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 Transmission Tariff for FY 2019-20

Petition No. 271/2018

for

Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli

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

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List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
Discom	Distribution Company
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

Abbreviation	Full Form
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
JKPDD	Power Development Department , Jammu and Kashmir
LT	Low Tension
MU	Million Units
MYT	Multi Year Tariff
NFA	Net Fixed Assets
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
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. 271/2018

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 Transmission Tariff for FY 2019-20.

And in the matter of

Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli......................................Petitioner

ORDER

Dated: 20th May 2019

1. This Order is passed in respect of Petition filed by the Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli for approval of True-up of FY 2017-18, Annual Performance Review for FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Transmission Tariff for FY 2019-20.

2. On receipt of the Petition, the Commission examined 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 held and the stakeholders/Public were heard there.

3. The tariff, as detailed in the Chapter "Transmission Tariff for FY 2019-20", 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 Tariff order is to be shared with the Distribution Licensee of the UT and also be uploaded by the Petitioner on its website within one week of the receipt of the Order.

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 Transmission Tariff for FY 2019-20.

The summary of each year has been provided as follows:

(i) The Commission while truing-up for FY 2014-15, FY 2015-16 and FY 2016-17 in Tariff Order dated January 30, 2018 had determined a standalone revenue gap of INR 17.95 Cr, INR 8.24 Cr and INR 3.27 Cr for FY 2014-15, FY 2015-16 and FY 2016-17 respectively. Since the Petitioner had not submitted the annual audited accounts of FY 2014-15 and FY 2015-16 in a timely manner, the Commission has decided not to allow carrying cost on the gap corresponding to the years till FY 2016-17 and INR 29.46 Cr (17.95+8.24+3.27) has been considered as the net revenue gap for FY 2016-17.

(ii) The Commission has trued up for FY 2017-18 and approved Annual Revenue Requirement of INR 31.59 Cr vis-à-vis actual revenue of INR 29.06 Cr, resulting in standalone revenue gap of INR 2.53 for FY2017-18.

(iii) For FY 2018-19, the Commission has approved revised Annual Revenue Requirement of INR 27.26 Cr and projected revenue of INR 42.84 Cr at approved tariff, which resulted in standalone revenue surplus of INR 15.58 Cr. Thus, the cumulative revenue gap at the end of FY 2018-19 is shown in the following table:

Table 1: Cumulative revenue gap/(surplus) at the end FY 2018-19 (INR Crore)

S.No	Particular	FY 2016-17	FY 2017-18	FY 2018-19
1	Opening gap	0.00	31.53	38.60
2	Addition	29.46	2.53	(15.58)
3	Closing gap	29.46	34.06	23.02
4	Average gap	14.73	32.79	30.81
5	Interest rate	14.05%	13.85%	13.45%
6	Carrying Cost	2.07	4.54	4.14
7	**Total gap including carrying cost**	**31.53**	**38.60**	**27.17**

(iv) The closing revenue gap at the end of FY 2018-19 has been adjusted by the Commission in a phased manner over a period of three years (FY 2019-20 – FY 2021-22) as shown in the following table:

Table 2: Revenue gap distribution over three years (INR Crore)

S.No	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening gap	27.17	18.11	9.06
2	Addition (33.33% of 27.17 Cr)	(9.06)	(9.06)	(9.06)
3	Closing gap	18.11	9.06	-
4	Interest rate*	9.55%	9.55%	9.55%
5	Average gap	22.64	13.58	4.53
6	Carrying Cost	2.16	1.30	0.43
7	**Total gap including carrying cost to be considered in ARR (-2+6)**	**11.22**	**10.35**	**9.49**

**Projected SBI MCLR for 1st April of respective year, will be revised based on actual SBI MCLR*

(v) Accordingly, the Aggregate Revenue Requirement as submitted by the Petitioner and approved by the Commission for FY 2019-20 is as under:

Table 3: Aggregate Revenue Requirement for FY 2019-20 (INR Crore)

S. No	Particulars	Petitioners submission	Approved by Commission
1	**Net Revenue Requirement**	**31.38**	**31.30**
2	Add: true-up of previous years including carrying cost	12.95	11.22
3	**Net Revenue Requirement**	**44.33**	**42.52**

(vi) Considering the Aggregate Revenue Requirement for FY 2019-20, and the transmission capacity, the transmission charges have been approved in *Chapter 5: Transmission Tariff for FY 2019-20* of the Order for long-term and medium-term consumers and short-term open access consumers as below:

Table 4: Transmission Tariff for FY 2019-20

S.No	Particular	FY 2019-20
1	Aggregate Revenue Requirement (INR Crore)	42.52
2	Transmission System Capacity (MW)	1,294
3	**Long-term/Medium-term Transmission Charges (INR/MW/month)**	**27,381**
4	**Short-term open access Transmission Charges (INR/MW/Day)**	**900.21**

The open access consumers shall pay charges in accordance with charges determined above and Regulation 4.1 of 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 as amended from time to time.

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

-Sd-

(Neerja Mathur)

Member

-Sd-

(M.K. Goel)

Chairperson

Place: Gurugram
Date: 20th May 2019

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

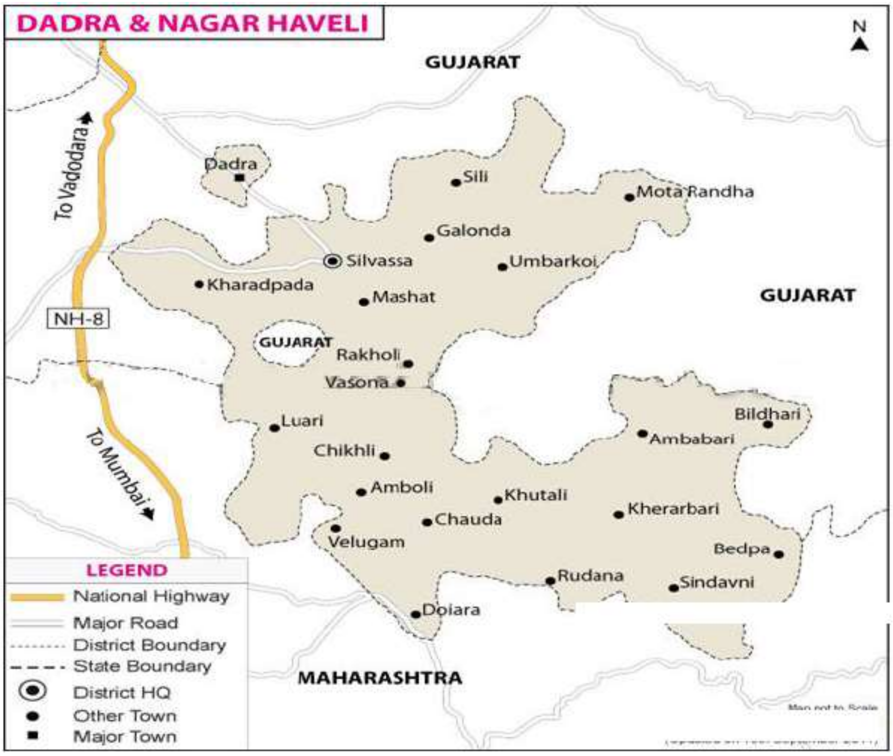
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R 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 a statutory body responsible for regulation of the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting 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 UT 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 and 100% metering which further contributes to the increasing demand for power.



1.3. Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli

The Dadra and Nagar Haveli Electricity Reforms Transfer Scheme 2013 was notified by the Administration of Dadra and Nagar Haveli vide notification no. 1-1(594) ELE/2013/697 dated March 7, 2013. Further, the Administration vide notification no. 1-1(656)/ELE/2012/700 dated March 8, 2013 for implementing the Dadra and Nagar Haveli Electricity Reforms Transfer Scheme 2013 notified the effective date as April 1, 2013.

As per the Clause 4(1) of the notified transfer scheme:

"Subject to the provision of this scheme on and with effect from such date as may be notified by the Administration as effective date of transfer:

(a) The functions of Distribution and associated divisions of department as set out in Schedule A shall stand out and vested with DNH Power Distribution Corporation Limited without any further act or things to be done by the Administration or the Company or any other person."

As per the Schedule 'B' of the notified Transfer Scheme, the assets at 66/11 kV and below were transferred to DNHPDCL.

Further, as per para at serial no. 8:

"(8) The functions, duties, personnel, assets , liabilities and proceedings as set out in schedule 'C' shall not be transferred to the company and vest with the Electricity Department."

As per Schedule 'C':

"Unless otherwise specified by the Administration, the assets, liabilities, personnel and proceedings in relation to following shall not be transferred to the Company:

1. Function of generation of electricity except non-conventional source of energy.

2. Functions of transmission of electricity.

3. Functions of policy making, Planning and Coordination.

4. Functions which are not transferred to the Company under this scheme."

Accordingly, the Electricity Department, Transmission Division of Dadra and Nagar Haveli (hereinafter referred to as "ED-DNH Transmission") has been entrusted with the function of transmission of electricity in its license area. The details of operational transmission infrastructure are as below:

Existing Transmission Network

The present transmission system of ED-DNH Transmission consists of 36.88 circuit km of 220 kV double circuit (D/C) lines. At present, the State gets power from 400/220 kV Substation of POWERGRID Vapi and 400/220 kV Kala Substation of POWERGRID (DNH).

The details of the transformation capacity of ED-DNH Transmission are as follows:

Table 5: Transmission System of ED-DNH Transmission

S.No.	Sub-station	Configuration	Total
1	220 kV Kharadpada Sub-Station	2 x 100 + 2 x 160 MVA	520 MVA
2	220 kV Khadoli Sub-Station	3 x 160 MVA	480 MVA
3	220kV Switching Stations at Sayli and New Kharadpada and Bhilosa	03 Nos	--
	TOTAL Capacity (220kV Level)		**1000 MVA**

1.4. JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Terms and Conditions for Determination of Tariff) Regulations, 2009 on February 9, 2010. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and UTs (Terms and Conditions for Determination of Tariff) (First Amendment) Regulations, 2009 on June 27, 2012. These Regulations are applicable to 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.

1.5. 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 for determination of tariff in second Control Period.

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 6, 2018. The Commission issued the Business Plan Order for the MYT Control Period (hereinafter referred to as ‘Business Plan Order’) on November 16, 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 for the FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Transmission Tariff proposal for the FY 2019-20 vide letter no. DNH/ELETRANS/2018/20/380 dated December 7, 2018.

After initial scrutiny/analysis, the Petition was admitted on December 14, 2018 and was marked as Petition no. 271/2018.

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 Public Hearing and Orders, denotes the Secretariat of the Commission responsible for carrying out technical due diligence and validation of data of the Petition 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. 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	January 31, 2019
2	Reply received from Petitioner	February 8 , 2019/ February 12, 2019
3	Public hearing	February 6, 2019
4	Issuance of Second Deficiency Note	February 15, 2019
5	Reply received from Petitioner	February 18, 2019 / February 19, 2019 / February 26, 2019 /

1.9. Notice for Public Hearing

Public notices were published by the Petitioner for inviting objections/ 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 28, 2018	Daman Ganga Times (Gujarati)	Silvassa

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 to be 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 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, Silvassa to discuss the issues related to the Petition filed by the Petitioner **However, the Commission did not receive any written or verbal comments from the Public/ Stakeholders in respect of this Petition.**

2. Chapter 2: True-up for FY 2017-18

2.1. Background

The Commission had issued the Order on determination of transmission tariff for FY 2017-18 on April 19, 2017 (hereinafter referred to as the "Tariff Order"). Further, the Order on true-up of FY 2014-15, FY 2015-16 and FY 2016-17, Annual Performance Review of FY 2017-18 and Approval of Aggregate Revenue Requirement (ARR) and determination of tariff for FY 2018-19 for Electricity Department, UT of Dadra and Nagar Haveli (Transmission Division) was issued by the Commission on January 30, 2018 (hereinafter referred to as the "APR Order").

As per Regulation 8 (2) of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, the review and true-up of revenue and expenses of the Petitioner shall be carried out as follows:

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

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

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

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

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

The Commission now in this Chapter carries out the true-up for FY 2017-18 as per JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

2.2. Gross Fixed Assets and Capitalization

Petitioner's Submission

The Petitioner has submitted the following details with regard to the capitalisation for FY 2017-18:

Table 9: Gross Fixed Assets and Capitalisation details submitted by Petitioner (INR Crore)

S.No	Particulars	Approved (Tariff Order)	Approved (APR Order)	Submitted by Petitioner
1	Opening GFA	241.68	229.72	229.72
2	Addition during the year	-	-	-
3	Closing GFA	241.68	229.72	229.72

Commission's Analysis

The opening gross fixed assets for FY 2017-18 has been considered same as the closing gross fixed assets as per the true-up of FY 2016-17. The same has been verified from the annual accounts for FY 2017-18. The asset addition in the year was also verified from the audited annual accounts for FY 2017-18 submitted by the Petitioner. The Commission accordingly approves the capitalization and gross fixed assets for FY 2017-18 as shown in the following table:

Table 10: Gross Fixed Assets and Capitalisation approved by the Commission (INR Crore)

S.No	Particulars	Submitted by Petitioner	Approved by the Commission
1	Opening GFA	229.72	229.72
2	Addition during the year	-	-
3	Closing GFA	229.72	229.72

The Commission approves Nil capitalisation in the true-up of FY 2017-18.

2.3. Depreciation

Petitioner's submission

The Petitioner has submitted that the depreciation has been worked out after applying the depreciation rates as per the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009. Accordingly, the depreciation for the year has been submitted as below:

Table 11: Depreciation details submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (Tariff Order)	Approved (APR Order)	Submitted by Petitioner
1	Opening GFA	241.68	229.72	229.72
2	Addition during the year	-	-	-
3	Closing GFA	241.68	229.72	229.72
4	Average GFA	241.68	229.72	229.72
5	Depreciation	12.44	11.81	11.81

Commission's analysis

As per Regulation 26 of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009:

"For the purpose of tariff, depreciation shall be computed in the following manner:

(i) The value base for the purpose of depreciation shall be the historical cost of the assets, that is actual expenses limited to approved capital cost where such capital cost has been approved by the Commission:

Provided that land is not a depreciable asset and its cost shall be excluded from the capital cost while computing depreciation.

(ii) The historical cost of the asset shall include additional capitalisation.

(iii) The historical cost shall include foreign currency funding converted into equivalent rupees at the exchange rate prevalent on the date when foreign currency was actually availed but not later than the date of commercial operation.

(iv) Depreciation for generation and transmission assets shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost. Depreciation for distribution and other assets not covered by CERC shall be as per Government of India norms of 1994 as may be revised by the Commission from time to time."

Accordingly, the Commission has considered the depreciation rates as specified in the CERC (Terms and Conditions of Tariff) Regulations, 2014. The Commission, after verification of the asset class wise fixed asset addition in the books of accounts, has arrived at the depreciation values as follows:

Table 12: Depreciation approved by Commission (INR Crore)

Particulars	Depreciation rate	Opening GFA	Addition	Deletion	Closing GFA	Average	Depreciation
Plant and Machinery	5.28%	222.02	0.00	0.00	222.02	222.02	11.72
Buildings	3.34%	2.42	0.00	0.00	2.42	2.42	0.08
Vehicles	9.50%	0.00	0.00	0.00	0.00	0.00	0.00
Office Equipment	6.33%	0.08	0.00	0.00	0.08	0.08	0.01
Computers and Others	15.00%	0.00	0.00	0.00	0.00	0.00	0.00
Land	0.00%	5.21	0.00	0.00	5.21	5.21	0.00
Total	**5.14%**	**229.72**	**0.00**	**0.00**	**229.72**	**229.72**	**11.81**

The Commission approves depreciation of INR 11.81 Cr in the true-up of FY 2017-18.

2.4. Interest on Loan

Petitioner's submission

The Petitioner has considered the opening loan balance for FY 17-18 equal to the closing balance of loan approved in true-up of FY 2016-17. 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 Petitioner has considered the rate of interest as the State Bank of India Prime Lending Rate (SBI PLR) of 13.85%. Accordingly, the interest and finance charges submitted by the Petitioner as shown in the table below:

Table 13: Interest and Finance charges submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (Tariff Order)	Approved (APR Order)	Submitted by Petitioner
1	Opening Loan	60.2	47.85	47.85
2	Loan for additional Capitalization	0.00	0.00	0.00
3	Loan Repayment	12.44	11.81	11.81
4	Closing Loan	47.76	36.04	36.04
5	**Interest Cost on Avg. Loans**	**7.56**	**5.81**	**5.81**

Commission's analysis:

The opening loan balance for FY 2017-18 has been considered equal to the closing balance of loan approved in true-up of FY 2016-17. The normative loan addition in FY 2017-18 has been computed as 70% of the capitalisation for FY 2017-18, which works out to be nil. The repayment of loans has been considered equal to the depreciation during FY 2017-18.

The Commission in its previous Tariff Orders approved the interest on long-term loans equivalent to SBI PLR for the respective year. In absence of any actual loan borrowed by the Petitioner, the interest rate has been considered equivalent to SBI PLR as on April 1, 2017.

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 14: 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	-	-	-
3	Less: Normative Repayment equivalent to Depreciation	11.81	11.81	11.81
4	Closing Normative Loan	36.04	36.04	36.04
5	Average Normative Loan	41.95	41.95	41.95
6	Rate of Interest (%)	13.85%	13.85%	13.85%
7	**Interest on Loan**	**5.81**	**5.81**	**5.81**

The Commission approves the Interest of Loan of INR 5.81 Cr in the true-up of FY 2017-18.

2.5. Return on Equity (RoE)

Petitioner's submission

The Petitioner has computed the Return on Equity considering the rate specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. The equity addition has been considered to the tune of 30% of assets capitalized during the year. Accordingly, the Petitioner has claimed the return on equity for FY 2017-18 as shown in the table below:

Table 15: Return on Equity submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (Tariff Order)	Approved (APR Order)	Submitted by Petitioner
1	Opening Equity	36.61	33.02	33.02
2	Addition in Equity on account of new capitalization	0.00	0.00	0.00
3	Closing Equity	36.61	33.02	33.02
4	Average Equity	36.61	33.02	33.02
5	**Return on Equity**	**5.67**	**5.12**	**5.12**

Commission's analysis:

Regulation 24 (1) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009 states the following:

"(1) Subject to the proviso to Regulation 23(2), Return on Equity shall be computed on the paid up equity capital determined in accordance with Regulation 23 and shall be guided by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 as amended by the CERC from time to time. The same principles will apply for distribution business also as far as possible."

Further, the Regulation 24 (2) of the CERC (Terms and Conditions of Tariff) Regulations, 2014, states that:

"(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station …"

Accordingly, the rate of return on equity for transmission business has been considered as 15.50%. The opening equity for FY 2017-18 has been considered same as the closing equity in true-up of FY 2016-17. The normative equity addition in FY 2017-18 has been computed as 30% of the capitalisation for FY 2017-18, which works out to be nil. 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 16: 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	33.02	33.02	33.02
2	Equity Addition	-	-	-
3	Closing Equity	33.02	33.02	33.02
4	Average Equity	33.02	33.02	33.02
5	Rate of RoE	15.50%	15.50%	15.50%
6	**Return on Equity**	**5.12**	**5.12**	**5.12**

The Commission approves Return on Equity of INR 5.12 Cr in the true-up of FY 2017-18.

2.6. Operation & Maintenance Expenses

As per Regulation 27 (2) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009:

"While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodology specified by CERC on the matter, as amended from time to time".

Further, as per regulation 29 (4) (b) of the CERC (Terms and Conditions of Tariff) Regulations, 2014:

"(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of bays and kms of line length with the applicable norms for the operation and maintenance expenses per bay and per km respectively."

Thus, the CERC Regulations specify that O&M expenses for transmission business are to be determined as per the norms based on "INR. Lakh/bay" and "INR. Lakh/ckt-KM".

However, considering the small size of the transmission system, the Commission had placed its reliance on the following proviso of the Regulation 27 (2) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, while determining O&M norms for FY 2017-18 in the APR Order:

"Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated utility, treat its transmission system as an integral part of its distribution system itself."

As the size of the network maintained by the Petitioner is very small, the Commission has treated the transmission network as an integral part of the distribution system and has applied the provisions of O&M applicable to distribution business as per JERC (Terms and Conditions for determination of Tariff), Regulations, 2009 to the Petitioner.

Accordingly, the Commission had considered the Regulation 27 (3) (b) of the JERC Tariff Regulations 2009, while determining O&M norms for FY 2017-18 in the APR Order:

"(b)Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year"

The components comprising of the O&M – employee expenses, R&M expenses and A&G expenses have been discussed separately below.

2.6.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual Employee expenses of INR 4.90 Cr against approved expenses of INR 2.46 Cr in the APR Order.

Commission's analysis

The employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses. The Commission had approved employee expenses of INR 2.46 Cr in the APR Order, which included an allowance of 0.28 Cr for the impact of Seventh Pay Commission. The actual employee expenses for FY 2017-18 as per audited accounts is INR 4.90 Cr.

The Commission while determining the O&M expenses for FY 2017-18 in the APR Order had relied on the reasoning as discussed in section 2.6 to approve the employee expenses. The actual expenses for FY 2016-17 were escalated by WPI inflation to determine the expenses for FY 2017-18. However, the actual expenses have increased by 115% over FY 2016-17. The Commission sought the reason for the same through a deficiency note. The Petitioner submitted that the same is on account of GPF contribution and retirement benefits. Considering that the said expenses are uncontrollable in nature, the Commission approves the expenses as per the audited accounts. Since, the actual expenditure already includes the impact of Seventh Pay Commission, the same is not being allowed separately.

The following table provides the employee expenses approved by the Commission in the APR Order, Petitioner's submission and now trued-up by the Commission:

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

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	2.19	4.90	4.90
2	Impact of 7th Pay Commission	0.28		-
3	**Total Employee Expenses**	**2.46**	**4.90**	**4.90**

The Commission approves Employee Expenses of INR 4.90 Cr in the True-up of FY 2017-18.

2.6.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 0.90 Cr as against the approved expenses of INR 0.28 Cr in the APR Order.

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. Similar to the methodology followed for approving the Employee Expenses, the Commission approves the A&G expenses as per the audited accounts of FY 2017-18.

The following table provides the A&G expenses approved by the Commission in the APR Order, Petitioner's submission and now trued-up by the Commission:

Table 18: 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)	0.28	0.90	0.90

The Commission approves the Administrative & General (A&G) expenses of INR 0.90 Cr in the True-up of FY 2017-18.

2.6.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted the actual R&M expenses of INR 2.12 Cr as against the approved expenses of INR 1.95 Cr in the APR Order.

Commission's analysis

Similar to the methodology followed for approving the Employee Expenses and the A&G Expenses, the Commission approves the A&G expenses as per the audited accounts of FY 2017-18.

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

Table 19: 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)	1.95	2.12	2.12

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.12 Cr in the true-up of FY 2017-18.

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

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

Table 20: 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	2.46	4.90	4.90
2	Administrative & General Expenses (A&G)	0.28	0.90	0.90
3	Repair & Maintenance Expenses	1.95	2.12	2.12
4	**Total Operation & Maintenance Expenses**	**4.69**	**7.92**	**7.92**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 7.92 Cr in the true-up of FY 2017-18.

2.7. Interest on Working Capital

Petitioner's submission

The Petitioner has calculated interest on working capital based on the principles outlined in the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, by considering the below parameters (as in CERC Tariff Regulations, 2014):

a) Receivables equivalent to two months of fixed cost
b) Maintenance spares @15% of operation and maintenance expenses
c) Operation and maintenance expenses for one month

The Petitioner has considered interest on working capital as 13.85%.

Table 21: Interest on Working Capital submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (Tariff Order)	Approved (APR Order)	Submitted by Petitioner
1	Receivables equivalent to two months of fixed cost	2.42	4.70	5.26
2	Maintenance spares @15% of operation and maintenance expenses	0.44	0.70	1.19
3	Operation and maintenance expenses for one month	0.25	0.39	0.66
4	Total Working Capital requirement	3.11	5.79	7.11
5	**Interest on Working Capital**	**0.43**	**0.80**	**0.98**

Commission's analysis:

Regulation 29 of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, states the following with regard to interest on working capital calculation:

"(1) For generation and transmission business, the working capital shall be as per CERC norms.
...
(4) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of 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 generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

Further, Regulation 29 of the CERC (Terms and Conditions of Tariff) Regulations, 2014 specifies:

"(c) Hydro generating station including pumped storage hydro-electric generating station and transmission system including communication system:

i. Receivables equivalent to two months of fixed cost;
ii. Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
iii. Operation and maintenance expenses for one month."

Accordingly, the Commission has computed the working capital requirement for the Petitioner for FY 2017-18. The interest on working capital has been computed considering the interest rate as SBI PLR on April 1, 2017 - 13.85%.

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 22: 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 equivalent to two months of fixed cost	4.70	5.26	5.26
2	Maintenance spares @15% of operation and maintenance expenses	0.70	1.19	1.19

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
3	Operation and maintenance expenses for one month	0.39	0.66	0.66
4	Total Working Capital requirement	5.79	7.11	7.11
5	Rate of Interest (%)	13.85%	13.85%	13.85%
6	**Interest on Working Capital**	**0.80**	**0.98**	**0.99**

The Commission approves the Interest on Working Capital as INR 0.99 Cr in the true-up of FY 2017-18.

2.8. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the Non-Tariff Income of INR 0.05 Cr for FY 2017-18.

Commission's analysis:

As per **Regulation 16 (iii) of the JERC (Open Access in Transmission and Distribution) Regulations, 2009**:

"25% of the charges collected from the short-term open access users shall be retained by the open access providers (electrical lines) and the balance 75% shall be adjusted towards reduction in the charges payable by the long term open access users (electrical lines)."

The Petitioner has submitted that the STOA charges are collected by DNHPDCL and out of the amount collected, 25% of the charges is passed on to ED-DNH, while the rest 75% is retained by DNHPDCL.

The Commission notes that this practice is not in accordance with the JERC Open Access Regulation, 2009. According to the said regulations, the entire STOA should be passed on to ED-DNH. Out of this transferred amount, 75% of the charges need to be subtracted from the ARR of the Petitioner.

The Commission also notes that although the current practice violates the regulations, it does not cause any financial loss. Therefore, no amount has been subtracted from ARR submitted by the Petitioner on account of Non-Tariff Income (NTI). However, the Commission directs the Petitioner to ensure the compliance with JERC Open Access Regulations, 2009 with immediate effect and submit the details of compliance in its subsequent Petitions.

Further, the Commission has considered the actual revenue earned by the licensee from O&M works for 220 KV bays of PGCIL as Non-Tariff Income for FY 2017-18.

Table 23: 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**	**0.05**	**0.05**	**0.05**

* Does not include STOA charges

The Commission approves Non-Tariff Income of INR 0.05 Cr in the True-up of FY 2017-18.

2.9. 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 31.59 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 24: 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	Depreciation	11.81	11.81	11.81
2	Interest on Long-term Loans	5.81	5.81	5.81
3	Return on Equity	5.12	5.12	5.12
4	O&M Expense	4.69	7.92	7.92
5	Interest on Working Capital	0.80	0.98	0.99
6	**Total Revenue Requirement**	**28.23**	**31.64**	**31.64**
7	Less: Non-Tariff Income	0.05	0.05	0.05
8	**Net Revenue Requirement**	**28.18**	**31.59**	**31.59**
9	Add: true-up of previous years including carrying cost	-	-	-
10	**Net Revenue Requirement**	**28.18**	**31.59**	**31.59**

The Commission approves net Aggregate Revenue Requirement of INR 31.59 Cr in the true-up of FY 2017-18.

2.10. Revenue at existing Transmission Tariff and Standalone Gap/Surplus

Petitioner's submission

The Petitioner has considered revenue from approved tariff for FY 2017-18 as INR 33.14 Crore. Accordingly, the standalone gap/surplus for FY 2017-18 as submitted by the Petitioner is as below:

Table 25: Revenue Gap/(Surplus) for FY 2017-18 as submitted by Petitioner (INR Crore)

S. No	Particulars	Submitted by Petitioner
1	Annual Revenue Requirement	31.59
2	Total Revenue	33.14
3	Revenue Gap/(Surplus)	(1.56)

Commission's analysis

The Commission in the previous Tariff Orders has considered revenue as the total amount of the bills raised by the Petitioner upon its customer(s), irrespective of the actual recovery by the Petitioner and the revenue booked in the annual accounts. The total amount of bills raised by the Petitioner in FY 2017-18 was INR 29.06 Cr. Accordingly, standalone gap/surplus for FY 2017-18 is shown in the following table:

Table 26: Approved Standalone Revenue Gap/(Surplus) for FY 2017-18 (INR Crore)

S. No	Particulars	Approved by the Commission
1	Annual Revenue Requirement	31.59
2	Total Revenue	29.06
3	**Revenue Gap/(Surplus)**	**2.53**

The Commission, in the true-up of FY 2017-18 approves a standalone gap of INR 2.53 Cr.

3. Chapter 3: Annual Performance Review for FY 2018-19

3.1. Background

The Tariff Order for FY 2018-19 was issued by the Commission on January 30, 2018 approving the Aggregate Revenue Requirement (ARR) and transmission tariff for FY 2018-19 (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 Order for FY 2018-19. The Annual Performance Review for FY 2018-19 is to be carried out as per the provisions of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009:

Regulation 8 (1) of the JERC Tariff Regulations, 2009 states:

"The Commission shall undertake a review along with the next Tariff Order of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/pre-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'."

Regulation 20 of the JERC Tariff Regulations, 2009 states:

"While determining the cost of transmission for use of transmission network of each transmission licensee, the Commission shall be guided, as far as feasible, by the principles and methodologies specified by CERC as amended from time to time for determination of tariff applicable to transmission licensee."

As per Regulation 20 (3) and Regulation 21 of the CERC (Terms and Conditions of Tariff) Regulations, 2014, the tariff for transmission of electricity shall be determined as follows:

"...charges shall be derived on the basis of annual fixed cost. The annual fixed cost (AFC) of a generating station or a transmission system including communication system shall consist of the following components:

(a) Return on equity;

(b) Interest on loan capital;

(c) Depreciation;

(d) Interest on working capital; and

(e) Operation and maintenance expenses:"

The Commission has accordingly done the Annual Performance Review for FY 2018-19 and determined the Aggregate Revenue Requirement.

3.2. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has proposed nil capitalization during FY 2018-19 against approved capitalization of INR 23.85 Cr in the ARR Order. Accordingly, the Petitioner has submitted the gross fixed assets and capitalization as shown in the following table:

Table 27: Gross Fixed Assets and Capitalisation details submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (ARR Order)	Submitted by Petitioner
1	Opening GFA	229.72	229.72
2	Addition during the year	-	-
3	Closing GFA	229.72	229.72

Commission's analysis

The Commission in the ARR Order had approved a capitalization of INR 23.85 Cr in respect of project - Establishment of 220/66 KV, 2x160 MVA Sub-Station at Waghchipa with associated transmission line' during FY 2018-19. However, the Petitioner has now submitted nil capitalization during the year. A query regarding the same was raised to the Petitioner through a deficiency note. The Petitioner responded that the said capitalization might be considered in FY 2019-20.

Accordingly, the Commission approves nil capitalization for FY 2018-19. The opening GFA for FY 2018-19 has been considered same as the closing GFA approved in true-up of FY 2017-18. In accordance with the same, the Commission approves the capitalization and Gross Fixed Assets for the year as shown in the following table:

Table 28: Gross Fixed Assets and Capitalisation approved by the Commission (INR Crore)

S.No.	Particulars	Approved (ARR Order)	Now Approved
1	Opening GFA	229.72	229.72
2	Addition during the year	-	-
3	Closing GFA	229.72	229.72

The Commission approves nil capitalisation in the APR for FY 2018-19.

3.3. Depreciation

Petitioner's submission

The Petitioner has submitted that the depreciation has been worked out after applying the depreciation rates as per the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009. Accordingly, the depreciation for the year has been submitted as below:

Table 29: Depreciation details submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (ARR Order)	Submitted by Petitioner
1	Opening GFA	229.72	229.72
2	Addition during the year	23.85	-
3	Closing GFA	253.57	229.72
4	Average GFA	241.65	229.72
5	Depreciation	12.44	11.81

Commission's analysis

As per Regulation 26 of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009:

"For the purpose of tariff, depreciation shall be computed in the following manner:

(i) The value base for the purpose of depreciation shall be the historical cost of the assets, that is actual expenses limited to approved capital cost where such capital cost has been approved by the Commission:

Provided that land is not a depreciable asset and its cost shall be excluded from the capital cost while computing depreciation.

(ii) The historical cost of the asset shall include additional capitalisation.

(iii) The historical cost shall include foreign currency funding converted into equivalent rupees at the exchange rate prevalent on the date when foreign currency was actually availed but not later than the date of commercial operation.

(iv) Depreciation for generation and transmission assets shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost. Depreciation for distribution and other assets not covered by CERC shall be as per Government of India norms of 1994 as may be revised by the Commission from time to time."

Accordingly, the Commission has considered the depreciation rates as specified in the CERC (Terms and Conditions of Tariff) Regulations, 2014. The asset class wise fixed assets have been considered to be same as approved in true-up of FY 2017-18. Accordingly, the Commission has arrived at the depreciation values for the year as shown in the table below:

Table 30: Depreciation approved by Commission (INR Crore)

Particulars	Depreciation rate	Opening GFA	Addition	Deletion	Closing GFA	Average	Depreciation
Plant and Machinery	5.28%	222.02	0.00	0.00	222.02	222.02	11.72
Buildings	3.34%	2.42	0.00	0.00	2.42	2.42	0.08
Vehicles	9.50%	0.00	0.00	0.00	0.00	0.00	0.00
Office Equipment	6.33%	0.08	0.00	0.00	0.08	0.08	0.01
Computers and Others	15.00%	0.00	0.00	0.00	0.00	0.00	0.00
Land	0.00%	5.21	0.00	0.00	5.21	5.21	0.00
Total	**5.14%**	**229.72**	**0.00**	**0.00**	**229.72**	**229.72**	**11.81**

The Commission now approves depreciation of INR 11.81 Cr in the APR for FY 2018-19.

3.4. Interest on Loan

Petitioner's submission

The Petitioner has considered the opening loan balance for FY 18-19 equal to the closing balance of loan for the 2017-18. The normative loan addition in FY 2018-19 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 2018-19.

Further, the Petitioner has considered the rate of interest as the State Bank of India Prime Lending Rate (SBI PLR) of 13.45%. Accordingly, the interest and finance charges submitted by the Petitioner as shown in the table below:

Table 31: Interest and Finance charges submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (APR Order)	Submitted by Petitioner
1	Opening Loan	36.04	36.04
2	Loan for additional Capitalization	16.70	0.00
3	Loan Repayment	12.44	11.81
4	Closing Loan	40.30	24.23
5	**Interest Cost on Avg. Loans**	**5.11**	**4.05**

Commission's analysis:

The opening loan balance for FY 2018-19 has been considered equal to the closing balance of loan approved in true-up of FY 2017-18. The normative loan addition in FY 2018-19 has been computed as 70% of the capitalisation for FY 2018-19, which works out to be nil. The repayment of loans has been considered equal to the depreciation during FY 2018-19.

The Commission, similar to the approach followed in the true-up of FY 2017-18, has considered the rate of interest as SBI PLR as on April 1, 2018 - 13.45%.

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

Table 32: Interest on Loan approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	36.04	36.04	36.04
2	Add: Normative Loan During the year	16.70	-	-
3	Less: Normative Repayment equivalent to Depreciation	12.44	11.81	11.81
4	Closing Normative Loan	40.30	24.23	24.23
5	Average Normative Loan	38.17	30.14	30.14
6	Rate of Interest (%)	13.40%	13.45%	13.45%
7	**Interest on Loan**	**5.11**	**4.05**	**4.05**

The Commission approves Interest on Loan of INR 4.05 Cr in the APR of FY 2018-19.

3.5. Return on Equity (RoE)

Petitioner's submission

The Petitioner has computed the Return on Equity considering the rate specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014. The equity addition has been considered to the tune of 30% of assets capitalized during the year. Accordingly, the Petitioner has submitted the revised estimates for return on equity for FY 2018-19 as shown in the table below:

Table 33: Return on Equity submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (APR Order)	Submitted by Petitioner
1	Opening Equity	33.02	33.02
2	Addition in Equity on account of new capitalization	7.16	-
3	Closing Equity	40.18	33.02
4	Average Equity	36.60	33.02
5	**Return on Equity**	**5.67**	**5.12**

Commission's analysis:

Regulation 24 (1) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009 states the following:

"(1) Subject to the proviso to Regulation 23(2), Return on Equity shall be computed on the paid up equity capital determined in accordance with Regulation 23 and shall be guided by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 as amended by the CERC from time to time. The same principles will apply for distribution business also as far as possible."

Further, the Regulation 24 (2) of the CERC (Terms and Conditions of Tariff) Regulations, 2014, states that:

"(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station …"

Accordingly, the rate of return on equity for transmission business has been considered as 15.50%. The opening equity for FY 2018-19 has been considered same as the closing equity approved in true-up of FY 2017-18. The normative equity addition in FY 2018-19 has been computed as 30% of the capitalisation for FY 2018-19, which works out to be nil. The following table provides the Return on Equity approved by the Commission in the ARR Order, Petitioner's submission and revised estimates now approved by the Commission.

Table 34: Return on Equity approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	33.02	33.02	33.02
2	Equity Addition	7.16	-	-
3	Closing Equity	40.18	33.02	33.02
4	Average Equity	36.60	33.02	33.02
5	Rate of RoE	15.50%	15.50%	15.50%
6	**Return on Equity**	**5.67**	**5.12**	**5.12**

The Commission approves the Return on Equity of INR 5.12 Cr in the APR of FY 2018-19.

3.6. Operation & Maintenance Expenses

As per Regulation 27 (2) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009:

"While determining the O&M expenses for transmission functions within the State, the Commission shall be guided, as far as feasible by the principles and methodology specified by CERC on the matter, as amended from time to time".

Further, as per regulation 29 (4) (b) of the CERC (Terms and Conditions of Tariff) Regulations, 2014:

"(b) The total allowable operation and maintenance expenses for the transmission system shall be calculated by multiplying the number of bays and kms of line length with the applicable norms for the operation and maintenance expenses per bay and per km respectively."

Thus, the CERC Regulations specify that O&M expenses for transmission business are to be determined as per the norms based on "INR. Lakh/bay" and "INR. Lakh/ckt-KM".

However, considering the small size of the transmission system, the Commission had placed its reliance on the following proviso of the Regulation 27 (2) of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, while determining O&M norms for FY 2018-19 in the ARR Order:

"Provided further that the Commission may, if it considers it just, practical and proper considering the size of the total transmission system of, and the quantum of electricity handled by, an integrated utility, treat its transmission system as an integral part of its distribution system itself."

As the size of the network maintained by the Petitioner is very small, the Commission has treated the transmission network as an integral part of the distribution system and has applied the provisions of O&M applicable to distribution business as per JERC (Terms and Conditions for determination of Tariff), Regulations, 2009 to the Petitioner.

Accordingly, the Commission had considered the Regulation 27 (3) (b) of the JERC Tariff Regulations 2009, while determining O&M norms for FY 2018-19 in the ARR Order:

"(b)Base O&M expenses as above shall be adjusted according to variation in the rate of WPI per annum to determine the O&M expenses for subsequent year, where WPI is the Wholesale Price Index on April 1 of the relevant year"

The components comprising of the O&M – employee expenses, R&M expenses and A&G expenses have been discussed separately below.

3.6.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted revised estimates for employee expenses at INR 4.92 Cr against INR 2.50 Cr approved in the ARR Order.

Commission's analysis

The employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses. The Commission had approved employee expenses of INR 2.50 Cr in the ARR Order, which included an allowance of 0.27 Cr for the impact of Seventh Pay Commission. The Petitioner has submitted revised estimates for FY 2018-19 as INR 4.92 Cr.

The Commission while determining the O&M expenses for FY 2018-19 in the ARR Order had relied on the reasoning as discussed in section 3.6 to approve the employee expenses. The actual expenses for FY 2016-17 were escalated by WPI inflation to determine the expenses for FY 2018-19. The Commission in the Annual Performance Review approves the same expenses as approved in the ARR Order, which shall be trued-up based on actuals at the time of true-up of FY 2018-19.

The following table provides the employee expenses approved by the Commission in the ARR Order, Petitioner's submission and revised estimates now approved by the Commission:

Table 35: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	2.23	4.92	2.23
2	Impact of Seventh Pay Commission	0.27		0.27
3	**Total Employee Expenses**	**2.50**	**4.92**	**2.50**

The Commission approves employee expenses of INR 2.50 Cr in the APR of FY 2018-19.

3.6.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted revised estimates for A&G expenses at INR 0.90 Cr against INR 0.28 Cr approved in the ARR Order.

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, etc. The Commission had approved the A&G expenses for FY 2018-19 in the ARR Order by escalating the actual A&G expenses for FY 2016-17 with WPI inflation as per the explanation in section 3.6. Similar to methodology followed in employee expenses, the Commission in the Annual Performance Review approves the same expenses as approved in the ARR Order, which shall be trued-up based on actuals at the time of true-up of FY 2018-19. Further, the Petitioner in response to query raised by the Commission has further submitted that it has paid INR 23,64,000 to JERC as licensee fee in Jun'18 for FY 2016-

17, FY 2017-18 and FY 2018-19. Since, it is an uncontrollable expense to be allowed based on actuals, it is allowed separately to the Petitioner. Thus, the total A&G expenses for FY 2018-19 works out to be INR 0.52 Cr.

The following table provides the A&G expenses approved by the Commission in the ARR Order, Petitioner's submission and revised estimates now approved by the Commission:

Table 36: 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	0.28	0.90	0.28
2	JERC licensee fee	-		0.24
3	**Total Administration & General Expenses (A&G)**	**0.28**	**0.90**	**0.52**

The Commission now approves the Administrative & General (A&G) expenses of INR 0.52 Cr in the APR for FY 2018-19.

3.6.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted revised estimates for R&M expenses at INR 2.38 Cr against INR 1.98 Cr approved in the ARR Order.

Commission's analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses, the Commission had approved the R&M Expenses for FY 2018-19 in ARR Order by escalating the actual R&M expenses for FY 2016-17 with WPI. Similar to methodology followed in employee expenses and A&G expenses, the Commission in the Annual Performance Review approves the same expenses as approved in the ARR Order, which shall be trued-up based on actuals at the time of true-up of FY 2018-19. Further, the Commission allows the expenses in respect of AMC of SLDC equipment (as observed in annual accounts of FY 2017-18) over and above the approved R&M expenses allowed for maintenance of other assets of the licensee.

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

Table 37: 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	1.98	2.38	1.98
2	AMC of SLDC		-	0.55
3	**Total Repair & Maintenance Expenses (R&M)**	**1.98**	**2.38**	**2.53**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.53 Cr in the APR of FY 2018-19.

3.6.4. 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 revised estimates of O&M expenses now approved by the Commission:

Table 38: 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	2.50	4.92	2.50
2	Administrative & General Expenses (A&G)	0.28	0.90	0.52
3	Repair & Maintenance Expenses	1.98	2.38	2.53
4	**Total Operation & Maintenance Expenses**	**4.76**	**8.20**	**5.55**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 5.55 Cr in the APR of FY 2018-19.

3.7. Interest on Working Capital

Petitioner's submission

The Petitioner has calculated interest on working capital based on the principles outlined in the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, by considering the below parameters (as in CERC Tariff Regulations, 2014):

a) Receivables equivalent to two months of fixed cost
b) Maintenance spares @15% of operation and maintenance expenses
c) Operation and maintenance expenses for one month

The Petitioner has considered interest on working capital as 13.45%.

Table 39: Interest on Working Capital submitted by Petitioner (INR Crore)

S.No.	Particulars	Approved (ARR Order)	Submitted by Petitioner
1	Receivables equivalent to two months of fixed cost	4.79	5.01
2	Maintenance spares @15% of operation and maintenance expenses	0.71	1.23
3	Operation and maintenance expenses for one month	0.40	0.68
4	Total Working Capital requirement	5.90	6.92
5	**Interest on Working Capital**	**0.79**	**0.93**

Commission's analysis:

Regulation 29 of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, states the following with regard to interest on working capital calculation:

"(1) For generation and transmission business, the working capital shall be as per CERC norms.
…
(4) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of 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 generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

Further, Regulation 29 of the CERC (Terms and Conditions of Tariff) Regulations, 2014 specifies:

"(c) Hydro generating station including pumped storage hydro-electric generating station and transmission system including communication system:

i. Receivables equivalent to two months of fixed cost;
ii. Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
iii. Operation and maintenance expenses for one month."

Accordingly, the Commission has computed the revised estimates of working capital requirement for the Petitioner for FY 2018-19. The interest on working capital has been computed considering the interest rate as SBI PLR on April 1, 2018 - 13.45%.

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 40: 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 equivalent to two months of fixed cost	4.79	5.01	4.54
2	Maintenance spares @15% of operation and maintenance expenses	0.71	1.23	0.83
3	Operation and maintenance expenses for one month	0.40	0.68	0.46
4	Total Working Capital requirement	5.90	6.92	5.84
5	Rate of Interest (%)	13.40%	13.45%	13.45%
6	**Interest on Working Capital**	**0.79**	**0.93**	**0.79**

The Commission approves the Interest on Working Capital as INR 0.79 Cr in the APR of FY 2018-19.

3.8. Non-Tariff Income

Petitioner's submission

The Petitioner has submitted the revised estimate of non-tariff income for FY 2018-19 as INR 0.06 Cr against non-tariff income of INR 0.05 Cr approved in the ARR Order.

Commission's analysis:

The Petitioner in response to query from the Commission confirmed that the revenue from O&M works for 220 KV bays of PGCIL shall remain at same level in FY 2018-19 as FY 2017-18. However, 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 41: 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**	**0.0525**	**0.06**	**0.055**

The Commission now approves Non-Tariff Income of INR 0.055 Cr in the APR for FY 2018-19.

3.9. Previous years' Revenue Gap

The Commission while truing-up for FY 2014-15, FY 2015-16 and FY 2016-17 in Tariff Order dated January 30, 2018 had determined a standalone revenue gap of INR 17.95 Cr, INR 8.24 Cr and INR 3.27 Cr for FY 2014-15, FY 2015-16 and FY 2016-17 respectively. Since the Petitioner had not submitted the annual audited accounts of FY 2014-15 and FY 2015-16 in a timely manner, the Commission has decided not to allow carrying cost on the gap corresponding to the years till FY 2016-17 and INR 29.46 Cr (17.95+8.24+3.27) has been considered as the net revenue gap for FY 2016-17. Accordingly, the closing gap at the end of FY 2017-18 has been calculated as shown in the table below:

Table 42: Cumulative revenue gap/(surplus) at the end FY 2017-18 (INR Crore)

S.No	Particular	FY 2016-17	FY 2017-18
1	Opening Gap/(Surplus)	0.00	31.53
2	Addition	29.46	2.53
3	Closing Gap/(Surplus)	29.46	34.06
4	Average Gap/(Surplus)	14.73	32.79
5	Interest rate	14.05%	13.85%
6	Carrying Cost	2.07	4.54
7	**Total gap including carrying cost**	**31.53**	**38.60**

3.10. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 44.18 Cr is submitted after adjusting the Non -Tariff Income for FY 2018-19 and impact of true-up of previous years including carrying cost.

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 43: 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	Depreciation	12.44	11.81	11.81
2	Interest on Long-term Loans	5.11	4.05	4.05
3	Return on Equity	5.67	5.12	5.12
4	O&M Expense	4.76	8.20	5.55
5	Interest on Working Capital	0.79	0.93	0.79
6	**Total Revenue Requirement**	**28.77**	**30.11**	**27.31**
7	Less: Non-Tariff Income	0.05	0.06	0.05
8	**Net Revenue Requirement**	**28.72**	**30.05**	**27.26**
9	Add: true-up of previous years including carrying cost	14.13	14.13	0.00*
10	**Net Revenue Requirement**	**42.84**	**44.18**	**27.26**

**This has been dealt separately in the next section*

The Commission approves the net ARR of INR 27.26 Cr in the APR of FY 2018-19.

3.11. Standalone Gap/(Surplus) for FY 2018-19

The Commission had approved the net revenue requirement of INR 42.84 Cr in the ARR order of FY 2018-19. The Commission has now approved the net revenue requirement of INR 27.26 Cr. Thus, the standalone revenue gap/(surplus) as approved by the Commission is shown in the following table:

Table 44: Standalone revenue gap/(surplus) for FY 2018-19 (INR Crore)

S.No	Particular	ARR Order	Petitioner's Submission	Now Approved by the Commission
1	Net Revenue Requirement	42.84	44.18	27.26
2	Revenue at existing Tariff	42.84	42.84	42.84
3	**Standalone Gap/(Surplus)**	**0.00**	**1.34**	**(15.58)**

3.12. Gap/Surplus to be carried forward to FY 2019-20

The Commission has considered the standalone surplus for FY 2018-19 to be adjusted from the existing cumulative revenue gap till FY 2017-18 to determine the cumulative revenue gap along with the carrying cost at the end of FY 2018-19 as shown in the following table:

Table 45: Cumulative revenue gap/(surplus) at the end FY 2018-19 (INR Crore)

S.No	Particular	FY 2016-17	FY 2017-18	FY 2018-19
1	Opening gap	0.00	31.53	38.60
2	Addition	29.46	2.53	(15.58)
3	Closing gap	29.46	34.06	23.02
4	Average gap	14.73	32.79	30.81
5	Interest rate	14.05%	13.85%	13.45%
6	Carrying Cost	2.07	4.54	4.14
7	**Total gap including carrying cost**	**31.53**	**38.60**	**27.17**

The Commission has arrived at a cumulative revenue gap of INR 27.17 Cr at the end of FY 2018-19 which is to be recovered in the future years. In order to avoid a tariff shock, the Commission has decided to allow the recovery of the cumulative revenue gap in a phased manner over a period of three years. The cumulative revenue gap of INR 27.17 Cr is thus amortised over three years, and the latest SBI MCLR has been considered for calculating the carrying cost. The previous years' revenue gap to be recovered in the ARR of FY 2019-20 is shown as follows:

Table 46: Revenue gap distribution over three years (INR Crore)

S.No	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening gap	27.17	18.11	9.06
2	Addition (33.33% of 27.17 Cr)	(9.06)	(9.06)	(9.06)
3	Closing gap	18.11	9.06	-
4	Interest rate*	9.55%	9.55%	9.55%
5	Average gap	22.64	13.58	4.53
6	Carrying Cost	2.16	1.30	0.43
7	**Total gap including carrying cost to be considered in ARR (-2+6)**	**11.22**	**10.35**	**9.49**

**Projected SBI MCLR for 1st April of respective year, will be revised based on actual SBI MCLR*

4. Chapter 4: Determination of Aggregate Revenue Requirement for FY 2019-20, FY 2020-21 and FY 2021-22 (2nd MYT Control Period)

4.1. 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 Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2018 (hereinafter referred to as “MYT Regulations, 2018”).

4.2. 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 16, 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.

4.3. Gross Fixed Assets (GFA) and Capitalisation

Petitioner’s submission

The Petitioner has submitted the same capital expenditure and capitalisation as approved by the Commission in the Business Plan Order. The Petitioner has requested the Commission to consider same.

Commission’s analysis:

The Commission has considered the capitalisation already approved in the Business Plan Order dated November 16, 2018. The Petitioner in respect of deficiency note raised by the Commission submitted that the capitalization of INR 23.85 Cr against the scheme “Establishment of 2x160 MVA, 220/66 kV Vagchipa Substation with associated 220 kV Lines” approved for FY 2018-19 may be considered in FY 2019-20. Accordingly, the Commission has considered capitalization of INR 66.88 Cr in FY 2019-20 in addition to capitalization approved in the Business Plan Order. The opening GFA for FY 2019-20 has been considered same as the closing GFA approved in APR of FY 2018-19.

The following table provides the capitalization and GFA for the Control Period from FY 2019-20 to FY 2021-22:

Table 47: Gross Fixed Assets and Capitalisation approved by the Commission (INR Crore)

S.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA	229.72	296.60	296.60
2	Addition during the year	66.88	-	15.75
3	Closing GFA	296.60	296.60	312.35

The Commission approves the capitalisation and Gross Fixed Assets as shown in the table above.

4.4. Depreciation

Petitioner's submission

The Petitioner has determined the depreciation by applying category-wise depreciation rates notified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 on the opening balance of Gross Fixed assets and average of the addition during the MYT Control Period. Accordingly, the depreciation for the year has been submitted as below:

Table 48: Depreciation details submitted by Petitioner (INR Crore)

S.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA	229.72	272.75	272.75
2	Addition during the year	43.03	-	15.75
3	Closing GFA	272.75	272.75	288.50
4	Average GFA	251.24	272.75	280.63
5	Depreciation	12.94	14.08	14.50

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."

Accordingly, depreciation rates have been considered based on CERC (Terms and Conditions of Tariff), 2014. The weighted average depreciation rate has been calculated based on asset class wise fixed assets as per audited accounts of FY 2017-18 and the depreciation rates as considered. Further, deprecation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year.

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

Table 49: Depreciation approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Gross Fixed Assets	229.72	296.60	296.60
2	Addition during the year	66.88	-	15.75
5	Adjustment/Retirement during the year	-	-	-
6	Closing Gross Fixed Assets	296.60	296.60	312.35
7	Average Gross Fixed Assets	263.16	296.60	304.48
8	Effective Rate of Depreciation (%)	5.14%	5.14%	5.14%
9	**Depreciation**	**13.53**	**15.25**	**15.65**

The Commission approves a depreciation of INR 13.53 Cr, INR 15.25 Cr and INR 15.65 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.5. *Interest on Loan*

Petitioner's submission

The Petitioner has considered normative debt-equity ratio of 70:30 as per the MYT regulations, 2018. Further, the Petitioner has considered interest rate of 9.00% to compute the interest on long-term loans.

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

Table 50: Interest on Loan submitted by the Petitioner (INR Crore)

S.No.	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	24.23	41.41	27.33
2	Add: Normative Loan during the year (70% of proposed capitalization)	30.12	-	11.03
3	Less: Normative Repayment	12.94	14.08	14.50
4	Closing Normative Loan	41.41	27.33	23.86
5	Average Normative Loan	32.82	34.37	25.59
6	Rate of Interest	9.00%	9.00%	9.00%
7	Interest on Normative Loan	**2.95**	**3.09**	**2.30**

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."

Since, the Petitioner has no actual loans, the rate of interest in accordance with the Regulation 28.4 of the MYT Regulations, 2018 shall be the latest 1-year SBI MCLR plus 100 basis points. For projection, the 1-year SBI MCLR as on January 10, 2019 (8.55%) has been considered for each year of the Control Period.

The closing loan balance in APR of FY 2018-19 has been considered as the opening loan balance for FY 2019-20. The normative loan addition in each year has been considered as 70% of the capitalization in the respective year as approved section 4.3. The Interest on Loan has been calculated on the average loan during the year.

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

Table 51: Interest on loan approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	24.23	57.52	42.28
2	Add: Normative Loan During the year	46.82	-	11.03
3	Less: Normative Repayment equal to Depreciation	13.53	15.25	15.65
4	Closing Normative Loan	57.52	42.28	37.65
5	Average Normative Loan	40.88	49.90	39.96
6	Rate of Interest (%)	9.55%	9.55%	9.55%
7	**Interest on Loan**	**3.90**	**4.77**	**3.82**

The Commission approves Interest on Loan as INR 3.90 Cr, INR 4.77 Cr and INR 3.82 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.6. Return on Equity (RoE)

Petitioner's submission

The Petitioner has computed the Return on Equity (RoE) 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 considered a post-tax rate of return on equity of 15.50% as per the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014.

Commission's analysis:

The Regulation 27.1 of the MYT Regulations, 2018 stipulates the following:

"27.1 Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 26 for the assets put to use for the Transmission Licensee and shall be allowed in accordance with the prevalent CERC Tariff Regulations for transmission system.."

Accordingly, the Commission has considered a rate of return on equity of 15.50%. The opening equity for FY 2019-20 has been considered equal to the closing equity approved in APR of FY 2018-19. The equity component for capitalization during the respective year has been considered as 30% of the capitalization as approved in section 4.3. The following table provides the return on equity approved for each year of the Control period:

Table 52: RoE approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Equity	33.02	53.08	53.08
2	Additions on account of new capitalisation	20.06	-	4.73
3	Closing Equity	53.08	53.08	57.81
4	Average Equity	43.05	53.08	55.45
5	Return on Equity (%)	15.50%	15.50%	15.50%
6	**Return on Equity**	**6.67**	**8.23**	**8.59**

The Commission approves Return on Equity of INR 6.67 Cr, INR 8.23 Cr and INR 8.59 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.7. 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 41 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 Transmission Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the transmission Licensee, estimates of the actuals for the base Year, prudence check and any other factors considered appropriate by the Commission.

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

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

Where,

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

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

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

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

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

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

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

A&Gn – Administrative and General expenses of the Transmission Licenseefor the nth Year;

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

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

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

Gn is a growth factor for the nth Year. Value of Gn shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, 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.

4.7.1. 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 average increase in Consumer Price Index (CPI) has been calculated based on the average increase in the Consumer Price Index (CPI) for immediately preceding three years. The table below provides the employee expenses projected for each year of the MYT Control Period:

Table 53: Employee Expenses submitted by Petitioner (INR Crore)

Particular	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
CPI Inflation		4.28%	4.28%	4.28%
Projected Employee Cost	**4.92**	**5.13**	**5.35**	**5.57**

Commission's analysis

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

"6. Values for Base Year

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

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

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

In order to estimate the employee expenses for the base year, the impact of Seventh Pay Commission (as approved by the Commission in its Orders) has been deducted from the actual employee expenses for FY 2015-16, FY 2016-17 and FY 2017-18. Further, the Commission has computed the average of net employee expenses (eq. to Sixth Pay Commission salary levels) so computed to arrive at the net employee expenses for the median year. Thereafter, the net employee expenses, thus, arrived for the median year have been escalated by the CPI inflation twice to arrive at the net employee expenses for the base year, FY 2018-19. The impact of Seventh pay Commission in FY 2017-18 as approved in this Order escalated by CPI Inflation has been added to the net employee expenses to estimate the total employee expenses for the base year. The resultant employee expenses have been escalated by CPI Inflation to arrive upon the employee expenses of each year of the Control Period. The growth factor for the Control Period has been considered zero as the Petitioner has submitted that it has no plans for recruitment of new employees.

The CPI Inflation has been computed as follows:

Table 54: 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%	
2017-18	284.42	3.08%	
		CPI Inflation	**4.28%**

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

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

S. No	Particulars	Net expenses for base year*	Total expenses for base year#	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	3.18				
2	Growth in number of employees (Gn)			0.00%	0.00%	0.00%
3	CPI Inflation for preceding three years (CPI)		4.28%	4.28%	4.28%	4.28%
4	**Employee Expenses**	**3.18**	**3.47**	**3.62**	**3.77**	**3.93**

* Excluding impact of Seventh Pay Commission; # Including impact of Seventh Pay Commission

The Commission approves Employee Expenses of INR 3.62 Cr, INR 3.77 Cr and INR 3.93 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.7.2. 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 along with various parameters considered.

Table 56: A&G submitted by Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
CPI Inflation	4.28%	4.28%	4.28%
Projected A&G expenses	**0.94**	**0.98**	**1.02**

Commission's analysis

The license fee for FY 2016-17 and FY 2017-18 was paid in FY 2018-19 by DNH-Transmission. The same has been added to the respective years to compute the actual A&G expense for the year. Further, similar to the methodology followed while estimating the employee expenses, the Commission has determined the A&G expenses for the median year of FY 2016-17 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 57: 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	0.40				
2	CPI Inflation		4.28%	4.28%	4.28%	4.28%
3	**A&G Expenses**	**0.40**	**0.43**	**0.45**	**0.47**	**0.49**

The Commission approves the Administrative & General (A&G) expenses of INR 0.45 Cr, INR 0.47 Cr and INR 0.49 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.7.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses for each year of the Control Period by escalating R&M expenses for FY 2018-19 with average increase in Wholesale Price Index (WPI) for FY 2015-16, FY 2016-17 & FY 2017-18. The table below provides the R&M expenses proposed for each year of the MYT Control Period along with various parameters considered.

Table 58: R&M expenses submitted by Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
WPI Inflation	0.33%	0.33%	0.33%
Projected R&M Expenses	**2.38**	**2.83**	**2.83**

Commission's analysis

The 'K' factor has been determined as the average of ratio of R&M expenses 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 59: 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	2.14	1.91	2.67
2	Opening GFA	177.90	214.52	229.72
3	K Factor	1.20%	0.89%	1.16%
4	**K Factor Approved by the Commission (Average of 3 years)**	**1.08%**		

The 'K' factor is kept constant for all the years and multiplied with the 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 60: 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 61: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	GFA of previous year (GFA_{n-1})	229.72	296.60	296.60
2	K factor approved (K)	1.08%	1.08%	1.08%
3	WPI Inflation	0.33%	0.33%	0.33%
4	**R&M Expenses = (K x (GFA_{n-1}) x (1+$WPI_{inflation}$)**	**2.50**	**3.23**	**3.23**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.50 Cr, INR 3.23 Cr and INR 3.23 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.7.4. 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 62: O&M Expenses approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	3.62	3.77	3.93
2	Administrative & General Expenses (A&G)	0.45	0.47	0.49
3	Repair & Maintenance Expenses	2.50	3.23	3.23
4	**Total Operation & Maintenance Expenses**	**6.57**	**7.47**	**7.65**

The Commission approves Operation & Maintenance (O&M) expenses of INR 6.57 Cr, INR 7.47 Cr and INR 7.65 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.8. Interest on Working Capital

Petitioner's submission

The Petitioner has calculated interest on working capital based on the principles outlined in the JERC MYT Regulations, 2018, by considering the below parameters (as in CERC Tariff Regulations, 2014):

a) Receivables equivalent to two months of fixed cost
b) Maintenance spares @15% of operation and maintenance expenses
c) Operation and maintenance expenses for one month

The Petitioner has considered interest on working capital as 13.45%.

Table 63: Interest on Working Capital submitted by Petitioner (INR Crore)

S.No.	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Receivables equivalent to two months of fixed cost	5.23	5.74	5.79
2	Maintenance spares @15% of operation and maintenance expenses	1.27	1.37	1.41
3	Operation and maintenance expenses for one month	0.70	0.76	0.79
4	Total Working Capital requirement	7.20	7.88	7.99
5	**Interest on Working Capital**	**0.97**	**1.06**	**1.07**

Commission's analysis:

The Regulation 42 of the MYT Regulations, 2018 stipulates the following:

"42. Norms of Working Capital for Transmission Licensee

"42.1 The Transmission Licensee shall be allowed interest on the estimated level of working capital for the Financial Year computed in accordance with prevalent CERC Tariff Regulations."

Further, Regulation 29 of the CERC (Terms and Conditions of Tariff) Regulations, 2014 specifies:

"(c) Hydro generating station including pumped storage hydro-electric generating station and transmission system including communication system:

i. Receivables equivalent to two months of fixed cost;
ii. Maintenance spares @ 15% of operation and maintenance expenses specified in regulation 29; and
iii. Operation and maintenance expenses for one month."

The Regulation 31 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 Working Capital for each year of the Control Period. The interest rate has been considered as 1-year SBI MCLR as on April 1, 2018 (8.15%) plus 200 basis points. The impact of change in norms for working capital in CERC Tariff Regulations, 2019 shall be considered at the time of Annual Performance Review. The interest on working capital computed for the Control Period is shown in the table below:

Table 64: Interest on Working Capital approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Receivables equivalent to two months of fixed cost	5.22	6.07	6.07
2	Maintenance spares @15% of operation and maintenance expenses	0.99	1.12	1.15
3	Operation and maintenance expenses for one month	0.55	0.62	0.64
4	Total Working Capital requirement	6.75	7.82	7.86
5	Rate of Interest (%)	10.15%	10.15%	10.15%
6	**Interest on Working Capital**	**0.69**	**0.79**	**0.80**

The Commission approves the Interest on Working Capital of INR 0.69 Cr, INR 0.79 Cr and INR 0.80 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

4.9. 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 65: Non-Tariff Income submitted by the Petitioner (INR Crore)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Non-Tariff Income	**0.06**	**0.06**	**0.06**

Commission's analysis:

The Regulation 43 of the MYT Regulations, 2018 stipulates the following:

"43. Non-Tariff Income

43.1 The amount of Non-Tariff Income relating to the transmission business as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in determining annual transmission charges of the Transmission Licensee:

Provided that the Transmission Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of Aggregate Revenue Requirement.

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) Miscellaneous receipts like parallel operation charges;

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

k) Excess found on physical verification;

l) Interest on investments, fixed and call deposits and bank balances;

m) Prior period income, etc.:

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

The Commission has escalated the Non-Tariff Income approved in APR of FY 2018-19 by 5% 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 66: Non -tariff Income approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	**Non- Tariff Income**	**0.06**	**0.06**	**0.06**

The Commission approves Non-Tariff Income of INR 0.06 Cr for each year of the MYT Control Period.

4.10. 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 67: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (INR Crore)

S. No.	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Depreciation	12.94	14.08	14.50
2	Interest Cost on Long-term Capital Loans	2.95	3.09	2.30
3	Return on Equity	6.12	7.12	7.49
4	O&M Expense	8.45	9.15	9.43
5	Interest on Working Capital Loans	0.97	1.06	1.07
6	**Total Revenue Requirement**	**31.43**	**34.50**	**34.79**
7	Less: Non-Tariff Income	0.06	0.06	0.06
8	**Net Revenue Requirement**	**31.38**	**34.45**	**34.73**
9	Add: true-up of previous years including carrying cost	12.95	11.76	10.58
10	**Net Revenue Requirement**	**44.33**	**46.21**	**45.31**

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 68: Aggregate Revenue Requirement approved by Commission (INR Crore)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Depreciation	13.53	15.25	15.65
2	Interest Cost on Long-term Capital Loans	3.90	4.77	3.82
3	Return on Equity	6.67	8.23	8.59
4	O&M Expense	6.57	7.47	7.65
5	Interest on Working Capital Loans	0.69	0.79	0.80
6	**Total Revenue Requirement**	**31.36**	**36.50**	**36.51**
7	Less: Non-Tariff Income	0.06	0.06	0.06
8	**Net Revenue Requirement**	**31.30**	**36.44**	**36.45**
9	Add: true-up of previous years including carrying cost	11.22*	10.35*	9.49*
10	**Net Revenue Requirement**	**42.52**	**46.79**	**45.94**

** Refer Table 46 for detailed calculation*

The Commission approves net ARR of INR 42.52 Cr, INR 46.79 Cr and INR 45.94 Cr for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

5. Chapter 5: Transmission Tariff for FY 2019-20

5.1. Transmission capacity of system

The transmission system capacity is the contracted capacity made available to the beneficiary during the given period. The present capacity of Kharadpada substation and Khadoli substation is 509.60 MW and 470.40 MW respectively. Further, the Petitioner expects to Commission the 220/66 KV Vagchhipa Substation (2x 160 MVA) in June 2019, resulting in a total transmission capacity of 1294 MW (the power factor has been considered as 0.98).

Therefore, the Commission approves the projected capacity of the transmission system as 1294 MW for FY 2019-20.

5.2. Tariff Determination

The Regulation 46 of the MYT Regulations, 2018 states that:

"46. Sharing of charges for Intra-State Transmission Network

46.1 The Aggregate Revenue Requirement of the Transmission Licensee, as approved by the Commission, shall be shared by all long-term users and medium-term users of the transmission system on a monthly basis in the ratio of their respective Allotted Transmission Capacity to the total Allotted Transmission Capacity, in accordance with the following formula:

$ATC_n = (\text{Transmission ARR} / 12) \times (CC_n / SCC)$

Where,

ATC_n = annual transmission charges payable by the nth long-term user or medium-term user of the transmission system;

Transmission ARR = Aggregate Revenue Requirement of the Transmission Licensee, determined in accordance with these Regulations;

CC_n = Allotted Transmission Capacity by the n^{th} long-term user or medium-term user of the transmission system;

SCC = sum of Allotted Transmission Capacity by all long-term users and medium-term users of the transmission system:

Provided that the ATC_n shall be payable on a monthly basis by each long-term user or medium-term user of the transmission system and shall be collected by the State Transmission Utility (STU).

46.2 The short-term Open Access Consumers shall pay transmission charges on INR/MW/day basis determined in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

Further, the Regulation 4.1 of 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 states that:

"4.1 Transmission Charges

1. An Open Access Consumer using the Intra-State Transmission System, shall pay transmission charges to the State Transmission Utility or the Intra-State Transmission Licensee other than the State Transmission Utility for usage of their system as determined by the Commission in the Tariff Order from time to time:

Provided that transmission charges shall be payable on the basis of contracted capacity in case of Long-term and Medium-term Open Access Consumers and on the basis of scheduled load in case of Short-term Open Access Consumers. For Open Access for a part of a Day, the transmission charges shall be payable as under:

a. Up to six (6) hours in a Day in one (1) block: 1/4th of the charges for Long-term and Medium-term users;

b. More than six (6) hours and up to twelve (12) hours in a Day in one (1) block: ½ of the charges for Long-term and Medium term users; and

c. More than twelve (12) hours and upto twenty-four (24) hours in a Day in one (1) block: equal to Long term and Medium-term users"

Accordingly, the Commission has determined the charges for long-term and medium-term consumers and short-term open access consumers as below:

Table 69: Transmission Tariff for FY 2019-20

S.No	Particular	FY 2019-20
1	Aggregate Revenue Requirement (INR Crore)	42.52
2	Transmission System Capacity (MW)	1,294
3	**Long-term/Medium-term Transmission Charges (INR/MW/month)**	**27,381**
4	**Short-term open access Transmission Charges (INR/MW/Day)**	**900.21**

The short-term open access consumers shall pay charges in accordance with charges determined above and Regulation 4.1 of 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 as amended from time to time.

6. Chapter 6: Directives

The Commission in its previous Orders had issued a number of specific directives to Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli with the objective of attaining operational efficiency and streamlining the flow of information, which would be beneficial for the Sector and the Petitioner both in short and long term. This Chapter deals with the Petitioner's compliance with the Commission's directives and Commission's views thereon as well as the summary of new directives for compliance and implementation by the Electricity Department, Transmission Division, UT of Dadra and Nagar Haveli.

Directive 1: Submission of audited annual accounts along with the true-up Petitions for FY 14-15 onwards

Originally issued in Tariff Order dated March 30, 2015 and carried forward to the Tariff Order dated January 30, 2018
The Petitioner was directed to submit the Transmission true-up Petition of FY 2014-15 along with annual audited accounts of FY 2013-14 & FY 2014-15 with the ARR Tariff Petition of FY 2017-18.
Petitioner's response in present Tariff Petition
The Electricity Department Transmission Division has submitted the audited accounts for FY 2017-18 along with this Petition.
Commission's response
The Commission notes the submission of the Petitioner and accordingly drops this directive.

Directive 2: Functioning of SLDC

Originally issued in Tariff Order dated March 30, 2015 and carried forward to the Tariff Order dated January 30, 2018

The Petitioner has submitted that the SLDC is already operational and an Assistant Engineer of the DNHPDCL has been appointed as the nodal officer of the SLDC. The scheduling of power is being done on a day to day basis.

However, as per the provisions of JERC Grid Code Regulations 2010:

"(3)(a) Establishment of SLDC: The State Government of Goa and the Appropriate Governments in respect of Union Territories of Andaman & Nicobar Islands, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry shall establish a centre to be known as the State Load Dispatch Centre (SLDC) in the State of Goa and in the Union Territories. The State Load Dispatch Centre shall be operated by a Government company or any Authority or Corporation established or constituted by or under any State Act, as may be notified by Appropriate Government. Until a Government company or any authority or corporation is notified by the Appropriate Government, the State Transmission Utility shall operate the State Load Despatch Centre.

b) Functions of SLDC: State Load Dispatch Centre shall discharge the functions as stipulated under Sections 32 (2) and 33 of the Act.

c) Manning of SLDC:

(i) SLDC shall be manned by qualified and experienced Engineers who are well acquainted with State Transmission System and grid operation.

(ii) ii) Periodical Training shall be imparted to the personnel of the State Load Dispatch Centre to update their skills in order to enable them to discharge their functions stipulated under Section 32 (2) & 33 of the Act"

In view of provisions of Electricity Act 2003 and already laid down sector specific Regulations, the operations of SLDC should not be entrusted with the distribution company (DNHPDCL).

So, the Commission directs to the Petitioner to comply the following points:

- *To establish an independent SLDC for DNH.*
- *To segregate the accounts of SLDC business and transmission business.*

- *Filing separate ARR Petitions for SLDC and transmission business compulsorily from FY 17-18 onwards.*

The compliance status report of above directive should be submitted to Commission within the next six months of issuance of this Order.

Petitioner's response in present Tariff Petition

The Electricity Department, Transmission Division has deputed personnel to the DNHPDCL for smooth functioning of its operations. As soon as the personnel of the Department are deputed back to the Department, the Department will take over the full-fledged operations of the SLDC from DNHPDCL. The matter was referred to the competent authority for getting the deputed personnel back to the Electricity Department from deputation. The authority has assured that since the DNHPDCL is under process of filling up the vacant process, as soon as the posts are filled up, the deputed personnel of the Electricity Department would be reverted back.

Commission's response

The Commission has noted that the Petitioner has not complied with this directive as per the intent and spirit of the Act and Regulations framed thereunder. The Commission reiterates that in view of provisions of Electricity Act 2003 and already laid down sector specific Regulations, the operations of SLDC should not be entrusted with the distribution company (DNHPDCL).

Hence, the Commission takes a serious note of non-compliance and reiterates its directions with the following points:

- *To establish an independent SLDC for DNH.*
- *To segregate the accounts of SLDC business and transmission business.*
- *To file separate ARR Petitions for SLDC and transmission business compulsorily from FY 2019-20 onwards.*

Till the operational and financial segregation of SLDC is complete, the Commission directs the Petitioner to undertake necessary actions to take over operations of the SLDC from DNHPDCL within the next 3 months and report the compliance to the Commission.

Directive 3: Submission of feasibility study of transmission ring main system

Originally issued in Tariff Order dated March 31, 2016 and carried forward to the Tariff Order dated January 30, 2018

The Petitioner is directed to submit a feasibility study report for installation of ring main system along with other reliability improvement provisions in order to increase transmission network reliability.

Petitioner's response in present Tariff Petition

The Electricity Department, Transmission Division has submitted final feasibility study report along with the MYT Petition for second Control Period as Annexure III.

Commission's response

The Commission notes the compliance by the Petitioner and accordingly drops this directive.

Directive 4: Submission of O&M allocation methodology

Originally issued in Tariff Order dated April 19, 2017 and carried forward to the Tariff Order dated January 30, 2018

The Commission observes that the Petitioner is yet to submit the allocation methodology. While DNHPDCL has provided audited accounts to validate their O&M costs, the Petitioner is yet to submit the audited accounts for their licensed business. The Commission directs the Petitioner to submit the audited accounts for the previous years along with the next tariff filing. In case of further non-compliance, the Commission will be constrained to take appropriate action against the Petitioner.

Petitioner's response in present Tariff Petition

The Electricity Department Transmission Division has submitted the audited accounts for FY 2017-18 along with this Petition.

Commission's response

The Commission notes the compliance by the Petitioner and accordingly drops this directive.