TARIFF ORDER

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

Petition No. 18/2019

for

Electricity Department, Transmission Division, Dadra and Nagar Haveli

18th May, 2020

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

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
LT	Low Tension

Abbreviation	Full Form
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	State Bank of India Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
STOA	Short Term Open Access
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory

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

CORAM

Shri. M. K. Goel, Chairperson

Petition No. 18/2019

In the matter of

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

And in the matter of
Electricity Department, Transmission Division, Dadra and Nagar Haveli.......................................Petitioner

ORDER

Dated: 18th May, 2020

1. This Order is passed in respect of Petition filed by the Electricity Department, Transmission Division, Dadra and Nagar Haveli (herein after referred to as "The Petitioner" or "Electricity Department, Transmission Division, Dadra and Nagar Haveli" or "The Licensee") for approval of True-up of FY 2018-19, Annual Performance Review for FY 2019-20, Aggregate Revenue Requirements (ARR) for FY 2020-21 and Transmission Tariff for FY 2020-21 before the Joint Electricity Regulatory Commission (herein after referred to as "The Commission" or "JERC") .

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

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

4. Any Financial implication in view of lockdown due to pandemic COVID-19, will be duly considered while evaluating the APR FY 2020-21 thereafter true-up of FY 2020-21

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 2018-19, APR of FY 2019-20 and ARR along with the Transmission Tariff for FY 2020-21.

6. A Summary has been provided as follows:

(i) The Commission while truing up of FY 2017-18 in Tariff Order dated 20th May 2019 had determined a standalone revenue gap of INR 2.53 Crores. In the said Order, the Commission in APR of FY 2018-19 had approved revised standalone surplus of INR 15.58 Cr. In order to avoid a Tariff shock, the Commission had allowed the recovery of cumulative revenue gap of INR 27.17 Cr at the end of FY 2018-19, in a phased manner over a period of three years.

(ii) Now, the Commission in this Order has trued up for FY 2018-19 and has approved Annual Revenue Requirement of INR 29.92 Cr vis-à-vis actual revenue of INR 42.85 Cr, resulting in standalone revenue surplus of INR 12.93 Cr for FY 2018-19.

(iii) Further, for FY 2019-20, the Commission has approved revised Annual Revenue Requirement of INR 27.34 Cr and projected revenue of INR 42.52 Cr at approved tariff, which resulted in standalone revenue surplus of INR 15.18 Cr. Thus, the cumulative revenue gap at the end of FY 2019-20 is shown in the following table:

Table 1: Cumulative revenue gap/(surplus) at the end of FY 2019-20 (INR Crore)

S. No	Particular	Formula	FY 2018-19	FY 2019-20
1	Opening gap	A	38.60	30.00
2	Addition	B	(12.93)	(15.18)
3	Closing gap	C = A+B	25.68	14.82
4	Average gap	D = (A+C)/2	32.14	22.41
5	Interest rate	E	13.45%	9.55%
6	Carrying Cost	F = (D*E)/100	4.32	2.14
7	**Total gap/(Surplus) including carrying cost**	**G = C+F**	**30.00**	**16.96**

(iv) In line with the approach followed by the Commission in Order dated 20th May 2019, the closing revenue gap at the end of FY 2019-20 has been adjusted by the Commission in a phased manner over a period of two years (FY 2020-21 & FY 2021-22) as follows:

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

S. No.	Particular	Formula	FY 2020-21	FY 2021-22
1	Opening gap	A	16.96	8.48
2	Addition (50% of 16.96 Cr)	B	(8.48)	(8.48)
3	Closing gap	C = A+B	8.48	-
4	Interest rate*	D	8.85%	8.85%
5	Average gap	E = (A+C)/2	12.72	4.24
6	Carrying Cost	F = (D*E)/100	1.13	0.38
7	**Total gap including carrying cost to be considered in ARR**	**G = C+F**	**9.60**	**0.38**

** Latest available SBI MCLR (1 Year) as on 10.02.2020 is considered, will be revised based on actual SBI MCLR*

(v) The Aggregate Revenue Requirement as submitted by the Petitioner and approved by the Commission for FY 2020-21 is as follows:

Table 3: Aggregate Revenue Requirement for FY 2020-21 (INR Crore)

S. No	Particulars	Petitioners submission	Approved by Commission
1	**Net Revenue Requirement**	**33.55**	**31.85**
2	Add: true-up of previous years including carrying cost	6.39	9.60
3	**Net Revenue Requirement**	**39.93**	**41.45**

(vi) Considering the Aggregate Revenue Requirement for FY 2020-21 and the transmission capacity, the transmission charges have been approved in "*Chapter 5: Transmission Tariff for FY 2020-21*" of this Order for long-term and medium-term consumers and short-term open access consumers as shown below:

Table 4: Transmission Tariff for FY 2020-21

S. No	Particular	Formula	FY 2020-21
1	Aggregate Revenue Requirement (INR Crore)	A	41.45
2	Transmission System Capacity (MW)	B	1,137
3	**Long-term/Medium-term Transmission Charges (INR/MW/month)**	**C = ((A/B)/12)*10^7**	**30,383**
4	**Short-term open access Transmission Charges (INR/MW/Day)**	**D = ((A/B)/365)*10^7**	**998.89**

(vii) 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.

7. This Order shall come into effect from 1st June, 2020 and shall remain applicable till further Orders. All existing provisions that are not modified by this Order shall continue to be in force.

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

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

-sd-
(M.K. Goel)
Chairperson

Place: Gurugram
Date: 18th May, 2020

(Certified Copy)

(Rakesh Kumar)

Secretary

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC) (for the State of Goa & UTs)

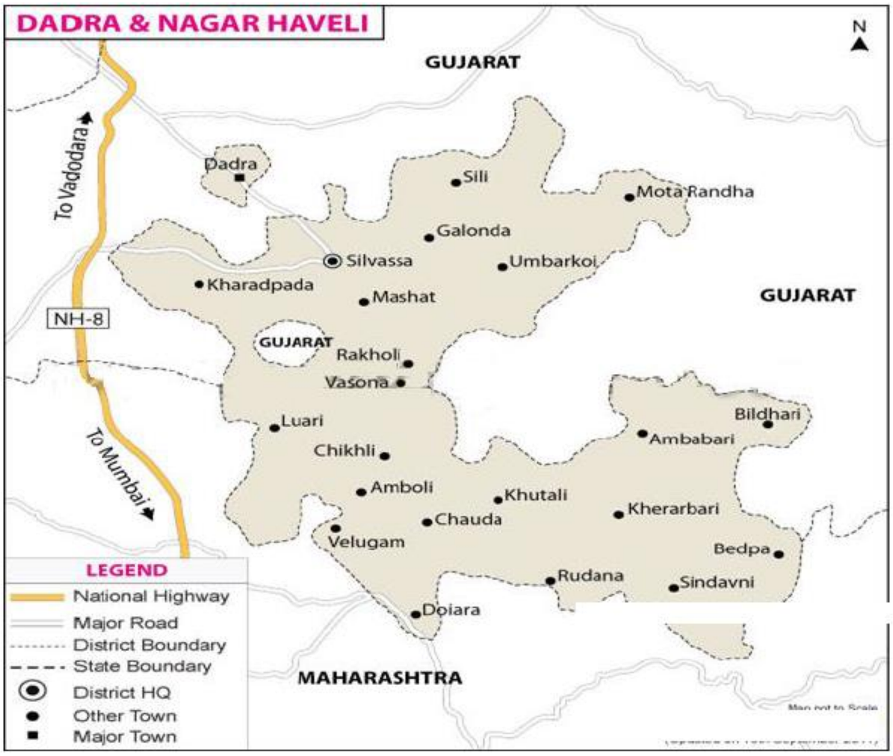
In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R 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 regulating the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Dadra & Nagar Haveli and Daman & Diu and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting interest of consumers and ensuring supply of electricity to all areas.

1.2. About Dadra and Nagar Haveli

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

The rapid development of DNH has led to a tremendous increase in the demand for power. Currently, 97% of total sales are to HT and LT industrial consumers. The present peak demand of this territory is around 816 MW (As on January 2020). DNH has also achieved 100% electrification and 100% metering which further contributes to the increasing demand for power.



1.3. Electricity Department, Transmission Division, 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, as the functions of transmission of electricity has not been vested on DNH Power Distribution Corporation Limited, 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 consists of 38.18 circuit km of 220 kV double circuit (D/C) lines. At present, the State gets power from 400/220 kV Vapi Substation of POWERGRID and 400/220 kV Kala Substation of POWERGRID.

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

Table 5: Transmission System of ED-DNH

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	--
4	**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. Further, the Commission notified the JERC for the state of Goa & Union Territories (Multi Year Distribution Tariff) Regulations, 2014 on June 30, 2014. This Regulation is applicable for only the Distribution Licensees in the state of Goa & Union Territories and is applicable for determination of tariff from April 1, 2015 up to March 31, 2018. (i.e. till FY 2015-18). Accordingly, JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 are applicable to generation companies and transmission 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 from April 1, 2009 up to March 31, 2018. (i.e. till FY 2018-19).

1.5. Multi Year Tariff Regulations, 2018

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

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

1.8. Filing and Admission of the Present Petition

The present Petition was admitted on December 12, 2019 and marked as Petition no. 18/2019. The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.9. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petition and key data gaps. The Petitioner submitted its response on the issues through various letters/emails.

The Commission conducted the Technical Validation Session (TVS) with the Petitioner at the Commission's office in Gurugram, during which the discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in this session and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner on the Petition along with the dates:

Table 6: List of Interactions with the Petitioner

S. No	Subject	Date
1	Issuance of First Discrepancy Note	December 12, 2019
2	Reply received from Petitioner	December 27, 2019
3	Technical Validation Session with the Petitioner at JERC office	January 7, 2020
4	Issuance of Second Deficiency Note	January 9, 2020
4	Reply received from Petitioner on queries raised during Technical Validation Session	January 13, 2020

S. No	Subject	Date
5	Public hearing	January 21, 2020

1.10. 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 12, 2019	UT Today, English	Silvassa
2	December 12, 2019	Daman Ganga Times, Gujrati	Silvassa
3	January 03, 2020	Free Press Journal, English	Mumbai

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

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large that the Public Hearing is to be conducted by the Commission on January 21, 2020 from 10 AM onwards at Hotel Yatri Nivas in Silvassa.

Table 8: Details of Public Notices published by the Commission

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

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

1.11. Public Hearing

The Public Hearing was held on January 21, 2020 from 10 AM onwards at Hotel Yatri Nivas, Silvassa to enable the stakeholders to raise issues, if any 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.** The names of stakeholders who attended the Public Hearing are provided as Annexure I.

2. Chapter 2: True-up for FY 2018-19

2.1. Background

The Commission had issued the Order on determination of transmission tariff for FY 2018-19 on January 30, 2018 (hereinafter referred to as the "ARR Order" for the purpose of true- Up of FY 2018-19). Further, the Order on true-up of FY 2017-18, Annual Performance Review of FY 2018-19 and Approval of Aggregate Revenue Requirement (ARR) for 2nd MYT control Period (FY 2019-20 to FY 2021-22) and determination of tariff for FY 2019-20 for Electricity Department, Dadra and Nagar Haveli (Transmission Division) was issued by the Commission on May 20, 2019 (hereinafter referred to as the "APR Order" for the purpose of true-up of FY 2018-19).

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 2018-19 as per JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

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

The Petitioner has submitted the audited accounts for FY 2018-19, audited by statutory auditor M/s P. Ghorela & Co. The Commission in this Chapter now carries out the true-up of FY 2018-19 in accordance with the principles laid down in the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

2.3. Gross Fixed Assets and Capitalization

Petitioner's Submission

The Petitioner has submitted the following details with regard to the capitalisation for FY 2018-19:

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	229.72	229.72	229.72
2	Addition during the year	23.85	0.00	0.08
3	Closing GFA	253.57	229.72	229.80

Commission's Analysis

The opening gross fixed assets for FY 2018-19 has been considered same as the closing gross fixed assets as per the true-up of FY 2017-18. The same has been verified from the annual accounts for FY 2018-19. The asset addition in the year was also verified from the audited annual accounts for FY 2018-19 submitted by the Petitioner. The asset addition carried out during FY 2018-19 is under 'Furniture and Fixture' head and the same is allowed. The Commission accordingly approves the additional capitalization and gross fixed assets for FY 2018-19 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	Trued-up by Commission
1	Opening GFA	229.72	229.72
2	Addition during the year	0.08	0.08
3	**Closing GFA**	**229.80**	**229.80**

The Commission approves INR 0.08 Cr capitalization in the true-up of FY 2018-19.

2.4. 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	229.72	229.72	229.72
2	Addition during the year	23.85	0.00	0.08
3	Closing GFA	253.57	229.72	229.80
4	Average GFA	241.65	229.72	229.76
5	**Depreciation**	**12.44**	**11.81**	**11.82**

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 and applied the depreciation rates as specified in the CERC (Terms and Conditions of Tariff) Regulations, 2014 that are applicable for FY 2018-19. 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	0.08	0.00	0.16	0.12	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**	**0.08**	**0.00**	**229.80**	**229.76**	**11.81**

The Commission approves depreciation of INR 11.81 Cr in the true-up of FY 2018-19.

2.5. Interest on Loan

Petitioner's submission

The Petitioner has considered the opening loan balance for FY 2018-19 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 capitalization for FY 2018-19. The repayment of loans has been considered equal to the depreciation during FY 2018-19.

Further, the Petitioner has considered the rate of interest of 13.45% as the State Bank of India Prime Lending Rate (SBI PLR) as on 01.04.2018. 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	36.04	36.04	36.04
2	Loan for additional Capitalization	16.70	0.00	0.05
3	Loan Repayment	12.44	11.81	11.82
4	Closing Loan	40.30	24.23	24.27
5	**Interest Cost on Avg. Loans**	**5.11**	**4.05**	**4.06**

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 capitalization for FY 2018-19, which works out to be INR 0.05 Cr. The repayment of loans has been considered equal to the depreciation approved for FY 2018-19.

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 01, 2018.

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	36.04	36.04	36.04
2	Add: Normative Loan During the year	-	0.05	0.05
3	Less: Normative Repayment equivalent to Depreciation	11.81	11.82	11.81
4	Closing Normative Loan	24.23	24.27	24.28

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
5	Average Normative Loan	30.14	30.16	30.16
6	Rate of Interest (%)	13.45%	13.45%	13.45%
7	**Interest on Loan**	**4.05**	**4.06**	**4.06**

The Commission approves the Interest of Loan of INR 4.06 Cr in the true-up of FY 2018-19.

2.6. 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 2018-19 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	33.02	33.02	33.02
2	Addition in Equity on account of new capitalization	7.16	0.00	0.02
3	Closing Equity	40.18	33.02	33.04
4	Average Equity	36.60	33.02	33.03
5	**Return on Equity**	**5.67**	**5.12**	**5.12**

<u>Commission's analysis</u>

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 in true-up of FY 2017-18. The normative equity addition in FY 2018-19 has been computed as 30% of the capitalization for FY 2018-19, which works out to be INR 0.02 Cr. 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	-	0.02	0.02
3	Closing Equity	33.02	33.04	33.04
4	Average Equity	33.02	33.03	33.03
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 2018-19.

2.7. 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 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."

Therefore, 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 has considered the Regulation 27 (3) (b) of the JERC Tariff Regulations 2009, while determining O&M norms for FY 2018-19:

"(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.

2.7.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual Employee expenses of INR 4.53 Cr against approved expenses of INR 2.50 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 2.50 Cr in the APR Order, which included an allowance of 0.27 Cr for the impact of Seventh Pay Commission. The actual employee expenses for FY 2018-19 as per audited accounts is INR 4.53 Cr.

The Commission to determine the Employee expenses for FY 2018-19 in the ARR Order, escalated actual expenses for FY 2016-17 by annual change in Wholesale price index. The Commission in the APR order approved the same expenses as approved in the ARR order. However, the actual expenses have increased by 111% over FY 2016-17. The Commission sought the reason from the petitioner for the same through a deficiency note.

The Petitioner submitted that the actual employee expenses incurred during the FY 2018-19 were INR 4.53 Cr as against employee expenses of INR 4.90 Cr incurred during FY 2017-18 and hence, there is a reduction in the actual employee expenses incurred during the FY 2018-19. The Petitioner further submitted that the increase in the employee expenses as against the amount approved by the Commission is due to the expense incurred by the Department on GPF contribution and retirement benefits.

The Commission in its Order dated May 20, 2019 while carrying out the truing up for FY 2017-18 approved the actual employee expenses considering that the increase in Terminal Benefit expenses are uncontrollable in nature. In line with similar approach, 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	2.23	4.53	4.53
2	Impact of 7th Pay Commission	0.27		
3	**Total Employee Expenses**	**2.50**	**4.53**	**4.53**

The Commission approves Employee Expenses of INR 4.53 Cr in the True-up of FY 2018-19.

2.7.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 1.79 Cr as against the approved expenses of INR 0.52 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.

The Commission through a deficiency note asked the Petitioner to submit the detailed break up of A&G expenses and justification for increase in A&G expenses with respect to approved A&G expenses. The Petitioner submitted that the increase in A&G expenses is due to the expenses incurred by the Department on the AMC of SLDC and SLDC charges. The AMC of SLDC was Rs. 0.63 Crore and SLDC charges were Rs. 0.59 Crore. The SLDC charges are being levied by the PGCIL against the cost incurred by it on establishment of the SLDC.

The Commission observed that the petitioner has included AMC expenses of SLDC in the A&G expenses. The Commission in APR order included the AMC expenses of SLDC in R&M expenses. Hence, the Commission has allowed AMC expense of SLDC as a part of R&M expenses instead of A&G expenses. Accordingly, these expenses have not been disallowed. For rest of A&G expenses, the Commission approves the A&G expenses as per the audited accounts of FY 2018-19 that is similar to the methodology followed for approving the Employee expenses.

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)**	**0.52**	**1.79**	**1.16**

The Commission approves the Administrative & General (A&G) expenses of INR 1.16 Cr in the True-up of FY 2018-19.

2.7.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted the actual R&M expenses of INR 1.79 Cr as against the approved expenses of INR 2.53 Cr in the APR Order.

Commission's Analysis

The expenses of SLDC AMC are allowed to form part of R&M expenses by the Commission instead of A&G expenses. Similar to the methodology followed for approving the Employee Expenses and the A&G Expenses, the Commission approves the R&M expenses as per the audited accounts of FY 2018-19.
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)	1.98	1.79	1.79
2	AMC of SLDC	0.55	-	0.63
3	**Total Repair & Maintenance Expenses (R&M)**	**2.53**	**1.79**	**2.42**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.42 Cr in the true-up of FY 2018-19.

2.7.4. 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	2.50	4.53	4.53
2	Administrative & General Expenses (A&G)	0.52	1.79	1.16
3	Repair & Maintenance Expenses	2.53	1.79	2.42
4	**Total Operation & Maintenance Expenses**	**5.55**	**8.11**	**8.11**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 8.11 Cr in the true-up of FY 2018-19.

2.8. 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	4.79	4.54	5.01
2	Maintenance spares @15% of operation and maintenance expenses	0.71	0.83	1.22
3	Operation and maintenance expenses for one month	0.40	0.46	0.68
4	Total Working Capital requirement	5.90	5.83	6.90
5	**Interest on Working Capital**	**0.79**	**0.79**	**0.96**

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 that are applicable for FY 2018-19 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 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 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	4.54	5.01	4.99
2	Maintenance spares @15% of operation and maintenance expenses	0.83	1.22	1.22
3	Operation and maintenance expenses for one month	0.46	0.68	0.68
4	Total Working Capital requirement	5.84	6.90	6.88
5	Rate of Interest (%)	13.45%	13.85%	13.45%
6	**Interest on Working Capital**	**0.79**	**0.96**	**0.93**

The Commission approves the Interest on Working Capital as INR 0.93 Cr in the true-up of FY 2018-19.

2.9. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the Non-Tariff Income of INR 0.03 Cr for FY 2018-19.

Commission's Analysis

Regulation 33 of the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009, provides as follows:

"33. Non-Tariff Income
Following components of income shall be treated as non-tariff income for the generating company or the licensee as applicable:
(1) Meter/metering equipment/service line rentals
(2) Service charges
(3) Customer charges
(4) Revenue from late payment surcharge
(5) Recovery for theft and pilferage of energy
(6) Incentives from Central Generating Stations (CGS's)
(7) Interest on staff loans and advances
(8) Interest on advances to suppliers
(9) Income from trading
(10) Income from staff welfare activities
(11) Interest on investments, fixed and call deposits and bank
(12) Net recovery from penalty on coal liaison agents, if any
(13) Prior period income
(14) Miscellaneous receipts/income."

The Commission has observed that as per the Annual Accounts for FY 2018-19, STOA income was INR 7,50,000. Subsequently, it was clarified by the Petitioner that this income has been received from Scheduling Charges as against STOA charges shown in the accounts. Hence complete amount is considered by the Commission as Non-Tariff Income as these types of income are in the nature of 'Service charges'.

Further, the Commission has considered the actual revenue earned by the licensee from O&M works for 220 KV bays of PGCIL and Tender fees as Non-Tariff Income for FY 2018-19 as these types of income are in the nature of 'Service charges'/ 'Miscellaneous receipts/income'. The total Non-Tariff Income approved by the Commission is INR 0.10 Cr (0.07 + 0.03).

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**	**0.06**	**0.03**	**0.10**

The Commission approves Non-Tariff Income of INR 0.10 Cr in the True-up of FY 2018-19.

2.10. 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 30.04 Cr for approval in the True-up of FY 2018-19.

Commission's Analysis

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

Table 24: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (INR Crore)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Depreciation	11.81	11.82	11.81
2	Interest on Long-term Loans	4.05	4.06	4.06
3	Return on Equity	5.12	5.12	5.12
4	O&M Expense	5.55	8.11	8.11
5	Interest on Working Capital	0.79	0.96	0.93
6	**Total Revenue Requirement**	27.32	30.06	30.03
7	Less: Non-Tariff Income	0.06	0.03	0.10
8	**Net Revenue Requirement (Annual Fixed Cost)**	**27.27**	**30.04**	**29.92**

The Commission approves net Aggregate Revenue Requirement of INR 29.92 Cr in the true-up of FY 2018-19.

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

Petitioner's submission

The Petitioner has considered revenue from approved tariff for FY 2018-19 as INR 42.97 Crore. Accordingly, the standalone gap/surplus for FY 2018-19 as submitted by the Petitioner is as below:

Table 25: Revenue Gap/(Surplus) for FY 2018-19 as submitted by Petitioner (INR Crore)

S. No	Particulars	Amount
1	Annual Revenue Requirement	30.04
2	Total Revenue	42.97
3	Revenue Gap/(Surplus)	(12.93)

Commission's Analysis

The total amount of revenue recovered by the Petitioner in FY 2018-19 as per the annual accounts was INR 42.97 Cr. However, the total amount of transmission bills raised by the Petitioner for FY 2018-19 (April 2018 to March 2019) is INR 42.85 Cr. The Commission enquired about this discrepancy. The Petitioner submitted that due to an inadvertent error, the bill for June 2018 was taken in the accounts as INR 3,63,93,113 instead of INR 3,52,19,142 and requested the Commission to consider the revenue for FY 2018-19 as INR 42.85 Crore. Therefore, the Commission has considered revenue from approved tariff for FY 2018-19 as INR 42.85 Cr. Accordingly, standalone gap/surplus for FY 2018-19 is shown in the following table:

Table 26: Approved Standalone Revenue Gap/(Surplus) for FY 2018-19 (INR Crore)

S. No	Particulars	Amount
1	Annual Revenue Requirement	29.92
2	Total Revenue	42.85
3	**Revenue Gap/(Surplus)**	**(12.93)**

The Commission, in the true-up of FY 2018-19 approves a standalone surplus of INR 12.93 Cr.

3. Chapter 3: Annual Performance Review for FY 2019-20

3.1. Background

The Tariff Order for FY 2019-20 was issued by the Commission on May 20, 2019 approving the Aggregate Revenue Requirement (ARR) and transmission tariff for FY 2019-20 (hereinafter referred to as 'ARR Order' for the purpose of APR of FY 2019-20). This Chapter covers the Annual Performance Review (APR) for FY 2019-20 vis-à-vis the cost parameters approved by the Commission in the ARR Order for FY 2019-20. The Annual Performance Review for FY 2019-20 is to be carried out as per the provisions of the JERC (Generation, Transmission & Distribution Multi Year Tariff), Regulations, 2018:

Regulation 11.1 of the JERC MYT Tariff Regulations, 2018 states as follows:

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

Further Regulation 40.2 of the JERC (MYT Tariff Regulations, 2018) states as follows:

*"*The annual Transmission Charges of the Transmission licensee shall be determined by the Commission on the basis of application for determination of Aggregate Revenue Requirement made by Transmission licensee…"

As per Regulation 40.3 of the JERC (MYT Tariff Regulations, 2018)

"The Aggregate Revenue Requirement for a Transmission Licensee shall comprise of the following components:
g) Return on Equity;
h) Depreciation;
i) Interest and Finance Charges on Loan Capital;
j) Interest on Working Capital and deposits from Transmission System Users;
k) Operation and maintenance expenses;
l) Income Tax
Less:
m) Income from Open Access Charges, 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;
n) Non-Tariff Income;
o) Income from Other Business…"

The Commission has accordingly carried out the Annual Performance Review for FY 2019-20 as per the provisions of JERC MYT Regulations and has determined the ARR for FY 2019-20.

3.2. Approach for the Review of FY 2019-20

The review of the Aggregate Revenue Requirement requires assessment of the various cost elements like capital expenditure, O&M expenses, interest on long term loans, interest on working capital loans, depreciation, etc. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the prudence check of actual information submitted by the Petitioner, the MYT Regulations, 2018 and on the basis of the norms approved in the ARR Order dated May 20, 2019.

3.3. Gross Fixed Assets (GFA) and Capitalisation

Petitioner's submission

The Petitioner has proposed INR 0.30 Cr capitalization during FY 2019-20 against approved capitalization of INR 66.88 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)	Petitioner's Submission
1	Opening GFA	229.72	229.80
2	Addition during the year	66.88	0.30
3	Closing GFA	296.60	230.10

Commission's Analysis

The Commission in the ARR Order had approved a capitalization of INR 66.88 Cr which included - Establishment of 220/66 KV, 2x160 MVA Sub-Station at Vaghchhipa with associated transmission line' during FY 2019-20. However, the Petitioner has now submitted nil capitalization during the year for the said project. A query regarding the same was raised to the Petitioner through a deficiency note. The Petitioner responded that the project is likely to be commissioned in FY 2020-21 and the revised estimated cost of the project is INR 74.03 Cr.

The Petitioner claimed INR 0.30 Cr capitalization for FY 2019-20. The Commission sought the details of assets capitalized through a deficiency note. The Petitioner responded that the asset addition of INR 0.30 Cr includes miscellaneous R&M works at 220 kV substations.

As per Regulation 24.3 of the JERC (MYT Regulations, 2018)

> *"The capital expenditure, in respect of Existing Project, incurred or projected to be incurred on the following counts after the Cut-off Date, may be admitted by the Commission, subject to prudence check:*
>
> *(i) Liabilities to meet award of arbitration or for compliance with the order or decree of a court of law;*
>
> *(ii) Change in law or compliance of any existing law;*
>
> *(iii) Any expenses to be incurred on account of need for higher security and safety of the capital asset as advised or directed by appropriate Government agencies or statutory authorities responsible for national security/internal security;*
>
> *(iv) Any liability for works executed prior to the Cut-off Date, after prudence check of the details of such undischarged liability, total estimated cost of package, reasons for such withholding of payment and release of such payments etc.;*
>
> *(v) Any liability for works admitted by the Commission after the Cut-off Date to the extent of discharge of such liabilities by actual payments;*
>
> *(vi) Any additional capital expenditure, which has become necessary for efficient operation of the transmission system. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level; and*
>
> *(vii) In case of transmission system, any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement due to obsolesce of technology, replacement of switchyard equipment due to increase of fault level, tower strengthening, communication equipment, emergency restoration system, insulators cleaning infrastructure, replacement of porcelain insulator with polymer insulators, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission system:*

Provided that any expenditure on acquiring the minor items or the assets including tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, computers, fans, washing machines, heat convectors, mattresses, carpets, etc., bought after the Cut-off Date shall not be considered for additional capitalization for determination of tariff:

Provided further that if any expenditure has been claimed under Renovation and Modernisation (R&M) or repairs and maintenance under O&M Expenses, the same expenditure cannot be claimed under this Regulation."

JERC MYT Regulations, 2018 clearly provides that any expenditure towards acquiring the minor assets or any expenditure towards repairs and maintenance cannot be capitalised. As the asset addition proposed by the Petitioner during FY 2019-20 is towards miscellaneous R&M works, the Commission has not allowed the capitalization of same during FY 2019-20. The Petitioner may claim these miscellaneous R&M expenses as part of O&M expenses at the time of truing up for FY 2019-20. Accordingly, the Commission approves nil capitalization for FY 2019-20. The opening GFA for FY 2019-20 has been considered same as the closing GFA approved in true-up of FY 2018-19. 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 Capitalization approved by the Commission (INR Crore)

S. No.	Particulars	Approved (ARR Order)	Petitioner's Submission	Now Approved by Commission
1	Opening GFA	229.72	229.80	229.80
2	Addition during the year	66.88	0.30	-
3	**Closing GFA**	**296.60**	**230.10**	**229.80**

The Commission approves nil capitalization in the APR for FY 2019-20.

3.4. Depreciation

Petitioner's submission

The Petitioner has submitted that the depreciation has been worked out after applying the depreciation rates as per the CERC (Terms and Conditions for determination of Tariff), Regulations, 2014. 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)	Petitioner's Submission
1	Opening GFA	229.72	229.80
2	Addition during the year	66.88	0.30
3	Closing GFA	296.60	230.10
4	Average GFA	263.16	229.95
5	Depreciation	13.53	11.82

Commission's Analysis

As per Regulation 30 of the JERC (MYT Regulations), 2018:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

As per Regulation 30.6 of the JERC (MYT Regulations), 2018:

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

Accordingly, the Commission has considered the depreciation rates as specified in the CERC (Terms and Conditions of Tariff) Regulations, 2019. The asset class wise fixed assets have been considered to be same as approved in true-up of FY 2018-19. 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%	0.16	0.00	0.00	0.16	0.16	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%**	**229.80**	**0.00**	**0.00**	**229.80**	**229.80**	**11.81**

The Commission now approves depreciation of INR 11.81 Cr in the APR for FY 2019-20.

3.5. Interest on Loan

Petitioner's submission

The Petitioner has considered the opening loan balance for FY 19-20 equal to the closing balance of loan for the 2018-19. The normative loan addition in FY 2019-20 has been computed as 70% of the capitalization for FY 2019-20. The repayment of loans has been considered equal to the depreciation during FY 2019-20.

Further, the Petitioner has considered the rate of interest as the State Bank of India Prime Lending Rate (SBI PLR) of 9.55%. 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 (ARR Order)	Petitioner's Submission
1	Opening Loan	24.23	24.28
2	Loan for additional Capitalization	46.82	0.21
3	Loan Repayment	13.53	11.82
4	Closing Loan	57.52	12.67
5	**Interest Cost on Avg. Loans**	**3.90**	**1.76**

Commission's Analysis

The opening loan balance for FY 2019-20 has been considered equal to the closing balance of loan approved in true-up of FY 2018-19. The normative loan addition in FY 2019-20 has been computed as 70% of the capitalization for FY 2019-20, which works out to be nil as no capitalisation has been allowed for FY 2019-20. The repayment of loans has been considered equal to the depreciation during FY 2019-20.

The Commission for FY 2019-20 has considered the rate of interest as SBI MCLR plus 100 basis points as on April 1, 2019 i.e., 9.55% (8.55% plus 1.00%) as per the provisions of JERC MYT Regulations, 2018.

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	24.23	24.27	24.28
2	Add: Normative Loan During the year	46.82	0.21	-
3	Less: Normative Repayment equivalent to Depreciation	13.53	11.82	11.81
4	Closing Normative Loan	57.52	12.66	12.47
5	**Average Normative Loan**	**40.87**	**18.47**	**18.38**
6	Rate of Interest (%)	9.55%	9.55%	9.55%
7	**Interest on Loan**	**3.90**	**1.76**	**1.76**

The Commission approves Interest on Loan of INR 1.76 Cr in the APR of FY 2019-20.

3.6. 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 2019-20 as shown in the table below:

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

S. No.	Particulars	Approved (ARR Order)	Petitioner's Submission
1	Opening Equity	33.02	33.04
2	Addition in Equity on account of new capitalization	20.06	0.09
3	Closing Equity	53.08	33.13
4	Average Equity	43.05	33.09
5	**Return on Equity**	**6.67**	**5.13**

Commission's Analysis

Regulation 27.1 of the JERC (MYT Regulations), 2018 states the following:

"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."

Further, the Regulation 30 (2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019, states that:

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;..."

Accordingly, the rate of return on equity for transmission business has been considered as 15.50%. The opening equity for FY 2019-20 has been considered same as the closing equity approved in true-up of FY 2018-19. The normative equity addition in FY 2019-20 has been computed as 30% of the capitalization for FY 2019-20, 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	33.04	33.04
2	Equity Addition	20.06	0.09	-
3	Closing Equity	53.08	33.13	33.04
4	Average Equity	43.05	33.09	33.04
5	Rate of RoE	15.50%	15.50%	15.50%
6	**Return on Equity**	**6.67**	**5.13**	**5.12**

The Commission approves the Return on Equity of INR 5.12 Cr in the APR of FY 2019-20.

3.7. Operation & Maintenance Expenses

As per Regulation 41.1 of the JERC (MYT Regulations), 2018:

"41.1 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."*

As per Regulation 41.2 of the JERC (MYT Regulations), 2018:

"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."

As per Regulation 41.3 of the JERC (MYT Regulations), 2018:

"41.3 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 Licensee for 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.

41.4 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.

41.5 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."

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

3.7.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted revised estimates for employee expenses at INR 4.72 Cr against INR 3.62 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 3.62 Cr in the ARR Order. The Petitioner has submitted revised estimates for FY 2019-20 as INR 4.72 Cr.

The Commission while determining the O&M expenses for FY 2019-20 in the MYT Order had relied on actual expenses for FY 2015-16 to FY 2017-18 in accordance with Regulation 6 of the JERC (MYT Regulations), 2018 for arriving at the employee expenses of base year, FY 2018-19. The expenses of base year FY 2018-19 were escalated by average CPI inflation & factor Gn which is nil, to determine the expenses for FY 2019-20.

Regulation 6 of the MYT Regulations, 2018 stipulates the following:

"6. Values for Base Year

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

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

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

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

The CPI Inflation has been computed as follows:

Table 35: Computation of CPI Inflation (%)

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

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 36: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses for the previous year (EMPn-1)	-	4.53	4.53
2	Growth in number of employees (Gn)	-	0	0
3	CPI Inflation	-	4.22%	4.22%
4	Employee Expenses (EMPn)= (EMPn-1) x (1+Gn) x (1+CPI inflation)	3.62	4.72	4.72
5	**Total Employee Expenses**	**3.62**	**4.72**	**4.72**

The Commission approves employee expenses of INR 4.72 Cr in the APR of FY 2019-20.

3.7.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted revised estimates for A&G expenses at INR 1.86 Cr against INR 0.45 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 has determined A&G expenses for FY 2019-20 by escalating actual A&G expenses for FY 2018-19 by average CPI Inflation (For FY 2016-17 to FY 2018-19). As there is no claim for provision by the Petitioner, the Commission is allowing Nil provision.

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

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 37: 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 for the previous year (A&Gn-1)	-	1.79	1.16
2	CPI Inflation	-	4.22%	4.22%
3	**Administration & General Expenses (A&Gn)**	**0.45**	**1.86**	**1.21**

The Commission now approves the Administrative & General (A&G) expenses of INR 1.21 Cr in the APR for FY 2019-20.

3.7.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted revised estimates for R&M expenses at INR 2.05 Cr against INR 2.50 Cr approved in the ARR Order.

Commission's Analysis

The Commission while determining the "K" factor in the MYT Order had relied on actual R&M expenses for FY 2015-16 to FY 2017-18. As the R&M expenses for FY 2018-19 have been trued up in this Order, the Commission has re-determined the k factor based on trued-up R&M expenses from FY 2016-17 to FY 2018-19. The "K" factor has been computed as follows:

Table 38 : Computation of 'K' factor

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses (Rs Crore)	1.91	2.12	2.42
2	Opening GFA (Rs Crore)	214.52	229.72	229.72
3	K Factor	0.89%	0.92%	1.05%
4	**K Factor Approved by the Commission (Average of 3 years)**	**0.96%**		

The 'K' factor 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 FY 2019-20.

The WPI Inflation has been computed as follows:

Table 39: Computation of WPI Inflation (%)

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

The 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 40: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	K factor	-	0.87%	0.96%
2	GFAn-1 (opening GFA)	-	229.80	229.80
3	WPI Inflation (%)	-	2.97%	2.99%
4	**Repair & Maintenance Expenses**	**2.50**	**2.05**	**2.26**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.26 Cr in the APR of FY 2019-20.

3.7.4. 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 41: 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	3.62	4.72	4.72
2	Administrative & General Expenses (A&G)	0.45	1.86	1.21
3	Repair & Maintenance Expenses	2.50	2.05	2.26
4	**Total Operation & Maintenance Expenses**	**6.57**	**8.63**	**8.19**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 8.19 Cr in the APR of FY 2019-20.

3.8. Interest on Working Capital

Petitioner's submission

The Petitioner has calculated interest on working capital based on the principles outlined in the CERC (Terms and Conditions for determination of Tariff), Regulations, 2014, 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 10.55%.

Table 42: Interest on Working Capital submitted by Petitioner (INR Crore)

S. No.	Particulars	Approved (ARR Order)	Petitioner's Submission
1	Receivables equivalent to two months of fixed cost	5.22	4.67
2	Maintenance spares @15% of operation and maintenance expenses	0.99	1.29
3	Operation and maintenance expenses for one month	0.55	0.72
4	Total Working Capital requirement	6.76	6.69
5	**Interest on Working Capital**	**0.69**	**0.71**

Commission's Analysis

Regulation 42.1 of the JERC MYT Regulations, 2018 states the following with regard to Interest on Working Capital:

"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 34 (C) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 specifies:

"*(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:*

(i) Receivables equivalent to 45 days of annual fixed cost;

(ii) Maintenance spares @ 15% of operation and maintenance expenses including security expenses; and

(iii) Operation and maintenance expenses, including security expenses for one month."

Accordingly, the Commission has computed the revised estimates of working capital requirement for the Petitioner for FY 2019-20. The interest on working capital has been computed considering the interest rate as one year SBI MCLR as on April 1, 2019 – 8.55% plus 200 basis points.

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 43: 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 45 days of net Annual Fixed Cost	5.22	4.67	3.36
2	Maintenance spares @15% of operation and maintenance expenses	0.99	1.29	1.23
3	Operation and maintenance expenses for one month	0.55	0.72	0.68
4	Total Working Capital requirement	6.75	6.68	5.27
5	Rate of Interest (%)	10.15%	10.55%	10.55%
6	**Interest on Working Capital**	**0.69**	**0.71**	**0.56**

The Commission approves the Interest on Working Capital as INR 0.56 Cr in the APR of FY 2019-20.

3.9. Non-Tariff Income

Petitioner's submission

The Petitioner has submitted the revised estimate of non-tariff income for FY 2019-20 as INR 0.03 Cr against non-tariff income of INR 0.06 Cr approved in the ARR Order.

Commission's analysis

The Commission has approved the amount equal to Trued up Non-Tariff Income for FY 2018-19. 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 44: 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**	**0.06**	**0.03**	**0.10**

The Commission now approves Non-Tariff Income of INR 0.10 Cr in the APR for FY 2019-20.

3.10. Aggregate Revenue Requirement (ARR) for FY 2019-20

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of INR 28.02 Cr is submitted after adjusting the Non -Tariff Income for FY 2019-20 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 2019-20 are approved as follows:

Table 45: Aggregate Revenue Requirement approved by the Commission for FY 2019-20 (INR Crore)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Depreciation	13.53	11.82	11.81
2	Interest on Long-term Loans	3.90	1.76	1.76
3	Return on Equity	6.67	5.13	5.12
4	O&M Expense	6.57	8.63	8.19
5	Interest on Working Capital	0.69	0.71	0.56
6	**Total Revenue Requirement**	**31.36**	**28.05**	**27.44**
7	Less: Non-Tariff Income	0.06	0.03	0.10
8	**Net Revenue Requirement (Annual Fixed Cost)**	**31.30**	**28.02**	**27.34**

The Commission approves the net ARR of INR 27.34 Cr in the APR of FY 2019-20.

3.11. Standalone Gap/(Surplus) for FY 2019-20

The Commission had approved the net revenue requirement of INR 42.52 Cr in the ARR order of FY 2019-20 including impact of previous years Gap/(Surplus). The Commission has now approved the net revenue requirement of INR 27.34 Cr on standalone basis. Thus, the standalone revenue gap/(surplus) as approved by the Commission is shown in the following table:

Table 46: Standalone revenue gap/(surplus) for FY 2019-20 (INR Crore)

S. No	Particular	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	42.52	28.02	27.34
2	Revenue at existing Tariff	42.52	42.52	42.52
3	**Standalone Gap/(Surplus)**	**-**	**(14.50)**	**(15.18)**

3.12. Gap/Surplus to be carried forward to FY 20-21 & FY 21-22

The Commission while truing up of FY 2017-18 in Tariff Order dated 20th May 2019 had determined a standalone revenue gap of INR 2.53 Crores. In the said Order, the Commission in APR of FY 2018-19 had approved revised standalone surplus of INR 15.58 Cr. In order to avoid a Tariff shock, the Commission had allowed the recovery of cumulative revenue gap of INR 27.17 Cr at the end of FY 2018-19, in a phased manner over a period of three years.

Now, the Commission in this Order has trued up for FY 2018-19 and has approved Annual Revenue Requirement of INR 29.92 Cr vis-à-vis actual revenue of INR 42.85 Cr, resulting in standalone revenue surplus of INR 12.93 Cr for FY 2018-19.

Further, for FY 2019-20, the Commission has approved revised Annual Revenue Requirement of INR 27.34 Cr and projected revenue of INR 42.52 Cr at approved tariff, which resulted in standalone revenue surplus of INR 15.18 Cr. Thus, the cumulative revenue gap at the end of FY 2019-20 is shown in the following table:

Table 47: Cumulative revenue gap/(surplus) at the end FY 2019-20 (INR Crore)

S. No.	Particular	FY 2018-19	FY 2019-20
1	Opening Gap/ (Surplus)	38.60	30.00
2	Addition in Gap / (Surplus)	(12.93)	(15.18)
3	Closing Gap / (Surplus)	25.68	14.82
4	Average Gap / (Surplus)	32.14	22.41
5	Interest rate	13.45%	9.55%
6	Carrying Cost	4.32	2.14
7	**Total Gap / (Surplus) including carrying cost**	**30.00**	**16.96**

In line with the approach followed by the Commission in Order dated 20th May 2019, the cumulative revenue gap of INR 16.96 Cr at the end of FY 2019-20 has been amortised by the Commission in a phased manner over a period of two years (FY 2020-21 & FY 2021-22) and the latest available SBI MCLR (as on 10.02.2020) has been considered for calculating the carrying cost. The previous years' revenue gap to be recovered in the ARR of FY 2020-21 is shown as follows:

Table 48: Revenue gap distribution over two years (INR Crore)

S. No	Particular	FY 2020-21	FY 2021-22
1	Opening gap	16.96	8.48
2	Addition (50% of 16.96 Cr)	(8.48)	(8.48)
3	Closing gap	8.48	-
4	Interest rate	8.85%	8.85%
5	Average gap	12.72	4.24
6	Carrying Cost	1.13	0.38
7	**Total gap including carrying cost to be considered in ARR**	**9.60**	**0.38**

4. Chapter 4: Determination of Aggregate Revenue Requirement for FY 2020-21

4.1. Background

In this Chapter, the Commission has determined the Aggregate Revenue Requirement (ARR) for FY 2020-21. 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 FY 2020-21

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2020-21 based on figures approved in the Business Plan Order dated November 16, 2018, the MYT order for FY 2020-21, as per the audited accounts for FY 2018-19 and the provisional information available for FY 2019-20. The ARR has been determined for FY 2020-21 and for the same year revenue is determined at existing tariff to arrive at the revenue gap/surplus for FY 2021-21.

4.3. Gross Fixed Assets (GFA) and Capitalization

Petitioner's submission

The Petitioner has submitted the capital expenditure of INR 25.41 Cr and capitalization of INR 76.28 Cr towards Laying of new Transmission Lines and Strengthening of existing transmission network to cope up with the growing demand and connectivity for the new areas under development. The Petitioner has requested the Commission to consider the same.

Commission's Analysis

The Commission through the deficiency note asked the Petitioner to submit the scheme wise details of capitalisation proposed in FY 2020-21 along with progress till date. The Petitioner in reply submitted the scheme-wise details as follows:

Table 49: Scheme wise Details of Capitalisation

S. No.	Name of Scheme	Proposed Capitalization (INR Crore)	Status of Approval	Progress till November 2019 (INR Cr)
1	Establishment of 2x160 MVA, 220/66 kV Vaghchhipa Sub-Station with associated 220 kV Lines	74.03	Revised estimate for Rs. 74.03 Cr. is submitted to CEA for approval	50.87
2	Replacement of existing old 220 kV circuit breaker and providing 110 Volt DC battery set at Kharadpada	0.82	Approved	0.00
3	Upgradation and Modernization of existing 220 kV Switching Sub-Station New Kharadpada by providing SCADA system	1.43	Approved	0.00
	Total	**76.28**		

The Commission further asked the Petitioner to submit the reasons for increase in cost for Establishment of 2x160 MVA, 220/66 kV Vaghchhipa Sub-Station with associated 220 kV Lines and updated status of other 2 schemes.

The Petitioner in its reply submitted that the cost for Establishment of 2x160 MVA, 220/66 kV Vaghchhipa Sub-Station with associated 220 kV Lines has increased due to cost over-run and time over-run mainly on account of Land Acquisition issues. The Petitioner also informed that the revised estimated cost is submitted to CEA for approval and approval of CEA is yet to be received.

In the absence of approval for revised estimated cost for this scheme, the Commission at this stage for this scheme has considered the Capital Cost of Rs 66.88 Crore as approved in the previous Order. The Commission will carry out the prudence check of actual Capital Cost of the scheme after the scheme is completed and put to use and on approval from CEA for revised Capital Cost. As proposed by Petitioner, the Commission has considered the capitalisation of this scheme in FY 2020-21.

The Petitioner submitted that the Work Order for the Scheme "Replacement of existing old 220 kV circuit breaker and providing 110 Volt DC battery set at Kharadpada" has already been issued and the work is likely to be completed in FY 2020-21. The Petitioner also submitted the copy of Work Order. As the Work Order for this scheme has been issued, the Commission has considered the capitalisation of this scheme in FY 2020-21.

As regards the Scheme for Upgradation and Modernization of existing 220 kV Switching Sub-Station New Kharadpada by providing SCADA system, the Work Order is yet to be issued and hence it is unlikely that the Scheme will get capitalised in FY 2020-21. Accordingly, the Commission has not considered the capitalisation of this scheme in FY 2020-21. In case this scheme is capitalised during FY 2020-21, the Commission will consider the impact of same while carrying out the APR and True-up for FY 2020-21.

The following table provides the capitalization and GFA for FY 2020-21:

Table 50: Gross Fixed Assets and Capitalisation approved by the Commission (INR Crore)

S. No.	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Opening GFA	229.72	230.10	229.80
2	Addition during the year	-	76.28	67.70
3	**Closing GFA**	**229.60**	**306.38**	**297.50**

The Commission approves the capitalization 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 FY 2020-21. Accordingly, the depreciation for the year has been submitted as below:

Table 51: Depreciation details submitted by Petitioner (INR Crore)

S. No.	Particulars	Claimed
1	Opening GFA	230.10
2	Addition during the year	76.28
3	Closing GFA	306.38
4	Average GFA	268.24
5	Depreciation	13.84

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) Regulations, 2019. Further, deprecation for FY 2020-21 has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved for year.

The following table provides the calculation of asset wise depreciation for FY 2020-21:

Table 52: Depreciation approved by Commission for FY 2020-21 (INR Crore)

S. No	Particulars	Depreciation Rate	Opening GFA	Addition	Deletion	Closing GFA	Average	Depreciation
1	Plant and Machinery	5.28%	222.02	67.70	0.00	289.72	255.87	13.51
2	Buildings	3.34%	2.42	0.00	0.00	2.42	2.42	0.08
3	Vehicles	9.50%	0.00	0.00	0.00	0.00	0.00	0.00
4	Office Equipment	6.33%	0.16	0.00	0.00	0.16	0.16	0.01
5	Computers and Others	15.00%	0.00	0.00	0.00	0.00	0.00	0.00
6	Land	0.00%	5.21	0.00	0.00	5.21	5.21	0.00
7	**Total**	**5.16%**	**229.80**	**67.70**	**0.00**	**297.50**	**263.65**	**13.60**

The Commission approves a depreciation of INR 13.60 Cr for FY 2020-21.

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 9.55% to compute the interest on long-term loans.

The following table provides the Interest on Loan projected for FY 2020-21:

Table 53: Interest on Loan submitted by the Petitioner (INR Crore)

S. No.	Particular	Claimed
1	Opening Normative Loan	12.67
2	Add: Normative Loan during the year (70% of proposed capitalization)	53.39
3	Less: Normative Repayment	13.84

S. No.	Particular	Claimed
4	Closing Normative Loan	52.22
5	Average Normative Loan	32.44
6	Rate of Interest	9.55%
7	**Interest on Normative Loan**	**3.10**

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 capitalization approved by the Commission for the Year.

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

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

Since, the Petitioner has no actual loans, the rate of interest in accordance with the Regulation 28 of the MYT Regulations, 2018 shall be the 1-year SBI MCLR as on 1st April of the relevant year plus 100 basis points. For projection, the latest available 1-year SBI MCLR as on February 10, 2020 (7.85%) has been considered for FY 2020-21.

The closing loan balance in APR of FY 2019-20 has been considered as the opening loan balance for FY 2020-21. The normative loan addition in FY 2020-21 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 FY 2020-21:

Table 54: Interest on loan approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Opening Normative Loan	57.52	12.67	12.47
2	Add: Normative Loan During the year	-	53.39	47.39
3	Less: Normative Repayment equal to Depreciation	15.25	13.84	13.60
4	Closing Normative Loan	42.27	52.22	46.26
5	Average Normative Loan	49.89	32.44	29.37
6	Rate of Interest (%)	9.55%	9.55%	8.85%
7	**Interest on Loan**	**4.77**	**3.10**	**2.60**

The Commission approves Interest on Loan as INR 2.60 Cr for FY 2020-21.

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 FY 2020-21 is considered equivalent to the closing equity for FY 2019-20. 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.."

Further, the Regulation 30 (2) of the CERC (Terms and Conditions of Tariff) Regulations, 2019, states that:

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

Provided that return on equity in respect of additional capitalization after cut-off date beyond the original scope excluding additional capitalization due to Change in Law, shall be computed at the weighted average rate of interest on actual loan portfolio of the generating station or the transmission system;"

Accordingly, the Commission has considered a rate of return on equity of 15.50%. The opening equity for FY 2020-21 has been considered equal to the closing equity approved in APR of FY 2019-20. 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 FY 2020-21:

Table 55: RoE approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Opening Equity	53.08	33.13	33.04
2	Additions on account of new capitalization	-	22.88	20.31
3	Closing Equity	53.08	56.02	53.35
4	Average Equity	53.08	44.58	43.20
5	Return on Equity (%)	15.50%	15.50%	15.50%
6	**Return on Equity**	**8.23**	**6.91**	**6.70**

The Commission approves Return on Equity of INR 6.70 Cr for FY 2020-21.

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:

41.1 The Operation and Maintenance expenses for the Transmission Licensees shall be computed in accordance with this Regulation.

41.1 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.

41.2 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.

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

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

Where,

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

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

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

WP Iinflation – 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 Licensee for 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.

41.4 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.

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

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

4.7.1. Employee Expenses

Petitioner's submission

The Petitioner has determined the employee expenses for FY 2020-21 based on the norms specified in the MYT Regulations, 2018. The projected employee expenses for FY 2019-20 have 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 FY 2020-21:

Table 56: Employee Expenses submitted by Petitioner (INR Crore)

Particular	Approved in MYT order	Claimed
Employee Cost	3.77	4.92

<u>Commission's Analysis</u>

The Commission has determined the Employee expenses for FY 2020-21 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 FY 2020-21, the approved employee expenses in APR for FY 2019-20 has been escalated by average CPI inflation. The average CPI inflation is average of increase in CPI Index for last three fiscals (For FY 2016-17 to FY 2018-19).

The CPI Inflation has been computed as follows:

Table 57: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2016-17	276	4.12%	
2017-18	285	3.14%	
2018-19	300	5.39%	
		CPI Inflation	**4.22%**

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

Table 58: Employee Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Employee Expenses for the previous year (EMPn-1)	3.47	4.72	4.72
2	Growth in number of employees (Gn)	0.00%	0.00%	0.00%
3	CPI Inflation	4.28%	4.22%	4.22%
4	**Employee Expenses (EMPn)= (EMPn-1) x (1+Gn) x (1+CPI inflation)**	**3.77**	**4.92**	**4.92**

The Commission approves Employee Expenses of INR 4.92 Cr for FY 2020-21.

4.7.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has determined the A&G expenses for FY 2020-21 based on the norms specified in the MYT Regulations, 2018. The A&G expenses for FY 2019-20 have been taken as base. The average increase in Consumer Price Index (CPI) has been considered for preceding three years while projecting the employee expenses. The table below provides the A&G expenses projected for FY 2020-21 along with various parameters considered.

Table 59: A&G submitted by Petitioner (INR Crore)

Particular	Approved in MYT order	Claimed
CPI Inflation	4.28%	4.22%
Projected A&G expenses	**0.47**	**1.94**

Commission's Analysis

Similar to the methodology followed while estimating the employee expenses, the Commission has determined the A&G expenses for FY 2020-21 by escalating approved A&G expenses for FY 2019-20 by average CPI inflation increase for last three fiscals.

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

Table 60: A&G Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	A&G Expenses for the previous year (A&Gn-1)	0.43	1.86	1.21
2	CPI Inflation	4.28%	4.22%	4.22%
3	**A&G Expenses A&Gn = A&Gn-1 x (1+CPIinflation)**	**0.47**	**1.94**	**1.26**

The Commission approves the Administrative & General (A&G) expenses of INR 1.26 Cr for FY 2020-21.

4.7.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses for FY 2020-21 according to MYT Regulations, 2018. The table below provides the R&M expenses proposed for FY 2020-21 along with various parameters considered.

Table 61: R&M expenses submitted by Petitioner (INR Crore)

Particular	Approved in MYT order	Claimed
WPI Inflation	0.33%	2.97%
Projected R&M Expenses	**3.23**	**2.05**

Commission's Analysis

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

Table 62: Computation of 'K' factor for FY 2020-21 (INR Crore)

S. No	Particulars	FY 2016-17	FY 2017-18	FY 2018-19
1	R&M Expenses	1.91	2.12	2.42
2	Opening GFA	214.52	229.72	229.72
3	K Factor	0.89%	0.92%	1.05%
4	**K Factor Approved by the Commission (Average of 3 years)**	**0.96%**		

The 'K' factor is multiplied with the GFA approved for FY 2019-20. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for FY 2020-21.

The WPI Inflation has been computed as follows:

Table 63: Computation of WPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in WPI Index	Average increase in WPI indices over 3 years
2016-17	112	1.73%	
2017-18	115	2.92%	
2018-19	120	4.31%	
		WPI Inflation	**2.99%**

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

Table 64: R&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Opening GFA (GFA_{n-1})	296.60	230.10	229.80
2	K factor approved (K)	1.08%	0.87%	0.96%
3	WPI Inflation	0.33%	2.97%	2.99%
4	**R&M Expenses = K x (GFA_{n-1}) x ($1+WPI_{inflation}$)**	**3.23**	**2.05**	**2.26**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 2.26 Cr for FY 2020-21.

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 FY 2020-21:

Table 65: O&M Expenses approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Employee Expenses	3.77	4.92	4.92
2	Administrative & General Expenses (A&G)	0.47	1.94	1.26
3	Repair & Maintenance Expenses	3.23	2.05	2.26
4	**Total Operation & Maintenance Expenses**	**7.47**	**8.91**	**8.44**

The Commission approves Operation & Maintenance (O&M) expenses of INR 8.44 Cr for FY 2020-21. The main reason for reduction in total O&M expenses is due to reduction in A&G expenses.

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 10.55%.

Table 66: Interest on Working Capital submitted by Petitioner (INR Crore)

S. No.	Particulars	Approved in MYT order	Claimed
1	Receivables equivalent to two months of net Annual Fixed Cost	6.07	5.59
2	Maintenance spares @15% of operation and maintenance expenses	1.12	1.34
3	Operation and maintenance expenses for month	0.62	0.74
4	Total Working Capital requirement	7.81	7.67
5	**Interest on Working Capital**	**0.79**	**0.81**

Commission's Analysis

The Regulation 42 of the MYT Regulations, 2018 stipulates as follows:

"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 34 (C) of the CERC (Terms and Conditions of Tariff) Regulations, 2019 specifies:

(c) For Hydro Generating Station (including Pumped Storage Hydro Generating Station) and Transmission System:

i. Receivables equivalent to 45 days of annual fixed cost;

ii. Maintenance spares @ 15% of operation and maintenance expenses including security expenses *iii. Operation and maintenance expenses, including security 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 FY 2020-21. The interest rate has been considered as 1-year SBI MCLR as on April 1, 2019 (8.55%) plus 200 basis points. The interest on working capital computed for FY 2020-21 is shown in the table as follows:

Table 67: Interest on Working Capital approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Receivables equivalent to 45 days of fixed cost	6.07	5.59	3.93
2	Maintenance spares @15% of operation and maintenance expenses	1.12	1.34	1.27
3	Operation and maintenance expenses for one month	0.62	0.74	0.70
4	Total Working Capital requirement	7.82	7.67	5.90
5	Rate of Interest (%)	10.15%	10.55%	10.55%
6	**Interest on Working Capital**	**0.79**	**0.81**	**0.62**

The Commission approves the Interest on Working Capital of INR 0.62 Cr for FY 2020-21.

4.9. Non-Tariff Income

Petitioner's submission

The Petitioner has estimated the non-tariff income for FY 2020-21 as shown in the following table:

Table 68: Non-Tariff Income submitted by the Petitioner (INR Crore)

Particular	Approved in MYT order	Claimed
Non-Tariff Income	**0.06**	**0.03**

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 True of FY 2018-19 by 5% for FY 2020-21. The same shall be trued-up on actual basis.

The Non-Tariff Income approved for FY 2020-21 has been shown in the following table:

Table 69: Non -tariff Income approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	**Non- Tariff Income**	**0.06**	**0.03**	**0.11**

The Commission approves Non-Tariff Income of INR 0.11 Cr for FY 2020-21.

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 FY 2020-21 as shown in the following table:

Table 70: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (INR Crore)

S. No.	Particular	Approved in MYT order	Claimed
1	Depreciation	15.25	13.84
2	Interest Cost on Long-term Capital Loans	4.77	3.10
3	Return on Equity	8.23	6.91
4	O&M Expense	7.47	8.91
5	Interest on Working Capital Loans	0.79	0.81
6	**Total Revenue Requirement**	36.51	33.57
7	Less: Non-Tariff Income	0.06	0.03
8	**Net Revenue Requirement (Annual Fixed Cost)**	36.45	33.55
9	Add: true-up of previous years including carrying cost	10.35	6.39
10	**Net Revenue Requirement**	**46.80**	**39.93**

Commission's Analysis

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

Table 71: Aggregate Revenue Requirement approved by Commission (INR Crore)

S. No	Particulars	Approved in MYT order	Claimed	Now Approved by Commission
1	Depreciation	15.25	13.84	13.60
2	Interest Cost on Long-term Capital Loans	4.77	3.10	2.60
3	Return on Equity	8.23	6.91	6.70
4	O&M Expense	7.47	8.91	8.44
5	Interest on Working Capital Loans	0.79	0.81	0.62
6	**Total Revenue Requirement**	**36.51**	**33.57**	**31.96**
7	Less: Non-Tariff Income	0.06	0.03	0.11
8	**Net Revenue Requirement (Annual Fixed Cost)**	**36.45**	**33.55**	**31.85**
9	Add: true-up of previous years including carrying cost*	10.35	6.39	9.60
10	**Net Revenue Requirement**	**46.80**	**39.93**	**41.45**
** Refer Table 48 for detailed calculation*				

The Commission approves net ARR of INR 41.45 Cr for FY 2020-21.

5. Chapter 5: Transmission Tariff for FY 2020-21

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 Commission in Tariff Order dated 20th May 2019, had approved Annual Transmission Capacity (ATC) of 1294 MW considering the Petitioner submission that the 220/66 KV Vaghchhipa Substation (2x 160 MVA) is expected to be commissioned during FY 2019-20. However, it is observed that the Petitioner is yet to commission the proposed 220/66 kV Vaghchhipa Sub-Station (2 x 160 MW), which is now proposed to be commissioned in FY 2020-21. Accordingly, the Commission approved Annual Transmission Capacity of 1294 MW (the power factor has been considered as 0.98) for FY 2020-21.

The contracted transmission capacity of the system is as under:

Table 72: Transmission Capacity approved by Commission (MW)

Transmission Capacity (MW)	FY 2019-20	FY 2020-21
Transmission Capacity	980	1294

5.2. Tariff Determination

Based upon the projected capacity of the transmission capacity, the tariff determined by the Petitioner is as follows:

Table 73: Transmission Tariff proposed by Petitioner

Tariff Determination	FY 2020-21
Aggregate Revenue Requirement (INR Crore)	39.93
Transmission Capacity (MW)	1294
Energy Required at periphery	6975.46
Long/Medium Term Transmission charges (INR / MW/ Month)	25724.11
Short Term Open Access Transmission charges (INR /MW/Day)	857.47

Commission's Analysis

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:

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

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"

The Commission in the Tariff Order dated 20th May, 2019, had approved transmission charges for FY 2019-20 considering the Annual Transmission Capacity (ATC) of 1294 MW, as projected by the Petitioner considering the commissioning of 220/66 kV Vaghchhipa Sub-Station in FY 2019-20. However, it is observed that the Petitioner is yet to commission the proposed 220/66 kV Vaghchhipa Sub-Station, which is now proposed to be commissioned in FY 2020-21. Accordingly, the Commission has considered the Average Transmission Capacity of 1137 MW (i.e. 980 + (1294-980)/2) during FY 2020-21 for the approval of transmission charges for FY 2020-21.

Accordingly, the transmission charges proposed by Petitioner and approved by the Commission for long-term and medium-term consumers and short-term open access consumers for FY 2020-21 is as follows:

Table 74: Transmission Tariff for FY 2020-21

S. No	Particular	Petitioner's Proposal	Approved by Commission
1	Aggregate Revenue Requirement (INR Crore)	39.93	41.45
2	Transmission System Capacity (MW)	1,294	1,137
3	Long-term/Medium-term Transmission Charges (INR/MW/month)	25,724	30,383
4	Short-term open access Transmission Charges (INR/MW/Day)	857.47	998.89

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

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, Dadra and Nagar Haveli.

Directive 1: Functioning of SLDC

Originally issued in Tariff Order dated March 30, 2015 and carried forward to the Tariff Order dated May 20, 2019 The Commission in Tariff Order dated May 20, 2019 as regard to this Directive observed as follows: *"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."*
Petitioner's Submission in present Tariff Petition: *The Electricity Department, Transmission Division would like to submit that the functioning of the SLDC has already been transferred to Electricity Department, Transmission Division vide. Order No. DNHPDCL/11/2012/565. dated 05.03.2019.*
Commission's Response: The Commission has noted that Petitioner has transferred functioning of SLDC to Electricity Department, Transmission Division vide order no. DNHPDCL/11/2012/565. dated 05.03.2019. However, the Petitioner has not yet complied to two specific directives which are as follows: • 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. Hence, the Commission reiterates its directions with the following points: • To segregate the accounts of SLDC business and transmission business. • To file separate ARR Petitions for SLDC and transmission business compulsorily from FY 2021-22 onwards.

Directive 2: Intra State Transmission Loss & Transmission Availability

The Petitioner is directed to start calculating the Intra State Transmission Losses and Annual Transmission Availability of its Transmission Network and submit the same along with the ARR and Tariff Petition for FY 2021-22 onwards.

Annexures

Annexure I: List of persons attended Public Hearing

The following is the list of the participants who have attended the Public Hearing on January 21, 2020 in Silvassa.

Table 75: List of participants in Public Hearing

S. No.	Name of Stakeholder
1	Shri Atul R Shah, Federation of Industries Association
2	Shri Mahipal Solanki, APCPI
3	Shri H.B. Pandal, RIL-SMD
4	Shri K. J. Mody, APCPI
5	Shri R.N. Purohit, APCPI
6	Shri Ravi N. Pandey, Federation of Industries Association
7	Shri A.K. Shivhare, Sanathan
8	Shri Chandrakant M Parekh, Federation of Industries Association
9	Shri DSR Raju, Precision Wires Ind. Ltd.
10	Shri DR. Shelka, Federation of Industries Association
11	Shri P. Gajjar, Sterlite
12	Shri Rajesh Gupta
13	Shri Sanjay Gupta
14	Shri Shubham Goyal
15	Shri K.J. Deshi, Apar Industries Limited
16	Shri P.K. Jadia
17	Shri Sumit Jain, Arihant Polysacks
18	Shri Pankaj
19	Shri S.C. Choudhary, Balaji Castings
20	Shri Anshu, Vaishno Castings
21	Shri Vijay G, Sterlite Copper