



TARIFF ORDER

True-up of the FY 2016-17, Annual Performance Review of the FY 2017-18 and Approval of Aggregate Revenue Requirements (ARR) and determination of retail tariff for the FY 2018-19

Petition No. 251/2017

For

Electricity Department of Daman and Diu

13th March, 2018

JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories,

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List of abbreviations

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

Abbreviation	Full Form
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution Loss
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff

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

QUORUM

Sh. M. K. Goel (Chairperson)

Smt. Neerja Mathur (Member)

Petition No. 251/2017

In the matter of

Approval for the True-up of the FY 2016-17, Annual Performance Review for the FY 2017-18 and Aggregate Revenue Requirements (ARR) and Tariff proposal for the FY 2018-19.

And in the matter of

Electricity Department of Daman and Diu.....Petitioner

ORDER

Dated: 13th March 2018

- a) This Order is passed in respect of a Petition filed by the Electricity Department of Daman and Diu for approval of True-up of the FY 2016-17 and Annual Performance Review of the FY 2017-18, Aggregate Revenue Requirements (ARR) and Tariff proposal for the FY 2018-19.
- b) 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 its sufficiency and the veracity of the information submitted. Further, suggestions /comments/objections were invited from the public/stakeholders. A Public Hearing was held and the stakeholders/Public were heard there. The schedule of activities performed in the course of this quasi-judicial process are given below:

Table 1: Timelines w.r.t the Petition filed for True-up of the FY 2016-17, APR of the FY 2017-18 and ARR of the FY 2018-19

Particular	Details
Date of Admission	22 nd December, 2017
Public Hearing	11 th January, 2018 (Daman) and 8 th February, 2018 (Diu)
Technical Validation Session	16 th February, 2018

- c) The approved tariff, as detailed in the Chapter “Tariff Schedule,” shall come into force from 1st April 2018 and shall remain valid till further Orders of the Commission.

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

-Sd-
Neerja Mathur
(Member)

-Sd-
M.K. Goel
(Chairperson)

JOINT ELECTRICITY REGULATORY COMMISSION
(For the State of Goa and Union Territories)

Place: Gurugram
Date: 13th March 2018

(Certified Copy)
Keerti Tewari

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted a Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as “the Joint Electricity Regulatory Commission for the Union Territories” vide notification no. 23/52/2003-R&R dated 2 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 an autonomous body responsible for regulation of the Power Sector in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, 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 Department of Daman and Diu (ED DD)

The Electricity Department of Daman & Diu (ED DD) is responsible for power supply to all categories of consumers in the Union Territory of Daman & Diu. The ED DD is engaged in the procurement, transmission and distribution of electricity for consumers in the Union Territory of Daman and Diu. The ED DD mainly relies on the Central Sector Generating Stations (CSGS) in the Western Region to meet its energy demand. The ED DD also has some allocation from the Eastern Region Central Generating Stations.

The present transmission and distribution system of the ED DD consists of 26 circuit kms of 220 kV Double Circuit (D/C) lines, 85.30 Ckms of 66kV lines, 420 circuit kms of 11kV overhead as well as underground lines, 773.71 circuit kms of LT OH & U/G lines along with 875 transformers. Presently there are 107 numbers of 11 kV feeders and 5 no. 66 kV feeders in the network of UT of Daman and Diu.

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 on 30th June 2014 applicable for a three year Control Period starting from FY 2015-16 till the 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 from the FY 2016-17 to the FY 2018-19. The Regulations apply to all the distribution licensees in the State of Goa and the Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.4. Filing and Admission of the Present Petition

The present Petition was filed vide letter dated 20th December 2017, received at the Commission’s office on 21st December 2017, admitted on 22nd December 2017 and marked as Petition No. 251/2017.

1.5. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted and certain deficiencies were observed. Accordingly, deficiency notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioners and key data gaps, which included O&M Expenses, 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 these sessions 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 date:

Table 1: List of interactions with the Petitioner

S. No	Subject	Date
1	Issue of First Discrepancy Note	1 st January, 2018
2	Public hearing	11 th January, 2018 (Daman) and 8 th February, 2018 (Diu)
3	Reply received from Petitioner	12 th February, 2018
		14 th February, 2018
4	Technical Validation Session	16 th February, 2018
5	Issue of 2 nd Discrepancy Note	16 th February, 2018
6	Reply received from Petitioner	21 st February, 2018
		22 nd February, 2018
		26 th February, 2018

1.6. Notice for Public Hearing

Public notices were published by the Petitioner as follows for inviting objections/ suggestions from stakeholders on the Tariff Petition, which have been taken into consideration for finalization of the Tariff Petition:

Table 2: Details of Public Notices published by the Petitioner

Sr.No.	Date	Name of Newspaper	Place of circulation
1	08 th January 2018	Vartman Parwah	Daman and Diu

Copy of the Public Notices published by the Petitioner are attached as Annexure 2 of this Order.

The Commission also published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing to be conducted by the Commission on 11th January 2018 from 10 AM onwards at the Swami Vivekanand Auditorium, Daman and at the Malala Auditorium, Diu on 8th February, 2018 from 10 am onwards:

Table 3: Details of Public Notices published by the Commission

S.No.	Date	Name of Newspaper	Place of Circulation
1	23 rd December, 2017	Asli Azadi	Daman
		Gujarat Samachar	Daman
		Savera India Times	Daman
2	8 th January, 2018	Asli Azadi	Daman
		Gujarat Samachar	Daman
		Savera India Times	Daman
3	9 th January, 2018	Asli Azadi	Daman
4	19 th January 2018	Asli Azadi	Diu
		Gujarat Samachar	Diu
		Savera India Times	Diu
5	6 th February 2018	Asli Azadi	Diu
		Gujarat Samachar	Diu
		Savera India Times	Diu

Copies of the Public Notices published by the Commission for intimation of the Public Hearing are attached as Annexure 1 to this Order. This notice was also uploaded on the Commission's website.

1.7. Public Hearing

The Public Hearings were held at the Swami Vivekanand Auditorium, Daman on 11th January 2018 from 10.00 a.m. onwards and at the Malala Auditorium, Diu on 8th February, 2018 from 10 am onwards to discuss the issues related to the Petition filed by the Petitioner. The Commission has examined the issues and concerns voiced by various stakeholders. The major issues discussed during the public hearing and/or written comments made by the stakeholders, 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.

The Public Hearing was held on Swami Vivekanand Auditorium, Daman on 11th January 2018 and at the Malala Auditorium, Diu on 8th February, 2018 for Petition on True-up of the FY 2016-17, APR of the FY 2017-18 and ARR of the FY 2018-19. During the Public Hearings, 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 objections earlier, were also given an equal opportunity to present their views/suggestions in respect of the Petition.

The list of the Stakeholders is attached as Annexure 3 to this Order.

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

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. The submissions of the Stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Tariff Slabs and Rates

Stakeholder's Comment:

First slab of Domestic category of consumers should be made 0-200 units with a tariff of Rs 0.50/unit. Further, as the Department is showing a cumulative surplus, the tariff should be reduced; and the first two slabs should be merged into a single slab of 0-200 units.

Petitioner's Response:

The ED DD has noted the observations of the Stakeholder. However, the Commission is empowered to take any decision in the matter.

Commission's View:

The Commission has dealt with matters related to change in the tariff structure in the 'Chapter 6: Tariff Principles and Design'.

2.2.2. Separate category for fisheries

Stakeholder's Comment:

Currently fisheries are considered under the Commercial category. It is requested that the same be brought under Agriculture category. It was also suggested that 50% subsidy be provided to the fisheries.

Petitioner's Response:

No response has been received in this regard from the Petitioner.

Commission's View:

The Commission directs the Petitioner to collect and provide the past five year commercial data including the number of consumers, load and sales for the fisheries in its jurisdiction. The Petitioner is also directed to submit its proposal in this regard along with the cost implications with the next Tariff Petition.

2.2.3. Delayed Payment Surcharge

Stakeholder's Comment:

The delayed payment surcharge should be reduced to 1% from existing 2% as previously the bills were issued on a bi-monthly basis.

Petitioner's Response:

The ED DD has noted the observations. However, it is submitted that the interest/DPC levied on electric bills is as per the provisions of the Supply Code and the Hon'ble Commission is empowered to take any decision in the matter.

Commission's View:

The Commission is of the view that the delayed payment surcharge is being levied as a penalty to discourage the consumers from delaying/defaulting in payment of the bill towards the energy consumption. Further, timely payment of bill leads to improved cash flows thus enabling the Petitioner to provide better services at reasonable charges. Thus, the Commission finds it appropriate to retain the delayed payment surcharge at the present level.

2.2.4. Security Deposit

Stakeholder's Comment:

Domestic consumers should be exempted from security deposit.

Petitioner's Response:

The ED DD has noted the observations. However, it is submitted that the Department is collecting security deposit as per the Regulations issued by the Hon'ble Commission.

Commission's View:

The Commission is of the view that security deposit serves as an instrument of safeguarding the Petitioner in case of payment default by the consumer. Moreover, the security deposit helps in reducing the working capital requirement and applicable interest on working capital of the Petitioner, effectively reducing the end consumer tariff. Thus the Commission finds it appropriate to retain security deposit for domestic consumers.

2.2.5. Payment collection facilities

Stakeholder's Comment:

Cash collection facilities should be provided in villages to enable people from villages to avoid coming to town for paying electricity bills.

Petitioner's Response:

The ED DD would like to submit that the consumers residing in the villages can pay their electricity bills in cash through Saral Seva Kendra which have been opened by the UT Administration of Daman and Diu.

Commission's View:

The Petitioner is directed to take all possible measures so as to ensure that cash collection facilities are available and easily accessible to all rural consumers. In addition, the Petitioner is directed to increase the awareness of digital payment mechanisms as an alternative to cash payments, in order to reduce the inconvenience of traveling and cash usage.

2.2.6. Solar Policy**Stakeholder's Comment:**

The UT of Daman and Diu should formulate a Solar Policy for the Union Territory wherein the consumers of the UT should be allowed to install rooftop solar plants in their premises and should be able to sell any excess generation of solar energy to the ED DD. The consumers should be given subsidy for generation of solar energy through installation of rooftop solar plants. The ED DD should also develop energy parks by promoting green energy sources

Petitioner's Response:

The Administration of UT of Daman and Diu has already notified Solar Policy of the UT of Daman and Diu. The Solar Policy has the provision of net metering wherein the consumers can sell any excess generation of solar energy to the ED DD.

Commission's View:

The Commission notes that the Administration has notified the Solar Policy. In order to increase public awareness, the Petitioner may publish the same on its website.

2.2.7. Solar plant benefit**Stakeholder's Comment:**

The solar plant installed at Diu is functioning well. The domestic consumers of Diu should get its benefit by reduction in tariff.

Petitioner's Response:

The ED DD would like to submit that as the energy generated from the solar plant is directly fed into the grid and the energy is supplied to all the consumers, hence, the tariff of the Domestic consumers cannot be reduced due to solar generation.

Commission's View:

The stakeholder should understand that even the energy generated from Solar and other renewable sources has some cost and is not free. Further, the benefit of energy generated through renewable sources is being passed on to all the consumers of the UT.

Further, the Commission has dealt with matters related to change in the tariff structure in the Chapter 'Tariff Principles and Design' of this Order.

2.2.8. Cross Subsidy Surcharge

Stakeholder's Comment:

Error in the calculation of Cross Subsidy Surcharge should be rectified.

Petitioner's Response:

The ED DD has noted the observations. However, it is submitted that the cross subsidy surcharge has been computed as per the formula notified in the Tariff Policy dated 28.01.2016.

Commission's View:

The Commission vide its order dated 09th May 2017 against the Petition No. 231/2017 had directed the Petitioner to refund the excess cross subsidy charged to consumers. The Petitioner has complied with the said order as submitted in this Petition.

2.2.9. New connection documentation

Stakeholder's Comment:

Daman is an industrial hub wherein a large number of industrial workers reside. The Department is giving only one connection to chawls, however, connection should be given to every room. Also, electricity connection should be given based on the NOC from the Panchayat for SC/ST/minorities and farmers as they don't have necessary documents required for getting electricity connection.

Petitioner's Response:

The ED DD would like to submit that the chawls are multistoried and have a number of rooms. The Department provides one connection to the chawl as it is considered as a single consumer. In order to get the connection to every room the consumers are required to produce an Occupancy Certificate. The Occupancy Certificate is to be produced as per the guidelines issued by the UT Administration of Daman and Diu. The ED DD would like to submit that the Department is granting electricity connections as per the Regulations issued by the Commission.

Commission's View:

The Petitioner is directed to collect the details with regard to this issue and submit to the Commission along with its proposal and cost implications with the next Tariff Petition.

3. Chapter 3: True-up for FY 2016-17

3.1. Background

Under the MYT regime, Order on Aggregate Revenue Requirement (ARR) for 1st MYT Control Period (the FY 2016-17 to the FY 2018-19) and Wheeling & Retail Supply Tariff for the FY 2016-17 was issued on 7th April 2016 (hereinafter referred to as the “MYT Order”). Subsequently, the Commission issued the Tariff Order for the FY 2017-18, determining the Aggregate Revenue Requirement (ARR) and tariff for the FY 2017-18, True-up for the FY 2015-16 and Annual Performance review (APR) of the FY 2016-17 on 29th May 2017 (hereinafter referred to as the “APR Order”).

The Commission now in this Chapter carries out the True-up of the FY 2016-17, being the first year of the Control Period, in accordance with the principles laid down in the MYT Regulations, 2014.

3.2. Energy Sales

Petitioner’s Submission

The Petitioner has submitted the total quantum of energy sales for the FY 2016-17 as 1757.11 MU as against an approved energy sales quantum of 1765.59 MU in the APR Order.

Commission’s Analysis

The MYT Regulations, 2014 stipulates that the variation in sales constitutes “uncontrollable factors” that are beyond the control of the Petitioner and cannot be mitigated. Regulation 9.1 of the MYT Regulations 2014 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 Commission had approved the energy sales of 1765.59 MU in the APR Order, against which actual energy sales of 1757.11 MU have been submitted by the Petitioner now.

The Petitioner along with the Petition submitted the energy audit report for the FY 2016-17. The quantum of energy sales was verified from the energy audit report submitted by the Petitioner.

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

Table 4: Energy Sales (MU) Trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
(i)	0-50 units	0.16	30.18	30.18
(ii)	51-200 units	12.22	27.85	27.85
(iii)	201 - 400 units	18.78	21.44	21.44
(iv)	401 and above	60.84	18.42	18.42

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
(v)	Low Income Group (LIG)	0.10	0.10	0.10
1	Domestic	92.09	97.99	97.99
(i)	1- 100 units	21.73	24.76	24.76
(ii)	101 and above units	32.61	25.61	25.61
	Own consumption (not billed)		5.00	5.00
2	Commercial	54.34	55.37	55.37
(i)	Up to 10 HP	1.83	2.81	2.81
(ii)	Above 10 HP	0.80	0.00	0.00
3	Agriculture	2.63	2.81	2.81
4	LTP Industry	167.69	179.85	179.85
5	Public Lighting	7.62	7.89	7.89
6	Public Water Works	2.81	3.22	3.22
(i)	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA	1,006.34	1,354.13	1,354.13
(ii)	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)	432.06	53.68	53.68
7	High Tension	1,438.40	1,407.81	1,407.81
9	Hoardings/ Signboards	0.00	0.00	0.00
10	Temporary	0.00	2.17	2.17
	Gross Total	1,765.59	1,757.11	1,757.11

The Commission approves 1757.11 MU as sale of energy for the FY 2016-17.

3.3. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted the total Open Access Sales for the FY 2016-17 as 456.63 MU against an approved Sales quantum of 459.77 MU in the APR Order and the Open Access purchase as 462.20 MU against an approved purchase of 467.43 MU.

Commission's Analysis

The Energy Audit Report submitted by the Petitioner stipulates the Open Access Sales of 456.63 MU and Open Access Purchase of 464.25 MU. The Commission finds the sales and purchase quantum provided in the report to be accurate and has considered the same here.

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

Table 5: Open Access Sales (MU) and Purchase Trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Sales	459.77	456.63	456.63
2	Open Access Purchase	467.43	462.20	464.25

The Commission approves Open Access Sales of 456.63 MU and Purchase of 464.25 MU in the True-up of FY 2016-17.

3.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss of 3.51% against a loss of 3.69% approved in the APR Order for the FY 2016-17.

Commission's analysis

The Energy Audit Report submitted by the Petitioner for the FY 2016-17 stipulates the Inter-State Transmission Loss as 2.78%.

The Petitioner was directed to submit the justification for the significant variation in Inter-State transmission loss from the approved value from the APR Order. The Petitioner, however couldn't submit the same and in the absence of such information, the Commission now considers the Inter-State transmission losses as stipulated in the Energy Audit Report.

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

Table 6: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Inter-State Transmission Losses	3.69%	3.51%	2.78%

The Commission approves the Inter-State Transmission Loss at 2.78% for the FY 2016-17.

3.5. Intra-State Distribution Loss

Petitioner's submission

The Petitioner has submitted that it achieved an Intra-State Distribution Loss of 8.48% in the FY 2016-17 against an approved loss of 8.50%.

Commission's analysis

As per the Energy Audit Report submitted by the Petitioner, the Intra-State distribution loss is stipulated as 8.48%. Accordingly, the Commission has considered the Intra-State distribution loss as per the Energy Audit Report. Since, the Petitioner has achieved a lower Intra-State distribution loss than approved during the year the incentive for the same has to be shared among the consumers and the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in the "Section 3.20: Incentive/Disincentive towards over/under achievement of norms of distribution losses section" of this Order.

The table below provides the Intra-State Distribution Loss approved in APR Order, submitted and now approved by the Commission

Table 7: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Intra-State Distribution Loss	8.50%	8.48%	8.48%

The Commission approves Intra-State Distribution Loss at 8.48% for the FY 2016-17.

3.6. Renewable Purchase Obligation (RPO)

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, according to which the Petitioner had to purchase 4.85% of its total consumption (including 1.65% from Solar) from renewable sources for FY 2016-17.

For the FY 2016-17, the Petitioner had a standalone target of 85.22 MU quantum of energy comprising of 28.99 MU Solar and 56.23 MU Non Solar. Against the target, the Petitioner has purchased 14.48 MU of physical solar power and 24.81 MU of physical non-solar power. The Petitioner also purchased REC's equivalent to 13.33 MU Non Solar Power.

Based on the above, the Commission has computed the cumulative RPO compliance at the end of the FY 2016-17 as shown in the following table:

Table 8: Compliance status of Renewable Purchase Obligation (RPO)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%
2	Non Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%
	Total Target	1.00%	2.00%	3.00%	3.00%	3.30%	3.55%	4.85%
3	Sales Within UT (MU)	1655.20	1771.17	1862.95	1754.08	1621.72	1691.98	1757.11
	RPO Target							
5	Solar (MU)	4.14	5.31	7.45	7.02	9.73	14.38	28.99
6	Non Solar (MU)	12.41	30.11	48.44	45.61	43.79	45.68	56.23
	Total RPO Target (MU)	16.55	35.42	55.89	52.62	53.52	60.07	85.22
	RPO Compliance (Actual Purchase)							
7	Solar (MU)	0.00	0.00	0.00	0.20	0.40	4.42	14.48
8	Non Solar (MU)	0.00	0.00	0.00	0.00	0.00	7.13	24.81
	Total RPO Compliance (Actual Purchase in MU)	0.00	0.00	0.00	0.20	0.40	11.55	39.29
	RPO Compliance (REC Certificate Purchase)							
9	Solar (MU)	0.00	0.00	0.00	0.00	0.00	57.15	0.00
10	Non Solar (MU)	0.00	0.75	4.70	13.20	79.73	108.23	13.33
	Total RPO Compliance (REC Certificate)	0.00	0.75	4.70	13.20	79.73	165.38	13.33
	RPO Compliance (REC+ Actual)							

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17
11	Solar (MU)	0.00	0.00	0.00	0.20	0.40	61.57	14.48
12	Non Solar (MU)	0.00	0.75	4.70	13.20	79.73	115.36	38.14
	Total RPO Compliance (MU)	0.00	0.75	4.70	13.40	80.13	176.93	52.62
Cumulative Requirement till current year								
13	Solar (MU)	4.14	9.45	16.90	23.92	33.65	48.03	77.02
14	Non Solar (MU)	12.41	42.52	90.96	136.57	180.35	226.04	282.26
	Total (MU)	16.55	51.98	107.86	160.49	214.00	274.07	359.29
Cumulative Compliance till current year								
15	Solar (MU)	0.00	0.00	0.00	0.20	0.60	62.17	62.51*
16	Non Solar (MU)	0.00	0.75	5.45	18.65	98.38	213.74	251.88
	Total (MU)	0.00	0.75	5.45	18.85	98.98	275.91	314.39
Net Shortfall in RPO Compliance till current year								
17	Solar (MU)	4.14	9.45	16.90	23.72	33.05	-14.14	14.51
18	Non Solar (MU)	12.41	41.77	85.51	117.92	81.97	12.30	30.38
	Total (MU)	16.55	51.23	102.41	141.64	115.02	-1.84	44.89

*The Commission has not considered the surplus Solar RPO achievement of 14.14 MU of FY 2015-16 while arriving at the cumulative compliance till FY 2016-17.

As mentioned above, the Petitioner has failed to cover all the RPO shortfall prior to FY 2016-17 (for the FY 2014-15, FY 2015-16 and FY 2016-17) by 31st March 2017. The Commission notes that there is a net shortfall in RPO compliance till FY 2016-17 of 44.89 MU (14.51 MU – Solar and 30.38 MU – Non Solar). The Commission has dealt with the cost associated with covering the shortfall in RPO in the APR for FY 2017-18. As mentioned in the previous section, the cost of RPO compliance has been considered in the total power purchase cost. The following table provides the cost towards compliance of RPO approved in FY 2016-17.

Table 9: Cost towards compliance of Renewable Purchase Obligation (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)
Solar	14.48	0.00
Own Generation	14.48	-
Solar REC	0.00	0.00
Non-Solar	38.14	-
Power purchase	24.81	12.24
Non-solar REC	13.33	2.00
Total	52.62	14.24

The Commission approves Rs 14.24 Cr towards compliance of RPO in the True-up of the FY 2016-17.

3.7. Power Purchase Quantum & Cost

Petitioner's submission

The plant wise details of the power purchase quantum and total power purchase cost incurred have been provided in the Petition. The Power Purchase bills for verification of the total cost incurred have also been provided along with the Petition.

The Petitioner has submitted that against the power purchase cost of Rs 726.49 Cr approved by the Commission in the APR Order, it has incurred a cost of Rs 715.30 Cr (inclusive of cost incurred towards meeting the transmission charges, Renewable Purchase Obligation and UI, but excluding the revenue from sale of surplus power). However, the details furnished by the Petitioner show a power purchase cost of Rs 715.69 Cr. The Petitioner has also earned Rs 1.14 Cr against sale of surplus power.

The ED DD also requested to allow the UI purchase during the FY 2016-17 without any penalty as the ED DD has already incurred that amount. The total UI purchase is 100.14 MU at the cost of Rs 17.61 Cr Further the ED DD generated 14.48 MUs of Solar energy from its Rooftop and Ground mounted Solar plants during the FY 2016-17 to meet its Solar obligation. As there were no Solar certificates available in the Energy Exchange therefore Solar certificates could not be purchased to fulfill the target of solar energy. The power purchase quantum and cost for FY 2016-17 has been shown in the table below:

Table 10: Power Purchase cost submitted by the Petitioner (In Rs Cr)

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)	Per Unit (Rs/kWh)
	NTPC Stations						
1	KSTPS	369.32	18.51	53.63	13.07	85.21	2.31
2	KSTPS III	49.39	6.27	7.32	(0.03)	13.56	2.75
3	VSTPP-I	94.89	5.86	17.00	4.10	26.96	2.84
4	VSTPP-II	62.32	4.06	10.62	1.54	16.22	2.60
5	VSTPP- III	85.89	8.44	14.56	2.62	25.62	2.98
6	VSTPP- IV	98.58	13.35	16.94	1.58	31.87	3.23
	VSTPP- V	60.55	8.37	10.30	0.45	19.12	3.16
7	KGPP	48.91	18.24	10.34	6.36	34.94	7.15
8	GGPP	143.19	21.21	29.46	4.39	55.06	3.84
9	Sipat-I	194.00	23.85	26.98	3.06	53.89	2.78
10	Sipat-II	78.27	8.62	11.29	2.65	22.56	2.88
11	Mauda	20.56	16.58	5.15	(0.54)	21.19	10.31
13	Mauda II	0.01	1.37	0.00	0.00	1.37	1405.61
14	KHSTPP-II	13.63	1.54	3.33	(0.00)	4.87	3.57
	<i>Others</i>						
	Subtotal - NTPC	1319.52	156.26	216.94	39.25	402.67	3.05
15	NSPCL - Bhilai	480.35	85.86	84.93	(4.99)	165.80	3.45
	NPCL						
16	KAPS	(1.17)	0.00	0.00	0.00	0.00	0.00
17	TAPS	93.01	0.00	27.44	0.00	27.44	2.95
	Subtotal- NPCL	91.85	0.00	27.44	0.00	27.44	2.99
	Others						
18	RGPL	18.09	2.50	3.24	0.00	5.74	3.17
	Subtotal- Others	18.09	2.50	3.24	0.00	5.74	3.17

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)	Per Unit (Rs/kWh)
	Power purchase from Other Sources						
20	IEX/Bilateral	0.00	0.00	0.00	0.00	0.00	0.00
21	UI Under-drawal/ Over-drawal	100.14	0.00	17.61	0.00	17.61	1.76
22	Solar	14.48	0.00	0.00	0.00	0.00	0.00
23	Non Solar	24.81	2.00	12.24	0.00	14.24	4.93
	Subtotal- Other Sources	139.43	2.00	29.84	0.00	31.84	2.28
	Total Power Purchase Cost (At DD Periphery)	2049.24	246.62	362.38	34.26	633.49	3.09
24	PGCIL CHARGES	-	-	-	-	70.17	-
25	WRLDC	-	-	-	-	0.42	-
26	MSTCL	-	-	-	-	3.50	-
27	REC	-	-	-	-	3.10	-
28	GETCO	-	-	-	-	3.20	-
29	PGVCL	-	-	-	-	0.06	-
	POSCO					1.75	
	Grand Total of Charges	-	244.62	362.38	34.26	715.69	3.49

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:

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

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, and IPPs. No power has been purchased through IEX/ Bilateral Purchase etc. The Petitioner submitted the overall power purchase cost as Rs 715.30 Cr, inclusive of transmission cost but exclusive of revenue due to sale of surplus power.

On examining the power purchase quantum and cost as per the monthly and station-wise bills submitted by the Petitioner for each source, the Commission found that the power purchase cost as per invoices raised by the generators amount to Rs 715.69 Cr while the power purchase cost as recorded in the audited accounts of the Petitioner amounts to Rs 715.30 Cr **The Commission has relied on the audited accounts of the Petitioner for the purpose of True-up of power purchase cost.**

The revenue on account of surplus power sale/UI underdrawl has been considered as a revenue item by the Petitioner. In line with the Petitioner's submission, the Commission has considered revenue of Rs 1.14 Cr on account surplus power sale/UI underdrawl as per the audited accounts of the Petitioner and the same has been subtracted from the power purchase cost to arrive at the net power purchase cost.

The Petitioner submitted that the total power purchase cost is inclusive of the cost incurred towards compliance of the Renewable Purchase Obligation (RPO) target for the FY 2016-17. The compliance status of RPO has been discussed in detail in the subsequent section. The Commission has considered the total cost of Rs 14.24 Cr (including cost of Non Solar RECs) as per actuals towards compliance of RPO target, in the total power purchase cost approved for FY 2016-17.

The Commission approves power purchase quantum of 2049.24 MU and cost of Rs 714.16 Cr (adjusted for sale of surplus power) in the True-up of FY 2016-17.

3.8. Energy Balance

Petitioner's submission

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

Table 11: Energy requirement submitted (in MU)

Particulars	Approved in APR Order	Petitioner's Submission
Sales	1,765.59	1,757.11
Open Access Sales	459.77	456.63
Less: Energy Savings	0.35	0.00
Total Sales	2,225.01	2,213.74
Add: Losses	206.69	205.22
T&D Losses (in %)	8.50%	8.48%
Energy Required at Periphery	2,431.70	2,418.96
Add: Sales to common pool consumer	1.05	26.61
Less: Own Generation	0.00	14.48
Less: Energy Purchased through UI at Periphery	49.78	100.14
Less: Open Access Purchase	467.43	464.20
Energy requirement at state periphery from tied up sources	1,915.54	1866.75
Transmission loss	73.38	67.87
Transmission loss (in %)	3.69%	3.51%
Total Energy to be purchased at state periphery from generator end	1988.92	1,934.62
Power Purchase from tied up sources and UI at generator end	2,038.70	2,034.76

Commission's analysis:

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. and the energy audit report has been examined and accordingly the energy balance has been derived for FY 2016-17.

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

Table 12: Energy balance approved

Particulars	Formula	Approved in APR Order	Petitioner's submission	Now approved
Energy requirement				
Energy sales within the State/UT	a	1765.59	1757.11	1757.11
Open Access Sales	b	459.77	456.63	456.63
Less: Energy Savings	c	0.35	0.00	0.00
Total Sales within the State/UT	d=a+b-c	2225.01	2213.74	2213.74
Distribution losses				
%	e	8.50%	8.48%	8.48%
MU	f=g-d	206.09	205.12	205.12
Energy required at State Periphery	g=d/(1-e)	2431.70	2418.86	2418.86
Energy Transactions at Periphery				
Add: Sales in Unscheduled Interchange	h	1.05	26.61	26.55
Add: Sales in Power Exchanges	i	0.00	0.00	0.00
Less: Purchase under UI (MU)	j	49.78	100.14	100.14
Less: Open Access Purchase (MU)	k	467.43	464.20	464.25
Own Generation	l	0.00	14.48	14.48
Total energy required at State Periphery from Tied-up Sources (MU)	m=g+h+i-j-k-l	1915.54	1866.65	1866.54

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 reckons 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 Rs 15.91 Cr have been incurred against approved expenses of Rs 11.10 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 2016-17 are reflected as Rs 15.91 Cr. The Petitioner has submitted that the reason for the substantial increase in salaries and wages is on account of the 7th Pay Commission.

The Commission is of the opinion that increase in salaries and wages on account of the recommendations of the 7th Pay Commission is an uncontrollable expenditure, hence any increase on account of the 7th Pay Commission recommendation should be a pass through. However, the additional impact of the 7th Pay Commission has not been considered by the Commission since satisfactory details were not submitted by the Petitioner in spite of several reminders. The Commission shall consider the same in the subsequent Tariff Petitions once the relevant details are provided by the Petitioner.

The MYT Regulations, 2014 stipulate the variation in operation and maintenance expenditure to be a controllable factor. Thus, in accordance with the MYT Regulations, the Commission is not allowing any increase in the employee expenses against those approved in the APR Order and considers the same Employee Expenses as approved in the APR Order for FY 2016-17.

Table 13: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	11.10	15.91	11.10
2	Impact of 7 th Pay Commission	0.00	0.00	0.00
3	Total Employee Expenses	11.10	15.91	11.10

The Commission approves Employee Expenses of Rs 11.10 Cr in the True-up of FY 2016-17.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

Actual A&G expenses of Rs 6.75 Cr have been incurred against the approved expenses of Rs 4.96 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 2016-17 are reflected as Rs 6.75 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 14: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	4.96	6.75	4.96

The Commission approves the Administrative & General (A&G) expenses of Rs 4.96 Cr in the True-up of FY 2016-17.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

Actual R&M expenses of Rs 17.50 Cr have been incurred against approved expenses of Rs 13.57 Cr in the APR Order. R&M expenses are incurred towards day to day maintenance of the transmission and distribution network of the ED DD and form an integral part of the company's efforts towards reliable and quality power supply as 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 15: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Repair & Maintenance Expenses (R&M)	13.57	17.50	13.57

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 13.57 Cr in the True-up of FY 2016-17.

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

The Commission approves total O&M Expenses of Rs 29.63 Cr against the Petitioner's submission of Rs 40.16 Cr.

Table 16: O&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	11.10	15.91	11.10
2	Administrative & General Expenses (A&G)	4.96	6.75	4.96
3	Repair & Maintenance Expenses	13.57	17.50	13.57
	Total Operation & Maintenance Expenses	29.63	40.16	29.63

3.10. Capital Expenditure and Capitalisation

Petitioner's submission

The actual capital expenditure incurred for the FY 2016-17 has been Rs 48.62 Cr and capitalisation achieved during the year has been Rs 65.52 Cr, of which the capitalisation of Rs 26.39 Cr is on account of execution of smaller projects for which approval of CEA is not required.

Commission's analysis:

The Commission has observed that the capitalisation achieved by the Petitioner is on account of two types of projects – first, for which a financial and technical approval is taken from a competent authority such as the CEA, and second, smaller projects for which execution decision is taken at the operational level. The former kind of projects capitalised in the FY 2016-17 are as follows:

Table 17: Actual capitalisation on approved projects (In Rs Cr)

S.No.	Scheme	Amount
1	6MW Solar PV Plant	32.59
2	30MVA Bhimpore Substation (2016-17)	2.67
3	66 KV Malala Substation(2016-17)	2.62
4	66 KV Zari Substation (2016-17)	1.26
	Total	39.13

A capitalization of **Rs 26.39 Cr** has been on account of the smaller projects for which approval of CEA is not required.

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

Table 18: Capital Expenditure and Capitalisation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capital Expenditure	71.98	48.62	48.62
2	Capitalisation	54.70	65.52	65.52

The Commission approves capital expenditure and capitalisation of Rs 48.62 Cr and Rs 65.52 Cr respectively in the True-up of the FY 2016-17.

3.11. Capital Structure**Petitioner's Submission**

The entire capital deployment at the ED DD is through equity for the FY 2016-17.

Commission's analysis

In the Technical Validation Session held on 16th February 2018 at the Commission's office, the Petitioner was directed to submit the details of the assets funded through consumer contribution, if any. However, the Petitioner has not submitted any details against the same. In the absence of any information, no assets have been assumed to be funded from consumer contribution in the True-up of the FY 2016-17. The impact of the same shall be accounted for by the Commission in future Tariff Orders once the Petitioner submits such information.

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*
 - 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 2016-17 as follows:

Table 19: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	468.12	468.63	468.63
2	Addition During the FY	54.70	65.52	65.52
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	522.82	534.15	534.15

Table 20: Normative Loan addition (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	131.66	131.66	131.66
2	Add: Normative Loan During the year	38.29	45.87	45.86
3	Less: Normative Repayment equivalent to Depreciation	25.10	23.55	26.80
4	Closing Normative Loan	144.85	153.98	150.72

Table 21: Normative Equity addition (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	41.98	41.98	41.98
2	Additions on account of new capitalisation	16.41	19.66	19.66
3	Closing Equity	58.39	61.64	61.64

3.12. Depreciation

Petitioner's submission

For computation of depreciation, the opening balance of the GFA for the FY 2016-17 has been considered and subsequently the assets capitalised over the year are added. The Petitioner submitted that the Depreciation has been worked out as prescribed in the JERC MYT Regulations, 2014 as follows.

Table 22: Depreciation submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	468.63
2	Addition During the FY	65.52
3	Adjustment/Retirement During the FY	-
4	Closing Gross Fixed Assets	534.15
5	Average Gross Fixed Assets	501.39
6	Rate of Depreciation (%)	4.70%
	Depreciation	23.55

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 23: 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%

Based on the above depreciation rates stipulated in the CERC Tariff Regulations, 2014 and the actual asset addition during the year, the weighted average depreciation rate works out to 5.35% as against a rate of 5.07% approved in the APR Order.

The Commission has calculated the depreciation on average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the opening GFA as submitted by the Petitioner for the FY 2016-17. The following table provides the calculation of depreciation during the FY 2016-17:

Table 24: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	468.12	468.63	468.63
2	Addition During the FY	54.70	65.52	65.52
3	Closing Gross Fixed Assets	522.82	534.15	534.15
4	Average Gross Fixed Assets	495.47	501.39	501.39
5	Weighted Average Rate of Depreciation (%)	5.07%	4.70%	5.35%
	Depreciation	25.10	23.55	26.80

The Commission approves depreciation of Rs 26.80 Cr in the True-up of FY 2016-17

3.13. Interest on Loan

Petitioner's submission

The Petitioner has determined the Interest on Loan on normative basis. The opening balance of loans for FY 2016-17 is considered the same as approved by the Commission in the APR Order. The normative loan addition in FY 2016-17 has been computed as 70% of the capitalisation for the FY 2016-17.

The repayment of loans has been considered equal to the depreciation during the FY 2016-17.

Further the rate of interest has been considered as the State Bank of India Prime Lending Rate (SBI PLR) of 14.05% (rate as on 1st April 2016).

Commission's analysis:

The MYT Regulations, 2014 stipulate that the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. 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.
 - (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.)*

The Petitioner in the Technical Validation Session (TVS) 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. Repayment has been considered equivalent to depreciation allowed during the year

The Commission for the purpose of calculation of Interest on Loan has considered interest rate equivalent to SBI PLR @ 14.05%, as on 1st April 2016. 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 2016-17. 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.

Table 25: Interest on Loan approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	131.66	131.66	131.66
2	Add: Normative Loan During the year	38.29	45.87	45.86
3	Less: Normative Repayment= Depreciation	25.10	23.55	26.80
4	Closing Normative Loan	144.85	153.98	150.72
5	Average Normative Loan	138.26	142.82	141.19
6	Rate of Interest (%)	14.05%	14.05%	14.05%
	Interest on Loan	19.42	20.07	19.84

The Commission approves the Interest of Loan of Rs 19.84 Cr in the True-up of the FY 2016-17.

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 ED DD has computed the Return on Equity at 16% on post tax basis.

Commission’s analysis:

According to the Regulation 27 of the MYT Regulations, 2014,

- “
- (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 mentioned above, 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 as prescribed in the MYT Regulations, 2014. 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. The following table provides the return on equity Trued-up for the FY 2016-17.

Table 26: RoE approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	41.98	41.98	41.98
2	Additions on account of new capitalisation	16.41	19.66	19.66
4	Closing Equity	58.39	61.64	61.64
5	Average Equity	50.19	51.81	51.81
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	8.03	8.29	8.29

The Commission approves a Return on Equity of Rs 8.29 Cr in the True-up of the FY 2016-17.

3.15. Interest on Security Deposits

Petitioner’s submission

Payments of Rs 3.69 Cr were released to the consumers towards interest on security deposits during the FY 2016-17 against Rs 3.50 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 is of the opinion that the actual interest on security deposit disbursed to the consumers in their bills, as reflected in the audited accounts of the FY 2016-17, should be considered for Truing-up. However, the Petitioner submitted that the detailed break-up showing the actual interest on security deposit is not recorded in

the audited accounts. Under the circumstances, the Commission has relied on the submission made by the Petitioner to approve the interest on security deposit.

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

Table 27: Interest on Consumer Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	44.46	-	-
2	Add: Deposits During the year	1.52	-	-
3	Less: Deposits refunded	0.00	-	-
4	Closing Security Deposit	45.97	-	-
5	Average Security Deposit	45.22	-	-
6	Rate of Interest (%)	7.75%	-	-
	Interest on Security Deposit	3.50	3.69	3.69

The Commission approves interest on security deposit as Rs 3.69 Cr in the True-up of the FY 2016-17.

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:

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

The interest on working capital is computed at 9.30% (SBI base rate as on 05th October 2015 as has been shown in the table below:

Table 28: Interest on Working Capital submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	130.12
2	Less: Power Purchase Cost for one month	59.61
3	Inventory Based on Annual Requirement for Previous FY for 2 months	1.36
4	Total Working Capital Requirement	71.87
5	Less: Security Deposit excluding BG/FDR	52.68
6	Net Working Capital	19.19

S. No	Particulars	Petitioner's Submission
7	Rate of Interest (%)	9.30%
	Interest on Working Capital	1.78

Commission's analysis:

The computation of working capital requirements and the rate of interest to be considered are stipulated in the MYT Regulations. 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 and the inventory for two months as per the audited accounts of FY 2016-17.

With regards to the interest rate, the Commission has considered the SBI Base rate as on 1st April 2016, as stipulated in the MYT Regulations 2014.

Accordingly, the interest on working capital has been calculated, as shown in the table below:

Table 29: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	141.79	130.12	130.75
2	Less: Power Purchase Cost for one month	60.54	59.61	59.61
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.96	1.36	1.36
4	Total Working Capital Requirement	82.21	71.87	72.50
5	Less: Security Deposit excluding BG/FDR	45.22	52.68	49.74
6	Net Working Capital	36.99	19.19	22.77
7	Rate of Interest (%)	9.30%	9.30%	9.30%
	Interest on Working Capital	3.44	1.78	2.12

The Commission approves the Interest on Working Capital as Rs 2.12 Cr in the True-up of the FY 2016-17.

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 Licenced 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 Licenced 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.

Table 30: Income Tax approved by Commission (In Rs 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 2016-17.

3.18. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner hasn't considered any provision for bad and doubtful debts for the year.

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 written off any amount in the FY 2016-17. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts.

3.19. Non-Tariff Income (NTI)

Petitioner's submission

The actual Non-Tariff Income of Rs 20.08 Cr has been earned in the FY 2016-17. Out of the Rs 20.08 Cr, Rs 12.67 Cr is on account of delayed payment charges. The remaining Rs 7.32 Cr is on account of various other components such as meter rent, interest income, etc.

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 approved by the Commission is shown in the table below:

Table 31: Non- Tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Meter rent			1.14
2	Delayed payment charges			12.76
3	Interest income			4.05
4	Misc. Income			2.14
	Gross Total	19.20	20.08	20.08

The Commission approves Non-Tariff Income of Rs 20.08 Cr in the True-up of the FY 2016-17.

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 2016-17, the Commission had approved the T&D loss level of 8.50% in the APR Order. The Petitioner has achieved T&D loss of 8.48% against the approved loss of 8.50%. The Commission, in accordance with Regulation 10 of the JERC MYT Regulations, 2014 (reproduced below) determines the incentive towards achievement of target of Intra-State distribution loss for the FY 2016-17 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 Rs 3.83/kWh, which is the rate of net power purchase at the periphery of the Petitioner arrived at after deducting revenue from UI and the rebate due to early payments and dividing it by the energy required at the periphery for sale to retail consumers.

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

Table 32: Incentive towards achievement of Intra-State distribution loss (In Rs Cr)

S. No	Particulars	Petitioner's Submission	Trued-up by Commission
1	Retail Sales	1,765.59	1,757.11
2	T&D Loss (%)	8.48%	8.50%*
3	Power Purchase at State/UT Periphery	1,929.61	1,920.00
4	Gain/(Loss) (MU)		0.41
5	Average Power Purchase Cost (APPC)		3.83
6	Gain/ (Loss) (Rs Cr)		0.16
	Sharing (30% to the ED DD in case of gain and 100% in case of loss) (Rs Cr)		0.05

*As approved in the APR Order of FY 2016-17, used for calculation of gain/(loss)

The Commission determines and approves Rs 0.05 Cr as incentive for over-achieving the Intra-State Distribution Loss target for the FY 2016-17.

3.21. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of Rs 791.61 Cr are submitted for approval in the True-up of the FY 2016-17.

Commission's analysis

The Commission on the basis of the detailed analysis of the cost parameters of the ARR has considered and approved the revenue requirement in the True-up of the FY 2016-17 as given in the following table:

Table 33: Aggregate Revenue Requirement approved by Commission for the FY 2016-17 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost (adjusted for revenue from sale of surplus power)	726.36	714.16	714.16
2	Provision for RPO Compliance			
3	Operation & Maintenance Expenses	29.63	40.16	29.63
4	Depreciation	25.10	23.55	26.80
5	Interest and Finance charges	19.42	20.07	19.84
6	Interest on Working Capital	3.44	1.78	2.12
7	Interest on Security Deposit	3.50	3.69	3.69
8	Return on Equity	8.03	8.29	8.29
9	Provision for Bad Debt	0.00	0.00	0.00
10	Income Tax	0.00	0.00	0.00
11	Incentive/ (Disincentive)on achievement of norms	0.00	0.00	0.05
12	Total Revenue Requirement	815.61	812.86	805.74
13	Less: Non-Tariff Income	19.20	20.08	20.08
14	Net Revenue Requirement	796.28	791.61	784.52

The Commission approves net Aggregate Revenue Requirement of Rs 784.52 Cr in the True-up of the FY 2016-17.

3.22. Revenue at existing Retail Tariff

Petitioner's submission

The actual revenue for the FY 2016-17 is Rs 818.98 Cr (including, FPPCA of Rs (19.35) Cr and Open Access charges of Rs 38.28 Cr) as against Rs 873.34 Cr approved by the Commission in the APR Order. The detailed reconciled statement of revenue from the sale of power at existing tariff with reference to the final actual figures of income & expenditure as per the audited accounts of the FY 2016-17 has also been submitted.

Commission's analysis

The Commission, in order to check the authenticity of the revenue and energy sales figures, analysed the sales and revenue figures for each consumer category and sub-category by imposing various levels of checks. Various discrepancies were observed and communicated to the Petitioner through discrepancy notes. In regard to a discrepancy of Rs 0.60 Cr between the revenue booked in the audited accounts and the revenue as submitted in the slab wise details, the Commission has relied on the revenue as recorded in the audited accounts.

During the discussions, the Petitioner informed the Commission that the fixed charges notified by the Commission in Tariff Schedule of the Tariff Order for the FY 2016-17 for the Domestic and LT Commercial consumers categories were not charged. The Tariff Schedule notified by the Commission must not be deviated from and the Petitioner is obligated to follow it. The Commission has taken note of the deviation and is of the view that this is a serious violation of the Tariff Schedule prescribed and directs the Petitioner to follow the entire Tariff Schedule. While truing up for the FY 2016-17, the Commission has assumed normative revenue of Rs 1.61 Cr billed to Domestic and LT Commercial consumers on account of fixed charges and taken that into account in the revenue.

The consumer category-wise and slab wise revenue as submitted by the Petitioner and approved by the Commission is shown in the following table:

Table 34: Revenue at existing tariff approved by Commission for the FY 2016-17 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
(i)	0-50 units	0.02	3.63	-
(ii)	51-200 units	2.35	5.01	-
(iii)	201 - 400 units	4.62	4.72	-
(iv)	401 and above	17.26	4.67	-
(v)	Low Income Group (LIG)	0.01	0.01	-
1	Domestic	24.26	18.04	-
(i)	1- 100 units	5.76	7.21	-
(ii)	101 and above units	12.28	10.27	-
2	Commercial	18.04	17.49	-
(i)	Up to 10 HP	0.13	0.14	-
(ii)	Above 10 HP	0.08	0.09	-
3	Agriculture	0.21	0.22	-
4	LTP Industry	63.82	65.29	-
5	Public Lighting	3.20	3.31	-
6	Public Water Works	1.08	1.21	-
(i)	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA	529.04	686.55	-
(ii)	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)	211.07	27.35	-
7	High Tension	740.10	713.89	-

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
9	Hoardings/ Signboards	0.00	0.00	-
10	Temporary	0.84	0.00	-
11	Gross Total	850.73	819.46	-
	PF Charges		2.36	-
	PF Incentive		23.92	-
	FPPCA Charges	-9.57	-19.35	-
	OA Charges	32.18	38.28	-
	Prompt Rebate		-0.26	-
	U. I. Charges		1.14	-
	Other Charges		-0.72	-
	RRAS Charges		1.38	-
	Congestion Charges		0.01	-
12	Total Revenue inclusive of OA Charges of Rs 38.28 Cr	873.34	818.38	818.98*
13	Fixed charges not charged to Domestic and Commercial consumer categories			1.61
14	Grand total			820.59

*As recorded in the audited accounts

The Commission approves the revenue from sale of power as Rs 820.59 Cr in the True-up of the FY 2016-17.

3.23. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff, the standalone revenue surplus of Rs 27.36 Cr is arrived at in the True-up of the FY 2016-17

Commission analysis

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

Table 35: Standalone Revenue Gap/ Surplus for the FY 2016-17 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	796.28	791.61	784.52
2	Revenue from Retail Sales at Existing Tariff (including Open Access)	873.34	818.98	820.59
	Net Gap/(Surplus)	(77.06)	(27.37)	(36.07)

The Commission, in the True-up of the FY 2016-17 approves a standalone surplus of Rs 36.07 Cr. This standalone surplus has been carried over in the subsequent years and has been dealt with while determining the tariff for the FY 2018-19.

4. Chapter 4: Annual Performance Review for the FY 2017-18

4.1. Background

The Tariff Order for the FY 2017-18 was issued by the Commission on 29th May 2017 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2017-18. This Chapter covers the Annual Performance Review (APR) for the FY 2017-18 vis-à-vis the cost parameters approved by the Commission in the Order for the FY 2017-18. The Annual Performance Review for the FY 2017-18 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 2017-18

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 2017-18 has been done based on actual data of the first 9 months of the FY 2017-18 of Power Purchase Quantum and Cost, energy sales, capitalisation etc. depending on which the estimates for the remaining 3 months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the MYT Regulations, 2014 and on the basis of the norms approved in the MYT Order dated 06th April 2016.

4.3. Energy Sales

Petitioner’s Submission

The revised estimate of energy sales are 2039.27 MU for the FY 2017-18 which are based on the actual energy sales for the first 6 months of the financial year as against 1843.86 MUs approved by the Commission in the APR Order.

The overall energy sales are significantly dependent upon HT/EHT Industries which constitute around 81% of the total energy sales and the increase in sales for the FY 2017-18 as against the sales approved by the Commission is due to the fact that in the month of November 2017, consumers availing open access have reduced the quantum of open access by 31.50 MW out of the 48.50 MW being availed by them till November, 2017. Therefore, proportionate sales against 31.50 MW have been added to the total sales for the period December, 2017 to March, 2018.

Commission's Analysis

The Commission has examined the audited figures for the FY 2016-17 and provisional information provided by the Petitioner for the first 9 months of the FY 2017-18. For all the consumer categories other than HT/EHT industries, Low Income Group (LIG) consumers and Temporary consumers, the Commission has estimated the proportion of actual energy sales till the month of December over total energy sales during the financial year, for the last three years. Using these proportion of sales, the Commission has determined the sales till the month of December and accordingly extrapolated the sales based on the seasonal variations experienced in the last three years during this period to determine the energy sales for the FY 2017-18.

As the sales detail for Low Income Group (LIG) consumers and Temporary consumers was separately available only till September 2017, for the purpose of estimation of energy sales for Low Income Group (LIG) consumers and Temporary consumers, the Commission has considered actual sales till the month of September and accordingly extrapolated the sales to determine the energy sales for the FY 2017-18, as described in the above paragraph.

For the HT/EHT category, there has been a significant movement of consumers from open access to the Petitioner. The Commission has determined the energy sales for the FY 2017-18 by adjusting for the increase in month wise sales on account of consumers giving up open access.

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

Table 36: Energy Sales (MU) approved by the Commission

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Domestic	95.96	111.95	114.99
2	LIG/ Kutir Jyoti	0.1	0.15	0.15
3	Commercial	59.13	71.54	58.75
4	Agriculture	2.81	5.39	4.89
5	LT Industry	175.16	187.79	196.57
6	HT/EHT Industry	1499.91	1,646.52	1,691.96
7	Public Lighting	7.82	9.31	9.82
8	Public Water Works	2.95	3.40	3.61
9	Temp. Supply	0.00	3.22	3.40
	Gross Total	1,843.86	2,039.27	2,084.14

The Commission approves energy sales of 2084.14 MU in the APR of the FY 2017-18.

4.4. Open Access and Unscheduled Interchange Sales and Purchase

Petitioner's Submission

The open access consumers have scheduled total power of 321.09 MU during the FY 2017-18 and open access energy purchase of 326.41 MU at the periphery has been estimated.

The sale and purchase under Unscheduled Interchange (UI) have been estimated as 5.08 MU and 186.77 MU respectively.

Commission's Analysis

The Commission has taken into account the movement of open access consumers to the Petitioner's consumer base in the remaining months of the FY 2017-18. However, the actual open access energy sales and purchase till the month of November 2017, as submitted by the Petitioner have been considered on actual basis. Also, the pooled losses of 1.87% as submitted in the energy audit report of the Petitioner have been used to calculate the open access purchase at the periphery.

For estimating the sale and purchase of power through UI, the Commission has considered the actual sale and purchase made under UI till December 2017. Any variation in the UI interchange shall be dealt with in the True-up of the FY 2017-18.

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

Table 37: Open Access sales and purchase (in MU) approved by the Commission

S. No	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Open Access Sales	482.75	321.09	321.09
2	Open Access Purchase	490.80	326.41	327.20

The Commission approves open access sales of 321.09 MU and purchase of 327.20 MU in the APR of FY 2017-18.

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

Table 38: Open Access sales and purchase (in MU) approved by the Commission

S. No	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	UI Sales	0.00	5.08	0.00
2	UI Purchase	0.00	186.77	184.01

The Commission approves NIL UI sales and a purchase of 184.01 MU in the APR of the FY 2017-18.

4.5. Inter-State Transmission Loss

Petitioner's submission

The Inter-State Transmission Loss of 3.66% as approved by the Commission in the ARR Order has been considered.

Commission's analysis

The Commission in the ARR Order had revised the Inter-State distribution loss to 3.69% based on the latest information available, against an approved loss of 3.66% in the MYT Order. The Commission has continued with the Inter-State transmission loss at the same loss levels as considered in the APR order.

The following table provides the Inter-State Transmission Loss submitted and now approved by the Commission.

Table 39: Inter-State Transmission Loss (%)

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

The Commission approves Inter-State Transmission Loss of 3.69% for the APR of the FY 2017-18.

4.6. Intra-State Distribution Loss

Petitioner's submission

The Intra-State Distribution loss of 8.40%, as approved in the APR Order, has been considered.

Commission's analysis

The Commission approves the Intra-State Distribution Loss of 8.40% as approved in the MYT and the APR Order

The table below provides the Intra-State Distribution Loss approved in the ARR Order, Petitioners submission and now approved by the Commission.

Table 40: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
1	Intra-State Distribution Loss	8.40%	8.40%	8.40%

The Commission approves Intra-State Distribution Loss of 8.40% for the APR of the FY 2017-18.

4.7. Power Purchase Quantum & Cost

Petitioner's submission:

The ED DD has no generating stations of its own other than the solar plants and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhya, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar, Sholapur etc. to meet its energy requirement.

The ED DD for the purpose of estimation of the power availability during the FY 2017-18 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Private Sector Power Generating Companies
- Renewable energy sources - Solar and Non-Solar
- Other market sources

The Petitioner has allocation from Western as well as Eastern regions from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawl from the Grid.

For projecting the energy availability for the FY 2017-18, six months actual power purchase has been considered. For projecting the remaining six months of power purchase for the FY 2017-18, firm and infirm allocation from various generating stations has been considered as per the allocation specified in the notification number WRPC/Comml-I/6/Alloc/2017/15183 dated 17.10.2017 of Western Regional Power Committee.

The table in the following page provides the energy allocation of the Petitioner with respect to each station.

Table 41: Energy Allocation as submitted by the Petitioner (MW)

Name of Plant	Plant Capacity (MW)	ED DD Allocation (MW)	Avg. ED DD Allocation (%)
NTPC			
KSTPP	2,100	49	2.32%
KSTPP-III	500	6	1.18%
VSTPP-I	1,260	13	1.03%
VSTPP-II	1,000	9	0.90%
VSTPP- III	1,000	11	1.10%
VSTPP- IV	500	12	2.49%
VSTPS-V	500	8	1.63%
KAWAS	656	31	4.73%
JGPP	657	31	4.77%
Bhilai Unit-I &II(NTPC)	500	70	14.00%
Sipat-I	1,980	25	1.26%
Sipat-II	1,000	10	0.97%
MSTPS-I	500	12	2.49%
MOUDA-II	1,000	17	1.69%
SOLAPUR	660	13	1.96%
Subtotal	13,814	318	
Eastern Region			
KHSTPP-II	1000	1.3	0.13%
Subtotal	1000	1.3	
NPCIL			
KAPPS	440	9.17	2.08%
TAPP 3&4	1080	12.77	1.18%
Subtotal	1520.00	21.94	
Others			
Ratnagiri	1967	38	1.93%
Subtotal	1967	38	
Grand Total	18,300.59	378.93	

The revised estimated power purchase cost for FY 2017-18 as submitted by the Petitioner is presented in the table on the following page:

Table 42: Power Purchase quantum (MU) and cost (In Rs Cr) submitted by the Petitioner

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	Credit/Debit for URS	All Charges Total	Per Unit Cost
NTPC Stations								
KSTPP	358.65	22.66	50.08	1.70			74.43	2.08
KSTPP-III	41.60	6.01	5.56	0.17			11.74	2.82
VSTPP-I	93.63	7.50	14.79	0.30			22.58	2.41
VSTPP-II	64.78	4.46	9.59	0.20			14.25	2.20
VSTPP- III	81.66	8.40	12.42	0.25			21.07	2.58
VSTPP- IV	87.19	13.94	12.96	0.60			27.49	3.15
VSTPS-V	60.75	9.46	9.40	0.17			19.04	3.13
KAWAS	125.61	19.03	26.77	0.91			46.70	3.72
JGPP	157.70	23.93	30.93	4.66			59.53	3.77
Sipat-I	169.35	23.73	22.87	0.44			47.04	2.78
Sipat-II	68.25	8.81	9.70	0.03			18.55	2.72
MSTPS-I	49.54	17.11	13.86	0.45			31.42	6.34
MOUDA-II	64.75	4.80	2.07	-0.03			6.84	1.06
KHSTPP-II	11.04	1.51	2.67	-0.01			4.17	3.78
SOLAPUR	43.65	9.41	11.41	0.00			20.82	4.77
Subtotal	1478.14	180.76	235.08	9.83	49.37	(0.47)	375.83	2.54
NTPC Bhilai								
Bhilai Unit-I &II(NTPC)	506.62	82.16	106.57	-0.42			188.30	3.72
Subtotal	506.62	82.16	106.57	(0.42)			188.30	3.72
NPCIL								
KAPPS	0.00	0.00	0.00	0.00			0.00	0.00
TAPP 3&4	55.37	0.00	17.22	0.00			17.22	3.11
KAPPS (III & IV)	0.00	0.00	0.00	0.00			0.00	0.00
Subtotal	55.37	0.00	17.22	0.00			17.22	3.11
Others								
Ratnagiri	0.00	1.30	0.86	0.57			2.73	0.00
Subtotal	0.00	1.30	0.86	0.57			2.73	0.00
Power purchase from Other Sources								
Power purchase from Indian E. Exchange	70.00	0.00	24.50	0.00			24.50	3.50
UI	186.77	0.00	41.06	0.00			41.06	2.20
Solar	18.04	0.00	0.00	0.00			0.00	0.00
Non Solar (Exchange)	0.00	0.00	0.00	0.00			0.00	0.00
Solar REC	0.00	0.00	3.29	0.00			3.29	
Non Solar REC	0.00	0.00	12.85	0.00			12.85	
Subtotal	274.81	0.00	81.71	0.00			81.71	2.97
Misc. Arrears								
NTPC Rebate								
Gross Power Purchase	2314.94	264.22	441.43	9.98	49.37	(0.47)	665.79	2.88

Source	Units Purchased	Fixed Charges	Variable Charges	Other Charges	Rebate	Credit/Debit for URS	All Charges Total	Per Unit Cost
External Losses								
Total Power Purchase	2314.94	264.22	441.43	9.98	49.37	(0.47)	665.79	2.88
PGCIL CHARGES							77.29	
WRLDC							0.46	
MSTCL							3.85	
REC							3.41	
GETCO							3.52	
PGVCL							0.07	
POSCO							1.93	
Grand Total of Charges – Net	2314.94						756.31	3.27

- Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2017.
- Power purchase arrears for the remaining six months have been considered as nil as the ED DD has no prior information of arrear bills from the generators and transmission companies.
- The ED DD has received income tax refund to the tune of Rs 47.85 Cr from the NTPC in the month of June, 2017. The same has been deducted from the ARR.
- For FY 2017-18, till September, 2017 the ED DD has procured 9.02 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the ED DD will further procure 9.02 MU of solar power from its own generation and will purchase a further 32.94 MUs as solar certificates to meet its solar obligation till FY 2017-18.
- During the first six months of the FY 2017-18, the ED DD purchased 26.67 MUs through non-solar certificates. To meet its non-solar obligation for the FY 2017-18, the ED DD has planned to purchase 58.98 MUs through non-solar certificates during the remaining six months of the FY 2017-18.

Commission's Analysis:

The Commission has estimated the power purchase quantum and cost for the remaining months of the FY 2017-18 based on the actual data for 9 months, as submitted by the Petitioner. For estimating the remaining three months of power purchase for the FY 2017-18, firm and infirm allocation from various generating stations has been considered. The source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

4.7.1. Availability of power

Availability of power from NTPC & NTPC-SAIL Bhilai:

- Power purchase quantum for 11 of the total 16 NTPC plants has been estimated based on the 3 years average of quantum of energy scheduled for the FY 2014-15, the FY 2015-16 and the FY 2016-17.
- For Kawas and Gandhar gas power plants average of quantum purchase of first 9 months till Dec-2017 has been considered for projecting the power purchase quantum in remaining months as the power purchase trends in FY 2017-18 have shown marked increase as compared to purchases in preceding years

- For Mauda Phase I, the energy availability has been projected based on average PLF of last 5 years because the power purchases in the FY 2014-15, the FY 2015-16 and the FY 2016-17 have been much lower than actual purchases in the FY 2017-18
- For Mauda Phase II, since the plant was operational only in August 2017, the energy availability has been projected based on actual energy purchase from Oct 2017-Dec 2017.
- Solapur thermal station began operations in October 2017, hence the energy availability has been projected assuming normative PLF of 85% and other relevant parameters as per CERC Tariff Regulations, 2014

Availability from NPCIL plants:

- Tarapur and Kakrapara atomic plants of NPCIL supply energy to Daman & Diu. For Kakrapara plant no energy has been scheduled from April-December 2017. Further, as the Petitioner has submitted that the plant is shut down for maintenance therefore no power is projected to be scheduled in the remaining months of the FY 2017-18.
- There is a steady purchase of energy from Tarapur atomic plant. The energy projected to be scheduled in the remaining months of the FY 2017-18 has been estimated based on the 3 years average of quantum of energy scheduled in the FY 2014-15, the FY 2015-16 and the FY 2016-17.

Availability from RGPPL:

- The State of Maharashtra (which has 95% share allocation from RGPPL) is not scheduling power because of non-availability of natural gas for this project and non-availability of technical minimum schedule to run the plant and therefore presently there is no generation from the plant. Therefore, for the period from April-17 to Dec-17 no power purchase has been considered from RGPPL as a result of which no power purchase has been projected for the remaining months as well.

Availability of power from Open Market

- As discussed in the subsequent section while determining the energy balance that there is a power deficit for the FY 2017-18. The Commission directs the Petitioner to procure this power from Open Market.

4.7.2. Power Purchase Cost

Variable Charges:

The total variable costs have been computed by taking the actuals of the first nine months and the charges for the remaining three months have been projected using the average of the actuals per unit variable cost as per bills of October 2017 to December 2017 for all the stations.

For procurement of power from Open Market, the Average Round the Clock (RTC) rate for the calendar year 2017 has been considered.

Fixed Charges:

- Actual Fixed Costs have been considered for the first nine months for all stations
- Fixed costs have been determined based on the tariff orders issued by the CERC for the respective Central Generating Stations for the remaining three months
- For Mauda II, Solapur and KGPP since the tariff order has not been issued, fixed cost as per power purchase bills has been considered.
- Fixed cost has been apportioned as per Daman & Diu's share in each station and average of the annual plant availability factor achieved during the last five years. The plant availability factor has been limited to 85% for plants having higher availability.

Other Charges:

- Actual charges have been considered for the first nine months of the FY 2017-18 and no other charges have been considered for the remaining three months of the FY 2017-18.

- Rebate amount of Rs 49.37 Cr from NTPC Stations has been considered for estimation of purchase costs for the FY 2017-18

4.7.3. 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.

For this purpose, 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 have been considered.

The following table provides the quantum of energy availability and the power purchase cost approved by the Commission for the FY 2017-18:

Table 43: Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchas at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed charges (Rs Cr)	Other charges (Rs Cr)	Total (RsCr)	Avg. Rate (@ State Periphery) (Rs/kwh)
NTPC							
KSTPS	364.93	351.47	46.70	22.48	2.23	71.41	2.03
KSTPS 3	44.62	42.98	5.49	5.90	0.31	11.71	2.72
VSTPP-I	97.24	93.65	14.87	7.49	0.75	23.11	2.47
VSTPP-II	69.13	66.58	9.90	4.35	0.43	14.68	2.20
VSTPP- III	87.29	84.07	12.69	8.23	0.48	21.39	2.54
VSTPP- IV	93.10	89.67	13.36	13.64	0.78	27.79	3.10
KGPP	107.03	103.08	29.50	19.03	0.91	49.43	4.80
GGPP	140.03	134.86	33.64	23.93	4.66	62.24	4.61
Sipat-I	184.61	177.80	23.04	23.31	0.50	46.86	2.64
Sipat-II	79.50	76.57	10.30	8.63	0.30	19.23	2.51
Mouda	49.41	47.59	13.30	15.43	0.45	29.18	6.13
VSTPS-V	61.02	58.77	9.02	9.13	0.35	18.50	3.15
Mouda 2	39.36	37.91	9.95	6.65	-0.03	16.57	4.37
SLP	31.00	29.85	9.43	7.10	0.00	16.54	5.54
KHSTPP-II	14.99	14.44	3.45	1.51	-0.01	4.95	3.43
Subtotal - NTPC	1463.28	1409.28	244.65	176.83	12.10	433.58	3.08
NSPCL Bhillai	506.62	487.93	99.39	83.42	(1.24)	181.57	3.72
NPCIL							
KAPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TAPS	58.37	56.22	12.06	0.00	0.00	12.06	2.15
Subtotal	58.37	56.22	12.06	0.00	0.00	12.06	2.17
Others							
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchas at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed charges (Rs Cr)	Other charges (Rs Cr)	Total (RsCr)	Avg. Rate (@ State Periphery) (Rs/kwh)
Unscheduled Interchange (UI) Overdrawal/Underdrawal		184.01	-	44.03	-	44.03	2.39
Open Market Purchase		118.90	35.31	-	-	35.31	2.97
Open Market Sale	-	-	-	-	-	-	-
Total	2028.27	2256.34	391.41	304.28	10.86	706.55	3.14
Renewable Purchase Obligation (RPO)							
Solar Self Generation	18.92	18.92	-	-	-	-	-
Solar REC				7.15	0.00	7.15	
Non Solar REC	-	-	-	17.69	0.00	17.69	
Subtotal	18.92	18.92	0.00	24.84	0.00	24.84	
Transmission Charges							
PGCIL Charges	-	-	-	57.91	-	57.91	-
The ED DD Transmission Charges	-	-	-	7.75	-	7.75	-
Subtotal	-	-	-	65.65	-	65.65	-
Total	2047.20	2275.26	391.41	394.77	10.86	797.04	3.51

The Commission approves the revised quantum of power purchase as 2275.26 MU at State/ UT Periphery with total cost of Rs 797.04 Cr in the APR for the FY 2017-18.

4.8. Renewable Purchase Obligations (RPOs)

Petitioner's submission:

Till September, 2017 the ED DD has procured 9.02 MU of solar energy from its ground mounted and rooftop solar plants. For the remaining six months the ED DD will further procure 9.02 MU of solar power from its own generation and will purchase a further 32.94 MUs as solar certificates to meet its solar obligation till the FY 2017-18.

During the first six months of the FY 2017-18, the ED DD purchased 26.67 MUs through non-solar certificates. To meet its non-solar obligation for the FY 2017-18, the ED DD has planned to purchase 58.98 MUs through non-solar certificates during the remaining six months of the FY 2017-18.

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 6.70% of its total consumption (including 2.50% from Solar) from renewable sources for the FY 2017-18.

The Petitioner is also required to clear the backlog of 44.90 MU (Solar – 14.51 MU and Non Solar – 30.38 MU) upto the FY 2016-17 carried forward.

The Petitioner has also submitted that it plans to cover the backlog and fulfill the RPO target for FY 2017-18 by 31st March 2018. 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 2017-18.

Table 44: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2017-18
Sales within State (MU)	2084.14
RPO obligation (in %)	6.70%
Solar	2.50%
Non-solar	4.20%
RPO obligation for the year (in MU)	139.64
Solar	52.10
Non-solar	87.53
Backlog upto FY 2016-17	44.89
Solar	14.51
Non Solar	30.38
Total RPO to be fulfilled for the year	184.62
Solar	66.62
Non Solar	117.92
RPO compliance (actual purchase)	18.92
- Solar	18.92
-Non-solar	0.00
RPO compliance (REC certificate purchase)	165.69
- Solar	47.69
-Non-solar	117.92

The Commission has assumed the rate of purchase for Solar and Non-Solar REC as Rs 1.50/ kWh due to non – availability of Solar REC's.

The Commission has computed the cost towards compliance of RPO as shown in the following table. The cost has already been considered in the total power purchase cost approved by the Commission in the previous section:

Table 45: Cost towards compliance of Renewable Purchase Obligation (RPO) (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)	Avg. Rate (Rs/kWh)
Solar	66.62	7.15	1.07
Non-solar	117.92	17.69	1.50
Total	184.54	24.84	1.34

The Commission has approved a cost Rs 24.84 Cr towards RPO Compliance in the APR of FY 2017-18.

4.9. Energy Requirement at State/UT Periphery

Petitioner's submission

The Petitioner has submitted the energy requirement as shown in the table below:

Table 46: Energy Requirement of the System (MU)

Particulars	Petitioners submission
Sales	2,039.27
Open Access Sales	321.09
Less: Energy Savings	(0.35)
Total Sales	2,360.01
Add: Losses	216.42
T&D Losses (%)	8.40%
Energy Required at Periphery	2,576.43
Add: Sales to common pool consumer	5.08
Less: Own Generation	18.04
Total energy requirement at state periphery	2,563.47
Less: Energy Purchased through UI at Periphery	186.77
Less: Open Access Purchase	326.41
Energy requirement at state periphery from tied up sources	2,050.28
Transmission loss	77.89
Transmission loss (%)	3.66%
Energy requirement at state periphery from generator end	2,128.17
Total Energy requirement from tied up sources & UI at generator end	2,314.94
Total Energy requirement in UT including Open Access	2,641.36

Commission's analysis

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

Table 47: Energy Balance Now Approved (MU)

Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved
Energy requirement for Discom				
Energy sales of Discom	a	1843.86	2039.27	2084.14
Less: Energy Savings	b	0.35	0.35	0.00
Total Sales within the State/UT	c=a-b	1843.51	2038.92	2084.14
Distribution losses				
%	d	8.40%	8.40%	8.40%
MU	e=f-d	172.10	187.01	191.12
Energy required at State Periphery for Discom sales	f=c/(1-d)	2048.79	2226.28	2275.26
Open Access				
Open Access Sales	g	482.75	321.09	321.09
Pooled losses				
%	h			1.87%
MU	i=j-g	8.05	5.32	6.11
Energy required for Open Access	j	490.80	326.41	327.20
Total energy required at State Periphery	k=f+j	2539.59	2576.43	2602.47
Energy Transactions at Periphery				
Add: Sales in Unscheduled Interchange	l	0.00	5.08	0.00
Add: Sales in Power Exchanges	m	0.00	0	0.00
Less: Purchase under UI (MU)	n	0.00	186.77	184.01
Less: Open Access Purchase (MU)	o	490.80	326.41	327.20
Total energy scheduled at State Periphery from Tied-up Sources (MU)	l=k+l+m-n-o	2048.79	2068.33	2091.26
Energy Available at state periphery from firm sources	p	2048.79	2050.29	1953.43
Own Generation	q	0.00	18.04	18.92
Deficit/(Surplus)	r=l-p-q	0.00	0.00	118.90

The Commission approves the Total Energy Requirement at State/UT Periphery as 2,602.47 MU in the APR for the FY 2017-18. In the ARR Order for FY 2017-18, the Commission did not approve any deficit of power and estimated that the complete requirement shall be met from firm sources. However, now in the APR for the FY 2017-18, the Commission has estimated a deficit of 118.90 MU and directs the Petitioner to procure this power from IEX/ Bilateral Exchange etc. rather than from costlier power stations, as is the approach followed by the Petitioner in the previous years. The cost towards procurement of this deficit power has been discussed in the subsequent section while estimating the total power purchase cost.

4.10. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprises of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). The regulation 21 of the MYT Regulation, 2014 states the following:

“The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, R&M expense and A&G expenses

...

(g) The norms shall be determined at constant prices of base year and escalation on account of inflation shall be over and above the baseline...”

4.10.1. Employee Expenses

Petitioner’s submission

The employee expenses of Rs 16.06 Cr have been incurred against the approved expenses of Rs 11.62 Cr in the ARR Order. The employee expenses are determined in accordance with the MYT Regulations and the methodology prescribed by the Commission in the ARR Order for the FY 2017-18. The employee expenses of the FY 2016-17 have been considered as base, which are inclusive of the impact of the 7th Pay Commission, for projecting the employee expenses for the FY 2017-18. The employee expenses submitted by the Petitioner, comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension and gratuity, leave encashment and staff welfare expenses.

Commission’s analysis

The Regulation 21.1 of the MYT Regulations, 2014 states the following:

“Employee cost shall be computed as per the approved norm escalated by wholesale price index (WPI), adjusted by provisions for expenses beyond the control of the Distribution Licensee and one time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

*EMP_n = (EMP_b * WPI inflation) + Provision, where:*

EMP_n: Employee expense for the year n

EMP_b: including yearly increments of employees, bonus, promotion. VRS. Employee expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Provision for expenses as necessitated by the licensee due to expansion of the consumer base, yearly increments of Employees, and any expected one-time expenses as specified above.;”

The WPI inflation rate considered by the Commission is computed as follows:

Table 48: WPI Inflation considered by the Commission

Year	Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	112.46	
2014-15	113.88	1.26%
2015-16	109.72	(3.65)%
2016-17	111.62	1.73%
Average increase in last three years		(0.22)%

The Commission is of the opinion that increase in salaries and wages on account of recommendations of the 7th Pay Commission is an uncontrollable expenditure, hence any increase on account of the 7th Pay Commission recommendation should be a pass through. However, the additional impact of the 7th Pay Commission has not been considered by the Commission since satisfactory details were not submitted by the Petitioner in spite of several reminders. Once the relevant details are provided by the Petitioner, the Commission shall consider the same along with the impact of inflation as per MYT Regulations 2014 in the True-up of the FY 2017-18 based on the relevant details provided by the Petitioner.

The Commission has considered the employee expenses as approved in the ARR Order for FY 2017-18 as the base and allowed escalation to the extent of the average increase in the WPI inflation as computed in the previous table.

Table 49: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	11.62	16.06	11.59
2	Impact of 7 th Pay Commission	0.00	0.00	0.00
3	Total Employee Expenses	11.62	16.06	11.59

The Commission approves employee expenses of Rs 11.59 Cr in the APR of the FY 2017-18.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The revised estimate of A&G expenses have been calculated in accordance with the MYT Regulations and the methodology prescribed by the Commission in the ARR Order considering revised inflation numbers. A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

Commission's analysis

The Regulation 21.3 of the MYT Regulations, 2014 states the following:

"A&G expenses shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

** A&G_n = (A&G_b * WPI inflation) + Provision where:*

A&G_n: A&G expense for the year n

A&G_i: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission."

The WPI inflation rate considered by the Commission is computed as follows:

Table 50: WPI Inflation considered by the Commission

Year	Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	112.46	
2014-15	113.88	1.26%
2015-16	109.72	(3.65)%
2016-17	111.62	1.73%
Average increase in last three years		(0.22)%

The Commission has considered the A&G expenses as approved in the ARR Order for FY 2017-18 as the base and allowed escalation to the extent of the average increase in the WPI inflation as computed in the previous table.

Table 51: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	5.19	6.81	5.18

The Commission now approves the Administrative & General (A&G) expenses of Rs 5.18 Cr in the APR for the FY 2017-18.

4.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The revised estimate of R&M expenses are calculated in accordance with the MYT Regulations and the methodology prescribed by the Commission in the ARR Order considering revised inflation numbers. The Petitioner has considered the R&M expenses of the FY 2016-17 as base for projecting the R&M expenses for the FY 2017-18.

Commission's analysis

The Regulation 21.2 of the MYT Regulations, 2014 states the following:

"Repairs and Maintenance (R&M) expenses shall be calculated as percentage (as per the norm defined) of Opening Gross Fixed Assets for the year governed by following formula:

*$R\&M_n = K_b * GFA_n * Inflation\ Index$, where:*

R&M_n: Repairs & Maintenance expense for nth year

GFA_n: Opening Gross Fixed Assets for nth year

K_b: Percentage point as per the norm

GFA : Gross Fixed Assets at the beginning of the Financial Year

Inflation Index is CPI : WPI:: 60 : 40

CPI is Consumer Price Index issued by Govt, of India & these indices are for immediately preceding three years

WPI is whole sale price Index issued by Govt, of India & these indices are for immediately preceding three years"

The CPI and WPI inflation rates considered by the Commission is computed as follows:

Table 52: WPI Inflation considered by the Commission

Year	CPI Average of the FY (Apr-Mar)	Increase in CPI Index	WPI Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	236.00		112.46	
2014-15	250.83	6.29%	113.88	1.26%
2015-16	265.00	5.65%	109.72	(3.65)%
2016-17	275.92	4.12%	111.62	1.73%
Average increase in last three years	5.35%		(0.22)%	
Average increase in last three years in inflation index (60:40=CPI:WPI)	3.12%			

The Commission has considered the k factor of 2.76% as approved by the Commission in the MYT Order dated 06th April 2016. The Commission has considered the closing GFA of the FY 2016-17 as approved under the True-

up process as the opening GFA for the FY 2017-18. The R&M expenses have been approved by the Commission as computed below:

Table 53: R&M calculations

S. No	Particulars	FY 2017-18
1	Opening GFA	534.15
2	K Factor Approved by the Commission	2.76%
3	Inflation index (60:40=CPI:WPI)	3.12%
4	R&M Expenses	15.20

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

Table 54: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Repair & Maintenance Expenses (R&M)	15.16	19.10	15.20

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 15.20 Cr in the APR of the FY 2017-18.

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

The Commission approves total O&M Expenses of Rs 31.98 Cr against the Petitioner's submission of Rs 41.97 Cr in the APR of the FY 2017-18.

Table 55: O&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	11.62	16.06	11.59
2	Administrative & General Expenses (A&G)	5.19	6.81	5.18
3	Repair & Maintenance Expenses	15.16	19.10	15.20
	Total Operation & Maintenance Expenses	31.97	41.97	31.98

4.11. Capital Expenditure & Capitalisation

Petitioner's submission

The Petitioner in its Petition had submitted the following details for capital expenditure and capitalisation:

Table 56: Capital Expenditure and capitalisation initially submitted by the Petitioner (In Rs Cr)

S. No	Particulars	Now Approved by Commission
1	Capital Expenditure	46.40
2	Capitalisation	47.73

The Commission sought the details of the capital expenditure and capitalization envisaged by the Petitioner along with the progress made on the same. The Petitioner consequently made a revised submission in this regard and the details as mentioned in the following table were shared:

Table 57: Revised submission for capital expenditure and capitalisation (In Rs Cr)

Sr. No.	Name of Project/Work	Capital Expenditure till January 2017	Capital Expenditure Estimates (FY 2017-18)	Expected Capitalization (Revised Estimate for FY 2017-18)
1	Scheme for establishment of 1x160 MVA + 2x50 MVA, 220/66/11 KV S/S at Ringanwada, Daman alongwith associated 220 KV D/C line from 400 KV new PGCIL S/S to Ringanwada, Daman.	39.90	40.45	40.45
2	Scheme for establishment of 66/11 KV, 2x20 MVA GIS Sub-station alongwith associated line at Dabhel, Daman	0.00	0.00	0.00
3	Scheme for establishment of 66/11 KV GIS Sub-station at Panchal Industrial Estate, Bhimpore, Daman	0.00	0.00	0.00
4	Providing Underground power Distribution system in Daman & Diu and Normal Development works & release of service connection	33.18	33.18	33.18
5	Total	73.08	73.63	73.63

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 scheme wise Detailed Project Reports (DPR) and the copy of the Technical Sanctions accorded to each scheme. The Petitioner in response, submitted the supporting documents with regard to the scheme wise capital expenditure and capitalisation along with the copy of the technical sanctions. Against an approved capex and capitalisation of 121.82 Cr and 101.88 Cr respectively, the Petitioner has envisaged a capex and capitalisation of Rs 73.63 Cr each.

Table 58: Capital Expenditure and Capitalisation approved by Petitioner (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission*	Now Approved by Commission
1	Capital Expenditure	121.82	73.63	73.63
2	Capitalisation	101.88	73.73	73.63

*Revised submission

The Commission approves the capital expenditure of Rs 73.63 Cr and capitalisation of Rs 73.63 Cr in the APR for the FY 2017-18.

4.12. Capital Structure

Petitioner's Submission

The entire capital deployment shall be through equity for the FY 2017-18.

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, the excerpt of the Regulation states the following:

“

- (a) The Distribution Licensee shall provide detailed loan-wise, project-wise and utilization-wise details of all of the pending loans
- (b) If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

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

In accordance with the MYT Regulations, 2014, the Commission has determined the Capital Structure for FY 2017-18 as follows:

Table 59: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved*
1	Opening Gross Fixed Assets	522.82	534.15	534.15
2	Addition During the FY	101.88	47.73	73.63
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	624.70	581.89	607.78

*As per Petitioner's revised submission

Table 60: Normative Loan addition (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	144.85	153.98	150.72
2	Add: Normative Loan During the year	71.32	33.41	51.54
3	Less: Normative Repayment equivalent to Depreciation	29.27	27.83	29.21
4	Closing Normative Loan	186.89	159.56	173.05

Table 61: Normative Equity addition (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	58.39	61.64	61.64
2	Additions on account of new capitalisation	30.56	14.32	22.09
3	Closing Equity	88.96	75.96	83.73

4.13. Depreciation

Petitioner's submission

For computation of depreciation, the closing GFA of the FY 2016-17 is taken as the opening GFA for the FY 2017-18 and subsequently the proposed capitalisation during the FY 2017-18 is added. The Depreciation rate has been considered at the same level as was approved in the ARR Order for the FY 2017-18.

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.”

In the ARR Order, the Commission approved the following asset wise depreciation rates as per the CERC Tariff Regulations, 2014:

Table 62: 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%

The Petitioner was directed to submit the asset wise capitalisation schedule for the period on the basis of proposed capitalisation and the same was used for the calculation of the effective rate of depreciation for the FY 2017-18. The depreciation has been calculated on the average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the closing GFA of the FY 2016-17 as approved in the True-up. The net addition during the year has been considered equivalent to capitalisation as approved above. The following table provides the calculation of depreciation during the FY 2017-18.

Table 63: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	522.82	534.15	534.15
2	Addition During the FY	101.88	73.63	73.63
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	624.70	607.78	607.78
5	Average Gross Fixed Assets	573.76	558.02	570.97
6	Weighted Average Rate of Depreciation (%)	5.10%	4.99%	5.12%
	Depreciation	29.27	27.83	29.23

The Commission now approves depreciation of Rs 29.23 Cr in the APR for the FY 2017-18.

4.14. Interest on Loan

Petitioner's submission

The Interest on Loan is calculated on normative basis according to the MYT Regulations, 2014. The closing balance of the FY 2016-17 is taken as the opening balance of loans for the FY 2017-18. The normative loan addition in FY 2017-18 has been computed as 70% of the capitalisation proposed during the FY 2017-18.

The repayment of loans has been considered equivalent to the depreciation during the FY 2017-18. Further the rate of interest has been considered as SBI PLR @ 14.05%.

Commission's analysis:

The Petitioner in the Technical Validation Session (TVS) has submitted that the complete capitalisation during the year shall be funded by Petitioner's 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 actual 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, in the ARR Order, approved the interest on long term loans equivalent to the prevailing SBI Prime Lending Rate (PLR) of 13.85%. The Commission, similar to the approach followed in the True-up of the FY 2016-17, has considered the rate of interest as SBI PLR as on 1st April 2017 @ 13.85%.

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 2016-17. 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 64: Interest on Loan approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	144.85	153.98	150.72
2	Add: Normative Loan During the year	71.32	33.41	51.54
3	Less: Normative Repayment equivalent to Depreciation	29.27	27.83	29.21
4	Closing Normative Loan	186.90	159.56	173.05
5	Average Normative Loan	165.87	156.77	161.88
6	Rate of Interest (%)	13.85%	14.05%	13.85%
	Interest on Loan	22.97	22.03	22.42

The Commission approves Interest on Loan of Rs 22.42 Cr in the APR of the FY 2017-18.

4.15. Return on Equity (RoE)

Petitioner's submission

The Return on Equity (RoE) is computed in accordance with the MYT Regulations 2014, RoE is computed on 30% of the capital base. The Petitioner has considered the opening equity equivalent to closing equity for the FY 2016-17 and has considered added equity to the tune of 30% of assets proposed to be capitalized during the year. Accordingly, the ED DD 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, the Commission for the purpose of equity addition during the year has limited it to 30% of 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 rate of 16% (on post-tax basis) with opening equity considered equivalent to closing equity of the FY 2016-17 approved in the True-up. The following table provides the return on equity approved in the ARR Order, Petitioner's submission and as now approved by the Commission..

Table 65: RoE approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	58.39	61.64	61.64
2	Additions on account of new capitalisation	30.56	14.32	22.09
4	Closing Equity	88.96	75.96	83.73
5	Average Equity	73.68	68.80	72.68
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	11.79	11.01	11.63

The Commission approves the Return on Equity of Rs 11.63 Cr in the APR of the FY 2017-18.

4.16. Interest on Security Deposits

Petitioner's submission

A provision of Rs 3.69 Cr has been made towards payment of interest on consumer security deposits during the FY 2017-18 being the same as per actuals of the FY 2016-17.

Commission's analysis:

The Interest on security deposits has been calculated in accordance with the MYT Regulations 2014, based on average of opening and closing consumer security deposits during the year. As approved in the ARR Order, the Commission has not considered any additions in the consumer security deposits during the year. The same shall be considered as per actuals in the True-up of FY the 2017-18. The rate of interest has been considered equivalent to RBI Bank rate as on 1st April 2017 in accordance with the MYT Regulations 2014. The table below provides the calculation of interest on consumer security deposits for the year.

Table 66: Interest on Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	45.97	-	55.01
2	Add: Deposits During the year	0.00	-	0.00
3	Less: Deposits refunded	0.00	-	0.00
4	Closing Security Deposit	45.97	-	55.01
5	Average Security Deposit	45.97	-	55.01
6	Rate of Interest (%)	6.50%	-	6.50%
	Interest on Security Deposit	2.99	3.69	3.58

The Commission approves Interest on Security Deposit as Rs 3.58 Cr in the APR of the FY 2017-18.

4.17. 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 Rate of Interest of 9.30% as approved by the Commission the ARR Order

Commission's analysis:

For calculating the working capital requirements of the Petitioner during the year the receivables have been considered as Net ARR for 2 months, the revised power purchase cost of the FY 2017-18 as determined above and the consumer security deposit. The inventory for two months has been considered on the same levels as per the audited accounts of the FY 2016-17

With regards to the interest rate, the SBI Base rate as on 1st April 2017 has been considered, as stipulated in the MYT Regulations 2014.

Accordingly, the interest on working capital has been calculated, as shown in the table below:

Table 67: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	149.00	141.38	146.37
2	Less: Power Purchase Cost for one month	63.09	63.03	66.42
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.96	1.43	1.36
4	Total Working Capital Requirement	86.87	79.78	81.31
5	Less: Security Deposit excluding BG/FDR	45.97	52.68	55.01
6	Net Working Capital	40.90	27.10	26.30
7	Rate of Interest (%)	9.10%	9.30%	9.30%
	Interest on Working Capital	3.72	2.52	2.45

The Commission approves the Interest on Working Capital as Rs 2.45 Cr in the APR of the FY 2017-18.

4.18. Income Tax

Petitioner's submission

No submissions have been made in this regard.

Commission's analysis:

No income tax liability has been computed for the FY 2017-18 since the corporatization of the ED DD is still pending.

Table 68: Income tax approved by Commission (In Rs 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 2017-18.

4.19. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

The Commission also has not considered any provision for Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of the FY 2017-18.

4.20. Non-Tariff Income

Petitioner's submission

The non-tariff income for the FY 2017-18 has been considered after an increase of 5% over the actual non-tariff income of the FY 2016-17.

Commission's analysis:

For the APR of the FY 2017-18 the Commission has considered Non-Tariff Income at the same amount as per actuals of the FY 2016-17. The same shall be Trued-up on actual basis. The NTI approved in the ARR Order, Petitioner's submission and now approved by the Commission is shown in the table below:

Table 69: Non-Tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	NTI	20.16	21.03	20.08

The Commission now approves Non-Tariff Income of Rs 20.08 Cr in the APR for the FY 2017-18.

4.21. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of Rs 843.57 Cr is submitted after adjusting the Non -Tariff Income for the FY 2017-18.

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 2017-18 are approved as follows:

Table 70: Aggregate Revenue Requirement approved by the Commission for the FY 2017-18 (In Rs 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 sale of surplus power)	757.02	755.55	797.04
2	Operation & Maintenance Expenses	31.97	41.97	31.98
3	Depreciation	29.27	27.83	29.23
4	Interest and Finance charges	22.97	22.03	22.42
5	Interest on Working Capital	3.72	2.52	2.45
6	Interest on Security Deposit	2.99	3.69	3.58
7	Return on Equity	11.79	11.01	11.63
8	Provision for Bad Debt	0.00	0.00	0.00
9	Income Tax	0.00	0.00	0.00
10	Total Revenue Requirement	859.73	864.60	898.32
11	Less: Non-Tariff Income	20.16	21.03	20.08
12	Net Revenue Requirement	839.57	843.57	878.24

The Commission approves the net ARR of Rs 878.24 Cr in the APR of the FY 2017-18.

4.22. Revenue at existing Retail Tariff

Petitioner's submission

The revenue from sale of power at existing tariff of Rs 848.27 Cr is calculated on the basis of energy sales in the territory for the FY 2017-18. The estimated revenue for the FY 2017-18 is based on the six month actual revenue at the existing tariff. The revenue for remaining six months of FY 2017-18 has been computed based on the retail tariff notified by the Commission in the Tariff Order of the FY 2017-18.

Commission's analysis

The consumer category wise/ sub category wise and slab wise revenue at retail tariff is calculated as per the tariff rates applicable for the FY 2017-18. The revenue from demand charges and the energy charges has been projected for each category/ sub category and slab. The Commission has not projected any revenue from Power factor incentive etc. and the same shall be considered as per actuals while truing up of FY 2017-18. The revenue from category/ sub category/ slab wise revenue as computed by the Commission for the FY 2017-18 has been shown in the table below:

Table 71: Revenue at existing tariff computed by Commission (In Rs Cr)

S. No.	Category	Phase	Fixed Charges (Rs Cr)	Energy charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
1	LT-D/DOMESTIC		1.34	18.20	19.53	1.70
1	0-100 units	Single	0.45	4.14	4.59	1.22
2	101-200 units	Single	0.14	1.90	2.04	1.72
3	201-400 units	Single	0.22	3.56	3.78	2.07
4	401 and above	Single	0.19	3.61	3.79	2.42
5	0-100 units	Three	0.15	1.57	1.72	1.21
6	101-200 units	Three	0.05	0.72	0.77	1.71
7	201-400 units	Three	0.07	1.35	1.42	2.06
8	401 and above	Three	0.06	1.36	1.43	2.41
2	Low Income Group		0.00051	0.00	0.00051	0.0333
1	Low Income Group		0.00051	0.00	0.00051	0.0333
3	LT-C/Commercial		0.29	16.64	16.93	2.88
1	0-100 units	Single	0.09	2.51	2.60	2.49
2	101 Units and Above	Single	0.09	3.52	3.61	3.34
3	0-100 units	Three	0.05	4.42	4.47	2.43
4	101 Units and Above	Three	0.05	6.19	6.24	3.28
4	LT-Ag/AGRICULTURE		0.00	0.32	0.32	0.65
1	Upto 10 HP per unit		0.00	0.32	0.32	0.65
2	11 kV- 1 MW and above		0.00	0.00	0.00	0.00
5	LT INDUSTRIAL		3.38	60.94	64.31	3.27
1	For the category		3.38	60.94	64.31	3.27
6	LT-PL/Public Lighting		0.00	3.68	3.68	3.75
1	For the category			3.68	3.68	3.75
7	LT-Public Water Works		0.03	1.19	1.22	3.37
1	For the category		0.03	1.19	1.22	3.37
8	HT		53.21	701.84	755.06	4.46
	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA		50.24	675.39	725.64	4.46
	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)		2.97	26.45	29.42	4.56
9	Temporary supply		0.00	1.73	1.73	5.08
1	For the category		0.00	1.73	1.73	5.08
	Grand total		58.24	804.54	862.78	4.14

The Commission, has determined revenue from sale of power at existing tariff as Rs 862.78 Cr in the APR of the FY 2017-18.

4.23. Revenue from open access consumers

Petitioner's submission

The revenue from open access consumers is as per the actuals collected in the first 9 months of the FY 2017-18. Further, a significant portion of HT/EHT consumers have given up open access in the month of November, which has been accounted for while projecting the sales.

Commission analysis

The Commission has also accounted for the movement of open access consumers to the consumer base of the Petitioner along with the actuals as submitted by the Petitioner for the first 9 months of the FY 2017-18.

Table 72: Revenue from open access approved by Commission (In Rs Cr)

Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved
Revenue from Open Access	33.79	32.37	28.90

4.24. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from retail tariff and open access, the standalone revenue surplus of Rs 30.57 Cr is arrived at in the APR for the FY 2017-18.

Commission analysis

The Petitioner has refunded Rs 6.49 Cr against the Commission's order dated 09th May 2017 on account of excess Cross Subsidy Surcharge billed by the Petitioner. The same has been deducted from the revenue while calculating the standalone revenue gap for the FY 2017-18. The Revenue Gap/Surplus is arrived at and approved as follows:

Table 73: Standalone Revenue Gap/ Surplus at existing tariff (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioners submission	Now Approved
1	Annual Revenue Requirement	839.57	843.57	878.24
2	Revenue from sale of power	893.99	848.27	862.78
3	Revenue from Open Access	33.79	32.37	28.90
4	Revenue Gap/(Surplus)	(88.21)	(37.06)	(13.44)
5	Refund of Cross subsidy surcharge	0.00	6.49	6.49
	Revenue Gap/(Surplus)	(88.21)	(30.57)	(6.95)

The standalone surplus at existing retail tariff is Rs 6.95 Cr in the APR of the FY 2017-18. The estimated surplus is carried over to the next year and has been considered while determining the tariff for the FY 2018-19.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2018-19

5.1. Background

The ARR for the FY 2018-19 was approved in the MYT Order issued for the 1st Control Period (the FY 2016-17 to the FY 2018-19). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2018-19. The determination of Aggregate Revenue Requirement for the FY 2018-19 is to be carried out as per the following provisions of Regulation 6 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) Regulations, 2014:

“6.ARR Forecast

6.1 The applicant shall, based on the Business Plan as approved by the Commission by Order, submit the forecast of Aggregate Revenue Requirement and expected revenue from tariff, for the Control Period by a Petition in accordance with the JERC (Terms & Condition for determination of Tariff) Regulations, 2009 by 30th November of the year prior to the commencement of the Control Period and accompanied by such fee payable, as specified in the JERC (Conduct of Business) Regulations, 2009.

6.2 The forecast of Aggregate Revenue Requirement shall be developed using the assumptions relating to the behaviour of individual variables that comprise the Aggregate Revenue Requirement during the Control Period.

6.3 The forecast of expected revenue from tariff and charges shall be developed based on the following:

- (a) Estimates of quantum of electricity to be supplied to consumers and wheeled on behalf of Distribution System Users for each financial year within the Control Period; and*
- (b) Prevailing tariff as at the date of making the application.”*

5.2. Approach for determination of ARR for the FY 2018-19

This Chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2018-19, approved in the MYT Order dated 06th April, 2016 and re-computes the same considering the actual information available of various parameters for the FY 2016-17 as per the audited accounts and the provisional information available for first 9 months of the FY 2017-18. The revised ARR and revenue at existing tariff is determined for the FY 2018-19 to arrive at the revised revenue gap/surplus for the year.

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

Petitioner’s Submission

The Petitioner has estimated the energy sales, connected load and number of consumers are projected for the year based on the historical trends observed in the last five years (the FY 2012-13 to the FY 2016-17) and the actual data for the first 6 months of the FY 2017-18.

Commission’s Analysis

The Commission for projecting the number of consumers, connected load and energy sales for each category has observed the historical trends in the past 6 years (the FY 2011-12 to the FY 2016-17) and the actual data provided by the Petitioner for the first 9 months of the FY 2017-18 (first six months for LIG and Temporary categories). The Commission has calculated the Compounded Annual Growth Rate (CAGR) and the Year on Year (Y-o-Y) increase for each category, and using the appropriate growth rate has estimated the category wise consumers, connected load and energy sales. The tables below provide the trends observed in the growth of number of consumers, connected load and energy sales for the Petitioner.

Table 74: Growth in No. of consumers

Category	Y-o-Y growth					CAGR				
	FY13/ FY12	FY14/ FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
Domestic	-7.64%	3.42%	3.04%	2.48%	2.12%	0.59%	2.76%	2.54%	2.30%	2.12%
LIG/ Kutir Jyoti	-4.76%	0.00%	2.50%	2.44%	0.00%	0.00%	1.23%	1.64%	1.21%	0.00%
Commercial	-11.67%	-2.28%	0.82%	2.14%	-4.07%	-3.14%	-0.88%	-0.41%	-1.01%	-4.07%
Agriculture	1.38%	1.53%	0.34%	4.02%	3.22%	2.09%	2.27%	2.51%	3.62%	3.22%
LT Industry	-	-	-	3.53%	-3.41%	-0.11%	-2.30%	-0.82%	0.00%	-3.41%
HT/EHT Industry	-3.14%	-0.37%	-1.50%	-0.25%	2.04%	-0.66%	-0.03%	0.08%	0.89%	2.04%
Public Lighting	96.28%	-8.13%	54.57%	0.95%	7.94%	24.88%	11.53%	18.98%	4.39%	7.94%
Public Water Works	0.00%	-7.79%	53.52%	14.68%	1.60%	10.53%	13.33%	21.39%	7.94%	1.60%
Temp. Supply	-	-	-	-	3227.27%	0.00%	0.00%	0.00%	0.00%	3227.27%
Total	-7.19%	2.04%	2.80%	2.49%	1.76%	0.30%	2.27%	2.35%	2.12%	1.76%

Table 75: Growth in Connected Load

Category	Y-o-Y growth					CAGR				
	FY13/ FY12	FY14/ FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
Domestic	-0.65%	1.65%	109.25%	2.05%	1.90%	17.05%	21.95%	29.58%	1.97%	1.90%
LIG/ Kutir Jyoti	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial	-48.37%	-2.89%	9.45%	2.27%	5.16%	-10.01%	3.40%	5.59%	3.71%	5.16%
Agriculture	-	-	-	1.52%	3.81%	13.04%	14.06%	14.92%	2.66%	3.81%
LT Industry	2.02%	0.99%	2.56%	7.17%	-3.09%	1.88%	1.84%	2.13%	1.91%	-3.09%
HT/EHT Industry	30.66%	1.13%	-0.37%	3.82%	6.18%	7.73%	2.66%	3.18%	4.99%	6.18%
Public Lighting	18.17%	-14.07%	0.49%	1.99%	-47.93%	-11.53%	-17.71%	-18.89%	-27.12%	-47.93%
Public Water Works	-	1.53%	19.73%	0.00%	0.00%	3.33%	5.00%	6.19%	0.00%	0.00%
Temp. Supply	-	-	-	-	2302.96%	0.00%	0.00%	0.00%	0.00%	2302.96%
Total	17.57%	1.04%	9.75%	3.94%	4.11%	7.12%	4.66%	5.90%	4.03%	4.11%

Table 76: Growth in Energy Sales

Category	Y-o-Y growth					CAGR				
	FY13/ FY12	FY14/ FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
Domestic	-7.64%	3.42%	3.04%	2.48%	2.12%	0.59%	2.76%	2.54%	2.30%	2.12%
LIG/ Kutir Jyoti	-4.76%	0.00%	2.50%	2.44%	0.00%	0.00%	1.23%	1.64%	1.21%	0.00%
Commercial	-11.67%	-2.28%	0.82%	2.14%	-4.07%	-3.14%	-0.88%	-0.41%	-1.01%	-4.07%
Agriculture	1.38%	1.53%	0.34%	4.02%	3.22%	2.09%	2.27%	2.51%	3.62%	3.22%
LT Industry	-	-	-	3.53%	-3.41%	-0.11%	-2.30%	-0.82%	0.00%	-3.41%

Category	Y-o-Y growth					CAGR				
	FY13/ FY12	FY14/ FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
HT/EHT Industry	-3.14%	-0.37%	-1.50%	-0.25%	2.04%	-0.66%	-0.03%	0.08%	0.89%	2.04%
Public Lighting	96.28%	-8.13%	54.57%	0.95%	7.94%	24.88%	11.53%	18.98%	4.39%	7.94%
Public Water Works	0.00%	-7.79%	53.52%	14.68%	1.60%	10.53%	13.33%	21.39%	7.94%	1.60%
Temp. Supply	-	-	-	-	3227.27%	0.00%	0.00%	0.00%	0.00%	3227.27%
Total	-7.19%	2.04%	2.80%	2.49%	1.76%	0.30%	2.27%	2.35%	2.12%	1.76%

Using the appropriate growth rate from the trends observed above, the number of consumers, connected load and energy sales have been estimated for the FY 2018-19. For projecting the sales of the HT/EHT category, a subjective rate of 2.66% has been considered, which the actual CAGR growth rate observed is in connected load during the last four years (the FY 2013-14 to the FY 2016-17). For all categories, the growth rate is applied over the estimates of FY 2017-18, as determined in the previous Chapter.

The growth rate adopted and the revised number of consumers, connected load and energy for each category is tabulated below:

Table 77: No. of consumers

Category	Growth Rate (CAGR)	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	2 year	2.30%	50,215	49,606
LIG/ Kutir Jyoti	2 year	1.21%		43
Commercial	2 year	-1.01%	8,889	7,716
Agriculture	3 year	2.51%	1,298	1,348
LT Industry	2 year	0.00%	1,823	1,755
HT/EHT Industry	3 year	0.08%	810	801
Public Lighting	3 year	18.98%	565	808
Public Water Works	3 year	21.39%	109	187
Temp. Supply	2 year	0.00%	0	366
Total			63,710	62,631

Table 78: Connected Load (kVA)

Category	Growth Rate CAGR	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	4 year	21.95%	132,780	181,183
LIG/ Kutir Jyoti	4 year	0.00%		50
Commercial	3 year	5.59%	22,158	23,168
Agriculture	1 year	3.81%	5,945	4,108
LT Industry	3 year	2.13%	118,291	108,622
HT/EHT Industry	4 year	2.66%	861,167	565,488
Public Lighting	4 year	-17.71%	1,898	596
Public Water Works	4 year	5.00%	913	877
Temp. Supply	Subjective Rate	0.00%	0.00	673
Total			1,143,153	884,765

Table 79: Energy Sales (MU)

Category	Growth Rate (CAGR)		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	2 year	8.56%	119.18	118.43	124.82
LIG/ Kutir Jyoti	3 year	9.31%	0.11	0.15	0.17
Commercial	5 year	10.35%	54.71	78.94	64.83
Agriculture	2 year	10.38%	2.77	5.44	5.39
LT Industry	5 year	2.78%	179.71	193.01	202.03
HT/EHT Industry	Subjective Rate	2.66%	1682.46	1,965.96	1,903.49
Public Lighting	4 year	4.93%	14.04	9.97	10.30
Public Water Works	Subjective Rate	0.00%	4.47	3.37	3.61
Temp. Supply	Subjective Rate	0.00%	0.00	3.22	3.40
Total			2,057.45	2,378.50	2,318.05

The Commission approves number of consumer as 62,631, connected load as 884,765 kVA and energy sales of 2318.05 MU in the ARR of the FY 2018-19.

5.4. Open Access and Unscheduled Interchange Sales and Purchase

Petitioner's Submission

Against the projected open access sales of 143.65 MU the Petitioner has projected the open access purchase of 146.38 MU at the periphery.

The sale and purchase under Unscheduled Interchange (UI) have been estimated as 5.85 MU and 86.00 MU respectively.

Commission's Analysis

The Commission has taken into account the movement of open access consumers to the Petitioner's consumer base. The pooled losses of 1.87% as submitted in the energy audit report of the Petitioner have been used to calculate the open access purchase at the periphery.

The Commission has not considered any sale or purchase under the UI mechanism for the FY 2018-19. The same shall be approved in the consequent Tariff Orders based on the actual UI sale/purchase by the Petitioner.

The table below provides the open access sales and purchase approved by the Commission in the MYT Order, the Petitioner's submission and now approved by the Commission.

Table 80: Open Access sales and purchase (in MU) approved by the Commission

S. No	Category	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Open Access Sales	453.22	143.65	143.65
2	Open Access Purchase	475.59	146.03	146.38

The Commission approves open access sales of 143.65 MU and purchase of 146.38 MU in the ARR of the FY 2018-19.

5.5. Inter-State transmission loss

Petitioner's submission

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

Commission's analysis

The Commission has decided to continue with the loss trajectory as specified in the MYT Order for the FY 2018-19.

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

Table 81: Inter-State transmission loss (%)

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

The Commission approves an Inter-State Transmission Loss of 3.66% in the ARR of the FY 2018-19

5.6. Intra-State Distribution Loss

Petitioner's submission

The Intra-State Distribution Loss of 8.30% is considered as approved in the MYT Order.

Commission's analysis

The Commission has decided to continue with the Intra-State Distribution Loss as approved in the MYT Order.

The table provided on the next page presents the Intra-State Distribution Loss approved in the ARR Order, Petitioners submission and now approved by the Commission

Table 82: Intra-State Distribution Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Intra-State Distribution Loss	8.30%	8.30%	8.30%

The Commission approves Intra-State Distribution Loss of 8.30% in the ARR of FY 2018-19.

5.7. Energy Requirement at State/UT Periphery

Petitioner's submission

The Petitioner has submitted the Energy Requirement at State/ UT Periphery as follows:

Table 83: Energy Requirement (MU) submitted by Petitioner

Particulars	FY 2018-19
Sales	2,378.50
Open Access Sales	143.65
Less: Energy Savings	(0.35)
Total Sales	2,521.79
Add: Losses	228.25

Particulars	FY 2018-19
T&D Losses	8.30%
Energy Required at Periphery	2,750.05
Add: Sales to common pool consumer	5.85
Less: Own Generation	18.04
Total energy requirement at State periphery	2,737.86
Less: Energy Purchased through UI at Periphery	86.00
Less: Open Access Purchase	146.03
Energy requirement at state periphery from tied up sources	2,505.83
Interstate loss (MU)	95.20
Interstate loss (%)	3.66%
Energy requirement at state periphery from generator end	2601.03

Commission's analysis:

The energy requirement at State/UT Periphery is derived based on the energy sales estimate and the Intra-State transmission losses and Intra-State distribution losses approved for the FY 2018-19.

Table 84: Energy Requirement (MU) approved by Commission

Particulars	Formula	Approved in MYT Order	Petitioner's Submission	Now Approved
Energy Requirement				
Energy sales within the State/UT	a	2,057.45	2,378.50	2318.05
Open Access Sales	b	453.22	143.65	143.65
Less: Energy Savings	c	(0.35)	(0.35)	0.00
Total Sales within the State/UT	d=a+b-c	2,510.32	2,521.79	2461.70
Distribution losses				
%	e	227.22	228.25	212.55
MU	f=g-d	8.30%	8.30%	8.30%
Energy required at State Periphery	g=d/(1-e)	2,737.54	2,750.05	2674.25
Energy Transactions at Periphery				
Add: Sales in Unscheduled Interchange	h	8.35	5.85	0.00
Add: Sales in Power Exchanges	i	-	-	0.00
Less: Purchase under UI (MU)	j	0.00	86.00	0.00
Less: Open Access Purchase (MU)	k	475.59	146.03	146.38
Total Energy Requirement at State Periphery from Tied-up Sources	l=g+h+i-j-k	2,270.30	2,505.83	2527.86

The Commission approves Total Energy Requirement at State/UT Periphery as 2,527.86 MU in the ARR of the FY 2018-19.

5.8. Power Purchase Quantum & Cost

Petitioners Submission

For projecting the energy availability for the FY 2018-19 the firm and infirm allocation from various generating stations is considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

Power Purchase:

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

The power availability for the FY 2018-19 has been estimated based on the revised allocation issued by the Western Region Power Committee (WRPC) vide number WRPC/Comm-I/6/Alloc/2017/15183 dated 17.10.2017. The energy allocation from various generating stations has been considered the same as in the FY 2017-18, as discussed in the previous section.

For projecting the power availability for the FY 2018-19, the ED DD has considered average allocation of firm and infirm power from the western region generation stations (NTPC and NPCIL) of the Western Regional Power Committee. For projecting the power purchase from eastern region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account.

Additionally, the ED DD has 70 MW allocations from NSPCL Bhilai power stations. Energy availability from NSPCL Bhilai power stations for FY 18-19 has been considered by taking 70 MW allocation from the plant.

Power purchase quantum from the NTPC stations of the current year and FY 2018-19 has been calculated based on the installed capacity of each plant and by applying the average PLF of the previous four years (the FY 2014 to the FY 2017) to calculate the plant-wise gross generation. For NSPCL, an average PLF of 90% has been considered.

For gas based generating stations i.e. Kawas (KGPP) and Gandhar (GGPP) weighted average PLF of the FY 2012-13, the FY 2013-14 and the FY 2014-15 has been taken into account.

Auxiliary consumption of 9% and 3% has been considered for estimating the gross generation from coal and gas based generating stations respectively.

Merit Order Dispatch: Further, the NTPC stations have been subjected to merit order dispatch and accordingly the power purchase quantum and variable cost has been projected. However the fixed charges have been approved for full allocation.

As per the RPO obligations the ED DD shall have to purchase 85.63 MUs of Solar power and 128.44 MUs of Non-Solar power during the FY 2018-19. Own generation of solar has been projected at 18.04 MUs for the FY 2018-19. Rest of the solar obligation shall be met by purchasing Renewable Energy Certificates. To meet the non-solar RPO the ED DD shall procure non-solar power through the exchange and purchase renewable energy certificates.

For computing the power availability at the periphery, 3.66% weighted average external transmission losses have been applied on the gross power purchase for the FY 2017-18 and the FY 2018-19.

The following table depicts the station wise power purchase for the FY 2018-19:

Table 85: Station wise power purchase submitted by Petitioner

Source	FY 2018-19
NTPC Stations	
KSTPP	340.44
KSTPP-III	41.04
VSTPP-I	90.92
VSTPP-II	63.18
VSTPP- III	77.17
VSTPP- IV	87.03
VSTPS-V	55.23
KAWAS	159.68
JGPP	177.72
Sipat-I	145.86
Sipat-II	56.85
MSTPS-I	49.60
MOUDA-II	114.51
KHSTPP-II	7.24
SOLAPUR	87.54
Subtotal	1554.03
NTPC Bhilai	
Bhilai Unit-I &II(NTPC)	494.41
Subtotal	494.41
NPCIL	
KAPPS	66.47
TAPP 3&4	78.08
KAPPS (III & IV)	0.00
Subtotal	144.55
Others	
Ratnagiri	0.00
Subtotal	0.00
<u>Power purchase from Other Sources</u>	
Power purchase from Indian E. Exchange	390.00
UI	86.00
Solar	18.04
Non Solar (Exchange)	0.00
Solar REC	0.00
Non Solar REC	0.00
Subtotal	494.04
Misc. Arrears	
NTPC Rebate	
Gross Power Purchase	2687.03
External Losses	
Total Power Purchase	2687.03

Power Purchase Cost:

The cost of purchase from the central generating stations for the FY 2018-19 is estimated on the basis of the following assumptions:

- Fixed cost for the FY 2018-19 has been projected considering a 5% escalation over the estimated fixed cost for various stations for FY 2016-17.
- Variable cost for each NTPC generating stations for the FY 2018-19 has been projected at the same rate as received during the first six months of FY 2017-18.
- The ED DD has projected other charges (tax, incentives, etc) for the FY 2017-18 at a similar level as estimated for the full year of FY 2016-17.
- For nuclear plants with single part tariff i.e. KAPP and TAPP, the actual average variable cost per unit has been considered at the same rate as received during the first six months of FY 2017-18 for projecting the power purchase cost for the FY 2018-19.
- For power purchase from renewable energy sources, for the FY 2018-19, the ED DD has appointed BHEL as EPC and O&M contractor for 1 MW solar plant at Daman and 3 MW solar plant at Diu. Also, the ED DD has appointed Ujjas energy limited as EPC and O&M contractor for 6MW solar plant at Diu. For the purchase of solar and non-solar power, the rate of Rs 1.00/unit and Rs 1.5/unit has been considered for the FY 2018-19.
- The average power purchase cost for procurement of power from the energy exchange has been considered at Rs 2.65/unit.

The Total Power Purchase cost from various sources for the FY 2018-19 is summarized in the table below

Table 86: Power Purchase quantum (MU) and Cost (In Rs Cr) submitted by Petitioner

Source	Units Purchased (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)	Per Unit Cost (Rs/kwh)
NTPC Stations						
KSTPP	340.44	23.79	47.53	0.00	71.33	2.10
KSTPP-III	41.04	6.31	5.49	0.00	11.80	2.87
VSTPP-I	90.92	7.87	14.36	0.00	22.23	2.45
VSTPP-II	63.18	4.69	9.36	0.00	14.04	2.22
VSTPP- III	77.17	8.82	11.74	0.00	20.56	2.66
VSTPP- IV	87.03	14.63	12.94	0.00	27.57	3.17
VSTPS-V	55.23	9.93	8.55	0.00	18.48	3.35
KAWAS	159.68	19.98	34.02	0.00	54.00	3.38
JGPP	177.72	25.13	34.85	0.00	59.98	3.38
Sipat-I	145.86	24.91	19.70	0.00	44.61	3.06
Sipat-II	56.85	9.25	8.08	0.00	17.33	3.05
MSTPS-I	49.60	17.97	13.88	0.00	31.84	6.42
MOUDA-II	114.51	5.04	30.97	0.00	36.01	2.70
KHSTPP-II	7.24	1.59	1.75	0.00	3.34	4.61
SOLAPUR	87.54	9.88	0.00	0.00	9.88	0.00
Subtotal	1554.03	189.79	253.23	0.00	443.02	2.85
NTPC Bhilai						
Bhilai Unit-I &II(NTPC)	494.41	86.26	104.00	0.00	190.26	3.85
Subtotal	494.41	86.26	104.00	0.00	190.26	3.85
NPCIL						
KAPPS	66.47	0.00	19.21	0.00	19.21	2.89
TAPP 3&4	78.08	0.00	24.29	0.00	24.29	3.11
KAPPS (III & IV)	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	144.55	0.00	43.50	0.00	43.50	3.01

Source	Units Purchased (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)	Per Unit Cost (Rs/kwh)
Others						
Ratnagiri	0.00	1.37	0.00	0.57	1.94	0.00
Subtotal	0.00	1.37	0.00	0.57	1.94	0.00
<u>Power purchase from Other Sources</u>						
Power purchase from Indian E. Exchange	390.00		103.35		103.35	2.65
UI	86.00		18.91		18.91	2.20
Solar	18.04				0.00	0.00
Non Solar (Exchange)	0.00		0.00		0.00	0.00
Solar REC	0.00		6.76		6.76	
Non Solar REC	0.00		19.27		19.27	
Subtotal	494.04	0.00	148.28	0.00	148.28	3.00
Misc. Arrears						
NTPC Rebate						
Gross Power Purchase	2687.03	277.43	549.00	0.57	827.00	3.08
External Losses						
Total Power Purchase	2687.03	277.43	549.00	0.57	827.00	3.08

Transmission Charges

The transmission charges payable to PGCIL are projected based on the total capacity allocation in the transmission network. For the FY 2018-19 the transmission charges payable have also been considered by the Petitioner.

For projecting the PGCIL transmission charges for the FY 2018-19, an escalation of 5% over the estimated FY 2017-18 transmission charges has been considered in view of the increase in transmission charges. Further, the ED DD has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission charges for the ensuing year.

Table 87: Total Power Purchase Cost submitted by Petitioner (In Rs Cr)

Particulars	FY 2018-19
Gross Power Purchase Cost	827.00
PGCIL CHARGES	85.01
WRLDC	0.51
MSTCL	4.24
REC	3.76
GETCO	3.87
PGVCL	0.07
POSCO	2.12
Total Power Purchase Cost (including Transmission Cost)	926.57

Commission's Analysis

The Commission has projected the power purchase quantum and cost for FY 2018-19 based on the monthly actual data for 12 months for the FY 2016-17, the FY 2015-16 and the FY 2014-15, as submitted by the Petitioner. For

projecting availability of power, firm allocation from various generating stations has been considered. The source wise methodology followed for projection of quantum and cost of power procurement has been detailed as follows:

5.8.1. Availability of power

Availability of power from NTPC & NTPC-SAIL Bhilai:

- The power purchase quantum for 10 of the total 15 NTPC plants has been estimated based on the 3 years average of quantum of energy scheduled in the FY 2014-15, the FY 2015-16 and the FY 2016-17.
- For Kawas & Gandhar gas power plants, energy availability is considered as average of FY 2017-18, due to irregular scheduling of power during major part of the FY 2016-17.
- For Mauda Phase 1 & 2, the availability of power has been projected based on the average PLF achieved by the plants in FY 2017-18 because low quantum of power were purchased from Mauda-I in the FY 2014-15, the FY 2015-16 and the FY 2016-17 and Mauda-II was commissioned in March 2017
- For Vindhyachal Phase 5 & NSPCL Bhilai, the availability of power has been projected based on the average PLF achieved by the plants during the last 5 years as Vindhyachal Phase 5 began supplying power only since H2-FY 2015-16 and there was irregular scheduling of power from NSPCL.
- The availability of power from the new station Solapur thermal plant which began operations in October 2017 has been projected assuming normative PLF of 85% and other relevant parameters as prescribed in CERC Tariff Regulations, 2014.

Availability from NPCIL plants:

- From Kakrapar power station, power availability has been assumed to be the same as in the FY 2015-16 as no power has been scheduled in the FY 2016-17 and the first 9 months of the FY 2017-18
- DD has a steady purchase of energy from Tarapur atomic plant, the energy projected to be scheduled in the FY 2018-19 has been estimated based on the 3 years average of quantum of energy scheduled in the FY 2014-15, the FY 2015-16 and the FY 2016-17.

Availability from RGPPL Plant:

- As discussed in the APR for the FY 2017-18, the State of Maharashtra is not scheduling power because of non-availability of natural gas and therefore no power purchase has been projected from this source for the FY 2018-19.

Availability of power from Open Market

- The energy deficit for the FY 2018-19, as discussed in the section of energy balance has been assumed to be procured from open market.
- No power has been projected under UI for the FY 2018-19.

5.8.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs have been computed by taking the average of the actuals per unit variable cost as per bills of October 2017 to December 2017 for all the stations.
- For procurement of power from Open Market, the Average Round the Clock (RTC) rate for western region during the calendar year 2017 has been considered.
- No cost has been projected towards UI Overdrawl/ Underdrawl.

Fixed Charges:

- The fixed costs have been determined based on the Tariff Orders issued by the CERC for respective Central Generating Stations,
- For Mauda II since the Tariff Order has not been issued, fixed cost as per power purchase bills has been considered.
- The Fixed cost has been apportioned on the basis of the ED DD's share in each station and average annual plant availability factor achieved during the last five years by the plant

Other Charges:

No other charges have been considered for the FY 2018-19.

5.8.3. 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 Commission has taken into account the additional capacity share in the new stations while estimating the Inter-State transmission charges for the FY 2018-19.

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

The energy availability and the power purchase cost approved by the Commission have been shown in the table below:

Table 88: Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchas at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed charges (Rs Cr)	Total (RsCr)	Avg. Rate (@ State Periphery) (Rs/kwh)
NTPC						
KSTPS	363.28	349.88	41.96	23.14	65.10	1.86
KSTPS 3	45.89	44.20	5.21	5.61	10.82	2.45
VSTPP-I	93.20	89.76	13.79	8.06	21.86	2.44
VSTPP-II	64.20	61.84	8.90	4.32	13.21	2.14
VSTPP- III	84.57	81.45	11.73	7.98	19.71	2.42
VSTPP- IV	95.30	91.78	13.25	12.47	25.72	2.80
KGPP	116.65	112.35	36.71	19.25	55.95	4.98
GGPP	140.00	134.83	38.67	24.07	62.74	4.65
Sipat-I	186.42	179.54	21.18	22.48	43.66	2.43
Sipat-II	77.85	74.98	9.10	8.31	17.41	2.32
Mouda	40.73	39.23	10.46	16.02	26.47	6.75
VSTPS-V	54.72	52.70	7.64	9.35	16.99	3.22
Mouda 2	53.77	51.79	13.36	8.36	21.71	4.19
SLP	89.80	86.49	27.06	19.26	46.32	5.36
KHSTPP-II	14.25	13.72	3.11	1.49	4.61	3.36
Subtotal - NTPC	1520.64	1464.52	262.13	190.16	452.30	3.09
NSPCL Bhilai	504.26	485.65	91.62	86.88	178.50	3.68

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchas at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed charges (Rs Cr)	Total (RsCr)	Avg. Rate (@ State Periphery) (Rs/kwh)
NPCIL						
KAPS	33.74	32.50	7.51	0.00	7.51	2.31
TAPS	93.55	90.10	26.50	0.00	26.50	2.94
Subtotal	127.29	122.59	34.01	0.00	34.01	2.77
Others						
RGPPL	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	0.00	0.00	0.00	0.00	0.00	0.00
Unscheduled Interchange (UI) Overdrawal/Underdrawal	0.00	0.00		-	-	-
Open Market Purchase	-	436.17	129.54		129.54	2.97
Open Market Sale	-	-	-	-	-	-
Total	2152.18	2508.94	517.31	277.04	794.35	3.17
Renewable Purchase Obligation (RPO)						
Solar	18.92	18.92	9.68	-	9.68	-
Non Solar			18.78	-	18.78	-
Subtotal	18.92	18.92	28.45	-	28.45	-
Transmission Charges						
PGCIL Charges	-	-	-	-	54.57	-
The ED DD Transmission Charges	-	-	-	-	10.3	-
Subtotal	-	-	-	-	64.87	-
Total	2171.11	2527.86	545.77	277.04	887.68	3.51

The Commission approves the quantum of power purchase as 2,527.86 MU at the State/ UT Periphery with a total cost of Rs 887.68 Cr for the FY 2018-19.

5.9. Renewable Purchase Obligations (RPOs)

Petitioner's submission:

As per the RPO obligations the ED DD shall have to purchase 85.63 MUs of solar power and 128.44 MUs of non-solar power during the FY 2018-19. Own generation of solar has been projected at 18.04 MUs for the FY 2018-19. Rest of the solar obligation shall be met by purchasing Renewable Energy Certificates. To meet the non-solar RPO the ED DD shall try to procure non-solar power through the exchange and purchase renewable energy certificates.

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 (including 3.60% from Solar) from renewable sources for the FY 2018-19.

The Commission has considered the per unit rate of Rs 1.50/kwh to fulfill the Solar RPO and the same rate for fulfilling the Non Solar RPO. The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 the Commission has determined the following Renewable Purchase Obligation for the Petitioner for the FY 2018-19:

Table 89: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2018-19
Sales within State (MU)	2,318.05
RPO obligation (in %)	9.00%
Solar	3.60%
Non-solar	5.40%
RPO obligation for the year (in MU)	208.62
Solar	83.45
Non-solar	125.17
RPO compliance (actual purchase)	18.92
- Solar	18.92
-Non-solar	0.00
RPO compliance (REC certificate purchase)	189.70
- Solar	64.53
-Non-solar	125.17

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

Table 90: Cost towards compliance of Renewable Purchase Obligation (RPO) (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)	Avg. Rate (Rs/kWh)
Solar	64.53	9.68	1.50
Non-solar	125.17	18.78	1.50
Total	189.70	28.45	1.50

5.10. Energy Balance

Petitioner's submission

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

Table 91: Energy Balance submitted by Petitioner (MU)

Particulars	FY 2018-19	
	Approved (6th April, 2016)	Projected
Retail Sales (a)	2,057.45	2,378.50
Open Access Sales (b)	453.22	143.65
Less: Energy Savings (c)	(0.35)	(0.35)
Total Sales (d=a+b-c)	2,510.32	2,521.79
Distribution Loss (MU) (e=g-d)	227.22	228.25
Distribution Loss (%) (f=e/g)	8.30%	8.30%
Energy Required at Periphery (g)	2,737.54	2,750.05
Sale to common pool consumer/UI Sale(h)	8.35	5.85
Own generation (i)	0.00	18.04
Total energy requirement at state periphery(j=g+h-i)	2,745.89	2,737.86
Less: Energy Purchased through UI at Periphery (k)	0.00	86.00
Less: Open Access Purchase at Periphery (l)	475.59	146.03
Energy requirement at state periphery from tied up sources (m=j-k-l)	2,270.30	2,505.83
Inter-state loss (MU) (n=o-m)	86.25	95.20
Inter-state loss (%)	3.66%	3.66%
Energy requirement at state periphery from generator end (o)	2356.54	2601.03
Total Energy requirement from tied up sources & UI at generator end (p=o+k)	2356.54	2687.03
Total Energy requirement in UT including Open Access (q=p+l)	2832.13	2833.06

Commission's analysis

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

Table 92: Energy Balance approved by Commission (MU)

Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved
Energy requirement for Discom				
Energy sales of Discom	a	2,057.45	2,378.50	2318.05
Less: Energy Savings	b	-0.35	-0.35	0.00
Total Sales within the State/UT	c=a-b	2057.80	2378.85	2318.05
Distribution losses				
%	d	8.30%	8.30%	8.30%
MU	e=f-d	186.26	215.32	209.81
Energy required at State Periphery for Discom sales	f=c/(1-d)	2244.06	2594.17	2527.86
Open Access				
Open Access Sales	g	453.22	143.65	143.65
Pooled losses				
%	h			1.87%

Particulars	Formula	Approved in ARR Order	Petitioner's Submission	Now Approved
MU	$i=j-g$	22.37	2.38	2.73
Energy required for Open Access	j	475.59	146.03	146.38
Total energy required at State Periphery	$k=f+j$	2,737.54	2750.05	2674.25
Energy Transactions at Periphery				
Add: Sales in Unscheduled Interchange	l	8.35	5.85	0.00
Add: Sales in Power Exchanges	m	0.00	0.00	0.00
Less: Purchase under UI (MU)	n	0.00	86.00	0.00
Less: Open Access Purchase (MU)	o	475.59	146.03	146.38
Total energy scheduled at State Periphery from Tied-up Sources (MU)	$l=k+l+m-n-o$	2270.30	2523.87	2527.86
Energy Available at state periphery from firm sources (MU)	p	2270.30	2115.83	2072.77
Own Generation	q	0.00	18.04	18.92
Deficit/(Surplus)	$r=l-p-q$	0.00	390.00	436.17

The Commission approved an energy deficit of 436.17 MU in the FY 2018-19. The additional cost of procurement has been considered in the total power purchase cost approved for the FY 2018-19.

5.11. 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 regulation 21 of the MYT Regulation, 2014 states the following:

“The Commission shall stipulate a separate trajectory of norms for each of the components of O&M expenses viz., Employee cost, R&M expense and A&G expenses

...

(g) The norms shall be determined at constant prices of base year and escalation on account of inflation shall be over and above the baseline...”

5.11.1. Employee Expenses

Petitioner’s submission

The employee expenses comprise of basic salary, dearness allowances, medical cost, leave travel allowances, honorarium, etc. No cost related to leave salary contribution and pension of the employee is projected and the Commission is requested to consider the same at the time of True-up on actual basis.

Employee expenses have been estimated on normative basis, in accordance with the MYT Regulations and the methodology prescribed by the Commission in the MYT Order.

It is requested that the Employee Expenses be treated as uncontrollable expense and the proposed employee expenses may be considered for the FY 2018-19.

Commission’s analysis

The Regulation 21.1 of the MYT Regulations, 2014 states the following:

“Employee cost shall be computed as per the approved norm escalated by wholesale price index (WPI), adjusted by provisions for expenses beyond the control of the Distribution Licensee and one time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

$EMP_n = (EMP_b * WPI \text{ inflation}) + \text{Provision}$, where:

EMP_n : Employee expense for the year n

EMP_b : including yearly increments of employees, bonus, promotion. VRS. Employee expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Provision for expenses as necessitated by the licensee due to expansion of the consumer base, yearly increments of Employees, and any expected one-time expenses as specified above.,”

The WPI inflation rate considered by the Commission is computed as follows:

Table 93: WPI Inflation considered by the Commission

Year	Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	112.46	
2014-15	113.88	1.26%
2015-16	109.72	(3.65)%
2016-17	111.62	1.73%
Average increase in last three years		(0.22)%

The Commission is of the opinion that increase in salaries and wages on account of recommendations of 7th Pay Commission is an uncontrollable expenditure, hence any increase on account of 7th Pay Commission recommendation should be a pass through. However, the additional impact of 7th Pay Commission has not been considered by the Commission since satisfactory details were not submitted by the Petitioner in spite of several reminders. Once the relevant details are provided by the Petitioner, the Commission shall consider the same along with the impact of inflation as per MYT Regulations 2014 in the subsequent Tariff Orders.

The Commission has considered the employee expenses as approved in the MYT Order dated 06th April 2016 as the base and allowed escalation to the extent of the average increase in the WPI inflation as computed in the previous table.

Table 94: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	12.99	16.21	12.96
2	Impact of 7 th Pay Commission	0.00	0.00	0.00
3	Total Employee Expenses	12.99	16.21	12.96

The Commission approves Employee Expenses of Rs 12.96 Cr in the ARR of the FY 2018-19.

5.11.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted a revised estimate of A&G expenses in accordance with the MYT Regulations, 2014. A&G expenses primarily comprises of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits.

Commission's analysis

The Regulation 21.3 of the MYT Regulations, 2014 states the following:

“A&G expenses shall be computed as per the norm escalated by wholesale price index (WPI) and adjusted by provisions for confirmed initiatives (IT etc. initiatives as proposed by the Distribution Licensee and validated by the Commission) or other expected one-time expenses, and shall be governed by following formula:

* $A\&G_n = (A\&G_b * WPI \text{ inflation}) + Provision$ where:

$A\&G_n$: A&G expense for the year n

$A\&G_i$: A&G expense as per the norm

WPI inflation: is the average increase in the Wholesale Price Index (WPI) for immediately preceding three years

Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.”

The WPI inflation rate considered by the Commission is computed as follows:

Table 95: WPI Inflation considered by the Commission

Year	Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	112.46	
2014-15	113.88	1.26%
2015-16	109.72	(3.65)%
2016-17	111.62	1.73%
Average increase in last three years		(0.22)%

The Commission has considered the A&G expenses as approved in the MYT Order dated 06th April 2016 as the base and allowed escalation to the extent of the average increase in the WPI inflation as computed in the previous table.

Table 96: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	5.80	6.88	5.79

The Commission approves the Administrative & General (A&G) expenses of Rs 5.79 Cr in the ARR of the FY 2018-19.

5.11.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner submitted that the Repairs and Maintenance Expense comprise of expenses incurred by the Petitioner with regard to maintenance and upkeep of the transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and breakdowns in the system. The R&M Expenses are determined on normative basis, in accordance with the MYT Regulations, 2014

Commission's analysis

The Regulation 21.2 of the MYT Regulations, 2014 states the following:

“Repairs and Maintenance (R&M) expenses shall be calculated as percentage (as per the norm defined) of Opening Gross Fixed Assets for the year governed by following formula:

$R\&M_n = K_b * GFA_n * Inflation \text{ Index}$, where:

$R\&M_n$: Repairs & Maintenance expense for nth year

GFA_n : Opening Gross Fixed Assets for nth year

Kb: Percentage point as per the norm

GFA : Gross Fixed Assets at the beginning of the Financial Year

Inflation Index is CPI : WPI:: 60 : 40

CPI is Consumer Price Index issued by Govt, of India & these indices are for immediately preceding three years

WPI is whole sale price Index issued by Govt, of India & these indices are for immediately preceding three years”

The CPI and WPI inflation rates considered by the Commission is computed as follows:

Table 97: WPI Inflation considered by the Commission

Year	CPI Average of the FY (Apr-Mar)	Increase in CPI Index	WPI Average of the FY (Apr-Mar)	Increase in WPI Index
2013-14	236.00		112.46	
2014-15	250.83	6.29%	113.88	1.26%
2015-16	265.00	5.65%	109.72	(3.65)%
2016-17	275.92	4.12%	111.62	1.73%
Average increase in last three years		5.35%		(0.22)%
Average increase in last three years in inflation index (60:40=CPI:WPI)		3.12%		

The Commission has considered the k factor of 2.76% as approved by the Commission in the MYT Order dated 06th April 2016. The Commission has considered the closing GFA of the FY 2017-18 as approved under the APR as the opening GFA for the FY 2018-19. The R&M expenses have been approved by the Commission as computed below:

Table 98: R&M calculations

S. No	Particulars	FY 2017-18
1	Opening GFA	607.78
2	K Factor Approved by the Commission	2.76%
3	Inflation index (60:40=CPI:WPI)	3.12%
4	R&M Expenses	17.30

The table provided on the next page presents 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 99: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Repair & Maintenance Expenses (R&M)	16.62	20.80	17.30

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 17.30 Cr in the ARR for the FY 2018-19.

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

The Commission approves total Operation & Maintenance Expenses of Rs 36.05 Cr against Rs 43.89 Cr as submitted by the Petitioner.

Table 100: O&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	12.99	16.21	12.96
2	Administrative & General Expenses (A&G)	5.80	6.88	5.79
3	Repair & Maintenance Expenses	16.62	20.80	17.30
	Total Operation & Maintenance Expenses	35.41	43.89	36.05

5.12. Capital Expenditure & Capitalisation

Petitioner's submission

The Petitioner had submitted the following details for capital expenditure and capitalisation:

Table 101: Capital Expenditure and Capitalisation initially submitted by Petitioner (In Rs Cr)

S. No	Particulars	Now Approved by Commission
1	Capital Expenditure	77.23
2	Capitalisation	58.73

The Commission sought the details of the capital expenditure and capitalization envisaged by the Petitioner along with the progress made on the same. The Petitioner consequently made a revised submission in this regard and the following details were shared:

Table 102: Revised submission for capital expenditure and capitalisation (In Rs Cr)

Sr. No.	Name of Project/Work	Capital Expenditure Estimates	Expected Capitalization
1	Scheme for establishment of 66/11 KV, 2x20 MVA GIS Sub-station alongwith associated line at Dabhel, Daman	19.00	0.00
2	Scheme for establishment of 66/11 KV GIS Sub-station at Panchal Industrial Estate, Bhimpore, Daman	10.00	0.00
3	Scheme for establishment of 2x100 MVA, 220/66 KV GIS Sub-station at Dabhel, Daman alongwith associated 220 KV multicircuit Magarwada-Dabhel transmission line via Kachigam	5.00	0.00
4	Establishment of new hybrid bay in Sub-station (i.e Dalwada, Bhimpore, Dabhel, Kachigam, Magarwada).	8.00	8.00
5	Scheme for inter connection of 66 KV line from Zari Sub-station to Eurocoustic and replacement of Panther conductor from Kachigam Sub-station to EPL	4.50	4.50
6	Providing Underground power Distribution system in Daman & Diu and Normal Development works & release of service connection	23.00	23.00

Sr. No.	Name of Project/Work	Capital Expenditure Estimates	Expected Capitalization
7	Installation of Grid connected wind energy	50.00	0.00
	Total	119.50	35.50

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 scheme wise Detailed Project Reports (DPR) and the copy of the Technical Sanctions accorded to each scheme. The Petitioner in response, submitted the supporting documents w.r.t the scheme wise capital expenditure and capitalisation along with the copy of the technical sanctions. Against an approved capex and capitalisation of 117.31 Cr and 119.11 Cr respectively, the Petitioner has envisaged a capex and capitalisation of Rs 119.50 Cr and Rs 35.50 Cr respectively.

Table 103: Capital Expenditure and Capitalisation approved by Petitioner (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission*	Now Approved by Commission
1	Capital Expenditure	117.31	119.50	119.50
2	Capitalisation	119.11	35.50	35.50

*Revised submission

The Commission approves capital expenditure of Rs 119.50 Cr and capitalisation of Rs 35.50 Cr in the ARR of the FY 2018-19.

5.13. Capital Structure

Petitioner's Submission

The Petitioner, as per the revised submission, submitted that capitalisation of Rs 35.50 Cr shall be undertaken in FY 2018-18. Further, the entire capital deployment at the ED DD shall be through equity.

Commission's analysis

As discussed, while determining the capital structure, as the Petitioner has failed to provide the details of the assets created from consumer contributions, no asset has been assumed to be funded through consumer contribution. Further, since the Petitioner submitted that the entire capitalisation is funded through equity, equity higher than 30% of capitalisation has been considered as normative loan. In accordance with the MYT Regulations, 2014, the Commission has determined the Capital Structure for the FY 2018-19 as detailed as follows:

Table 104: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved*
1	Opening Gross Fixed Assets	560.00	581.89	607.78
2	Addition During the FY	119.11	58.73	35.50
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	680.10	640.62	643.28

*As per Petitioner's revised submission

Table 105: Normative Loan addition (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	149.17	159.56	173.05
2	Add: Normative Loan During the year	83.38	41.11	24.85
3	Less: Normative Repayment equivalent to Depreciation	31.65	30.64	32.09
4	Closing Normative Loan	200.89	170.02	165.81

Table 106: Normative Equity addition (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	80.57	75.96	83.73
2	Additions on account of new capitalisation	35.73	17.62	10.65
3	Closing Equity	116.30	93.58	94.38

5.14. Depreciation

Petitioner's submission

For computation of Depreciation, the Petitioner has considered the the closing balance of the FY 2017-18 as the opening balance of the GFA for the FY 2018-19 subsequently added the capitalisation proposed during the FY 2018-19. The Depreciation has been worked out by applying the asset wise rates as prescribed in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014.

Commission's analysis

In the MYT Order, the Commission approved the following asset wise depreciation rate as provided in the table below:

Table 107: 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%

The Petitioner was directed to submit the asset wise capitalisation schedule for the period on the basis of the proposed capitalisation and the same was used for determination of effective rate of depreciation for the FY 2018-19. The depreciation has been calculated on the average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the closing GFA of the FY 2017-18 as approved in the True-up. The net addition during the year has been considered equivalent to capitalisation as approved above. The following table provides the calculation of depreciation during the year the FY 2017-18.

Table 108: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Opening Gross Fixed Assets	560.99	581.89	607.78
2	Addition During the FY	119.11	58.73	35.50

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
3	Adjustment/Retirement During the FY	680.10	640.62	0.00
4	Closing Gross Fixed Assets	620.55	611.25	643.28
5	Average Gross Fixed Assets	560.99	581.89	625.53
6	Weighted Average Rate of Depreciation (%)	5.64%	5.27%	5.13%
	Depreciation	31.65	30.64	32.11

The Commission approves depreciation of Rs 32.11 Cr in the ARR of the FY 2018-19.

5.15. Interest on Loan

Petitioner's submission

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

The repayment of loans has been considered equal to the depreciation during the FY 2018-19. Further the rate of interest has been considered as SBI PLR @ 14.05%.

Commission's analysis:

The Interest on Loan is determined in accordance with the MYT Regulations. The Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. Repayment has been considered equivalent to depreciation allowed during the year.

Similar to the approach followed in previous years the rate of interest has been considered as prevailing SBI Prime Lending Rate (PLR) of 13.40%. 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 APR for the FY 2017-18.

The table below provides the Interest on Loan approved by the Commission

Table 109: Interest on loan approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	149.17	159.56	173.03
2	Add: Normative Loan During the year	83.38	41.11	24.85
3	Less: Normative Repayment equal to Depreciation	31.65	30.64	32.11
4	Closing Normative Loan	200.89	170.02	165.77
5	Average Normative Loan	163.65	131.50	169.40
6	Rate of Interest (%)	14.05%	14.05%	13.40%
	Interest on Loan	24.59	23.15	22.70

The Commission approves Interest on Loan as Rs 22.70 Cr in the ARR of the FY 2018-19.

5.16. Return on Equity (RoE)

Petitioner's submission

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

Commission's analysis:

The RoE has been calculated on normative basis on the average of the opening and closing 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. 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 as prescribed in the MYT Regulations, 2014. The following table provides the return on equity approved for the year.

Table 110: RoE approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	80.57	75.96	83.73
2	Additions on account of new capitalisation	35.73	17.62	10.65
4	Closing Equity	116.30	93.58	94.38
5	Average Equity	98.44	84.77	89.05
6	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	18.61	13.56	14.25

The Commission approves Return on Equity of Rs 14.25 Cr in the ARR of the FY 2018-19.

5.17. Interest on Security Deposits

Petitioner's submission

A provision of Rs 3.69 Cr has been made towards payment of interest on consumer security deposits, which is the same as in the FY 2017-18.

Commission's analysis:

The Interest on security deposits is calculated in accordance with the MYT Regulations, based on the average of the opening and the closing consumer security deposits during the year. As per the approach followed in the MYT Order, the Commission has not considered any additions in consumer security deposits during the year. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The table below provides the calculation of interest on consumer security deposits for the year.

Table 111: Interest on Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	-	-	55.01
2	Add: Deposits During the year	-	-	0.00
3	Less: Deposits refunded	-	-	0.00
4	Closing Security Deposit	-	-	55.01
5	Average Security Deposit	-	-	55.01
6	Rate of Interest (%)	-	-	6.25%
	Interest on Security Deposit	3.05	3.69	3.44

The Commission approves Interest on Security Deposit as Rs 3.44 Cr in the ARR for the FY 2018-19.

5.18. Interest on Working Capital

Petitioner's submission

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

The working capital requirement 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 the previous year

The ED DD has computed interest on working capital at 9.30% as approved by the Commission in the MYT Order.

Table 112: Interest on Working Capital submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	168.21
2	Less: Power Purchase Cost for one month	77.21
3	Inventory Based on Annual Requirement for Previous FY for 2 months	1.50
4	Total Working Capital Requirement	92.50
5	Less: Security Deposit excluding BG/FDR	52.68
6	Net Working Capital	39.82
7	Rate of Interest (%)	9.30%
	Interest on Working Capital	3.70

Commission's analysis:

For determination of working capital requirements during the year, the receivables are considered as Net ARR for 2 months, the revised power purchase cost of the FY 2018-19 as shown above and the consumer security deposit. The inventory for two months has been considered the same as in the FY 2017-18.

With regards to the interest rate, the prevailing SBI Base rate has been considered, in accordance with the MYT Regulations.

Accordingly, the interest on working capital has been calculated, as shown in the following table:

Table 113: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	174.57	168.21	163.20
2	Less: Power Purchase Cost for one month	89.19	77.21	73.97

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
3	Inventory Based on Annual Requirement for Previous FY for 2 months	0.69	1.50	1.36
4	Total Working Capital Requirement	86.07	92.50	90.59
5	Less: Security Deposit excluding BG/FDR	39.34	52.68	55.01
6	Net Working Capital	46.73	39.82	35.58
7	Rate of Interest (%)	9.30%	9.30%	8.65%
	Interest on Working Capital	4.35	3.70	3.08

The Commission approves the Interest on Working Capital of Rs 3.08 Cr in the ARR of the FY 2018-19.

5.19. Income Tax

Petitioner's submission

No submission has 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 114: Income Tax approved by Commission (In Rs Cr)

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

5.20. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

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

5.21. Non-Tariff Income

Petitioner's submission

For projecting the non-tariff income for the FY 2018-19, an increase of 5% p.a. over the estimated non-tariff income for the FY 2017-18 has been considered.

Commission's analysis:

For the ARR of the FY 2018-19 the Commission has considered Non-Tariff Income at the same amount as per actuals of the FY 2016-17. The same shall be Trued-up on actual basis. The NTI approved in the MYT Order, Petitioner's submission and now approved by the Commission is shown in the table below:

Table 115: Non -tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	NTI	22.02	22.02	20.08

The Commission approves Non-Tariff Income of Rs 20.08 Cr in the ARR of the FY 2017-18

5.22. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement of Rs 1022.32 Cr 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 requirement for the FY 2018-19 is approved as provided in the following table:

Table 116: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
1	Net Power Purchase Cost (inclusive of cost towards RPO and sale of surplus power)	1067.78	925.69	887.68
2	Operation & Maintenance Expenses	35.41	43.89	36.05
3	Depreciation	31.65	30.64	32.11
4	Interest and Finance charges	24.59	23.15	22.70
5	Interest on Working Capital	4.35	3.70	3.08
6	Interest on Security Deposit	3.05	3.69	3.44
7	Return on Equity	18.61	13.56	14.25
8	Provision for Bad Debt	0.00	0.00	0.00
9	Income Tax			0.00
10	Total Revenue Requirement	1,185.44	1,044.32	999.31
11	Less: Non-Tariff Income	22.02	22.02	20.08
12	Net Revenue Requirement	1,163.42	1,022.32	979.23

The Commission approves net ARR of Rs 979.23 Cr for the FY 2018-19.

5.23. Revenue at existing Retail Tariff

Petitioner's submission

The revenue from sale of power at existing tariff of Rs 848.27 Cr is based on the projected energy sales, connected load and number of consumers. The revenue for FY 2018-19 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2017-18.

Commission's analysis

The category wise/ sub category wise and slab wise revenue at retail tariff is determined as per the applicable tariff rates. The revenue from demand charges and the energy charges has been projected for each category/ sub category and slab. The category/ sub category/ slab wise revenue as computed by the Commission for the FY 2018-19 has been shown in the table below:

Table 117: Revenue from existing retail tariff (In Rs Cr)

S. No.	Category	Phase	Fixed Charges (Rs Cr)	Energy charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
1	LT-D/DOMESTIC		1.37	19.75	21.12	1.69
1	0-100 units	Single	0.46	4.49	4.96	1.21
2	101-200 units	Single	0.15	2.06	2.20	1.71
3	201-400 units	Single	0.22	3.86	4.09	2.06
4	401 and above	Single	0.19	3.91	4.11	2.41
5	0-100 units	Three	0.15	1.70	1.86	1.20
6	101-200 units	Three	0.05	0.78	0.83	1.70
7	201-400 units	Three	0.07	1.46	1.54	2.05
8	401 and above	Three	0.06	1.48	1.55	2.40
2	Low Income Group		0.0005	0.0000	0.0005	0.0308
1	Low Income Group		0.0005	0.0000	0.0005	0.0308
3	LT-C/Commercial		0.29	18.36	18.65	2.88
1	0-100 units	Single	0.09	2.77	2.86	2.48
2	101 Units and Above	Single	0.09	3.88	3.97	3.33
3	0-100 units	Three	0.05	4.88	4.93	2.43
4	101 Units and Above	Three	0.05	6.83	6.88	3.28
4	LT-Ag/AGRICULTURE		0.00	0.35	0.35	0.65
1	Upto 10 HP per unit		0.00	0.35	0.35	0.65
2	Beyond 10 HP per unit		0.00	0.00	0.00	NA
5	LT INDUSTRIAL		3.45	62.63	66.08	3.27
1	For the category		3.45	62.63	66.08	3.27
6	LT-PL/Public Lighting		0.00	3.86	3.86	3.75
1	For the category		0.00	3.86	3.86	3.75
7	LT-Public Water Works		0.03	1.19	1.22	3.38
1	For the category		0.03	1.19	1.22	3.38
8	HT		54.63	789.58	844.22	4.44
	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA		51.58	759.83	811.41	4.43
	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)		3.05	29.76	32.81	4.52

S. No.	Category	Phase	Fixed Charges (Rs Cr)	Energy charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
9	Temporary supply		0.00	1.73	1.73	5.08
1	For the category		0.00	1.73	1.73	5.08
	Grand total		59.76	897.46	957.23	4.13

The Commission has determined revenue from sale of power at existing tariff as Rs 957.23 Cr in the FY 2018-19.

5.24. Revenue from open access consumers

Petitioner's submission

The revenue from open access consumers is projected based on the estimates for the FY 2017-18 and considering the fact that a significant portion of HT/EHT consumers have given up open access in the month of November 2017.

Commission's analysis

The Commission has also accounted for the movement of open access consumers to the consumer base of the Petitioner and the open access rate determined for the FY 2018-19, as discussed in Chapter 7, and has accordingly approved the revenue from open access as follows.

Table 118: Revenue from open access approved by Commission (In Rs Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved
Revenue from Open Access	14.50	15.43	20.70

5.25. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the Petitioner has submitted a standalone revenue surplus of Rs 2.39 Cr for the FY 2018-19.

Commission's analysis

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

Table 119: Standalone Revenue Gap/ Surplus (In Rs Cr)

Particulars	Approved in MYT Order	Petitioners Submission	Now Approved
Net Revenue Requirement (A)	1,163.41	1,022.32	979.23
Revenue from Retail Sales at Existing Tariff (B)	1,061.92	1,009.28	957.23
Revenue from Open Access (C)		15.43	20.70
Total revenue from Retail Sales at Existing Tariff (including Open Access) (D=B+C)		1,024.71	977.92
Net Gap / (Surplus) (E=A-D)	(101.49)	(2.39)	1.30

The standalone gap at existing retail tariff is Rs 1.30 Cr for the FY 2018-19. The estimated gap is considered while determining the retail tariff for the FY 2018-19, 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 2018-19 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, 2014.

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 ED DD'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. Since, the area served by the ED DD has ~81% of industrial sales, the Commission has attempted to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society. The Commission has also sought to ensure regulatory consistency for all stake-holders and financial sustainability of the Petitioner.

6.2. Applicable Regulations

Regulation 36 of MYT Regulations, 2014 states the following:

“a. The Commission shall gradually move towards reduction of cross subsidy in accordance with Electricity Act, Tariff Policy and such other guidelines of the government as applicable.

b. The Distribution Licensee shall compute the consumer category-wise cost of supply as per the methodology elaborated below.

c. Allocation of Cost: The Cost to serve shall be allocated to the consumer categories in the following manner:

Step 1: Functional Demarcation of Cost – Total cost shall be divided on the basis of functions performed such as power purchase, distribution etc.

Step 2: Classification of Cost –Each of the functionalized costs shall be further classified, based on its intrinsic nature into Demand related cost, Energy related cost and Customer related cost. Demand related costs shall generally be of fixed nature, related to capacity creation and shall include interest on capital borrowing, depreciation etc. Energy cost shall be related to quantum of electricity consumption of consumer, such as fuel cost, interest on working capital, etc. Consumer related cost shall include operating expenses associated with meter reading, billing and accounting.

Step 3: Allocation of Cost

- (i) Allocation of Demand Costs: Demand costs of all three functions shall be allocated among consumer categories on the basis of average coincident peak demand of the tariff categories (average of past 12 months). To facilitate determination of average coincident peak demand for the various tariff categories, load research shall be made an integral part of the operations of the DISCOMs and systematic load research exercises shall be initiated.*
- (ii) Allocation of Energy Costs: Energy related costs of Distribution functions shall be allocated to consumer categories on the basis of ratio of electricity consumption of each consumer category to the total electricity consumption under the purview of the Distribution Licensee. Energy related costs of Power purchase shall be allocated to various tariff categories on the basis of block approach on merit order dispatch and incremental principle, where each tariff category shall be allocated the incremental (energy related) power purchase cost on the basis of their respective share in the*

incremental power purchase. For the purpose of operationalizing the block approach and incremental principle, the Commission shall identify and notify a suitable year as the “base year”.

(iii) Allocation of Customer Costs: Customer related costs shall be allocated to consumer categories on the basis of the ratio of number of consumers in each category to total number of consumers under the purview of the Distribution Licensee.

d. Summation of allocated Demand cost, Energy cost and Customer cost across functions shall be total Cost to serve for respective consumer categories. Cost to serve reduced by revenue from a consumer category shall give total subsidy for that category. Total subsidy for a consumer category reduced by Government subsidy, if any, shall be cross-subsidy for that consumer category.

e. The consumers below poverty line who consume power below a specified level, say 30 units per month, shall receive a special support through cross subsidy.

f. Cross-subsidy surcharge and additional surcharge in Open Access

(i) The amount received or to be received by the licensee on account of cross-subsidy surcharge and additional surcharge, as approved by the Commission from time to time in accordance with the Regulations specified by the Commission, shall be shown separately against the consumer category that is permitted open access as per the phasing plan.

(ii) Cross-subsidy surcharge and additional surcharge shall be shown as revenue from the tariff from the consumer categories who have been permitted open access and such amount shall be utilized to meet the cross-subsidy requirements of subsidized categories and fixed costs of the Distribution Licensee arising out of his obligation to supply. Provided that the licensee shall provide such details in its annual filings.

g. Tariff Design

(i) The Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.

(ii) After the costs have been allocated based on the method specified in clauses I and (d) above, tariffs for different consumer categories shall be designed with due regard to factors provided under section 62(3) of the Act.

(iii) The time of day tariff would be structured across three time slabs to denote normal, peak and off-peak periods. The time-periods would vary according to different seasons of the year i.e. summer, winter and the monsoon season. The peak tariff would be 10%-20% higher than the normal tariff and the off-peak tariff would be priced 5%-10% lower than the normal tariff.

(iv) Time of Day tariff may be introduced in a phased manner, wherein in phase 1 it would be for HT Consumers, in phase 2 – for LT consumers consuming more than 25 KW and in phase 3 for LT consumers consuming more than 10 KW.”

6.3. Consolidated Revenue Gap/ Surplus

Petitioner’s Submission

The Petitioner has proposed a consolidated revenue surplus of Rs 215.65 Cr till the FY 2018-19.

Table 120: Revenue Gap/ Surplus submitted by Petitioner (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Total ARR	791.61	843.57	1,022.32
Revenue @ Existing Tariff (including open access)	818.98	880.64	1,024.71
Total Revenue	818.98	880.64	1,024.71
Revenue Gap /(Surplus)	(27.36)	(37.06)	(2.39)
Refund of Cross subsidy surcharge	0.00	6.49	0.00
Revenue Gap /(Surplus)	(27.36)	(30.57)	(2.39)
Covered By			

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Previous Years' Gap /(Surplus) Carried Over	(184.19)	(211.55)	(213.26)
Less: FPPCA not billed to consumers	0.00	28.87	0.00
Total Gap /(Surplus) for three years	(211.55)	(213.26)	(215.65)

Commission's analysis

The Petitioner while projecting consolidated revenue surplus has not considered the holding cost. The Commission observes that the Petitioner has the surplus fund, which is deposited in the Banks. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. Keeping in mind all of the above, the Commission has considered the holding cost @ 8.00% on the surplus amount.

The Commission, in the APR Order has approved a revenue surplus of Rs 184.19 Cr till 31st March 2016. Accordingly, the Commission determines the following consolidated revenue gap/ surplus as shown below:

Table 121: Standalone Revenue Gap/ Surplus determined by Commission (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Net Revenue Requirement	784.52	878.24	979.23
Revenue from Retail Sales at Existing Tariff	820.59	862.78	957.23
Revenue from Open Access	0.00	28.90	20.70
Standalone Gap /(Surplus) for the year	(36.07)	(13.44)	1.30
Refund of Cross subsidy surcharge		6.49	
Net Gap /(Surplus)	(36.07)	(6.95)	1.30

Table 122: Consolidated Revenue Gap/ Surplus determined by Commission (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Gap /(Surplus)	(184.19)	(236.44)	(262.59)
Addition Gap /(Surplus) during the year	(36.07)	(6.95)	1.30
Closing Gap /(Surplus)	(220.26)	(243.39)	(261.28)
Average Gap /(Surplus)	(202.23)	(239.92)	(261.94)
Rate of Interest	8.00%	8.00%	8.00%
Carrying/Holding cost	(16.18)	(19.19)	(20.95)
Final Closing Gap /(Surplus)	(236.44)	(262.59)	(282.24)

The Commission determines a consolidated revenue surplus of Rs 282.24 Cr till the FY 2018-19 at existing tariff.

6.4. Treatment of the consolidated Gap/ Surplus and Tariff Design

As derived above, the resultant consolidated revenue surplus is Rs 282.24 Cr. In view of this surplus the Commission has decided to adjust the tariff of LT Industry and HT categories. The individual approach adopted and the applicability of the same has been discussed in the following sections.

6.4.1. Tariff Proposal

Petitioner's Submission

The Petitioner has submitted that since there is a cumulative surplus of Rs 215.65 Cr (Petitioner's submission) for the FY 2016-17, the FY 2017-18 and the FY 2018-19, the ED DD has not proposed any tariff hike for the FY 2018-19.

The proposed tariff for the existing and proposed tariff structure for various consumer categories for the FY 2018-19 is as under:

Table 123: Proposed Tariff Structure for the FY 2018-19

Tariff Structure	Existing (FY 2017-18)		Proposed (FY 2018-19)	
	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
LT-D/Domestic				
0 to 100 Units	1.10	Rs/Consumer/M onth Single Phase: Rs 20 Three Phase: Rs 45	1.10	Rs/Consumer/M onth Single Phase: Rs 20 Three Phase: Rs 45
101 to 200 Units	1.60		1.60	
201 to 400 Units	1.95		1.95	
Beyond 401 Units	2.30		2.30	
Low Income Group		Rs 10/connection /month		Rs 10/connection /month
LT-C/Commercial				
1st 100 Units	2.40	Rs/Consumer/M onth Single Phase: Rs 25 Three Phase: Rs 50	2.40	Rs/Consumer/M onth Single Phase: Rs 25 Three Phase: Rs 50
Beyond 100 Units	3.25		3.25	
LT- Ag/ Agriculture				
Upto 10 HP per unit	0.65		0.65	
Beyond 10 HP per unit	0.90		0.90	
LTP Motive Power(Including Public Water Work)				
For the category	3.10	Rs 25/HP/month	3.10	Rs 25/HP/month
LT-PL/Public Lighting				
Public Lighting	3.75		3.75	
LT-Public Water Works				
For the category	3.30	Rs 25/HP/month	3.30	Rs 25/HP/month
HT				
HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA				
For all units	4.15	Rs 105/kva/month	4.15	Rs 105/kva/month
HT Industrial((Ferro Metallurgical/ Steel Melting/ Steel Rerolling Power Intensive)				
For all units	4.10	Rs 275/kva/month	4.10	Rs 275/kva/month
Hoardings/Sign Boards				
For all units	6.20	Rs 100/kva/month	6.20	Rs 100/kva/month

Commission's analysis

As discussed above, the Commission has determined the retail tariff for the FY 2018-19 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the MYT Regulations, 2014.

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. **Revenue stability:** Utilities should ensure adequate fixed cost recovery from fixed/demand charges
5. **Affordability:** Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs
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 comprehensible to 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.

Keeping in view the above principles, the Commission has made the following amendments in the retail tariff applicable for FY 2018-19

1. Reduction in the energy charges paid by the LT Industrial category consumers. There is substantial potential for growth in this category which shall be beneficial for the economy of Daman and Diu. The Commission hopes to facilitate the same through the reduction in energy charges for the category.
2. In order to make the tariff for HT category more reflective of the fixed cost of supply for this category, the fixed cost has been increased while reducing the energy charges being paid by these consumers, overall reducing the tariff paid by the consumer by 3.54%. This shall help make the tariff more cost reflective while reducing the burden of energy charges for HT consumers and thereby promoting this crucial consumer category.

6.4.2. Tariff change and Schedule:

The cumulative revenue surplus at the end of the FY 2018-19 allows for the restructuring of certain tariff categories in order to make them more cost reflective.

The table below provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the existing and approved recovery vis-à-vis the (ACoS).

Table 124: Tariff increase approved by Commission

Category	Existing Tariff			Approved Tariff		Increase (%)
	ACoS (Rs/kwh)	ABR (Rs/kwh)	Recovery (%)	ABR (Rs/kwh)	Recovery (%)	
Domestic	4.22	1.69	40%	1.69	40%	0.00%
LIG/ Kutir Jyoti	4.22	0.03	0.73%	0.03	0.73%	0.00%
Commercial	4.22	2.88	68%	2.88	68%	0.00%
Agriculture	4.22	0.65	15%	0.65	15%	0.00%
LT Industry	4.22	3.27	77%	3.17	75%	-3.06%
HT/EHT Industry	4.22	4.44	105%	4.28	101%	-3.54%
Public Lighting	4.22	3.75	89%	3.75	89%	0.00%
Public Water Works	4.22	3.38	80%	3.38	80%	0.00%
Temp. Supply	4.22	5.08	120%	5.08	120%	0.00%
Total	4.22	4.26	97.75%	3.99	94.50%	-3.23%

The retail tariff approved for each category has been discussed as follows:

1. Domestic

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 125: Retail Tariff for Domestic category

S. No	Domestic	Phase	Existing		Approved	
			Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	0-100 units	Single	20.00 Rs/Con/Month	1.10 Rs/kWh	20.00 Rs/Con/Month	1.10 Rs/kWh
2	101-200 units	Single	20.00 Rs/Con/Month	1.60 Rs/kWh	20.00 Rs/Con/Month	1.60 Rs/kWh
3	201-400 units	Single	20.00 Rs/Con/Month	1.95 Rs/kWh	20.00 Rs/Con/Month	1.95 Rs/kWh
4	401 and above	Single	20.00 Rs/Con/Month	2.30 Rs/kWh	20.00 Rs/Con/Month	2.30 Rs/kWh
5	0-100 units	Three	45.00 Rs/Con/Month	1.10 Rs/kWh	45.00 Rs/Con/Month	1.10 Rs/kWh
6	101-200 units	Three	45.00 Rs/Con/Month	1.60 Rs/kWh	45.00 Rs/Con/Month	1.60 Rs/kWh
7	201-400 units	Three	45.00 Rs/Con/Month	1.95 Rs/kWh	45.00 Rs/Con/Month	1.95 Rs/kWh
8	401 and above	Three	45.00 Rs/Con/Month	2.30 Rs/kWh	45.00 Rs/Con/Month	2.30 Rs/kWh

2. Low Income Group (LIG)

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the following table:

Table 126: Retail Tariff for LIG category

S. No	LIG	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	For all units	10.00 Rs/Con/Month	-	10.00 Rs/Con/Month	-

3. Commercial

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 127: Retail Tariff for Commercial category

S. No	Commercial	Phase	Existing		Approved	
			Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	0-100 units	Single	25.00 Rs/Con/Month	2.40 Rs/kWh	25.00 Rs/Con/Month	2.40 Rs/kWh
2	101 Units and Above	Single	25.00 Rs/Con/Month	3.25 Rs/kWh	25.00 Rs/Con/Month	3.25 Rs/kWh
3	0-100 units	Three	50.00 Rs/Con/Month	2.40 Rs/kWh	50.00 Rs/Con/Month	2.40 Rs/kWh
4	101 Units and Above	Three	50.00 Rs/Con/Month	3.25 Rs/kWh	50.00 Rs/Con/Month	3.25 Rs/kWh

4. LT Industrial

The Commission is reducing the energy charges by Rs 0.10/kWh in order to promote this crucial category.

Table 128: Retail Tariff for LT Industry category

S. No	LT Industrial	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	For the category	25.00 Rs/HP/Month	3.10 Rs/kWh	25.00 Rs/HP/Month	3.00 Rs/kWh

5. HT/EHT Industry

The fixed cost has been increased while reducing the energy charges being paid by these consumers in order to make this category more cost reflective. An overall decrease of 3.54% in the tariff of this category has been approved by the Commission. The existing and approved tariff is shown in the table below:

Table 129: Retail Tariff for HT/EHT Industry category

S. No	HT/EHT	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA	105 Rs/kVA/month	4.15 Rs/kWh	240 Rs/kVA/month	3.55 Rs/kWh
2	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)	275 Rs/kVA/month	4.10 Rs/kWh	425 Rs/kVA/month	3.50 Rs/kWh

6. Agricultural

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 130: Retail Tariff for Agricultural category

S. No	Agriculture	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
1	For sanctioned load upto 10 HP		0.65 Rs/kWh		0.65 Rs/kWh
2	Beyond 10 HP and up to 99 HP sanctioned load		0.90 Rs/kWh		0.90 Rs/kWh

7. Public Lighting

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 131: Retail Tariff for Public Lighting category

S. No	Public Lighting	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
(i)	For all units		3.75 Rs/kWh		3.75 Rs/kWh

8. Public water works

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 132: Retail Tariff for Public Lighting category

S. No	Public Lighting	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
(i)	For all units	25.00 Rs/HP/Month	3.30 Rs/kWh	25.00 Rs/HP/Month	3.30 Rs/kWh

9. Hoarding/ Advertisements

The Commission has decided to keep the tariff of this category same as earlier with no change. The existing and approved tariff is shown in the table below:

Table 133: Retail Tariff for Hoarding/ Advertisements category

S. No	Hoarding/ Advertisements	Existing		Approved	
		Demand Charge	Energy Charge	Demand Charge	Energy Charge
(i)	For all units	100 Rs/kVA/month	6.20 Rs/kWh	100 Rs/kVA/month	6.20 Rs/kWh

6.4.3. Revenue from Approved Retail Tariff for FY 2018-19

Based on the retail tariff as approved above the Revenue from approved tariff is shown in the table below:

Table 134: Revenue from approved retail tariff (In Rs Cr)

S. No.	Category	Phase	Fixed Charges (Rs Cr)	Energy charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
1	LT-D/DOMESTIC		1.37	19.75	21.12	1.69
1	0-100 units	Single	0.46	4.49	4.96	1.21
2	101-200 units	Single	0.15	2.06	2.20	1.71
3	201-400 units	Single	0.22	3.86	4.09	2.06
4	401 and above	Single	0.19	3.91	4.11	2.41
5	0-100 units	Three	0.15	1.70	1.86	1.20
6	101-200 units	Three	0.05	0.78	0.83	1.70
7	201-400 units	Three	0.07	1.46	1.54	2.05
8	401 and above	Three	0.06	1.48	1.55	2.40
2	Low Income Group		0.0005	0.0000	0.0005	0.0308
1	Low Income Group		0.0005	0.0000	0.0005	0.0308
3	LT-C/Commercial		0.29	18.36	18.65	2.88
1	0-100 units	Single	0.09	2.77	2.86	2.48
2	101 Units and Above	Single	0.09	3.88	3.97	3.33
3	0-100 units	Three	0.05	4.88	4.93	2.43
4	101 Units and Above	Three	0.05	6.83	6.88	3.28
4	LT-Ag/AGRICULTURE		0.00	0.35	0.35	0.65
1	Upto 10 HP per unit		0.00	0.35	0.35	0.65
2	Beyond 10 HP per unit		0.00	0.00	0.00	NA
5	LT INDUSTRIAL		3.45	60.61	64.06	3.17
1	For the category		3.45	60.61	64.06	3.17
6	LT-PL/Public Lighting		0.00	3.86	3.86	3.75
1	For the category		0.00	3.86	3.86	3.75
7	LT-Public Water Works		0.03	1.19	1.22	3.38
1	For the category		0.03	1.19	1.22	3.38
8	HT		138.96	675.38	814.34	4.28
	HTC General Industrial / Motive Power 11KV or 66KV having CMD above 100KVA		133.62	649.97	783.59	4.28
	HT Industrial (Ferro Metallurgical / Steel Melting / Steel Rerolling Power Intensive)		5.34	25.40	30.74	4.24
9	Temporary supply		0.00	1.73	1.73	5.08
1	For the category		0.00	1.73	1.73	5.08

S. No.	Category	Phase	Fixed Charges (Rs Cr)	Energy charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
	Grand total		144.09	781.24	925.33	3.99

Therefore, the Commission approves revenue from approved Retail Tariff of Rs 925.33 Cr for the FY 2018-19 against a Net Revenue Requirement of Rs 979.23 Cr

6.4.4. Revised Revenue Gap/ Surplus

On considering the additional revenue from tariff adjustment the resultant Revenue Gap/Surplus has been shown in the table below:

Table 135: Revised Revenue Gap/ Surplus approved by Commission (In Rs Cr)

Particulars	Gap at existing tariff	Gap at proposed tariff
Opening Gap/(Surplus) (A)	(262.59)	(262.59)
Annual Revenue Requirement (B)	979.23	979.23
Revenue from Retail Sale (C)	957.23	925.33
Revenue from Open Access (D)	20.70	20.70
Total Revenue from Retail Sale and Open Access (E=C+D)	977.92	946.02
Addition Gap/(Surplus) (F=B-E)	1.30	33.20
Closing Gap/(Surplus) (G=A+F)	(261.28)	(229.39)
Average Gap/(Surplus) (H=(A+G)/2)	(261.94)	(245.99)
Rate of Interest (I)	8.00%	8.00%
Carrying/Holding cost (J=I*H)	(20.95)	(19.68)
Final Closing Gap/ (Surplus) (K=J+G)	(282.24)	(249.06)

The Commission approves a revised revenue surplus of Rs 249.06 Cr in the FY 2018-19.

The Commission directs the Petitioner to adjust the above stated cumulative surplus of Rs 249.06 Cr with the positive FPPCA (which includes arrear bills for past), if any under intimation to the Commission on quarterly basis duly indicating the surplus utilized and the balance surplus.

7. Chapter 7. Open Access Charges for the FY 2018-19

7.1. Determination of Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's submission:

The Petitioner has submitted the allocation of ARR into wheeling and retail supply of electricity as shown in the table below.

Table 136: Allocation matrix as submitted by Petitioner

Particulars	Allocation (%)		FY 2018-19	
	Wheeling	Supply	Wheeling	Supply
Fuel Cost	0%	100%	0	0
Power Purchase Cost	0%	100%	-	926.57
Employee	70%	30%	11.35	4.86
R&M	50%	50%	10.40	10.40
A&G	90%	10%	6.19	0.69
Depreciation	90%	10%	27.58	3.06
Interest Cost on Long-term Capital Loans	90%	10%	20.84	2.32
Interest on Working Capital Loans	22%	78%	0.81	2.89
Interest on Security Deposit	0%	100%	-	3.69
Return on Equity	90%	10%	12.21	1.36
Provision for Bad Debt	0%	100%	-	-
Annual Revenue Requirement			89.38	955.84
Less: Non-Tariff Income	0%	100%	-	22.02
Less: Revenue from Surplus Power Sale	0%	100%	-	0.88
Less Revenue from OA consumer	0%	100%	-	15.43
Net Revenue Requirement			89.38	917.52

Table 137: Determination of input energy for network usage percentage

Particulars	Unit	FY 2018-19
Sales at 11 kV and above (HT/EHT)	MU	1,965.96
Losses in % for HT/EHT network	%	1.81%
Input required for sales at 11 kV and above	MU	2002.20
Projected total Input	MU	2750.05
Projection of HT/EHT network usage	%	72.81%
Balance proportion of LT network usage	MU	27.19%

Accordingly, the Petitioner has submitted wheeling charges of Rs 0.33/kWh for the FY 2018-19 as shown in the following table:

Table 138: Wheeling Charge calculation as submitted by Petitioner

Particulars	Unit	Formula	FY 2018-19
Wheeling Cost	Rs Cr	A	89.38
Wheeling Cost at HT/EHT network	Rs Cr	$B=A*72.81\%$	65.07
Input required for sales at 11 kV and above	MU	C	2,002.20
Wheeling Charges for HT/EHT network usage	Rs per unit	$D=B/C*10$	0.33
Wheeling Cost for LT network	Rs Cr	E	24.31
Input required for sales at LT level	MU	F	747.85
Wheeling Charges for HT/EHT network usage	Rs per unit	$G=E/F*10$	0.33

Commission's analysis:

The Commission feels that there has to be proper bifurcation of all expenses between the functions of the wheeling business (wire business) and the retail supply business. The Commission has thought it prudent to consider the allocation matrix for bifurcation of wheeling and retail ARR as approved by the Commission in the Tariff Order for the FY 2017-18. The allocation between wheeling and retail supply business for the FY 2018-19 as per the ARR approved in this Order is provided in the table below:

Table 139: Allocation matrix approved by Commission

Sr. No.	Particulars	Allocation (%)		FY 2018-19		Total
		Wheeling	Supply	Wheeling	Supply	
1	Cost of power purchase for full year	0%	100%	0.00	887.68	887.68
3	Employee costs	70%	30%	9.07	3.89	12.96
4	Administration and General Expenses	90%	10%	5.21	0.58	5.79
5	Repair and Maintenance Expenses	50%	50%	8.65	8.65	17.30
6	Depreciation	90%	10%	28.90	3.21	32.11
7	Interest and Finance charges	90%	10%	20.43	2.27	22.70
8	Interest on Working Capital	22%	78%	0.68	2.40	3.08
9	Interest on consumer security deposit	0%	100%	0.00	3.44	3.44
10	Return on NFA /Equity	90%	10%	12.82	1.42	14.25
11	Provision of Bad & Doubtful Debt	0%	100%	0.00	0.00	0.00
12	Income Tax	90%	10%	0.00	0.00	0.00
13	Total Revenue Requirement			85.76	913.54	999.31
14	Less: Non-Tariff Income	0%	100%	0.00	20.08	20.08
15	Net Revenue Requirement			85.76	893.46	979.23

In order to determine the wheeling charges prudently, the Commission has allocated the wheeling costs on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by Open Access consumers and primarily comprise of O&M Expenses and other costs as provided in the table above. The criteria for allocation of wheeling costs is elaborated as follows:

- O&M Expenses are allocated on the basis of number of consumers under each category.
- All expenses other than the O&M expenses are allocated on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation. However the Petitioner has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.

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 140: Parameters assumed for voltage wise allocation of wheeling charges

Category	Consumers	Sales (MU)	Asset Allocation (%)	Voltage wise Losses (%)
LT	61,830	414.56	30.00%	44.35%
HT & EHT	801	2,047.14	70.00%	1.87%
Total	62,631	2,461.70	100%	8.30%

HT/EHT wheeling charges have been allocated to HT/EHT and LT consumers based on the energy input at HT/EHT level for sale at HT/EHT and LT consumers. LT wheeling charges were allocated to LT consumers only. Accordingly, the Commission approves the Wheeling Charges as follows:

Table 141: Wheeling Charges approved by Commission

Category	O&M	Others	Total	Wheeling Charges (Rs/kWh)
LT	13.68	21.57	35.25	1.12
HT & EHT	0.18	50.33	50.51	0.19
	13.86	71.90	85.76	0.35

The Commission approves wheeling charge of Rs 1.12/ kWh at LT voltage level, and Rs 0.19/kWh at HT/EHT voltage level

7.2. Determination of 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 per the following:

Table 142: Additional Surcharge approved by Commission

Particulars	FY 2018-19
Total Power Purchase cost approved	887.68
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	277.04
Energy Sales (MU)	2,318.05
Additional Surcharge (Rs/kWh)	1.20

Previously, a consumer availing open access was required to pay fixed charges on the contracted load even when the load was drawn partially from the Distribution Licensee. In addition, he was also required to pay wheeling charges, additional surcharge and cross-subsidy surcharge. As per the Open Access Regulations, 2017, a consumer now is only required to pay fixed charges on Admissible Drawl rather than on total contracted load. The Commission, in this Order, has determined voltage wise wheeling charges rather than a single per unit wheeling charge as was approved in the previous Tariff Order. The Commission has also revised the methodology for Additional surcharge, as discussed, and Cross-Subsidy surcharge as discussed in the subsequent sections.

The Commission approves an Additional Surcharge of Rs 1.20/kwh for the FY 2018-19.

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 change the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner’s submission:

The Petitioner has proposed the Cross Subsidy Surcharge for the FY 2018-19 as per the following formula:

$$S = T - [C / (1 - L / 100) + D + R]$$

Where,

S is the surcharge

T is the tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation;

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

R is the per unit cost of carrying regulatory assets.

The proposed Cross Subsidy Surcharge is as below.

Table 143: Proposed Cross Subsidy Surcharge for the FY 2018-19

Cross Subsidy Surcharge	UoM	HT & EHT Industry
T	Rs per kwh	4.52
C	Rs per kwh	3.45
D	Rs per kwh	0.33
L	%	1.81%
R		0.00
Surcharge	Rs per kwh	0.75

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to average cost of supply. The Average Cost of Supply is used to determine the cross subsidy surcharge as follows:

Table 144: Cross Subsidy Surcharge

Category	ACoS (Rs/kWh)	ABR (Rs/kWh)	Cross- Subsidy (Rs/kWh)
LT	4.22	2.68	-1.55
HT & EHT	4.22	4.28	0.05

Therefore, the Commission approves Rs 0.05/kWh for HT/EHT voltage level in the FY 2018-19.

8. Chapter 8: Tariff Schedule

8.1. Tariff Schedule

Table 145: Tariff Schedule

S. No.	Category	Fixed Charges	Energy Charges
1.	DOMESTIC		
i	0-100 units	Rs/Consumer/Month Single Phase: Rs 20 Three Phase: Rs 45	1.10 Rs/kWh
ii	101-200 units		1.60 Rs/kWh
iii	201-400 units		1.95 Rs/kWh
iv	401 and above		2.30 Rs/kWh
v	Low Income Group (Up to 2x40 W bulbs only)	Power supply to low income group connections will be charged at Rs10 per service connection per month. For any unauthorized increase in the load beyond 2*40 watts, penal charges at the rate of Rs20 per month per point will be levied and the installation will be liable for disconnection.	
2.	COMMERCIAL		
i	1-100 units	Rs/Consumer/Month Single Phase: Rs 25 Three Phase: Rs 50	2.40 Rs/kWh
ii	101 units and above		3.25 Rs/kWh
3.	LT INDUSTRIAL		
i	LTP Motive Power	Rs 25.00/- per HP or part thereof	3.00 Rs/kWh
Power Factor Charges			
Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.90 as per the Commission's Regulation 11/2010 shall be charged extra 2.5 % of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. The ED DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.			
4.	LT Public Water Works		
	LT Public Water Works	Rs 25.00/- per HP or part thereof	3.30 Rs/kWh
Power Factor Charges			
Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.90 as per the Commission's Regulation 11/2010 shall be charged extra 2.5 % of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. The ED DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.			
5.	HT/EHT		
i	High Tension Consumer (For all units)	240 Rs/kVA/month	3.55 Rs/kWh

S. No.	Category	Fixed Charges	Energy Charges
ii	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units)	425 Rs/kVA/month	3.50 Rs/kWh
<p>1. Penalty Charges: Twice the applicable charges.</p> <p>a) Penalty charges will be levied on those units which are drawn beyond the contract demand. These units will be worked out on pro-rata basis co-relating the total consumption of the month with billing demand.</p> <p>b) If Industries are overdrawing power by more than 20% of the Contract Demand, their electricity connection will be disconnected immediately.</p> <p>2. Power Factor Charges</p> <p>(a) The monthly average power factor of the supply shall be maintained by the consumer not less than 0.90 (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 0.01 in power factor up to 0.7 (lagging).</p> <p>(b) In case the monthly average power factor of the consumer is more than 95% (0.95 lagging), a power factor incentive @ 1.00% on demand and energy charges shall be given for each increase of 0.01 in power factor above 0.95 (lagging).</p> <p>(c) If the average power factor falls below 0.70 (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.</p> <p>(d) The power factor shall be rounded off to two decimal places. For example, 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95</p> <p>3. Billing Demand</p> <p>Billing demand will be the highest among the following:</p> <p>(a) 100 kVA</p> <p>(b) 85% of the Contract demand</p> <p>(c) Actual Demand Established</p>			
6.	AGRICULTURE		
i	For sanctioned load up to 10 HP	-	0.65 Rs/kWh
ii	Beyond 10 HP and up to 99 HP sanctioned load	-	0.90 Rs/kWh
<p>Power Factor Charges</p> <p>Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.90 as per the Commission's Regulation 11/2010 shall be charged extra 2.5% of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. ED-DD reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.</p>			
7.	PUBLIC LIGHTING		
i	For all units	-	3.75 Rs/kWh
8.	HOARDINGS/SIGNBOARDS		
i	Hoarding/Signboards	Rs 100 per kVA per Month or part thereof	6.20 Rs/kWh
9.	Temporary Supply		

S. No.	Category	Fixed Charges	Energy Charges
			<p>Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.</p> <p>For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.</p> <p>The Temporary Tariff are applicable for temporary period of supply up to 1 (one) month, which can be extended for another period of supply up to a maximum period of 2 years.</p>

8.2. Applicability

Table 146: Applicability of Tariff Schedule

Category	Applicability	Point of Supply/Notes
1. Domestic	This schedule shall apply to private houses, hostels, hospitals run on Non-commercial lines, Charitable, Educational and Religious Institutions for Light, Fans, Radios, Domestic Heating and other household appliances including water pumps up to 2 HP.	
2. Commercial	This schedule shall apply to Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations.	This includes all categories which are not covered by other tariff categories including Domestic Category, Low Income Group, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.
3. LT Industrial	This schedule shall apply to all Low Tension Industrial Motive Power Connections including water works/pumps with sanctioned load up to 99 HP.	
4. LT Public Water Works		
5. HT consumers	This schedule shall apply to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.	
6. HHT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units))		
7. Agriculture	This schedule shall apply to Agriculture or poultry loads up to 99 HP sanctioned load will be considered in this category.	
8. Public Lighting		
9. Hoardings / Signboards	This schedule shall apply to electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the tariff applicable for "Advertisements and Hoardings"	

Category	Applicability	Point of Supply/Notes
	category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.	
10. Temporary Supply	The Temporary Tariff is applicable for a temporary period of supply up to 1 (one) month, which can be extended for another period of supply up to a maximum period of 2 years.	

8.3. General Conditions of HT and LT Supply

1. The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
2. Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
3. Supply to consumers having contracted load between 100 KVA to 4000 KVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 KV and for more than 4000 KVA up to 25000 KVA at 66 KV. For the consumer who requires load more than 25000 KVA, the supply voltage shall be at 220 KV level.
4. If energy supplied for a specific purpose under a particular tariff is used for a different purpose not contemplated in the contract for supply and/or for which a higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of Section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.
5. If connected load of a domestic category is found to be at variance with the sanctioned/contracted load as a result of replacement of appliances such as lamps, fans, fuses, switches, low voltage domestic appliances, fittings, it shall not fall under Section 126 and Section 135 of the EA 2003.
6. If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 15 days' notice as per the provisions of the Act and the Supply Code Regulations.
7. Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out. Similarly, slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.
8. The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulation. If such over-drawal is more than 20% of the contract demand then the connections shall be disconnected immediately.

Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000

kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

9. Unless specifically stated to the contrary, the figures of energy charges relate to paisa per unit (kWh) charge for the energy consumed during the month.
10. Delayed payment surcharge shall be applicable to all categories of consumers. Delayed payment surcharge of 2% per month or part thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paisa shall be ignored and amount of 50 paisa or more shall be rounded off to the next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only up to the month of permanent disconnection.
11. **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.
12. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment, a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.
13. **TOD Tariff:** For the purpose of TOD Tariff, the peak/off-peak/normal hours and charges for the corresponding period shall be as under:

Time of use	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

14. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula notified in Chapter 9 of this Order. Such charges shall be recovered/refunded in accordance with the terms and conditions specified in the FPPCA formula.
15. The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in this Tariff Order for the FY 2018-19.

8.4. Schedule of Miscellaneous Charges

Table 147: Schedule of Miscellaneous Charges

Description	Approved Charges
Monthly Meter Rental Charges(as per provisions of Regulation 7.3 (1) of JERC (Electricity Supply Code) Regulations 2010)	
Single Phase LT meter	Rs10 per month or part thereof
Three Phase LT meter	Rs25 per month or part thereof
LT Meter with MD indicator	Rs200 per month or part thereof
Tri-vector Meter	Rs500 per month or part thereof
Note: The type of meters to be installed in consumer premises will be decided by the department. Generally the consumers having connected load above 50 HP will be provided with L.T.M.D meters	

Description	Approved Charges
Reconnection Charges(as per provisions of Regulation 9.3 (c) of JERC (Electricity Supply Code) Regulations 2010	
LT Services	
• Single Phase LT	Rs 50/-
• Three Phase LT	Rs 100/-
HT Services	Rs 1000/-
Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges	
Testing Fee for Various Metering Equipments(as per provisions of Regulation 7.4 of JERC (Electricity Supply Code) Regulations 2010	
Single Phase	Rs 100/-
Three Phase	Rs 300/-
Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	Rs 500/-
Three Phase Tri-vector Meter (0.5 Class) 11 kV HT Consumer	Rs 500/-
Three Phase Tri-vector Meter (0.2 Class) 66 KV EHT Consumers	Rs 1000/-
Combined CT/PT Unit for 11 KV Consumer	Rs 500/-
66 KV CT/ PT Unit	Rs 500/-
Three Phase CT Block	Rs 300/-
CT Coil	Rs 100/-
Service Connection Charges(as per provisions of Regulation 3.3 (3) of JERC (Electricity Supply Code) Regulations 2010	
Single Phase LT	Rs250/-
Three Phase LT	Rs1,000/-
HT (First 500 KVA)	Rs10,000/-
HT (Beyond 500 KVA)	Rs1,000/- per 100 KVA or part thereof
Extra Length - Single Phase	Rs25/- per meter
Extra Length - Three Phase	Rs50/- per meter
Extra length chargeable will be beyond the permissible 30 meters free length from existing network for new connections for all categories except agriculture. Free length in respect of new agriculture consumer is 300 meters.	
Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by the ED DD.	
Fees (Non-refundable) for submission of Test Report of wiring Completion	
Single Phase Lighting / Domestic	Rs 10/- Per Test Report
Three Phase Lighting / Domestic	Rs 25/- Per Test Report
Single Phase Lighting / Non Domestic	Rs 50/- Per Test Report
Three Phase Lighting / Non Domestic	Rs 100/- Per Test Report
Three Phase LT Industries	Rs 250/- Per Test Report
Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	Rs 50/- Per Test Report

Description	Approved Charges
HT Industries upto 500 KVA	Rs 1,000/- Per Test Report
HT Industries upto 2500 KVA	Rs 5,000/- Per Test Report
HT Industries above 2500 KVA	Rs 10,000/- Per Test Report

9. Chapter 9. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, 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 the region (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 2016-17 will be undertaken by the Commission once the audited accounts of the FY 2016-17 are available. If the audited accounts for the FY 2016-17 are prepared timely, the impact of True-up of various cost and revenue items is allowed in the tariff of the FY 2018-19, 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.

9.1. 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.”

9.2. Existing formula

The Commission first introduced the provision for adjustment of fuel surcharge in the Joint Electricity Regulatory Commission for the State of Goa and UT’s (Terms and conditions for determination of tariff) Regulations, 2009 notified on 08 February 2010. The relevant Clause 7 of the Regulations is provided below:

“7. Fuel Surcharge Formula

(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.

(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto.”

The Commission subsequently notified the Joint Electricity Regulatory Commission for the State of Goa and UT’s (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 on 27 June, 2012 prescribing the methodology for determination and the recovery mechanism of Fuel & Power Purchase Cost Adjustment (FPPCA) formula. Subsequently on 18 January, 2013, the Commission issued a Corrigendum correcting the calculations of the FPPCA for certain consumer categories.

On 30 June, 2014 the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Multi Year Distribution Tariff) Regulations, 2014 wherein the Commission proposed to adopt the same methodology as prescribed in the Joint Electricity Regulatory Commission for the State of Goa and UT’s (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 in the MYT Period. Clause 19 of the Regulations is shown as follows

“19. Treatment of Incremental Power procurement cost

The Distribution Licensee shall recover the incremental cost on account of fuel & power purchase adjustment in accordance with FPPCA formula provided in JERC Terms & Condition for determination of Tariff (first amendment) Regulations, 2009.”

On 19 October, 2016 JERC notified the Joint Electricity Regulatory Commission for the State of Goa and UT’s (Multi Year Distribution Tariff) (Second Amendment) Regulations, 2016 according to which the Fuel and Power Purchase cost adjustment charge shall be levied by distribution licensees on consumer electricity bills on account of the incremental power purchase cost incurred by the licensees and the Transmission charge recovery was also added to the formula. The relevant amendment to the Regulation has been shown as follows:

1. Recovery Periodicity (Cycle)

The licensee shall compute fuel and power procurement cost variations on quarterly basis and adjustment shall be made in consumers bills starting after a month following the end of the quarter on units billed in the month under consideration. For example, Fuel & Power Purchase Cost Adjustment (FPPCA) for the quarter April-May-June shall be made 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 respective months. The formula shall be applicable prospectively for the purpose of consideration of Fuel and Power Purchase Cost Adjustment. FPPCA shall be done for all consumer categories except Below Poverty Line (BPL) and Agriculture consumers.

2. Formula

The formula for determination of per unit Fuel & Power Purchase Cost Adjustment ("FPPCA") is as under:

Per Unit FPPCA (Paisa/ unit) = Per Unit Actual cost of Power Purchase- Per Unit Approved Cost of Power Purchase in Tariff Order

$$\text{Per Unit FPPCA} \left(\frac{\text{Paisa}}{\text{Unit}} \right) = \left[\frac{\text{Pactual} - \text{Sbulk}}{[\{(X - c) - Xs\} * b] - Z} \right] * 1000 - \text{Rapproved}$$

Where

$$c = \{(X - A) * \frac{T_{\text{approved}}}{100}\}$$

$$b = \left(1 - \frac{Y_{\text{approved}}}{100}\right)$$

Where:

- *Pactual* : Actual cost of power purchased during the quarter (excluding purchase from unapproved bilateral and other unapproved sources) includes transmission charges of PGCIL but excludes SLDC charges, RLDC charges and reactive energy charges (Rs Cr).
- *Sbulk* : Actual Revenue recognized from Sale of power to persons other than consumers of the licensee during the quarter (Rs Cr).
- *Rapproved* : Approved per unit cost of power purchase for use in the FPPCA formula as given in the Tariff Order of the Licensee (Paisa per unit).
- *X* : Actual Energy units (kWh) procured during the quarter in consideration excluding unapproved sources (million units).
- *A* : Actual Energy Units (kWh) procured during the quarter in consideration (million units) from power exchanges, power generation within the periphery of the licensee & used by licensee and units overdrawn from the grid.
- *T_{approved}* : Approved inter-state transmission losses for the year in consideration as provided in the Tariff Order (%).
- *Y_{approved}* : Approved T&D losses for the year in consideration as provided in the Tariff Order (%).
- *Xs* : Actual Sale of power to persons other than the utility consumers (million units) during the quarter.
- *Z* : Actual energy units billed for BPL and Agriculture category consumers (million units).

3. Other Terms and conditions

- a) For the purpose of 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 shall be considered. However, the bills or credits of earlier period

received by the distribution licensee earlier than the period under consideration will not be considered for the purpose of FPPCA.

- b) The variation in fuel and power purchase cost adjustment with respect to the approved per unit power purchase cost, as per the formula specified above shall be recoverable/payable based on units billed for each category of consumers except BPL & Agriculture.
- c) Per unit rate of FPPCA to be billed to consumers is worked out in Paisa after rounding off to the next lower integer in case of fraction less than 0.5 and to the next higher integer in case of fraction equal to or greater than 0.5.
- d) 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

$$\frac{\text{Approved Retail Tariff for a category or sub category}}{\text{Weighted Average Retail Tariff (WART)}}$$

The value of K for different consumer category or sub category for the year in consideration is considered as per the respective Tariff Order.

- Step 2: Determination of proportionate FPPCA (Paisa/unit) consumer category/sub-category wise

FPPCA to be billed for the consumers category or sub-category (Paisa/unit) =

$$\text{Average FPPCA} \left(\frac{\text{Paisa}}{\text{uni}} \right) * K \text{ for that consumer category or sub - category}$$

4. Duties of the licensees and Designated officer

- a) Every distribution licensee shall appoint a designated officer not below the rank of Executive Engineer with Name, Designation, Telephone no. & Fax and Place of Posting, who shall compute, certify and post the PPCA calculations, PPCA chargeable & related data summary on the licensees website and clarify to consumers query, if any.
- b) The Designated Officer shall send certified copy of FPPCA calculations immediately to Joint Electricity Regulatory Commission.”

9.3. Need to review the existing mechanism

JERC has been amongst the first few Electricity Regulatory Commission’s in India to introduce the concept of adjustment of variation in the power purchase cost in the end consumer tariffs through Fuel and Power Purchase Cost Adjustment (FPPCA) mechanism in 2012.

The Indian Power Sector is very dynamic and has changed a lot since 2012. Further, there have been changes in the methodology for determination and recovery of generation and transmission tariff, transmission pricing mechanism, fuel mix with emergence of renewable energy etc. Other State Electricity Regulatory Commissions (SERCs) have also introduced the concept of the FPPCA wherein the Fuel and Power Purchase cost variations are passed through to the consumer either monthly, bi-monthly or quarterly. In between, the Commission has also received representation from various consumer groups and the distribution licensees seeking clarity and simplicity in the FPPCA mechanism adopted by the Commission. In light of the above and the experiences gained during these years, the Commission has decided to examine the FPPCA mechanism followed in other States vis-à-vis the FPPCA mechanism adopted by the Commission and identify the best practices.

A detailed examination of the methodology followed across other States for calculation of variations in the Fuel and Power Purchase Cost Adjustment revealed the following observations:

- Every State has a different formula for determination of the FPPCA charges. However the fundamental objective of all of them remains the same i.e. to pass on the incremental cost of power procurement to the consumers
- FPPCA charges are composed of different elements in different States with power purchase cost from approved and long term sources being the only element common across all States
- FPPCA charges are mostly determined on the Discom Periphery across all the States
- Power purchase cost considered as base for calculation of FPPCA charges is determined in the TO
- For States, procuring power from own generation plants, the Station Heat Rate and other components such as Auxiliary consumption, losses etc. are considered as base as approved in the Tariff Order for calculating the variations in the power purchase costs

The key takeaways with respect to certain parameters of the formula are provided in the table below:

Table 148: Key Takeaways

S. No.	Parameter	Takeaways
1.	<i>Time Period</i>	<ul style="list-style-type: none"> • Time period for levy of the FPPCA is quarterly in most of the States except in Chhattisgarh and Bihar where recovery is on bi-monthly and monthly basis respectively.
2.	<i>Approval Process</i>	<ul style="list-style-type: none"> • Some of the SERCs allow the Discoms to recover FPPCA charges upto a certain limit via automatic route (without approval of the Commission) thereby reducing the administrative burden. However, in most of the States like Maharashtra, Kerala, Madhya Pradesh etc. prior approval from the Commission is required.
3.	<i>Elements included while determining FPPCA charges</i>	<ul style="list-style-type: none"> • In all the States, power purchase cost from long term approved sources is considered while calculating the FPPCA charges • Central Transmission charges are considered in the States of Gujarat, Maharashtra, Delhi and Uttar Pradesh; • Adjustments (Under-recovery/ Over-recovery) due to previous FPPCA period is considered in the States like Bihar, Karnataka , Kerala and Maharashtra; • Power Purchase cost from short term sale/ purchase, bilateral exchange, IEX etc. is considered in the States of Gujarat, Maharashtra and Uttar Pradesh; • In States like Karnataka and Madhya Pradesh, only variable cost of power purchase is considered while calculating the FPPCA charges; • In Uttar Pradesh (UP) any kind of arrears/refunds etc. in the period are also considered
4.	<i>Elements excluded while determining FPPCA charges</i>	<ul style="list-style-type: none"> • Short term power procurement cost is excluded while calculating FPPCA in most of the States except Gujarat, Maharashtra and Uttar Pradesh • In UP, power purchase cost from unapproved plants is excluded • DSM charges are excluded in most of the States • In Bihar, the Regulations categorically define exclusion of any kind of penalties due to delayed payment, while calculating FPPCA charges • In Chhattisgarh power purchase cost from renewable sources is excluded. • In the NCT of Delhi, past arrear/ credits are not considered unlike UP where they are considered.

S. No.	Parameter	Takeaways
5.	<i>Categories excluded</i>	<ul style="list-style-type: none"> • Almost all categories are covered under the ambit of the FPPCA charges except in the State of Kerala where the domestic consumers upto a certain consumption limit are not levied FPPCA charges. • In Gujarat State, the FPPCA charges for the Agriculture category are subsidized by the State Government.
6.	<i>T&D losses considered for determination</i>	<ul style="list-style-type: none"> • In most of the States, the T&D losses approved in the Tariff Order are considered for calculation of gross units; however, in Gujarat and Bihar, the approved or actual losses whichever are lower are considered • In Maharashtra, the actual T&D losses are considered.
7.	<i>Notification via Regulations/ Tariff Order</i>	<ul style="list-style-type: none"> • In most of the States like Delhi, Maharashtra, Madhya Pradesh etc., the FPPCA methodology is defined in the Tariff regulations except in Karnataka and Kerala where individual regulations are notified.
8.	<i>Ceiling within a month (%) for recovery</i>	<ul style="list-style-type: none"> • In States like Maharashtra, Gujarat, Bihar and Karnataka, the upper ceiling of the FPPCA charges is provided which is applicable to all categories.
9.	<i>Ceiling within a month for a category</i>	<ul style="list-style-type: none"> • Ceiling of the FPPCA charges in a quarter for categories such as Domestic and Agriculture in Chhattisgarh State.
10.	<i>Recovery Mechanism</i>	<ul style="list-style-type: none"> • FPPCA charges are recovered from the consumers and are part of their electricity bills • In some States like Gujarat and Madhya Pradesh, a uniform FPPCA charge is recovered depending on the billed units while in States like Maharashtra and UP, the category wise FPPCA charges based on the category ABR is determined

The existing FPPCA mechanism notified by the Commission is in the form of an amendment in the existing Regulation - *Joint Electricity Regulatory Commission for the State of Goa and UT's (Multi Year Distribution Tariff) (Second Amendment) Regulations, 2016*. These Regulations are sub-legislations and making any changes in the Regulation involves legal process which is cumbersome and time consuming. The Commission, therefore, proposes to repeal the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi Year Distribution Tariff) (Second Amendment) Regulations, 2016 and provide the formula for the FPPCA mechanism in the Tariff Order issued by the Commission.

In the section below, the Commission has discussed the proposed FPPCA formula for inclusion in the Tariff Order for the FY 2018-19.

9.4. New formula

Based on the review of the existing formula and examination of the formulas and the best practices adopted by the various SERC's, the Commission proposes the following mechanism 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 2018 (i.e. Power Purchased by the Licensee from 1st April 2018 onwards). For power purchased by the Licensee for the period from 1st January 2018 till 31st March 2018, the FPPCA will be calculated based on the earlier formula.

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
 - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
 - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
 - Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded
2. Transmission cost adjustments which shall contain the following elements:
 - Variation on account of Central Transmission Charges including arrears/ revisions.
 - Variation on account of State Transmission charges including arrears/revisions
3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
 - Any adjustments /reversals due to over recovery of charges
 - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
 - Any other adjustments on account of factors not envisaged at the time of tariff fixation
4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$FPPCA \left(\frac{Rs.}{Unit} \right) = \left(\frac{(Pact + Tact + Oact - ASact) * 10}{\{ [PPOact * (1 - TLapp) + PPIact - PSOact] * (1 - DLapp) \} - Zact} \right) - Rapp$$

Where:

- *Pact* (in Rs. Cr.): Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
 - Cost of procurement from sources outside the State,
 - Cost of procurement from sources within the State,
 - Cost of DSM excluding any penal charges,
 - Cost of procurement from the Bilateral/ exchange etc.
 - Less: Revenue from sale of surplus power/ DSM
- *Tact* (in Rs. Cr.): Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
 - Inter-State transmission cost (PGCIL charges),
 - Intra-State transmission cost
- *Oact* (in Rs. Cr.): Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- *ASact* (in Rs. Cr.): Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- *PPOact* (in MU): Quantum of power purchased in the quarter from sources outside State/ Union Territory

- *TLapp (in %)*: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIact (in MU)*: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- *PSOact (in MU)*: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- *DLapp (in %)*: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- *Zact (in MU)*: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp \left(\frac{Rs}{unit} \right) = \left(\frac{(Papp + Tapp) * 10}{\{[PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp} \right)$$

- *Papp (in Rs. Cr.)*: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
 - Cost of procurement from sources outside the State,
 - Cost of procurement from sources within the State,
 - Cost of procurement from the Bilateral/ exchange etc.
 - Less: Revenue from sale of surplus power
- *Tapp (in Rs. Cr.)*: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
 - Inter-State transmission charges (PGCIL charges),
 - Intra-State transmission charges
- *PPOapp (in MU)*: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- *TLapp (in %)*: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- *PPIapp (in MU)*: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- *DLapp (in %)*: Approved T&D losses for the year in consideration as provided in the Tariff Order
- *PSOapp (in MU)*: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- *Zapp (in MU)*: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.
2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.
3. The FPPCA charges for a quarter shall be limited to a 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

$$\frac{\text{Approved Retail Tariff for a category or sub category} \left(\frac{Rs.}{unit} \right)}{\text{Weighted Average Retail Tariff (WART)} \left(\frac{Rs.}{unit} \right)}$$

The value of K for different consumer category or sub category for the year in consideration is considered as per the respective Tariff Order.

- Step 2: Determination of proportionate FPPCA (Rs/unit) consumer category/sub-category wise

$$FPPCA \left(\frac{Rs.}{Unit} \right) = Average FPPCA * K \text{ for that consumer category or sub - category}$$

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 Rs 3.84 per unit for the FY 2018-19.

Table 1: R_{approved} determined by Commission for FY 2018-19

Particulars	Amount
P _{app} (Rs Cr)	887.68
T _{app} (Rs Cr)	64.87
PPO _{app} (MU)	822.81
TL _{app} (%)	3.69%
PPI _{app} (MU)	455.09
PSO _{app}	0.00
DL _{app} (%)	8.30%
Z _{app} (MU)	5.56
R_{app} (Rs/kWh)	3.84

10. Chapter 10: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- **The detailed action plan for compliance of all the directives within 1 month of the issuance of this Order.**
- **The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 10 days of the end of each quarter of the calendar year.**

10.1. 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.

10.1.1. Information for determination of Voltage-wise Wheeling Charges

Originally Issued in Tariff Order dated 6th April 2016
Commission's Latest Directive in Tariff Order Dated 29th May 2017 <i>The Commission notes that the Petitioner has not submitted the details of voltage wise assets and expenses along with the allocation methodology as yet. The Petitioner is now directed to submit the details of voltage wise assets and expenses along with the allocation methodology by 31st July 2017.</i>
Petitioner's Response in the Present Tariff Petition <i>The ED DD would like to submit that the details of voltage wise assets and expenses along with the allocation methodology shall be submitted to the Hon'ble Commission shortly.</i>
Commission's Response <i>The Commission has noted with concern that the Petitioner is yet to submit the voltage wise details of assets and voltage wise details of losses. The absence of this data hinders the fair distribution of cost of supply and consequently the tariff determination for various categories. The Commission now directs the Petitioner to ensure compliance of this directive within 2 months of issuance of this Order and submit the desired details for the FY 2016-17 and FY 2017-18, failing which the Commission will be constrained to take appropriate action against the Petitioner.</i>

10.1.2. Promotion of Solar Generation

Originally Issued in Tariff Order dated 06th April 2016
Commission's Latest Directive in Tariff Order Dated 29th May 2017 <i>The Commission appreciates the efforts undertaken by the Petitioner. The Commission directs the Petitioner to take up the matter with Government to finalize the Policy at the earliest and submit the monthly status report on the actions taken.</i>
Petitioner's Response in the Present Tariff Petition

Originally Issued in Tariff Order dated 06th April 2016
Commission's Latest Directive in Tariff Order Dated 29th May 2017 <i>The Commission appreciates the efforts undertaken by the Petitioner. The Commission directs the Petitioner to take up the matter with Government to finalize the Policy at the earliest and submit the monthly status report on the actions taken.</i>
<i>The ED DD has submitted that the Solar Policy of the UT of Daman and Diu shall be finalized by March, 2018 and shall be submitted to the Hon'ble Commission. Further, the report on Promotion of Solar generation is has been submitted along with this Petition as Annexure VI.</i>
Commission's Response <i>The Petitioner is directed to share the Solar Policy of Daman and Diu with the Commission and also share the revised report on Promotion of Solar generation with regard to the new Solar Policy. In order to increase public awareness, the Petitioner may publish the Solar Policy on its website.</i>

10.2. New Directives issued in this Order

10.2.1. Power purchase planning

The Petitioner is directed to create a five year power purchase plan taking into account the sales envisaged by the Petitioner and the various power sources available. Till now the Petitioner has relied on UI to fulfil its power purchase needs in the occurrence of deficit. For instance, 100.14 MU were scheduled through UI. On the other hand no power was purchased through the open markets. This indicates a lack of adequate planning for power purchase as well as exposes the utility to the risk of dynamic of UI charges.

10.2.2. Assets created from consumer contribution

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 Commission in future Tariff Orders.

10.2.3. Creation of SLDC

Currently the functions of scheduling of power is being performed by the ED DD itself. The Commission directs the Petitioner to form a separate SLDC which is ring fenced from the ED DD. The Petitioner is directed to employ employees dedicated to the SLDC operations, which are independent from the ED DD.

10.2.4. kVAh based tariff

During the Technical Validation Session the Commission enquired about the Petitioner's readiness to implement kVAh tariff for its high voltage consumers. The Petitioner responded that it does not currently possess the requisite infrastructure to implement the same. The Commission also notes that in spite of having similar conditions as the ED DD, DNHPDCL has already implemented kVAh tariff for its HT/EHT consumers.

The Commission thus directs the Petitioner to ensure that proper infrastructure and capabilities are in place to roll-out kVAh based tariff for its HT/EHT from the next tariff cycle.

10.2.5. Operational safety and policy for accidents and compensation

During the Public Hearing in Diu, stakeholders submitted their grievance with regard to an accidental electrocution caused during construction of overhead power lines, which led to the death of a construction

worker. It was brought to notice that no compensation has thus far been granted by the ED DD to the aggrieved family, to which the ED DD submitted that it is in the process of granting the compensation.

The Commission directs the Petitioner to earnestly ensure that the concerns of the aggrieved family are adequately addressed. 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, ED DD 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. The Commission is directed to share the status of the above mentioned interventions within two months of this Order.

10.2.6. Tariff Schedule

The Commission has noted that the fixed charges notified by the Commission in Tariff Schedule of the Tariff Order for the FY 2016-17 for the Domestic and LT Commercial consumers categories were not charged by the Petitioner during FY 2016-17. The Tariff Schedule notified by the Commission must not be deviated from and the Petitioner is obligated to follow it. The Commission has taken note of the deviation and is of the view that this is a serious violation of the Tariff Schedule prescribed and directs the Petitioner to follow the entire Tariff Schedule.

Annexures

Annexure 1: Public Notices published by the Commission



संयुक्त विद्युत नियामक आयोग
(गोवा राज्य और संघ प्रदेशों के लिए)
दूसरी मंजिल, एचएसआईआईडीसी कार्यालय परिसर, वाणिज्य निकुंज परिसर,
उद्योग विहार, फेज-5, गुडगांव (हरियाणा)
फोन : 0124-2342851, 2342852 फेक्स : 0124-2432853
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सार्वजनिक सूचना

संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा दमण व दीव प्रशासन विद्युत अधिनियम 2003 की धारा 61, 62 व 64 अंतर्गत वित्तीय वर्ष 2016-17 के लिए टू-अप याचिका, वित्तीय वर्ष 2017-18 की समीक्षा व कुल राजस्व आवश्यकता (एआर) और वित्तीय वर्ष 2018-19 के टैरिफ प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत दखिल की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

उपरोक्त याचिका पर ईच्छुक व्यक्ति छह प्रतियों में आपत्ति/सुझाव व्यक्तिगत तौर पर अथवा ईमेल द्वारा secretaryjerc@gmail.com अथवा पंजीकृत डाक द्वारा सचिव, जेईआरसी (गोवा व संघ प्रदेशों के लिए) को संबोधित कर 11 जनवरी 2018 अथवा उससे पहले कार्यपालक इंजीनियर, बिजली विभाग, विद्युत भवन, सोमनाथ कचीगाम रोड, कचीगाम, दमण-396210 को प्रति के साथ दायर कर सकते हैं।

आयोग द्वारा उपरोक्त मामले में सार्वजनिक सुनवाई दमण में दिनांक 11 जनवरी 2018 को सुबह 10.00 बजे आयोजित होगी।

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव



જોઈન્ટ ઈલેક્ટ્રિસિટી રેગુલેટરી કમિશન
(ગોવા સ્ટેટ અને કેન્દ્ર શાસિત પ્રદેશ માટે)

બીજો માળ, એચએસઆઈઆઈડીસી ઓફિસ કોમ્પ્લેક્સ, વાણિજ્ય નીકુંજ કોમ્પ્લેક્સ, ઉદ્યોગ વિહાર, ફેઝ-૫, ગુરગાંવ (હરિયાણા) ઝોન નં. ૦૧૨૪-૨૩૪૨૮૫૧, ૨૩૪૨૮૫૨.
ફોન- ૦૧૨૪-૨૩૪૨૮૫૩, ઈ-મેલ: secy-jerc@nic.in વેબસાઈટ: www.jercuts.gov.in

જાહેર નોટીસ

દમણ અને દીવ ઈલેક્ટ્રિસિટી ડિપાર્ટમેન્ટ દ્વારા ઈલેક્ટ્રિસિટી એક્ટ, ૨૦૦૩ ની કલમ ૬૧, ૬૨ અને ૬૪ હેઠળ ના.વ. ૨૦૧૬-૧૭ માટે ટુ-અપ પીટીશન દર્શાવીને પીટીશન ફાઈલ કરેલ છે, ના.વ. ૨૦૧૭-૧૮ માટે રીવ્યુ અને એગ્રીગેટ રેવન્યુ રીક્વાયરમેન્ટ (એઆરઆર) અને ના.વ. ૨૦૧૮-૧૯ માટે ટેરિફ પ્રપોઝલ પીટીશન ફાઈલ કરેલ છે. જે પીટીશન નં. ૨૫૧/૨૦૧૭ તરીકે દાખલ કરવામાં આવેલ છે અને કમિશન વેબસાઈટ www.jercuts.gov.in ઉપર ઉપલબ્ધ છે.

રસ ધરાવતી વ્યક્તિઓ ઉપરોક્ત પીટીશન સામેના વાંધાઓ/સૂચનો છ નકલમાં રૂબરૂ અથવા ઈમેલ: secretaryjerc@gmail.com ઉપર અથવા રજિસ્ટર્ડ પોસ્ટથી: ધ સેક્રેટરી, જર્ક (ગોવા અને કે.શા.પ્ર. માટે) ને ૧૧-૧-૨૦૧૮ નાં રોજ કે તે અગાઉ પહોંચતા કરવાના રહેશે, તેમજ તેની એક નકલ એક્ઝિક્યુટીવ એન્જિનિયર, ઈલેક્ટ્રિસિટી ડિપાર્ટમેન્ટ, વિદ્યુત ભવન, સોમનાથ-કારીગામ રોડ, દમણ (ઈમેલ:- elec-dmn-dd@nic.in)ને મોકલી આપવાની રહેશે. કમિશન દ્વારા ઉપરોક્ત પીટીશનની જાહેર સુનાવણી ૧૧ જાન્યુઆરી, ૨૦૧૮ નાં રોજ સવારે ૧૦.૦૦ વાગે દમણ ખાતે રાખવામાં આવશે.

સહી/-
(કીર્તિ તિવારી)
સેક્રેટરી

संयुक्त विद्युत नियामक आयोग
(गोवा राज्य और संघ प्रदेशों के लिए)
दूसरी मंजिल, एनएमआईआईसी कार्यालय परिसर, वाणिज्य निकुंज परिसर,
उद्योग विहार, फेज-5, गुडगांव (हरियाणा)
फोन : 0124-2342851, 2342852 फेक्स : 0124-2432853
ई-मेल : secv-jerc@nic.in वेबसाइट : www.jercuts.gov.in

सार्वजनिक सूचना

संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा दमण व दीव प्रशासन विद्युत अधिनियम 2003 की धारा 61, 62 व 64 अंतर्गत वित्तीय वर्ष 2016-17 के लिए टु-अप याचिका, वित्तीय वर्ष 2017-18 की समीक्षा व कुल राजस्व आवश्यकता (एआरआर) और वित्तीय वर्ष 2018-19 के टैरिफ प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत दाखिल की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

उपरोक्त याचिका पर इच्छुक व्यक्ति छह प्रतियों में आपत्ति/सुझाव व्यक्तिगत तौर पर अथवा ईमेल द्वारा secretaryjerc@gmail.com अथवा पंजीकृत डाक द्वारा सचिव, जेईआरसी (गोवा व संघ प्रदेशों के लिए) को संबोधित कर 11 जनवरी 2018 अथवा उससे पहले कार्यपालक इंजीनियर, बिजली विभाग, विद्युत भवन, सोमनाथ-कचीगाम रोड, कचीगाम, दमण-396210 को प्रति के साथ दाखिल कर सकते हैं।

आयोग द्वारा उपरोक्त मामले में सार्वजनिक सुनवाई दमण में दिनांक 11 जनवरी 2018 को सुबह 10.00 बजे आयोजित होगी।

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव



संयुक्त विद्युत नियामक आयोग

(गांधी राज्य तथा संघ प्रदेशों के लिए)

दमण मंजिल, एचएमआईआईडीसी ऑफिस परिसर, वाणिज्य निकुंज परिसर,
उद्योग विहार, फेज 5, गुडगांव (हरियाणा)

फोन : 0124-2342851, 2342852 फैक्स: 0124-2342853
ईमेल: secy-jerc@nic.in वेबसाइट: www.jercuts.gov.in

सार्वजनिक सूचना

23.12.2017 को प्रकाशित सार्वजनिक सूचना के आगे दमण और दीव संघ राज्य क्षेत्र के सभी हितधारकों को एतद्वारा सूचना दी जाती है कि संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा वित्तीय वर्ष 2016-17 के लिए टू-अप अनुमोदन, वित्तीय वर्ष 2017-18 की समीक्षा व एआरआर और बिजली नियम 2003 की धारा 61, 62 और 64 वित्तीय वर्ष 2018-19 के टैरिफ संशोधन प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत स्वीकृत की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

आयोग द्वारा उपरोक्त मामले में जन सुनवाई का आयोजन किया गया है। जन सुनवाई की तारीख, समय और स्थान निम्नानुसार है:-

तारीख/दिन/वर्ष	समय	स्थान
12 जनवरी 2018 (गुरुवार)	सुबह 10.00 बजे से	स्वामी विवेकानंद ऑडिटोरियम सरकारी कॉलेज नजदीक नानी दमण - 396 210

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव



જોઈન્ટ ઈલેક્ટ્રિસિટી રેગ્યુલેટરી કમિશન

(ગોવા રાજ્ય અને કેન્દ્ર શાસિત પ્રદેશો માટે)

બીજો માળ, એચએસઆઈઆઈડીસી ઓફિસ કોમ્પ્લેક્સ, વાણિજ્ય નીકુંજ કોમ્પ્લેક્સ, ઉદ્યોગ વિહાર, ફેઝ-IV, ગુરગાંવ (હરિયાણા) ફોન નં. ૦૧૨૪-૨૩૪૨૮૫૧, ૨૩૪૨૮૫૨. ફેક્સ-૦૧૨૪-૨૩૪૨૮૫૩, ઈ-મેલ:- secy-jerc@nic.in વેબસાઈટ:- www.jercuts.gov.in

જાહેર નોટિસ

૨૩-૧૨-૨૦૧૭ નાં રોજ પ્રકાશિત જાહેર નોટિસ પ્રતિ વિશેષમાં, દમણ અને દિવ ના કેન્દ્રશાસિત પ્રદેશોના લાભાર્થીઓને આ સાથે જણાવવાનું કે, દમણ અને દિવના વિદ્યુત વિભાગે, નાણાંકીય વર્ષ ૨૦૧૬-૧૭ માટે ટુ અપ પીટિશન માટે, જેમાં નાણાંકીય વર્ષ ૨૦૧૬-૧૭ નાં રિવ્યુ માટે અને વર્ષ ૨૦૧૮-૧૯ માટે, ઈલેક્ટ્રિસિટી એક્ટ, ૨૦૦૩ ની કલમ ૬૧, ૬૨ અને ૬૪ હેઠળ એપ્રીગેટ રેવન્યુ રીકવાયરમેન્ટ (એઆરઆર) માટે દાવો દાખલ કરેલ છે. તેને દાવા ક્રમાંક ૨૫૧/૨૦૧૭ તરીકે દાખલ કરવામાં આવેલ છે અને કમિશનની વેબસાઈટ www.jercuts.gov.in પર ઉપલબ્ધ છે.

આયોગ, ઉપરોક્ત દાવા પર સુનાવણી માટે જાહેર સુનાવણી નીચે આપેલ સમયપત્રક મુજબ યોજશે.

તારીખ/ દિવસ/ વર્ષ	સમય	સ્થળ
૧૧ મી જાન્યુઆરી (ગુરુવાર), ૨૦૧૮	સવારે ૧૦.૦૦ વાગે અને આગળ ઉપર	સ્વામી વિવેકાનંદ ઓડીટોરિઅમ, સરકારી કોલેજ પાસે, નાની દમણ- ૩૯૬૨૧૦

અવાચ્ય/-
(કીર્તિ તિવારી)
સચિવ



संयुक्त विद्युत विनियामक आयोग
(गोवा और संघ प्रदेश के हेतु)

2 तल, एचएसआईआईडीसी कार्यालय परिसर, वनिजा निकुंज परिसर, उद्योग विहार,
फैज 5, गुडगांव, (हरियाणा) दूरभाष : 0124-2342851, 2342852
फैक्स- 0124-2342853, ईमेल : secy-jerc@nic.in Website :
www.jercuts.gov.in.

सार्वजनिक सूचना

पूर्व में 23.12.2017 को प्रकाशित सार्वजनिक सूचना पर , दमण एवं दीव के संघीय क्षेत्र के हितधारकों को एतत द्वारा सूचित किया जाता है कि दमण एवं दीव के विद्युत विभाग ने 2016-17, वित्त वर्ष 2017-18 की समीक्षा और वित्त वर्ष 2018-19 के तहत कुल आवश्यक राजस्व (एआरआर) और टैरिफ प्रस्ताव, विद्युत अधिनियम, 2003 की धारा 61, 62 और 64 के तहत सही याचिका दायर की। इससे इसी याचिका संख्या 251/2007 के रूप में कराया गया है एवं यह आयोग की वेबसाईट पर Website : www.jercuts.gov.in. उपलब्ध है।

आयोग नीचे दी गई अनुसूचि के अनुसार उपरोक्त याचिका पर लोग सुनवाई करेगा

दिनांक, दिवस, वार	समय	स्थान
11 जनवरी (गुरुवार) 2018	प्रातः 10 से प्रारंभ	स्वामी विवेकानंद सभागार, सरकारी कॉलेज के पास, नानी दमण 396 210

एसडी/-
(कीर्ति तिवारी) सचिव

37 और सूरत की 4 पंचायतों में भी चुनाव होगा।



संयुक्त विद्युत नियामक आयोग

(गोवा राज्य तथा संघ प्रदेशों के लिए)

दृगगे मंजिल, गचण्णुआइंआईडीसी ऑफिस परिसर, वार्णज्य निकुंज परिसर,
उद्योग विहार, फेज 5, गुडगांव (हरियाणा)

फोन : 0124-2342851, 2342852 फेक्स: 0124-2342853

ईमेल: secy-jerc@nic.in वेबसाइट: www.jercuts.gov.in

शुद्धिपत्र

कल दिनांक 08.01.2018 को असली आजादी दैनिक के पृष्ठ संख्या 8 पर विज्ञापन प्रकाशित किया गया था, जिसमें त्रुटीवश 11.01.2018 की जगह 12.01.2018 छप गया था। इस संदर्भ में संज्ञान लेते हुए यह शुद्धिपत्र छापा गया है। कृपया 12.01.2018 की जगह 11.01.2018 पढ़ा जाए।

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव

(09.01.2018)

द्वितीय पूण्यतिथिअे श्राद्धांशलि



संयुक्त विद्युत नियामक आयोग
(गोवा राज्य तथा संघ प्रदेशों के लिए)
दूसरी मंजिल, एचएसआईआईडीसी ओफिस परिसर, वाणिज्य निकुंज परिसर,
उद्योग विहार, फेज 5, गुडगांव (हरियाणा)
फोन : 0124-2342851, 23422852 फेक्स: 0124-2342853
ईमेल: secy-jerc@nic.in वेबसाइट: www.jercuts.gov.in

सार्वजनिक सूचना

हितधारकों को एतद्वारा सूचना दी जाती है कि संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा वित्तीय वर्ष 2016-17 के लिए ट्यु-अप अनुमोदन, वित्तीय वर्ष 2017-18 की समीक्षा व बिजली नियम 2003 की धारा 61, 62 और 64 अंतर्गत वित्तीय वर्ष 2018-19 के वार्षिक राजस्व आवश्यकता और टैरिफ संशोधन प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत स्वीकृत की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

उपरोक्त याचिका पर ईच्छुक व्यक्ति छह प्रतियों में आपत्ति/सुझाव व्यक्तिगत तौर पर अथवा ईमेल द्वारा www.secretaryjerc@gmail.com अथवा पंजीकृत डाक द्वारा सचिव, जेईआरसी(गोवा व संघ प्रदेशों के लिए) को संबोधित कर 07.02.2018 अथवा उससे पहले कार्यपालक इंजीनियर, बिजली विभाग, विद्युत भवन, सोमनाथ-कचीगाम रोड, कचीगाम, दमण-396210 को प्रति के साथ दायर कर सकते हैं। (ई-मेल elec-dmn-dd@nic.in)

आयोग द्वारा सार्वजनिक सुनवाई दीव में दिनांक 8 फरवरी 2018 को सुबह 10.00 बजे आयोजित होगी।

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव



જોઈન્ટ ઈલેક્ટ્રિસિટી રેગ્યુલેટરી કમિશન

(ગોવા સ્ટેટ અને કેન્દ્ર શાસિત પ્રદેશો માટે)

બીજો માળ, એચએસઆઈઆઈડીસી કોમ્પ્લેક્સ, વાણિજ્ય નિકુંજ કોમ્પ્લેક્સ, ઉદ્યોગ વિહાર,
કેઝ-૫, ગુરગાંવ (હરિયાણા) ફોન નં. ૦૧૨૪-૨૩૪૨૮૫૧, ૨૩૪૨૮૫૨.
ફેક્સ- ૦૧૨૪-૨૩૪૨૮૫૩, ઈ-મેલ: secy-jerc@nic.in વેબસાઈટ: www.jercuts.gov.in


જાહેર નોટિસ

તમામ રસ ધરાવતા વ્યક્તિઓને આ સાથે સૂચના આપવામાં આવે છે કે - દમણ અને દીવ ઈલેક્ટ્રિસિટી ડિપાર્ટમેન્ટ દ્વારા ના.વ. ૨૦૧૬-૧૭ માટે ટુ-અપ મંજૂરી, ના.વ. ૨૦૧૭-૧૮ રીવ્યુ અને એન્યુઅલ રેવન્યુ રીકવાયરમેન્ટ (એઆરઆર) અને ના.વ. ૨૦૧૮-૧૯ માટે ટેરિફ રિવિઝન દરખાસ્ત કે.શા. પ્ર. દમણ અને દીવ માટે ઈલેક્ટ્રિસિટી એક્ટ, ૨૦૦૩ ની કલમ ૬૧, ૬૨ અને ૬૪ હેઠળ પીટીશન ફાઈલ કરવામાં આવેલ છે. જેને પીટીશન નં. ૨૫૧/૨૦૧૭ થી દાખલ કરવામાં આવેલ છે અને કમિશન વેબસાઈટ www.jercuts.gov.in ઉપર ઉપલબ્ધ છે. રસ ધરાવતી વ્યક્તિઓ ઉપરોક્ત પીટીશન સંદર્ભે છ નકલમાં પોતાના વાંધા/સૂચનો રૂબરૂમાં અથવા ઈ-મેલ www.secretaryjerc@gmail.com દ્વારા અથવા રજિસ્ટર્ડ ટપાલથી: ધ સેક્રેટરી, જર્ક (ગોવા અને કે.શા.પ્ર. માટે) ને ૭-૨-૨૦૧૮ નાં રોજ કે તે અગાઉ મળી જાય તે રીતે જમા કરાવવાનાં રહેશે. જેની એક નકલ એકિઝક્યુટીવ એન્જિનિયર, ઈલેક્ટ્રિસિટી ડિપાર્ટમેન્ટ, વિદ્યુતભવન, સોમનાથ-કાચીગામ રોડ, દમણ-૩૯૬૨૧૦ ને મોકલવાની રહેશે. (ઈ-મેલ: elec-dmn-dd@nic.in)

કમિશન દ્વારા ૮ ફેબ્રુઆરી, ૨૦૧૮ નાં રોજ સવારે ૧૦.૦૦ વાગે દીવ ખાતે જાહેર સુનાવણી હાથ ધરાશે.

સહી/-
(કીર્તિ તિવારી)
સેક્રેટરી

न्यायिक निकाय के द्वारा प्रदान की गई सेवा का उद्देश्य है।



Joint Electricity Regulatory Commission
(for The State of Goa and Union Territories)
2nd Floor, HSIIDC Office Complex, Vanijya Nikunj Complex, Udyog Vihar, Phase-V, Gurgaon (Haryana) Ph.: 0124-2342851, 2342852
Fax: 0124-2342853, E-mail: secy-jerc@nic.in Website: www.jercuts.gov.in

PUBLIC NOTICE

Notice is hereby given to all the interested persons that the Electricity Department of Daman and Diu has filed a Petition for approval of True-up for the FY 2016-17, Review of the FY 2017-18 and Annual Revenue Requirement (ARR) and Tariff Revision Proposal for the FY 2018-19 for the UT of Daman and Diu under Sections 61, 62 and 64 of the Electricity Act, 2003. The same has been admitted as Petition No. 251/2017 and is available on the Commission's website www.jercuts.gov.in

Interested persons may file objections/suggestions in six copies on the above Petition in person or through E-mail www.secretaryjerc@gmail.com or through registered post addressed to The Secretary, JERC (for Goa & UTs) to reach on or before 07.02.2018 with a copy to The Executive Engineer, Electricity Department, Vidyut Bhavan, Somnath-Kachigam Road, Daman- 396210. (E-mail elec-dmn-dd@nic.in)

The Commission shall hold a Public Hearing on 8th February, 2018 at 10.00 AM at Diu.

Sd/-
(Keerti Tewari)
Secretary



संयुक्त विद्युत नियामक आयोग
(गोवा राज्य तथा संघ प्रदेशों के लिए)

**दूसरी मंजिल, एचएसआईआईडीसी ओफिस परिसर, वाणिज्य निकुंज परिसर,
उद्योग विहार, फेज 5, गुडगांव (हरियाणा)**

फोन : 0124-2342851, 23422852 फेक्स: 0124-2342853
ईमेल: secy-jerc@nic.in वेबसाइट: www.jercuts.gov.in


सार्वजनिक सूचना

19.01.2018 को प्रकाशित सार्वजनिक सूचना के आगे दमण और दीव संघ राज्य क्षेत्र के सभी हितधारकों को एतद्वारा सूचना दी जाती है कि संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा वित्तीय वर्ष 2016-17 के लिए ट्रू-अप अनुमोदन, वित्तीय वर्ष 2017-18 की समीक्षा व बिजली नियम 2003 की धारा 61, 62 और 64 अंतर्गत वित्तीय वर्ष 2018-19 के वार्षिक राजस्व आवश्यकता और टैरिफ संशोधन प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत स्वीकृत की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

आयोग द्वारा उपरोक्त मामले में जन सुनवाई का आयोजन किया गया है। जन सुनवाई की तारीख, समय और स्थान निम्नानुसार है:-

तारीख/दिन/समय	समय	स्थान
8 फरवरी 2018(गुरुवार)	सुबह 10.00 बजे से	द ऑडिटोरियम मलालपा, दीव संघ प्रदेश दमण-दीव

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव



જોઇન્ટ ઇલેક્ટ્રિસિટી રેગ્યુલેટરી કમિશન

(ગોવા રાજ્ય અને કેન્દ્ર શાસિત પ્રદેશો માટે)


બીજી માળ, એચએસઆઈઆઈડીસી ઓફિસ કોમ્પ્લેક્સ, વાણિજ્ય નીકુંજ, ઉદ્યોગવિહાર,
કેઝ-૫, ગુરગાંવ (હરિયાણા) કોન નં. ૦૧૨૪-૨૩૪૨૮૫૧, ૨૩૪૨૮૫૨
ફોન: ૦૧૨૪-૨૩૪૨૮૫૨, ઈ-મેઇલ: secretaryjerc@gmail.com Website: www.jercuts.gov.in

૧૯-૦૧-૨૦૧૮ના રોજ પ્રસિધ્ધ થયેલ નોટિસના અનુસંધાનમાં કેન્દ્રશાસિત પ્રદેશ દમણ અને દીવના લાભાર્થીઓને સુચિત કરવામાં આવે છે કે દમણ અને દીવ ઇલેક્ટ્રીસિટી ડિપાર્ટમેન્ટ દ્વારા ઇલેક્ટ્રિસિટી એક્ટ ૨૦૦૩ની કલમ ૬૧, ૬૨ અને ૬૪ હેઠળ ના.વ. ૨૦૧૬-૧૭ માટે ટુ-અપ મંજુરી, ના.વ. ૨૦૧૭-૧૮ના એન્યુઅલ પરફોર્મન્સ રીવ્યુ (APR) અને ના.વ. ૨૦૧૮-૧૯ માટે એન્યુઅલ રેવન્યુ રીક્વાયરમેન્ટ (ARR) અને ટેરિફ રીવીઝન પ્રપોઝલ માટે એક પીટીશન કરવામાં આવેલ છે. જેને પીટીશન નં. ૨૫૧/૨૦૧૮ તરીકે દાખલ કરવામાં આવેલ છે. અને જે કમિશન વેબસાઇટ : www.jercuts.gov.in ઉપર ઉપલબ્ધ છે.

કમિશન દ્વારા ઉપરોક્ત પીટીશનની જાહેર સુનાવણી નીચેના શીડ્યુલ મુજબ રાખવામાં આવેલ છે.

તારીખ-દિવસ-વર્ષ	સમય	સ્થળ
૮ ફેબ્રુઆરી (ગુરુવાર), ૨૦૧૮	સવારે ૧૦ વાગ્યાથી	(ઓડિટોરીયમ, મલાલા, દીવ કે.શા.પ્ર. દમણ અને દીવ)

સંહી
(કીર્તિ તિવારી)
સેક્રેટરી



संयुक्त विद्युत नियामक आयोग
(गोवा राज्य तथा संघ प्रदेशों के लिए)

दूसरी मंजिल, एचएसआईआईडीसी ऑफिस परिसर, घाणिज्य निकुंज परिसर,
उद्योग विहार, फेज 5, गुडगांव (हरियाणा)

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सार्वजनिक सूचना

19.01.2018 को प्रकाशित सार्वजनिक सूचना के आगे दमण और दीव संघ राज्य क्षेत्र के सभी हितधारकों को एतद्वारा सूचना दी जाती है कि संघ प्रदेश दमण व दीव के विद्युत विभाग द्वारा वित्तीय वर्ष 2016-17 के लिए टु-अप अनुमोदन, वित्तीय वर्ष 2017-18 की समीक्षा व बिजली नियम 2003 की धारा 61, 62 और 64 अंतर्गत वित्तीय वर्ष 2018-19 के वार्षिक राजस्व आवश्यकता और टैरिफ संशोधन प्रस्ताव के लिए याचिका दायर की गई है। इसे याचिका संख्या 251/2017 अंतर्गत स्वीकृत की गई है जो आयोग की वेबसाइट www.jercuts.gov.in पर उपलब्ध है।

आयोग द्वारा उपरोक्त मामले में जन सुनवाई का आयोजन किया गया है। जन सुनवाई की तारीख, समय और स्थान निम्नानुसार है:-

तारीख/दिन/समय	समय	स्थान
8 फरवरी 2018(गुरुवार)	सुबह 10.00 बजे से	द ऑडिटोरियम मलालपा, दीव संघ प्रदेश दमण-दीव

-हस्ताक्षर-
(किर्ती तिवारी)
सचिव

Annexure 2: Public Notices published by the Petitioner

આહવાના સેવાધામ દ્વારા યોજાયેલી રમત સ્પર્ધાના વિજેતાઓને કરાચું ઇનામ વિતરણ



આહવા, તા. ૦૮ ડાંગ જિલ્લાના મુખ્ય મથક આહવા ખાતે કાર્યરત સેવાધામ : ડૉ.આંબેડકર વનવાસી કલ્યાણ ટ્રસ્ટ દ્વારા તાજેતરમાં આયોજિત કરાયેલી વિવિધ રમતગમત સ્પર્ધાના વિજેતા ખેલાડીઓ, તથા ટીમને ઇનામ વિતરણ કરવાનો એક કાર્યક્રમ યોજાઈ ગયો. જેમાં વોલીબોલ સ્પર્ધાના પ્રથમ વિજેતા સાંઈ ટીમ-આહવાને

રૂ.૫૫૦૧/-, બીજું ઇનામ કૃષ્ણ ટીમ-કાલીબેલને રૂ.૪૫૦૧/-, ત્રીજું ઇનામ આર.એસ.ટીમ-આહવાને રૂ.૩૫૦૧/- સહિત ઝાવડા તથા વઘઈની ટીમ પ્રત્યેકને રૂ.૨૦૦૧/- - આસ્વાસન ઇનામ એનાયત કરાયા હતા. ઉલ્લેખનિય છે કે, વોલીબેલ સ્પર્ધામાં જિલ્લાના ૨૦ ગામોની ૨૬ ટીમોએ ભાગ લીધો હતો. આ ઉપરાંત અહીં આયોજિત કબડ્ડી સ્પર્ધામાં પ્રથમ ઇનામ

આહવાના સેવાધામ દ્વારા યોજાયેલી રમત સ્પર્ધાના વિજેતાઓને કરાચું ઇનામ વિતરણ

ગારમડીની ટીમને રૂ.૫૫૦૧/-, દ્વિતીય ઇનામ વાહુટિયાની ટીમને રૂ.૪૫૦૧/-, અને તૃતીય ઇનામ પાંભલાની ટીમને રૂ.૩૫૦૧/- સહિત બરડા અને સરવર ગામની ટીમને પ્રત્યેકને રૂ.૨૦૦૧/- આસ્વાસન ઇનામ એનાયત કરાયા હતા. કબડ્ડી સ્પર્ધામાં ૧૯ ગામોની ૨૦ ટીમોએ ભાગ લીધો હતો. એલ એન્ડ ટી, સુરતના સહયોગથી યોજાયેલા આ ઇનામ વિતરણ સમારંભમાં સેવાધામના પ્રકલ્પ પ્રમુખ શ્રી દત્તાભાઈ સાળુંકે, ડૉ.આંબેડકર વનવાસી કલ્યાણ ટ્રસ્ટના સભ્ય શ્રી પીયુષભાઈ મહેતા, એલ એન્ડ ટીના શ્રીમતી અલ્પાબેન પટેલ સહિત ડાંગ સ્વરાજ આશ્રમ-આહવાના શ્રી ગાંડાભાઈ પટેલ સહિતના મહાનુભાવો, સ્પર્ધકો વિગેરે ઉપસ્થિત રહ્યા હતા.

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**GOVERNMENT OF INDIA
ADMINISTRATION OF U.T. OF DAMAN & DIU
OFFICE OF THE EXECUTIVE ENGINEER,
ELECTRICITY DEPARTMENT,
VIDYUT BHAVAN,
KACHIGAM,
DAMAN.**

PUBLIC NOTICE

Notice is hereby given to all interested persons that Electricity Department of Ut of Daman & Diu has filed a Petition for approval of True up of FY 2016-17, Review of FY 2017-18 and ARR and Tariff Proposal for FY 2018-19 under section 61, 62 and 64 of the Electricity Act, 2003. The same has been admitted under Petition No. 251/2017 and is available on department website and Commissions's website www.jercuts.gov.in

The Commission shall hold Public Hearing on the above matter. The date, time and venue of the Public Hearing is given as under :

Date and Time : 11/01/2018 (Thursday) at 10:00 Hrs onwards
Venue : Swami Vivekanand Auditorium, Nani Daman.

Executive Engineer,
Electricity Department,
Daman.
Mobile : 94269 82023
e-mail: elec-dmn-dd@nic.in

VARTMAN PARWAH
08. 01. 2018

Annexure 3: List of Stakeholders

The following is the list of the stakeholders who have submitted objections/ suggestions:

Sl. No.	Name of Stakeholder
1.	Shri Deepesh Tandel, District President, BJP, Daman
2.	Shri Ketan Patel, State Congress Committee, Daman
3.	Ms. Shruti Bhatia, VP (Regulatory Affairs and Communication), Indian Energy Exchange
4.	Shri Umesh Patel, Youth Action Force
5.	Shri Vasubhai Patel, BJP General Secretary, UT of Daman and Diu
6.	Shri Ramesh Singh, Representative of Congress Party
7.	Shri K.C.Parekh, Advisor to Daman Industrial Association and Member of JERC Board
8.	Shri Mohan Lacmane, Hotelier
9.	Smt. Ashvini B. Bamanian, Vice President, District Panchayat, Diu
10.	Shri Ramnikbhai Bamanian, Social Worker & Ex. Councillor, DMC
11.	Shri Kishor B. Kapadia, General Secretary, BJP