6.12	1.85
(iv)	401 and above	0.04	16.70	16.74	2.44
(v)	Low Income Group	0.18	-	0.18	0.00
2	**COMMERCIAL**	**0.05**	**12.11**	**12.16**	**3.43**
(i)	0-100 units	0.02	0.31	0.33	2.75
(ii)	101 Units and Above	0.02	11.80	11.82	3.46
3	**LT INDUSTRIAL**	**4.44**	**83.95**	**88.39**	**3.95**
(i)	LTP Motive Power (For All Units)	*4.35*	*80.90*	*85.25*	*3.95*
	Up to 20 HP	0.02	2.17	2.19	3.69
	Above 20 HP	4.33	78.73	83.06	3.96
(ii)	LT Public Water Works (For all units)	*0.09*	*3.05*	*3.14*	*4.06*
	Up to 20 HP	0.07	2.54	2.60	4.05
	Above 20 HP	0.02	0.52	0.54	4.10
4	**HT/EHT**	**535.52**	**2051.18**	**2586.69**	**4.40**
(i)	11 kV- Load upto 1 MW	114.85	332.21	447.06	5.02
(ii)	11 kV- 1 MW and above	126.03	632.20	758.23	4.47
(iii)	66 kV	183.30	692.50	875.80	4.19
(iv)	220 kV	111.34	394.26	505.61	4.19
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.54**	**0.54**	**0.74**
(i)	For sanctioned load upto 10 HP	0.00	0.44	0.44	0.70
(ii)	Beyond 10 HP and up to 99 HP sanctioned load	0.00	0.10	0.10	1.00
6	**PUBLIC LIGHTING**	**0.00**	**2.94**	**2.94**	**3.45**
(i)	For all units	0.00	2.94	2.94	3.45
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**-**
(i)	For all units	0.00	0.00	0.00	-
8	**TEMPRORARY**	**0.00**	**1.69**	**2.20**	**6.48**
(i)	For all units	0.00	1.69	2.20	6.48
	Total	**540.30**	**2,180.45**	**2,721.44**	**4.32**

The Commission has determined revenue from sale of power at existing tariff as INR 2,721.44 Cr in FY 2019-20.

5.23. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue gap of INR 412.27 Cr is arrived at for in FY 2019-20.

Commission's analysis

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

Table 125: Standalone Revenue Gap/ (Surplus) determined at existing tariff (NR Crore)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	3,037.65	3,105.86
2	Revenue from sale of power @Existing tariff	2,625.15	2,721.44
3	Revenue from sale of surplus power	0.23	0.00
4	Regulatory Surcharge	0.00	0.00
	Revenue Gap/(Surplus)	**412.27**	**384.42**

The standalone revenue gap at existing retail tariff is INR 384.42 Cr for FY 2019-20. The estimated gap is considered while determining the retail tariff for FY 2019-20, 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 2019-20 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration 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 94-95% 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. The Commission has also sought to ensure regulatory consistency for all stakeholders and financial sustainability of the Petitioner.

6.2. Applicable Regulations

Regulation 19 of MYT Regulations, 2018 states the following:

"***19. Annual determination of tariff***

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

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

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

"

Further, Regulation 67 of MYT Regulations, 2018 states the following:

"

67. Determination of Tariff

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

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

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

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

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

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

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

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

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

6.3. Cumulative Revenue Gap/ Surplus at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a cumulative revenue surplus of INR 1.14 Cr till FY 2019-20. The standalone and consolidated revenue gap/surplus as submitted by the Petitioner has been tabulated below:

Table 126: Standalone and Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (INR Crore)

S. No.	Particulars	2017-18	2018-19	2019-20
1	Total ARR	2,324.80	2,942.09	3,037.65
2	Revenue @ Existing Tariff	2,280.44	2,891.80	2,625.15
3	Revenue from Surplus Power Sale	0.00	0.26	0.23
4	**Total Revenue (2+3)**	**2,280.44**	**2,892.06**	**2,625.38**
5	Revenue Gap /(Surplus) (4-1)	44.36	50.04	412.27
	Covered By:			
6	Previous year's Gap/(Surplus) carried over	(97.09)	(52.73)	(2.69)
7	Total Gap/(Surplus) (5+6)	(52.73)	(2.69)	409.58
8	Additional Revenue @ Proposed Tariff	0.00	0.00	410.72
9	**Net Gap/(Surplus) (7+8)**	**(52.73)**	**(2.69)**	**(1.14)**

Commission's analysis

Regulation 8.4 of the MYT Regulation, 2014 stipulates the following:

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

The Commission observes that the Petitioner has not taken any loan till date. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. Keeping in mind all of the above, the Commission as considered the carrying cost @ 8.00% which is the opportunity cost for the Petitioner for FY 2017-18 and 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 trueup 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.

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 2019-20 as shown in the table as follows:

Table 127: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Net Revenue Requirement	2,232.58	2,928.88	3,105.86
Revenue from Retail Sales at Existing Tariff	2,224.80	2,620.32	2,721.44
Revenue from Open Access Charges	-	-	-
Revenue from Regulatory Surcharge	-	254.17	-
Revenue from FPPCA Charges		103.11	-
Total Revenue	**2,224.80**	**2,977.60**	**2,721.44**
Standalone Gap/(Surplus) for the year	**7.78**	**(48.72)**	**384.42**

Table 128: Consolidated Revenue Gap/ (Surplus) determined by Commission at existing tariff (INR Crore)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Opening Gap/(Surplus)	(97.09)	(96.77)	(155.18)
Addition Gap/(Surplus) due to standalone year	7.78	(48.72)	384.42
Closing Gap/(Surplus)	(89.31)	(145.49)	229.24
Average Gap/(Surplus)	(93.20)	(121.13)	37.03
Rate of Interest	8.00%	8.00%	9.55%
Carrying cost	(7.46)	(9.69)	3.54
Closing Gap/ (Surplus)	**(96.77)**	**(155.18)**	**232.78**

The Commission determines a cumulative revenue gap of INR 232.78 Cr till FY 2019-20 at existing tariff.

6.4. Treatment of the cumulative Gap/Surplus and Tariff Design

As derived above, the resultant consolidated revenue gap is INR 232.78 Cr, signifies that the existing tariff does 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 proposes to retain the Regulatory Surcharge. 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 gap of INR 409.58 Cr through tariff hike in FY 2019-20 of INR 0.40/kWh for all categories except Domestic, Low Income Group and Agriculture category, resulting in an additional revenue of INR 410.72 Cr in FY 2019-20.

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 129: Retail Tariff proposed by Petitioner for FY 2019-20

S.No.	Category	Existing FY 2018-19		Proposed FY 2019-20	
		Fixed Charges	Energy Charges (INR/Kwh)	Fixed Charges	Energy Charges (INR/Kwh)
1	**LT-D/Domestic**				
(i)	0-50 Units	5.00 INR/Con/Month	1.20	5.00 INR/Con/Month	1.20
(ii)	51 to 200 Units		1.80		1.80
(iii)	201 to 400 Units		2.30		2.30
(iv)	Beyond 401 Units		2.80		2.80
(v)	LIGH	10.00 INR/Con/month		10.00 INR/Con/month	
2	**LT-C/Commercial**				
(i)	1st 100 Units	5.00 INR/Con/Month	2.55	5.00 INR/Con/Month	2.95
(ii)	Beyond 100 Units		3.60		4.00
3	**LT- Ag/ Agriculture and Poultry**				
(i)	Upto 10 HP		0.70		0.70
(ii)	Beyond 10 HP		1.00		1.00
4	**LTP Industrial**				
(i)	Upto 20 HP Connected Load	5.00 INR/HP/month	3.65	5.00 INR/HP/month	4.05
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	3.75	50.00 INR/HP/month	4.15
5	**LT-PL/Public Lighting**				
	Public Lighting		3.45		3.85
6	**LT Public Water Works**				
(i)	Upto 20 HP Connected Load	25.00 INR/HP/month	3.95	25.00 INR/HP/month	4.35
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	3.95	50.00 INR/HP/month	4.35

S.No.	Category	Existing FY 2018-19		Proposed FY 2019-20	
		Fixed Charges	Energy Charges (INR/Kwh)	Fixed Charges	Energy Charges (INR/Kwh)
7	**HT Category**				
(i)	11 kV	375.00 INR/kVA/month	INR 3.30/kVAh	375.00 INR/kVA/month	INR 3.98/kVAh
(ii)	66 kV	500.00 INR/kVA/month	INR 3.25/kVAh	500.00 INR/kVA/month	INR 3.93/kVAh
(iii)	220 kV	550.00 INR/kVA/month	INR 3.20/kVAh	550.00 INR/kVA/month	INR 3.88/kVAh
8	**Hoardings/Advertisements**				
	For all units	100.00 INR/kVA/month	3.00	100.00 INR/kVA/month	3.00
9	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**			-	4.00

Commission's analysis

As discussed above, the Commission has determined the retail tariff for FY 2019-20 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 – uncompetitive industries owing to higher input costs and inability of Discoms to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

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

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

b) Approach:

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply 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 reforms is often objected to avoid further burdening of these consumers. But to improve the quality of service of electricity, the Discom has to undergo significant capital expenditure which eventually deteriorates the affordability of tariffs. Thus to tackle this problem and in the spirit of economic wellbeing of all consumer classes, the concept of cross-subsidies has been built into the current tariff structure.

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

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

b) Approach

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

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

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

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the 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 amendments in the retail tariff applicable for FY 2019-20:

1. The Commission discontinues the Regulatory Surcharge of 9.70% imposed in the Tariff Order of FY 2018-19 for recovery of past revenue gap as the objective of the same is achieved and the Petitioner is at a revenue surplus by the end of FY 2018-19.

2. On account of the projected standalone revenue gap during FY 2019-20 at existing tariff, the Commission has decided to increase the tariff. The energy charges of all consumers' categories has been increased except for LIG, Agriculture and hoarding/signboards categories. The fixed charges has been increased from INR 5/connection/month to INR 10/connection/month in both the slabs of commercial category and from INR 5/HP/month to INR 10/HP/month in up to 20 HP slab of LT Motive Industry.

3. The Commission believes that the demand for charging infrastructure for electric vehicles will increase in the near future due to increased commercialization. Furthermore, the Commission is of the opinion that to impart the necessary impetus for the adoption of E-Vehicles in the Territory a sustainable framework has to be developed and having a designated electricity tariff is the first step towards achieving it. Therefore, keeping in view the anticipated demand and need, the Commission introduces a new category namely Electric Vehicle Charging Stations for consumers setting up infrastructure for charging of Electric vehicles/ Electric rickshaws etc. and has fixed the tariff as per the guidelines of Ministry of Power, Govt. of India.

6.4.2. 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 130: Existing and Approved Tariff for FY 2019-20

S.No.	Category	Existing FY 2018-19		Approved FY 2019-20	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**LT-D/Domestic**				
(i)	0-50 Units	5.00 INR/Con/Month	1.20 INR/kWh	5.00 INR/Con/Month	1.30 INR/kWh
(ii)	51 to 200 Units		1.80 INR/kWh		2.00 INR/kWh
(iii)	201 to 400 Units		2.30 INR/kWh		2.50 INR/kWh
(iv)	Beyond 401 Units		2.80 INR/kWh		3.10 INR/kWh
(v)	LIG	10.00 INR/Con/month		10.00 INR/Con/month	
2	**LT-C/Commercial**				
(i)	0 - 100 Units	5.00 INR/Con/Month	2.55 INR/kWh	10.00 INR/Con/Month	2.80 INR/kWh
(ii)	Beyond 100 Units		3.60 INR/kWh		3.90 INR/kWh
3	**LT- Ag/ Agriculture and Poultry**				
(i)	Upto 10 HP		0.70 INR/kWh		0.70 INR/kWh
(ii)	Beyond 10 HP		1.00 INR/kWh		1.00 INR/kWh
4	**LTP Industrial**				
	(a) LTP Motive Power				
(i)	Upto 20 HP Connected Load	5.00 INR/HP/month	3.65 INR/kWh	10.00 INR/HP/month	3.95 INR/kWh
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	3.75 INR/kWh	50.00 INR/HP/month	4.10 INR/kWh
	(b) LT Public Water Works				
(i)	Upto 20 HP Connected Load	25.00 INR/HP/month	3.95 INR/kWh	25.00 INR/HP/month	4.30 INR/kWh
(ii)	Above 20 HP Connected Load	50.00 INR/HP/month	3.95 INR/kWh	50.00 INR/HP/month	4.30 INR/kWh
5	**LT-PL/Public Lighting**				
	Public Lighting		3.45 INR/kWh		3.80 INR/kWh
6	**HT INDUSTRIAL**				
(i)	11 kV	375.00 INR/kVA/month	3.30 INR/kVAh	375.00 INR/kVA/month	3.65 INR/kVAh
(ii)	66 kV	500.00 INR/kVA/month	3.25 INR/kVAh	500.00 INR/kVA/month	3.60 INR/kVAh
(iii)	220 kV	550.00 INR/kVA/month	3.20 INR/kVAh	550.00 INR/kVA/month	3.55 INR/kVAh
7	**Hoardings/Advertisements**				
	For all units	100.00 INR/kVA/month	7.00 INR/kWh	100.00 INR/kVA/month	7.00 INR/kWh
8	**Charging Stations for e-rickshaw/e-vehicle on single point delivery**			100 INR/kVA/month	4.50 INR/kWh

6.4.3. Revenue from Approved Retail Tariff for FY 2019-20

Based on the retail tariff approved above, the revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station category due to unavailability of requisite data. The Commission as of now approves the k factor for the categories as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under this category. Further, due to unavailability of EV charging station as on date, therefore k-Factor of 1.00 is considered for the same. The revenue from approved Retail Tariff for FY 2019-20 as computed is shown below:

Table 131: Revenue from Approved Retail Tariff for FY 2019-20

S.No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)	k-factor
1	**DOMESTIC**	**0.29**	**30.90**	**31.37**	**2.31**	**0.49**
(i)	0-50 units	0.07	0.25	0.32	1.65	0.35
(ii)	51-200 units	0.13	5.56	5.69	1.76	0.37
(iii)	201-400 units	0.06	6.67	6.73	2.04	0.43
(iv)	401 and above	0.04	18.42	18.45	2.69	0.57
(v)	Low Income Group	0.18	-	0.18	0.00	0.00
2	**COMMERCIAL**	**0.10**	**13.14**	**13.24**	**3.74**	**0.80**
(i)	0-100 units	0.05	0.34	0.39	3.20	0.68
(ii)	101 Units and Above	0.05	12.80	12.85	3.76	0.80
3	**LT INDUSTRIAL**	**4.46**	**91.75**	**96.21**	**4.30**	**0.92**
(i)	LTP Motive Power (For All Units)	4.37	88.43	92.80	4.30	0.92
	Up to 20 HP	0.04	2.35	2.39	4.02	0.86
	Above 20 HP	4.33	86.08	90.41	4.31	0.92
(ii)	LT Public Water Works (For all units)	0.09	3.32	3.41	4.41	0.94
	Up to 20 HP	0.07	2.76	2.83	4.40	0.94
	Above 20 HP	0.02	0.56	0.58	4.45	0.95
4	**HT/EHT INDUSTRIAL**	**535.52**	**2271.16**	**2806.68**	**4.77**	**1.02**
(i)	11 kV	240.88	1066.7	1307.58	5.05	1.08
(ii)	66 kV	183.30	767.08	950.38	4.55	0.97
(iii)	220 kV	111.34	437.38	548.73	4.54	0.97
5	**AGRICULTURE AND POULTRY**	**0.00**	**0.54**	**0.54**	**0.74**	**0.16**
(i)	For sanctioned load upto 10 HP	0.00	0.44	0.44	0.70	0.15
(ii)	Beyond 10 HP	0.00	0.10	0.10	1.00	0.21
6	**PUBLIC LIGHTING**	**0.00**	**3.24**	**3.24**	**3.80**	**0.81**
(i)	For all units	0.00	3.24	3.24	3.80	0.81
7	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**
(i)	For all units	0.00	0.00	0.00	0.00	1.00
8	**TEMPRORARY**	**0.00**	**2.39**	**2.39**	**7.04**	*

S.No.	Category	Fixed Charges (INR Crore)	Energy charges (INR Crore)	Total (INR Crore)	ABR (INR/unit)	k-factor
(i)	For all units	0.00	2.39	2.39	7.04	*
9	**ELECTRIC VEHICLE CHARGING STATION**	**0.00**	**0.00**	**0.00**	**0.00**	**1.00**
	Total	**540.37**	**2413.11**	**2953.66**	**4.69**	**-**

**1.50 times the k factor of the relevant category in which the connection falls*

The Commission approves revenue from approved Retail Tariff of INR 2953.66 Cr for the FY 2019-20.

Accordingly, the introduction of new sub categories within the Domestic and Commercial categories will impact the Average Billing Rate (ABR) of the respective categories. 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 132: Tariff increase/decrease approved by Commission

S. No	Category	ACOS (INR /kwh)	ABR at existing tariff (INR /kwh)	ABR at approved tariff (INR /kwh)	Increase/ (Decrease) (%)
1	Domestic	4.93	2.10	2.31	**10.01%**
2	Commercial	4.93	3.43	3.74	**8.88%**
3	Agriculture and Poultry	4.93	0.74	0.74	**0.00%**
4	LT Industry	4.93	3.95	4.30	**8.85%**
5	HT/EHT Industry	4.93	4.40	4.77	**8.50%**
6	Public Lighting	4.93	3.45	3.45	**0.00%**
7	Public Water Works	4.93	4.06	4.41	**8.62%**
8	Temp. Supply	4.93	6.48	7.04	**8.53%**
9	EV Charging Station	4.93	0.00	0.00	**0.00%**
10	**Total**	**4.93**	**4.32**	**4.69**	**8.53%**

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 8.53%.

6.4.4. Revised Revenue Gap/ Surplus

On considering the additional revenue from Regulatory Surcharge, the resultant Revenue Gap/ (Surplus) has been shown in the table below:

Table 133: Cumulative revenue Gap/ (Surplus) at approved Tariff for FY 2019-20

S.No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
1	**Net Revenue Requirement**	2,232.58	2,928.88	3,105.86
2	Revenue from Retail Sales at Proposed Tariff	2,224.80	2,620.32	2,953.66
3	Revenue from Open Access Charges	-	-	-
4	Revenue from Regulatory Surcharge	-	254.17	-
5	Revenue from FPPCA Charges		103.11	-
6	**Total Revenue**	**2,224.80**	**2,977.60**	**2,953.66**
7	**Standalone Gap/ (Surplus) for the year**	**7.78**	**(48.72)**	**152.20**

S.No.	Particulars	FY 2017-18	FY 2018-19	FY 2019-20
8	Opening Gap/ (Surplus)	(97.09)	(96.77)	(155.18)
9	Addition Gap/ (Surplus) due to standalone year	7.78	(48.72)	152.20
10	**Closing Gap/ (Surplus)**	**(89.31)**	**(145.49)**	**(2.98)**
11	Average Gap/ (Surplus)	(93.20)	(121.13)	(79.08)
12	Rate of Interest	8.00%	8.00%	9.55%
13	Carrying cost	(7.46)	(9.69)	(7.55)
14	**Closing Gap/ (Surplus)**	**(96.77)**	**(155.18)**	**(10.53)**

The Commission approves a cumulative revenue surplus of INR 10.53 Cr in FY 2019-20.

6.4.5. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2019-20 are as follows:

1. The Commission discontinues the Regulatory Surcharge of 9.70% imposed in the Tariff Order of FY 2018-19 for recovery of past revenue gap as the objective of the same is achieved and the Petitioner is at a revenue surplus by the end of FY 2018-19.

2. On account of the projected standalone revenue gap during FY 2019-20 at existing tariff, the Commission has increased the tariff by an average of 8.53% . The energy charges of all consumers' categories has been increased except for LIG, Agriculture and hoarding/signboards categories. The fixed charges has been increased from INR 5/connection/month to INR 10/connection/month in both the slabs of commercial category and from INR 5/HP/month to INR 10/HP/month in up to 20 HP slab of LT Motive Industry.

3. The Commission has introduced a new category namely Electric Vehicle Charging Stations for consumers setting up infrastructure for charging of Electric vehicles/ Electric rickshaws etc. and has fixed the tariff as per the guidelines of Ministry of Power, Govt. of India.

7. Chapter 7. Open Access Charges for the FY 2019-20

7.1. Determination of Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's submission:

The Petitioner has submitted the allocation of ARR into wheeling and retail supply of electricity as shown in the table below.

Table 134: Allocation of ARR between Wheeling and Retail Supply as submitted by Petitioner

Annual Revenue Requirement	Allocation (%)		Allocation FY 2019-20	
Particular	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	2,926.75
Employee	70%	30%	11.04	4.73
R&M	50%	50%	5.81	5.81
A&G	90%	10%	0.90	0.87
Depreciation	90%	10%	15.51	1.72
Interest Cost on Long-term Capital Loans	90%	10%	2.36	0.26
Interest on Working Capital Loans	22%	78%	8.97	31.80
Interest on Security Deposit	22%	78%	0.46	1.64
Return on Equity	90%	10%	19.72	2.19
Contribution towards Contingency Reserve	0%	100%	-	2.27
Income Tax	90%	10%	-	-
Annual Revenue Requirement			**64.77**	**2,978.05**
Less: Non-Tariff Income	0%	100%	-	12.07
Less: Revenue from Surplus Power Sale	0%	100%	-	0.23
Net Revenue Requirement			**64.77**	**2,965.75**

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 is 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 135: Parameters assumed by Petitioner for voltage wise allocation of wheeling charges

Category	Consumers	Sales (MU)	Asset Allocation (%)	Voltage wise losses (%)
Below 11 kV-LT	77,951	414.27	40%	25.81%
11 kV	909	2,497.88	30%	3.80%
66 kV	32	2,142.71	30%	1.50%

Category	Consumers	Sales (MU)	Asset Allocation (%)	Voltage wise losses (%)
220 kV	2	1,242.03	-	0.60%
Total	**78,894**	**6,296.88**	**100%**	**4.42%**

The wheeling charges submitted by the Petitioner is as below:

Table 136: Wheeling charges proposed by Petitioner for FY 2019-20

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11 kV-LT	17.54	18.81	36.35	0.65
11 kV	0.20	14.11	14.31	0.06
66 kV	0.01	14.11	14.11	0.06
Total	**17.75**	**47.02**	**64.77**	

Commission's Analysis:

As per MYT Regulations 2018,

"48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable….."

The 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 2019-20 as per the ARR approved in this Order is provided in the table below:

Table 137: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2019-20		
	Wheeling	Supply	Wheeling	Supply	Total
Cost of power purchase for full year	*0%*	*100%*	0.00	3,037.02	3,037.02
Employee costs	*40%*	*60%*	5.81	8.71	14.51
Administration and General Expenses	*50%*	*50%*	3.48	3.48	6.96
Repair and Maintenance Expenses	*90%*	*10%*	7.92	0.88	8.81
Depreciation	*90%*	*10%*	15.18	1.69	16.87
Interest and Finance charges	*90%*	*10%*	0.53	0.06	0.59
Interest on Working Capital	*10%*	*90%*	4.88	43.96	48.85
Interest on consumer security deposit	*10%*	*90%*	0.24	2.20	2.45
Return on Equity	*90%*	*10%*	13.27	1.52	14.79
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			**51.33**	**3,099.53**	**3,150.85**
Less: Non-Tariff Income	*10%*	*90%*	4.50	40.49	44.99
Income from other Business	*50%*	*50%*			
Net Revenue Requirement			**46.83**	**3,059.03**	**3,105.86**

In order to determine the wheeling charges prudently, the Commission has allocated the wheeling costs on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by Open Access consumers and primarily comprise of O&M Expenses and other costs as provided in the table above. The criteria for allocation of wheeling costs is elaborated as follows:

- O&M Expenses are allocated 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 considered based on Petitioner's submission in this regard. However, the Commission considering that there are three consumers in EHT category has assumed 10% asset allocation at this voltage level.

The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

Table 138: 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	414.28	14.71%	485.71	77,950	40.00%
11kV	2,587.03	3.80%	2,746.65	905	30.00%
66kV	2,088.16	1.50%	2,132.75	33	20.00%
220 kV	1,207.42	0.60%	1,214.71	3	10.00%
Total	**6,296.89**	**4.30%**	**6,579.82**	**78,892**	**100.00%**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 139: Wheeling Charges approved by Commission for FY 2019-20

Category	O&M (INR Crore)	Others (INR Crore)	Total (INR Crore)	Wheeling Charges (INR/kWh)
Below 11kV	17.02	13.16	30.18	0.73
11kV	0.19	11.94	12.12	0.05
66kV	0.00	3.97	3.98	0.02
220 kV	0.00	0.55	0.55	0.00
Total	**17.21**	**29.62**	**46.83**	

The Commission approves wheeling charge of INR 0.73/ kWh at LT voltage level, and INR 0.05/kWh at 11 kV and INR 0.02/kWh at 66 kV voltage level for FY 2019-20.

7.2. Determination of Additional Surcharge

Petitioner's submission:

The Petitioner has submitted the following calculations for Additional Surcharge for FY 2019-20:

Table 140: Additional Surcharge for FY 2019-20 as submitted by Petitioner

Particulars	FY 2019-20
Total Power Purchase cost (INR Crores)	2,926.75
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges) (INR Crores)	1,064.06
Energy Sales (MU)	6,296.88
Additional Surcharge (INR/kWh)	**1.69**

Commission's Analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa And Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"*An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:*

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

"This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges."

Further, Regulation 5.2 (1) (b) states the following:

"*The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.*

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Table 141: Additional Surcharge approved by Commission for FY 2019-20

S. No.	Particulars	FY 2019-20
1	Total Power Purchase Fixed Cost (excluding transmission charges) (INR Crores)	1,058.53
2	Energy Sales (MUs)	6,296.88
3	**Additional Surcharge (INR/kWh)**	**1.68**

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 1.68/kwh for FY 2019-20.

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 analyse the information and revise the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's Submission:

The Petitioner has determined the cross subsidy charges on the basis of average cost of supply and is shown in the following table:

Table 142: Cross-subsidy Surcharge for FY 2019-20 submitted by Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross-Subsidy (INR/kWh)
11 kV	4.73	4.29	-0.44
66 kV	4.57	4.18	-0.39
220 kV	4.40	4.21	-0.19

Commission's Analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for 11kV, 66kV & 220 kV voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 4.30%, as approved in the ARR for FY 2019-20. Voltage wise losses assumed at each level have been shown in the table below:

Table 143: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Below 11kV	9.44%	14.71%
11kV	3.80%	5.81%
66kV	1.50%	2.09%
220 kV	0.60%	0.60%
Total	**4.30%**	**4.30%**

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 144: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Below 11kV	414.28	14.71%	485.71
11kV	2,587.03	5.81%	2,746.65
66kV	2,088.16	2.09%	2,132.75
220 kV	1,207.42	0.60%	1,214.71
Total	**6,296.89**	**4.30%**	**6,579.82**

Now the overall ARR approved for FY 2019-20 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 145: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Number of Consumers	Voltage wise Asset Allocation (%)
Below 11kV	485.71	77,950	40.00%
11kV	2,746.65	905	30.00%
66kV	2,132.75	33	20.00%
220 kV	1,214.71	3	10.00%
Total	**6,579.82**	**78,892**	**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 146: 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	153.64	117.43	271.07	414.28	6.54
11kV	618.49	664.05	1,282.54	2,587.03	4.96
66kV	473.11	515.63	988.74	2,088.16	4.73
220 kV	267.22	293.68	560.90	1,207.42	4.65
Total	**1,512.46**	**1,590.78**	**3,103.24**	**6,296.89**	

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge

Table 147: Cross-Subsidy Surcharge approved by the Commission for FY 2019-20

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Below 11kV	6.54	3.55	-3.00
11kV	4.96	5.05	0.10
66kV	4.73	4.55	-0.18
220 kV	4.65	4.54	-0.10

Therefore, the Commission approves INR 0.10 per kWh as Cross Subsidy Surcharge for 11 kV and Nil Cross-Subsidy Surcharge at other all voltage levels for FY 2019-20.

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, Daman & Diu, Dadra & Nagar Haveli 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) Indian Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

8.2. Formula

The following mechanism shall be followed for calculation and passing on of variations in the Fuel and Power Purchase Cost Adjustment (FPPCA) in the end consumer tariff, which shall come into force w.e.f. 1st April 2019 (i.e. Power Purchased by the Licensee from 1st April 2019 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
    - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties

- Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
- Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
   - Variation on account of Central Transmission Charges including arrears/ revisions.
   - Variation on account of State Transmission charges including arrears/revisions

3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
   - Any adjustments /reversals due to over recovery of charges
   - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
   - Any other adjustments on account of factors not envisaged at the time of tariff fixation

4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{Rs.}}{\boldsymbol{Unit}}\right) =. \left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \mathbf{10}}{\{[\boldsymbol{PPOact} * (\mathbf{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\mathbf{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

Where:

- $Pact(in\ Rs.Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ Rs.Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost
- $Oact\ (in\ Rs.Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ Rs.Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM

- $PSOact\ \ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{Rs}{unit}) = \left(\frac{(Papp + \ Tapp\ ) * 10}{\{[PPOapp * \ (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ Rs.Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
    - Cost of procurement from sources outside the State,
    - Cost of procurement from sources within the State,
    - Cost of procurement from the Bilateral/ exchange etc.
    - Less: Revenue from sale of surplus power
- $Tapp\ (in\ Rs.Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
    - Inter-State transmission charges (PGCIL charges),
    - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to a $\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.

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 sub category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR/unit) consumer category/sub-category wise

$$FPPCA\left(\frac{Rs.}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the Fuel and Power Purchase Cost Adjustment (FPPCA) formula notified by the Commission in this Order.

   For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.83 per unit for the FY 2019-20.

Table 148: $R_{approved}$ determined by Commission for FY 2019-20

S.No.	Particulars	Amount
1	Total Power Purchase Cost (INR Cr), Papp	2,649.31
2	Transmission Charges (INR Cr), T_{app}	387.71
3	Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NSPCL, NPCIL, EMCO) (MU), PPO_{app}	6,523.61
4	Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.66%
5	Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	299.32
6	Quantum of Sale of Surplus Power (MU), PSO_{app}	0.00
7	Approved Intra-State T&D Loss (%), DL_{app}	4.30%
8	Energy Sales for LIG and Agriculture consumer category (MU), Z_{app} (MU)	7.32
9	**R_{app} (INR/kWh)**	**4.83**

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 in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate necessary action under Section 142 of the Electricity Act 2003 read with other provisions of the Act, and the Regulations made thereunder.

9.1.1. Assets verification

Originally Issued in Tariff Order dated 31st July 2012
Commission's Latest Directive in Tariff Order Dated 30th January 2018 *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 2 months of issuance of this Order failing which the Commission will be constrained to take appropriate action against the Petitioner.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL has submitted the asset verification done by an external agency (i.e. Chartered Accountant Firm) along with the Petition as Annexure- IV.*
Commission's Response *The Commission notes the compliance to the above Directive and accordingly drops this directive.*

9.1.2. Enforcement Cell

Originally Issued in Tariff Order dated 31st July 2012
Commission's Latest Directive in Tariff Order Dated 30th January 2018 *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, failing which the Commission will be constrained to take appropriate action against the Petitioner.*
Petitioner's Response in the Present Tariff Petition *DNHPDCL has submitted that the Lab & Vigilance Department is looking after the work of vigilance activity throughout the territory in respect of the categories of consumer. The vigilance check has been kept for metering arrangement of the consumers, their consumption as per their contractual power demand etc.*
Commission's Response *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.*

9.1.3. Capital Expenditure

Originally Issued in Tariff Order dated 31st July 2012

Commission's Latest Directive in Tariff Order Dated 30th January 2018

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. Further, it is observed that the Petitioner has been able to submit capitalisation of only INR7.22 cr. in FY 2017-18 and nil in FY 2018-19. The Commission directs the Petitioner to increase its efforts towards capex activities necessary to enhance reliability and quality of supply to consumers.

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 and submit the desired reports on quarterly basis, failing which the Commission will be constrained to take appropriate action against the Petitioner.

9.1.4. 100% Metering

Originally Issued in Tariff Order dated 15th December 2015

Commission's Latest Directive in Tariff Order Dated 30th January 2018

The Commission directs the Petitioner to report the compliance of this directive within 2 months of issuance of this Order.

Petitioner's Response in the Present Tariff Petition

The DNHPDCL has submitted that the work order for supply and installation of single phase meter has been issued. The agency has started the work of installing meters in rural & scattered area and will be completed before 31.03.2019.

Commission's Response

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.

9.1.5. Implementation of Smart Grid

Originally Issued in Tariff Order dated 07th April 2016

Commission's Latest Directive in Tariff Order Dated 30th January 2018

The Commission notes the submission of the Petitioner and directs it to submit the quarterly status report on the implementation of smart grid.

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 2019 for roll out of smart grid in DNH within this MYT Control Period.

9.1.6. Information for determination of Voltage-wise Wheeling Charges

Originally Issued in Tariff Order dated 07th April 2016
Commission's Latest Directive in Tariff Order Dated 30th January 2018 *The Commission observes that the Petitioner is yet to submit the requisite details. The Commission now directs the Petitioner to submit the desired information before 31st August 2018.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL has submitted that the Information is already submitted to the Commission in the Business plan as well ARR Petition filed for FY 2018-19.*
Commission's Response *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 2020-21.*

9.1.7. Capital Expenditure

Originally Issued in Tariff Order dated 30th January 2018
Commission's Directive *It is noticed that the Petitioner for FY 2017-18, could manage to provide supporting documents for capital expenditure and capitalisation worth INR 7.22 Cr only, against approved of INR 119.02 Cr. in the Tariff Order for FY 2017-18. Further, for FY 2018-19 the Petitioner has proposed nil capitalisation, against an approved of INR83.18 Cr. in the MYT Order. 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.*
Petitioner's Response in the Present Tariff Petition *The DNHPDCL has submitted that the project of underground cabling work of Silvassa town area along with establishment of 66/11kv GIS Sub-station will be completed during FY 2018-19 and would capitalise assets of INR 60 crore.*
Commission's Response *The Commission observed that though the Petitioner has submitted that INR 60 Crore would be capitalized in FY 2018-19 against the said work, 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.*

9.1.8. Assets created from consumer contribution

Originally Issued in Tariff Order dated 30th January 2018
Commission's Directive *The Petitioner has failed to submit the details of assets created through consumer contribution. During the Technical Validation Session, the Petitioner confirmed that some of the assets have been created by consumer contribution however the Petitioner couldn't submit the details for the same. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered entire GFA towards depreciation and will reduce the depreciation in future, once the details of consumer contribution is made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by Commission in future Tariff Orders.*
Petitioner's Response in the Present Tariff Petition

The DNHPDL has submitted that as per the approved Accounting policy of the corporation, an item of Property acquired on contribution made by consumer which requires an obligation to provide the electricity to the consumers is recognized at nominal value of INR 1. Hence, the aspect of the calculation of the depreciation on these assets and adjustments thereof would not arise. Relevant page of the Accounting policy is enclosed as Annexure-V along with the Petition.
Commission's Response *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.*

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 149: Tariff Schedule

S. No.	Category	Fixed Charges	Energy Charges
1.	**DOMESTIC**		
(i)	0-50 units	5.00 INR/Con/Month	1.30 INR/kWh
(ii)	51-200 units		2.00 INR/kWh
(iii)	201-400 units		2.50 INR/kWh
(iv)	401 and above		3.10 INR/kWh
(v)	Low Income Group (Up to 2x40 W bulbs only)	Power supply to low income group connections will be charged at INR10 per service connection per month. For any unauthorized increase in the load beyond 2*40 watts, penal charges at the rate of INR20 per month per point will be levied and the installation will be liable for disconnection.	
2.	**COMMERCIAL**		
(i)	0-100 units	10.00 INR/Con/Month	2.80 INR/kWh
(ii)	101 units and above	10.00 INR/Con/Month	3.90 INR/kWh
3.	**LT INDUSTRIAL**		
(a)	LTP Motive Power		
(i)	Up to 20 HP	10.00 INR/HP/Month	3.95 INR/kWh
(ii)	Above 20 HP	50.00 INR/HP/Month	4.10 INR/kWh
(b)	LT Public Water Works		
(i)	*Up to 20 HP*	25.00 INR/HP/Month	4.30 INR/kWh
(ii)	*Above 20 HP*	50.00 INR/HP/Month	4.30 INR/kWh
4.	**HT/EHT INDUSTRIAL**		
(i)	11 kV supply	375.00 INR/kVA/month	3.65 INR/kVAh
(ii)	66 kV supply	500.00 INR/kVA/month	3.60 INR/kVAh
(iii)	220 kV supply	550.00 INR/kVA/month	3.55 INR/kVAh
5.	**AGRICULTURE AND POULTRY**		
(i)	For sanctioned load up to 10 HP	-	0.70 INR/kWh
(ii)	Beyond 10 HP	-	1.00 INR/kWh
6.	**PUBLIC LIGHTING**		
(i)	For all units	-	3.80 INR/kWh

S. No.	Category	Fixed Charges	Energy Charges
7.	**HOARDINGS/SIGNBOARDS**		
(i)	Hoarding/Signboards	INR100 per kVA per Month or part thereof	7.00 INR/kWh
8.	**ELECTRIC VEHICLE CHARGING**		
(i)	Electric Charging Vehicle	100 INR/kVA/month	4.50 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 150: Applicability of Tariff Schedule

Category	Applicability	Point of Supply/Notes
1. Domestic	This schedule shall apply to private houses, hostels, hospitals run on Non-commercial lines, Charitable, Educational and Religious Institutions for Light, Fans, Radios, Domestic Heating and other household appliances including water pumps up to 2 HP.	
2. Commercial	This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, 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	

Category	Applicability	Point of Supply/Notes
	Rerolling / Power Intensive consumers drawing through 220 kV systems	
7. Agriculture and Poultry	This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.	
8. Public Lighting		
9. Hoardings / Signboards	This schedule shall apply to electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.	
10. Temporary Supply	The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations.	
11. Electric Charging Station	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT).	

10.3. General Conditions of HT and LT Supply

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

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

3. Supply to consumers having contracted load between 100 KVA to 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.

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 2019-20.

10.4. Schedule of Miscellaneous Charges

Table 151: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges	
Single Phase LT meter	INR 10 per month or part thereof
Three Phase LT meter	INR 25 per month or part thereof
LT Meter with MD indicator	INR 200 per month or part thereof
Tri-vector Meter	INR 500 per month or part thereof
Note: The type of meters to be installed in consumer premises will be decided by the department. Generally the consumers having connected load above 50 HP will be provided with L.T.M.D meters	
Reconnection Charges	
LT Services	
• Single Phase LT	INR 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