TARIFF ORDER

True-up of the FY 2017-18, Annual Performance Review of the FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and Determination of retail tariff for the FY 2019-20

Petition No. 267/2018

For

Electricity Wing of Engineering Department, Chandigarh (EWEDC)

20th May 2019

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

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APCPL	Aravali Power Company Pvt Ltd.
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BBMB	Bhakra Beas Management Board
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
DT	Distribution Transformer
EWEDC	Electricity Wing of Engineering Department, Chandigarh
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
INR	Indian Rupee
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter State Transmission System
JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
JKPDD	Power Development Department , Jammu and Kashmir
LC	Letter of Credit
LT	Low Tension

Abbreviation	Full Form
MU	Million Units
MYT	Multi Year Tariff
NAPS	Narora Atomic Power Station
NFA	Net Fixed Assets
NHPC	National Hydroelectric Power Corporation
NPCIL	Nuclear Power Corporation of India Limited
NRS	Non- Residential Supply
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
RAPP	Rajasthan Atomic Power Project
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SJVNL	Satluj Jal Vidyut Nigam Limited
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution Loss
THDC	Tehri Hydro Development Corporation Limited
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Sh. M. K. Goel, Chairperson

Smt. Neerja Mathur, Member

Petition No. 267/2018

In the matter of

Approval for the True-up of the FY 2017-18, Annual Performance Review for the FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and retail tariff for the FY 2019-20.

And in the matter of

Electricity Wing of Engineering Department, Chandigarh (EWEDC)……………………………………………Petitioner

ORDER

Dated: 20th May 2019

1) This Order is passed in respect of a Petition filed by the Electricity Wing of Engineering Department, Chandigarh (EWEDC) for approval of True-up of the FY 2017-18, Annual Performance Review for the FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and retail tariff for the FY 2019-20.

2) On receipt of the Petition, the Commission scrutinised its contents and requisitioned further information/clarifications on the data gaps observed in the Petition to take a prudent view of the Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. Further, suggestions/comments/objections were invited from the public/stakeholders. A Public Hearing was also held and the stakeholders/Public were heard.

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

4) The licensee shall publish the revised Tariff Schedule and the salient features of tariff within one week of receipt of the Order in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply and upload the Tariff Order on its website.

5) The Commission based on the Petitioner's submission, relevant MYT Regulations, facts of the matter and after proper due diligence has approved the True-up of FY 2017-18, APR of FY 2018-19 and ARR for the 2nd MYT Control Period along with the retail tariff for FY 2019-20.

The summary of each year has been provided as follows:

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

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

S. No	Particulars	Petitioner's Submission	Approved by Commission
1	Net Revenue Requirement	770.72	777.30
2	Revenue from sale of power at Existing Tariff	845.33	845.33
3	FPPCA Charges	189.44	189.44
4	Regulatory Surcharge	0.12	0.12
5	**Total Revenue**	**1,034.89**	**1,034.89**
	Net Gap /(Surplus)	**(264.17)**	**(257.59)**

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

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

S. No	Particulars	Petitioners submission	Approved by Commission
1	Annual Revenue Requirement	853.15	827.09
2	Revenue from sale of power at Existing Tariff	850.31	878.50
3	FPPCA	21.80	21.80
4	Regulatory Surcharge	42.52	43.93
	Revenue Gap/(Surplus)	**(61.48)**	**(117.14)**

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

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

S. No	Particulars	Petitioners submission	Approved by Commission
1	Annual Revenue Requirement	958.29	863.02
2	Revenue from sale of power at Approved Tariff	874.89	917.31
3	Regulatory Surcharge	43.74	-
	Revenue Gap/(Surplus)	**39.65**	**(54.29)**

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

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

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Opening Gap /(Surplus) (a)	94.49	(165.84)	(84.44)
Add: Gap/(Surplus) (b)	(257.59)	(117.14)	(54.29)
Cumulative Gap/(Surplus) for the FY 2010-11 to FY 2013-14 (c)	0.00	208.17	0.00
Closing Gap /(Surplus) (d=a+b+c)	(163.10)	(74.81)	(138.72)
Average Gap/ (Surplus) (e=(a+d)/2)	(34.30)	(120.32)	(111.58)
Interest Rate on carrying cost (% ,f)	8.00%	8.00%	9.55%
Carrying Cost (g=e*f)	(2.74)	(9.63)	(10.66)
Final Closing Gap/ (Surplus) (d+g)	**(165.84)**	**(84.44)**	**(149.38)**

6) On account of projected standalone surplus at existing tariff (without surcharge) during 2019-20, no tariff hike has been made in the retail tariff for existing categories . The Commission has also discontinued the Regulatory Surcharge of 5% imposed in the Tariff Order of FY 2018-19 for recovery of past revenue gap as the objective of the same has been achieved and the Petitioner is revenue surplus at the end of FY 2018-19.

7) A new sub-category within the Domestic Supply category namely HT domestic has been created owing to the difference in voltage level. The Domestic Supply (DS) category shall now include two sub-categories viz. LT Domestic and HT Domestic. The HT Domestic category shall include domestic consumers connected to 11 kV and above voltage level.

8) Similar to Domestic, a new sub-category within the Commercial/ Non Residential Supply (NRS) namely HT Commercial has been created on similar lines. The Commercial/ Non Residential Supply (NRS) shall now include two sub-categories viz. LT Commercial and HT Commercial. The HT Commercial category shall include commercial/ non-residential consumers connected to voltage level of 11 kV and above.

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

10) The Petitioner is hereby directed to implement monthly billing for all category of consumers (except Agriculture) with immediate effect in accordance with the Supply Code Regulations, 2018 and submit the quarterly progress of the same to the Commission.

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

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

Place: Gurugram
Date: 20th May 2019

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission for the State of Goa and UT's (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as the "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2nd May 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 30th May 2008.

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

1.2. About Electricity Wing of Engineering Department, Chandigarh (EWEDC)

The Electricity Wing of Engineering Department of UT Administration of Chandigarh, hereinafter referred to as 'EWEDC' or as the 'Petitioner', a deemed licensee under Section 14 of the Electricity Act 2003, is carrying out the business of transmission, distribution and retail supply of electricity in Chandigarh (UT). EWEDC is functioning as an integrated distribution licensee of the Union Territory of Chandigarh. EWEDC procures most of its power through its allocation from Central Generating Stations (CGS) such as NTPC, NHPC, NPCIL BBMB, SJVNL and THDC. The EWEDC also buys short-term power for meeting the demand-supply shortfall during peak hours.

Chandigarh has been divided into various sectors and all the sectors of Chandigarh are electrified and any desiring consumer can avail power supply by submitting a requisition in the prescribed form to the appropriate office of the Department subject to fulfillment of the requisite conditions and payment of charges. The EWEDC is under the control of the Administration of the Union Territory of Chandigarh.

1.3. Multi Year Distribution Tariff Regulations, 2014

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 (hereinafter referred to as 'MYT Regulations, 2014') on 30th June 2014 applicable for a three year Control period starting from FY 2015-16 till FY 2017-18. The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) (First Amendment) Regulations, 2015 on 10th August 2015 shifting the MYT Control Period to FY 2016-17 to FY 2018-19. These Regulations are applicable to all the distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.4. 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 (hereinafter referred to as 'MYT Regulations, 2018')on 10th August 2018. These Regulations are applicable in the 2nd MYT Control Period comprising of three financial years from FY 2019- 20 to FY 2021-22. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Approval of Business Plan for 2nd MYT Control Period

In accordance with the Clause 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 29th August 2018. The Commission issued the Business Plan Order for the MYT Control Period (hereinafter referred to as 'Business Plan Order') on 12th November 2018.

1.6. Filing and Admission of the Present Petition

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

The Petitioner has submitted the current Petition for approval of True-up of the FY 2017-18, Annual Performance Review for the FY 2018-19, Aggregate Revenue Requirements (ARR) for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and retail tariff for the FY 2019-20 vide letter no. SEE/OP/C1-2018/210/2670 dated 30th November 2018.

After initial scrutiny/analysis, the Petition was admitted on 10th December 2018 and was marked as Petition no. 267/2018

1.7. Interaction with the Petitioner

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

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

Table 1: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of First Discrepancy Note	10th December, 2018
2	Public hearing	8th January, 2019
3	Reply received from Petitioner	19th December, 2018
4	Technical Validation Session	2nd January, 2019
5	Issue of 2nd Discrepancy Note	4th January, 2019
6	Reply received from Petitioner	15th January, 2019

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

1.8. Notice for Public Hearing

Public notices were published by the Petitioner for inviting objections/ suggestions from stakeholders on the Tariff Petition with details as shown in the table as follows:

Table 5: Details of Public Notices published by the Petitioner

S.No.	Date	Name of Newspaper	Place of circulation
1	20th December 2018	Ajit	Chandigarh
2	20th December 2018	Dainik Bhaskar	Chandigarh
3	20th December 2018	The Tribune	Chandigarh

The Commission also published Public Notices in the leading newspapers for inviting objections/ suggestions on the tariff petition filed by EWEDC as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing conducted by the Commission on 8th January 2019 from 10 AM onwards at Auditorium Hall, Government Museum and Art Gallery, Chandigarh. These notices and Petition were also uploaded on the Commission's website.

Table 6: Details of Public Notices published by the Commission

S.No.	Date	Name of Newspaper	Place of Circulation
1	14th December 2018	Ajit	Chandigarh
3	14th December 2018	Dainik Jagran	Chandigarh
4	14th December 2018	The Tribune	Chandigarh
5	5th January 2019	Ajit	Chandigarh
6	5th January 2019	Dainik Jagran	Chandigarh
7	5th January 2019	The Tribune	Chandigarh

1.9. *Public Hearing*

The Public Hearing was held on 8th January 2019 at the Auditorium Hall, Government Museum and Art Gallery to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2.

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

2.1. Regulatory Process

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

The Public Hearing was held at Auditorium Hall, Government Museum and Art Gallery, Chandigarh on 8th January 2019 on the Petition for the True-up of the FY 2017-18, APR of the FY 2018-19, ARR's for 2nd MYT Control Period (FY 2019-20 to FY 2021-22) and retail tariff for the FY 2019-20. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written comments/objections earlier, were also given an equal opportunity to present their views/suggestions in respect to the Petition.

The list of the Stakeholders is attached as Annexure 1 to this Order.

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

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

2.2.1. Procedure for Open-Access

Stakeholder's Comment:

In Chandigarh, well defined Open Access Regulations followed by Open Access Charges are in place but till date, the procedure of the same has not been defined by the SLDC. Due to this, the procurement of power through Open Access in Chandigarh is not possible as consumers don't have guidelines/procedures for the same. However in other UTs regulated by the JERC, the said procedures are in place. The EWEDC should also prepare procedure for procurement of Power from Power Exchanges on Day-Ahead basis by Consumers so that they can buy power at competitive rates.

Petitioner's Response:

The Electricity Department Chandigarh is an integrated utility and a deemed distribution licensee as per Electricity Act-2003. As per Section 3.4(a) of Open Access Regulations, the Coordination Committee has been constituted vide CE (UT) Office Order No. 663 Dated 16th Nov 2018. to finalise the detailed procedure of Long term Open Access (LTOA), Medium term Open Access (MTOA) and Short term Open Access (STOA) and to deal with the Open Access Applications accordingly.

The draft Procedure of Long Term Open Access prepared by the Coordination Committee was forwarded to the Commission vide this office Memo No. 1932 Dated 13th Nov 2018. The Commission vide Letter No. 426 Dated 16th Nov 2018 has raised some observations. The Open Access Procedure has been re-submitted to the Commission vide Memo No. 2771 Dated 18th Nov 2018 and is under approval with Commission.

Commission's View:

The Commission has approved the procedure submitted by the Petitioner for roll out of Open Access in the UT of Chandigarh. The Commission directs the stakeholder to visit the office of petitioner for further clarifications and necessary approvals for availing Open Access. The Petitioner is directed to allow open access to the willing consumers on priority basis.

2.2.2. Recovery of Arrears from Defaulters

Stakeholder's Comment:

The EWEDC should recover arrears from defaulters before proposing tariff hikes.

Petitioner's Response:

The EWEDC regularly makes rigorous efforts to recover arrears from the defaulters. However, the data of arrears of defaulters every financial year is a part of the financial statement of Electricity Wing of Engineering Department which gets audited by AG UT and is accordingly submitted to the Commission in the respective years of Tariff Petition.

Commission's View:

The Commission recognises the concerns of the stakeholder and the Commission has accordingly not allowed the provision for bad and doubtful debts to the Petitioner in the True-up of the FY 2017-18 and projections for the FY 2018-19 and the MYT period. Thus, the inefficiency of the Petitioner is not passed on to the consumer tariffs. Further, the Commission observes that the defaulters of arrears are liable to pay late payment surcharge. The Petitioner is directed to take action against the defaulters by disconnecting the supply of defaulting consumers as per Section 56 of the Electricity Act, 2003.

2.2.3. True-Up of the FY 2017-18

Stakeholder's Comment:

It is not known for certain whether audited accounts of FY 2017-18 have been submitted to the Commission after completion of audit from AG/UT Chandigarh. Further, EWEDC has promised to incorporate details of assets prior to 2005 in the True up for the FY 2017-18 however no progress update has been provided on that.

Petitioner's Response:

The Annual Accounts of True Up Year, i.e., FY 2017-18 were forwarded to AG UT on 8th Aug 2018 and the same has been audited by AG UT. The Audit certificate has been forwarded to the Commission vide office Memo No. 2686 dated 3rd Nov 2018. The Petitioner has prepared the Fixed Asset Register (FAR) for FY 2017-18 in which assets prior to 2005 have been recognized.

Commission's View:

The Commission has carried out the True-up of the FY 2017-18 only after receiving the audited accounts of the Petitioner. The Petitioner has submitted the FAR for FY 2017-18 and the value of assets recognized prior to 2005. The recognized assets would have an impact on the calculation of depreciation. The same has been considered after proper prudence check and has been discussed in detail in the Depreciation section of the True-up of FY 2017-18, APR of FY 2018-19 and ARR for the MYT period.

2.2.4. Pre-paid Electric Meters & Smart Meters

Stakeholder's Comment:

Despite the directions given by the JERC, the consumers have still not been provided an option to install the pre-paid meters and to seek refund of their security. Installing Pre-paid Meters will lead to advance payment being received by the Electricity Department and also reduction in the bad debts. The EWEDC can also give advance payment to the suppliers and can get rebate for the same. However, some stakeholders also submitted that since now smart meters are being installed, exercise on installation of pre-paid meters should be halted.

Petitioner's Response:

The pilot work to install 30,000 Smart Meters (which has provision for Prepaid Metering) in Electricity 'OP' Sub Div No. 5, Industrial Area, Chandigarh, has already been allotted to M/s RECPDCL (a Public Sector Undertaking) and they had called the tenders which had to be cancelled in view of a case in Delhi High Court. Fresh tenders have been called and tendering is under process. The work is likely to be completed within 18 months after the award of contract by M/s RECPDCL. Further, DPR for installation of Smart Meters all over Chandigarh for INR. 350 Crore has already been submitted to the Ministry of Power under National Smart Grid Mission (NSGM) of Govt. of India which is under consideration.

Commission's View:

The Petitioner is advised to expedite the process of procurement and installation of smart meters. The Stakeholder in the mean time can avail the option of advance payment rebate notified by the Commission. The Commission directs the Petitioner to strengthen the mechanism of advance payment rebate under intimation to the Commission as per the Tariff Schedule notified by the Commission in this Order.

2.2.5. Manpower Requirement

Stakeholder's Comment:

The Commission had directed the Petitioner to arrange follow up at the level of Secretary (Power) of UT with Govt. of India. Status report was to be given to JERC. The Stakeholder believes that recruitment of LDCs, Lineman and ALMS on outsourcing basis is not sufficient and that the EWEDC must recruit personnel at an Executive level who will be responsible for the delays, if any.

Petitioner's Response:

Ministry of Power vide their letter dated 5th May 2017 has returned the proposal to sanction the Manpower Study as approved by the JERC for attending to the observations of Department of Expenditure, Ministry of Finance. The observations were attended and submitted to CE office vide office Memo no. 1391 dated 31st May 2017. Vide Letter No. 5227 dated 10th July 2018, CE UT has advised to intimate the JERC that matter is under consideration of the competent authority of Chandigarh Administration.

Commission's View:

The Commission notes that the Petitioner has repeatedly failed to comply with the Commission's directive. The Commission advises that the Chief Engineer and the Secretary (Power), Chandigarh to take up the matter at their level to convince the competent authority in this regard in the interest of the consumers.

2.2.6. Completion of capital works

Stakeholder's Comment:

The following is the list of capital works which have not yet been completed despite repeated directions of the Commission

- Works for laying 66 kV underground cable from Sector 32 Grid Sub-station to Sector 34 Grid Sub-station as approved by the JERC in the Business Plan for the FY 2015-16 to FY 2018-19.
- The Transformer and Associated Panels are lying un-utilized for more than about 10 years.
- No probable date of commissioning for construction of 220/66 KV Sub-Station at Hallo Majra by M/s PGCIL has been given. Our experience for the past few years on progress of Existing / New Schemes is that close monitoring is lacking with the result that projects time of completion keeps on shifting year on year. Deficiency of man power at Executive level etc. is a major reason for the delays which needs consideration.

The EWEDC should fix responsibility for the delay in completion of work. Further, the EWEDC should inform target date of commissioning of the said grid works/sub-stations.

Petitioner's Response:

The work of 66KV circuit from Grid Sub-station Sector-32 to Sector-34 was awarded to M/s RECPDCL and the work of laying of 66KV cable has been completed. M/s PGCIL has been requested to Commission the Sub-Station before March 2019.

The 220/66 KV Sub Station at Hallo Majra is under construction by M/s PGCIL which is in full swing and likely to be completed in the scheduled time frame.

Commission's View:

The Commission notes the dismal performance of the Petitioner with regard to achieving its capitalisation targets. The Commission observes that the said works were scheduled to be completed by the FY 2017-18 but are still under execution. The Petitioner is directed to undertake necessary/appropriate actions so as to ensure that the works approved in the Business Plan Order are completed as per the schedule committed, without any cost overrun.

2.2.7. Tariff Petition

Stakeholder's Comment:

As per the Petition for True – Up of FY 2017-2018, ARR of FY 2018-2019 and Multi-Year ARR for Control period of FY -2019-2020 to FY 2021-2022 and retail tariff of FY 2019-2020, there is a surplus of INR 18.65 Cr up to FY 2019-2020. Therefore, no tariff revision is proposed. EWEDC deserves appreciation. However, it may be confirmed that no gap exists against any previous year.

Petitioner's Response:

The Tariff Petition is prepared under the various provisions of MYT Regulation, 2018 approved by the Commission and as per Tariff Petition, the total surplus upto FY 2019-20 is amounting to INR. 18.65 Cr., therefore, EWEDC has not proposed any revision in retail tariff for various categories for the FY 2019-20.

The Tariff Petition is prepared under the various provisions and formats approved by the Commission.

Commission's View:

The Commission has discussed in detail the revenue gap/ surplus derived at the end of FY 2019-20 in Chapter 6 of this Order and has accordingly determined the tariff for FY 2019-20.

2.2.8. Creation of new category for Electric Vehicles

Stakeholder's Comment:

JERC may consider introducing new tariff category for Electric Vehicle Charging stations, Charging infrastructure / Battery Swap. This may be done at the earliest.

Petitioner's Response

The Petitioner has submitted the proposal for the same.

Commission's View

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

2.2.9. Kundi Connections

Stakeholder's Comment:

EWEDC is admitting that most of the residents of Slums /Juggies and Houses built outside Laldora steal the Electricity by Kundi Connections etc. The New supply code 2018 has already been notified by the Commission in the official gazette replacing the previous Supply Code. EWEDC has been bringing forward the issue of allowing Single Point Supply (SPS) connection category for last so many years, but with no output so far. An appeal is being repeated to JERC to solve the problem once for all. Creation of a separate Police Station for investigating electricity thefts is another suggestion. In Punjab, separate Police Stations exist in few districts.

The CED must stop power theft by removing all kundi/ illegal connections before proposing tariff hikes.

Petitioner's Response:

The Petitioner has submitted that there are a number of slum dwellers/juggles and houses build outside Laldora. Most of the residents of these areas steal the electricity by Kundi Connections etc. as the electricity is a basic amenity. However, the new electricity connections to these residents could not be released due to mandatory provisions of Supply Code Regulation for releasing of new connection. Therefore, the Petitioner requests to allow the Single Point Supply (SPS) connection for these consumers, as requested by EWEDC in previous Tariff Petitions. The Petitioner further submits that the electricity connection may be released to the leading person of that area for further distribution of electricity in the said area. This will further reduce the AT&C losses of EWEDC in future.

Commission's View:

The stakeholders are informed that the Commission has already fixed the target T&D Losses for the Petitioner and the impact of any additional losses is to borne by the Petitioner as per the provisions of the MYT Regulations,

2018. The Commission does not allow the Petitioner to grant SPS connections to these consumers and directs to strengthen the enforcement activities and grant connections as per the tariff schedule approved. Further, theft prone areas should be checked regularly. The defaulters should be prosecuted under the provisions of Section 135 of the EA, 2003. The Commission further directs the Petitioner that the new connections to the residents of Slums/ Juggies may be granted in accordance with the provisions of the Supply Code Regulations notified by JERC.

2.2.10. Energy Audit

Stakeholder's Comment:

The EWEDC has not furnished action plan for Energy Audit and loss reduction measure to the Commission. The response of the EWEDC should be made time bound with maximum period of one year. In the absence of energy audit the entire issue of tariff is non-transparent.

Petitioner's Response:

The technical sanction for installation of Device Language Message Specification (DLMS) meters at all node points of 66KV & 11 KV for energy audit purpose, has already been accorded vide memo No-9963 dt-10/09/18 and Detailed Notice Inviting Tender (DNIT) is under progress. The DT Metering will be started after successful implementation of feeder metering. However, on pilot basis, 126 DT meters are installed in the Industrial Area for energy audit which is being done manually. The energy audit report can be submitted to the Commission after installation of DLMS meters on 66KV and 11 KV feeders.

Commission's View:

The Petitioner is well equipped to carry out the Energy Audit in its territory and the Commission does not intend to intervene in the operational decision making of the Petitioner. The Commission thus directs the Petitioner to carry out the Energy Audit at the earliest and submit the same to the Commission along with the next tariff Petition.

2.2.11. Smart City

Stakeholder's Comment:

The Commission had advised EWEDC to follow up with appropriate Govt. bodies so as to extract maximum benefit for consumers by the implementation of the Smart City Project. The Stakeholder requests indication of the present position in this regard for benefit of consumers.

Petitioner's Response:

At present, no funds have been allocated to Electricity Wing for any work under Smart City.

Commission's View:

The Commission advises the Petitioner to follow-up with appropriate government bodies to extract maximum benefits for consumers through the implementation of the Smart City Project.

2.2.12. Transmission & Distribution Loss

Stakeholder Comments

The estimated T&D loss for FY 2018-19 is 13.25% as against 9.51% (Actual unaudited) for FY 2017-18, which needs corrective action.

Petitioner's Response

The actual T&D loss for FY 2017-18 is 9.51 % and sharp fall in T&D loss has already been explained in the MYT Petition, where increase in the energy sale through UI/exchange from 36.76 MUs in FY 2016-17 to 131.74 MUs in FY 2017-18 has been stated to be the reason for this fall. The Petitioner has explained in its Petition that this increased energy sale is attributable to 48 MUs returned to J&K in FY 2017-18 against energy received in FY 2015-16 and FY 2016-17. The Petitioner has also submitted that T&D loss figures have now been audited.

Commission's View

The Commission notes that the loss reduction being estimated for FY 2018-19 is 13.25%, while the Petitioner has achieved 9.51% (audited) in FY 2017-18. The Commission also notes the explanation provided by the Petitioner relating to the steep reduction in FY 2017-18 due to increased energy sale through UI/exchange. Keeping in view the achievements of FY 2017-18, the Commission has approved a steeper loss reduction trajectory than that proposed by the Petitioner in the Business Plan Order, taking into account the Intra- State T&D loss achieved by the Petitioner in FY 2017-18.

2.2.13. Subsidy to Farmers

Stakeholder's Comment:

The EWEDC must provide subsidy to farmers in the UT.

Petitioner's Response:

The power consumption in Agriculture category is negligible in Chandigarh. No subsidy is being provided to any category of consumers in Chandigarh.

Commission's View:

The agricultural consumers in Chandigarh are already being provided the benefits of cross subsidy. The Average Cost of Supply for the UT of Chandigarh is INR 5.13/kWh while the agricultural consumers are only being charged INR 2.90/kWh as the tariff.

2.2.14. Demand Side Management & Energy Conservation

Stakeholder's Comment:

The effectiveness of DSM activities carried out by the EWEDC are not up to scale.

Petitioner's Response:

A post of Asstt. Executive Engineer (System Improvement Cell) in the office of S.E. Electy. 'OP' Circle, Chandigarh already exists and the assigned individual is looking after the DSM Cell.

Commission's View:

The Commission directs the Petitioner to further strengthen the DSM Cell and widely publicize the various schemes and initiatives undertaken by the Petitioner.

2.2.15. Bad Debt Provision

Stakeholder's Comment:

The provision for bad debt beyond 0.1 percentage is not admissible. Provision of bad debts in FY 2017-18 should not be allowed by JERC. EWEDC should make all out efforts to recover the defaulting amount till it exhausts all legal means. EWEDC should consider hiring a third agency to recover the defaulting amount as done in the State of Haryana.

Petitioner's Response:

The recovery of Defaulting Amount/ Bad Debt is a continuous process for which EWEDC is making efforts time to time. A number of recovery suits have also been filed at various courts of law against the various defaulters to recover the Defaulting Amount/ Bad Debt. This is as per regulation notified by Commission.

Commission's View:

Regulation 29 of the MYT Regulations, 2014 provides:

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

The Commission has followed the above mentioned regulation and no amount has been approved in FY 2017-18 or FY 2018-19 under bad debt since the same has not been written off in the books of accounts of the Petitioner.

2.2.16. Penal Provisions on not meeting threshold Contract demand

Stakeholder's Comment:

- Presently EWEDC has a provision of fixing contract demand as minimum of 60% of the connected load in case of large supply units. This practice has already been withdrawn in the States of Punjab and Haryana. Moreover, since there is a provision under the general conditions of tariff for levy of penalty in case contract demand is exceeded during a particular month, it is prayed that the condition of contract demand being 60% of connected load should be withdrawn. The consumer shall be allowed to give his contract demand as per his needs and not as per the connected load.

- For Medium supply and Non- Residential Supply category, the concept of contract demand needs to be introduced as in Punjab and Haryana. The same is required by the industry to avoid unnecessary burden of fixed charges where they have to maintain large connected load but use a small part of it at any instance. Industry needs to install various machines but have to run only a few as per the demand. In this case the connected load reaches a high figure whereas his need is very less. In this scenario the industry is burdened with the unnecessary fixed charges. This provision would put an end to checking of load and harassment to the consumer.

Petitioner's Response:

The EWEDC is being regulated by the Commission, accordingly, all relevant provisions of Tariff Order, Supply Code etc is being followed in true spirit. Now, all the HT/EHT consumers are being billed on maximum demand bases as per the Clause No. 8.3 (7) of the Tariff Order dated 28.03.2018 approved by the Commission. As per this Clause, the billing in case of HT/EHT shall be on maximum demand recorded during the month or 85% of the Contract Demand, whichever is higher.

Commission's View:

The Commission would like to clarify that the term 'connected load' has no significance with regards to this Order as fixed charges are being charged on the basis of 85% Contract demand or the Maximum Demand whichever is higher for HT/EHT consumers as mentioned in the Tariff Schedule. The stakeholder can get his load increased or decreased in accordance with the Supply Code Regulations notified by JERC.

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

3.1. Applicable Provisions and Background

Under the first MYT regime of the JERC, Order on Aggregate Revenue Requirement (ARR) (the FY 2016-17 to the FY 2018-19) and Wheeling & Retail Supply Tariff for the FY 2016-17 was issued by the Commission on 28th April 2016 (hereinafter referred to as the "MYT Order"). The Tariff Order determining the Aggregate Revenue Requirement (ARR) and tariff for the FY 2017-18, Annual Performance review (APR) of the FY 2016-17 and True-up for the FY 2015-16 was issued on 4th May 2017. Subsequently, the Tariff Order determining the Aggregate Revenue Requirement (ARR) and tariff for the FY 2018-19, True-up for the FY 2016-17 and Annual Performance review (APR) of the FY 2017-18 was issued on 28th March 2018 (hereinafter referred to as the "APR Order").

The True up for the FY 2017-18 has to be carried out in accordance to Regulation 8(2) of the MYT Regulations, 2014, stated as following:

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

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

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

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

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

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

3.2. Approach for True-up for FY 2017-18

The Petitioner has requested for True-up of FY 2017-18 on the basis of audited accounts. The Petitioner has submitted details of the expenditure and the revenue for the year based on its audited accounts along with a comparison of the actual revenue and expenditure against the corresponding figures previously approved by the Commission in the APR of FY 2017-18.

The Commission has analysed various elements of the actual revenue and expenses for the FY 2017-18 based on the audited accounts submitted by the Petitioner, and has carried out the True-up exercise in in accordance with the principles laid down in the MYT Regulations, 2014 after due prudence check. The Commission has allowed necessary adjustments in cases where variations are for reasonable and justifiable reasons.

3.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for the FY 2017-18 as 1,588.80 MU as against approved energy sales quantum of 1,591.48 MU in the APR Order.

Commission's Analysis

Regulation 9.1 of the MYT Regulations, 2014 provides:

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

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

The Commission had approved the energy sales of 1,591.48 MU in the APR Order, against which actual energy sales of 1588.80 MU have been submitted by the Petitioner now. The quantum of energy sales was verified from the audited accounts submitted by the Petitioner and the same were found to be in order.

The table below provides the energy sales approved by the Commission in the APR Order, the Petitioner's submission and quantum of energy sales now trued-up by the Commission.

Table 7: Energy Sales (MU) Trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	734.58	731.94	731.94
2	Commercial	489.41	494.02	494.02
3	Large Industrial supply	123.21	119.85	119.85
4	Medium Industrial supply	117.57	119.33	119.33
5	Small Industrial supply	20.30	19.50	19.50
6	Agriculture	1.59	1.43	1.43
7	Public lighting	20.29	17.73	17.73
8	Bulk supply	79.89	80.60	80.60
9	Temp. Supply	4.64	4.40	4.40
	Total	**1,591.48**	**1,588.80**	**1,588.80**

The Commission approves 1,588.80 MU as energy sales for the FY 2017-18.

3.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss of 3.60%, as against the approved value of 4.21% in the APR of the FY 2017-18.

Commission's analysis

Based on the power purchased by the Petitioner and the power available to the Petitioner at the State periphery, the Commission finds the Inter-State Transmission Loss as submitted by the Petitioner to be in order.

The following table provides the Inter-State Transmission Loss as approved in the APR Order, the Petitioner's submission and now trued-up by the Commission.

Table 8: Inter-State Transmission Loss Trued-up by Commission (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Loss	4.21%	3.60%	3.60%

The Commission approves the Inter-State Transmission Loss at 3.60% for the FY 2017-18.

3.5. Intra-State Distribution Loss

Petitioner's submission

Intra-State Distribution Loss for the FY 2017-18 has been arrived at 9.51% as compared to 12.75% approved by the Commission in the APR Order.

The Petitioner submitted that it has been constantly endeavoring to reduce the T&D losses. It has been able to reduce the T&D losses from 24.22% in FY 2003-04 to 9.51% in the FY 2017-18. In this regard, the Petitioner has submitted that the system improvement and augmentation work executed each year under the planned schemes have resulted in the reduction of T&D losses significantly in its distribution area.

Commission's analysis

The Commission has considered the net energy available for sales to retail consumers by the Petitioner consisting of energy available from firm sources, energy under the Deviation Settlement Account (DSA), energy purchased from Open market and energy procured from Solar sources within the UT. The Commission has further considered actual sales of 1,588.80 MU as approved in the previous section. Considering the difference in energy available at the periphery of the Petitioner and the sales approved, actual Intra-State Distribution Loss of the FY 2017-18 stands at 9.51%, as shown in the table below:

Table 9: Intra-State Distribution Loss calculation

S. No	Particulars	Trued-up by Commission
1	Energy Sales within the UT (MU)	1,588.80
2	Energy Required at State Periphery (MU)	1,755.87
3	T&D Losses (MU)	167.06
4	**T&D Loss (%)**	**9.51%**

Since, the Petitioner has been able to over-achieve the Intra-State Distribution Loss target of 12.75% for the year, the incentive for the same has been provided to the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in "Section 3.20: Incentive/Disincentive towards over/under-achievement of norms of distribution losses section" of this Order.

The following table provides the Intra-State T&D loss approved in the APR of FY 2017-18, the Petitioner's submission and now trued-up by the Commission.

Table 10: Intra-State Distribution Loss Trued-up by Commission (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State Distribution Loss	12.75%	9.51%	9.51%

The Commission, while Truing-up for the FY 2017-18 has considered the actual intra-state T&D loss of 9.51% and hence provided an incentive to the Petitioner in accordance with the MYT

Regulations, 2014 for over achievement of Intra-State Distribution Loss target approved by the Commission for FY 2017-18 in the APR Order.

3.6. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner meets its power requirement from the allocations from Central Generating Stations (CGS) such as NTPC, NHPC, NPCIL BBMB, SJVNL, THDC along with bilateral agreement and banking arrangements. The allocation from CGS consists of a fixed share of allocation for a year, and the Govt. of India changes the variable share of allocation from the unallocated quota, time to time. Since, during the peak summer seasons the allocation of power from various sources is inadequate, therefore the Petitioner procures power from short–term sources i.e. power exchange, UI, banking etc.
The following table shows the summary of actual Power Purchase from various sources for the FY 2017-18 including Transmission Charges and purchase from short-term sources i.e. power exchange, UI, cost towards RPO etc. Further, Power Purchase Cost is inclusive of Letter of Credit (LC) Charges payable to BBMB for the FY 2017-18.

Table 11: Power Purchase quantum and cost submitted by the Petitioner

Source	Quantum (MU)	Total Charges (INR Cr)
NTPC	381.68	108.04
NHPC	260.48	90.95
NPCIL	168.47	60.83
SJVNL	105.75	27.07
BBMB	667.12	210.89
APCPL	54.77	25.69
THDC	178.59	77.96
Bilateral/Exchange Purchase	71.29	15.97
CREST	3.78	3.12
Pvt. Solar	0.86	0.76
UI Over-drawal	109.29	26.69
Less: Banking	48.02	-
Others (PGCIL Charges, Reactive Power, NRLDC)	-	30.05
REC Cost	-	3.35
LC Charges	-	0.80
Total	**1,953.72**	**682.17**

Commission's analysis

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

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

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

The Petitioner procures power mainly from NTPC Stations, Hydro Stations, NPCIL stations, and IPPs. The Petitioner has submitted the overall power purchase cost as INR 682.17 Cr against a procurement of 1,953.72 MU, inclusive of transmission cost but exclusive of revenue due to sale of surplus power.

The revenue on account of surplus power sale/UI Under-drawl has been considered as a revenue item by the Petitioner and adjusted separately in the ARR. The Commission for the purpose of finalising the Power Purchase quantum and cost for FY 2017-18 has adjusted the revenue of INR 23.92 Cr on account of surplus power sale/UI Under-drawl (verified as per the audited accounts) in the Total Power Purchase cost to arrive at the Net Power Purchase quantum and cost.

The Petitioner submitted that the total power purchase cost is inclusive of the cost incurred towards compliance of Renewable Purchase Obligation (RPO) target for the FY 2017-18. The compliance status of RPO has been discussed in detail in the subsequent section.

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

Table 12: Power Purchase quantum and cost Trued-up by Commission

Source	Approved in APR Order		Trued-Up by Commission	
	Energy Units (MU)	Total Charges (INR Cr)	Energy Units (MU)	Total Charges (INR Cr)
NTPC	390.33	139.57	381.68	108.04
NHPC	265.55	91.91	260.48	90.95
NPCIL	165.75	49.67	168.47	60.83
SJVNL	104.84	26.40	105.75	27.07
BBMB	666.90	205.89	667.12	210.89
APCPL	55.24	26.14	54.77	25.69
THDC	174.19	85.06	178.59	77.96
Bilateral/Exchange Purchase	107.32	12.92	71.29	15.97
CREST	3.31	2.75	3.78	3.12
Pvt. Solar (Net Generation)	0.74	0.65	0.86	0.76
UI Over-drawal	24.73	6.86	109.29	26.69
Less: Banking	0.77	0.00	48.02	-
Others (PGCIL Charges, Reactive Power, NRLDC)	-	51.12	-	30.05
REC Cost	-	3.55	-	3.35
LC Charges	-	-	-	0.80
Total	**1,958.14**	**702.48**	**1,953.72**	**682.17**
Less: Revenue from sale/UI Under-drawal	57.36	0.00	131.38	23.92
Net total	**1,900.78**	**702.48**	**1,822.34**	**658.25**

The Commission approves power purchase cost of INR 658.25 Cr (adjusted for sale of surplus power/UI Under-drawal) in the True-up of FY 2017-18.

3.7. Renewable Purchase Obligation (RPO)

Petitioner's submission

The Petitioner submitted that it has been able to meet its RPO for the FY 2017-18 (solar and non-solar). Besides the REC purchase, it has also purchased energy from conventional solar plants such as CREST and through gross and net metering, details of which are as follows:

Table 13: RPO compliance submitted by the Petitioner

Particulars	RPO %	Target		Actual
		Conventional Power consumed (MU)	Units (MU)	Units (MU)
Solar	2.50%	495.38	12.38	19.23
Solar Rooftop (Gross Generation)				*15.45*
CREST				*3.78*
Non-Solar (REC)	4.20%	495.38	20.81	22.00
Total	**6.70%**		**33.19**	**41.23**

Commission's analysis

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets. In accordance with the Regulations, the Petitioner had to purchase 6.70% of its total consumption (excluding hydro) from renewable sources for the FY 2017-18.

The effective energy sales used for calculation of the RPO have been arrived at as follows:

Table 14: Effective energy sales (except hydro) for calculation of RPO

S.No.	Particular	Formula	FY 2017-18
1	Energy Sales within UT	a	1,588.80
2	Hydro Power Purchase FY 2017-18	b	1,253.57
3	Inter-State Loss (%)	c	3.60%
4	Inter-State Loss (MU)	d= c*b	45.18
5	Intra-State Loss (%)	e	9.51%
6	Intra-State Loss (MU)	f=e*(b-d)	114.97
7	Hydro Power Sale (MU)	g=b-d-f	1,093.42
8	Conventional Power Sale	h= a-g	495.38

The Petitioner has complied with the RPO target till FY 2016-17. The standalone RPO target for FY 2017-18 has been provided in the following table:

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

Description	FY 2017-18
Sales within State from conventional sources (MU)	495.38
RPO obligation (in %)	**6.70%**
Solar	2.50%
Non-solar	4.20%
RPO obligation for the year (in MU)	**33.19**
Solar	12.38
Non-solar	20.81
Backlog upto FY 2016-17	**0.00**
Solar	0.00
Non Solar	0.00
Total RPO to be fulfilled for the year	**33.19**
Solar	12.38
Non Solar	20.81
RPO compliance- Physical Purchase	
- Solar	19.23

Description	FY 2017-18
CREST	*3.78*
Pvt. Solar (Gross Generated)	*15.45*
-Non-solar	0.00
RPO compliance (REC certificate purchase)	
- Solar	0.00
-Non-solar	22.00
Total RPO compliance (Physical Purchase+ REC certificate purchase)	**41.23**
- Solar	19.23
-Non-solar	22.00

The RPO compliance status in the FY 2017-18 has been done based on the renewable energy/ REC purchased by the Petitioner. The Petitioner has been able to meet the standalone RPO target for the FY 2017-18. However, it has been observed that no expenditure has been incurred towards procurement of solar power via Gross Metering. In case the Petitioner's incurs any cost in the subsequent years under this head, the same shall be considered as per actuals.

The cost towards compliance of RPO incurred in FY 2017-18 has been shown in the following table:

Table 16: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	Solar	19.23	3.88	2.02
a)	*CREST*	3.78	3.12	8.25
b)	*Pvt. Solar (Gross- metering)*	15.45	-	-
(i)	*Pvt. Solar (Net- metering)*	0.86	0.76	8.84
2	Non-solar	22.00	3.35	1.52
	Total	**41.23**	**7.23**	**1.75**

The Commission approves INR 7.23 Cr towards compliance of RPO in the True-up of the FY 2017-18 and the same has been considered in the Power Purchase cost approved for FY 2017-18.

3.8. Energy Balance

Petitioner's submission

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

Table 17: Energy requirement submitted by the Petitioner (in MU)

Particulars	Petitioners submission
Units Procured	1,948.43
Less: Outside Sale Trading	131.74
Energy Available	1,816.70
Inter-State Transmission Loss (%)	3.60%
Transmission Loss (MUs)	65.47
Net Energy Available at UT Periphery	1,751.23
Power Available within UT	
Power procured from Gross/Net Metering Mode (MUs)	4.64
Total Energy Available	**1,755.87**
Actual Energy Sales (MUs)	**1,588.80**

Particulars	Petitioners submission
T&D Loss (%)	9.51%
T&D Loss (MUs)	167.06
Total Energy required at UT Periphery (MUs)	**1,755.87**

Commission's analysis:

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

The following table provides the energy balance approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 18: Energy balance Trued-up by Commission (in MU)

Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
Energy requirement for Discom			
Total Sales within the State/UT	1,591.48	1,588.80	1,588.80
Distribution losses			
%	12.75%	9.51%	9.51%
MU	232.57	167.06	167.06
Energy required at UT Periphery for Discom sales	**1,824.05**	**1,755.87**	**1,755.87**
Energy Availability			
Availability from firm sources outside UT	1,822.80	1,816.54	1,816.54
Availability from Open Market	107.32	71.29	71.29
Availability from UI Over-drawal	24.73	109.29	109.29
Less: UI Under-drawal	0.00	66.72	66.72
Less: Sale in Open Market	57.36	64.66	64.66
Less: Bilateral transfer to J&K	(0.77)	48.02	48.02
Total Energy Availability at Generator periphery from Outside UT	1,898.26	1,817.71	1,817.71
Total Energy Availability within UT (CREST, Pvt. Solar etc.)	4.05	4.64	4.64
Total Energy Availability for UT	**1,902.31**	**1,822.34**	**1,822.34**
Inter-State Transmission Loss (%)- Applicable for Energy from outside State	4.21%	3.60%	3.60%
Total Energy Availability at UT Periphery	**1,824.05**	**1,755.87**	**1,755.87**

3.9. Operation & Maintenance Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

Therefore, any variation in O&M Expenses is attributable to the Petitioner and is not passed on in the ARR, other than any cost which is beyond the control of the Petitioner.

3.9.1. Employee Expenses

Petitioner's submission

Employee expenses of INR 68.82 Cr have been incurred against approved expenses of INR 66.82 Cr in the APR Order. The employee expenses comprise of Salaries, Dearness allowance, Bonus, Terminal benefits in the form of Pension and Gratuity, Leave encashment and staff welfare expenses.

Commission's analysis

As per the audited accounts submitted by the Petitioner, the employee expenses during the FY 2017-18 are reflected as INR 68.82 Cr.

However, in accordance with the MYT Regulations, the Employee expenses are controllable, therefore, the Commission has considered the same Employee Expenses as approved in the APR Order for FY 2017-18.

Table 19: Employee Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Total Employee Expenses	66.82	68.82	66.82

The Commission approves Employee Expenses of INR 66.82 Cr in the True-up of FY 2017-18.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted the actual A&G expenses of INR 4.81 Cr as reflected in audited accounts against the approved expenses of INR 6.34 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. As per the audited accounts submitted by the Petitioner the A&G expenses for FY 2017-18 are reflected as INR 4.81 Cr.

However, as variation in the O&M expenses is controllable, the Commission approves the same A&G expenses as approved in the APR Order.

Table 20: A&G Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	6.34	4.81	6.34

The Commission approves the Administrative & General (A&G) expenses of INR 6.34 Cr in the True-up of FY 2017-18.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of INR 8.50 Cr have been incurred against approved expenses of INR 12.97 Cr in the APR Order. R&M expenses are incurred towards day to day maintenance of the transmission and distribution network of the Petitioner and form an integral part of the Licensee's efforts towards providing reliable and quality power supply and also in the reduction of losses in the system.

Commission's analysis

Similar to the approach followed while approving the Employee expenses and A&G expenses above, the Commission approves the same R&M Expenses as approved in the APR Order.

Table 21: R&M Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	12.97	8.50	12.97

The Commission approves the Repair & Maintenance (R&M) expenses of INR 12.97 Cr in the True-up of FY 2017-18.

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

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

Table 22: O&M Expenses Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	66.82	68.82	66.82
2	Administrative & General Expenses (A&G)	6.34	4.81	6.34
3	Repair & Maintenance Expenses	12.97	8.50	12.97
	Total Operation & Maintenance Expenses	**86.13**	**82.13**	**86.13**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 86.13 Cr in the True-up of FY 2017-18.

3.10. Capitalisation

Petitioner's submission

The Petitioner has managed to achieve capitalisation of INR 8.07 Cr during the year against approved capitalisation of INR 2.40 Cr in the APR Order.

Commission's analysis:

The Commission observes that the capitalisation achieved by the Petitioner is higher than that approved by the Commission in the APR Order. However, the Commission observes that it is much lower as compared to the capitalisation approved in the upcoming Control Period (Approved in the Business Plan Order), as discussed in subsequent chapters. Lower capitalisation signifies that not enough efforts are being taken in enhancing the reliability and quality of supply to the consumers. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary to improve the service quality and target 24x7 supply to all consumers.

The Commission examined the Fixed Asset Register (FAR) as submitted by the Petitioner and accordingly approves the capitalisation as shown in the table as follows:

Table 23: Capitalisation Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	2.40	8.07	8.07

The Commission approves capitalisation of INR 8.07 Cr in the True-up of the FY 2017-18.

3.11. Capital Structure

Petitioner's Submission

The entire capital deployment at the EWEDC is through equity for the FY 2017-18.

Commission's analysis

In the Technical Validation Session held at the Commission's office, the Petitioner was directed to submit the relevant documents specifying the nature of capital deployed for creation of assets. The Petitioner submitted that the entire capital is infused as equity by the Government. Further, the Petitioner also submitted that no assets have been created through consumer contribution.

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

"

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

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

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

In accordance with the MYT Regulations, 2014 the Commission has determined the Capital Structure for FY 2017-18 as shown in the table below. The Opening GFA has been revised by the Commission on account of new assets recognized in the Fixed Asset Register (FAR) submitted for FY 2017-18 by the Petitioner. The matter has been discussed in detail in the subsequent section.

Table 24: Funding Plan Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	2.40	8.07	8.07
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	1.68	5.65	5.65
5	Equity	0.72	2.42	2.42

Table 25: GFA addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	409.47	409.47	429.31
2	Addition During the FY	2.40	8.07	8.07
3	Adjustment/Retirement During the FY	0.00	19.84	-
4	Closing Gross Fixed Assets	411.87	437.38	437.38

Table 26: Normative Loan addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	24.21	54.45	24.21
2	Add: Normative Loan During the year	1.68	5.65	5.65
3	Less: Normative Repayment equivalent to Depreciation	11.74	15.95	16.39
4	Closing Normative Loan	14.15	44.15	13.47

Table 27: Normative Equity addition Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	122.84	128.79	122.84
2	Additions on account of new capitalisation	0.72	2.42	2.42
3	Closing Equity	123.56	131.21	125.26

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted that for computation of depreciation, the opening GFA approved by the Commission in the Tariff Order dated 28th March 2018 has been considered and actual addition during FY 2017-18 as per the annual accounts has been considered. Further, depreciation for the year has been considered based on the Fixed Asset Register prepared for FY 2017-18.

Commission's analysis

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

"

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

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

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

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

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

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

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

Table 28: Asset wise and overall effective Depreciation Rate (%)

Description	Rate	Asset Addition	Effective Rate
Plant & Machinery	5.28%	4.31	
Buildings	3.34%	3.75	
Vehicles	9.50%	-	
Furniture & Fixtures	6.33%	-	
Computers & Others	15.00%	-	
Land	0.00%	-	
Total	**-**	**8.07**	**5.14%**

The Petitioner as part of the this Petition has been able to submit the Fixed Asset Register (FAR) for FY 2017-18 which specifies the value of assets that have achieved 90% depreciation as of FY 2017-18. As the MYT Regulations, 2014 stipulates that the depreciation shall be allowed to a maximum of 90% of the original cost of the asset, therefore the entire value of assets depreciated upto 90% as reflected in the FAR of FY 2017-18 has been deducted from the opening GFA of FY 2017-18 as approved in the APR Order.

As mentioned in the Tariff Order for FY 2018-19, there were some assets prior to 2005 which were not recognized in the FAR schedule of the Balance Sheet. The Petitioner as part of the FAR prepared for FY 2017-18 has recognized assets worth INR 19.84 Cr which have been added in the asset base during FY 2017-18. The Commission taking cognizance of the same has also revised the opening asset base based on the Petitioner's submission and due verification.

The revised GFA has then been considered and the depreciation on average Gross Fixed Assets (GFA) has been determined. The net addition during the year has been calculated after deducting the value of retired assets.

The following table provides the calculation of revised GFA for the year FY 2017-18:

Table 29: Calculation of revised GFA

Description	Opening GFA as approved in APR Order	Add: Assets adjustment	Less: Assets depreciated upto 90% till FY 2017-18	Revised Opening GFA	Addition/ Deletion during the year	Closing GFA
Plant & Machinery	399.54	(4.43)	106.31	288.79	4.31	293.11
Buildings	7.19	25.37	6.56	26.00	3.75	29.75
Vehicles	0.87	0.00	0.71	0.16	-	0.16
Furniture & Fixtures	0.20	(0.08)	0.08	0.04	-	0.04
Computers & Others	0.98	(0.33)	0.53	0.12	-	0.12
Land	0.69	(0.69)	-	-	-	-
Total	**409.47**	**19.84**	**114.20**	**315.11**	**8.07**	**323.18**

The following table provides the calculation of depreciation during the year FY 2017-18

Table 30: Depreciation Trued-up by Commission (In INR Cr.)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Closing GFA approved in the True-up of FY 2016-17 (a)	409.47	409.47	409.47
2	Add: Adjustments in assets (b)	-	-	19.84
3	Revised Opening GFA for FY 2017-18 (a+b)	-	-	429.31
4	Less: Assets depreciated upto 90% till FY 2017-18 (c)	-	-	114.20
5	Opening Gross Fixed Assets for calculation of depreciation (a+b-c)	409.47	409.47	315.11
6	Addition During the FY	2.40	27.91	8.07
7	Adjustment/Retirement During the FY	0.00	0.00	0.00
8	Closing Gross Fixed Assets	411.87	437.38	323.18
9	Average Gross Fixed Assets	410.67	423.41	319.15
10	Rate of Depreciation (%)	2.86%	3.77%	5.14%
	Depreciation	**11.74**	**15.95**	**16.39**

The Commission approves depreciation of INR 16.39 Cr in the True-up of FY 2017-18

3.13. Interest on Loan

Petitioner's submission

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

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

Commission's analysis:

Regulation 24 of the MYT Regulations provides:

"

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner in reply to the 2nd Discrepancy Note has submitted that the complete capitalisation during the year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30. Further, no loan component has been considered for the additional assets recognized in FY 2017-18 worth INR 19.84 Cr, as discussed in the previous section.

The Commission for the purpose of calculation of Interest on Loan has considered the interest rate equivalent to SBI PLR as on 1st April 2017. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average normative loan during the year with the opening loan considered equivalent to the opening loan approved in the APR of the FY 2017-18. The addition in loan has been considered as explained above and the repayment is considered the same as depreciation during the year.

The following table provides the Interest on Loan, approved by the Commission in the APR Order, Petitioners submission and now trued-up by the Commission.

Table 31: Interest on Loan Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	24.21	54.45	24.21
2	Add: Normative Loan During the year	1.68	5.65	5.65
3	Less: Normative Repayment= Depreciation	11.74	15.95	16.39
4	Closing Normative Loan	14.15	44.15	13.47
5	Average Normative Loan	19.18	49.30	18.84
6	Rate of Interest (%)	13.85%	13.85%	13.85%
	Interest on Loan	**2.66**	**6.83**	**2.61**

The Commission approves the Interest of Loan of INR 2.61 Cr in the True-up of the FY 2017-18.

3.14. Return on Equity (RoE)

Petitioner's submission

The RoE is calculated in accordance with the MYT Regulations 2014, and is computed on 30% of the capital base. The equity addition has been considered to the tune of 30% of assets capitalized during the year. Accordingly, the Petitioner has computed the Return on Equity at 16% on post tax basis.

Commission's analysis:

Regulation 27 of the MYT Regulations, 2014 provides:

"

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

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

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

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

As the complete asset capitalisation during the year has been funded by equity, the Commission, for the purpose of equity addition during the year, has limited it to 30% of the total capitalisation. The RoE has been calculated on the average of the opening and the closing of equity during the year @ 16% post-tax basis with opening equity considered the same as approved in the APR Order. Similar to loan addition, no equity component has been considered for the additional assets recognized in FY 2017-18 worth INR 19.84 Cr.

The following table provides the return on equity Trued-up for the FY 2017-18.

Table 32: RoE Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	122.84	128.79	122.84
2	Additions on account of new capitalisation	0.72	2.42	2.42
4	Closing Equity	123.56	131.21	125.26
5	Average Equity	123.20	130.00	124.05
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**19.71**	**20.80**	**19.85**

The Commission approves a Return on Equity of INR 19.85 Cr in the True-up of the FY 2017-18.

3.15. Interest on Consumer Security Deposits

Petitioner's submission

Payments of INR 11.72 Cr were released to the consumers towards interest on security deposits during the FY 2017-18 against INR 9.77 Cr approved by the Commission in the APR Order.

Commission's analysis:

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

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

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

The Commission has further noticed that the CAG in its audit report has pointed out that the liability for Advance Consumer Deposit (ACD) is being booked on the basis of assessment instead of actual realization. Hence, security deposits are overstated to the extent of ACD assessed but not realized. However, the Commission has considered Interest on consumer deposit as per the audited accounts and directs the Petitioner to remove the discrepancy in accounts from the next financial year.

The following table provides the interest on security deposit as approved in the APR Order, the Petitioner's submission and the interest now trued-up by the Commission:

Table 33: Interest on Consumer Security Deposits Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	147.81	147.81	147.81
2	Add: Deposits During the year	5.00	45.62	45.62
3	Less: Deposits refunded	0.00	2.47	2.47
4	Closing Security Deposit	152.81	190.96	190.96
5	Average Security Deposit	150.31	169.39	169.39
6	**Rate of Interest (%)**	6.50%	6.92%	6.92%
	Interest on Security Deposit	**9.77**	**11.72**	**11.72**
	Interest paid to consumers	**9.77**	**11.72**	**11.72**

The Commission approves interest on security deposit as INR 11.72 Cr in the True-up of the FY 2017-18.

3.16. Interest on Working Capital

Petitioner's submission

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

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The interest on working capital is computed at 8.70% (SBI base rate as on 1st April 2018) as has been shown in the table below:

Table 34: Interest on Working Capital submitted by Petitioner (In INR Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	140.88
2	Less: Power Purchase Cost for one month	56.85
3	Inventory Based on Annual Requirement for Previous FY for 2 months	2.57
4	Total Working Capital Requirement	86.60
5	Less: Security Deposit excluding BG/FDR	190.96
6	Net Working Capital	(104.36)
7	Rate of Interest (%)	8.70%
	Interest on Working Capital	**0.00**

Commission's analysis:

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

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

(i) Receivables of two months of billing

(ii) Less power purchase cost of one month

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

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

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

The Commission, for determination of working capital requirements of the Petitioner during the year, has considered the receivables as ARR on pro rata basis for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit as above and the inventory for two months as per the audited accounts of FY 2017-18.

With regards to the interest rate, the Petitioner has erroneously considered the SBI base rate as on 1st April 2018 instead of SBI Base rate on 1st April 2017, as stipulated in the MYT Regulation, 2014. The Commission, therefore has considered the SBI Base rate as on 1st April 2017 in line with the MYT Regulations, 2014.

The Working Capital requirement after deduction of the amount of security deposit is coming to be negative. Hence, the Interest on Working Capital is approved as Nil, as shown in the table below:

Table 35: Interest on Working Capital Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	134.81	140.88	129.55
2	Less: Power Purchase Cost for one month	58.54	56.85	54.85
3	Inventory Based on Annual Requirement for Previous FY for 2 months	4.08	2.57	2.57
4	Total Working Capital Requirement	80.35	86.60	77.27
5	Less: Security Deposit excluding BG/FDR	150.31	190.96	169.39
6	Net Working Capital	(69.96)	(104.36)	(92.12)
7	Rate of Interest (%)	9.30%	8.70%	9.10%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

The Commission approves the Interest on Working Capital as nil in the True-up of the FY 2017-18.

3.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

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

"

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

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

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

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

Table 36: Income Tax Trued-up by Commission (In INR Cr)

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

The Commission approves Income Tax liability as nil for the FY 2017-18.

3.18. Provision for Bad & Doubtful Debts

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

As per Regulation 29 of the MYT Regulations, 2014:

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

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

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

3.19. Non-Tariff Income (NTI)

Petitioner's submission

The Petitioner has submitted the actual Non-Tariff Income of INR 24.97 Cr for the FY 2017-18.

Commission's analysis:

The Commission has authenticated the submission of the Petitioner from the audited accounts and found the same to be correct. The NTI approved in the APR Order, Petitioner's submission and now trued-up by the Commission is shown in the following table:

Table 37: Non- Tariff Income Trued-up by Commission (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Non-tariff income	23.64	24.97	24.97

The Commission approves Non-Tariff Income of INR 24.97 Cr in the True-up of the FY 2017-18.

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

Petitioner's submission:

No submission has been made in this regard.

Commission's analysis:

In the APR for FY 2017-18, the Commission had approved the T&D loss level of 12.75%. The Petitioner has achieved T&D loss of 9.51% against the approved loss level of 12.75%. The Commission, in accordance with Regulation 10 of the JERC MYT Regulations, 2014 (reproduced below) has determined the incentive towards the over-achievement of the target of Intra-State distribution loss for the FY 2017-18 as follows:

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

The incentive has been considered at INR 3.75/kWh, which is the Average Power Purchase cost (APPC) of the Petitioner. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up and the Energy at the State/UT Periphery has been computed after grossing up the retail energy sales (1,588.80 MU) with the actual Intra-State T&D Loss (9.51%).

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

Table 38: Incentive due to over-achievement of Intra-State Distribution Loss target (In INR Cr)

S. No	Particulars	As per Approved Intra-State T&D Loss	Trued-up by Commission
1	Retail Sales	1,588.80	1,588.80
2	T&D Loss (%)	12.75%	9.51%
3	Power Purchase at State/UT Periphery	1,820.98	1,755.87
4	Gain/(Loss) (MU)		65.11
5	Average Power Purchase Cost (APPC)		3.75
6	Gain/ (Loss) (INR Cr)		24.41
7	Sharing of 30% of gain with the Petitioner		**7.32**

The Commission determines and approves INR 7.32 as incentive for over- achieving the Intra-State Distribution Loss target for the FY 2017-18.

3.21. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 770.72 Cr for approval in the True-up of the FY 2017-18.

Commission's analysis

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

Table 39: Aggregate Revenue Requirement Trued-up by Commission for the FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	702.48	658.25	658.25
2	Operation & Maintenance Expenses	86.13	82.13	86.13
3	Depreciation	11.74	15.96	16.39
4	Interest on Loan	2.66	6.83	2.61
5	Return on Equity	19.71	20.80	19.85
6	Interest on Security Deposit	9.77	11.72	11.72
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	0.00	0.00
10	Incentive/ (Disincentive)on achievement of norms	0.00	0.00	7.32
11	**Total Revenue Requirement**	**832.49**	**795.69**	**802.27**
12	Less: Non-Tariff Income	23.64	24.97	24.97
13	**Net Revenue Requirement**	**808.85**	**770.72**	**777.30**

The Commission approves net Aggregate Revenue Requirement of INR 777.30 Cr in the True-up of the FY 2017-18.

3.22. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue from retail sale for the FY 2017-18 is INR 845.25 Cr as against INR 808.85 Cr approved by the Commission in the APR Order. The Petitioner has also considered revenue recovered through FPPCA of INR. 189.44 Cr. The detailed reconciled statement of revenue from the sale of power at existing tariff and FPPCA with reference to the final actual figures of income & expenditure as per the audited accounts of the FY 2017-18 has also been submitted.

Further, an amount of INR 0.12 Cr on account of Regulatory Surcharge imposed by the Commission from 1st April 2018 onwards, in the previous Tariff Order, has also been considered. As this amount was billed to the consumers for energy consumed during the month of March 2018, the same has been accounted for in the FY 2017-18.

Commission's analysis

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

Table 40: Revenue at existing tariff Trued-up by Commission for the FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	295.45	300.51	300.51
2	Commercial	300.22	324.62	324.62
3	Large Industrial supply	77.60	75.11	75.11
4	Medium Industrial supply	68.27	71.29	71.29
5	Small Industrial Supply	10.77	10.73	10.73
6	Agriculture	0.46	0.40	0.40
7	Public lighting	11.67	10.73	10.73
8	Bulk supply	49.45	48.03	48.03
9	Temp. Supply	3.76	3.90	3.90
10	**Sub-total**	817.65	845.33	845.33
11	FPPCA	109.96	189.44	189.44
12	Regulatory Surcharge	-	0.12	0.12
13	**Grand total**	**927.61**	**1,034.89**	**1,034.89**

The Commission approves the revenue from sale of power as INR 1,034.89 Cr (including FPPCA charges and Regulatory Surcharge) in the True-up of the FY 2017-18.

3.23. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue surplus of INR 264.09 Cr is arrived at in the True-up of the FY 2017-18.

Commission analysis

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

Table 41: Standalone Revenue Gap/ (Surplus) for the FY 2017-18 (In INR Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	808.85	770.72	777.30
2	Revenue from Retail Sales at Existing Tariff	817.65	845.33	845.33
3	FPPCA Charges	109.96	189.44	189.44
4	Regulatory Surcharge	0.00	0.12	0.12
5	**Total Revenue**	**927.61**	**1,034.89**	**1,034.89**
	Net Gap /(Surplus)	**(118.76)**	**(264.17)**	**(257.59)**

The Commission, in the True-up of the FY 2017-18 approves a standalone surplus of INR 257.59 Cr This standalone surplus has been carried over to the subsequent years and has been dealt with while determining the tariff for the FY 2019-20.

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

4.1. Applicable Provisions and Background

The Tariff Order for the FY 2018-19 was issued by the Commission on 28th March 2018 approving the Aggregate Revenue Requirement (ARR) and retail tariff for the FY 2018-19 (hereinafter referred to as 'ARR Order'). This Chapter covers the Annual Performance Review (APR) for the FY 2018-19 vis-à-vis the cost parameters approved by the Commission in the Order for the FY 2018-19. The Annual Performance Review for the FY 2018-19 is to be carried out as per the following provisions of Regulation 8 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2014:

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

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

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

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

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

4.2. Approach for the Review for the FY 2018-19

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M expenses, interest on long term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2018-19 has been done based on actual Power Purchase Quantum and Cost of the first 6 months of the FY 2018-19, actual Energy Sales for the first 6 months, etc. depending on which the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the information submitted by the Petitioner, the MYT Regulations, 2014 and on the basis of the norms approved in the ARR Order dated 28th March 2018.

4.3. Energy Sales

Petitioner's Submission

The sales for the FY 2018-19 have been estimated based on the CAGR of the actual sales approved by the Commission for the FY 2011-12 to FY 2017-18. The CAGR for the past five/three/two/one-year growth has been applied appropriately on the actual sales for the FY 2017-18 to arrive at the estimated sales for the FY 2018-19. A total sales of 1,636.26 MU has been estimated against the 1,654.68 MU as approved by the Commission in the ARR Order for FY 2018-19.

Commission's Analysis

The Commission has noted the audited figures for FY 2017-18 and provisional information provided by the Petitioner for the first 6 months of the FY 2018-19. For all the categories, the Commission has estimated the proportion of actual energy sales till the month of September over total energy sales during the financial year, for the last three years. Using this average proportion of sales, the Commission has extrapolated the actual energy sales till the month of September to determine the energy sales for the remaining period of FY 2018-19.

The table below provides the energy sales approved by the Commission in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 42: Energy Sales (MU) approved by the Commission for the FY 2018-19

S. No.	Category	Approved in ARR Order	Petitioner's Submission		Now Approved by Commission
			Apr-Sep (Actual)	Apr-Mar (RE)	
1	Domestic	770.85	411.49	759.39	750.69
2	Commercial	507.90	279.96	507.56	516.80
3	Large Industrial supply	124.13	64.53	119.85	119.85
4	Medium Industrial supply	124.46	56.75	123.76	119.33
5	Small Industrial Supply	20.86	9.83	19.75	18.65
6	Agriculture	1.59	0.77	1.46	1.31
7	Public lighting	20.36	6.13	17.73	11.86
8	Bulk supply	79.89	31.58	82.36	54.47
9	Temp. Supply	4.64	2.20	4.40	5.32
	Gross Total	**1,654.68**	**863.23**	**1,636.26**	**1,598.27**

The Commission approves energy sales of 1,598.27 MU in the APR of the FY 2018-19.

4.4. *Inter-State Transmission Loss*

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.60%, same as per actuals in FY 2017-18.

Commission's analysis

The Commission in the APR of FY 2018-19 considers the Inter-State transmission losses in line with those approved in the True-up of FY 2017-18. The same shall be revised based on actuals during the True-up exercise.

The following table provides the Inter-State Transmission Loss approved by the Commission in the ARR Order, the Petitioner's submission and Loss level now approved by the Commission.

Table 43: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Inter-State Transmission Losses	4.21%	3.60%	3.60%

The Commission approves Inter-State Transmission Loss of 3.60% for the APR of the FY 2018-19.

4.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner submitted that while the sales have increased in the last three years, losses have remained stagnant without much improvement as majority of the increase in sales has happened in the LT category. Various technical and technological improvements proposed under IPDS and other schemes shall be useful in bringing about the desired reduction in loss levels in the future. Since these schemes are still under implementation, the Petitioner requests the Commission to revise the T&D loss level for the FY 2018-19.

The Petitioner stated that the Intra-State Distribution loss of 9.51% in FY 2017-18 cannot be taken as base for determination of future loss trajectory. The sharp fall in T&D losses in the FY 2017-18 has primarily been on account of the following factors which might not be relevant in the current year:

- There has been increase in energy sale through UI/exchange from 36.76 MUs in FY 2016-17 to 131.74 MUs in FY 2017-18.
- The excess energy sales were due to return of 48 MUs towards banked units to J&K during the FY 2017-18 against energy received in the FY 2015-16 & FY 2016-17 and sale of excess power through UI/exchange during different intervals of time.

Therefore, in line with the above, the Petitioner has considered the actual loss level of 13.65% for the FY 2016-17 as base and has projected 0.20% reduction in loss year over year and accordingly arrived at 13.25% Intra-state Distribution Loss for FY 2018-19.

In addition to above, the Petitioner submitted that the energy input to the UT is metered outside its territory and hence it has to bear the additional losses of the interstate circuit due to not having any interstate point in its boundary.

Therefore, in view of all of the submissions as made above, the Petitioner has requested the Commission to re-consider & revise the loss target to a level which is achievable under the circumstances detailed as above.

Commission's analysis

In the ARR Order dated 28th March 2018, the Commission had maintained the loss levels as approved in the MYT Order dated 28th April 2016.

Since the Commission had not restated the T&D loss trajectory based on lower losses in the FY 2014-15 (now attributed to wrong submission of sales in FY 2014-15) in the MYT Order itself, the Commission finds no merit in restating the loss trajectory at this stage. Hence, for the FY 2018-19 the Commission retains the loss level of 12.25% as approved in the ARR Order dated 28th March 2018.

Further, during the Public Hearing several stakeholders have complained about the rampant spread of 'kundi connections' in Chandigarh. The Petitioner has also not submitted the Energy Audit report in spite of repeated directions of the Commission. Furthermore, the Petitioner has already been able to achieve Inter-State Distribution Loss much lower as compared to the level being approved now in FY 2018-19. The Commission notes that contrary to the Petitioner's submission, there is considerable scope for improvement with regard to reduction of T&D losses and the Petitioner would be able to achieve the Loss target for the FY 2018-19.

The following table provides the Intra-State Distribution Loss approved in the ARR Order, the Petitioner's submission and now approved by the Commission.

Table 44: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State Distribution Loss	12.25%	13.25%	12.25%

The Commission approves Intra-State Distribution Loss of 12.25% in the APR of the FY 2018-19

4.6. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner procures power from various sources such as:

- Central Generating Stations (CGS) such as NTPC, NHPC and NPCIL
- Other Generating Stations such as SJVNL, BBMB, THDC and APCPL
- Other Sources such as bilateral agreement, banking arrangement, power exchange, UI etc.

The Petitioner has allocation from Northern as well as Western regions from coal, gas, nuclear and hydro power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner relies on energy exchange and Over-drawl from the grid.

For projecting the energy availability for the FY 2018-19, the Petitioner has considered 6 months actual power purchase. For projecting the remaining six months of power purchase for the FY 2018-19, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification number NRPC/Comml/201/REA/2018/10199-10237 dated 4th September 2018 of the Northern Regional Power Committee.

The revised estimated power purchase cost for FY 2018-19 is presented in the following table:

Table 45: Power Purchase quantum (MU) and cost (In INR Cr) submitted by the Petitioner

Particulars	Approved in T.O. dated 28th March, 2018		Petitioner's submission	
	Units (in MUs)	Cost (in INR. Cr.)	Units (in MUs)	Cost (in INR. Cr.)
NTPC	445.57	151.10	333.70	138.66
NHPC	219.57	65.57	284.09	103.75
APCPL	54.24	22.54	51.97	40.95
NPCIL	166.40	48.40	185.68	67.67
SJVNL	75.48	18.98	119.77	34.04
BBMB	666.90	213.92	645.58	172.71
THDC	113.38	73.32	188.79	98.86
Bilateral/Exchange	213.40	65.73	206.83	64.90
CREST	3.31	2.48	7.70	6.68
Pvt. Solar	0.74	0.66	1.10	0.79
PGCIL Charges		62.71		42.04
NRLDC Charges		4.44		0.17
Reactive Energy				0.95
REC Cost		7.18		3.77
Short-Term Purchase				-
Grand Total	**1,958.99**	**737.02**	**2,025.19**	**775.96**

- The fixed cost for each plant is computed based on the percentage allocation of the plant capacity to the EWEDC and corresponding annual fixed charges approved for the generating stations as per the Tariff Orders for the control period (FY 2014-19) approved by CERC. For generating plants where Tariff Orders are still pending, fixed charges from the first six months of the FY 2018-19 have been considered.
- The variable charges for the thermal and nuclear power plants have been considered based on the actual variable charges during the first six months of the FY 2018-19.
- In case of BBMB the average rate of power as per the recent invoices has been considered for the purpose of projections.
- The generation units available from thermal and nuclear plants are computed considering the average PLF of the plants in the past three years. For hydel plants, the design energy or actual generation in the past three years has been considered as the basis for projections.
- The deficit in energy is proposed to be met through short term power.
- PGCIL, NRLDC and reactive energy charges are computed based upon the half yearly figures available and have been pro-rated for the balance period.

Commission's Analysis:

The Commission while estimating the power purchase quantum and cost for FY 2018-19 has considered the actual quantum and cost of power till September 2018 (H1), as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 6 months of the FY 2018-19 (H2). The methodology followed for projecting the quantum and cost for the remaining months of FY 2018-19 has been discussed as follows:

4.6.1. Availability of power

Availability of energy from APCPL and NTPC Stations:

- The energy availability from APCPL and the NTPC stations except Singrauli, Rihand II, Anta and Auraiya has been estimated based on the average energy available during the months of October – March in the last three financial years FY 2015-16 to FY 2017-18.
- For Singrauli, Rihand II, Anta and Auraiya power stations, quantum of energy available has been considered same as the average energy available during H1 of FY 2018-19, due to intermittent scheduling in the past years.

Availability of energy from NHPC, THDC, BBMB and SJVNL stations:

- The energy availability from all stations of NHPC, THDC, BBMB and SJVNL has been estimated based on the average energy available during the months of October – March in the last three financial years FY 2015-16 to FY 2017-18.
- Energy availability from newly commissioned station of NHPC Kishanganga has been considered on the basis of design energy and share allocated to the Petitioner.

Availability from NPCIL stations:

- The energy availability from Narora Atomic Power Station (NAPS) and Rajasthan Atomic Power Station Unit 3 &4 (RAPS Unit 3&4) have been estimated based on the average energy available during the months of October – March in the last three financial years from FY 2015-16 to FY 2017-18.

- Energy availability for Rajasthan Atomic Power Station Unit 5&6 (RAPS Unit 5&6) has been estimated based on the average energy available during H1 of FY 2018-19, due to increase in allocation.

Availability of power from CREST and other Renewable Energy Sources

- The energy availability from CREST and other Renewable Energy Sources has been considered same as per availability in FY 2017-18 (as per actuals).

- The energy availability from Gross Generation has been considered as per the submissions of the Petitioner.

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

- The Open market purchase and sale for H1 has been considered as per actuals. For the remaining months the quantum for purchase/sale has been considered as estimated in the energy balance, discussed in the subsequent section

- A net return of 0.77 MU of power to the JKPDD under the bilateral agreement has been considered as per the actuals in first 6 months as submitted by the Petitioner. No quantum of energy under banking has been considered for the remaining 6 months of FY 2018-19.

- Quantum under UI Over-drawal/ Under-drawal in H1 of FY 2018-19 has been considered as per actuals. No quantum under UI has been considered for the remaining 6 months of FY 2018-19.

4.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations and Open Market have been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2018 to September 2018 for all the stations.

- The cost towards UI Over-drawal/ Under-drawal has been considered as per actuals incurred by the Petitioner in the first 6 months of FY 2018-19

Fixed Charges:

- Actual Fixed Costs have been considered for the first six months for all stations

- The fixed costs for the remaining months have been considered based on the Tariff Orders issued by the CERC for respective Central Generating Stations

- Fixed cost has been apportioned as per the EWEDC's share in each station and average of the annual plant availability factor achieved during the last few years depending on the commissioning date. The plant availability factor has been limited to 85% for plants having higher availability, in line with the norms specified by CERC.

Other Charges:

- Actual charges have been considered for the first 6 months of the FY 2018-19. No other charges have been considered for the remaining months of the FY 2018-19.

4.6.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL based on the total capacity allocation of the transmission network of the Petitioner.

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and the latest Regional Power Committee reports specifying the station-wise cumulative weighted average share of the various CG Stations allocated to the Petitioner.

4.6.4. Total power purchase quantum and cost

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

Table 46: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC					
Singrauli	5.56	0.86	1.17	(0.01)	2.02
Rihand I	65.77	8.76	6.72	(0.29)	15.19
RihandII	51.52	7.01	4.67	(0.32)	11.35
Rihand III	47.71	6.26	7.16	(0.33)	13.09
Unchahar I	16.45	4.82	1.56	0.11	6.50
Unchahar II	24.79	7.19	2.19	(0.19)	9.19
Unchahar III	10.96	3.25	1.16	0.20	4.61
Unchahar IV	0.00	0.00	0.30	0.05	0.35
Anta	0.27	0.22	5.09	0.22	5.53
Auriya	3.24	1.29	5.53	0.25	7.07
Dadri	21.28	8.05	5.54	1.09	14.69
Kahalgaon II	21.42	4.83	2.29	(0.01)	7.11
Dadri II	10.36	3.49	1.33	0.26	5.08
Koldam Hydro	42.11	10.88	11.38	8.23	30.49
Subtotal - NTPC	**321.44**	**66.91**	**56.10**	**9.25**	**132.27**
NHPC					
Salal	7.95	0.51	0.77	0.23	1.51
Tanakpur	3.48	0.64	1.48	(0.01)	2.11
Chamera I	77.62	9.19	10.55	1.14	20.88
ChameraII	31.90	3.33	3.97	0.58	7.87
Uri	15.88	1.35	2.03	0.44	3.82
Dhauliganga	22.19	2.80	3.34	1.38	7.52
Dulhasti	39.33	11.22	6.04	1.85	19.10
Sewa II	8.14	1.83	2.65	0.04	4.51
Uri II	22.77	5.61	7.42	0.40	13.43
Chamera III	18.95	4.17	4.62	0.00	8.79

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
Parbati-III	13.17	3.74	3.06	0.00	6.81
Kishanganga	11.04	2.26	4.58	0.00	6.83
Subtotal- NHPC	**272.43**	**46.63**	**50.51**	**6.04**	**103.19**
NPCIL					
NAPS	68.68	21.17	0.00	0.90	22.07
RAPP (Unit 3 & 4)-B	20.19	7.03	0.00	0.04	7.07
RAPP (Unit 5 & 6)-C	105.76	43.06	0.00	0.08	43.14
Subtotal- NPCIL	**194.63**	**71.26**	**0.00**	**1.03**	**72.28**
SJVNL					
Nathpa Jhakri	94.76	11.93	11.42	(0.33)	23.02
Rampur	15.66	2.62	2.57	(0.08)	5.11
Subtotal- SJVNL	**110.42**	**14.55**	**13.99**	**(0.41)**	**28.14**
BBMB					
BBMB 3.5%	527.81	72.81	0.00	0.00	72.81
BBMB Dehar	74.78	13.52	0.00	(0.16)	13.35
BBMB Pong	19.72	85.47	0.00	3.91	89.38
Subtotal- BBMB	**622.31**	**171.79**	**0.00**	**3.74**	**175.54**
APCPL					
Jhajjar	39.92	13.79	9.41	0.21	23.41
Subtotal- APCPL	**39.92**	**13.79**	**9.41**	**0.21**	**23.41**
THDC					
Koteshwar	14.48	2.94	5.24	0.27	8.45
Tehri	160.31	44.17	38.91	(0.84)	82.24
Subtotal- THDC	**174.78**	**47.11**	**44.15**	**(0.57)**	**90.68**
RPO					
Crest	7.70	7.38	0.00	0.00	7.38
Pvt. Solar (Net Generated)	1.10	0.92	0.00	(0.01)	0.91
Solar REC	-	-	-	-	-
Non Solar REC	-	2.51	0.00	0.00	2.51
Subtotal- Others	**8.80**	**10.81**	**0.00**	**(0.01)**	**10.80**
Bilateral J&K	0.77	0.00	0.00	0.00	0.00
Unscheduled Interchange (UI) Over-drawal/Under-drawal	88.19	25.56	0.00	0.00	25.56
Open Market Purchase (inclusive Of purchase in H1 of FY 2018-19)	52.20	21.61	0.00	2.43	24.04
Open Market Sale	62.97	26.23	0.00	0.00	26.23
Total	**1,821.39**	**463.81**	**174.16**	**21.71**	**659.68**
Transmission Charges					
PGCIL Charges				48.41	48.41
Other Transmission Charges				1.03	1.03
Subtotal				**49.44**	**49.44**

Details of the stations	Units Purchased (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Other Charges (INR. Cr.)	Total Charges (INR. Cr.)
Total Power Purchase Cost	**1,821.39**	**463.81**	**174.16**	**71.15**	**709.12**

The Commission approves the revised quantum of power purchase as 1,821.39 MU at the UT Periphery with total cost of INR 709.12 Cr in the APR of the FY 2018-19.

4.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

The Petitioner is required to procure power from renewable sources for meeting the RPO. The Petitioner has complied with the RPO, both solar & non-solar, till the FY 2017-18. The RPO requirement for FY 2018-19 and the compliance status as submitted by the Petitioner has been provided in the following table:

Table 47: Effective Energy Sales (Excluding Hydro) for FY 2018-19 as submitted by Petitioner

S. No.	Particular	Formula	FY 2018-19
1	Energy Sales within UT (In MUs)	a	1,636.26
2	Hydro Power Purchase (In MUs)	b	1,282.23
3	Inter-State Loss	c	3.60%
4	Inter-State Loss (In MUs)	d=b*c	46.16
5	Intra-State Loss	e	13.25%
6	Intra-State Loss (In MUs)	f=e*(b-d)	163.78
7	Hydro Power Consumed (In MUs)	g=b-d-f	1,072.29
8	**Conventional Power Consumed (In MUs)**	**h=a-g**	**563.97**

Table 48: RPO Requirement (Solar and Non-Solar) for FY 2018-19 as submitted by Petitioner

Particulars	RPO %	Target		Actual 2018-19 H1 (MU)	RPO to be Procured 2018-19 H2 (MU)
		Conventional Power Consumed (MU)	Units (MU)		
Solar (Gross-metering)	3.60%	563.97	20.30	23.95	-
Non-Solar	5.40%	563.97	30.45	19.60	10.85
Total	**9.00%**		**50.76**	**43.55**	**10.85**

The Petitioner has proposed to fulfill the remaining RPO by way of purchase of Renewable Energy Certificates (REC's). The Cost of the same has been considered in the Overall Power Purchase cost of the Petitioner for FY 2018-19.

Commission's analysis:

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 9.00% of its total consumption through conventional sources (including 3.60% from Solar) from renewable sources for the FY 2018-19.

The effective energy sales used for calculation of the RPO has been arrived at as follows:

Table 49: Effective energy sales (adjusted for hydro) (in MU)

S.No.	Particular	Formula	FY 2018-19
1	Energy Sales within UT	a	1,598.27
2	Hydro Power Purchase FY 2018-19	b	1,267.73
3	Inter-State Loss (%)	c	3.60%
4	Inter-State Loss (MU)	d= c*b	45.69
5	Intra-State Loss (%)	e	12.25%
6	Intra-State Loss (MU)	f=e*(b-d)	149.70
7	Hydro Power Consumed (MU)	g=b-d-f	1,072.35
8	Conventional Power consumed	h= a-g	525.92

The Petitioner has also submitted that it plans to fulfill the RPO target for FY 2018-19 by 31st March 2019. Hence, in accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for the FY 2018-19. The Petitioner has no backlog until FY 2017-18.

Table 50: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2018-19
Sales within State from conventional sources (MU)	525.92
RPO obligation (in %)	**9.00%**
Solar	3.60%
Non-solar	5.40%
RPO obligation for the year (in MU)	**47.33**
Solar	18.93
Non-solar	28.40
Backlog upto FY 2017-18	0.00
Solar	0.00
Non Solar	0.00
Total RPO to be fulfilled for the year	**47.33**
Solar	18.93
Non Solar	28.40
RPO compliance (proposed actual purchase)	
- Solar	26.94
Crest power	*7.70*
Pvt. Solar (Gross Generated)	*19.24*
-Non-solar	0.00
RPO compliance (REC certificate purchase)	**20.39**
- Solar	0.00
-Non-solar	20.39
Total RPO compliance (Physical Purchase+ REC certificate purchase)	**47.33**
- Solar	26.94
-Non-solar	20.39

In the current RPO compliance plan submitted by the Petitioner, the Commission acknowledges the efforts planned to procure more renewables in FY 2018-19. However, the Commission observes that, though the Petitioner is consistently meeting/surpassing its Solar obligations, it is relying on the REC purchases to meet its Non-Solar purchase obligations. The Petitioner has already purchased Non- Solar REC equivalent to 19.60 MU worth INR 2.43 Cr in first half of FY 2018-19. The Commission expects the Petitioner to make all efforts to increase procurement of power from Non-Solar sources. As per the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 dated 22nd August 2016, the Commission has notified the total RPO in terms of percentage of total energy mix of consumption excluding hydropower and has also specified the minimum quantum of Solar RPO to be met out of the total RPO. The Commission has observed that the Licensee has projected over-achievement of Solar RPO. Accordingly, the Commission has considered the cost of entire Solar RPO and adjusted the cost of Non-Solar RPO with the overachievement of Solar RPO. Subsequently, the Commission has considered the remaining shortfall to be fulfilled by way of REC purchase and has assumed the rate of purchase for Non-Solar REC as INR 1.00/kWh (IEX Floor Price). The actual compliance in respect of the pending RPO would be reviewed at the time of true-up and the supporting details such as purchase of RECs, bills from Solar/Non-Solar plants for the year must be submitted.

No cost has been considered for towards procurement from Gross metering and the same shall be considered on actual basis at the time of true-up.

The compliance and cost status towards RPO for FY 2018-19 as approved by the Commission is provided in the table below.

Table 51: Cost towards compliance of Renewable Purchase Obligation (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**26.94**	**8.30**	**3.08**
(a)	*CREST*	7.70	7.38	9.58
(b)	*Pvt. Solar (Gross- Generation)*	19.24		
(i)	*Pvt. Solar (Net- Generation)*	1.10	0.91	8.34
2	**Non-solar**	**20.39**	**2.51**	**1.23**
	Total	**47.33**	**10.81**	**2.28**

The Commission approves INR 10.81 Cr towards compliance of RPO in the APR of FY 2018-19 and the same has been considered in the Power Purchase cost approved for FY 2018-19.

4.8. Energy Balance

Petitioner's submission

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

Table 52: Energy Requirement of the System (MU)

Energy Balance	FY 2018-19
Units Procured	2,016.39
Less: Outside Sale – Trading	84.60
Energy Available	1,931.79
Inter-State Transmission Loss	3.60%
Transmission Loss (MU)	69.54
Net Energy Available at UT Periphery	**1,862.24**
Power procured from Gross & NET Metering Mode (In MUs)	23.95
Total Energy Available	**1,886.19**

Energy Balance	FY 2018-19
Actual Energy Sales (MU)	1,636.26
T&D Loss (%)	13.25%
T&D Loss (in MUs)	249.92
Total Energy Required at UT Periphery (MUs)	**1,886.18**
Demand Supply Gap / (Surplus)	**0.00**

Commission's analysis

Based on the revised estimates of energy sales and power purchase quantum, the Commission approves the following energy balance:

Table 53: Energy Balance approved (MU)

Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
ENERGY REQUIREMENT			
Energy sales within the State/UT	1,654.68	1,636.26	1,598.27
Distribution losses			
%	12.25%	13.25%	12.25%
MU	231.00	249.92	223.12
Energy required at State Periphery	**1,885.68**	**1,886.18**	**1,821.39**
Energy Availability of Discom			
Availability from firm sources outside UT - @Ex-bus	1,741.54	2,016.39	1,836.56
Availability from UI Over-drawal/ Under-drawal	0.00	0.00	91.49
Less: Sale in Open Market	0.00	84.60	65.32
Less: Bilateral transfer to J&K	0.00	0.00	0.77
Total Availability from Outside UT	**1,741.54**	**1,931.79**	**1,861.96**
PGCIL losses			
%	4.21%	3.60%	3.60%
MU		69.54	67.10
Availability from firm sources outside UT - @UT Periphery	**1,668.23**	**1,862.25**	**1,794.86**
Availability from within UT	4.05	23.95	8.80
Deficit/(Surplus)	**213.40**	**0.00**	**17.73**

The Commission has estimated a deficit of 17.73 MU and has assumed that the deficit power will be procured from Open Market in H2 of FY 2018-19. The cost towards procurement of this deficit power has been included by the Commission in power procurement cost approved in the earlier section.

4.9. Operation & Maintenance Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

4.9.1. Employee Expenses

Petitioner's submission

The Petitioner has considered the same employee expenses as approved by the Commission in the Tariff Order of FY 2018-19 dated 28th March 2018.

Commission's analysis

According to the regulations, the Commission doesn't allow any deviation in the employee expenses approved and considers the Employee Expenses at the same level as approved in the ARR Order for FY 2018-19.

Table 54: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	74.38	74.38	74.38

The Commission approves employee expenses of INR 74.38 Cr in the APR of the FY 2018-19.

4.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has considered the same A&G expenses as approved by the Commission in the Tariff Order of FY 2018-19 dated 28th March 2018.

Commission's analysis

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

Table 55: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	7.10	7.10	7.10

The Commission now approves the Administrative & General (A&G) expenses of INR 7.10 Cr in the APR of the FY 2018-19.

4.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has considered the same R&M expenses as approved by the Commission in the Tariff Order of FY 2018-19 dated 28th March 2018.

Commission's analysis

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

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

Table 56: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Repair & Maintenance Expenses (R&M)	10.51	10.51	10.51

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.51 Cr in the APR of the FY 2018-19.

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

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

Table 57: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	74.38	74.38	74.38
2	Administrative & General Expenses (A&G)	7.10	7.10	7.10
3	Repair & Maintenance Expenses	10.51	10.51	10.51
	Total Operation & Maintenance Expenses	**91.99**	**91.99**	**91.99**

The Commission approves the Operation & Maintenance (O&M) expenses of INR 91.99 Cr in the APR of the FY 2018-19.

4.10. Capital Expenditure and Capitalisation

Petitioner's submission

The Petitioner has proposed the capital expenditure and capitalisation during the FY 2018-19 based on the actual capital expenditure and capitalisation incurred in the first half of FY 2018-19. The Petitioner has submitted that the actual capitalisation achieved in the first 6 months of FY 2017-18 is INR 4.07 Cr.

The following table provides the capital expenditure and capitalisation for first 6 months of FY 2018-19 and proposed during the remaining period by the Petitioner.

Table 58: Revised submission for capitalisation (In INR Cr)

Sr. No.	Particulars	Approved in ARR Order	FY 2018-19 Apr-Sep (Actual)	FY 2018-19 (RE)
1	Capital Expenditure	11.50	14.46	28.92
2	Capitalisation	11.50	4.07	15.95

Commission's analysis

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. The Commission has gone through the submissions of the Petitioner and found them to be in order. The Commission for the FY 2018-19 approves the capital expenditure and capitalisation as proposed by the Petitioner.

The Commission takes a serious note of the inability of the Petitioner to meet the approved capitalisation targets. In the current year, the Petitioner has managed to achieve 25% of the capitalisation proposed during the year. The Commission cautions the Petitioner that such slow pace of implementation will have a substantial bearing on its revenue, will be detrimental to its own financial health and at the same time will have an impact on the quality of power supplied to the consumers. Hence, the Commission directs the Petitioner to expedite its efforts towards achieving capitalisation approved by the Commission during each year.

In accordance with the submission of the Petitioner, the Commission approves the capital expenditure and capitalisation for the year as shown in the following table:

Table 59: Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	11.50	28.92	28.92
2	Capitalisation	11.50	15.95	15.95

The Commission approves capital expenditure of INR 28.92 Cr and capitalisation of INR 15.95 Cr in the APR of the FY 2018-19.

4.11. Capital Structure

Petitioner's Submission

The entire capital deployment shall be through equity for the FY 2018-19.

Commission's analysis

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

"The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans

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

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

In accordance with the MYT Regulations, 2014 the Commission has determined the Capital Structure for FY 2018-19 as shown below. The Opening GFA has been revised by the Commission based on the revised closing GFA approved for FY 2017-18.

The Commission has accordingly determined the Capital Structure for FY 2018-19 as follows:

Table 60: Funding Plan approved by the Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capitalisation	11.50	15.95	15.95
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	8.05	11.17	11.17
5	Equity	3.45	4.79	4.79

Table 61: GFA addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	411.87	437.38	437.38
2	Addition During the FY	11.50	15.95	15.95
3	Adjustment/Retirement During the FY	0.00	0.00	-
4	Closing Gross Fixed Assets	423.37	453.33	453.33

Table 62: Normative Loan addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	14.14	44.13	13.47
2	Add: Normative Loan During the year	8.05	11.17	11.17
3	Less: Normative Repayment equivalent to Depreciation	11.94	16.79	16.91
4	Closing Normative Loan	10.25	38.51	7.72

Table 63: Normative Equity addition approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	123.56	131.21	125.26
2	Additions on account of new capitalisation	3.45	4.79	4.79
3	Closing Equity	127.01	136.00	130.04

4.12. Depreciation

Petitioner's submission

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

Commission's analysis

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

"

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

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

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

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

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

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

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

Table 64: Depreciation Rate (%)

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

As discussed in the True-up of FY 2017-18, the Commission has determined the revised GFA after deducting the value of assets that have achieved 90% depreciation. The closing GFA of FY 2017-18 as approved in the True-up has been considered as opening GFA of FY 2018-19. Further, depreciation has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during the year.

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

Table 65: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Closing GFA approved in the True-up of FY 2017-18 (a)	-	-	437.38
2	Less: Assets depreciated upto 90% (b)	-	-	114.20
3	Opening Gross Fixed Assets (a-b)	411.87	437.38	323.18
4	Addition During the FY	11.50	15.95	15.95
5	Adjustment/Retirement During the FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	423.37	453.33	339.13
7	Average Gross Fixed Assets	417.62	445.36	331.16

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
8	Effective Rate of Depreciation (%)	2.86%	3.77%	5.11%
	Depreciation	11.94	16.79	16.91

The Commission now approves depreciation of INR 16.91 Cr in the APR of the FY 2018-19.

4.13. Interest on Loan

Petitioner's submission

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

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

Commission's analysis:

The Petitioner in reply to the 2nd Discrepancy Note has submitted that the complete capitalisation during the year shall be funded by equity and no loan shall be taken during the year.

As per the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the capitalisation of assets as approved earlier. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30. Repayment has been considered equivalent to depreciation allowed during the year.

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

Further, in accordance with the MYT Regulations, 2014, the Interest on Loan has been calculated on the average loan during the year with the opening loan considered equivalent to the closing loan approved in the True-up of the FY 2017-18. The net addition in overall loan portfolio has been considered on normative basis as explained above and the repayment is considered equivalent to depreciation during the year.

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

Table 66: Interest on Loan approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	14.14	44.13	13.47
2	Add: Normative Loan During the year	8.05	11.17	11.17
3	Less: Normative Repayment equivalent to Depreciation	11.94	16.79	16.91
4	Closing Normative Loan	10.25	38.51	7.72
5	Average Normative Loan	12.19	41.32	10.59
6	Rate of Interest (%)	13.40%	13.45%	13.45%
	Interest on Loan	1.63	5.56	1.42

The Commission approves Interest on Loan of INR 1.42 Cr in the APR of the FY 2018-19.

4.14. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2014, and is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to the closing equity for the FY 2017-18 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. Accordingly, the EWEDC has computed the Return on Equity at 16% on post tax basis.

Commission's analysis:

As mentioned above, the complete asset capitalisation during the year has been funded by equity, but the Commission for the purpose of equity addition during the year has limited it to 30% of the total capitalisation as prescribed in the MYT Regulations, 2014.

The RoE has been calculated on the average of opening and closing of equity during the year at the rate of 16% (on post-tax basis) with the opening equity considered equivalent to the closing equity of the FY 2017-18 approved in the True-up. The following table provides the RoE approved in the ARR Order, the Petitioner's submission and the RoE now approved by the Commission.

Table 67: RoE approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	123.56	131.21	125.26
2	Additions on account of new capitalisation	3.45	4.79	4.79
4	Closing Equity	127.01	136.00	130.04
5	Average Equity	125.29	133.61	127.65
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	20.05	21.38	20.42

The Commission approves the Return on Equity of INR 20.42 Cr in the APR of the FY 2018-19. Any Income Tax, paid by the Petitioner on return on equity, shall be allowed by the Commission at the time of true up based on actual figures.

4.15. Interest on Consumer Security Deposits

Petitioner's submission

Interest on consumer security has been calculated on normative basis with addition of INR 8.00 Cr proposed during the year. An amount of INR 4.05 Cr has been added in the first 6 months of FY 2018-19.

Commission's analysis:

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2014, based on the average of the opening and closing consumer security deposits during the year. In accordance with the Petitioner's submission, the Commission has considered a net addition of INR 8.00 Cr in the consumer security deposits during the year. The rate of interest has been considered equivalent to RBI Bank Rate as on 1st April 2018.

The table below provides the calculation of interest on consumer security deposits for the year.

Table 68: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	152.81	190.96	190.96
2	Net addition during the year	5.00	8.00	8.00
3	Closing Security Deposit	157.81	198.96	198.96
4	Average Security Deposit	155.31	194.96	194.96
5	Rate of Interest (%)	6.25%	6.25%	6.25%
	Interest on Security Deposit	9.71	12.19	12.19

The Commission approves Interest on Security Deposit as INR 12.19 Cr in the APR of the FY 2018-19.

4.16. Interest on Working Capital

Petitioner's submission

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

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The Interest on Working Capital is computed at the SBI base rate as on 1st April, 2018 at 8.70%.

Commission's analysis:

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

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

The actual Working Capital requirement, after deduction of the amount of average Consumer Security Deposit during the year is coming out to be negative. Thus, the Interest on Working Capital has been considered as Nil, as shown in the table below:

Table 69: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	140.91	141.72	137.85
2	Less: Power Purchase Cost for one month	61.43	64.66	59.09

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
3	Inventory Based on Annual Requirement for Previous FY for 2 months	4.08	2.57	2.57
4	Total Working Capital Requirement	83.56	79.63	81.32
5	Less: Security Deposit excluding BG/FDR	155.31	198.96	194.96
6	Net Working Capital	(71.75)	(119.33)	(113.64)
7	Rate of Interest (%)	8.65%	8.70%	8.70%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

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

4.17. Income Tax

Petitioner's submission

No submissions have been made in this regard.

Commission's analysis:

For the FY 2018-19 no income tax liability is computed and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

Table 70: Income tax approved by Commission (In INR Cr)

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

The Commission approved Nil income tax liability for the FY 2018-19.

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

The Commission has not considered any provision for Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of the FY 2018-19.

4.19. Non-Tariff Income

Petitioner's submission

The non-tariff income for the FY 2018-19 has been estimated as INR 40.30 Cr based on the actual non-tariff income in the first 6 months of FY 2018-19.

Commission's analysis:

In absence of any precise methodology for projecting the NTI, the Commission, for the APR of FY 2018-19 has considered the same NTI as approved by the Commission in the True-up of FY 2017-18. 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 71: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Non- Tariff Income**	**26.99**	**40.30**	**24.97**

The Commission now approves Non-Tariff Income of INR 24.97 Cr in the APR of the FY 2018-19.

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses detailed above, the net aggregate revenue requirement of INR 853.15 Cr is submitted after adjusting the Non -Tariff Income for the FY 2018-19.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the revenue requirements in the APR of the FY 2018-19 are approved as follows:

Table 72: Aggregate Revenue Requirement approved by the Commission for the FY 2018-19 (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost (inclusive of cost towards RPO and adjusting for sale of surplus power)	737.02	745.54	709.12
2	Operation & Maintenance Expenses	91.99	91.99	91.99
3	Depreciation	11.94	16.79	16.91
4	Interest on Loan	1.63	5.56	1.42
5	Return on Equity	20.05	21.38	20.42
6	Interest on Security Deposit	9.71	12.18	12.19
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	0.00	0.00
10	**Total Revenue Requirement**	**872.34**	**893.44**	**852.06**
11	Less: Non-Tariff Income	26.99	40.30	24.97
12	**Net Revenue Requirement**	**845.35**	**853.15**	**827.09**

The Commission approves the net ARR of INR 827.09 Cr in the APR of the FY 2018-19.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has calculated the revenue from sale of power at existing tariff on the basis of energy sales in the territory for the FY 2018-19 of INR 850.31 Cr. Besides INR 21.80 Cr has been billed as FPPCA during the first 6 months of the FY 2018-19 and the same has been considered in the total revenue for the FY 2018-19. Further a revenue from Regulatory Surcharge imposed during FY 2018-19 has been estimated as INR 42.52 Cr.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2018-19. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not considered the revenue from Regulatory Surcharge along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for FY 2018-19. The FPPCA recovered in H1 FY 2018-19 has also been considered while approving the revenue gap/ surplus for FY 2018-19. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2018-19 has been shown in the following table.

Table 73: Revenue at existing tariff computed by Commission (In INR Cr)

S. No	Category	Energy Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
1	**DOMESTIC SUPPLY (DS)**	**750.69**	**11.02**	**332.26**	**343.27**	**4.57**
1	0-150 units	187.50	3.51	51.56	55.07	2.94
2	151-400 units	304.06	3.95	145.95	149.90	4.93
3	401 and above units	259.12	3.56	134.74	138.31	5.34
2	**COMMERCIAL / NON RESIDENTIAL (NRS)**	**516.80**	**43.04**	**288.59**	**331.63**	**6.42**
1	0-150 units (Single Phase)	3.76	1.05	1.88	2.93	7.78
2	151-400 units (Single Phase)	11.63	0.65	6.17	6.82	5.86
3	401 and above units (Single Phase)	218.70	1.28	122.47	123.75	5.66
1	0-150 units (Three Phase)	1.71	1.16	0.86	2.02	11.80
2	151-400 units (Three Phase)	4.72	0.91	2.50	3.41	7.22
3	401 and above units (Three Phase)	276.27	37.99	154.71	192.70	6.97
3	**INDUSTRY**	**257.83**	**29.93**	**124.96**	**154.89**	**6.01**
1	Large Industrial Power Supply (LS)	119.85	14.16	59.93	74.09	6.18
2	Medium Industrial Power Supply (MS)	119.33	15.05	56.08	71.13	5.96
3	Small Industrial Power Supply (SP)	18.65	0.71	8.95	9.67	5.18
4	**AGRICULTURAL PUMPING SUPPLY(AR)**	**1.31**	**0.00**	**0.38**	**0.38**	**2.90**
1	Agricultural Pumping Supply	1.31	0.00	0.38	0.38	2.90
5	**PUBLIC LIGHTING (PL)**	**11.86**	**0.83**	**6.34**	**7.17**	**6.05**
6	**BULK SUPPLY (BS)**	**54.47**	**10.16**	**26.69**	**36.85**	**6.77**

S. No	Category	Energy Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
1	Bulk Supply	54.47	10.16	26.69	36.85	6.77
7	**TEMPORARY SUPPLY**	**5.32**	**0.00**	**4.31**	**4.31**	**8.10**
1	Temporary Supply	5.32	0.00	4.31	4.31	8.10
	TOTAL	**1,598.27**	**94.98**	**783.53**	**878.50**	**5.50**

The Commission has determined revenue from sale of power at existing tariff as INR 878.50 Cr in the APR of the FY 2018-19.

4.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue surplus of INR 61.48 Cr is arrived at in the APR for the FY 2018-19.

Commission analysis

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

Table 74: Standalone Revenue Gap/ (Surplus) at existing tariff (In INR Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Annual Revenue Requirement	845.35	853.15	827.09
2	Revenue from sale of power at existing tariff	862.60	850.31	878.50
3	FPPCA	0.00	21.80	21.80
4	Regulatory Surcharge	43.13	42.52	43.93
	Revenue Gap/(Surplus)	**(60.38)**	**(61.48)**	**(117.14)**

The standalone surplus at existing retail tariff is INR 117.14 Cr in the APR of the FY 2018-19. The estimated surplus is carried over to the next year and has been considered while determining the tariff for the FY 2019-20.

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

5.1. Background

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

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

The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for each year based on figures approved in the Business Plan Order dated 12th November 2018, the actual information available of various parameters for the FY 2017-18 as per the audited accounts and the provisional information available for the FY 2018-19. The ARR has been determined for each year of the Control Period whereas the revenue at existing tariff is determined only for the FY 2019-20 to arrive at the revenue gap/surplus for the FY 2019-20.

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

Petitioner's Submission

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

Table 75: Number of consumers submitted by the Petitioner for the MYT Control Period

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	200,095	203,657	207,282
Commercial	25,348	26,043	26,757
Large Industrial supply	97	97	97
Medium Industrial supply	1,382	1,422	1,464
Small Industrial Supply	1,285	1,287	1,289
Agriculture	124	124	124
Public lighting	1,371	1,479	1,595
Bulk supply	742	814	893
Temp. Supply	386	386	386
Total	**230,830**	**235,309**	**239,887**

Table 76: Connected load submitted by the Petitioner for the MYT Control Period (kW)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	938,552	970,275	1,003,070
Commercial	467,112	485,890	505,423
Large Industrial supply	69,431	69,431	69,431
Medium Industrial supply	77,008	79,441	81,951
Small Industrial Supply	20,022	20,176	20,331
Agriculture	879	897	916
Public lighting	7,368	7,689	8,023
Bulk supply	42,573	42,799	43,026
Temp. Supply	2,191	2,191	2,191
Total	**1,625,136**	**1,678,789**	**1,734,362**

Table 77: Energy sales submitted by the Petitioner for the MYT Control Period (MU)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	787.86	817.41	848.06
Commercial	521.46	535.75	550.43
Large Industrial supply	119.85	119.85	119.85
Medium Industrial supply	128.35	133.11	138.05
Small Industrial Supply	20.00	20.26	20.52
Agriculture	1.49	1.52	1.55
Public lighting	17.73	17.73	17.73
Bulk supply	84.15	85.99	87.86
Temp. Supply	4.40	4.40	4.40
Total	**1,685.30**	**1,736.02**	**1,788.45**

Commission's Analysis

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

Table 78: Number of consumers approved by the Commission for the MYT Control Period

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	200,095	203,657	207,282
Commercial	25,348	26,043	26,757
Large Industrial supply	97	97	97
Medium Industrial supply	1,382	1,422	1,464
Small Industrial Supply	1,285	1,287	1,289
Agriculture	124	124	124
Public lighting	1,371	1,479	1,595
Bulk supply	742	814	893
Temp. Supply	386	386	386
Total	**230,830**	**235,309**	**239,887**

Table 79: Connected load approved by the Commission for the MYT Control Period (kW)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	938,552	970,275	1,003,070
Commercial	467,112	485,890	505,423
Large Industrial supply	69,431	69,431	69,431
Medium Industrial supply	77,008	79,441	81,951
Small Industrial Supply	20,022	20,176	20,331
Agriculture	879	897	916
Public lighting	7,368	7,689	8,023
Bulk supply	42,573	42,799	43,026
Temp. Supply	2,191	2,191	2,191
Total	**1,625,136**	**1,678,789**	**1,734,362**

Table 80: Energy sales approved by the Commission for MYT Control Period (MU)

Category	FY 2019-20	FY 2020-21	FY 2021-22
Domestic	787.86	817.41	848.06
Commercial	521.46	535.75	550.43
Large Industrial supply	119.85	119.85	119.85
Medium Industrial supply	128.35	133.11	138.05
Small Industrial Supply	20.00	20.26	20.52
Agriculture	1.49	1.52	1.55
Public lighting	17.73	17.73	17.73
Bulk supply	84.15	85.99	87.86
Temp. Supply	4.40	4.40	4.40
Total	**1,685.30**	**1,736.02**	**1,788.45**

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

5.4. Inter-State transmission loss

Petitioner's submission

The Petitioner has considered the Inter-State Transmission Loss of 3.60% for each year, same as per actuals incurred in FY 2017-18.

Commission's analysis

The Commission considers the transmission loss levels for each year of the control period in line with those approved in the APR of FY 2018-19. The same shall be revised based on actuals during the True-up exercise.

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

Table 81: Inter-State transmission loss (%)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Inter-State Transmission Losses	3.60%	3.60%	3.60%

The Commission approves an Inter-State Transmission Loss of 3.60% for each year of the MYT Control Period.

5.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner submitted that while the sales have increased in the last three years, losses have remained stagnant without much improvement as majority of the increase in the sales has happened in the LT category. Various technical and technological improvements proposed under IPDS and other schemes shall be useful in bringing about the desired reduction in loss levels. Since these schemes are currently under implementation, the Petitioner requests the Commission to revise the T&D loss level approved in the Business Plan Order for the MYT Control Period.

The Petitioner re-iterated that the T&D loss of 9.51% in FY 2017-18 cannot be taken as base for determination of future loss trajectory. The sharp fall in T&D losses in the FY 2017-18 has primarily been on account of the following factors which might not be relevant in the upcoming MYT Control Period:

- There has been increase in energy sale through UI/exchange from 36.76 MUs in FY 2016-17 to 131.74 MUs in FY 2017-18.
- The excess energy sales were due to return of 48 MUs towards banked units to J&K during the FY 2017-18 against energy received in the FY 2015-16 & FY 2016-17 and sale of excess power through UI/exchange during different intervals of time.

Therefore, in line with the above, the Petitioner has considered the actual loss level of 13.65% for the FY 2016-17 as base and has projected 0.20% reduction in loss y-o-y and accordingly considered 13.05%, 12.85% and 12.65% Intra-State Distribution Loss for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

In addition to above, the Petitioner submitted that the energy input to the UT is metered outside its territory and hence it has to bear the additional losses of the interstate circuit due to not having any interstate point in its boundary.

Therefore, in view of all of the submissions as made above, the Petitioner has requested the Commission to re-consider & revise the Intra-State distribution loss trajectory for the MYT Control Period to a level which is achievable under the circumstances as discussed.

Commission's analysis

The Commission, in the Business Plan Order, had discussed this issue in detail and had approved the Intra-State Distribution Loss trajectory for the MYT Control Period. The Petitioner has not made any additional submission to substantiate the year-wise intra-state T&D loss trajectory for the 2nd MYT Control Period. Hence, the Commission approves the same intra-state T&D Loss trajectory as approved in the Business Plan Order.

The table below provides the Intra-State Distribution Loss approved for the MYT Control Period.

Table 82: Intra-State Distribution Loss (%)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Intra-State Distribution Loss	9.40%	9.30%	9.20%

The Commission approves the Intra-State Distribution Loss of 9.40% for FY 2019-20, 9.30% for FY 2020-21 and 9.20% for FY 2021-22.

5.6. Power Purchase Quantum & Cost

Petitioners Submission

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

1. Power Purchase Quantum:

The Petitioner has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, NPCIL, NHPC, BBMB, SJVNL, APCPL etc.

The power availability for each year has been estimated based on the revised allocation issued by the Northern Regional Power Committee against the Ministry of Power letter No. NRPC/Comml/201 REA/2018/ 10199-10237 dated 4th Sep 2018. The energy allocation from various generating stations has been shown as follows:

Table 83: Energy Allocation as submitted by the Petitioner (MW)

Name of Plant	Plant Capacity (MW)	Avg. EWEDC Allocation (%)	EWEDC Allocation (MW)
NTPC Stations			
Singrauli	2,000	0.20	4.00
Rihand-I	1,000	1.00	10.00
Rihand-II	1,000	0.80	8.00
Rihand-III	1,000	0.55	5.50
Unchahar-I	420	0.48	2.02
Unchahar-II	420	0.71	2.98
Unchahar-III	210	0.48	1.01
Unchahar-IV	500	0.87	4.33
Anta	419	1.19	4.99
Auriya	663	0.75	4.97
Dadri GPP	830	0.61	5.06
Kahalgaon-II	1,500	0.20	3.00
Dadri-II	980	0.22	2.16
Koldam- Hydro	800	0.79	6.32
NHPC			
Salal	690	0.27	1.86
Tanakpur	94	1.28	1.20
Chamera-I	540	3.90	21.06
Chamera-II	300	0.67	2.01
Uri	480	0.62	2.98

Name of Plant	Plant Capacity (MW)	Avg. EWEDC Allocation (%)	EWEDC Allocation (MW)
Dhauliganga	280	0.72	2.02
Dulhasti	390	0.47	1.83
Sewa II	120	0.83	1.00
Uri II	240	0.63	1.51
Chamera III	231	0.60	1.39
Parbati-III	520	0,60	3.12
Kishanganga	330	1.79	5.91
NPCIL			
NAPS	440	1.14	5.02
RAPP (Unit 3 & 4)-B	66	3.18	2.10
RAPP (Unit 5 & 6)-C	440	0.68	2.99
SJVNL			
Nathpa Jhakri	1,500	0.53	7.95
Rampur	137	0.79	1.08
BBMB			
BBMB 3.5%	1,325	3.5	46.38
BBMB 1 LU- Dehar	990	3.5	34.65
BBMB 10 LU- Pong	360	3.5	12.60
APCPL			
Jajjar	1,500	0.43	6.45
THDC			
Koteshwar	400	0.36	1.44
Tehri	1,000	0.60	6.00

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

NTPC: The net energy generated from NTPC stations has been estimated by considering average PLF of past three years and normative auxiliary consumption as per CERC Tariff Regulations. Based upon the generated energy from each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

NHPC: The energy generated from NHPC stations has been estimated by considering design energy of the corresponding stations. Based upon the energy generated by each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

NPCIL: The energy generated from NPCIL stations has been estimated by considering the average PLF of the past three years. Based upon the generated energy from each plant and its corresponding entitlement to the UT of Chandigarh, the energy availability has been calculated.

SJVNL: The estimation of energy generated from the Nathpa Jhakri generating station has been done based upon the average generation in past three years while for the Rampur hydro station is estimated by considering the design energy of the power plant. Based upon the generated energy from each plant, the energy availability to the UT of Chandigarh has been calculated.

BBMB: The UT of Chandigarh has been allocated fix quota of 1 Lakh Units (LU) and 10 LU per day from the BBMB plant. In addition to that 3.50% of the plant capacity has been allocated to the UT of Chandigarh. The availability of power from BBMB has been considered based on the average generation in the past three years.

THDC: The energy generation from the Koteshwar and Tehri plants has been estimated based upon the average generation in the past three years while the energy available to the UT of Chandigarh for the Control Period has been calculated based upon the entitlement.

2. Power Purchase Cost:

The Petitioner has estimated the Power Purchase Cost for the MYT Period based on the station wise actual power purchase cost of FY 2017-18, provisional cost of six months for FY 2018-19 and the Tariff Orders issued by CERC for FY 2014-19 period. The assumptions considered for projection of power purchase cost from various generating stations are detailed as follows:

- The Fixed Cost for each plant is computed based upon the percentage allocation of the plant capacity to EWEDC and the corresponding annual fixed charges approved for the generating stations as per their recent Tariff Orders for the control period (FY 2014-19) approved by CERC.
- The Variable Charges for thermal plants are computed by escalating the variable charges for FY 2018-19 by 5% and multiplying them with the number of available units for the year.
- In case of hydro plants the variable charge has been computed based on the annual charges and design energy of the plant
- Variable Charges for BBMB plants have been considered as per the average rate in last twelve months along with the annual fixed charges and operation and maintenance charges towards the allocation of 3.50% share.
- PGCIL Charges, NRLDC Charges, Reactive Energy charges are computed at an escalation of 5% y-o-y over actuals billed per unit for FY 2018-19.
- Shortfall in power after accounting for energy availability from all stations and towards a portion of RPO obligation has been considered to be met from short term sources. The rate of short-term power has been projected by escalating the average per unit cost for the FY 2018-19 by 5% y-o-y.

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

Table 84: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for the MYT Control Period

S. No.	Source	Name of Project	FY 2019-20		FY 2020-21		FY 2021-22	
			Quantum (MU)	Cost (INR Cr)	Quantum (MU)	Cost (INR Cr)	Quantum (MU)	Cost (INR Cr)
1	NTPC	Singrauli	4.08	0.81	4.08	0.85	4.08	0.89
2		Rihand I	69.49	14.20	69.49	14.91	69.49	15.65
3		Rihand II	56.00	11.01	56.00	11.56	56.00	12.14

S. No.	Source	Name of Project	FY 2019-20		FY 2020-21		FY 2021-22	
			Quantum (MU)	Cost (INR Cr)	Quantum (MU)	Cost (INR Cr)	Quantum (MU)	Cost (INR Cr)
4		Rihand III	39.13	10.44	39.13	10.96	39.13	11.51
5		Unchahar I	12.70	5.56	12.70	5.84	12.70	6.13
6		Unchahar II	19.43	7.98	19.43	8.38	19.43	8.80
7		Unchahar III	6.61	3.31	6.61	3.48	6.61	3.65
8		Unchahar IV	-	-	-	-	-	-
9		Anta	23.64	34.05	23.64	35.75	23.64	37.54
10		Auriya	8.78	12.91	8.78	13.56	8.78	14.24
11		Dadri	40.82	29.75	40.82	31.24	40.82	32.80
12		Kahalgaon II	18.49	6.55	18.49	6.87	18.49	7.22
13		Dadri II	1.58	0.31	1.58	0.33	1.58	0.34
14		Koldam Hydro	54.40	39.89	54.40	41.88	54.40	43.98
15	NHPC	Salal	9.94	1.61	9.94	1.69	9.94	1.78
16		Tanakpur	5.74	2.12	5.74	2.22	5.74	2.33
17		Chamera I	100.71	22.06	100.71	23.16	100.71	24.32
18		Chamera II	50.87	10.51	50.87	11.04	50.87	11.59
19		Uri	18.94	3.66	18.94	3.85	18.94	4.04
20		Dhauliganga	26.20	8.63	26.20	9.06	26.20	9.51
21		Dulhasti	53.72	30.68	53.72	32.22	53.72	33.83
22		Sewa II	13.81	6.87	13.81	7.21	13.81	7.57
23		URI II	33.68	15.18	33.68	15.94	33.68	16.74
24		Chamera III	25.90	11.95	25.90	12.55	25.90	13.18
25		Parbati-III	17.44	8.94	17.44	9.39	17.44	9.86
26		K. Ganga	19.13	6.66	19.13	6.99	19.13	7.34
27	APCPL	Jhajjar (Aravali)	54.84	44.34	54.84	46.56	54.84	48.88
28	NPCIL	NAPP	82.47	29.36	82.47	30.82	82.47	32.36
29		RAPP (#3 and #4)	2.93	1.05	2.93	1.10	2.93	1.15
30		RAPP (#5 and #6)	105.35	43.63	105.35	45.81	105.35	48.10
31	SJVNL	NATHPA JHAKRI	129.19	32.06	129.19	33.66	129.19	35.34
32		Rampur	21.36	7.64	21.36	8.02	21.36	8.43
33	BBMB	BBMB 3.5%	290.14	0.00	290.14	-	290.14	-
34		BBMB 1 LU	41.11	5.56	41.11	5.84	41.11	6.14
35		BBMB 10 LU	10.84	79.08	10.84	83.04	10.84	87.19
39		DEHAR	-	21.28	-	22.35	-	23.47
40		PONG	-	0.14	-	0.14	-	0.15
41	THDC	Koteshwar	19.30	14.82	19.30	15.56	19.30	16.34
42		Tehri	179.37	91.51	179.37	96.09	179.37	100.89
43		PTC REC		6.99		9.62		18.58
44		UI/Deviation		87.71		107.01		128.58
45		Crest		8.57		10.53		14.85
46		Pvt.solar		1.04		1.28		1.80
		Total	**1,668.13**	**780.42**	**1,668.13**	**838.36**	**1,668.13**	**909.22**

Transmission Charges

The transmission charges payable to PGCIL are projected based on the total capacity allocation in the transmission network.

An y-o-y escalation of 5% over the estimated transmission charges for the FY 2018-19 has been considered for projecting the PGCIL transmission charges for the Control Period

Table 85: Transmission charges submitted by Petitioner (In INR Cr)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
PGCIL CHARGES	44.14	46.35	48.67
NRLDC Charges	0.18	0.19	0.20
Reactive Energy Charges	-	-	-
Total	**44.32**	**46.54**	**48.86**

Commission's Analysis

The Commission for the purpose of estimating the quantum and cost of power purchase for each year has relied on the station wise quantum approved in the Business Plan Order, actual energy availability for FY 2015-16, FY 2016-17 and FY 2017-18, provisional energy availability for first six months (H1) of FY 2018-19, actual Plant availability factor (PAF) and Plant Load Factor (PLF) for last 3-5 years for each station, allocated share to the Petitioner and norms and cost approved in Tariff Orders for Central Generating Stations approved by CERC.

The source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

5.6.1. Availability of power

Availability of energy from APCPL and NTPC Stations:

- The energy availability from APCPL and the NTPC stations except Unchahar II, Anta, Auraiya, Dadri and Dadri II power stations has been considered the same as approved in the Business Plan Order based on the average PLF of each station in the last 3-5 years.

- For Unchahar II, Anta, Auraiya, Dadri and Dadri II power stations, quantum of energy available has been considered same as estimated in FY 2018-19 due to intermittent scheduling in the past years and change in allocated share.

Availability of energy from NHPC, THDC, BBMB and SJVNL stations:

- The energy availability from all stations of NHPC, THDC, BBMB and SJVNL has been considered based on average energy available in the last three financial years from FY 2015-16 to FY 2017-18 and energy available in H1 FY 2018-19 on provisional basis.

- Energy availability from newly commissioned station of NHPC Kishanganga has been considered on the basis of design energy and share allocated to the Petitioner.

Availability from NPCIL stations:

- The energy availability from Narora Atomic Power Station (NAPS) and Rajasthan Atomic Power Station Unit 3&4 (RAPS Unit 3&4) has been estimated based on average energy available in the last three financial years from FY 2015-16 to FY 2017-18 and energy available in H1 FY 2018-19 on provisional basis.

- Energy availability for Rajasthan Atomic Power Station Unit 5&6 (RAPS Unit 5&6) has been considered same as FY 2018-19 on account of increase in allocation in FY 2018-19.

Availability of power from CREST and other Renewable Energy Sources

- The energy availability from CREST has been considered the same as approved in FY 2018-19.
- The energy availability from Gross Generation has been considered as per submissions of the Petitioner.

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

- The energy deficit for the each year, as discussed in the section of energy balance, has been assumed to be procured from the Open Market.
- No power has been projected under UI and Banking for any year.

5.6.2. *Power Purchase Cost*

Variable Charges:

- The per unit variable costs for various power stations and Open Market has been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2018 to September 2018. Y-o-y escalation of 5% has been considered over the actual per unit variable cost to arrive upon the variable per unit cost for each year

Fixed Charges:

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

Other Charges:

Other charges have not been considered for the MYT Control Period. The same shall be considered as per actuals during the True-up/APR of each year.

5.6.3. *Transmission Charges*

The Commission has projected the transmission charges payable to PGCIL based on the total capacity allocation of the Petitioner of the transmission network.

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 and the latest Regional Power Committee reports specifying the station-wise cumulative weighted average share allocated to the Petitioner for various CG Stations.

5.6.4. *Total power purchase quantum and cost*

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

Table 86: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2019-20

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC				
Singrauli	3.94	0.64	1.19	1.83
Rihand I	66.99	9.37	6.86	16.22
Rihand II	53.98	7.71	4.76	12.47
Rihand III	37.72	5.20	7.30	12.50
Unchahar I	12.24	3.77	1.59	5.36
Unchahar II	24.79	7.55	2.24	9.79
Unchahar III	6.37	1.98	1.18	3.17
Unchahar IV	0.00	0.00	0.31	0.31
Anta	0.27	0.23	5.19	5.42
Auriya	3.24	1.35	5.64	6.99
Dadri	21.28	8.46	5.65	14.11
Kahalgaon II	17.82	4.22	2.34	6.55
Dadri II	10.36	3.66	1.36	5.02
Koldam Hydro	52.45	14.22	11.61	25.84
Subtotal - NTPC	**311.43**	**68.36**	**57.22**	**125.58**
NHPC				
Salal	7.95	0.53	0.79	1.32
Tanakpur	3.48	0.67	1.51	2.18
Chamera I	77.62	9.65	10.76	20.41
ChameraII	31.90	3.49	4.05	7.54
Uri	15.88	1.42	2.07	3.49
Dhauliganga	22.19	2.94	3.41	6.35
Dulhasti	39.33	11.78	6.16	17.94
Sewa II	8.14	1.92	2.70	4.62
Uri II	22.77	5.89	7.57	13.46
Chamera III	18.95	4.38	4.71	9.09
Parbati-III	13.17	3.93	3.13	7.05
Kishanganga	25.45	5.46	4.67	10.13
Subtotal- NHPC	**286.83**	**52.06**	**51.52**	**103.58**
NPCIL				
NAPS	68.68	22.23	0.00	22.23
RAPP (Unit 3 & 4)-B	20.19	7.38	0.00	7.38
RAPP (Unit 5 & 6)-C	105.75	45.21	0.00	45.21
Subtotal- NPCIL	**194.62**	**74.82**	**0.00**	**74.82**
SJVNL				
Nathpa Jhakri	94.76	12.53	11.65	24.18
Rampur	15.66	2.75	2.62	5.37
Subtotal- SJVNL	**110.42**	**15.28**	**14.27**	**29.55**

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
BBMB				
BBMB 3.5%	527.81	152.99	0.00	152.99
BBMB 1 LU- Dehar	74.78	21.68	0.00	21.68
BBMB 10 LU- Pong	19.72	5.72	0.00	5.72
Subtotal- BBMB	**622.31**	**180.38**	**0.00**	**180.38**
APCPL				
Jhajjar	52.86	19.18	9.60	28.78
Subtotal- APCPL	**52.86**	**19.18**	**9.60**	**28.78**
THDC				
Koteshwar	14.48	3.08	5.34	8.43
Tehri	160.31	46.38	39.69	86.07
Subtotal- THDC	**174.78**	**49.46**	**45.03**	**94.49**
RPO				
Crest	7.70	7.38	0.00	7.38
Pvt.solar (Net Generation)	1.10	0.92	0.00	0.92
Solar REC	0.00	0.00	0.00	0.00
Non Solar REC	0.00	3.40	0.00	3.40
Subtotal- Others	**8.80**	**11.70**	**0.00**	**11.70**
Bilateral J&K	0.00	0.00	0.00	0.00
Unscheduled Interchange (UI) Over-drawal/Under-drawal	0.00	0.00	0.00	0.00
Open Market Purchase	98.10	42.65	0.00	42.65
Open Market Sale	0.00	0.00	0.00	0.00
Total	**1,860.16**	**513.89**	**177.64**	**691.53**
Transmission Charges				
PGCIL Charges			58.11	58.11
Other Transmission Charges			0.00	0.00
Subtotal			**58.11**	**58.11**
Total Power Purchase Cost	**1,860.16**	**513.89**	**235.75**	**749.64**

The Commission approves the quantum of power purchase as 1,860.16 MU at the UT Periphery with a total cost of INR 749.64 Cr for the FY 2019-20.

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

Table 87: Average Power Purchase Cost (APPC) for FY 2019-20

Particular	FY 2019-20
Total Power Purchase Cost (INR Cr)	749.64
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	69.80
Net Power Purchase Cost (INR Cr) (A)	**679.84**
Total Power Purchase quantum (MU)	1,860.16
Less: Quantum from renewable energy sources (MU)	8.80
Quantum of energy at State Periphery excluding quantum from renewable energy sources (MU) (B)	**1,851.36**
APPC (Rs/kWh) (A/B)	**3.67**

The Commission approves the Average Power Purchase Cost (APPC) as INR 3.67/ kWh for the FY 2019-20

Table 88: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2020-21

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC				
Singrauli	3.94	0.67	1.22	1.89
Rihand I	66.99	9.83	7.00	16.83
RihandII	53.98	8.10	4.85	12.95
Rihand III	37.72	5.46	7.45	12.91
Unchahar I	12.24	3.96	1.63	5.58
Unchahar II	24.79	7.93	2.28	10.21
Unchahar III	6.37	2.08	1.21	3.29
Unchahar IV	0.00	0.00	0.32	0.32
Anta	0.27	0.24	5.29	5.53
Auriya	3.24	1.42	5.75	7.17
Dadri	21.28	8.88	5.77	14.64
Kahalgaon II	17.82	4.43	2.38	6.81
Dadri II	10.36	3.85	1.39	5.23
Koldam Hydro	52.44	14.94	11.84	26.78
Subtotal - NTPC	**311.43**	**71.78**	**58.37**	**130.14**
NHPC				
Salal	7.95	0.56	0.80	1.36
Tanakpur	3.48	0.70	1.54	2.25
Chamera I	77.62	10.13	10.98	21.11
ChameraII	31.90	3.67	4.13	7.80
Uri	15.88	1.49	2.11	3.60

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Dhauliganga	22.19	3.08	3.48	6.56
Dulhasti	39.33	12.37	6.28	18.65
Sewa II	8.14	2.02	2.75	4.77
URI II	22.77	6.18	7.72	13.91
Chamera III	18.95	4.60	4.80	9.40
Parbati-III	13.17	4.13	3.19	7.31
Kishanganga	25.45	5.73	4.76	10.50
Subtotal- NHPC	**286.83**	**54.66**	**52.55**	**107.21**
NPCIL				
NAPS	68.68	23.34	0.00	23.34
RAPP (Unit 3 & 4)-B	20.19	7.75	0.00	7.75
RAPP (Unit 5 & 6)-C	105.75	47.47	0.00	47.47
Subtotal- NPCIL	**194.62**	**78.56**	**0.00**	**78.56**
SJVNL				
Nathpa Jhakri	94.76	13.16	11.88	25.04
Rampur	15.66	2.89	2.67	5.56
Subtotal- SJVNL	**110.42**	**16.05**	**14.55**	**30.60**
BBMB				
BBMB 3.5%	527.81	160.64	0.00	160.64
BBMB 1 LU- Dehar	74.78	22.76	0.00	22.76
BBMB 10 LU- Pong	19.72	6.00	0.00	6.00
Subtotal- BBMB	**622.31**	**189.40**	**0.00**	**189.40**
APCPL				
Jhajjar	52.86	20.14	9.79	29.93
Subtotal- APCPL	**52.86**	**20.14**	**9.79**	**29.93**
THDC				
Koteshwar	14.48	3.24	5.45	8.69
Tehri	160.31	48.70	40.48	89.18
Subtotal- THDC	**174.78**	**51.93**	**45.93**	**97.87**
RPO				
Crest	7.70	7.38	0.00	7.38
Pvt. Solar	1.10	0.92	0.00	0.92
Solar REC	0.00	0.27	0.00	0.27
Non Solar REC	0.00	4.84	0.00	4.84
Subtotal- Others	**8.80**	**13.41**	**0.00**	**13.41**

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Bilateral J&K	0.00	0.00	0.00	0.00
Unscheduled Interchange (UI) Over-drawal/Under-drawal	0.00	0.00	0.00	0.00
Open Market Purchase	151.97	69.38	0.00	69.38
Open Market Sale	0.00	0.00	0.00	0.00
Total	**1,914.02**	**565.31**	**181.19**	**746.50**
Transmission Charges				
PGCIL Charges			59.27	59.27
Other Transmission Charges			0.00	0.00
Subtotal			**59.27**	**59.27**
Total Power Purchase Cost	**1,914.02**	**565.31**	**240.46**	**805.77**

The Commission approves the quantum of power purchase as 1,914.02 MU at the UT Periphery with a total cost of INR 805.77 Cr for the FY 2020-21.

Table 89: Power Purchase Quantum (MU) and cost (INR Cr) approved for FY 2021-22

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
NTPC				
Singrauli	3.94	0.71	1.24	1.95
Rihand I	66.99	10.33	7.14	17.46
RihandII	53.98	8.50	4.95	13.45
Rihand III	37.72	5.73	7.60	13.33
Unchahar I	12.24	4.15	1.66	5.81
Unchahar II	24.79	8.32	2.33	10.65
Unchahar III	6.37	2.19	1.23	3.42
Unchahar IV	0.00	0.00	0.32	0.32
Anta	0.27	0.25	5.40	5.65
Auriya	3.24	1.49	5.87	7.35
Dadri	21.28	9.32	5.88	15.20
Kahalgaon II	17.82	4.65	2.43	7.08
Dadri II	10.36	4.04	1.41	5.45
Koldam Hydro	52.44	15.68	12.08	27.76
Subtotal - NTPC	**311.43**	**75.37**	**59.53**	**134.90**
NHPC				
Salal	7.95	0.59	0.82	1.41
Tanakpur	3.48	0.74	1.57	2.31
Chamera I	77.62	10.64	11.20	21.83
ChameraII	31.90	3.85	4.21	8.06

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Uri	15.88	1.57	2.15	3.72
Dhauliganga	22.19	3.24	3.55	6.78
Dulhasti	39.33	12.98	6.41	19.39
Sewa II	8.14	2.12	2.81	4.92
URI II	22.77	6.49	7.88	14.37
Chamera III	18.95	4.83	4.90	9.73
Parbati-III	13.17	4.33	3.25	7.58
Kishanganga	25.45	6.02	4.86	10.88
Subtotal- NHPC	**286.83**	**57.39**	**53.60**	**111.00**
NPCIL				
NAPS	68.68	24.51	0.00	24.51
RAPP (Unit 3 & 4)-B	20.19	8.14	0.00	8.14
RAPP (Unit 5 & 6)-C	105.75	49.84	0.00	49.84
Subtotal- NPCIL	**194.62**	**82.49**	**0.00**	**82.49**
SJVNL				
Nathpa Jhakri	94.76	13.81	12.12	25.93
Rampur	15.66	3.03	2.73	5.76
Subtotal- SJVNL	**110.42**	**16.85**	**14.85**	**31.69**
BBMB				
BBMB 3.5%	527.81	168.67	0.00	168.67
BBMB 1 LU- Dehar	74.78	23.90	0.00	23.90
BBMB 10 LU- Pong	19.72	6.30	0.00	6.30
Subtotal- BBMB	**622.31**	**198.87**	**0.00**	**198.87**
APCPL				
Jhajjar	52.86	21.14	9.99	31.13
Subtotal- APCPL	**52.86**	**21.14**	**9.99**	**31.13**
THDC				
Koteshwar	14.48	3.40	5.56	8.96
Tehri	160.31	51.13	41.29	92.42
Subtotal- THDC	**174.78**	**54.53**	**46.85**	**101.38**
RPO				
Crest	7.70	7.38	0.00	7.38
Pvt. Solar	1.10	0.92	0.00	0.92
Solar REC	0.00	1.33	0.00	1.33
Non Solar REC	0.00	5.91	0.00	5.91
Subtotal- Others	**8.80**	**15.54**	**0.00**	**15.54**

Details of the stations	Units Purchased at UT periphery (MU)	Variable Charges (INR. Cr.)	Fixed Charges (INR. Cr.)	Total Charges (INR. Cr.)
Bilateral J&K	0.00	0.00	0.00	0.00
Unscheduled Interchange (UI) Over-drawal/Under-drawal	0.00	0.00	0.00	0.00
Open Market Purchase	207.61	99.52	0.00	99.52
Open Market Sale	0.00	0.00	0.00	0.00
Total	**1,969.66**	**621.70**	**184.82**	**806.52**
Transmission Charges				
PGCIL Charges			60.45	60.45
Other Transmission Charges			0.00	0.00
Subtotal			**60.45**	**60.45**
Total Power Purchase Cost	**1,969.66**	**621.70**	**245.27**	**866.97**

The Commission approves the quantum of power purchase as 1,969.66 MU at the UT Periphery with a total cost of INR 866.97 Cr for the FY 2021-22.

5.7. Renewable Purchase Obligation (RPO)

Petitioner's submission:

The Petitioner is required to procure power from renewable sources for meeting the RPO. The RPO requirement for each year of the Control Period as submitted by the Petitioner has been provided in the following table:

Table 90: Effective Energy Sales (Excluding Hydro) for MYT Control Period as submitted by Petitioner

Particular	Formula	FY 2019-20	FY 2020-21	FY 2021-22
Energy Sales within UT (In MUs)	a	1,685.30	1,736.02	1,788.45
Hydro Power Purchase (In MUs)	b	1,121.79	1,121.79	1,121.79
Inter-State Loss	c	3.60%	3.60%	3.60%
Inter-State Loss (In MUs)	d=b*c	40.38	40.38	40.38
Intra-State Loss	e	13.05%	12.85%	12.65%
Intra-State Loss (In MUs)	f=e*(b-d)	141.12	138.96	136.80
Hydro Power Consumed (In MUs)	g=b-d-f	940.28	942.44	944.61
Conventional Power Consumed (In MUs)	**h=a-g**	**745.02**	**793.58**	**843.84**
RPO Targets (In %)		11.50	14.10	17.00
Solar (In %)	i	4.70	6.10	8.00
Non-Solar (In %)	j	6.80	8.00	9.00
RPO Targets (In MUs)		85.68	111.89	143.45
Solar Targets (In MUs)	(h*i)	35.02	48.41	67.51
Non-Solar Targets (In MUs)	(h*j)	50.66	63.49	75.95
RPO Compliance (Procurement & Own Generation) (In MUs)		29.23	34.23	39.23
Solar (In MUs)		29.23	34.23	39.23

Particular	Formula	FY 2019-20	FY 2020-21	FY 2021-22
Non-Solar (In MUs)		-	-	-
RPO Compliance (REC Purchase) (In MUs)		56.45	77.66	104.22
Solar (In MUs)		5.79	14.18	28.28
Non-Solar (In MUs)		50.66	63.49	75.95

The Petitioner has proposed to fulfill the RPO for each year by way of procuring power from roof-top solar plants and from bilateral agreements.

The Petitioner further submitted that it does not have the required potential for non-solar generation due to constrained geographical conditions. Solar is a cleaner energy and as per the solar mission of the Government of India, thrust has been given on increasing the solar sources of power. Therefore, in view of the above, the Petitioner has requested the Commission to kindly allow the Petitioner to meet the Non-solar RPO by utilising credits of solar RPO.

Commission's analysis:

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets. The quantum as per the revised target has to be determined on the effective energy sales. The energy sales without hydro used for calculation of the RPO has been arrived at as follows:

Table 91: Effective energy sales (adjusted for hydro) (in MU)

S.No.	Particular	Formula	FY 2019-20	FY 2020-21	FY 2021-22
1	Energy Sales within UT	a	1,685.30	1,736.02	1,788.45
2	Hydro Power Purchase FY 2017-18	b	1,293.40	1,293.40	1,293.40
3	Inter-State Loss (%)	c	3.60%	3.60%	3.60%
4	Inter-State Loss (MU)	d= c*b	46.61	46.61	46.61
5	Intra-State Loss (%)	e	9.40%	9.30%	9.20%
6	Intra-State Loss (MU)	f=e*(b-d)	117.20	115.95	114.70
7	Hydro Power Consumed (MU)	g=b-d-f	1,129.59	1,130.84	1,132.09
8	Conventional Power consumed	h= a-g	555.71	605.18	656.37

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the Commission has determined the following Renewable Purchase Obligation for the Petitioner for the each year of the Control Period.

Table 92: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2019-20	FY 2020-21	FY 2021-22
Sales within State from conventional sources (MU)	555.71	605.18	656.37
RPO obligation (in %)	**11.50%**	**14.10%**	**17.00%**
Solar	4.70%	6.10%	8.00%
Non-solar	6.80%	8.00%	9.00%
RPO obligation for the year (in MU)	**63.91**	**85.33**	**111.58**
Solar	26.12	36.92	52.51
Non-solar	37.79	48.41	59.07
Backlog upto FY 2018-19	**0.00**	**0.00**	**0.00**
Solar	0.00	0.00	0.00
Non Solar	0.00	0.00	0.00
Total RPO to be fulfilled for the year	**63.91**	**85.33**	**111.58**

Description	FY 2019-20	FY 2020-21	FY 2021-22
Solar	26.12	36.92	52.51
Non Solar	37.79	48.41	59.07
RPO compliance (Physical purchase)	**29.93**	**34.23**	**39.23**
- Solar	29.93	34.23	39.23
Crest power	7.70	7.70	7.70
Pvt. Solar (Gross Generated)	22.23	26.53	31.53
-Non-solar	0.00	0.00	0.00
RPO compliance (REC certificate purchase)	**33.98**	**51.10**	**72.35**
- Solar	0.00	2.69	13.28
-Non-solar	33.98	48.41	59.07
RPO compliance (Physical purchase + REC certificate purchase)	**63.91**	**85.33**	**111.58**
- Solar	29.93	36.92	52.51
-Non-solar	33.98	48.41	59.07

Similar to the approach followed in the APR of FY 2018-19, the Commission has adjusted the over-achievement in Solar RPO with Non –Solar while determining the compliance status for respective years in the MYT Control Period. Further, the Commission has considered the shortfall to be fulfilled by way of REC purchase and has assumed the rate of purchase for Solar and Non-Solar REC as INR 1.00/kWh (IEX Floor Price). The overall cost towards purchase of renewable energy shall be considered on actual basis during the APR/True-up.

The Commission would like to mention that even though the over-achievement in Solar RPO has been considered against the Non- Solar RPO in accordance with the Regulations, it is in no way implied that the Petitioner would reduce its efforts in procuring power from non-solar energy sources. The Commission believes that the procurement of renewable power from a mix of sources is important to avoid over-dependence on a particular source, development of renewable energy sources other than solar and promotion of clean energy consumption within the territories and at the same time ensuring overall compliance of RPO targets is met by the Discoms under its jurisdiction. Therefore, the Commission directs the Petitioner to simultaneously increase its efforts towards procuring physical non solar power rather than just relying on the purchase of RECs for compliance of Non –Solar RPO.

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

Table 93: Cost towards compliance of Renewable Purchase Obligation for FY 2019-20 (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**29.93**	**8.30**	**2.77**
(a)	*CREST*	7.70	7.38	9.59
(b)	*Pvt. Solar (Gross- Generation)*	*22.23*		
(i)	*Pvt. Solar (Net- Generation)*	*1.10*	*0.92*	*8.34*
2	**Non-solar REC**	**33.98**	**3.40**	**1.00**
	Total	**63.91**	**11.70**	**1.83**

The Commission approves INR 11.70 Cr towards compliance of RPO in the ARR of FY 2019-20 and the same has been considered in the Power Purchase cost approved for FY 2019-20.

Table 94: Cost towards compliance of Renewable Purchase Obligation for FY 2020-21 (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**36.92**	**8.57**	**2.32**
(a)	*CREST*	7.70	7.38	9.59
(b)	*Pvt. Solar (Gross- Generation)*	*26.53*		
(i)	*Pvt. Solar (Net- Generation)*	*1.10*	*0.92*	*8.34*
(c)	*Solar REC*	*2.69*	*0.27*	*1.00*
2	**Non-solar REC**	**48.41**	**4.84**	**1.00**
	Total	**85.33**	**13.41**	**1.57**

The Commission approves INR 13.41 Cr towards compliance of RPO in the ARR of FY 2020-21 and the same has been considered in the Power Purchase cost approved for FY 2020-21.

Table 95: Cost towards compliance of Renewable Purchase Obligation for FY 2021-22 (In INR Cr)

S. No	Description	RPO (MU)	Total Cost (INR Cr)	Avg. Rate (INR/kWh)
1	**Solar**	**52.51**	**9.63**	**1.84**
(a)	*CREST*	7.70	7.38	9.59
(b)	*Pvt. Solar (Gross- Generation)*	*31.53*		
(i)	*Pvt. Solar (Net- Generation)*	*1.10*	*0.92*	*8.34*
(c)	*Solar REC*	*13.28*	*1.33*	*1.00*
2	**Non-solar REC**	**59.07**	**5.91**	**1.00**
	Total	**111.58**	**15.54**	**1.40**

The Commission approves INR 15.54 Cr towards compliance of RPO in the ARR of FY 2021-22 and the same has been considered in the Power Purchase cost approved for FY 2021-22.

5.8. Energy Balance

Petitioner's submission

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

Table 96: Energy Balance submitted by Petitioner (MU)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Energy Procured	1,980.31	2,029.87	2,083.22
Less: Outside Sale - Trading	0.00	0.00	0.00
Energy Available	1,980.31	2,029.87	2,083.22
Inter-State Transmission Loss	3.60%	3.60%	3.60%
Transmission Loss (Mus)	71.29	73.08	75.00
Net Energy Available at UT Periphery	**1,909.02**	**1,956.79**	**2,008.22**
Power procured from Gross & NET Metering Mode (MUs)	29.23	34.23	39.23
Total Energy Available	**1,938.25**	**1,991.02**	**2,047.45**
Actual Energy Sales (Mus)	1,685.30	1,736.02	1,788.45
T&D Loss (%)	13.05%	12.85%	12.65%
T&D Loss (in MUs)	252.94	255.97	259.00
Total Energy Required at UT Periphery (MUs)	**1,938.24**	**1,991.99**	**2,047.45**
Demand Supply (Gap) / Surplus	**0.00**	**0.00**	**0.00**

Commission's analysis

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

Table 97: Energy Balance approved by Commission (MU)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
ENERGY REQUIREMENT			
Energy sales within the State/UT	1,685.30	1,736.02	1,788.45
Distribution losses			
%	9.40%	9.30%	9.20%
MU	174.85	178.00	181.21
Energy required at State Periphery	1,860.16	1,914.02	1,969.66
Energy Availability at Periphery			
Availability from firm sources	1,762.06	1,762.06	1,762.06
Availability from UI Over-drawal/ Under-drawal	0.00	0.00	0.00
Less: Bilateral transfer to J&K	0.00	0.00	0.00
Deficit/(Surplus)	**98.10**	**151.97**	**207.61**

The Commission has estimated a deficit of 98.10 MU in FY 2019-20, 151.97 MU in FY 2020-21 and 207.61 in FY 2021-22 to be procured from Open Market by the Petitioner. The cost of procuring deficit power has been included by the Commission in power procurement cost approved in the earlier section.

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative & General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 51 of the MYT Regulation, 2018 states the following:

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

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

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

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

c) Repairs and Maintenance expenses.

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

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

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

Where,

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.9.1. Employee Expenses

Petitioner's submission

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

Table 98: Employee Expenses submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Opening no. of employees	No.	1106	1309	1308	1301
Closing no. of employees	No.	1309	1308	1301	1314
Gn	In %	18%	0%	-1%	1%

Particular	Unit	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Employee Cost of Previous Year	INR. Cr.	68.82	84.94	88.51	91.80
Growth Factor (Gn)	In %	18%	0%	-1%	1%
CPI Inflation	In %	4.28%	4.28%	4.28%	4.28%
Projected Employee Cost	**INR. Cr.**	**84.94**	**88.51**	**91.80**	**96.69**

Commission's analysis

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

6. Values for Base Year

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

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

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

The Commission has averaged the actual employee expenses for FY 2015-16 to FY 2017-18 to arrive at the employee expenses for the median year FY 2016-17. Thereafter, the employee expenses, thus, arrived for FY 2016-17 have been escalated by the CPI inflation twice to arrive at employee expenses for the base year, FY 2018-19. The resultant employee expenses have been escalated by Growth Rate determined based on the manpower plan approved in the Business Plan Order and CPI Inflation to arrive upon the employee expenses for each year of the Control Period.

The CPI Inflation has been computed as follows:

Table 99: Computation of CPI Inflation (%)

FY	Average of (Apr-Mar)	Increase in CPI Index	Average increase in CPI indices over 3 years
2015-16	265.00	5.65%	
2016-17	275.92	4.12%	
2017-18	284.42	3.08%	
		CPI Inflation	**4.28%**

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

Table 100: Employee Expenses approved by Commission (In INR Cr)

S. No	Particulars	Average of preceding three years	Base Year	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	64.88				
2	Growth in number of employees (Gn)			-0.08%	-0.54%	1.00%
3	CPI Inflation for preceding three years (CPI)		4.28%	4.28%	4.28%	4.28%
	Employee Expenses	**64.88**	**70.55**	**73.52**	**76.26**	**80.32**

The Commission approves Employee Expenses of INR 73.52 Cr for FY 2019-20, INR 76.26 Cr for FY 2020-21 and INR 80.32 Cr for FY 2021-22.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

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

Table 101: A&G submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2019-20	FY 2020-21	FY 2021-22
A&G Expenses of Previous Year	INR. Cr.	7.10	7.40	7.72
CPI Inflation	In %	4.28%	4.28%	4.28%
Projected A&G expenses	**INR. Cr.**	**7.40**	**7.72**	**8.05**

Commission's analysis

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

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

Table 102: A&G Expenses approved by Commission (In INR Cr)

S. No	Particulars	Average of preceding three years	Base Year	FY 2019-20	FY 2020-21	FY 2021-22
1	A&G Expenses	4.22				
2	CPI Inflation		4.28%	4.28%	4.28%	4.28%
3	**A&G Expenses**	**4.22**	**4.59**	**4.79**	**5.00**	**5.21**

The Commission approves the Administrative & General (A&G) expenses of INR 4.79 Cr for FY 2019-20, INR 5.00 Cr for FY 2020-21 and 5.21 Cr for FY 2021-22.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has determined the R&M expenses for each year of the Control Period based on the norms specified in the MYT Regulations, 2018. The R&M expenses for the FY 2018-19 have been taken as base. The average increase in Wholesale Price Index (WPI) has been calculated based on the increase in the Wholesale Price Index (WPI) from FY 2015-16 to FY 2017-18. The 'K' factor as prescribed in the regulations has been calculated as ratio of R&M & GFA for the FY 2017-18 and has been considered the same for all the years.

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

Table 103: R&M expenses submitted by Petitioner (In INR Cr)

Particular	Unit	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22
Opening GFA	INR. Cr.	437.38	453.33	522.78	589.92
Addition During the year	INR. Cr.	15.95	69.45	67.14	57.38
Closing assets	INR. Cr.	453.33	522.78	589.92	647.30
Average GFA	INR. Cr.		488.06	556.35	618.61
K Factor	%	3.65%	3.65%	3.65%	3.65%
WPI Inflation	%		0.33%	0.33%	0.33%
Projected R&M Expenses	**INR. Cr.**		**16.60**	**19.14**	**21.60**

Commission's analysis

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

Table 104: Computation of 'K' factor for the MYT Control Period (In INR Cr)

S. No	Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1	R&M Expenses	10.01	9.45	8.50
2	Opening GFA	391.57	403.86	409.47
3	K Factor	2.56%	2.34%	2.07%
	K Factor Approved by the Commission (Average of 3 years)			**2.32%**

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for each year of the Control Period.

The WPI Inflation has been computed as follows:

Table 105: Computation of WPI Inflation (%)

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

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

Table 106: R&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA (GFA_{n-1}) of previous year	437.38	453.33	522.78
4	K factor approved (K)	2.32%	2.32%	2.32%
5	WPI Inflation	0.33%	0.33%	0.33%
	R&M Expenses = (K x (GFA_{n-1}) x ($1+WPI_{inflation}$)	**10.20**	**10.57**	**12.19**

The Commission approves the Repair & Maintenance (R&M) expenses of INR 10.20 Cr for FY 2019-20, INR 10.57 Cr for FY 2020-21 and INR 12.19 Cr for FY 2021-22.

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

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

Table 107: O&M Expenses approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Employee Expenses	73.52	76.26	80.32
2	Administrative & General Expenses (A&G)	4.79	5.00	5.21
3	Repair & Maintenance Expenses	10.20	10.57	12.19
	Total Operation & Maintenance Expenses	**88.51**	**91.82**	**97.72**

The Commission approves Operation & Maintenance (O&M) expenses of INR 88.51 Cr in FY 2019-20, INR 91.82 Cr in FY 2020-21 and INR 97.72 Cr in FY 2021-22.

5.10. Capital Expenditure and Capitalisation

Petitioner's submission

The Petitioner has proposed revised capital expenditure and capitalisation against that is approved by the Commission in the Business Plan Order. The Petitioner has requested the Commission to consider the revised capital expenditure and capitalisation based on additional submission as follows:

Table 108: Capital Expenditure and Capitalisation submitted by Petitioner (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Capital Expenditure	86.07	131.89	93.30
2	Capitalisation	69.45	67.14	57.38

Commission's analysis:

The Commission in the Business Plan Order had allowed the Petitioner for submission of pending DPRs to the Commission along with the MYT Petition. The Petitioner in this regard was required to submit the DPRs for all remaining schemes (not only for schemes with total capital expenditure >INR 10 Cr.) to be considered in the MYT Petition along with the Funding Plan. The Petitioner has provided the supporting documents for the additional capitalisation proposed in the MYT Petition against that approved in the Business Plan Order. Some of the schemes under Capital Expenditure and capitalisation submitted by the Petitioner in this Petition, were already approved in the Business Plan Order. The Commission as a part of this Order, has approved the additional schemes not considered in the Business Plan Order and accordingly approved the total capital expenditure and capitalisation for each year of the Control Period . The Commission has gone through the additional submissions of the Petitioner and have found these to be in order. Therefore, the Commission revises the capital expenditure and capitalisation plan in light of additional submissions of the Petitioner.

The following table provides the summary of capital expenditure pertaining to additional schemes approved by Commission for the MYT Control Period.

Table 109: Summary of capital expenditure pertaining to additional schemes now being approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
A. 66 KV New Schemes				
1	Prov. 66KV Transmission Line to upcoming 66KV G/S/Stn alongwith associate 66KV Line Bays at Raipure Kalan, Chandigarh	4.26	-	-
2	Providing 2x20MVA, 66/11KV Grid Sub-Station at Raipur Kalan.	3.90	-	-
3	Providing double circuit 66 KV overhead TL tussled monopoles from T off point 60 proposed 66/11 KV Grid substation village Sarangpur ,UT Chandigarh.	1.10	-	-
4	A) Prov. Construction of Double Circuit 66KV over head Transmission line on tubular monopoles from T-OFF Point to proposed 66KV G/S/Stn at Institutional Area in Village - Sarangpure, Chandigarh B) Prov. Construction of 2 Nos. Line Bays at 66/11KV G/S/Stn, Village - Sarangpure	0.32	-	-
5	Turnkey execution of new 66KV 2x20 MVA Grid S/Stn. at institutional Area, Village- Sarangpur, UT, Chandigarh	3.96	-	-
6	Up gradation of T/F capacity 66/11KV Grid S/Stn. IT Park by replacing 2x12.5 MVA with 2x20MVA T/F and shifting & reinstallation 2x12.5 MVA at Civil Sectt. Sector-1 & Sector-12, Chandigarh.	2.85	-	-
7	Up gradation of existing 33KV S/Stn. To 66KV by providing 1x30MVA, 66/11KV power T/F at Sector-34, Chandigarh.	2.89	-	-
8	Providing 66 kV Transmission line with underground cable from Sector-32 Grid Sub Station to Sector 34 Grid Sub Station	3.16	-	-
9	Revised Rough Cost Estimate for Supply, Delivery, Testing & Commissioning of 220V Volts 50 Amp full wave FCBC to replace the existing battery bank and battery charger at 66KV Grid Sub Station, Sector 39, Chandigarh	0.09	-	-
10	Providing 06 Nos., 66kV outgoing feeders from upcoming 220kV GIS Hallomajra, UT Chandigarh. a) 66kV Double Circuit (underground) to existing 66kV GSS Sector 52, UT Chandigarh each consisting of single core 4x630mm2 Aluminum conductor XLPE insulated cable (11.5x2 = 23KM Approx. for each circuit) with further extended link of one 66kV circuit to 33kV GSS Sector 34, UT Chandigarh (4x4 = 16KM Approx.) i.e. going to be upgraded to 66KV GSS. b) 66kV Double Circuit (underground) to existing 66kV GSS Sector 47, UT Chandigarh each consisting of single core 4x630mm2 Aluminum conductor XLPE insulated cable (6.5x2 = 13KM Approx. for each circuit)	19.00	34.00	23.00

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
	c) 66kV Single Circuit (underground) for 66kV GSS I/A Phase-I, UT Chandigarh consisting of single core 4x630mm2 Aluminum conductor XLPE insulated cable (1KM Approx.) terminated at poultry farm chowk Chandigarh on existing 66KV overhead tower line circuit in between 66KV GSS I/A Ph-I & II, UT Chandigarh. d) 66kV Single Circuit (underground) for 66kV GSS I/A Phase-II, UT Chandigarh consisting of single core 4x630mm2 Aluminum conductor XLPE insulated cable (1KM Approx.) terminated at poultry farm chowk Chandigarh on existing 66KV overhead tower line circuit in between 66KV GSS I/A Ph-I & II, UT Chandigarh.			
11	Replacement/ augmentation of 3 Nos. damaged 66/11KV, 10/12.5MVA Power Transformers with 20MVA Power Transformers at 66KV Grid Sub Station, Sector 1, BBMB and Industrial area Phase II, Chandigarh.	2.20	1.36	-
12	Replacement/augmentation of 01 No. damaged 66/11kV, 10/12.5MVA Power Transformers with 20 MVA Power Transformers at 66KV Grid Sub Station, Industrial Area, Phase-I, UT Chandigarh	1.00	0.38	-
13	a) Providing 1x30MVA 66/11KV additional Power TF At 66kv Grid Sub Station Sec-39 UT Chandigarh. b) Replacement of 14 Nos. MOCB with SF6, Breakers at 66KV Grid Substation Sector-52 and Sector –12 UT Chandigarh	2.10	5.20	3.07
14	RCE for the replacement of obsolete and old 66 kV isolator, 66 kV SF-6 breaker, 11 kV VCB and allied items at 66 kV Grid Sub Station I/A Phase-I & Phase-II and 33 kV Grid Sub Station I/A Phase-I, UT Chandigarh.	-	3.20	1.79
15	Providing 2x20MVA, 66 / 11KV Gas Insulated Sub Station at Sector-26 UT Chandigarh along with 66 KV D/C line from I.T Grid Sub Station Kishangarh to 66KV Grid Sub Station Sector-26 UT Chandigarh	-	16.37	10.92
16	Conversion of existing 33KV Sub Station Sector-18 to 66KV Sub Station Sector-18 by Providing GIS 2x20MVA, 66/11KV Power Transformer along with 66 kV associated 66 kV T/L with underground cable from 66 kV Sector-26 to 66 kV Sector 18	-	22.00	14.98
17	Providing Hot Spare 16/20MVA, 66/11KV Power Transformer	-	1.50	1.00
18	Conversion of 66 kV Single Circuit to Double Circuit T/L and U/G cable from 220 kV GSS Kishangarh to 66 kV Sub Station Sector-12 UT Chandigarh to double circuit T/L	-	4.42	2.95
	Sub-Total 66 KV New Schemes	**46.83**	**88.43**	**57.71**
B. 11 KV New Schemes				
1	General Service Connection (GSC) and Industrial Service Connection (ISC) including replacement of Electromechanical meters to Static meters	3.14	3.28	3.42

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
2	Strengthening of Distribution Network by providing 11KV underground power distribution system.	2.82	3.34	1.63
3	Providing and Augmentation of the LT O/H ACSR conductors	0.34	0.15	-
4	Strengthening of Distribution Network by providing/augmentation of 11/0.400KV, 1000/315/200/100 KVA Distribution Transformers along with ACB.	4.95	1.62	1.14
5	Providing 11KV/LT Aerial Bunched Conductor	0.76	-	1.79
6	Providing improved metering system, special tools, testing equipment's, vehicle, skylift, safety devices, office equipment etc.	1.28	0.47	-
7	Improvement and augmentation of 66/11 KV existing sub-station and 11KV Indoor sub-stations including HT/LT Panels, ACB/OCB, Battery bank, CT/PT, HT/ LT Shunt Capacitors etc. on the existing distribution transformers.	2.98	9.47	6.11
8	Miscellaneous such as Renovation of houses in Electricity Colony, Unforeseen Works etc.	2.00	1.80	1.50
9	Conversion of Existing Overhead HT/ LT Lines into underground Equipment's of 11 kV I/D S/Stn. Including Street Light System in Sector 8, UT, Chandigarh on Turnkey Basis.	9.00	4.14	-
10	Installation of AMR & DLMS compliant energy meters at EHV sub-stations for Energy Audit. The estimate is approved and DNIT is under process	-	0.82	-
	Sub Total 11 KV New Schemes	**27.27**	**25.09**	**15.59**
	Total Capital Expenditure	**74.10**	**113.52**	**73.30**

The following table provides the list of additional schemes to be capitalized during the control period as approved by the Commission.

Table 110: List of additional schemes to be capitalized during the MYT Control Period as approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
A. 66 KV New Schemes				
1	Revised Rough Cost Estimate for Supply, Delivery, Testing & Commissioning of 220V Volts 50 Amp full wave FCBC to replace the existing battery bank and battery charger at 66KV Grid Sub Station, Sector 39, Chandigarh	0.09	-	-
2	Replacement/ augmentation of 3 Nos. damaged 66/11KV, 10/12.5MVA Power Transformers with 20MVA Power Transformers at 66KV Grid Sub Station, Sector 1, BBMB and Industrial area Phase II, Chandigarh.	-	4.36	-
3	Replacement/augmentation of 01 No. damaged 66/11kV, 10/12.5MVA Power Transformers with 20 MVA Power Transformers at 66KV Grid Sub Station, Industrial Area, Phase-I, UT Chandigarh	-	1.38	-
4	a) Providing 1x30MVA 66/11KV additional Power TF At 66kv Grid Sub Station Sec-39 UT Chandigarh. b) Replacement of 14 Nos. MOCB with SF6,	-	-	10.37

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
	Breakers at 66KV Grid Substation Sector-52 and Sector –12 UT Chandigarh			
5	RCE for the replacement of obsolete and old 66 kV isolator, 66 kV SF-6 breaker, 11 kV VCB and allied items at 66 kV Grid Sub Station I/A Phase-I & Phase-II and 33 kV Grid Sub Station I/A Phase-I, UT Chandigarh.	-	-	4.99
6	Providing Hot Spare 16/20MVA, 66/11KV Power Transformer	-	-	2.50
7	Conversion of 66 kV Single Circuit to Double Circuit T/L and U/G cable from 220 kV GSS Kishangarh to 66 kV Sub Station Sector-12 UT Chandigarh to double circuit T/L	-	-	7.37
8	Prov. 66KV Transmission Line to upcoming 66KV G/S/Stn alongwith associate 66KV Line Bays at Raipure Kalan, Chandigarh.	11.03	-	-
	Sub-Total 66 KV New Schemes	**11.12**	**5.74**	**25.23**
B. 11 KV New Schemes				
1	General Service Connection (GSC) and Industrial Service Connection (ISC) including replacement of Electromechanical meters to Static meters	2.09	2.81	7.05
2	Strengthening of Distribution Network by providing 11KV underground power distribution system.	1.88	2.86	3.35
3	Providing and Augmentation of the LT O/H ACSR conductors	0.22	0.13	-
4	Strengthening of Distribution Network by providing/augmentation of 11/0.400KV, 1000/315/200/100 KVA Distribution Transformers along with ACB.	3.30	1.39	2.36
5	Providing 11KV/LT Aerial Bunched Conductor	0.51	-	3.69
6	Providing improved metering system, special tools, testing equipment's, vehicle, skylift, safety devices, office equipment etc.	0.85	0.40	-
7	Improvement and augmentation of 66/11 KV existing sub-station and 11KV Indoor sub-stations including HT/LT Panels, ACB/OCB, Battery bank, CT/PT, HT/ LT Shunt Capacitors etc. on the existing distribution transformers.	1.98	8.11	12.61
8	Miscellaneous such as Renovation of houses in Electricity Colony, Unforeseen Works etc.	1.33	1.54	3.09
9	Conversion of Existing Overhead HT/ LT Lines into underground Equipment's of 11 kV I/D S/Stn. Including Street Light System in Sector 8, UT, Chandigarh on Turnkey Basis.	-	18.14	-
10	Installation of AMR & DLMS compliant energy meters at EHV sub-stations for Energy Audit. The estimate is approved and DNIT is under process	-	0.82	-
	Sub Total 11 KV New Schemes	**12.16**	**36.20**	**32.15**
	Total Additional Capitalisation	**23.28**	**41.94**	**57.38**

The following table provides the capital expenditure and capitalisation approved by the Commission during the MYT Control Period:

Table 111: Capital Expenditure and Capitalisation approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
	Capital Expenditure			
1	Capital Expenditure approved in Business Plan Order	17.48	18.36	20.00
2	Additional Capital Expenditure approved now	74.10	113.52	73.30
3	**Total Capital Expenditure approved**	**86.07**	**131.89**	**93.30**
	Capitalisation			
1	Capitalisation approved in Business Plan Order	46.17	25.20	-
2	Additional Capitalisation approved now	23.28	41.94	57.38
3	**Total Capitalisation approved**	**69.45**	**67.14**	**57.38**

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

5.11. Capital Structure

Petitioner's Submission

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

Commission's analysis

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

26. Debt to Equity Ratio

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

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

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

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

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

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

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

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

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

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

In accordance with above, since the Petitioner has submitted that the entire capitalisation is funded through equity, equity higher than 30% of capitalisation has been considered as normative loan. Further, as per the submission of the Petitioner no assets haven been created by way of consumer contribution or Government grant.

Therefore, in accordance with the MYT Regulations, 2018, the Commission has determined the Capital Structure for each year of the MYT Control Period as follows:

Table 112: Funding Plan approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Capitalisation	69.45	67.14	57.38
2	Debt (%)	70%	70%	70%
3	Equity (%)	30%	30%	30%
4	Normative Loan	48.62	47.00	40.17
5	Equity	20.84	20.14	17.21

Table 113: GFA addition approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Gross Fixed Assets	453.33	522.78	589.92
2	Addition During the FY	69.45	67.14	57.38
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	522.78	589.92	647.30

Table 114: Normative Loan addition approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	7.72	43.46	75.24
2	Add: Normative Loan During the year	48.62	47.00	40.17
3	Less: Normative Repayment equivalent to Depreciation	12.87	15.22	17.37
4	Closing Normative Loan	43.46	75.24	98.04

Table 115: Normative Equity addition approved by the Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Equity	130.04	150.88	171.02
2	Additions on account of new capitalisation	20.84	20.14	17.21
3	Closing Equity	150.88	171.02	188.24

5.12. Depreciation

Petitioner's submission

The Petitioner has determined the depreciation on normative basis considering proposed capitalisation during the year and average of opening and closing GFA for each year. The Depreciation rate has been considered the same as per actuals computed for FY 2017-18. The Depreciation amount has been submitted as follows:

Table 116: Depreciation submitted by the Petitioner (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Gross Fixed Assets	453.33	522.78	589.92
2	Add: Assets added during year	69.45	67.14	57.38
3	Less: Adjustment/With-drawl	-	-	-
4	**Closing Gross Fixed Assets**	522.78	589.92	647.30
5	Average Gross Fixed Assets	488.05	556.35	618.61
6	Average Depreciation Rate	3.77%	3.77%	3.77%
	Depreciation for year	**18.40**	**20.97**	**23.32**

Commission's analysis

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

30. Depreciation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 117: Depreciation Rate (%)

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

The closing GFA of FY 2018-19 as approved in the APR has been considered as opening GFA of FY 2019-20. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year.

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

Table 118: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening GFA for FY 2019-20 (a)	453.33		
2	Less: Assets depreciated upto 90% (b)	114.20		
3	Revised opening Gross Fixed Assets (a-b)	339.13	408.58	475.72
4	Addition During the FY	69.45	67.14	57.38
5	Adjustment/Retirement During the FY	0.00	0.00	0.00
6	Closing Gross Fixed Assets	408.58	475.72	533.10
7	Average Gross Fixed Assets	373.86	442.15	504.41
8	Effective Rate of Depreciation (%)	3.44%	3.44%	3.44%
	Depreciation	**12.87**	**15.22**	**17.37**

The Commission approves a depreciation of INR 12.87 Cr for FY 2019-20, INR 15.22 Cr for FY 2020-21 and INR 17.37 Cr for FY 2021-22.

5.13. Interest on Loan

Petitioner's submission

In line with the methodology adopted for computation of depreciation, the Petitioner has determined the Interest on Loan on normative basis. The Petitioner has considered 70% of GFA at the end of FY 2017-18 as per the audited accounts and reduced the same by the Accumulated Depreciation to arrive upon the opening normative loan for the FY 2018-19. Subsequently 70% of capitalisation proposed during each year has been considered to arrive at the opening and closing normative loan for each year of the control period.

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

The interest at the SBI PLR rate of 13.45% as on 1st April 2018 has been applied on the average normative debt in order to project the interest on normative loans for the control period.

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

Table 119: Interest on Loan submitted by the Petitioner (In INR Cr)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Opening Normative Loan	38.51	68.72	94.75
Add: Normative Loan during the year (70% of proposed capitalization)	48.62	47.00	40.17
Less: Normative Repayment	18.40	20.97	23.32
Closing Normative Loan	68.72	94.75	111.59
Average Normative Loan	53.62	81.74	103.17
Rate of Interest	13.45%	13.45%	13.45%
Interest on Normative Loan	**7.21**	**10.99**	**13.88**

Commission's analysis:

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

28. Interest on Loan

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Hence, the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. However, the Petitioner has submitted that capitalisation during each year has been funded by the Petitioner's equity and no loan has been taken against any of the capitalised assets.

As per the MYT Regulations 2018, if the equity actually deployed is more than 30% of the capital cost, then equity in excess of 30% would be considered as normative loan. Further, the Commission has considered the capitalisation of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalisation has considered the normative debt equity ratio of 70:30.

The Petitioner has erroneously considered the Rate of Interest as SBI PLR according to the previous MYT Regulations. In absence of any actual loans, the Commission has considered the SBI MCLR rate plus 100 basis points as Rate of Interest, in accordance with the MYT Regulations, 2018. The Interest on Loan has been calculated on the average loan during the year with the opening loan for first year of the Control Period considered equivalent to the closing loan approved for FY 2018-19 in the APR.

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

Table 120: Interest on loan approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Loan	7.72	43.46	75.24
2	Add: Normative Loan During the year	48.62	47.00	40.17
3	Less: Normative Repayment equal to Depreciation	12.87	15.22	17.37
4	Closing Normative Loan	43.46	75.24	98.04
5	Average Normative Loan	25.59	59.35	86.64
6	Rate of Interest (%)	9.55%	9.55%	9.55%
	Interest on Loan	**2.44**	**5.67**	**8.27**

The Commission approves Interest on Loan as INR 2.44 Cr for FY 2019-20, INR 5.67 Cr for FY 2020-21 and INR 8.27 Cr for FY 2021-22.

5.14. Return on Equity (RoE)

Petitioner's submission

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

Table 121: RoE submitted by Petitioner (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Normative Equity	136.00	156.83	176.98
2	Addition During the year	20.84	20.14	17.21
3	Closing Normative Equity	156.83	176.98	194.19
4	Average Normative Equity	146.42	166.91	185.58
	Return on Equity@16%	**23.43**	**26.70**	**29.69**

Commission's analysis:

The Regulations 27.2 and 27.3 of the MYT Regulations, 2018 stipulate the following:

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

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

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the MYT Regulations, 2018 i.e. 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. The Commission has considered a rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations) and a rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with capital structure as discussed in the section on capital structure. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent CERC Regulations during the True-up of the respective years. The following table provides the total return on equity approved for the MYT Control Period.

Table 122: RoE approved by Commission (In INR Cr)

Particulars	FY 2019-20	FY 2020-21	FY 2021-22
Opening Equity	130.04	150.88	171.02
Additions on account of new capitalisation	20.84	20.14	17.21
Closing Equity	150.88	171.02	188.24
Average Equity	140.46	160.95	179.63
Average Equity (Wires Business)	126.42	144.86	161.67
Average Equity (Retail Supply Business) Business)	14.05	16.10	17.96
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	19.59	22.45	25.06
Return on Equity for Retail Supply Business	2.25	2.58	2.87
Return on Equity	**21.84**	**25.03**	**27.93**

The Commission approves Return on Equity of INR 21.84 Cr for FY 2019-20, INR 25.03 Cr of FY 2020-21 and INR 27.93 Cr for FY 2021-22. Any Income Tax, paid by the Petitioner on return on equity, shall be allowed by the Commission at the time of true up based on actual figures.

5.15. Interest on Consumer Security Deposits

Petitioner's submission

Interest on consumer security has been calculated on normative basis with addition of INR 8.00 Cr proposed during each year of the MYT Control Period.

The table below provides the calculation of interest on consumer security deposits proposed for each year of the MYT Control Period.

Table 123: Interest on Consumer Security Deposit submitted by the Petitioner (In INR Cr)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Opening Consumer Security Deposit	198.96	206.96	214.96
Net Addition During the year	8.00	8.00	8.00
Closing Consumer Security Deposit	206.96	214.96	222.96
Average Security Deposit	202.96	210.96	218.96
Bank Rate	6.25%	6.25%	6.25%
Interest on Consumer Security Deposit	**12.68**	**13.18**	**13.68**

Commission's analysis:

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

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

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

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2018, based on the average of the opening and closing consumer security deposits during the year. In accordance with the Petitioner's submission, the Commission has considered a net addition of INR 8.00 Cr in the consumer security deposits during the year. The rate of interest has been considered equivalent the RBI Bank Rate as on 1st April of the Financial Year in which the Petition is filed.

The table below provides the computation of interest on consumer security deposits approved for each year of the MYT Control Period.

Table 124: Interest on Security Deposits approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Opening Security Deposit	198.96	206.96	214.96
2	Net addition during the year	8.00	8.00	8.00
3	Closing Security Deposit	206.96	214.96	222.96
4	Average Security Deposit	202.96	210.96	218.96
5	Rate of Interest (%)	6.25%	6.25%	6.25%
6	**Interest on Security Deposit**	**12.69**	**13.19**	**13.69**

The Commission approves Interest on Security Deposit as INR 12.69 Cr for FY 2019-20, INR 13.19 Cr for FY 2020-21 and INR 13.69 Cr for FY 2021-22.

5.16. Interest on Working Capital

Petitioner's submission

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

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

- Receivable of two months of billing
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

The SBI 1 Year MCLR as on 1st April, 2018 plus 200 basis points i.e. 10.15% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for each year of the Control Period.

Table 125: Interest on Working Capital submitted by the Petitioner (In INR Cr)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Two months receivables	145.82	150.05	154.43
Add: One Month O&M Expenses	9.38	9.89	10.53
Add: 40% of repair and maintenance expenses for one month	0.55	0.64	0.72
Less: Consumer Security Deposit excl. BG/FDR	206.96	214.96	222.96
Total Working after deduction of Security Deposit	**0.00**	**0.00**	**0.00**
Interest Rate (%)	10.15%	10.15%	10.15%
Interest on Working Capital	**0.00**	**0.00**	**0.00**

Commission's analysis:

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

52. Norms of Working Capital for Distribution Wires Business

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

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

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

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

wires at the prevailing tariff;

Less:

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

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

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

31.3 The interest on working capital shall be a payable on normative basis notwithstanding that the Licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan based on the normative figures. 31.4 The rate of interest on working capital shall be equal one (1)Year State Bank of India

(SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1)Year period, as may be applicable as on 1st April of the Financial Year in which the Petition is filed plus 200 basis points.

In accordance with the MYT Regulation, 2018, the Commission has computed the Interest on Working Capital for each year of the Control Period. The actual Working Capital requirement, after deduction of the average amount of Consumer Security Deposit is coming out to be negative. Thus, the Interest on Working Capital has been considered as Nil, as shown in the table below:

Table 126: Interest on Working Capital approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	O&M Expense for 1 month	7.38	7.65	8.14
2	Maintenance spares at 40% of R&M expenses for one (1) month;	0.34	0.35	0.41
3	Receivables equivalent to two (2) months of the expected revenue from charges at the prevailing tariff	143.84	155.29	167.83
4	Less: Amount, held as security deposits	202.96	210.96	218.96
5	Net Working Capital	(51.41)	(47.67)	(42.58)
6	Rate of Interest (%)	10.15%	10.15%	10.15%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

The Commission approves the Interest on Working Capital as nil for each year of the MYT Control Period.

5.17. Income Tax

Petitioner's submission

No submission has been made in this regard.

Commission's analysis:

Regulation 32 of MYT Regulations, 2018 stipulates the following:

32. Tax on Income

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

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

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

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

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

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

Table 127: Income Tax approved by Commission (In INR Cr)

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

5.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

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

"62. Provision for bad and doubtful debts

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

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

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

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

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

5.19. Non-Tariff Income (NTI)

Petitioner's submission

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

Table 128: Non-Tariff Income submitted by the Petitioner (In INR Cr)

Particular	FY 2019-20	FY 2020-21	FY 2021-22
Non-Tariff Income	40.69	41.09	41.51

Commission's analysis:

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

"64. Non-Tariff Income

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

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

64.2 The Non-Tariff Income shall inter-alia include:
(a) Income from rent of land or buildings;
(b) Income from sale of scrap;
(c) Income from statutory investments;
(d) Interest on advances to suppliers/contractors;
(e) Rental from staff quarters;
(f) Rental from contractors;
(g) Income from hire charges from contactors and others;
(h) Income from advertisements, etc.;
(i) Meter/metering equipment/service line rentals;
(j) Service charges;
(k) Consumer charges;
(l) Recovery for theft and pilferage of energy;
(m) Rebate availed on account of timely payment of bills;
(n) Miscellaneous receipts;
(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
(p) Prior period income, etc.:

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

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

The Commission considers the same NTI as approved for FY 2018-19 for each year of the Control Period. The same shall considered as per actuals in True-up/ APR for each year.

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

Table 129: Non -Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Non- Tariff Income	24.97	24.97	24.97

The Commission approves Non-Tariff Income of INR 24.97 for each year of the MYT Control Period.

5.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

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

Table 130: Aggregate Revenue Requirement (ARR) submitted by the Petitioner (In INR Cr)

S. No.	Particular	FY 2019-20	FY 2020-21	FY 2021-22
1	Cost of power purchase for full year	824.74	884.90	958.09
2	Employee costs	88.51	91.80	96.69
3	Administration and general expenses	7.40	7.72	8.05
4	R&M expenses	16.60	19.14	21.60
5	Depreciation	18.40	20.97	23.32
6	Interest and finance charges	7.21	10.99	13.88
7	Interest on working capital	-	-	-
8	Interest on Security Deposit	12.68	13.18	13.68
9	Return on NFA /Equity	23.43	26.70	29.69
10	Provision for Bad Debt	-	-	-
11	**Total Revenue Requirement**	**998.97**	**1,075.42**	**1,165.00**
12	Less: Non-Tariff Income	40.69	41.09	41.51
13	**Net Revenue Requirement**	**958.29**	**1,034.33**	**1,123.49**

Commission's analysis

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

Table 131: Aggregate Revenue Requirement approved by Commission (In INR Cr)

S. No	Particulars	FY 2019-20	FY 2020-21	FY 2021-22
1	Power Purchase Cost inclusive of cost towards RPO	749.64	805.77	866.97
2	Operation & Maintenance Expenses	88.51	91.82	97.72
3	Depreciation	12.87	15.22	17.37
4	Interest on Loan	2.44	5.67	8.27
5	Return on Equity	21.84	25.03	27.93
6	Interest on Security Deposit	12.69	13.19	13.69
7	Interest on Working Capital	0.00	0.00	0.00
8	Income Tax	0.00	0.00	0.00
9	Provision for Bad & Doubtful Debt	0.00	0.00	0.00
10	**Total Revenue Requirement**	**887.99**	**956.69**	**1,031.94**
11	Less: Non-Tariff Income	24.97	24.97	24.97
	Net Revenue Requirement	**863.02**	**931.73**	**1,006.97**

The Commission approves net ARR of INR 863.02 Cr for FY 2019-20, INR 931.73 Cr for FY 2020-21 and INR 1006.97 Cr for FY 2021-22.

5.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has estimated revenue from sale of power at existing tariff as INR 874.89 Cr for FY 2019-20 based on the projected energy sales, connected load and number of consumers. Further, revenue from Regulatory Surcharge has been estimated as INR 43.74 Cr for FY 2019-20.

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable. The revenue from demand charges and the energy charges have been projected for each consumer category/ sub-category and slab. The Commission has not considered the revenue from Regulatory Surcharge along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for FY 2019-20. The Commission has considered suitable assumptions wherever necessary. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2019-20 has been shown in the following table

Table 132: Revenue at existing tariff computed by Commission (In INR Cr)

S. No.	Category	Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
1	**DOMESTIC SUPPLY (DS)**	**787.86**	**11.19**	**348.71**	**359.91**	**4.57**
1	0-150 units	196.79	3.56	54.12	57.68	2.93
2	151-400 units	319.12	4.01	153.18	157.19	4.93
3	401 and above units	271.96	3.62	141.42	145.04	5.33
2	**COMMERCIAL / NON RESIDENTIAL (NRS)**	**521.46**	**44.03**	**291.19**	**335.23**	**6.43**
1	0-150 units (Single Phase)	3.80	1.07	1.90	2.97	7.82
2	151-400 units (Single Phase)	11.74	0.67	6.22	6.89	5.87
3	401 and above units(Single Phase)	220.67	1.31	123.58	124.89	5.66
1	0-150 units (Three Phase)	1.73	1.19	0.86	2.06	11.90
2	151-400 units (Three Phase)	4.76	0.93	2.53	3.45	7.24
3	401 and above units (Three Phase)	278.76	38.86	156.11	194.97	6.99
3	**INDUSTRY**	**268.20**	**30.41**	**129.85**	**160.26**	**5.98**
1	Large Industrial Power Supply (LS)	119.85	14.16	59.93	74.09	6.18
2	Medium Industrial Power Supply (MS)	128.35	15.52	60.32	75.85	5.91
3	Small Industrial Power Supply (SP)	20.00	0.72	9.60	10.32	5.16
4	**AGRICULTURAL PUMPING SUPPLY(AR)**	**1.49**	**0.00**	**0.43**	**0.43**	**2.90**
1	Agricultural Pumping Supply	1.49	0.00	0.43	0.43	2.90
5	**PUBLIC LIGHTING (PL)**	**17.73**	**0.86**	**9.49**	**10.35**	**5.84**
6	**BULK SUPPLY (BS)**	**84.15**	**10.20**	**41.23**	**51.44**	**6.11**
1	Bulk Supply	84.15	10.20	41.23	51.44	6.11

S. No.	Category	Sales (MU)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)
7	**TEMPORARY SUPPLY**	**4.40**	**0.00**	**3.56**	**3.56**	**8.10**
1	Temporary Supply	4.40	0.00	3.56	3.56	8.10
	TOTAL	**1,685.30**	**96.70**	**824.47**	**921.17**	**5.47**

The Commission has determined revenue from sale of power at existing tariff as INR 921.17 Cr in the FY 2019-20.

5.22. Standalone Revenue Gap/ (Surplus)

Petitioner's submission

Based on the ARR and the revenue from the retail tariff, the standalone revenue gap of INR 39.65 Cr is arrived at for in the FY 2019-20.

Commission's analysis

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

Table 133: Standalone Revenue Gap/ (Surplus) determined at existing tariff for FY 2019-20 (INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	958.29	863.02
2	Revenue from sale of power	874.89	921.17
	Revenue Gap/(Surplus)	**83.40**	**(58.15)**

Table 134: Standalone Revenue Gap/ (Surplus) determined at existing tariff (inclusive of Regulatory Surcharge) for FY 2019-20 (INR Cr)

S. No	Particulars	Petitioners submission	Now Approved
1	Annual Revenue Requirement	958.29	863.02
2	Revenue from sale of power	874.89	921.17
3	Regulatory Surcharge	43.74	46.06
	Revenue Gap/(Surplus)	**39.65**	**(104.21)**

The standalone revenue surplus at existing retail tariff is determined as INR 58.15 Cr for FY 2019-20 and INR 104.21 Cr inclusive of Regulatory Surcharge. The treatment of the estimated surplus has been dealt with while determining the retail tariff for FY 2019-20, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2019-20 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the MYT Regulations, 2018.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration the EWEDC's submissions as well as the public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change.

6.2. Applicable Regulations

Regulation 19 of MYT Regulations, 2018 states the following:

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

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

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

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

"

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

"

67. Determination of Tariff

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

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

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

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

(a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.
(b) The fixed charges in tariff shall progressively reflect actual fixed cost incurred by Distribution Licensee;
(c) The overall retail supply tariff for different Consumer categories shall progressively reflect the cost of supply for respective categories of Consumers;
(d) The tariff for residential Consumers shall be set considering the affordability of tariff for various class of Consumers;
(e) The tariff shall be set in such a manner that it may not present a tariff shock to any category of Consumers."

6.3. Cumulative Revenue Gap/ (Surplus) at Existing Tariff

Petitioner's Submission

The Petitioner has proposed a cumulative revenue surplus of INR 18.65 Cr till the FY 2019-20. The standalone and consolidated revenue gap/surplus as submitted by the Petitioner has been tabulated below:

Table 135: Standalone Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Net Revenue Requirement	770.72	853.15	958.29
Revenue on existing tariff	845.25	850.31	874.89
FPPCA Charges	189.44	21.80	-
Regulatory Surcharge	0.12	42.52	43.74
Gap/(Surplus) for the year	**(264.09)**	**(61.48)**	**39.65**

Table 136: Cumulative Revenue Gap/ (Surplus) submitted by Petitioner (In INR Cr)

Particular	FY 2017-18	FY 2018-19	FY 2019-20
Opening (Surplus)/Gap	94.49	(172.91)	(208.56)
Add: (Surplus)/Gap during the year	(264.09)	(61.48)	39.65
Less: Regulatory Surcharge Recovered @ 5%	0.12	42.52	43.74
Closing (Surplus)/Gap	(169.48)	(191.87)	(125.17)
Average (Surplus)/Gap	(37.49)	(182.39)	(166.87)
Interest Rate	9.15%	9.15%	9.15%
Carrying/Holding Cost	(3.43)	(16.69)	(15.27)
Closing Gap/(Surplus) after adjusting Carrying Cost	**(172.91)**	**(208.56)**	**(140.44)**
Cumulative (Surplus)/Gap for the FY 2010-11 to FY 2013-14			208.17
Projected Cummulative Regulatory Surcharge Recovered upto FY 2019-20			86.38
Total Gap/(Surplus)			**18.65**

Commission's analysis

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

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

The Commission, notices that the Petitioner has not taken any loan till date. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. Keeping in mind all of the above, the Commission as considered the carrying cost @ 8.00% which is the opportunity cost for the Petitioner for the FY 2017-18 and FY 2018-19.

Further, Regulation 11.5 (c) of the MYT Regulation, 2018 stipulates the following:

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

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

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

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

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

Since the Petitioner has not borrowed any loan therefore the Commission allows Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR for FY 2019-20.

Accordingly, the Commission determines the standalone revenue gap/surplus for each year and likewise taking into account the previous year's gap/surplus, determines the cumulative revenue gap/ surplus at the end of FY 2019-20 as shown in the table as follows:

Table 137: Standalone Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Net Revenue Requirement	777.30	827.09	863.02
Revenue from Retail Sales at Existing Tariff	845.33	878.50	921.17
FPPCA Charges	189.44	21.80	-
Regulatory Surcharge	0.12	43.93	46.06
Total Revenue	1034.89	944.23	967.23
Standalone Gap /(Surplus) for the year	**(257.59)**	**(117.14)**	**(104.21)**

Table 138: Consolidated Revenue Gap/ (Surplus) determined by Commission at existing tariff (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Opening Gap/(Surplus)	94.49	(165.84)	(84.44)
Addition Gap/(Surplus) due to standalone year	(257.59)	(117.14)	(104.21)
Cumulative Gap/(Surplus) for the FY 2010-11 to FY 2013-14	0.00	208.17	0.00

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Closing Gap/(Surplus)	(163.10)	(74.81)	(188.64)
Average Gap/(Surplus)	(34.30)	(120.32)	(136.54)
Rate of Interest	8.00%	8.00%	9.55%
Carrying cost	(2.74)	(9.63)	(13.04)
Closing Gap/ (Surplus)	**(165.84)**	**(84.44)**	**(201.68)**

The Commission determines a cumulative revenue surplus of INR 201.68 Cr till the FY 2019-20 at existing tariff.

6.4. Treatment of the cumulative Gap/ (Surplus) and Tariff Design

As derived from above, the resultant cumulative revenue surplus is INR 201.68 Cr despite consideration of cumulative revenue gap of INR 208.17 Cr till FY 2013-14 recognised in the Tariff Order of FY 2018-19. In view of this surplus the Commission has made some modifications in the existing tariff schedule. The approach adopted and the applicability of the same has been discussed in the following sections.

6.4.1. Designing of Tariff

Petitioner's Submission

1. The Petitioner has proposed no change in tariff for the FY 2019-20 from FY 2018-19.
2. The Petitioner has proposed creation of a new consumer category namely Electric Vehicle Charging Stations/ Charging infrastructure/ Battery Swap.
3. The Petitioner has requested for certain modifications in respect of 'Applicability' of tariff categories such as Domestic, Commercial and Industrial (Medium and Small)
4. Modifications regarding the clauses on contracted demand, advance payment rebate, LT surcharge, etc. have been proposed under the 'General terms for HT and LT supply.
5. The Petitioner has also requested for the modification in the 'Schedule of Charges' for certain services

The category wise existing and proposed tariff submitted by the Petitioner is as follows:

Table 139: Retail tariff proposed by the Petitioner (In INR Cr)

S. No.	Category	Existing		Proposed	
		Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)	Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)
1	**DOMESTIC SUPPLY (DS)**				
1	0-150 units	10.00	2.75	10.00	2.75
2	151-400 units	10.00	4.80	10.00	4.80
3	401 and above units	10.00	5.20	10.00	5.20
2	**COMMERCIAL / NON RESIDENTIAL (NRS)**				
1	0-150 units	INR. 20/kW/ month for Single Phase INR. 100/kW/ month for Three Phase	5.00	INR. 20/kW/ month for Single Phase INR. 100/kW/ month for Three Phase	5.00
2	151-400 units		5.30		5.30
3	401 and above units		5.60		5.60
3	**INDUSTRY**				

S. No.	Category	Existing		Proposed	
		Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)	Fixed Cost (INR/kW/month)	Variable Cost (INR/kWh)
1	Large Industrial Power Supply (LS)	200.00	5.00	200.00	5.00
2	Medium Industrial Power Supply (MS)	200.00	4.70	200.00	4.70
3	Small Industrial Power Supply (SP)	30.00	4.80	30.00	4.80
4	**AGRICULTURAL PUMPING SUPPLY(AR)**				
1	Agricultural Pumping Supply	-	2.90	-	2.90
5	**PUBLIC LIGHTING (PL)**				
1	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external Agency	100	5.35	100	5.35
2	Advertisement / Neon sign Boards- Advertisement boards, bill boards(apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100	7.10	100	7.10
6	**BULK SUPPLY (BS)**				
1	Bulk Supply	200.00	4.90	200.00	4.90
7	**TEMPORARY SUPPLY**				
1	Temporary Supply	-	8.10	-	8.10
8	**ELECTRIC VEHICLE CHARGING STATIONS**				
1	0-150 units	-	-	INR. 20/kW/ month for Single Phase INR. 100/kW/ month for Three Phase	5.00
2	151-400 units	-	-		5.30
3	401 and above units	-	-		5.60

Commission's analysis

As discussed above, the Commission has determined the retail tariff for the FY 2019-20 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2018. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.

2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers

3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.

4. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs

5. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges

6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs

7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs

8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.

9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

While all the above parameters contribute significantly in developing a sustainable tariff framework, there are certain parameters namely Cost of Supply and Tariff Affordability which are of importance and constitute the building blocks in achieving the overall objective. The context and the approach for these parameters have been discussed as follows:

1. Cost of Supply

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Discom. For example, in order to ensure that tariffs are kept in check for residential consumers, while still allowing cost recovery for Discoms, cross subsidy is built in between categories. The tariffs so determined, are skewed, with tariff for industrial and commercial consumers being higher and for other categories being lower than their respective costs of supply. The implications of this imbalance in tariffs is twofold – uncompetitive industries owing to higher input costs and inability of Discoms to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

It is thus essential that tariffs reflect the true cost to service a category of consumer. As a crucial first step towards cost-reflective tariffs, it is important for distribution utilities to determine the costs of supply (which cascade from generation to transmission and finally to distribution and retail supply of power) that should be prudently recovered from each consumer category. These costs should correspond to the actual costs being imposed by each consumer category on the Discom. By determining consumer category wise costs of supply, the Discom would be in a better position to allocate costs where relevant and determine how tariffs can be levied fairly on each category.

The overall approach that can be followed for accurately determining the Cost of Supply has been discussed as follows

b) Approach:

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply (ACoS) method. The ACoS is computed by dividing the Annual Revenue Requirement (ARR) determined by the Commission for recovery through tariffs by the total energy sales for the year. However, this methodology doesn't indicate the costs incurred by consumers at different voltage levels using different assets of the network. Therefore, it doesn't help in determining accurate tariffs for particular consumers, eventually resulting in insufficient cost coverage.

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels. A simplified version of the same was suggested by Hon'ble ATE in 2010, to determine VCoS in the absence of all necessary data. In this method, the power purchase costs and other costs (such as network costs, wheeling costs etc.) are allocated to various consumer categories based on energy input or energy sales (as considered appropriate by the State Commission). This approach factors in the voltage level differentiation based on losses, however, it does not factor in asset utilization at different voltage levels.

A more refined version of determination of VCoS uses three parameters for allocating various costs to voltage levels – energy input at each voltage level, energy sales and asset allocation to voltage levels. The losses segregated voltage wise (as percentage of input energy) are to be allocated to different voltage levels based on energy input to each voltage level (as explained in subsequent sections). Subsequently, the cost elements such as power procurement costs, employee expenses, administrative and general expenses and income tax can be allocated to each voltage levels based on total sales at each voltage level. The cost elements, which are dependent on assets such as depreciation, interest costs, return allowed to utility etc. are allocated in ratio of assets allocated to each voltage level. The sum of all the cost components at each voltage level is the cost to supply the particular voltage (EHT/HT/LT).

The Commission is of the opinion that while VCoS differentiates cost allocation based on voltage levels, it does not factor in consumer category level differentiation. For instance, at the same LT level, cost of supplying electricity to a Commercial consumer may be different from that of a Residential consumer. Thus, it believes that the most progressive way forward for EWEDC is to accurately determine the cost of supply is to attempt to determine Cost of Supply at various category level. The Commission notes that States like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and EWEDC must also attempt to determine the same.

On studying the existing methodologies followed internationally, among developing nations with energy access situations like India's, the Commission is of the opinion that the Category wise Cost of Supply methodology is an appropriate starting point. The embedded cost method identifies and appropriately assigns the historical or accounting costs that make up a Discom's revenue requirement to all categories and sub-categories of consumers.

This method involves three steps:

- Cost Functionalization
- Cost Classification
- Cost Allocation

Cost functionalization separates cost data into the functional activities performed in the operation of a utility system - power generation/supply, transmission, distribution and retail supply. Classification determines the portion of the cost that is related to specific cost-causal factors, such as those that are demand-related, energy-related, or customer-related. Finally, the cost allocation step assigns the costs to specific customer categories based on the customer's contribution to the specific classifier selected.

The Commission as part of this Order has determined the tariff according to the Average Cost of Supply (ACoS) due to lack of requisite data. The Commission strongly believes that determination of Category wise Cost of Supply is essential to ensure cost reflectivity in tariffs fixed for different categories. However, the Commission feels that to carry out this exercise a lot of field level information would be required such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. which currently the Petitioner doesn't maintain. Therefore, in absence of the same the Commission is unable to determine the Category wise CoS in this Order but directs the Petitioner to start maintaining this data and submit the same in the tariff proceedings of next year.

2. *Tariff Affordability*

a) Context

The Commission understands that the consumer base of EWEDC is varied and covers a wide spectrum of socio-economic backgrounds, specially the domestic category consumers. It is aware that most low income households spend a substantial share of their income on utility services such as electricity, heating and water. However, any envisaged tariff reforms is often objected to avoid further burdening of these consumers. But to improve the quality of service of electricity, the Discom has to undergo significant capital expenditure which eventually deteriorates the affordability of tariffs. Thus to tackle this problem and in the spirit of economic wellbeing of all consumer classes, the concept of cross-subsidies has been built into the current tariff structure.

However, the Commission believes that a more scientific and logical approach can be adopted to identify the right categories of consumers and the right cross-subsidy/subsidy requirement that will benefit the end consumers at the same time. Hence, the Commission believes that there is a strong need to develop a scientific methodology to assess the social impact of electricity tariffs.

The overall approach that can be followed for determining the tariff affordability has been discussed as follows.

b) Approach

On reviewing methodologies adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

TAR is defined by obtaining the burden incurred by a household for electricity as compared to the overall household expenditure. The rationale behind this concept is that the electricity is basic utility and is unavoidable in today's scenario, however, this does not ensure that the expenditure level is in line with the overall household expenditure. Hence, this concept helps to understand the affordability level of electricity on households with different economic levels.

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Discom across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Discom's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholder's will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers which would be beneficial especially for Domestic category consumers. Additionally this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

The Commission in these tariff proceedings is not carrying out this exercise due to unavailability of accurate data. The Petitioner is directed to ensure the sanctity of the data maintained pertaining to various categories.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, the Commission has determined and restructured the Retail Tariff applicable for FY 2019-20 as per the following:

1. No increase has been made in the retail tariff for existing categories due to standalone revenue surplus (exclusive of Regulatory Surcharge) in FY 2019-20. Further, the Commission discontinues the Regulatory Surcharge of 5% imposed in the Tariff Order of FY 2018-19 for recovery of past revenue gap as the objective of the same has been achieved and the Petitioner is revenue surplus at the end of FY 2018-19.

2. A new sub-category within the Domestic Supply category namely HT domestic is being created owing to the difference in voltage level. The Domestic Supply (DS) category shall now include two sub-categories viz. LT Domestic and HT Domestic. The HT Domestic category shall include domestic consumers connected to 11 kV and above voltage level.

3. Similar to Domestic, a new sub-category within the Commercial/ Non Residential Supply (NRS) namely HT Commercial is being created on similar lines. The Commercial/ Non Residential Supply (NRS) shall now include two sub-categories viz. LT Commercial and HT Commercial. The HT Commercial category shall include commercial/ non-residential consumers connected to 11 kV and above voltage level.

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

6.4.2. Tariff Adjustment and Schedule:

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 140: Existing and approved tariff

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge INR/kW/month	Energy Charge INR/kWh	Fixed Charge INR/kW/month	Energy Charge INR/kWh
1.	**DOMESTIC SUPPLY (DS)**				
I.	**LT Domestic**				
a.	0-150 kWh per month	10.00	2.75	10.00	2.75
b.	151-400 kWh per month		4.80		4.80
c.	Above 400 kWh per month		5.20		5.20
II.	**HT Domestic**	-	-	10.00	4.80
2.	**COMMERCIAL/ NON RESIDENTIAL (NRS)**				

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge INR/kW/month	Energy Charge INR/kWh	Fixed Charge INR/kW/month	Energy Charge INR/kWh
I.	**LT Commercial**				
a.	0-150 kWh per month	INR. 20/kW/Month for Single Phase INR. 100/kW/Month for Three Phase	5.00	INR. 20/kW/Month for Single Phase INR. 100/kW/Month for Three Phase	5.00
b.	151-400 kWh per month		5.30		5.30
c.	Above 400 kWh per month		5.60		5.60
II.	**HT Commercial**	-	-	100.00	5.30
3.	**INDUSTRY**				
I	Large Industrial Power Supply (LS)	200.00	5.00	200.00	5.00
II	Medium Industrial Power Supply (MS)	200.00	4.70	200.00	4.70
III	Small Industrial Power Supply (SP)	30.00	4.80	30.00	4.80
4.	**AGRICULTURAL PUMPING SUPPLY (AR)**	-	2.90	-	2.90
5.	**PUBLIC LIGHTING (PL)**				
I	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external agency	100.00	5.35	100.00	5.35
II	Advertisement/ Neon-sign Boards Advertisement boards, bill boards (apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100.00	7.10	100.00	7.10
6.	**BULK SUPPLY (BS)**	200.00	4.90	200.00	4.90
7.	**TEMPORARY SUPPLY**	-	8.10	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge INR/kW/month	Energy Charge INR/kWh	Fixed Charge INR/kW/month	Energy Charge INR/kWh
8.	**ELECTRIC VEHICLE CHARGING STATION**	-	-	100.00	4.00

6.4.3. Revenue from Approved Retail Tariff for FY 2019-20

Based on the retail tariff approved above, the Revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station category and Advertisement/ Hoardings category due to unavailability of requisite data. The Commission as of now approves the k factor for the category as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under this category.

Table 141: Revenue from approved retail tariff determined by Commission (In INR Cr)

S. No	Category	Sales (MUs)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Total Charges (INR Cr)	ABR (INR/unit)	K Factor
1	**DOMESTIC SUPPLY (DS)**	**787.86**	**11.37**	**348.23**	**359.60**	**4.56**	**0.83**
I	**LT Domestic**	**775.88**	**11.02**	**342.48**	**353.50**	**4.56**	**0.83**
1	0-150 units	196.79	3.56	54.12	57.68	2.93	0.54
2	151-400 units	319.12	4.01	153.18	157.19	4.93	0.90
3	401 and above units	259.97	3.44	135.19	138.63	5.33	0.97
II	**HT Domestic**	**11.98**	**0.35**	**5.75**	**6.11**	**5.10**	**0.93**
2	**COMMERCIAL / NON RESIDENTIAL (NRS)**	**521.46**	**43.90**	**287.77**	**331.67**	**6.36**	**1.16**
I	**LT Commercial**	**407.43**	**17.62**	**227.33**	**244.95**	**6.01**	**1.10**
1	0-150 units (Single Phase)	3.80	1.07	1.90	2.97	7.82	1.43
2	151-400 units (Single Phase)	11.74	0.67	6.22	6.89	5.87	1.07
3	401 and above units (Single Phase)	220.67	1.31	123.58	124.89	5.66	1.03
4	0-150 units (Three Phase)	1.73	1.19	0.86	2.06	11.90	2.17
5	151-400 units (Three Phase)	4.76	0.93	2.53	3.45	7.24	1.32
6	401 and above units (Three Phase)	164.72	12.45	92.25	104.70	6.36	1.16
II	**HT Commercial**	**114.04**	**26.27**	**60.44**	**86.71**	**7.60**	**1.39**
3	**INDUSTRY**	**268.20**	**30.41**	**129.85**	**160.26**	**5.98**	**1.10**
I	Large Industrial Power Supply (LS)	119.85	14.16	59.93	74.09	6.18	1.14
II	Medium Industrial Power Supply (MS)	128.35	15.52	60.32	75.85	5.91	1.09
III	Small Industrial Power Supply (SP)	20.00	0.72	9.60	10.32	5.16	0.95

S. No	Category	Sales (MUs)	Fixed Charges (INR Cr)	Energy Charges (INR Cr)	Total Charges (INR Cr)	ABR (INR/unit)	K Factor
4	**AGRICULTURAL PUMPING SUPPLY(AR)**	**1.49**	**0.00**	**0.43**	**0.43**	**2.90**	**-**
	Agricultural Pumping Supply	1.49	0.00	0.43	0.43	2.90	-
5	**PUBLIC LIGHTING (PL)**	**17.73**	**0.86**	**9.49**	**10.35**	**5.84**	**1.07**
I	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external Agency	17.73	0.86	9.49	10.35	5.84	1.07
II	Advertisement / Neon sign Boards- Advertisement boards, bill boards (apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	-	-	-	-	-	1.00
6	**BULK SUPPLY (BS)**	**84.15**	**10.20**	**41.23**	**51.44**	**6.11**	**1.12**
	Bulk Supply	84.15	10.20	41.23	51.44	6.11	1.12
7	**TEMPORARY SUPPLY**	**4.40**	**0.00**	**3.56**	**3.56**	**8.10**	**1.50***
	Temporary Supply	4.40	0.00	3.56	3.56	8.10	1.50*
8	**ELECTRIC VEHICLE CHARGING STATION**	**-**	**-**	**-**	**-**	**-**	**1.00**
	TOTAL	**1,685.30**	**96.74**	**820.57**	**917.31**	**5.44**	**1.00**

**1.50 times the k factor of the relevant category in which the connection falls*

The Commission approves revenue from approved Retail Tariff of INR 917.31 Cr for the FY 2019-20.

Accordingly, the introduction of new sub categories within the Domestic and Commercial categories will impact the Average Billing Rate (ABR) of the respective categories. The following table provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the change in tariff for each of the consumer categories.

Table 142: Tariff increase/decrease approved by Commission

S. No	Category	ACOS (INR./kwh)	ABR at existing tariff (INR./kwh)	ABR at approved tariff (INR./kwh)	Increase/ (Decrease) (%)
1	Domestic	5.13	4.57	4.56	(0.07%)
2	Commercial	5.13	6.43	6.36	(1.33%)
3	Large supply	5.13	6.18	6.18	0.00%
4	Medium supply	5.13	5.91	5.91	0.00%
5	Small Power	5.13	5.16	5.16	0.00%
6	Agriculture	5.13	2.90	2.90	0.00%
7	Public lighting	5.13	5.84	5.84	0.00%
8	Bulk supply	5.13	6.11	6.11	0.00%
9	Temp. Supply	5.13	8.10	8.10	0.00%
	Total	**5.13**	**5.47**	**5.44**	**(0.42%)**

The introduction of new sub categories has resulted in the overall tariff decrease of 0.42%.

6.4.4. Cumulative Revenue Gap/ (Surplus) at Approved Tariff

Accordingly, on consideration of the change in revenue on account of introduction of new sub-categories and the discontinuation of Regulatory Surcharge, the resultant Revenue Gap/Surplus has been shown in the table below:

Table 143: Cumulative Revenue Gap/ (Surplus) approved by Commission (In INR Cr)

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
Net Revenue Requirement (a)	777.30	827.09	863.02
Revenue from Retail Sales at Approved Tariff (b)	845.33	878.50	917.31
Regulatory Surcharge (c)	0.12	43.93	0.00
FPPCA Charges (d)	189.44	21.80	0.00
Total Revenue (e= b+c+d)	1034.89	944.23	917.31
Standalone Gap /(Surplus) for the year (f=a-e)	**(257.59)**	**(117.14)**	**(54.29)**
Opening Gap /(Surplus) (g)	94.49	(165.84)	(84.44)
Add: Gap/(Surplus) (f)	(257.59)	(117.14)	(54.29)
Cumulative Gap/(Surplus) for the FY 2010-11 to FY 2013-14 (h)	0.00	208.17	0.00
Closing Gap /(Surplus) (i=f+g+h)	(163.10)	(74.81)	(138.72)
Average Gap/ (Surplus) (j=(g+i)/2)	(34.30)	(120.32)	(111.58)
Interest Rate on carrying cost (% ,k)	8.00%	8.00%	9.55%
Carrying Cost (l=j*k)	(2.74)	(9.63)	(10.66)
Final Closing Gap/ (Surplus) (i+l)	**(165.84)**	**(84.44)**	**(149.38)**

The Commission approves a cumulative revenue surplus of INR 149.38 Cr till FY 2019-20.

6.4.5. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2019-20 are as follows:

1. No increase has been made in the retail tariff for existing categories due to standalone revenue surplus (exclusive of Regulatory Surcharge) in FY 2019-20. Further, the Commission discontinues the Regulatory Surcharge of 5% imposed in the Tariff Order of FY 2018-19 for recovery of past revenue gap as the objective of the same has been achieved and the Petitioner is revenue surplus at the end of FY 2018-19.

2. New sub-categories within the Domestic and Commercial/ Non Residential Supply (NRS) Supply category namely HT domestic and HT Commercial respectively, have been created owing to the difference in voltage level. Slight decrease of 0.42% in overall tariff can be observed due to introduction of these new sub-categories.

3. The Commission has introduced a new category namely Electric Vehicle Charging Stations for consumers setting up infrastructure for charging of Electric vehicles/ Electric rickshaws etc. and has fixed the tariff as per the guidelines of Ministry of Power, Govt. of India.

7. Chapter 7. Open Access Charges for the FY 2019-20

7.1. Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's submission:

The Petitioner has not submitted any computation of Open Access Charges. Further, the details of allocation between wheeling & retail supply business for the FY 2019-20 has also not been submitted as the same has not been segregated by the Petitioner so far.

Commission's analysis:

It is seen from the Petitioner's submission that the Transmission and Distribution business has not been segregated and the Petitioner continues to function as an integrated utility. The Commission has a firm view that there has to be a proper bifurcation of all the expenses pertaining to the Petitioner between the functions of the wheeling business (wire business) and the retail supply business. The Regulation 48 of the MYT Regulations, 2018 stipulates the following:

"48. Separation of Accounts of Distribution Licensee

48.1 Every Distribution Licensee shall segregate accounts for Distribution Wires Business and Retail Supply Business and shall prepare an Allocation Statement. The wheeling charges pertaining to Distribution Wires Business of the Distribution Licensee shall be determined by the Commission on the basis of these segregated accounts:

Provided that in case complete accounting segregation has not been done, the following Allocation Statement shall be applicable:

Table 1: Allocation Statement for segregation of Distribution Wires Business and Retail Supply Business

Particulars	***Wires Business (%)***	***Retail Supply Business (%)***
Power Purchase Expenses	*0%*	*100%*
Inter-State Transmission Charges	*0%*	*100%*
Intra-State Transmission Charges	*0%*	*100%*
Employee Expenses	*40%*	*60%*
Administration & General Expenses	*50%*	*50%*
Repair & Maintenance Expenses	*90%*	*10%*
Capital Cost	*90%*	*10%*
Depreciation	*90%*	*10%*
Interest on Long-term Loan Capital	*90%*	*10%*
Interest on working capital and on consumer security deposits	*10%*	*90%*
Bad Debts Written off	*0%*	*100%*
Income Tax	*90%*	*10%*
Non-Tariff Income	*10%*	*90%*
Income from Other Business	*50%*	*50%*

"

Therefore, in absence of segregated accounts, the Commission has considered the allocation matrix as provided in the MYT Regulations, 2018

The allocation between wheeling and retail supply business for the FY 2019-20 as per the ARR approved in this Order is provided in the following table:

Table 144: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2019-20		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (INR Cr.)	Retail Supply Business (INR Cr)	Total ARR (INR Cr)
Power purchase expenses inclusive of Inter-State Transmission expenses	*0%*	*100%*	0.00	749.64	749.64
Employee costs	*40%*	*60%*	29.41	44.11	73.52
Administration and General Expenses	*50%*	*50%*	2.40	2.40	4.79
Repair and Maintenance Expenses	*90%*	*10%*	9.18	1.02	10.20
Depreciation	*90%*	*10%*	11.58	1.29	12.87
Interest on Loan	*90%*	*10%*	2.20	0.24	2.44
Interest on Working Capital	*10%*	*90%*	0.00	0.00	0.00
Interest on consumer security deposit	*10%*	*90%*	1.27	11.42	12.69
Return on Equity	*90%*	*10%*	19.66	2.18	21.84
Bad & Doubtful Debt written off	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			75.69	812.30	887.99
Less: Non -Tariff Income	*10%*	*90%*	2.50	22.47	24.97
Net Revenue Requirement			**73.19**	**789.83**	**863.02**

To determine the wheeling charges, the Wires Business cost has been allocated on the basis of voltage levels. The wheeling charges are levied for distribution network utilized by the Open Access consumers and primarily comprises of cost components as provided in the table above.

The methodology adopted for allocating the derived costs of Wires Business at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers.
- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation shown in the Table 144.
- The resultant cost at HT/EHT voltage level is divided among LT and HT/EHT voltage levels on the basis of input energy at respective voltage levels as the HT/EHT network is used by consumers at all voltage levels. The cost at LT voltage level is allocated completely to LT voltage level.

The energy input has been determined assuming the loss level of HT/EHT voltage as 3.95%, same as that approved in the Tariff Order of the FY 2018-19. The Petitioner in this regard has failed to submit the Energy Audit Report and voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 9.40% as approved in the ARR of the FY 2019-20 above.

In case the Petitioner submits the voltage wise asset allocation in due course, the Commission shall review the same based on the actual information provided. The voltage wise asset allocation assumed and the number of consumers in each category has been shown as follows:

Table 145: Parameters assumed for voltage wise allocation of costs for Wires Business

Category	No. of Consumers	Sales (MU)	Asset Allocation (%)	Cumulative Voltage wise Losses (%)	Energy Input (MU)
LT level	228,909	1,311.08	60.00%	10.84%	1,470.55
HT/EHT level	1921	374.22	40.00%	3.95%	389.61
Total	**230,830**	**1,685.30**	**100%**	**9.40%**	**1,860.16**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 146: Allocation of costs based on voltage level

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)
LT level	40.64	19.33	59.97	1,470.55
HT/EHT level	0.34	12.89	13.23	389.61
	40.98	**32.21**	**73.19**	**1,860.16**

Table 147: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Energy Sales (MU)	Wheeling Charges (INR/kWh)
LT level	40.91	29.51	70.42	1,470.55	0.54
HT/EHT level	0.07	2.70	2.77	389.61	0.07
	40.98	**32.21**	**73.19**	**1,860.16**	

The Commission approves wheeling charge of INR 0.54/ kWh at LT voltage level, and INR 0.07/kWh at HT/EHT voltage level

7.2. Additional Surcharge

Petitioner's submission:

No submission has been made by the Petitioner in this regard.

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa And Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulates:

"This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges."

Further, Regulation 5.2 (1) (b) states the following:

"The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as follows:

Table 148: Additional Surcharge approved by Commission

Particulars	FY 2019-20
Total Power Purchase cost approved (INR Cr)	749.64
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges) (INR Cr)	177.64
Energy Sales (MU)	1,685.30
Additional Surcharge (INR/kWh)	**1.05**

As per the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Open Access in Transmission and Distribution) Regulations, 2009, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR 1.05/kwh for the FY 2019-20.

The Commission directs the Petitioner to submit quarterly details of power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyse the information and revise the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's submission:

The Petitioner has not submitted any computation of Cross subsidy surcharge.

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for LT & HT/EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 9.40%, as approved in the ARR for FY 2019-20. Voltage wise losses assumed at each level have been shown in the table as follows:

Table 149: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
LT level	7.18%	10.84%
HT/ EHT level	3.95%	3.95%
Total	**9.40%**	**9.40%**

Using these losses, the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 150: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
LT level	1,311.08	10.84%	1,470.55
HT/ EHT level	374.22	3.95%	389.61
Total	**1,685.30**	**9.40%**	**1,860.16**

Now the overall ARR approved for FY 2019-20 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated to LT level on the basis of input energy, as the HT/EHT network is utilized by both HT/EHT and LT network consumers.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 151: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
LT level	1,470.55	60.00%	228,909
HT/EHT level	389.61	40.00%	1,921
Total	**1,860.16**	**100%**	**230,830**

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the following table:

Table 152: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR. Cr.)	Allocated Variable Cost (INR. Cr.)	Total Cost (INR. Cr.)	Energy Sales (MU)	VCoS (INR./kwh)
LT level	297.51	406.26	703.77	1,311.08	5.37
HT/EHT level	51.62	107.63	159.25	374.22	4.26
Total	**349.13**	**513.89**	**863.02**	**1,685.30**	

The VCoS as determined above is used to determine the Cross-Subsidy Surcharge

Table 153: Cross-Subsidy Surcharge

Category	VCoS (INR/kWh)	ABR (INR./kWh)	Cross- Subsidy (INR./kWh)
LT	5.37	5.34	-
HT & EHT	4.26	6.04	1.79

Therefore, the Commission approves Cross-Subsidy Surcharge as nil at LT Voltage level and INR. 1.79/kWh at HT/EHT Voltage level, in FY 2019-20.

8. Chapter 8. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Dispatch Center (SLDC)/ Regional Load Dispatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within its territory/state (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawl/Under-drawl from the Grid and the Inter State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of the FY 2017-18 will be undertaken by the Commission once the audited accounts of the FY 2017-18 are available. If the audited accounts for the FY 2017-18 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2019-20, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

8.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Indian Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:

"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

8.2. Formula

The following mechanism shall be followed for calculation and passing on of variations in the Fuel and Power Purchase Cost Adjustment (FPPCA) in the end consumer tariff, which shall come into force w.e.f. 1st April 2019 (i.e. Power Purchased by the Licensee from 1st April 2019 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:

   - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties

   - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).

- Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
    - Variation on account of Central Transmission Charges including arrears/ revisions.
    - Variation on account of State Transmission charges including arrears/revisions
3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
    - Any adjustments /reversals due to over recovery of charges
    - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
    - Any other adjustments on account of factors not envisaged at the time of tariff fixation
4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{Rs.}}{\boldsymbol{Unit}}\right) = .\left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \mathbf{10}}{\{[\boldsymbol{PPOact} * (\mathbf{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\mathbf{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

Where:

- $Pact(in\ Rs.Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
    - Cost of procurement from sources outside the State,
    - Cost of procurement from sources within the State,
    - Cost of DSM excluding any penal charges,
    - Cost of procurement from the Bilateral/ exchange etc.
    - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ Rs.Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
    - Inter-State transmission cost (PGCIL charges),
    - Intra-State transmission cost
- $Oact\ (in\ Rs.Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ Rs.Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ \ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ \ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter

- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{Rs}{unit}) = \left(\frac{(Papp + Tapp) * 10}{\{[PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ (in\ Rs.Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power
- $Tapp\ (in\ Rs.Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- $PPOapp\ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $PSOapp\ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to a $\pm$10% of the ABR of the consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
   - Step 1: Determination of Value of K

$$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ sub\ category\ (\frac{Rs.}{unit})}{Weighted\ Average\ Retail\ Tariff\ (WART)(\frac{Rs.}{unit})}$$

The value of K for different consumer category or sub category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR/unit) consumer category/sub-category wise

$$FPPCA\left(\frac{Rs.}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the Fuel and Power Purchase Cost Adjustment (FPPCA) formula notified by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.45 per unit for the FY 2019-20.

Table 124: $R_{approved}$ determined by Commission for FY 2019-20

Particulars	Amount
Total Power Purchase Cost (INR Cr), Papp	691.53
Transmission Charges (INR Cr), T_{app}	58.11
Power Purchase Quantum from CGS Stations at Generator Ex-bus (NTPC, NHPC, SJVNL, BBMB, THDC, NPCIL, APCPL) (MU), PPO_{app}	1,818.80
Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.60%
Power Purchase Quantum from sources within State/ Open Market, PPI_{app}	106.90
Quantum of Sale of Surplus Power (MU), PSO_{app}	0.00
Approved Intra-State T&D Loss (%), DL_{app}	9.40%
Energy Sales for Agriculture consumer category (MU), Z_{app} (MU)	1.49
R_{app} (INR/kWh)	**4.45**

9. Chapter 9: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- ***The detailed action plan for compliance of all the directives <u>within 1 month of the issuance of this Order</u>.***
- ***The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections <u>within 10 days of the end of each quarter of the calendar year</u>.***

9.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to take appropriate action under Section 142 of the Electricity Act 2003 and various other provisions of the Act, and Regulations framed by JERC.

9.1.1. Management Information System

Originally Issued in Tariff Order dated 7th May 2012
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission observes that the Petitioner is yet to ensure full compliance of this directive (to ensure that an effective MIS is in place). The Commission thus directs that pending the implementation/roll out of the relevant IT module, the Petitioner shall finalize the formats (for manual compilation of MIS) within 1 month of issuance of this Order and submit quarterly MIS for the information of the Commission*
Petitioner's Response in the Present Tariff Petition *The M/s NIELIT is a billing agency of Electricity Department Chandigarh for all category of electricity consumers who supply various MIS reports. The MIS reports are further forwarded to the Hon'ble Commission in the prescribed formats on regular basis.* *However, a proposal is already forwarded to NIC for online generation of MIS.*
Commission's Response *The Commission directs the Petitioner to expedite the process of online generation of MIS. The Commission thus directs the Petitioner to complete the roll-out of the MIS for the Discom at the earliest under intimation to the Commission.*

9.1.2. Metering /replacement of Non-Functional or defective/ 11KV Meters

Originally Issued in Tariff Order dated 16th July 2011
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance (including installation of smart meters as per Clause 8.4(3) of National Tariff Policy notified on 28th January 2016) despite repeated directives of the Commission. The Commission directs the Petitioner to identify and submit a detailed action plan to ensure 100% fully functional 11 kV meters within 1 month of issuance of this Order and ensure compliance of this directive before 31st December 2017. No further extension will be entertained by the Commission in this context.*
Petitioner's Response in the Present Tariff Petition *The necessary data/information is being supplied quarterly on regular basis and information for 2nd quarter has been provided vide the office Memo No. 2595 dated 03/10/17.*
Commission's Response *The Commission has observed that the quarterly report is only being submitted for consumer meters. The Petitioner is directed to submit the quarterly report of 11 kV feeder meters and DT meters also.*

9.1.3. Energy Audit

Originally Issued in Tariff Order dated 16th July 2011
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. The Commission now directs the Petitioner to expedite all pre-requisite actions for undertaking energy audit in its licensee area and ensure compliance of this directive within this financial year only. No further extension will be entertained by the Commission in this context*
Petitioner's Response in the Present Tariff Petition *The technical sanction for installation of DLMS meters at all node points of 66 kV & 11 kV for energy audit purpose, has already been accorded vide memo No-9963 dt-10/09/18 and DNIT is under progress. The DT Metering will be started after successful implementation of feeder metering. However, on pilot basis, 126 DT meters are installed in the Industrial Area for energy audit which is being done manually. The energy audit report can be submitted to the Commission after installation of DLMS meters on 6 kV and 11 kV feeders.*
Commission's Response *The Commission believes that the Petitioner is well equipped to carry out the Energy Audit in its territory and the Commission does not intend to intervene in the operational decision making of the Petitioner. The Commission thus directs the Petitioner to carry out the Energy Audit at the earliest and submit the same to the Commission along with the next tariff Petition.*

9.1.4. Demand Side Management and Energy Conservation

Originally Issued in Tariff Order dated 16th July 2011
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission observes that Petitioner has not yet reverted with the status of the action plan for installation of ToD meters. The Commission also observes that the Petitioner is also yet to submit the detailed roll-out plan of LED Bulbs in the UT of Chandigarh. The Commission directs the Petitioner to take up the matter with the highest authorities and submit the roll-out for ToD metering as well as distribution of LED bulbs in the licensee area of the CED within one month of issuance of this Order so as to fully comply with both the directives before 30th November 2017. No further extension will be entertained by the Commission in this matter and any further non-compliance will be viewed seriously.*
Petitioner's Response in the Present Tariff Petition *TOD metering cannot be started without data centre and at present Electricity Department Chandigarh has no such data centre as no R-APDRP was implemented in Chandigarh. The smart meter has an additional features of TOD metering and work for installation of 30,000 smart meters and its allied infrastructure under the area of SDO-5 has already been allotted to M/s REC as deposit work. The M/s REC has further awarded the work of AMI and SCADA through tendering. However, the DPR of Smart Grid of whole Chandigarh for approximate of INR 241.00 Crores has already approved by the empowered committee, MOP, Govt. of India. The MOP has already been requested for administrative approval and expenditure sanction by the SFC of MOP being the competent authority.*
Commission's Response *The Commission takes a serious view of the fact that the Petitioner is yet to roll-out TOD metering for its willing consumers. The Petitioner is directed to submit an action plan in this regard.*

9.1.5. Manpower Deployment

Originally Issued in Tariff Order dated 16th July 2011
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission directs the Petitioner to arrange follow up at the level of the Secretary (Power) of the UT with the Government of India in this matter. Further the Petitioner should make recruitment of manpower as per the report approved by the Commission and submit the status report by 30th September 2017*
Petitioner's Response in the Present Tariff Petition *The CE-cum-Spl. Secy. has directed vide memo No-4494 dt-08/06/18 to inform the Commission that the case is already under consideration with the higher authorities.*
Commission's Response *The Commission notes that the Petitioner has repeatedly failed to comply with the above directive. The Commission advises that the Chief Engineer and the Secretary (Power) to expedite the process and convince the competent authority in this regard in the interest of the consumers.*

9.1.6. Segregation of T&D losses and loss reduction trajectory

Originally Issued in Tariff Order dated 7th May 2012
Commission's Latest Directive in Tariff Order Dated 04th May 2017 *The Commission has taken a serious view of the fact that the Petitioner has repeatedly failed to comply with the directive over the years on the pretext of ensuring compliance under one scheme or another.* *The Commission now directs the Petitioner to submit the action plan for installation of interface meters at all feeders within 1 month of issuance of this Order. The Commission also directs the Petitioner to submit a detailed report of voltage wise T&D losses before 31st October 2017 failing which the Commission will be constrained to take appropriate action against the Petitioner.*
Petitioner's Response in the Present Tariff Petition *The RFP for appointment of consultant for Segregation of T&D losses and loss reduction trajectory was submitted to Chief Engineer–cum-Spl.-Secy (Engg.) vide memo No-2123 dt-03/10/17 for accord of principle approval. However, Chief Engineer–cum-Spl.-Secy (Engg.) vide memo No-5040 dt-04/07/18 has intimated that the consultant will be appointed after allotment of work for installation of audit meters.*
Commission's Response *The Commission directs the Petitioner to expedite the execution of the study. The Commission also directs the Petitioner to submit a detailed report of voltage wise T&D losses along with the next Tariff Petition.*

9.1.7. Assets created from consumer contribution

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 28th March 2018 *The Petitioner has failed to submit the details of assets created through consumer contribution, if any. The Petitioner is not entitled to get depreciation on these assets. The Commission has currently considered the entire GFA towards depreciation and will reduce the depreciation in future, once the details of the consumer contribution are made available. The Commission directs the Petitioner to submit detailed scheme wise consumer contributions, the impact of which shall be accounted by the Commission in future Tariff Orders.*
Petitioner's Response in the Present Tariff Petition *The assets created through own funds are considered for preparation of tariff petition.*
Commission's Response *The Commission would like to categorically mention that no information on assets created out of consumer contribution has been provided by the Petitioner. Further, the Petitioner himself has not considered any assets created out of consumer contribution while calculating the depreciation, interest on loan and RoE. The Petitioner in this regard is directed to submit the desired information positively along with the next Tariff Petition.*

9.1.8. Creation of SLDC

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 28th March 2018 *Currently, the functions of scheduling of power are being performed by the CED itself. The Commission directs the Petitioner to form a separate SLDC which is ring fenced from the CED. The Petitioner is directed to deploy employees dedicated to the SLDC operations, which are independent from the CED. Till the operationalization of SLDC, the Petitioner is directed to immediately appoint an officer responsible for receipt and processing of Open Access applications.*
Petitioner's Response in the Present Tariff Petition *The Electricity Department Chandigarh is an integrated utility and deemed distribution licensee as per Electricity Act-2003. It is further mentioned that Asst. Power controller (APC) is working under the supervision of Power Controller-cum-Executive Engineer Electy OP Divn No-2. APC is scheduling the power on day ahead basis and accordingly purchasing & selling power in the power exchange on day to day basis. Further, the procedure of Long-term open Access is already forwarded to Hon'ble Commission vide this office memo No-1932 dt-13/08/18. However, as per the direction of Hon'ble Commission, the co-ordination committee has been constituted and STU & SLDC are designated to deal the open access cases.* *The detailed procedure of Open Access has prepared by co-ordination committee and forwarded to CEUT-Cum-Spl-Secy. for further approval . The detailed procedure of Open Access will be forwarded to the Hon'ble Commission after approval from competent authority of Chandigarh Administration.*
Commission's Response *The Commission appreciates the efforts taken up by the Petitioner in this regard. The procedure for roll out of Open Access has been approved by the Commission. The Commission directs the Petitioner that the process of creation of SLDC be expedited with help from POSOCO and funds from PSDF.*

9.1.9. Operational safety and policy for accidents and compensation

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 28th March 2018 *The Commission directs the Petitioner to ensure that proper safety manuals are in place and are updated on a regular basis. To check enforcement of established safety procedures, the CED is directed to ensure periodic Safety Audits through independent professional agencies and adequate training of construction supervisory staff.* *The Commission also directs the Petitioner to develop a compensation policy for the victims of accidents caused due to the working of the Petitioner.*
Petitioner's Response in the Present Tariff Petition *The relevant training of respective staff is being conducted by the Electricity Department Chandigarh from time to time for safety and improving the efficiency. A training of 49 ALMs has already been conducted by HVPN Power training Institute (HPTI) Panchkula Haryana and a certificate is also issued to all trainee. However, the matter has been taken up with the PSPCL and HVPNL for training of supervisory staff of Electricity Wing as per CEA regulations, vide this office memo No-1652 & 1654 dt-05/07/2018 respectively. The response is still awaited.* *Further, a safety code book has already been published by this office and issued to concerned line Man/Asst. Line man for strict compliance.*

Originally Issued in Tariff Order dated 28th March 2018
Moreover, to ensure awareness for compliance of safety norms and standards by all the field staff, a DNIT is being prepared for seeking proposal from private agencies to organize a comprehensive training programme on safety measures along with disaster management for all the technical employees. *However, an estimate for Safety Audits through independent professional agencies is under preparation.* *The action is also being taken up to file a petition before Hon'ble JERC to seek approval to introduce a group accidental insurance policy for self-indemnification of line/substation staff to cover the risk in case of fatal and non-fatal accidents while performing official duties.*
Commission's Response *The Commission appreciates the efforts taken up by the Petitioner in this regard. The Commission directs the Petitioner to expedite the preparation of estimate for Safety Audits and submit the proposal for group accidental insurance policy to the Commission for perusal.*

9.1.10. Non-achievement of capitalization target

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 28th March 2018 *The Commission observes that the capitalisation achieved by the Petitioner in the FY 2016-17 is much lower, almost one-tenth, than approved by the Commission in the APR Order. The Petitioner has also submitted that a capitalisation of only INR 2.40 Cr has been achieved till January 2018 in the FY 2017-18 against a total approved capitalisation of INR 38.52 Cr as approved by the Commission in the ARR Order. Lower capitalisation signifies that not enough efforts have been undertaken in enhancing the reliability and quality of supply to the consumers. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for improving the service quality and targeting 24x7 supply to all consumers.*
Petitioner's Response in the Present Tariff Petition *In this connection it is submitted that RFP/ tender for augmentation of 66 kV Grids worth INR 80.64 Crores has been called. However, RFP/ tender to allot the work to PSUs could not be allotted yet as matter is under consideration with Finance Department, U.T., Chandigarh. As soon as the works are allotted to PSU, the capitalization will increase resulting improving the service quality to all consumers.*
Commission's Response *The Commission has noted the submission of the Petitioner. The Commission directs the Petitioner to ensure that the capitalisation targets approved in this Order is achieved in the upcoming control period as the same have been approved based on its submissions. In case the Petitioner fails to achieve the target then appropriate penalties shall be imposed during the tariff proceeding of the relevant year.*

9.1.11. Delay in submission of Tariff Petition

Originally Issued in Tariff Order dated 28th March 2018
Commission's Latest Directive in Tariff Order Dated 28th March 2018 *The Commission has taken a serious view of the delay in filing of Petition by the CED. The Petitioner is directed to file the subsequent tariff Petitions before 30th November of the respective year as per the applicable provisions of the MYT Regulations 2014. Further, the Commission has observed that although the Petitioner has carried out a load forecasting study, the Petitioner has not been using any scientific method to project the demand, power purchase quantum and cost in its Tariff Petitions. The Commission directs the Petitioner to ensure that its future submission regarding sales, power purchase cost are based on detailed analysis of the past trends and applicable tariffs of the power sources available.*

Originally Issued in Tariff Order dated 28th March 2018
Petitioner's Response in the Present Tariff Petition *The M/s. RSA & Co. is already appointed as consultant for preparation of ARR therefore the Petition of FY-2019-20 will be filled within the time schedule as prescribed in the MYT Petition.* *EDC has requested to AG (UT) to allow us to get the audit of accounts carried out from AG empanelled CAs. As, it usually takes 3.5 months in AG office, which is beyond the control of EDC. However the AG(UT) vide memo No-779 dt-30/06/18 has mentioned being Govt. Department , its accounts are audited and certified under Section-19(1) of Controller and Auditor General's (Duties, Power and conditions of Service) Act,1971 and asper section-13 of this Act, CAG is mandated to be sole auditor to audit all the trading, manufacturing ,profit and loss accounts & balance sheets kept any department of the Union or of a State.* *Further, efforts are being made to adopt/implement the scientific method to project the demand, power purchase quantum while scheduling and purchasing for which an estimate proposal is under preparation.*
Commission's Response *The Petitioner has been able to file this Petition within the prescribed timeline. The Commission directs the Petitioner to comply by the timelines in the upcoming years as well. The Commission drops this directive as the Petitioner has complied with the same.*

9.2. New Directives in this Order

9.2.1. Monthly Billing for Domestic and Commercial/ Non Residential category consumers

It has been observed that despite of repeated directions of the Commission, the Petitioner has not yet moved to monthly billing from bi-monthly billing for Domestic and Commercial/ Non Residential category consumers. The Commission takes serious note of this and directs the Petitioner to implement monthly billing for all category of consumers (except Agriculture) with immediate effect in accordance with the Supply Code Regulations, 2018 and submit the quarterly progress of the same to the Commission.

9.2.2. Determination of Category wise/ Voltage wise Cost of supply

The Petitioner is hereby directed to submit a proposal for category wise cost of supply along with the Tariff Petition for the next year. The Petitioner in this regard is directed to start collecting category wise and voltage wise data on losses, connected load, asset allocation etc. for prudent determination of the cost of supply.

9.2.3. kVAh based tariff

The Petitioner is directed to submit a proposal for implementation of kVA/kVAh tariff for HT/EHT consumers in the tariff petition for the next year. The Petitioner is also required to submit whether it possesses the requisite infrastructure to implement the same. The Commission in its efforts of making the tariff more cost reflective is looking to implement kVA/kVAh based tariff for HT/EHT consumers for all the utilities under its jurisdiction.

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 154: Tariff Schedule

S. No.	Consumer Category	Fixed Charge INR/kW/month	Energy Charge INR/kWh
1.	**DOMESTIC SUPPLY (DS)**		
I.	**LT Domestic**		
a.	0-150 kWh per month	10.00	2.75
b.	151-400 kWh per month		4.80
c.	Above 400 kWh per month		5.20
II.	**HT Domestic**	10.00	4.80
2.	**COMMERCIAL/ NON RESIDENTIAL (NRS)**		
I.	**LT Commercial**		
a.	0-150 kWh per month	INR. 20/kW/Month for Single Phase INR. 100/kW/Month for Three Phase	5.00
b.	151-400 kWh per month		5.30
c.	Above 400 kWh per month		5.60
II.	**HT Commercial**	100.00	5.30
3.	**INDUSTRY**		
I	Large Industrial Power Supply (LS)	200.00	5.00
II	Medium Industrial Power Supply (MS)	200.00	4.70
III	Small Industrial Power Supply (SP)	30.00	4.80
4.	**AGRICULTURAL PUMPING SUPPLY (AR)**	-	2.90
5.	**PUBLIC LIGHTING (PL)**		
I	Public Lighting system managed by Municipal Corporation, Panchayat and Street Lights maintained / outsourced to an external agency	100.00	5.35
II	Advertisement/ Neon-sign Boards Advertisement boards, bill boards (apart from advertisement boards installed on commercial establishments and charged under commercial tariff)	100.00	7.10
6.	**BULK SUPPLY (BS)**	200.00	4.90
7.	**TEMPORARY SUPPLY**	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.	

S. No.	Consumer Category	Fixed Charge INR/kW/month	Energy Charge INR/kWh
		For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
8.	ELECTRIC VEHICLE CHARGING STATION	100.00	4.00

10.2. Applicability

Table 155: Applicability of Tariff Schedule

Applicability	Character of service
DOMESTIC SUPPLY (DS)	
LT Domestic	
This schedule shall apply for light, fan, domestic pumping sets and household appliances in the following premises: a) Single private houses/flats. b) Government recognized education institutions, viz schools, colleges, universities, ITI hostels, canteens, and residential quarters attached to the educational institutions. c) Supply to hostels and /or residential quarter attached with the private educational institutions where separately metered. d) Paying Guest (PG) authorized by the Chandigarh Administration e) Administrative Training Institutes/Correctional Institutes/Training Centres exclusively run/managed by the UT/State/Central Government to undertake research, consultancy/Training and allied activities to improve management efficiency f) Government and public sports institutions/Gymnasium halls etc. banks and PCOs exclusively for the use of educational institutions. g) Religious Institutions viz. Temples, Gurudwaras, Mosques, Churches, provided that the Sub Divisional officer concerned authenticates the genuineness of the place being exclusively used for worship by the general public. h) Housing colonies and multi storied flats/buildings as defined in the Electricity Supply Code Regulations notified by the JERC. i) Dispensaries / Hospitals / Public Libraries / Schools / Colleges / Working Women's Hostels / run by the Chandigarh Administration. j) Recognized Centers/ societies for the welfare of blind, deaf and dumb, spastic children, physically handicapped persons, mentally retarded persons, as approved by the Chandigarh Administration. k) Orphanages/ Cheshire Homes/ Old age homes/ charitable homes and Gaushalas. l) Charitable Organizations viz. Schools, Hospitals, Dispensaries, Education and Research Institutes and Hostels attached to such Institutions registered with the Income Tax authorities under Section 80G, or 80 GGA, or 35 AC. The individual	AC, 50 cycles, Single phase 230 volts or three phase 400 volts. For loads up to 5 KW supply shall be connected on single phase 230 volts and above 5 KW up to 100 kVA supply shall be given on three phase 400 volts.

Applicability	Character of service
organization shall apply in writing to the Electricity Department along with a certificate from the IT Department or getting considered for the tariff in the Domestic Category m) Shelter Homes (including Night Shelters) approved by Chandigarh Administration. n) Crematoriums (including electric) and Burial Grounds. The Halls or Gardens/ Lawns or any portion of the premises listed in Para (i) above let out for consideration or used for Commercial activities at any time shall be charged at Commercial Rate of Electricity Tariff. **NOTES:** i. Where a portion of the dwelling is used for mixed load purposes the connection shall be billed for the purpose for which the tariff is higher. ii. Hostels shall be considered as one unit and billed under domestic supply tariff without compounding. iii. Private education institutions not recognized by the Chandigarh Administration shall be billed under Non Domestic Tariff. iv. STD/PCOs, shops attached to Religious Institutions will be billed under Non- Domestic Tariff. v. A room or a part of a residential house utilized by a teacher for imparting tuition work, self-occupied handicapped persons operating from their residences, cooking classes taken by house ladies, beauty parlour run by house ladies, ladies doing tailoring work etc. shall be covered under domestic tariff. vi. For cottage & commercial activities operating in residences such as repair of shoes by cobbler, dhobi, ironing of clothes, stitching/ knitting, paan-shop and bakery products etc. small shops, tea shops etc. with total load (maximum demand) of 5 kW domestic tariff shall be applicable subject to installation of MDI Meters. In cases where total load is more than 5 kW, separate metering shall be done for commercial and domestic use and consumption shall be charged according to the tariff applicable. vii. Professionals such as Doctors, Engineers, Lawyers, CAs, Journalists and Consultants practicing from their residence irrespective of location provided that such use shall not exceed 25% of the area of the premises or as specified in the rules/regulations of their respective State or Union Territory. viii. The load of common amenities for consumers of housing societies may include pumps for pumping water supply, lifts and lighting of common area. The consumption of energy for common services shall be separately metered with meters installed and sealed by the licensee and shall be billed at Domestic Tariff. The user shall inform the details of every non-domestic activity within the residential complex, such as commercial complex, industrial activity, and recreation club, along with the connected load, and shall seek a separate connection for the same under the commercial category.	
HT Domestic	
This schedule shall apply to all the consumer falling under the LT Domestic category above but connected at 11 kV or above voltage level	AC, 50 cycles, Three phase 11 Kilo volts.

<table>
<tr><th>Applicability</th><th>Character of service</th></tr>
<tr><td></td><td>For loads above 100 KVA, supply shall be connected on 11 KV and a separate transformer of adequate capacity shall be installed at consumers cost as per Electricity Supply Code Regulations notified by JERC. In case of consumers where the metering is being done on the low voltage side of the transformer instead of the high voltage side, the consumption should be computed by adding 3% extra on account of transformation/ losses. This arrangement shall be continued for a maximum of one year within which metering shall be shifted to HT(11KV) side of the transformers</td></tr>
<tr><td colspan="2">COMMERCIAL / NON RESIDENTIAL SUPPLY (NRS)</td></tr>
<tr><td>LT Commercial</td><td></td></tr>
<tr><td>This schedule shall apply to all consumers, using electrical energy for light, fans appliances like pumping sets, central air conditioning plant, lift ,welding set, small lathe, electric drill, heater, battery charger, embroidery machine, printing press, ice candy, dry cleaning machines, power press, small motors in non-residential premises such as defined below:
a) Hostels (other than those recognized/aided institutions of Chandigarh Administration)
b) Pvt. Schools/colleges, coaching institutes, research institutes, (Other than those run by the Chandigarh Administration),
c) Coaching institutes and research institutes (Other than those recognized by the Chandigarh Administration)
d) Auditoriums, Hospitals, clinics, dispensaries, nursing homes / diagnostic centers other than those run by the Chandigarh Administration.
e) Railways (other than traction)
f) Hotels, restaurants, guest houses, boarding / lodging houses, marriage houses
g) Cinemas
h) Banks
i) Petrol pumps.
j) Government / Public Sector offices and undertakings
k) Public halls, auditoriums, exhibitions, theatres, circus, cinemas etc.
l) All other establishments, i.e., shops, chemists, tailors, washing, dyeing etc. which do not come under the Factories Act.
m) Cattle farms, fisheries, piggeries, poultry farms, floriculture, horticulture, plant nursery Farm houses being used for commercial activity.
n) Ice-cream parlors, bars, coffee houses etc.</td><td>AC, 50 cycles, single phase at 230 Volts or 3 Phase at 400 Volts
For loads up to 5 KW, supply shall be connected on single phase 230 volts and above 5 KW up to 100 KVA, supply shall be given on 3 phase 400 volts.</td></tr>
</table>

Applicability	Character of service
o) Any other category of commercial consumers not specified/covered in any other category in this Schedule. NRS supply shall also be applicable to multi consumer complexes including commercial complexes as defined in the Electricity Supply Code Regulations notified by the JERC. No separate circuit/connection for power load including pumping set/central air conditioning plant, lifts etc. is permitted.	
HT Commercial	AC, 50 cycles, Three phase 11 Kilo volts.
This schedule shall apply to all the consumers falling under the LT Commercial category above but connected at 11 kV or above voltage level	For loads above 100 KVA, supply shall be given on 11 KV in case of multi consumer complex including commercial complex and in other cases for load above 100 KVA the supply shall be on 11 KV. In case of consumers where metering is done on the low voltage side of the transformer instead of the high voltage side, the consumption should be computed by adding 3% extra on account of transformation losses.
LARGE INDUSTRIAL POWER SUPPLY (LS)	
The schedule shall apply for consumers having industrial connected load above 100kVA.Their contract demand shall not be less than 100 kVA. No consumers shall increase their connected load without prior approval of the Electricity department. The consumer availing supply at high tension shall indicate rated capacity of all the step down transformers installed in his premises and shall not increase the capacity of such step down transformers without prior approval of the department. **NOTE** i. The above tariff covers supply at 11 kV. Surcharge at 20% on the tariff shall be leviable for all the existing consumers which are being given supply at 400 volts. A consumer getting supply at 33 kV and above will get a rebate of 3%. ii. Surcharge @ 17.5% on the tariff shall be leviable for all the arc furnace consumers which are being given supply at 11 kV. This surcharge at 17.5% shall also be leviable on other industrial consumers having contract demand exceeding 5000 kVA and running at 11kV. iii. In case of steel rolling mills having supply at 400 volts, an additional surcharge of 5% shall be leviable. iv. In case of HT consumers (11kV and above) where maximum demand and energy consumption is recorded on the lower voltage side of the consumer transformer instead of the high voltage side, maximum demand and energy consumption for billing purpose should be computed by adding 3% extra on units on account of transformation/cables losses. However this agreement shall in no case continue for more than three months and the meter shall be	AC, 50 Cycles, 3 phase 11 kV supply for loads above 100 kVA Supply can be given at 33/66/220kV depending on quantum/type of load and contract demand and availability of bus voltage and transformer winding capacity at the feeding substation wherever possible at the discretion of supplier. For arc furnace loads and other loads of equally violent fluctuating nature, voltage of supply will be 33kV and above depending upon availability of bus voltage and transformer winding capacity at the feeding substation wherever possible, at the discretion of supplier. **Contract demand** is the load kW, kVA or HP, as the case may be agreed to be supplied by the licenses and

Applicability	Character of service
installed on the HT side of the transformer within the said period including such existing connection. v. For new connections, all metering will be on HT side only.	contracted by the consumer and specified in the agreement. If the consumer in a month exceeds the contract demand, such excess shall be charged at an additional rate of INR 250/kVA.
MEDIUM INDUSTRIAL POWER SUPPLY (MS)	
This tariff schedule shall apply to all industrial power supply consumers having connected load ranging from 21 kVA to 100 kVA	AC, 50 cycles, 3 phase, 400 volts
SMALL INDUSTRIAL POWER SUPPLY (SP)	
This schedule shall apply to small power industries with connected load not exceeding 20 KW (26BHP) in urban and rural areas	AC, 50 cycles, single phase 230 volts, or 3 phase, 400 volts.
AGRICULTURAL PUMPING SUPPLY (AP)	
This schedule shall apply to all consumers for use of electrical energy for irrigation pumping load upto 20 kW (26 BHP). Supply for loads above 26 BHP/20 KW shall be charged in accordance with the relevant industrial tariff (Govt. Tubewells meant for water supply are covered under the relevant Industrial Tariff) **NOTE** • Pumping sets shall be ISI marked. The responsibility for ensuring installation of ISI marked pumping sets as well as shunt capacitors shall be that of the Junior Engineer concerned, who shall verify the same at the time of verification of test reports before the release of the connection. • Supply for agriculture/Irrigation pump sets, at one point, may also be given to a registered co-operative society or to a group of farmers recognized by the competent authority. • An agriculture consumer, if he so desires, may shift the location within his premises of his connection, with the approval of the competent authority, after payment of applicable charges.	AC, 50 Cycles, three phase, 400 volts, Single Phase at 230 volts.
PUBLIC LIGHTING (PL)	
This tariff schedule shall apply for use of Public Lighting system including signaling system, road and park lighting managed by municipal corporation, panchayats, institutions(at the discretion of the supplier)etc. The tariff schedule shall also apply for use of electricity by street lights managed/outsourced to an external agency and advertisement boards, sign boards, bill boards, signages etc., (apart from the advertisement boards installed on commercial establishments & charged under commercial tariff).	AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts.
BULK SUPPLY (BS)	
This tariff schedule shall apply to general or mixed loads exceeding 10 kW to MES, Defense establishments, Railways, Central PWD, Institutions, Hospitals, Departmental Colonies and other similar establishments where further distribution is to be done by the consumer. Above schedule shall not be applicable, if 50 % or more of the total sanctioned load is motive/ manufacturing load	AC, 50 cycles, three phase, 400 volts or 11 kV or higher voltage at the option of the department. Loads exceeding 100 kVA shall be released on HT only.
TEMPORARY SUPPLY	

Applicability	Character of service
Available to any person requiring power supply for a purpose temporary in nature. The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations notified by JERC.	AC, 50 cycles, Single phase at 230 Volts or three phase at 400 Volts
ELECTRIC VEHICLE CHARGING STATIONS	
This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	AC, 50 cycles, three phase, 11 kV or higher voltage.

10.3. General Conditions of HT and LT Supply

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

1) The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.

2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.

3) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.

4) Fixed charges, as applicable, will be charged on pro-rata basis from the date of release of connection.

5) The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of the contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawl is more than 20% of the contract demand then the connection shall be disconnected immediately.

   Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

6) **Power Factor Charges for HT and EHT**

   (a) Power factor means, the average monthly power factor and shall be the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded up to two figures.

   (b) The consumer shall maintain the monthly average power factor of the supply not less than 90% (lagging). If the monthly average power factor of (a) consumer falls below 90% (0.9 lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 1% in power factor upto 70%(lagging).

   (c) In case the monthly average power factor of the consumer is more than 95% (95% lagging), a power factor incentive @ 1% on demand and energy charges shall be given for each increase of 1% in power factor above 95% (lagging)

(d) If the average power factor falls below 70% (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

7) Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amounts less than 50 paisa shall be ignored and amounts of 50 paisa or more shall be rounded off to the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only upto the month of permanent disconnection.

8) **Advance Payment Rebate**: If full advance payment of the current bill is made before the issue date of previous cycle bill, rebate @1% shall be given on the amount consisting of SOP plus fixed charges plus FPPCA. However if the advance payment is not adequate as per current bill amount consisting of SOP plus Fixed Charges plus FPPCA or payment made after the issue date of previous cycle bill , such cases shall be treated for prompt payment rebate. Sample calculation for the same has been in Annexure 2 of this Order.

9) **Prompt Payment Rebate:** If payment is made at least 7-days in advance of the due date of payment of the current bill a rebate for prompt payment @ 0.25 % of the bill amount (SOP +Fixed Charges +FPPCA) amount shall be given. Those consumers having arrears shall not be entitled for such rebate. Sample calculation for the same has been in Annexure 2 of this Order.

Provided that in case the payment is made by cheque, the prompt payment discount will be applicable only if the payment by cheque is made 3 days prior to date of availing the prompt payment discount i.e. before 10 days from the due date of payment.

10) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula specified in Chapter 8 of this Tariff Order. Such charges shall be recovered / refunded/adjusted in accordance with the terms and conditions specified in the FPPCA mechanism.

11) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order.

12) **Surcharge for Low Power Factor/Non Installation of Required rated LT Shunt Capacitors**

(a) Consumers with L.T connections where the meter provided by the licensee has the power factor recording feature, shall install shunt capacitors of adequate rating to ensure power factor of 85% or above failing which low power factor surcharge at the rates noted below will be levied.

S. No.	Power Factor range	Surcharge
1.	85% and above	NIL
2.	Below 85% and upto 80%	2% of billed energy charges of that month for every 1% fall in P.F from 85%
3.	Below 80% and upto 75%	2.5% of billed energy charges of the month for every 1% fall in P.F from 80%
4.	Below 75%	3% of billed energy charges of that month for every 1% fall in P.F from 75%

The conditions for disconnection of a consumer supply in case of non-achievement of minimum level of power factor as prescribed in the Supply Code Regulations notified by JERC, shall apply.

13) **Unauthorized use of Electricity:** The unauthorized use of electricity shall be treated as specified in the Supply Code Regulations notified by JERC.

14) **Taxes and duties**

The tariff does not include any tax or duty etc. on electricity energy that may be payable at any time in accordance with any law then in force. Such charges, if any, shall be payable by the consumer in addition to the tariff charges.

15) **Time of Day (TOD) tariff**

a) Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.

b) The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer, as TOD metering is not yet implemented.

Period of use	Hrs.	Demand Charges	Energy Charges
Normal period	6:00 a.m. to 6:00 p.m	Normal Rate	Normal rate of energy charges
Evening peak load period	6:00 p.m to 10.00 p.m	Normal Rate	120% of Normal rate of energy charges
Off-peak load period	10:00 p.m to 6:00 a.m	Normal Rate	90% of Normal rate of energy charges

Applicability and Terms and Conditions of TOD tariff:

a) TOD tariff shall be **optional** unless otherwise specifically stated to the contrary in the Tariff Order.

b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power.

c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff.

d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

10.4. Schedule of Other Charges

S. No.	Description	Approved
A	**Application processing charges for new connection/ enhancement of load/ reduction of load**	
i	Domestic supply (LT)	INR 25/-
ii	Non-Domestic Supply (LT)	INR 100/-
iii	Small Power, Medium Supply and street lighting supply (LT)	INR 250/-
iv	Agriculture Power supply (LT)	INR 25/-
v	Temporary metered supply (LT)	Two times the normal rates of category of permanent supply
vi	HT/EHT Supply	As specified in Supply Code Regulations specified by JERC
B	**Charges for Re-fixing/ Changing of meter/Meter Board in the same premise on consumer request when no additional material is required. (When the cause leading to subsequent change/replacement of meter is either manufacturing defect or Department's fault then, it shall be free of cost and further, if shifting of meter is done in the interest of department work then it is free of cost.)**	
i	Single Phase Meter	INR 250/- per meter
ii	Three Phase Meter without CT	INR 500/- per meter
iii	Three Phase Meter (with CTs & PTs)	INR 1,000/- per meter
iv	Tri-vector and special type meters	INR 1,200/- per meter
v	HT/ EHV metering equipment	INR 3,000/- per meter

S. No.	Description	Approved
C	**Meter Inspection & Testing Charges**	
	(In case correctness/accuracy of a meter belonging to the Licensee is challenged by the consumer)	
i	Single phase	INR 150/- per meter
ii	3-phase whole current i.e. without C.T	INR 500/- per meter
iii	L.T. meter with CTs	INR 1,500/- per meter
iv	H.T. & E.H.F metering equipment.	INR 3,000/- per meter
	NOTE: If the challenged meter is found to be incorrect / defective, the credit of these charges will be given to the consumer, otherwise these will be forfeited.	
D	**Re-sealing charges (irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer):**	
i	Meter cupboard	INR 50/-
ii	Where cut-out is independently sealed	INR 50/-
iii	Meter cover or Meter Terminal cover (Single phase)	INR 150/-
iv	Meter cover or Meter Terminal cover (3- phase)	INR 375/-
v	Maximum Demand Indicator or C.T.s Chamber	INR 900/-
vi	Potential fuses	INR 900/-
	Note: If M&T and ME seals are found to be broken/tampered cost of meter shall be recoverable and the case shall be treated as theft case.	
E	**Reconnection Charges**	
A	Reconnecting/connecting the premises of any consumer who was previously disconnected on account of breach of his agreement with the department or of any other provisions of the Act as may be relevant.	
i	Domestic supply	INR 250/-
ii	Non-Domestic Supply	INR 500/-
iii	Small Power, Medium Supply and street lighting supply	INR 500/-
iv	Large Supply and bulk supply	INR 1000/-
v	Agriculture Power supply	INR 250/-
vi	Temporary metered supply	INR 1,500/-
F	**Testing/ Inspection of Consumer's installation**	
A	Initial Test/ Inspection	Free of Cost.
B	For subsequent test of a new installation or an extension to an existing installation if the installation is found to be defective or the wiring contractor or his representative fails to be present	
i	Single Phase	INR 150/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
ii	Three Phase	INR 200/- (Payable in advance for each subsequent visit for the purpose of testing the installation)

S. No.	Description	Approved
iii	Medium Supply/Bulk Supply loads upto 100 kVA	INR 500/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
iv	Large Supply/Bulk Supply (loads above 100 kVA)	INR 1,000/- (Payable in advance for each subsequent visit for the purpose of testing the installation.)
G	**Meter Reading Cards/ Passbook (New/ Replacement)**	
i	Provision of meter reading cards including PVC jacket	INR 5/- per card
ii	Replacement of meter card found to be missing on consumer's premises	
iii	Domestic & NRS	INR 5/- per card
iv	SP and AP	INR 10/- per card
v	MS	INR 25/- per card
vi	LS	INR 45/- per card
vii	Replacement of Passbook in case it is lost by AP Consumer	INR 60/- each
viii	Replacement of identification card missing on the premises of AP Consumer	INR 25/- each
ix	Temporary	INR 60/- per card
H	**Meter Rentals** (In case where consumer opts that licensee should supply meter)	
i	Single Phase meter	INR 20/- per month
ii	Three Phase LT meter	INR 50/- per month
iii	Three Phase LT meter with CT	INR 70/- per month
iv	11 kV Metering System	INR 500/- per month
v	33 kV Metering System	INR 1,000/- per month
vi	66 kV Metering System	INR 2,000/- per month
I	**Replacement of broken glass**	
a	Replacement of broken glass of meter cupboard (when the cause of the breakage is considered to be an act or fault of the consumer).	INR 60/- each
b	Replacement of meter glass where the same has been tampered with or broken by the consumer	
i	Single phase meter	INR 250/-
ii	Three phase meter	INR 450/-
J	**Amount of Security deposit for new/ extension of load**	**As per the procedure prescribed in clause 5.130 to clause 5.134 of JERC Electricity Supply Code Regulation 2018.**
K	**Charges recoverable from the consumer when the meter is found damaged / burnt owing to negligence or default on the part of consumer**	
i	Single Phase Meter	INR 700/- each
ii	Three Phase Meter	INR 1,550/- each
iii	LT CT operated Solid State Meter. (Without CTs)	INR.3,000/- each
iv	LT CTs	

S. No.	Description	Approved
	a) Upto 50/5A	INR.1,580/- each
	b) Above 50/5 A	INR. 600/- each
	c) Solid State HT TPT metering equipment (without CT/PT unit)	INR.20,000/- each
	d) H.T.C.T./P.T. Unit	INR. 40,470/-
L	**Special Meter reading charges in case of change in occupancy/ vacation of premises**	
i	Domestic	INR. 50/-
ii	Other Consumer-Single phase meter	INR 250/-
iii	Other Consumer-Three phase meter	INR 450/-
M	**Supply of duplicate copies of electricity bills**	
i	Domestic consumers	INR 5/-
ii	Non-Domestic consumers	INR 10/-
iii	Temporary consumers	INR 10/-
iv	L.T. Industrial (upto 20 kW) & AP consumer	INR 10/-
v	L.T. Industrial (above 20 kW) & Street lighting consumer	INR 15/-
vi	H.T. Industrial & bulk supply consumer	INR 20/-
N	**Review of electricity bills (If the accuracy of licensee's bill is challenged by the consumer and a review of the bills is demanded)**	
i	Single Phase Supply	INR 10/-
ii	Three Phase Supply	
	load upto 20 kW	INR 250/-
	load above 20 kW upto 60 kW	INR 450/-
	load above 60 kW upto 100 kVA	INR 750/-
iii	Large Supply (above 100 kVA)	INR 1,000/-
	NOTE: If the challenged bill is found to be incorrect, the credit of the fee will be given to the consumer, otherwise these will be forfeited.	
O	**Testing and calibration including sealing of energy meter owned /supplied by the consumer**	
i	Single Phase	INR 100/-
ii	Polyphase whole current meter	INR 500/-
iii	Polyphase meters with CTs	INR 1200/-
iv	HT and EHT metering equipment	INR 3,500/-
P	**Checking of the capacitors at the request of the consumer**	
i	Consumer receiving supply at 230/440 V	INR 250/- per visit
ii	Consumer receiving supply at Above 400 V and up to 11 KV	INR 500/- per visit
Q	**Demand notice extension fee (for each period of three months)**	
i	DS and NRS	INR 50/-
ii	AP	INR 500/-
iii	SP	INR 200/-
iv	MS/LS/BS	INR 2,500/-

S. No.	Description	Approved
	Note: Demand notice shall be valid for three months initially with an extended/grace period of further three months. After the expiry of grace/extended period of three months, the application shall be deemed as cancelled. Revival fee(one time only) for cancelled application shall be twice the demand notice extension fee as prescribed above and will be done by load sanctioning authority for another three months only	

10.5. Schedule for service connection charges and service rentals

Service connection charges are provided in the schedule of general and service connection charges and are to be recovered from all prospective consumers and existing consumers seeking extension in load. Schedule of service connection charges as applicable is given under:

A. Service connection charges for domestic supply

S. No	Particulars	Category	INR
1	Single Phase Fixed Per kW Charges		
a	Up to 1 kW	Domestic	250/-
		Non Residential Supply	250/-
b	Above 1 kW and up to 3 kW	Domestic	300/-
		Non Residential Supply	300/-
c	Above 3 kW and 5 kW	Domestic	500/-
		Non Residential Supply	750/-
2	Three Phase Fixed Per kW Charges		
a	Above 5 kW	Domestic	750/-
		Non Residential Supply	1,000/-

B. Variable Charges

No variable charges are leviable upto 75 meters of service line length from the point of interconnection. Beyond 75 meters for all loads variable charges @ INR 125 per meter length of service line shall be recoverable for loads in excess of 5 kW.

a) Domestic and Non Residential consumers falling under the following categories have the option, either to pay in lump sum the service connection charge as mentioned in the preceding clause or to pay monthly service rentals at 1.6 paisa per rupee of the estimated cost of the service line beyond the cost of 30.48 meters.

(i) Members of Schedule Castes.

(ii) Religious and Charitable institutions run by recognized/ registered associations or societies registered with Register of Societies

b) All such prospective and existing consumers who will pay or have paid service connection charges in full, shall be exempted from the payment of monthly service rentals.

c) The service rentals to the consumers existing prior to 1st November 2002, if applicable already shall continue.

C. Service connection charges for industrial and bulk Supply (For new Connections):

S. No	Load	Service Connection
1	Up to 100 kVA	INR 750/kW

Service connection charges under Para i) shall be applicable for loads upto 100 KVA where the length of new and augmented or both line(s) to be provided is up to 100 meters which will include 11kV line (whether overhead or cable LT line and service cable. Where this limit exceeds 100 meters, the applicant shall be required to pay the actual cost of @ INR 125 per meter of 11 kV line, LT line and service cable in excess of 100 meters as additional service connection charges (nonrefundable).However, no component of the distribution substation transformer to be created would be charged wherever applicable.

Extension of Load

a) **Where the consumer is either paying service rentals or had paid the service connection charges on kW basis for the original load.**

   i) Extension in load bringing to be charged at INR 750/- per the total load up to 100 kVA for extension part only. However charges for service line in excess of 100 meters shall be charged @ INR 125 per meter for length of service line (new or augmented or both) feeding such consumer. Rentals on original load, if applicable, already shall continue.

b) **Where the consumers had paid the service connection charge in full.**

   i) No charges for extension shall be recoverable where the cost of service/common part of service line had been paid by the applicant at the time of release of the original connection provided. No augmentation of service/common portion of service lines had been carried out ever since the release of connection and also the additional load can be released from the existing line without augmentation and the cost deposited by the consumer at the time of release of original connection is not less than 'per kW charges' payable on the basis of total connected load (including extension in load). For calculating per kW charges, the rate as applicable at the time of release of original connection shall apply for the existing load and prevailing rates for the extension in load. Difference, if any, between the actual cost paid and the recoverable amount 'per KW charges' shall be payable by such consumers at the time of extension in load. This shall also apply to the cases fed through an independent feeder laid at the cost of the consumer. The cost of line/bay (33/66/132/220kV) paid by the consumer or at the time of clubbing/conversion paid by the consumer at the time of clubbing of supply to higher voltage shall be appropriated towards service connection charges at the time of subsequent release of extension in load, if applicable. However, for calculating total 'per kW charges' service connection charges already recovered from the consumer in respect of clubbing cases, applicable rates to different connections as existing immediately prior to clubbing are to be taken into account.

   Cases involving augmentation of service/Common portion of service line or if the augmentation had taken place subsequent to release of connection shall be default with as per provisions of sub Para (a)

c) While accessing the connected load for working out service connection charges, both general and industrial loads of an individual consumer at one location shall be taken into account.

d) The "per kW", service charges for extension in load shall be as contained in above and those shall be in addition to the service rentals on the original load, if applicable thereon.

e) An increase in the connected load even without increase in the contract demand shall call for payment of service connection charges on "per kW" basis as applicable to the category in which total connected load after extension falls and shall be recoverable for extension of the electrical part only. Consumers seeking extension in contract demand within the sanctioned connected load shall not be required to pay service connection charges on KW basis.

f) Consumers seeking contract demand higher than 60% of the connected load, shall be charged one time charge termed 'Contract Demand Charges' as follows :

S. No	Particulars	INR/kVA
1	For Contract Demand above 60% and up to 80% of connected load	200/-
2	For Contract Demand above 80% and up to 100% of connected load	300/-
3	Large Supply Consumers getting at 33 kV and above are exempted from the payment of one time contract demand charges for purpose of increasing contract demand	

g) In case of LT connections, Service rentals to the consumer existing prior to 1-11- 2002, if applicable already shall continue.

D. Recovery of service connection charges for extension of load by consumers who had paid the full cost of the line

Industrial and Bulk supply consumers availing connection for load exceeding 1 MW have to pay the entire cost of service line laid for them. By virtue of paying the entire cost of the line involved in releasing the connection, the consumer is entitled to avail (within five years) extension in load upto 100% of the original line for which the line had been erected provided that line so erected is capable of carrying the load i.e. original load and extended load up to 100% of the original load. If, however, line already erected is unable to take 100% extension of load, extension in load shall be limited to the capacity of the line. In such an event, the consumer is not required to pay service connection charges for the extension in load, provided the cost of the line already provided by him is more than the per kW charges calculated at the applicable rate from time to time on the total load including extension in load applied by the consumer.

a) If the extension in load applied by the consumer is in excess of the capacity of line already erected or more than 100 % of the original load, consumer shall pay the service connection charges as applicable to the new applicants.

b) If during the period of 5 years from the date of connection some load has already been released from the line, whose entire cost has been paid by the consumer, who seeks extension in load within five years up to the extent of the capacity of the line or 100% of the original load within 5 years up to the extent of the capacity of the line or 100 % of the original load, whichever is lesser, release of additional load shall be regulated as under:

Load released on voltage above 11 kV and loads 1MW and above:

Extension in load to the original consumer shall be allowed (within the contract demand for which the line was originally erected for the said consumer) at the cost of the electricity department, even if augmentation/ erection of new lines are required.

Load less than 1MW released on 11 kV

In this case care should to taken for a period of 5 years that a margin of 100 % of the load of the original consumer is available in the capacity of the line. If other consumer(s) want connection(s) to be released by utilizing the available margin, new consumer(s) singly or jointly, as the case may be shall pay towards the cost of augmentation of the line so that sufficient margin in electricity carrying capacity is available to cater to the additional requirement of the original consumer.

a) Provisions of the preceding Para's of this schedule shall not be applicable where as a result of extension in load the supply voltage level of the consumer changes or when the consumer changes the site of the premises.

E. Service connection charges for agriculture power

All prospective tube well consumers covered under general category shall pay INR 3,000 per BHP as service connection charges. The above charges are recoverable where the total length of the service line including new 11 kV line, LT line (new/augmented) and service cable is upto 1 Km (out of which LT line/Service cable route length should not exceed 500 meters from the common pole).Where the total length of the service line is more than 1 km (out of which LT line/Service cable route length should not exceed 500 meters), any applicant under this category shall be required to pay the cost of the new 11 kV line beyond this limit at INR 125 per meter as additional service connection charges. However, no component of distribution substation/transmission cost would be charged.

11. Annexures

11.1. Annexure 1: List of Stakeholders who attended the Public hearing held at Chandigarh on 8th January 2019

S.No.	Name of person	Name of Office/address
1	Sh. Jagmohan Modi	428/1, Sector-44A, Chandigarh
2	Sh. Ravinder Singh	CREST
3	Sh. A. Mahajan	Industries Association, Chadigarh
4	Sh. V.P. Garg	1543, Sector-33D, Chandigarh
5	Sh. Sukhwinder Abrol	CREST
6	Sh. Purishiv	AAJ SAMAJ
7	Major R.S. Gujral	2528, Sector-35C, Chandigarh
8	Dr. Jagpal Singh	3001, Sector-35D,Chandigarh
9	Sh. Narinder Singh	Indian Citizen Forum
10	Sh. Naveen Manglani	Chamber of Chandigarh Industries
11	Sh. Amanpal Singhania	-
12	Sh. A.S. Gulati	1152,Sector-42B, Chandigarh
13	Group Capt. R.C. Goyal	1579, Sector-36D, Chandigarh
14	Sh. Puneet Randhwa & Mr. Shantanu Ghosh	Plot No.1, IT Park, Chandigarh Infosys
15	Dr. T.C. Goyal & Sanjeev Goyal	818. 38A, Chandigarh
16	Sh. Yudhvir Kamra	President, Laghu Udyog Bhawan
17	Sh. Rakesh P. Aggarwal	Sr. Vice President
18	Sh. Dhian Singh	-

11.2. Annexure 2: Sample calculation for advance and prompt payment rebate

From	To	Bill issue date	Due date	Total bill amount (INR)	Energy charges + Fixed charges + FPPCA	Bill issue date of previous cycle	Payment date	Payment made (considered under advance payment) (INR)	Payment made (considered under Prompt payment) (INR)	Advance payment rebate (INR)	Prompt payment rebate (INR)	Rest Payment (After adjustment of all dues) (INR)
20/09/2018	20/11/2018	20/12/2018	07/01/2019	2,500	2,000	20/10/2018	19/10/2018	6,000	-	20	-	3,520
20/11/2018	20/01/2019	20/02/2019	07/03/2019	3,000	2,500	20/12/2018	-	-	-	25	-	545
20/01/2019	20/03/2019	20/04/2019	07/05/2019	3,500	3,000	20/02/2019	21/02/2019	-	3,000	-	7.5	-

Notes:

1. Prompt Payment Rebate at 0.25% - If bill amount due is paid prior to 7 days of due date and after/as on bill issue date of previous bill
2. Advance Payment Rebate at 1% - If amount is paid in advance before the bill issue of previous bill
3. Prompt and advance payment shall be given on the bill amount (limited to energy charges+ fixed charges+ FPPCA only)
4. Those consumers having positive arrears shall not be entitled for prompt rebate/advance payment
5. Prompt and advance payment rebate to be given only if the payment made by the consumer is more than bill due amount