

TARIFF ORDER

Determination of Tariff for the FY 2017-18, Annual Performance Review of FY 2016-17 &

True-up of FY 2015-16

Petition No. 222/2017

For

Electricity Department of Daman and Diu

29th May 2017

संयुक्त विद्युत विनियामक आयोग (गोवा राज्य और संघ शासित प्रदेशों के लिए) JOINT ELECTRICITY REGULATORY COMMISSION

For the State of Goa and Union Territories,
2 तल, वाणिज्य निकुंज, एचएसआईआईडीसी कार्यालय परिसर, उद्योग विहार फेज-V,गुडगांव - 122016 हरियाणा
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Before the Joint Electricity Regulatory Commission For the State of Goa and Union Territories, Gurgaon

QUORUM

Sh. M. K. Goel (Chairperson) Smt. Neerja Mathur (Member)

Petition No. 222/2017

In the matter of

Approval for the True-up of the FY 2015-16, Annual Performance Review of the FY 2016-17 and Aggregate Revenue Requirement (ARR) and Tariff proposal for the FY 2017-18.

And in the matter of

Electricity Department of Daman and Diu Petitioner

ORDER

Dated: 29th May 2017

- a. This Order is passed in respect of the Petition filed by the Electricity Department of Daman and Diu for approval for the True-up of the FY 2015-16, Annual Performance Review of the FY 2016-17 and Aggregate Revenue Requirement (ARR) and the Tariff proposal for the FY 2017-18.
- b. After receiving the Petition, the Commission scrutinized 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. Further, suggestions /comments/objections were invited from the public/stakeholders. A Public Hearing was held and the stakeholders/Public were heard. The Schedule of activities performed in the course of this quasi-judicial process is given below:

Particulars	Details
Date of Admission	27 th December 2016
Technical Validation Session	1 st February 2017
Public Hearing	24 th January 2016 (Diu) & 9 th February, 2016 (Daman)

- c. The approved tariff for the FY 2017-18, as detailed in the Chapter "Tariff Schedule," shall come into force from 1st April 2017 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 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-**नीरजा माथुर** (सदस्य) -Sd-**एम. के. गोयल (अध्यक्ष**)

संयुक्त विद्युत विनियामक आयोग (गोवा और केंद्र शासित प्रदेशों के लिए)

स्थान : गुडगाँव

दिनांक: 29 मई 2017

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List of Abbreviations

Abbreviation		Full Form	
A&G	:	Administration & General	
Act	:	The Electricity Act, 2003	
ARR	:	Aggregate Revenue Requirement	
CAGR	:	Compound Annualized Growth rate	
Capex	:	Capital Expenditure	
СС	:	Current Consumption	
CEA	:	Central Electricity Authority	
CERC	:	Central Electricity Regulatory Commission	
CGS	:	Central Generating Station	
COD	:	Commercial Operation Date	
Commission/JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union Territories	
Ckt. Km	:	Circuit Kilometer	
DDUGJY	:	Deendayal Upadhyaya Gram Jyoti Yojana	
DISCOM	:	Electricity Department of Daman and Diu	
CPSU	:	Central Public Sector Undertaking	
EA 2003	:	The Electricity Act, 2003	
FC	:	Fixed Charges	
FPPCA	:	Fuel & Power Purchase Cost Adjustment	
FY	:	Financial Year	
GFA	:	Gross Fixed Assets	
НР	:	Horse Power	
НТ	:	High Tension	
IPDS	:	Integrated Power Development Scheme	
JERC	:	Joint Electricity Regulatory Commission for the state of Goa and Union Territories	
KVA	:	Kilo Volt Ampere	
KWh	:	Kilo Watt Hour	
LPS	:	Late Payment Surcharge	
LT	:	Low Tension	
MU	:	Million Unit	
MW	:	Mega Watt	
MYT	:	Multi Year Tariff	

Abbreviation		Full Form	
NDS	:	Non-Domestic Supply	
NFA	:	Net Fixed Assets	
O&M	:	Operation & Maintenance	
PGCIL	:	Power Grid Corporation of India Ltd.	
PLF	:	Plant Load Factor	
PX	:	Power Exchange	
R-APDRP	:	Restructured Accelerated Power Development and Reforms Programme	
REC	:	Renewable Energy Certificate	
RoE	:	Return on Equity	
RPO	:	Renewable Purchase Obligation	
R&M	:	Repair & Maintenance	
SBI CAPS	:	SBI Capital Market Limited	
SBI PLR/SBAR	:	SBI Prime Lending Rate/State Bank Advance Rate	
SCC	:	System Control Centre	
T&D	:	Transmission & Distribution	
UI	:	Unscheduled Interchange	
VC	:	Variable Charges	
WRPC	:	Western Regional Power Committee	

Chapter 1. Introduction

1.1.About JERC

In exercise of the powers conferred by Section 83 of the Electricity Act 2003, the Central Government constituted a two member (including Chairperson) Commission for all the Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for Union Territories" with headquarters at Delhi as notified vide notification no. 23/52/2003 – R&R dated 2nd May 2005. Later, with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" as notified on 30th May 2008. The Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Andaman & Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman & Diu, Lakshadweep and Puducherry) started functioning with effect from September 2008. The office of the Commission is located in Gurgaon, Haryana.

1.2. Electricity Regulatory Process in Daman & Diu

In earlier years, the Electricity Department of Daman and Diu (ED-DD) had submitted the Tariff and Business Plan Petitions, on which the Commission had subsequently issued the following Orders:

Table 1-1: Details of Tariff Petitions so far submitted by the Petitioner & Tariff Order's issued by JERC

Sr. No.	For the FY	Filing date	Date of Tariff Order
1.	2010-11	27 th March 2010	1 st November 2010
2.	2011-12	28 th March 2011	3 rd October 2011
3.	2012-13	30 th November 2011	25 th August 2012
4.	2013-14	30 th November 2012	22 nd March 2013
5.	2014-15	1st November 2013	1 st May 2014
6.	2015-16	2 nd December 2014	31 st March 2015
7.	Business Plan for 1st MYT Control Period	5 th August 2015	9 th December 2015
8.	MYT Order for 1st Control Period	19 th January 2016	6 th April 2016

1.3. Filing and Admission of Present Petition

The present Petition was filed vide letter dated 5th December 2016 and received at the Commission's office on 8th December 2016. The Petition was scrutinized in accordance

with terms of the JERC (Conduct of Business) Regulations, 2009 and the discrepancies were informed to the Petitioner on 14th December 2016 and 23rd December 2016. The Petition was admitted on 27th December 2016 and numbered as Petition No. 222/2017.

1.4.Interaction with the Petitioner

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

The Commission's staff held discussions with the Petitioner and interacted regularly with the Petitioner to seek clarifications and justification on various issues essential for analysis of the Tariff Petition and conducted a Technical Validation Session (TVS) with the Petitioner during which discrepancies in the Tariff Petition were pointed out and additional information sought by the Commission was informed. Relevant dates, including dates of correspondence and interaction with the Petitioner are as follows:

Sr. No.	Date	Subject
1.	23 rd December 2016	Data Gaps sought by the Commission
2.	8 th January 2017	Reply to Data Gaps furnished by the Petitioner
3.	1 st February 2017	Technical Validation Session - 1
4.	3 rd February 2017	Additional Data Gaps sought by the Commission
5.	27 th February 2017	Reply to Additional Data Gaps furnished by the Petitioner
6.	3 rd April 2017	Response to Public Objections furnished by the Petitioner
7.	11 th May 2017	Technical Validation Session - 2

Table 1-2: List of Interactions with the Petitioner

1.5. Public Hearing Process

The Commission directed the Petitioner to publish the present Petition in the abridged form as specified, for information of Public and to ensure wider Public participation. Public Notices were published by the Petitioner for inviting suggestions /objections from the stakeholders on the Tariff Petition which are taken into consideration for finalization of the Tariff Petition as follows:

		•	
Sr. No.	Date	Name of Newspaper	Place of Circulation
1.	14 th February 2017	Asli Azadi (Hindi),	Daman
2.	14 th February 2017	Savera India Times (Hindi),	Daman
3.	14 th February 2017	Vartaman Pravah (Gujarati)	Rajkot (Diu)
4.	4. 14th February 2017 Free Press Journal (Eng		Rajkot (Diu)
5.	14 th February 2017	Divya Bhasjar (Gujarati)	Rajkot (Diu)

Table 1-3: Details of Public Notices published by the Petitioner

The Petitioner also uploaded the Petition on its website (www.dded.gov.in) for inviting suggestions and objections on the Petition. Interested parties/stakeholders were requested to file their objections/ suggestions on the Petition to the Commission with a copy to the Petitioner on or before 10th February 2017. The copies of the Public Notices published by the Petitioner are attached as **Annexure 1** to this Order.

1.6. Notice for Public Hearing

The Commission also published the Public Notice in the leading newspapers giving due intimation to stakeholders, consumers and the public at large about the Public Hearing to be conducted on 24th January 2017 from 10 AM onwards at the Auditorium at Malala, Diu and 9th February 2017 from 10:00 AM onwards at the Swami Vivekananda **Auditorium, Nani Daman** as given below:

Table 1-4: Details of Public Notices published by the Commission

Sr. No.	Name of Newspaper	Date	Place of Circulation
1	Asli Azadi (Hindi)	10 th January 2017, 21 st January	Daman
2	Savera India Times (Hindi)	2017 and 7 th February 2017	Daman
3	Cuiarat Samachar (Cuiarati)	2017 and 7 " rebruary 2017	Raikot (Diu)

The Public Notice was also uploaded on the Commission's website (www.jercuts.gov.in). Copies of the Public Notices published by the Commission for information of the Public Hearing are attached as **Annexure 2** to this Order.

The major issues raised during the Public Hearing, along with the response of the utility and views of the Commission thereon, have been summarized in Chapter 2 of this Order. The Commission has appropriately taken into consideration the suggestions and comments raised on the Petition, while finalizing the Order.

1.7. Organization of the Order

This Order is organized in the following Chapters:

- **❖ Chapter 1:** Background and brief description of the regulatory process undertaken by the Commission
- **Chapter 2:** Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's Views thereon.
- **Chapter 3:** True-Up of ARR for the FY 2015-16.
- **Chapter 4:** Review of ARR for the FY 2016-17.
- **♦ Chapter 5:** Approval of various ARR components for the FY 2017-18
- **Chapter 6:** Approach of the Commission on Tariff principles and design
- **Chapter 7:** Open Access Charges for the FY 2017-18
- **❖ Chapter 8:** Tariff schedule of the FY 2017-18 and Schedule of Services and Charges approved by the Commission
- **Chapter 9:** Directives of the Commission to ED-DD

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 salient features of the Petition in the newspapers in an abridged form in the given format duly inviting comments/objections from the public in terms of the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009 (herein after referred to as "the Tariff Regulations 2009") and JERC (Multiyear Distribution Tariff) Regulations 2014 (herein after referred to as "the MYT Regulations 2014") as amended from time to time.

The Public Hearing was held on 24th January 2017 at Diu and 9th February 2017 at Daman. During the Public Hearing, some 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.

2.2.Objections/Suggestions, 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 and addressed the concerns of all the stakeholders in the subsequent sections:

2.2.1. Delayed Payment Surcharge (DPS)

Stakeholder's Comment:

The delayed payment surcharge is being computed at the rate of 2% on the electricity bill, which is very high and should be reduced to 1% as the bills are now issued on monthly basis instead of on bimonthly basis as earlier.

Petitioner's Response:

The interest/Delayed Payment Surcharge (DPS) is levied on the electricity bills as per the provisions of the JERC Electricity Supply Code Regulations, 2010 and the 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.

2.2.2. Continuous issue of bill for closed premises

Stakeholder's Comment:

ED-DD continuously issues bills even if the premises are closed for a long time and finally the bill amount becomes too huge due to high interest rate. The department is requested to stop the billing if the house remains closed for more than 6 months.

Petitioner's Response:

The Department has made a provision for the consumers to intimate the Department regarding closure of the premises for a long period of time. In such case the Department shall charge only the minimum charges from the consumers and they will not be liable to pay any huge bill amount due to high interest rate.

Commission's View:

Stakeholders may inform the Petitioner in advance regarding the closure of premises for long periods of time; however, the Consumers would have to pay the minimum or the fixed charges whichever is applicable.

2.2.3. High T&D Losses

Stakeholder's Comment:

The T&D losses claimed by the Petitioner are high and unrealistic.

Petitioner's Response:

There is no merit in the issue raised by the Stakeholder. In the FY 2015-16, the Petitioner had achieved T&D losses of 8.87%, which is one of the lowest in the country. Further, the department will put in all its efforts and try to achieve the loss levels as approved by the Commission in the Business Plan for the MYT Control Period. Further, each year third party energy audit is being done and the report of the same is submitted to the Commission.

Commission's View:

The loss reduction trajectory for the MYT Control Period has already been approved in the Business Plan Order dated 9th December 2015. The Commission would like to emphasize

that the inefficiencies of the Petitioner on this account if any, are not passed on to the consumers.

2.2.4. O&M Expenses

Stakeholder's Comment:

The O&M expenses of the Petitioner are too high.

Petitioner's Response:

The O&M expenses are required to run the Department smoothly and to provide continuous power supply to the consumers of the UT of Daman and Diu. Hence, the Commission is requested to approve the O&M expenses without any disallowance.

Commission's View:

The O&M expenses have been approved in accordance with the norms specified in the MYT Regulations 2014. The inefficiencies are not passed on to the consumers as the Commission undertakes detailed examination and prudence check of the actual expenses for setting the norms, and also before approval of the same.

2.2.5. Advertisement of Public Hearing

Stakeholder's Comment:

No proper advertisement was given regarding Public Hearing date and the venue.

Petitioner's Response:

The Commission had issued advertisement in various newspapers regarding the conduct of Public Hearing in Daman and Diu along with the details of the venue and the timing.

Commission's View:

The Commission had issued advertisements in various newspapers on 10^{th} January 2017, 21^{st} January 2017 and 7^{th} February 2017 regarding the conduct of the Public Hearings in Daman and Diu duly specifying the timings as well as the venues of the hearing. The department has also issued advertisements in various newspapers as indicated in Chapter 1.

2.2.6. Fuel and Power Purchase Cost Adjustment (FPPCA)

Stakeholder's Comment:

Out of the 24 paise benefit given to the Industries under the FPPCA, 4 paise should be reduced and passed on to the local residents.

Petitioner's Response:

FPPCA surcharge is levied on the industrial consumers and not on the domestic consumers. Hence relief, if any, shall also be passed on to the industrial consumers and not to the domestic consumers.

Commission's View:

The Petitioner should levy the FPPCA/ refund the FPPCA strictly as per the provisions of JERC (Terms and Conditions for Determination of Tariff) (First amendment) Regulations 2009.

2.2.7. Details regarding "Other Charges"

Stakeholder's Comment:

No details are available for the other charges mentioned in electricity bill.

Petitioner's Response:

At the request of the consumers, the Petitioner shall provide all the details regarding the other charges levied in the electricity bill.

Commission's View:

The Petitioner should clearly provide details of the 'Other Charges' in the bill itself.

2.2.8. Reduction in Tariff

Stakeholder's Comment:

Tariff should be declared such that we don't have scope to go for an appeal. There is scope to reduce the tariffs.

Petitioner's Response:

Observations of the Stakeholder are noted, however, the Commission is empowered to take any decision in the matter.

Commission's View:

The Commission has dealt with this issue in the Chapter 'Tariff Philosophy & Category Wise Tariffs for the FY 2017-18' of this Order.

2.2.9. Prior intimation for Power Outage

Stakeholder's Comment:

SMS alert should be given to the industries regarding the power shutdown/failure

Petitioner's Response:

The Department is in the process of giving SMS alerts to the industries regarding power shutdown/failure and is collecting the mobile numbers of all the consumers for the same. The department shall be in a position to provide SMS alert to the industries regarding the power shutdown/failure within six months.

Commission's View:

The Commission directs the Petitioner to take up the matter on priority in 6 months and intimate the Commission about the status of the SMS alerts. The Petitioner should also encourage its consumers to use the URJA Portal recently initiated by the Ministry of Power to get prior intimation regarding power outages. The Petitioner should also regularly update the status on the mentioned portal.

2.2.10. Solar Energy for farmers and poor villagers.

Stakeholder's Comment:

Solar energy generated should be distributed to farmers, poor villagers free of charge.

Petitioner's Response:

All the solar energy generated is fed into the main grid and then distributed to the consumers of the UT of Daman and Diu.

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.

2.2.11. Survey for LIG consumers

Stakeholder's Comment:

New survey should be carried out for the LIG consumer and free electricity should be provided to them.

Petitioner's Response:

Electricity is being billed to the consumers as per the tariff schedule approved by the Commission. Hence, the Commission is empowered to take any decision in the matter.

Commission's View:

The Commission directs the Petitioner to periodically review and update the number of LIG consumers in its licensed area. However, as per the provisions of the Section 65 of the Electricity Act 2003,

"If the State Government requires the grant of any subsidy to any consumer or class of consumers in the tariff determined by the State Commission under section 62, the State Government shall, notwithstanding any direction which may be given under section 108, pay, in advance and in such manner as may be specified, the amount to compensate the person affected by the grant of subsidy in the manner the State Commission may direct, as a condition for the licence or any other person concerned to implement the subsidy provided for by the State Government".

Thus, it is the prerogative of the Government to decide on the extent of subsidy to be given to the LIG consumers, subject to release of this subsidy in advance.

2.2.12. Underground Cabling

Stakeholder's Comment:

Underground cabling system should be done in a proper way with minimum cutting of roads & to prevent damage to water line, telephone line and drainage line etc.

Petitioner's Response:

The observations are noted. It is submitted that the work of underground cabling is being carried out in a planned manner with minimum cutting of road or damage to water line/telephone line/drainage line etc.

Commission's View:

The Petitioner should take all possible measures so as to ensure minimum inconvenience to other facilities while laying the underground power cables.

2.2.13. Domestic Tariff

Stakeholder's Comment:

More benefit should be given to the domestic consumers as compared to the Industrial consumers. The domestic slab should be increased from 1-50 units to 1-80 units. Further, benefit of solar energy should be given in Tariff to the domestic consumers.

Petitioner's Response:

All the solar energy generated is fed into the main grid and then distributed to the consumers of the UT of Daman and Diu. Also, the O&M cost of the solar plants is being borne by the ED-DD.

Further, electricity is being billed to the consumers as per the tariff schedule approved by the Commission. However, the Commission is empowered to take any decision in the matter.

Commission's View:

The Commission is of the view that the benefit of energy generated through renewable sources is 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 Philosophy & Category Wise Tariffs for the FY 2017-18' of this Order.

Chapter 3. True-up for the FY 2015-16

3.1. Applicable Provisions of Tariff Regulations 2009

The True-up of the FY 2015-16 is to be carried out as per the Regulation 8 of the Tariff Regulations, 2009:

- "8. Review and Truing up
- (1) The Commission shall undertake a review along with the next Tariff Order of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called 'Review''.
- (2) (i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called 'Truing Up'.
- (ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.
- (3) The revenue gap of the ensuing year shall be adjusted as a result of review and truing up exercises.
- (4) While approving such expenses/revenues 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/revenues. 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 necessary 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 change of consumer mix and additional supply of power and also indicate the manner in which the licensee proposes to meet the cost for such change of consumer mix and additional supply of power.
- (7) The Commission may consider granting approval to such proposals provided the cost of additional supply is ordinarily met by the beneficiary category."

3.2. Approach for True-Up of the FY 2015-16

In its True-up Petition for the FY 2015-16, the Petitioner has submitted the details of expenditure and revenue for the FY 2015-16 based on the audited accounts for the FY 2015-16. The Petitioner provided the comparison of actual revenue and expenditure against each head with the revenue and expenditure approved by the Commission.

In this Chapter, the Commission has carried out the True-up by analyzing all the elements of actual revenue and expenses for the FY 2015-16 as per the audited accounts submitted by the Petitioner, and after prudence check, has permitted necessary adjustments in cases where variations are for reasonable and justifiable reasons.

3.3. Energy Sales

Petitioner's Submission:

Actual category-wise energy sales for the FY 2015-16 are 1691.98 MU. Also, sales of 416.06 MU were done through the Open Access consumers.

Commission's Analysis:

The Commission had approved the sales at 1,684.58 MU for the FY 2015-16 in the Annual Performance Review (APR) Order dated 6th April 2016.

After going through the submissions of the Petitioner including the examination of the audited accounts for the FY 2015-16, the sales are approved as follows:

Table 3-1: Energy Sales approved by the Commission for the True-up of the FY 2015-16 (In MU)

	provide a series of the series		FY 2015-16	
S. No.	Category / Consumption Slab	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)
A	Domestic		88.29	88.29
1	0-50 units		0.15	0.15
2	51-200 units	90.99	11.72	11.72
3	201 - 400 units	90.99	17.64	17.64
4	401 and above		58.69	58.69
5	Low Income Group (LIG)		0.09	0.09
В	Commercial		49.93	49.93
1	1- 100 units	44.53	19.97	19.97
2	101 and above units		29.96	29.96
С	Agriculture	2.41	2.46	2.46
1	Up to 10 HP	2.41	1.71	1.71

			FY 2015-16	
S. No.	Category / Consumption Slab	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)
2	Above 10 HP		0.75	0.75
D	LTP Industry	159.83	160.54	160.54
E	Public Lighting	9.89	7.43	7.43
F	Public Water Works	3.54	2.68	2.68
G	нт		1,379.41	1,379.41
1	11/ 66 kV	1,373.39	965.59	965.59
2	HT Ferro		413.82	413.82
Н	Hoardings/ Signboards		-	-
I	Temporary	-	1.23	1.23
J	Total	1,684.58	1,691.98	1,691.98

Therefore, the Commission approves the total sales of 1,691.98 MU in the True-up of the FY 2015-16. Further, the Commission also approves the sales of 416.06 MU towards the Open Access consumers as submitted by the Petitioner.

3.4. Power Purchase Quantum & Cost for the FY 2015-16

Petitioner's Submission:

The actual power purchase cost incurred in the FY 2015-16 is Rs. 699.71 crore (including transmission charges) towards procurement of 1,989.51 MU (including energy purchased through UI over drawal) which was revised by the Petitioner to 1980.77 MU. As against the Petitioner's submission the approved power purchase cost in APR Order dated 6th April, 2016 was Rs. 838.03 crore (including transmission charges) towards procurement of 1.969.73 MU.

Commission's Analysis:

Earlier, the Commission had approved the power purchase cost including transmission charges at Rs. 838.03 crore for purchase of 1,969.73 MU for the FY 2015-16 in its APR Order dated $6^{\rm th}$ April 2016.

Further, during the Technical Validation Session held on 1st February 2017 and in reply to the data gaps, the Petitioner has submitted the summary of month wise power purchase quantum and cost for the FY 2015-16. As per the monthly summary report, the total power purchase cost is Rs. 701.15 crore towards procurement of 1980.77 MU, whereas as per the Petition, the actual power purchase cost is Rs. 699.71 crore (including transmission charges, as per audited accounts) towards procurement of 1,989.51 MU (including UI over drawal).

For the purpose of the True-up, the Commission has considered the submission of purchase of 1980.77 MU at the cost of Rs 701.05 crore. The Commission has cross-checked these details of power purchase quantum as submitted by the Petitioner with the publicly available information from the Regional Energy Accounts (REA) maintained by Western Regional Power Committee (WRPC) on their website (http://www.wrpc.gov.in/) wherein the total power purchased from different sources (except UI) is 1917.85 MU. The Commission has also verified the weekly UI bills as available with WRPC and has separately considered the UI over drawal of 63.40 MU as power purchase quantum. Thus as per REA and UI bills the total power purchase quantum for the FY 2015-16 as considered by the Commission is 1,981.25 MU (1917.85 + 63.40).

The Commission has also verified the power purchase cost as submitted by the Petitioner with the amount reflecting in the audited accounts for the FY 2015-16. The Commission, as part of its prudence check, also verified the power purchase bills of the Petitioner and found the same to be in order.

Keeping in view the above, the Commission has arrived at the total power purchase quantum of 1,981.25 MU from REA and UI bills and total power purchase cost of Rs 699.71 crore as verified from the audited accounts for the purpose of True-up of the FY 2015-16 as shown in the Table below:

Table 3-2: Power Purchase quantum and cost as submitted by the Petitioner and as approved by the Commission in the True-up of the FY 2015-16

		Power Purchase - Quantum (MU)			Power Purchase Cost (Rs. crore) - Approved in True-up Order				Per
Sr. No.	Particulars	Petitioner's Submission	Approve d in True-up Order	Difference	Fixed	Variable	Other	Total	Unit (Paisa/ kWh)
A	NTPC	1,143.69	1,156.34	(12.66)	150.34	162.72	(2.57)	310.49	269
1	KSTPP 1&2	365.72	365.51	0.20	20.18	38.90	(1.73)	57.35	157
2	KSTPP 3	43.97	43.97	-	6.63	4.89	(0.01)	11.51	262
3	VSTPP 1	92.80	92.80	-	5.65	13.69	(0.01)	19.33	208
4	VSTPP 2	65.74	65.74	0.00	4.07	9.90	0.34	14.31	218
5	VSTPP 3	86.11	86.11	-	8.46	11.66	(0.17)	19.95	232
6	VSTPP 4	97.71	97.71	-	12.67	13.08	0.03	25.78	264
7	VSTPP 5	23.51	23.51	(0.00)	3.02	3.49	0.08	6.58	280
8	KAWAS GPP	46.37	52.61	(6.24)	17.12	13.03	(0.84)	29.31	557
9	GANDHAR GPP	38.27	44.91	(6.64)	22.28	12.77	(0.38)	34.68	772
10	SIPAT 1	180.59	180.59	-	25.02	24.22	(1.13)	48.11	266
11	SIPAT 2	77.76	77.76	-	8.98	10.50	1.10	20.59	265

		Power Purchase - Quantum (MU)		Power Purchase Cost (Rs. crore) – Approved in True-up Order				Per	
Sr. No.	Particulars	Petitioner's Submission	Approve d in True-up Order	Difference	Fixed	Variable	Other	Total	Unit (Paisa/ kWh)
12	KHSTPS 2	15.15	15.13	0.01	1.51	3.27	0.16	4.95	327
13	MAUDA	10.01	10.01	-	14.73	3.33	(0.01)	18.05	1,803
В	NSPCL	618.61	618.61	(0.00)	102.92	128.31	0.23	231.46	374
1	BHILAI (ALLOCATED)	618.61	618.61	(0.00)	102.92	128.31	0.23	231.46	374
С	NPCIL	131.35	131.35	-	-	37.17	0.06	37.23	283
1	KAPPS	33.74	33.74	-	-	9.68	0.06	9.74	289
2	TAPPS 3&4	97.61	97.61	-	-	27.49	0.00	27.49	282
D	OTHERS								
1	RGGPL								
Е	UI	63.67	63.40	0.27	-	18.33	-	18.33	289
F	RPO -Physical power	11.55	11.55	-	3.35			3.35	
1	Solar	4.42	4.42	-	-			-	
2	Non Solar	7.13	7.13	-	3.35			3.35	470
G	RPO -Certificate purchase					36.24		36.24	
1	Solar					20.00		20.00	
2	Non Solar					16.23		16.23	
G	PXIL	11.92	0	11.92		1.79		1.79	
Н	Other Charges								
1	PGCIL CHARGES			_		56.52		56.52	
2	MSTCL			_		1.91		1.91	
3	WRLDC					0.41		0.41	

		Power Purchase - Quantum (MU)		Power Purchase Cost (Rs. crore) – Approved in True-up Order				Per	
Sr. No.	Particulars	Petitioner's Submission	Approve d in True-up Order	Difference	Fixed	Variable	Other	Total	Unit (Paisa/ kWh)
4	Reactive Energy Charges					3.42		3.42	
I	TOTAL	1,980.77	1,981.25	(0.48)	256.60	446.83	(2.27)	701.15	353.89
J	Difference							1.44	
K	Total		1,981.25					699.71	353.17

Therefore, the Commission approves the overall power purchase quantum and cost of 1,981.25 MU and Rs 699.71 crore (including cost towards compliance of RPO) respectively in the True-up of the FY 2015-16.

3.5. Renewable Purchase Obligation (RPO)

As per Regulation 1(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."

Further, the Commission has notified the amendment to the JERC (Procurement of Renewable Energy) Regulations, 2010 on 19th February 2014. As per the amendment, the Petitioner has to purchase 3.55% (0.85% for Solar and 2.70% for Non-Solar) of total energy purchase from renewable sources for the FY 2015-16.

The Commission, in its Business Plan Order dated 9th December 2015 issued against Petition no. 180/2015, has reiterated its direction that all the pending RPO upto FY 2015-16 must be fulfilled by the Petitioner by 31st March 2016 and no backlog would be allowed to be carried forward to the MYT Control Period of the FY 2016-17 to FY 2018-19.

Accordingly, the RPO compliance has been computed on the basis of submissions made by the Petitioner during the True up of the FY 2010-11, FY 2011-12, FY 2012-13, FY 2013-14 and FY 2014-15 as shown in the following Table:

Table 3-3: Summary of RPO Compliance up to end of the FY 2015-16 (MU)

Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Solar	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%
Non Solar	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%
Total	1.00%	2.00%	3.00%	3.00%	3.30%	3.55%
C.L. APPLE TIM	4655.00	4554.46	4062.04	4554.00	4604.50	4604.00
Sales Within UT	1655.00	1771.16	1862.94	1754.08	1621.72	1691.98
RPO Obligation (in MU)	16.55	35.42	55.89	52.62	53.52	60.07
- Solar	4.14	5.31	7.45	7.02	9.73	14.38
-Non Solar	12.41	30.11	48.44	45.61	43.79	45.68
RPO Compliance (Actual Purchase)	0.00	0.00	0.00	0.20	0.40	11.55
- Solar	0.00	0.00	0.00	0.20	0.40	4.42
-Non Solar	0.00	0.00	0.00	0.00	0.00	7.13
RPO Compliance (REC Certificate Purchase)	0.00	0.75	4.70	13.20	79.73	165.38
- Solar	0.00	0.00	0.00	0.00	0.00	57.15
-Non Solar	0.00	0.75	4.70	13.20	79.73	108.23
Total RPO Compliance	0.00	0.75	4.70	13.40	80.13	176.93
- Solar	0.00	0.00	0.00	0.20	0.40	61.57
-Non Solar	0.00	0.75	4.70	13.20	79.73	115.36
Cumulative Requirement till current year	16.55	51.97	107.86	160.48	214.00	274.06
- Solar	4.14	9.45	16.90	23.92	33.65	48.03
-Non Solar	12.41	42.52	90.96	136.56	180.35	226.03
Cumulative Compliance till current year	0.00	0.75	5.45	18.85	98.98	275.91
- Solar	0.00	0.00	0.00	0.20	0.60	62.17
-Non Solar	0.00	0.75	5.45	18.65	98.38	213.74
Net Shortfall in RPO Compliance till current year	16.55	51.22	102.41	141.63	115.02	-1.85
- Solar	4.14	9.45	16.90	23.72	33.05	-14.14
-Non Solar	12.41	41.77	85.51	117.91	81.97	12.29

The Commission observes that up to the end of the FY 2014-15, there is a cumulative shortfall of 115.02 MU (Solar: 33.05 MU and Non-Solar: 81.97 MU) in RPO compliance. However, in the additional submission, the Petitioner has submitted that it has bought physical power of 11.55 MU (Solar - 4.42 MU and Non-Solar - 7.13 MU) and REC certificates corresponding to 165.38 MU (Solar – 57.15 MU and Non-Solar - 108.23 MU) in the FY 2015-16, resulting in over-compliance of 1.85 MU on cumulative basis for the period ending March, 2016.

3.6.Intra-State Transmission and Distribution losses

Petitioner's Submission:

The actual loss level achieved in the FY 2015-16 was 8.87% as against the loss level of 8.60% approved by the Commission in its APR Order dated 6th April 2016.

Commission's Analysis:

The Commission had approved the T&D loss level for the FY 2015-16 as 8.60% in its APR Order dated 6^{th} April 2016.

The Commission has analyzed the actual T&D losses based on the actual drawal as available on the WRPC website. The actual drawal at the periphery of UT of Daman and Diu is 2,324.63 MU (including open access injection) whereas the sales including open access sales is 2108.04 MU. Thus, the actual T&D losses work out to be 216.59 MU constituting 9.32% as shown in the Table below:

Table 3-4: T&D Losses approved by the Commission in the True-up of the FY 2015-16 (MU)

		FY 2015-16				
Sr. No. Particulars		Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)		
	ENERGY REQUIREMENT					
1	Energy sales within the UT (in MU)	1,684.58	1,691.98	1,691.98		
2	Open Access Sales (in MU)	391.51	416.06	416.06		
3	Total Sales within the UT (in MU)	2,076.09	2,108.04	2,108.04		
4	Energy available at State Periphery (MU) (Based on Actual Drawal)	2,271.43	2,313.17	2,324.63		
5	T&D Losses (MU) (4-3)	195.34	205.13	216.59		
6	T&D Losses (%) (5/4)	8.60%	8.87%	9.32%		

Therefore, the Commission approves T&D loss of 9.32% based on the actual data in the True-up of the FY 2015-16.

3.7. Penalty towards under-achievement of T&D losses

Petitioner's submission:

No submission has been made in this regard.

Commission's analysis:

As per Regulation 9 of the JERC Tariff Regulations 2009,

- "9. Excess or Under Recovery with Respect to Norms and Targets
- 1) The generating company or the licensee, as the case may be, 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.
- 2) The generating company or the licensee, as the case may be, shall bear the entire loss on account of its failure to achieve the norms laid down by the Commission or targets set by the Commission from time to time."

The Commission, in its APR Order dated 6th April 2016, had approved T&D of 8.60% for the FY 2015-16. However as per the actual energy balance with reference to the Regional Energy Account (REA) and the UI accounts available on the website of WRPC, the Commission has computed the actual T&D loss of 9.32% for the FY 2015-16. Therefore, the Commission in accordance with Regulation 9 of the JERC Tariff Regulations, 2009 considers levying a penalty to be imposed on the Petitioner towards under-achievement of the T&D loss target laid down by the Commission.

The Penalty has been considered at the rate of effective power purchase at the periphery of the Petitioner arrived at 373 Paise/kWh [after deducting revenue from UI i.e. Rs 3.13 crore (refer section 3.8) from the gross power purchase cost i.e. Rs. 699.71 crore (refer section 3.4) and dividing it by the energy required at the periphery for Sale to retail consumers i.e. 1865.82 MU].

Consequent to the increase in percentage losses over the target approved by the Commission, the power purchased is more than that corresponding to the approved T&D losses in the Review Order for the FY 2015-16 dated 6th April, 2016. The assessment of penalty for increase in T&D losses is shown in the Table below:

Particulars	FY 2015-16		
Faiticulais	Approved	Actual	
Retail sales within the UT (MUs)	1691.98	1691.98	
T&D Loss within the UT (%)	8.60%	9.32%	
Energy required at UT Periphery for Sale to Retail Consumers*	1851.18	1865.82	
Excess Power Purchase (MUs)	14	.64	
Approved Per unit Power Purchase Cost (Paisa per kWh)	373		
Penalty for Underachievement	5.47		

Table 3-5: Penalty for underachievement of T&D Losses in the FY 2015-16

^{*} Excluding requirement of energy for the Open Access consumers at the periphery

Keeping in view the above mentioned provisions of the Regulations, the Commission disallows an amount of Rs. 5.47 crore from the power purchase cost considered in the True-up for the FY 2015-16.

Therefore, the Commission approves the final power purchase cost of Rs 694.25 crore (Rs 699.71 crore – Rs 5.47 crore) towards the purchase of 1981.25 MU in the True-up of ARR for the FY 2015-16.

3.8. Surplus Energy Sale/UI sales

Petitioner's Submission:

The Petitioner has not submitted the actual quantum of over/under drawal under UI mechanism for the FY 2015-16 but has claimed Rs. 3.13 crore as revenue from sale of surplus power during the FY 2015-16.

Commission's Analysis:

The Commission has verified the weekly summary sheets of UI from the WRPC for the FY 2015-16 and has considered the over-drawal and under-drawal of UI separately. The Commission has considered the UI over-drawal of 63.40 MU and UI under-drawal of 10.80 MU for the FY 2015-16 as per the UI bills for the FY 2015-16.

The Commission has thus considered the surplus UI sale of 10.80 MU amounting to Rs. 3.13 crore as verified from UI summary from the WRPC in the True-up of the FY 2015-16.

3.9.Energy Balance

Petitioner's Submission:

The actual energy balance for the FY 2015-16 is shown in the following Table:

Table 3-6: Energy balance for the FY 2015-16 as submitted by the Petitioner

Particulars	FY 2015-16 (Actual)
Sales (MU)	1,691.98
Open Access Sales (MU)	416.06
Total Sales (MU)	2,108.04
Add: Losses (MU)	205.13
T&D Losses (%)	8.87%
Energy Required at Periphery (MU)	2,313.17
Add: Sales to common pool consumer (MU)	11.03
Total Energy Required at Periphery (MU)	2,324.20
Transmission loss (MU)	88.30

Particulars	FY 2015-16 (Actual)
Transmission loss (%)	3.66%
Total Energy to be purchased (MU)	2,412.50
Power Purchase from other sources (MU)	1989.51
Open Access Purchase (MU)	422.99

Commission's Analysis:

The Commission has approved the intra-state T&D losses as elaborated in the foregoing paragraphs. The energy requirement for the FY 2015-16 is drawn based on the approved intra-state transmission & distribution losses and the approved energy sales (including open access sales and UI sales based on actual).

Accordingly, the Energy Balance as considered by the Commission for the True-up of the FY 2015-16 is shown in Table below:

Table 3-7: Energy Balance approved by the Commission for True-up of the FY 2015-16 (MU)

	Formula	FY 2015-16			
Particulars		Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
Energy sales within the State/UT (MU)	a	1,684.58	1,691.98	1,691.98	
Open Access Sales (MU)	b	391.51	416.06	416.06	
Energy Savings (MU)	С	-	-	-	
Total Sales within the State/UT (MU)	d=a+b-c	2,076.09	2,108.04	2,108.04	
T&D (%)	e=f/g	8.60%	8.87%	9.32%	
T&D (MU)	f=g-d	195.34	205.13	216.59	
Energy Required at periphery for sale within the State (MU)	g	2,271.43	2,313.17	2,324.63	
Sales to Common pool consumers / UI sales (MU)	h	37.03	11.03	10.80	
Total energy requirement at state periphery (MU)	i=g+h	2,308.46	2,324.20	2,335.43	
Energy purchased through UI at periphery (MU)	j	35.52	-	63.40	
Open access purchase at periphery (MU)	k	410.83	422.99	416.21	
Energy required at periphery from tied-up sources (MU)	l=i-(j+k)	1,862.11	1,901.21	1,855.82	
Interstate Losses (%)	m=n/o	3.66%	3.66%	3.23%	
Interstate Losses (MU)	n=o-l	72.09	88.30	62.03	
Total requirement from tied up sources at generator end (MU)	o	1,934.20	1,989.51	1,917.85	
Total requirement from tied up sources & UI at generator end (MU)	p=o+j	1,969.73	1,989.51	1,981.25	

	Formula	FY 2015-16			
Particulars		Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
Total requirement in the UT including Open access purchase (MU)	q=p+k	2,380.55	2,412.50	2,397.46	
Gross Availability	A=B+C+D+ E+F	2,380.55	2,412.50	2,397.46	
Power Purchase from Renewable Sources	В	37.99		11.55	
NPCIL	С	138.14	1,000,51	131.35	
Unscheduled Interchange	D	35.52	1,989.51	63.40	
Power Purchase from other sources	Е	1,758.07		1,774.95	
Open Access Purchase	F	410.83	422.99	416.21	

3.10. Operation and Maintenance Expenses

(1) Employee Expenses

Petitioner's Submission:

The actual employee expenses for the FY 2015-16 amount to Rs. 12.45 crore as compared to the employee expenses of Rs. 10.51 crore approved by the Commission in its APR Order dated 6^{th} April 2016.

Commission's Analysis:

The Commission had approved the employee expenses of Rs 10.51 crore in its APR Order dated 6th April 2016. The Commission has verified the actual Employee expenses of Rs. 12.45 crore for the FY 2015-16 from the audited accounts.

The employee expenses as submitted by the Petitioner and approved by the Commission are shown in the Table below:

Table 3-8: Employee Expenses approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

	FY 2015-16			
Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
Employee Expenses	10.51	12.45	12.45	

Therefore, the Commission approves the actual employee expenses of Rs 12.45 crore in the True-up of the FY 2015-16.

(2) Administration and General (A&G) Expenses

Petitioner's Submission:

The actual A&G expenses for the FY 2015-16 amount to Rs. 6.03 crore as compared to the A&G expenses of Rs. 6.77 crore approved by the Commission in its APR Order dated 6^{th} April 2016.

Commission's Analysis:

The Commission had approved the A&G expenses of Rs 6.77 crore in its APR Order dated 06th April 2016. The Commission has verified the actual A&G expenses of Rs. 6.03 crore for the FY 2015-16 from the audited accounts.

The A&G expenses as submitted by the Petitioner and approved by the Commission are shown in the Table below:

Table 3-9: Administrative and General Expenses approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

	FY 2015-16			
Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
A&G Expenses	6.77	6.03	6.03	

Therefore, the Commission approves the actual A&G expenses of Rs 6.03 crore in the True-up of the FY 2015-16.

(3) Repair and Maintenance Expenses

Petitioner's Submission:

The actual R&M expenses for the FY 2015-16 amount to Rs. 12.60 crore as compared to the R&M expenses of Rs. 11.55 crore approved by the Commission in its APR Order dated $6^{\rm th}$ April 2016.

Commission's Analysis:

The Commission had approved R&M expenses of Rs 11.55 crore in its APR Order dated 06th April 2016. The Commission has verified the actual R&M expenses of Rs. 12.60 crore for the FY 2015-16 from the audited accounts.

The R&M expenses as submitted by the Petitioner and approved by the Commission are shown in the following Table:

Table 3-10: Repair and Maintenance Expenses approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16			
Particulars	Order dated 6th Submission Commis		Approved by the Commission (True-up)		
R&M expenses	11.55	12.60	12.60		

Therefore, the Commission approves the actual R&M expenses of Rs 12.60 crore in the True-up of the FY 2015-16.

3.11. Capitalization, Gross Fixed Assets (GFA) & Depreciation

Petitioner's Submission:

As per the audited accounts of the FY 2015-16, there has been an addition of Rs. 61.90 crore in the GFA against the addition of Rs. 17.27 crore approved by the Commission for the FY 2015-16 in its APR Order dated 6th April 2016.

The depreciation for the FY 2015-16 has been submitted as per the audited annual accounts for the FY 2015-16. The Commission is requested to approve Rs. 19.28 crore as depreciation for the FY 2015-16. Depreciation has been computed by applying the depreciation rates as per the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009.

Commission's Analysis:

The submission of the Petitioner has been verified from the audited accounts submitted alongside and it is observed that assets of Rs 80.97 crore have been added during the FY 2015-16 instead of Rs 61.90 crore as submitted by the Petitioner.

The Commission had approved Rs 387.14 crore as the closing value of the GFA for the FY 2014-15 in the APR Order dated 6th April 2016 and the same has been considered as opening GFA for the FY 2015-16 along with capitalization of Rs. 80.97 crore during the FY 2015-16.

The GFA and capitalization allowed in the True-up of the FY 2015-16 is as follows:

Table 3-11: GFA and Capitalization approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16			
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
1	Opening Gross Fixed Assets	387.14	387.13	387.14	
2	Addition During the FY	17.27	61.90	80.97	

		FY 2015-16			
Sr. No	Particulars	Approved in	Petitioner's	Approved by the	
31. NO		Order dated	Submission	Commission	
		6 th April, 2016	(True-up)	(True-up)	
3	Adjustment/Retirement During the FY	-	-	-	
4	Closing Gross Fixed Assets	404.41	449.03	468.12	

As per Regulation 26 of the Tariff Regulations 2009:

- "(1) For the purpose of tariff, depreciation shall be computed in the following manner:
- (i) The value base for the purpose of depreciation shall be the historical cost of the assets, that is actual expenses limited to approved capital cost where such capital cost has been approved by the Commission:

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

- (ii) The historical cost of the asset shall include additional capitalization.
- (iii) The historical cost shall include foreign currency funding converted into equivalent rupees at the exchange rate prevalent on the date when foreign currency was actually availed but not later than the date of commercial operation.
- (iv) Depreciation for generation and transmission assets shall be calculated annually as per straight-line method over the useful life of the asset at the rate of depreciation specified by the Central Electricity Regulatory Commission from time to time.

Provided that the total depreciation during the life of the asset shall not exceed 90% of the original cost.

Depreciation for distribution and other assets not covered by CERC shall be as per Government of India norms of 1994 as may be revised by the Commission from time to time."

The Commission has not applied the CERC rates applicable on the average assets in place, since some of these assets have already attained the 90% limit of depreciation during the life of the asset, and has accordingly approved the depreciation as per the audited accounts for the True-up of the FY 2015-16 as shown in the following Table:

Table 3-12: Deprecation approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16		
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)
1	Depreciation	19.79	19.28	19.28

The Commission approves the closing GFA of Rs. 468.12 crore and depreciation of Rs 19.28 crore in the True-up of the FY 2015-16.

3.12. Interest and Finance Charges

Petitioner's Submission:

The opening balance of loan amounting Rs. 83.30 crore as approved by the Commission in its APR Order dated 6th April 2016 has been considered. The normative loan addition has been computed as Rs. 43.33 crore i.e. 70% of the capitalization for the FY 2015-16. In line with the approach adopted by the Commission in its previous Tariff Orders, 10% of the opening loans have been considered as the repayment during the year. Further the rate of interest has been considered as equal to the SBI PLR of 14.75%. The Commission is requested to approve the interest and finance charges amounting to Rs. 14.87 crore in the True-up of the FY 2015-16.

Commission's Analysis:

As per Regulation 25 of the JERC Tariff Regulations, 2009:

- "1) For existing loan capital interest and finance charges on loan capital shall be computed on the outstanding loans, duly taking into account the rate of interest and schedule of repayment as per the terms and conditions of relevant agreements.
- 2) Interest and finance charges on loan capital for new investments shall be computed on the loans, duly taking into account the rate of interest and the schedule of repayment as per the terms and conditions of relevant agreements. The rate of interest shall, however, be restricted to the prevailing Prime Lending Rate of the State Bank of India." (Read SBI Advance Rate)

Further as per Regulation 23 of the said Tariff Regulations 2009:

"23. Debt-Equity Ratio

- 1) For the purpose of determination of tariff, debt-equity ratio in case of existing, ongoing as well as new projects commencing after the date of notification of these Regulations shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as loan. Where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of tariff:
- 2) Provided that the Commission may, in appropriate cases, consider equity higher than 30% for the purpose of determination of tariff, where the generating company or the licensee is able to establish to the satisfaction of the Commission that deployment of equity more than 30% is in the interest of the general public: .
- 3) The debt and equity amounts arrived at in accordance with sub-regulation (1) above shall be used for all purposes including for determining interest on loan, return on equity, Advance against Depreciation and Foreign Exchange Rate Variation.

4) Provided that in the case of an Integrated Utility, till the time it remains Integrated Utility, it shall be entitled to return on its capital base as per Schedule VI to the repealed Electricity (Supply) Act, 1948."

The above stated Regulations mandate the debt equity ratio for the assets deployed, post the commencement of the JERC Tariff Regulations 2009. Further, as detailed earlier the Commission has considered the actual capitalization as Rs. 80.97 crore during the FY 2015-16. For the purpose of funding of the capitalization, the Commission has considered the normative debt equity ratio of 70:30, whereby it has considered the addition in normative loan at Rs. 56.68 crore and the opening normative loan of Rs. 83.31 crore as approved by the Commission in its APR Order dated 6th April 2016 for the FY 2015-16. Repayment for the year has been considered as 10% of the opening loan. Further, the Commission has considered the weighted average interest rate (SBI PLR) for the FY 2015-16 (https://www.sbi.co.in/portal/web/interest-rates/benchmark-prime-lending-rate-historical-data) which works to 14.29% instead of 14.75% as claimed by the Petitioner.

The calculation for the interest on the normative loan is given in the Table below:

Table 3-13: Interest and Finance Charges approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16			
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
1	Opening Normative Loan	83.31	83.30	83.31	
2	Add: Normative Loan during the year	12.09	43.33	56.68	
3	Less: Normative Repayment 10% of Opening Loan (10% of 1)	8.33	8.33	8.33	
4	Closing Normative Loan (1+2-3)	87.07	118.30	131.66	
5	Average Normative Loan (1+4) * 0.5	85.19	100.80	107.49	
6	Rate of Interest (SBI PLR)	14.29%	14.75%	14.29%	
7	Interest on Normative Loan	12.17	14.87	15.36	

Therefore, the Commission approves interest and finance charges of Rs 15.36 crore in the True-up for the FY 2015-16.

3.13. Interest on Working Capital

Petitioner's Submission:

The interest on Working Capital has been claimed in accordance with Regulation 29 of the Tariff Regulations 2009. It has been calculated by the same methodology as adopted by the Commission in its Tariff Order for the FY 2015-16 for arriving at the Working Capital

requirement, whereby it has excluded the Consumer Security Deposits available with the Petitioner from the Working Capital requirement.

The interest on Working Capital has been computed as Rs. 1.02 crore at the rate of 14.75% (SBI PLR) against Rs. 4.85 crore approved by the Commission in its Order dated 6th April 2016 for the FY 2015-16.

Commission's Analysis:

As per Regulation 29 of the Tariff Regulations, 2009:

- "(3) Subject to prudence check, the working capital for integrated utility shall be the sum of one month requirement for meeting:
 - a. Power purchase cost
 - b. Employees cost
 - c. Administration & general expenses
 - d. Repair & Maintenance expenses.
 - e. Sum of two month requirement for meeting Fuel cost.
- (4) The rate of interest on working capital shall be equal to the short term Prime Lending Rate of State Bank of India on the 1st April of the relevant financial year. The interest on working capital shall be payable on normative basis notwithstanding that the generating company / licensee has not taken working capital loan from any outside agency or has exceeded the working capital loan amount worked out on the normative figures."

The Commission has considered the calculation of the different components of the working capital on the basis of the above-stipulated norms. The Commission has deducted Consumer Security Deposit from the working capital requirement considered for the True-up of the ARR for the FY 2015-16. The Commission has considered the SBI PLR as applicable as on 1st April 2015. (https://www.sbi.co.in/portal/web/interest-rates/benchmark-prime-lending-rate-historical-data)

The detailed calculations of the interest on the Working Capital are as mentioned below:

The Petitioner has submitted that the security deposit of Rs. 53.99 crore has been considered as available for the FY 2015-16. The Commission sought further details of the security deposit for the FY 2015-16 in the data gaps. In response to the query raised by the Commission, the Petitioner has submitted the details as shown in the following Table:

Table 3-14: Details of security	denosit as submitted	l by the Petitioner	(Rs crore)
Table 3-14. Details of security	uebosit as submittet	a dv die i eddoliei	11/2: (10161

Particulars	Opening as on 1st April, 2015	Closing as on 31st March, 2016	Average
DD/Cash	41.67	44.46	43.06
BG	59.65	69.24	64.44
FDR	9.55	12.30	10.92
Total	110.86	126.00	118.43

The Commission notes that the average security deposit held in cash/DD by the Petitioner for the FY 2015-16 is Rs. 43.06 crore instead of Rs. 53.99 crore.

As the amount held in cash/DD is available to the Petitioner to meet its working capital requirement, the Commission has considered the same as available to meet the Working Capital requirement for the FY 2015-16. Further, the Commission has considered the (SBI of 14.75% 01st interest rate PLR) as on April 2015 (https://www.sbi.co.in/portal/web/interest-rates/benchmark-prime-lending-ratehistorical-data).

The calculation for the interest on the Working Capital is given below:

Table 3-15: Interest on Working Capital approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16				
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)		
1	Power Purchase Cost for one month	69.84	58.31	57.85		
2	Employee Cost for one month	0.88	1.04	1.04		
3	A&G Expenses for one month	0.56	0.50	0.50		
4	R&M Expenses for one month	0.96	1.05	1.05		
5	Total Working Capital for one month	72.24	60.90	60.44		
6	Security Deposit	39.34	53.99	43.06		
7	Total Working Capital after deduction of Security Deposit from Working Capital Requirement	32.89	6.91	17.38		
8	SBI PLR Rate (%)	14.75%	14.75%	14.75%		
9	Interest on Working Capital	4.85	1.02	2.56		

Therefore, the Commission approves Rs. 2.56 crore as Interest on Working Capital in the True-up of the FY 2015-16.

3.14. Interest on Security Deposit

Petitioner's Submission:

An amount of Rs 3.45 crore has been claimed as the interest on security deposit from consumers for the FY 2015-16.

Commission's Analysis:

In terms of the Section 47 (4) of the Electricity Act, 2003 'the distribution licensee is required to pay interest on security deposit collected from consumers equivalent to bank rate or more as may be specified by the Commission'.

As detailed in Section 3.13, average security deposit of Rs 43.06 crore is available with the Petitioner against Rs 53.99 crore claimed in the True-up Petition for the FY 2015-16.

The Commission further observes that the opening amount of security deposit as on 1st April, 2015 now submitted by the Petitioner varies from the closing amount for the FY 2014-15 (as approved by the Commission during the True-up of the FY 2014-15 on the basis of past submissions of the Petitioner).

The Commission directs the Petitioner to submit the details and impact of such variation in the ARR of the FY 2014-15 and the same shall be factored in during the Tariff determination process for the next financial year.

Keeping in view the above, the Commission has considered the opening and closing security deposit as submitted by the Petitioner in reply to the data gaps. The interest on security deposit has been considered as Rs 3.45 crore as submitted by the Petitioner and verified from the audited accounts.

The calculation of the interest on the Consumer Security Deposit is as follows:

Table 3-16: Interest on Security Deposit approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

			FY 2015-16	
Sr. No.	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)
1	Opening Security Deposit	39.34		41.67
2	Add: Deposits during the Year			
3	Less: Deposits refunded			
4	Closing Security Deposit	39.34		44.46
5	Average Security Deposit	39.34		43.06
6	Bank Rate	8.50%		8.50%
7	Interest on Security Deposit	3.34	3.45	3.45*

^{*} Works out to be Rs. 3.66 Crores, however claimed at actuals.

Therefore, the Commission approves an amount of Rs. 3.45 crore as interest on security deposit in the True-up of the FY 2015-16.

3.15. Return on Capital Base

Petitioner's Submission:

Return on Capital Base/ Net Fixed Assets has been calculated as per Regulation 23 (2) and Regulation 24 of the Tariff Regulations 2009. The Commission is requested to allow the Return on Net Fixed Assets of Rs. 7.46 crore for the FY 2015-16.

Commission's Analysis:

ED-DD being an integrated utility is entitled to return on capital base as per Regulation 23 of the Tariff Regulations 2009. Hence the Commission approves Return on capital base on the basis of GFA and cumulative depreciation as on 01st April 2015 as submitted by the Petitioner and as verified from the audited accounts as per the following Table:

Table 3-17: Return on Capital Base approved by the Commission for the True-up of the FY 2015-16 (In Rs. crore)

		FY 2015-16			
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
1	Gross block at beginning of the FY/Opening GFA or equity	387.14	387.13	387.14	
2	Accumulated depreciation/Addition in Equity at beginning of the FY	138.42	138.42	138.42	
3	Net block at beginning of the FY /Closing Equity	248.72	248.71	248.72	
4	Reasonable return @3% of NFA till FY 16	7.46	7.46	7.46	

Therefore, the Commission approves an amount Rs. 7.46 crore as Return on Net Fixed Assets (NFA) in the True-up of the FY 2015-16.

3.16. Non-Tariff Income

Petitioner's Submission:

Non-Tariff Income comprises of metering, late payment charges, interest on staff loans, income from trading, reconnection fee, UI sales/Sales to Exchanges and miscellaneous income amongst others. The Non-Tariff Income approved by the Commission in the APR for the FY 2015-16 was Rs. 19.02 crore. The Commission is requested to approve Non-Tariff Income of Rs 18.28 crore for the FY 2015-16.

The Commission has verified the Non-Tariff income submitted by the Petitioner from the audited accounts, which is correct and hence approves the same. The Non-Tariff Income as submitted by the Petitioner and approved by the Commission is shown in the Table below:

Table 3-18: Non-Tariff Income approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16				
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)		
1	Meter Service Rent	1.04	1.10	1.10		
2	Late Payment Surcharge	9.85	11.20	11.20		
3	Misc. Receipts/Income	8.13	5.99	5.99		
	Total	19.02	18.28	18.28		

Therefore, the Commission approves the Non-Tariff Income of Rs 18.28 crore in the True-up for the FY 2015-16.

3.17. Aggregate Revenue Requirement in the True-up of the FY 2015-16

Petitioner's Submission:

Based on the True-up for the FY 2015-16, the Commission is requested to approve an ARR of Rs. 755.47 crore.

Commission's Analysis:

The Commission has considered and approved the True-up of the ARR for the FY 2015-16 based on the items of expenditure discussed in the preceding paragraphs. The same has been summarized (vis-à-vis the Petitioner's claim in the true-up Petition for the FY 2015-16) in the Table below:

Table 3-19: Aggregate Revenue Requirement approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16			
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)	
1	Cost of power purchase for full year	838.03	699.71	699.71	
2	Penalty towards under-achievement of T&D losses			(5.47)	

		FY 2015-16				
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)		
3	Employee costs	10.51	12.45	12.45		
4	Administration and General Expenses	6.77	6.03	6.03		
5	Repair and Maintenance Expenses	11.55	12.60	12.60		
6	Depreciation	19.79	19.28	19.28		
7	Interest and Finance charges	12.17	14.87	15.36		
8	Interest on Working Capital	4.85 1.02		2.56		
9	Interest on Security Deposit	3.34 3.45		3.45		
10	Return on NFA /Equity	7.46	7.46	7.46		
11	Income Tax	-	-	-		
12	Total Revenue Requirement	914.47	776.87	773.45		
13	Less: Non-Tariff Income	19.02	18.28	18.28		
14	Less: Revenue from Surplus Power Sale through Exchange/UI	9.77	3.13	3.13		
15	Net Revenue Requirement	885.68	755.47	752.04		

The Commission approves net revenue requirement for the FY 2015-16 in the Trueup at Rs. 752.04 crore.

3.18. Revenue at approved Retail Tariff for True-up of the FY 2015-16

Petitioner's Submission:

The actual revenue for the FY 2015-16 as per the audited accounts is Rs. 779.39 crore (including Rs (-) 8.94 crore on account of FPPCA charges and Rs. 24.49 crore on account of open access charges) as against Rs. 847.41 crore approved by the Commission in its APR Order dated 6th April, 2016.

Commission's Analysis:

As per audited accounts for the FY 2015-16, the total income of the Petitioner including Non-Tariff income and revenue from sale of surplus power is Rs. 800.80 crore. After subtracting the Non-Tariff Income of Rs. 18.28 crore and revenue from sale of surplus power of Rs. 3.13 crore, the total revenue works out to Rs. 779.39 crore. As shown in the table below, the Commission has also considered the impact of FPPCA of Rs. (-) 8.94 crore and Rebate of Rs. (-) 0.19 crore for working out the revenue from sale of power as Rs. 788.52 crores inclusive of revenue Rs. 24.49 crore from open access consumers:

Table 3-20: Revenue from sale of power inclusive of revenue from open access consumers approved by the Commission for the True-up of the FY 2015-16 (Rs. crore)

Particulars	Amount
Total Income As per Accounts	800.80
Less: NTI	18.28
Less: Revenue from sale of surplus power / UI Sale	3.13
Total Income excluding revenue from Non-Tariff income and sale of surplus power	779.39
Less: FPPCA	(8.94)
Less: Rebate	(0.19)
Revenue from sale of power (including revenue from open access)	788.52

Therefore, the Commission approves the net revenue from the sale of power to the consumers of the UT as Rs 788.52 crore in the True-up for the FY 2015-16.

3.19. Revenue Gap/ (Surplus) for True-up of the FY 2015-16

Petitioner's submission:

The Commission approved the standalone revenue gap of Rs. 38.27 crore in its Order dated 6th April 2016 and cumulative surplus of Rs. 116.55 crore. Based on the True-up for the FY 2015-16 the Petitioner requested the Commission to approve the standalone surplus of Rs. 23.92 crore and cumulative surplus of Rs. 158.84 crore.

Commission's analysis:

The Commission, considering the carry forward surplus from the FY 2014-15 along with holding cost and also the revenue for the Petitioner including FPPCA, has arrived at the revenue gap/ (surplus) for the FY 2015-16. Standalone and cumulative revenue Gap/(Surplus) as approved by the Commission for the FY 2015-16 is shown in the Table below:

Table 3.21: Revenue Gap/(Surplus) approved by the Commission for True-up of the FY 2015-16 (Rs. crore)

		FY 2015-16				
Sr. Particulars		Approved in Order dated 6 th April, 2016	rder d 6 th Submission (True-up) (True			
1	Net Revenue Requirement	885.68	755.47	752.04		
2	Less: Revenue from Retail Sales including Open Access	847.41	779.39	788.52		
3	Net Gap / (Surplus)	38.27	(23.92)	(36.48)		
4	Less: Recovery on account of PPC variations/(Refund of			(8.94)		

			FY 2015-16				
Sr. No	Particulars	Approved in Order dated 6 th April, 2016	Petitioner's Submission (True-up)	Approved by the Commission (True-up)			
	Excess)						
5	Standalone Gap/(Surplus) after adjusting PPC variations	38.27	(23.92)	(27.54)			
6	Add: Gap/(Surplus) for the previous year	(134.92) (134.92)		(134.92)			
7	Add: Carrying Cost / (Holding Cost)	(19.90)		(21.92)			
8	Add: Past Arrears/Refunds to Consumers/Rebate			0.19			
9	Cumulative Gap/ (Surplus) as on 31st March 2016	(116.55)	(158.84)	(184.19)			

The Commission, considering the standalone revenue surplus of Rs. 27.54 crore for the FY 2015-16 along with holding cost of Rs. 21.92 crore on the carry forward cumulative surplus of Rs. 134.92 Crores from previous years, has arrived at the revenue surplus of Rs. 184.19 crore and approves the same in the True-up of the FY 2015-16.

Chapter 4. Review of the FY 2016-17

4.1. Applicable Provisions of MYT Regulations, 2014

The review of the FY 2016-17 is to be carried out as per the following provisions of Regulation 8 of MYT Regulations, 2014:

- "8. Annual Review of Performance and True-up
- (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 Review of the FY 2016-17

The Annual Performance Review for the FY 2016-17 has been undertaken considering the actual information for the first 6 months for energy sales and power purchase (quantum and cost), and projecting the same for the remaining 6 months.

The revised estimates of the FY 2016-17 for the 0&M Expenses are based on the norms approved in the Business Plan Order dated 9th December 2015.

4.3.Energy Sales

Petitioner's Submission:

The revised estimates of the energy sales for the FY 2016-17 are 1752.78 MU. The actual energy sales on the Petitioner's periphery (excluding open access sales) in the first six months of the FY 2016-17 are 876.39 MU. Further, the overall sales are significantly dependent on HT/EHT consumers (81.20% of total sales).

Commission's Analysis:

The Commission has noted the actual audited sales figures for the FY 2015-16 and six months unaudited sales figures for the FY 2016-17. The Commission has considered the revised base figures as submitted by the Petitioner for the FY 2015-16 and the historical trend in growth for projecting sales for the FY 2016-17. The detailed category wise sales to retail consumers for the FY 2016-17 (excluding open access sales) as approved by the Commission are shown below:

Table 4-1: Sales approved by the Commission for the Review of the FY 2016-17 (MU)

S. No.	Category / Consumption Slab	Petitioner's Submission (APR)	Approved by Commission (APR)	
Α	Domestic	103.22	92.09	
1	0-50 units		0.16	
2	51-200 units		12.22	
3	201 - 400 units	103.22	18.78	
4	401 and above		60.84	
5	Low Income Group (LIG)		0.10	
В	Commercial	47.80	54.34	
1	1- 100 units	47.80	21.73	
2	101 and above units	47.00	32.61	
C	Agriculture	2.59	2.63	
1	Up to 10 HP	2.59	1.83	
2	Above 10 HP	2.39	0.80	
D	LTP Industry	164.83	167.69	
E	Public Lighting	6.72	7.62	
F	Public Water Works	2.86	2.81	
G	НТ	1,423.20	1,438.40	
1	11/66 kV		1,006.34	
2	HT Ferro	1,423.20	432.06	

S. No.	Category / Consumption Slab	Petitioner's	Approved by	
Н	Hoardings/Signboards	-	-	
I	Temporary	1.56	-	
J	Total	1,752.78	1,765.59	

Therefore, the Commission approves the total sales of 1,765.59 MU in the Review of the ARR for the FY 2016-17.

4.4. Open Access Sales and Energy Savings

Petitioner's Submission:

Open access sales have been estimated as 436.86 MU with the estimated open access purchase of 444.14 MU. Energy savings for the FY 2016-17 have been estimated as 0.35 MU.

Commission's Analysis:

The Commission has estimated the Open Access purchase for the FY 2016-17 based on the actual purchase verified from REA till December, 2016 as 467.43 MU as against the Open Access purchase of 444.14 MU estimated by the Petitioner. The Commission has increased the Open Access sales in the same proportion as estimated by the Petitioner. Thus the Commission approves the estimated Open Access sales of 459.77 MU for the FY 2016-17 against 436.86 MU submitted by the Petitioner.

Further, the Commission has considered the energy savings of 0.35 MU at the same level as submitted by the Petitioner.

4.5.Intra-State Transmission & Distribution Loss

Petitioner's Submission:

The distribution losses of 8.50% as approved by the Commission in its last Tariff Order have been considered for the FY 2016-17.

Commission's Analysis:

The Commission has retained the loss level of 8.50% as approved in the MYT Order dated 6th April, 2016 in the Review of the FY 2016-17. However, the sharing of gain/loss on account of over/under-achievement of the target specified by the Commission shall be dealt with in the True-up of the FY 2016-17 on the basis of actual T&D loss level and the audited figures of the quantum of power purchase and sales for the FY 2016-17.

Accordingly, the Commission has considered the T&D loss level of 8.50% for the purpose of Review of ARR of the FY 2016-17.

4.6.Inter-State Transmission losses

Petitioner's Submission:

Inter-State losses has been considered at 3.66% for estimating the power availability at the periphery for FY 2016-17 as approved in the MYT Order dated 6th April, 2016..

Commission's Analysis:

In the Tariff Order dated 6th April 2016, the Commission had approved 3.66% as the inter-State transmission loss for the FY 2016-17.

Since the recent 52 weeks moving average of regional losses is working out as 3.69% till January 2017, the Commission approves the same in the Review of ARR of the FY 2016-17.

4.7. Power Purchase Quantum & Cost for the FY 2016-17

Petitioner's Submission:

The revised estimates of the FY 2016-17 are based on six months actuals and the remaining six months projections. For projection of the power purchase quantum for the remaining 6 months of the FY 2016-17, firm and infirm allocation from various generating stations has been considered. Further, the per unit variable cost, fixed cost and other charges for the remaining period have been considered at the same level as the actuals from April 2016 to September 2016. Also, the Ministry of Power has allocated 1.93% (38 MW) power on a long-term basis from RGPPL.

Till September 2016, 3.28 MU of solar energy have already been procured from own ground mounted and rooftop solar plants. For the remaining six months, another 3.28 MU of Solar power is considered to be procured from its own generation.

Also, Solar certificates corresponding to 12 MU will be purchased to meet its Solar obligation till FY 2016-17.

5.28 MU of physical Non-Solar energy has been purchased from HPSEBL and Non Solar certificates corresponding to 13.33 MU have been purchased. To meet its Non-Solar obligation for the FY 2016-17, 50 MU of Non-Solar energy is proposed to be purchased during the remaining six months of the FY 2016-17.

Accordingly, the Commission is requested to approve the revised power purchase cost of Rs 753.27 crore towards the purchase of power of 2043.57 MU.

The Commission has approved the power purchase cost of Rs. 964.22 crore including transmission charges towards purchase of 2167.83 MU in its Tariff Order dated 6th April 2016 for the FY 2016-17.

The Commission, as part of its prudence check has verified the station-wise power purchase bills as submitted by the Petitioner for the FY 2016-17 for the first six months. The Commission observes that there is variation in the revised submission (in response to data gaps as submitted by the Petitioner) in the quantum of power purchased from VSTPP 1, Kawas GPP, Gandhar GPP, KHSTPS 2, and KAPPS vis-à-vis, the quantum mentioned in the REA reports. The Commission has considered the power purchase quantum for the first six months of the FY 2016-17 as mentioned in the REA reports maintained by the WRPC. The quantum of power purchase (verified from REA, excluding purchase by the open access consumers) and cost of power purchase (including transmission charges, verified from power purchase bills) are mentioned in the Table below:

Table 4-2: Power Purchase (MU) and Cost (Rs crore) for the FY 2016-17 (April to September)

		Energy (MU)			Cost (Rs. crore)			
Sr. No.	Particulars	APR Submission	Actuals as per REA (six Months)	Difference	Fixed	Variable	Other	Total
A	NTPC							
1	KSTPP 1&2	186.73	186.73	-	8.80	29.61	(0.42)	37.99
2	KSTPP 3	24.86	24.86	-	3.15	4.01	0.43	7.59
3	VSTPP 1	46.79	47.05	(0.26)	2.81	8.57	0.29	11.67
4	VSTPP 2	27.01	27.01	-	1.86	4.76	0.24	6.86
5	VSTPP 3	44.07	44.07	-	4.23	7.65	2.15	14.03
6	VSTPP 4	50.53	50.53	-	6.64	8.84	(0.03)	15.45
7	VSTPP 5	33.31	33.31	-	4.18	5.76	0.29	10.23
8	KAWAS GPP	21.48	25.41	(3.94)	8.23	5.75	(0.27)	13.71
9	GANDHAR GPP	52.35	85.90	(33.55)	10.40	18.89	(0.52)	28.77
10	SIPAT 1	97.16	97.16	-	11.95	13.52	1.00	26.47
11	SIPAT 2	38.25	38.25	-	4.30	5.47	1.47	11.24
12	KHSTPS 2	7.44	6.14	1.30	0.77	1.66	(0.00)	2.43
13	MAUDA	9.67	9.67	-	8.25	2.51	(0.49)	10.27
В	NSPCL	249.41	249.41	-	44.58	38.85	(4.48)	78.95
1	BHILAI (ALLOCATED)	249.41	249.41	-	44.58	38.85	(4.48)	78.95
С	NPCIL	44.22	43.64	0.58	-	13.41	-	13.41
1	KAPPS	-	(0.58)	0.58	-	-	-	-
2	TAPPS 3&4	44.22	44.22	-	-	13.41	-	13.41

]	Energy (MU)			Cost (Rs. crore)			
Sr. No.	Particulars	APR Submission	Actuals as per REA (six Months)	Difference	Fixed	Variable	Other	Total	
D	OTHERS	4.52	4.52	_	0.65	0.86	_	1.51	
1	RGPPL	4.52	4.52	-	0.65	0.86	-	1.51	
E	UI		49.78	(49.78)		11.26		11.26	
Е	RPO	8.56	8.56	(0.00)	-	2.48	-	2.48	
1	Solar	3.28	3.28	-	-	-	-	-	
2	Non Solar	5.28	5.28	(0.00)	-	2.48	1	2.48	
F	Other Charges							36.41	
1	PGCIL CHARGES							34.21	
2	MSTCL							1.96	
3	WRLDC							0.24	
	TOTAL	946.34	1031.99	(85.65)	120.79	183.89	(0.35)	340.74	

Power Purchase Quantum and Cost for the remaining six months of the FY 2016-17

The Petitioner has firm allocation in the Central Sector Generating Stations of NTPC, NPCIL, NSPCL and other stations. The Commission while estimating the energy availability for the Petitioner has considered the following assumptions:

A) Power Purchase Quantum for the FY 2016-17

- **Allocation of Share:** The Commission has considered the firm and infirm allocation from various generating stations as per the allocation specified in the notification dated 30th January 2017 of WRPC.
- Gross Energy Availability: The Commission has estimated the gross energy availability from the existing stations based on the installed capacity and the average plant load factor for the past five years. The availability from each station has been considered based on merit order dispatch. The net energy sent out has been considered after considering the applicable auxiliary consumption as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and as approved by the Commission in its Tariff Order dated 6th April 2016. As mentioned in the foregoing paragraphs of this Order, the Commission has considered the separate effect of UI overdrawal / under-drawal for the FY 2016-17 (First Six Months); therefore the UI over-drawal of 49.78 MU (verified from the weekly UI bills as available with WRPC) under UI

mechanism for the FY 2016-17 is considered for the purpose of Review of the ARR of the FY 2016-17.

The Petitioner in reply to the specific query raised by the Commission submitted the following details of power procurement through renewable energy sources and REC purchase for first six months based on actuals, and projected for the remaining six months of the FY 2016-17:

Table 4-3: Details of purchase of renewable power and REC for the FY 2016-17 as submitted by Petitioner (MU)

Particulars	FY 2016-17					
rai ticulai s	First six Months	Remaining six Months	Total			
Physical Power (Total)	8.56	53.28	61.84			
Solar	3.28	3.28	6.56			
Non Solar	5.28	50.00	55.28			
REC (Total)	13.33	12.00	25.33			
Solar	0.00	12.00	12.00			
Non Solar	13.33	0.00	13.33			
Total (REC + Physical Power)	21.89	65.28	87.17			
Solar	3.28	15.28	18.56			
Non Solar	18.61	50.00	68.61			

As detailed in Section 4.8 the Commission has estimated the total Renewable Purchase Obligation for the FY 2016-17 as 29.13 MU for Solar and 56.50 MU for Non solar renewable power, whereas the Petitioner has planned to procure 18.56 MU from Solar and 68.61 MU from Non solar sources. Further as detailed in Section 4.8, there will still be shortfall equivalent to 10.57 MU of Solar purchase, which will be met through REC purchase and has additionally been factored by the Commission while approving the power purchase cost for the FY 2016-17.

• **Energy Available to the Petitioner:** The effective share from the stations is applied on the energy sent out to arrive at the energy available for the Petitioner from the respective stations.

The Commission has considered the following assumptions to arrive at the Power purchase cost for the remaining six months of the FY 2016-17:

B) Power Purchase Cost for the FY 2016-17

• **Fixed Charges:** The fixed charges are considered based on the formula specified for the stations in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. The Annual Fixed Charges for each station have been taken as per the latest Tariff Orders for the respective stations as applicable.

• **Variable Charges:** The Commission has considered the actual average per unit variable charges for the period April 2016 to September 2016 (as verified by the Commission from the power purchase bills submitted by the Petitioner) for the remaining six months of the FY 2016-17.

Approved Power Purchase Quantum and Cost for the FY 2016-17

For determining the power purchase cost, merit order dispatch principles have been applied. The must-run stations have been considered at the top of the merit order and variable cost incurred for meeting the energy requirement within the State has been calculated from the plants within the merit order. The transmission charges for the FY 2016-17 for the first six months have been considered as per the actuals as per bills submitted by the Petitioner and for the remaining six months as per applicable POC charges as determined by CERC in its Order No.L-1/44/2010-CERC Dated 28th July 2016. The other Charges (MSTCL etc.) have been extrapolated for the full FY based on actual six months of the FY 2016-17.

Considering the substantial reduction in Tariff for solar and wind power in recent auctions/bids, purchase of physical Solar power has been estimated at Rs. 4.00/kWh against Rs. 6.40 /kWh considered by the Petitioner. Further, purchase of physical non-solar power has been estimated at Rs. 4.50/kWh and the same would be revisited at the time of True-up for the FY 2016-17.

Summary of power purchase quantum and cost for October 2016 to March 2017 as considered by the Commission is shown in the following Table:

Table 4-4: Power Purchase quantum (MU) and cost (Rs. crore) considered by the Commission for October 2016 to March 2017

Quantum (MU)	Cost (Rs. crore)					
Quantum (MO)	Fixed	Variable	Other	Total		
1,006.70	160.86	190.21	34.68	385.75		

Based on the above, the total power purchase quantum and cost from various sources (including over-drawal of power under UI mechanism and transmission charges) as approved for the Review of ARR of the FY 2016-17 is shown in the Table below:

Table 4-5: Power Purchase quantum (MU) and cost (Rs. crore) approved by the Commission for the FY 2016-17

Sr.	Particulars	Energy			Per Unit		
No.	Particulars	(MU)	Fixed	Variable	Other	Total	(Paisa/ kWh)
A	NTPC	1,225.26	161.66	207.39	4.13	373.17	305
1	KSTPP 1&2	364.61	20.84	57.83	(0.42)	78.25	215

Sr.	Particulars	Energy	Cost (Rs crore)				Per Unit
No.	Particulars	(MU)	Fixed	Variable	Other	Total	(Paisa/ kWh)
2	KSTPP 3	47.05	6.26	7.60	0.43	14.29	304
3	VSTPP 1	92.10	6.56	16.78	0.29	23.63	257
4	VSTPP 2	58.46	4.09	10.30	0.24	14.63	250
5	VSTPP 3	82.26	8.47	14.28	2.15	24.91	303
6	VSTPP 4	93.47	13.07	16.36	(0.03)	29.40	315
7	VSTPP 5	55.36	8.67	8.49	0.29	17.45	315
8	KAWAS GPP	25.41	17.86	5.75	(0.27)	23.34	918
9	GANDHAR GPP	138.30	23.73	30.42	(0.52)	53.63	388
10	SIPAT 1	180.69	24.71	25.14	1.00	50.85	281
11	SIPAT 2	71.75	9.04	10.25	1.47	20.77	289
12	KHSTPS 2	6.14	4.05	1.66	(0.00)	5.71	929
13	MAUDA	9.67	14.30	2.51	(0.49)	16.32	1,687
В	NSPCL	555.33	104.95	86.50	(4.48)	186.98	337
1	BHILAI (ALLOCATED)	555.33	104.95	86.50	(4.48)	186.98	337
С	NPCIL	115.81		25.71		25.71	222
	KAPPS	31.05	-	25./1	-	25./1	222
1 2	TAPPS 3&4	84.76	-	25.71	-	25.71	303
	14773 304	04.70	<u>-</u>	23.71	<u>-</u>	23.71	303
D	OTHERS	30.68	15.05	5.84	-	20.88	681
1	RGPPL	30.68	15.05	5.84	-	20.88	681
E	UI	49.78		11.26	-	11.26	226
1	UI	49.78	-	11.26	-	11.26	226
F	RPO	61.84		33.72		33.72	
1	Solar	6.56	<u>-</u>	2.62		2.62	400
2	Non Solar	55.28	_	24.88	_	24.88	450
3	Solar REC	33.20		7.90		7.90	150
4	Non Solar REC			2.00		2.00	
G	PXIL/IEX						
77	Other Charges					71.00	
H 1	PGCIL CHARGES					71.08 66.68	
2	MSTCL CHARGES					3.93	
3	WRLDC					0.47	
J	WILLDC					-	
I	TOTAL	2,038.70	281.65	374.10	(0.35)	726.49	356

Therefore, the Commission approves the power purchase cost of Rs. 726.49 crore for procurement of 2038.70 MU of energy (excluding open access purchase) in the Review of the ARR for the FY 2016-17.

4.8. Renewable Purchase Obligation

Petitioner's Submission:

To meet the RPO for the FY 2016-17, the Petitioner has submitted the plan to procure REC and physical power of 18.56 MU from Solar sources and 68.61 MU from Non-solar sources.

Commission's Analysis:

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 4.85% of total consumption from renewable sources for the FY 2016-17 of which 1.65% shall be from Solar.

The RPO status for the FY 2016-17 as per the proposed renewable purchase plan submitted by the Petitioner is shown in the Table below:

Table 4-6: Summary of RPO Compliance up to end of the FY 2016-17 (MU)

Particulars	FY 2016-17
Total	4.85%
Solar	1.65%
Non Solar	3.20%
Sales Within UT (MU)	1,765.59
RPO Obligation	85.63
- Solar	29.13
-Non Solar	56.50
RPO Compliance (Actual Purchase)	61.84
- Solar	6.56
-Non Solar	55.28
RPO Compliance (REC Certificate Purchase)	25.33
- Solar	12.00
-Non Solar	13.33
Total RPO Compliance	87.17
- Solar	18.56
-Non Solar	68.61
Shortfall in RPO Compliance for current year	-1.54

Particulars	FY 2016-17
- Solar	10.57
-Non Solar	-12.11

As seen from the above, there is still shortfall equivalent to 10.57 MU in the compliance to Solar RPO, whereas there is over compliance of 12.11 MU in Non-solar RPO. The Commission has further decided to approve the cost of purchase of REC (both Solar and Non Solar) at the floor price of Rs. 3500 per MWh for Solar RECs and Rs. 1500 per MWh for Non Solar RECs approved by the CERC (http://www.cercind.gov.in/2014/Regulation/ord16.pdf). Thus, the Commission approves the cost of purchase of Solar RECs corresponding to 23.57 MU (12.00 MU projected+10.57 MU shortfall) at Rs 7.90 crore and cost of purchase of Non-Solar RECs corresponding to 13.33 MU at Rs 2.00 crore.

4.9. Surplus Energy Sale/UI sales

Petitioner's Submission:

Rs. 0.40 crore has been claimed as revenue from the sale of surplus power of 3.99 MU during the FY 2016-17.

Commission's Analysis:

The Commission has verified the weekly summary sheets/bills of UI from the WRPC for the FY 2016-17 (Apr-Sept) and for the purpose of this Order has considered the over drawal and under drawal of UI separately.

For the purpose of the review of the FY 2016-17, the Commission has considered the surplus energy sale of 1.05 MU (as verified from the UI bills from the WRPC) under UI mechanism for the FY 2016-17 at Rs. 0.13 crore.

4.10. Energy Balance

Petitioner's Submission:

The overall energy requirement including open access sales at the generator end for the FY 2016-17 is estimated as 2487.71 MU.

Commission's Analysis:

The energy requirement for the FY 2016-17 is drawn based on the approved Inter-State losses, intra-State T&D losses, energy sales to retail consumers and energy sales to open access consumers as discussed in the foregoing paragraphs.

As detailed in previous sections, the Commission has verified actual over-drawal and under-drawal from the UI accounts maintained by the WRPC. Further, the Commission has verified the open access purchase by open access consumers from the REA statement and found drawal to the tune of 467.43 MU in the FY 2016-17.

The energy requirement as submitted by the Petitioner and approved by the Commission in the review of ARR for the FY 2016-17 is shown in the Table below:

Table 4-7: Energy Balance approved by the Commission for the Review of the FY 2016-17 (MU)

		FY 2016-17			
Particulars	Formula	Approved in Order dated 6 th April, 2016	Petitioner's Submission (APR)	Approved by the Commission (APR)	
Energy sales within the State/UT (MU)	a	1,800.47	1,752.78	1,765.59	
Open Access Sales (MU)	b	411.09	436.86	459.77	
Energy Savings (MU)	С	0.35	0.35	0.35	
Total Sales within the State/UT (MU)	d=a+b-c	2,211.21	2,189.29	2,225.01	
T&D (%)	e	8.50%	8.50%	8.50%	
T&D (MU)	f=d/(1-e)-d	205.41	203.38	206.69	
Energy Required at periphery for sale within the state (MU)	g=d+f	2,416.62	2,392.67	2,431.70	
Sales to Common pool consumers / UI sales (MU)	h	103.24	3.99	1.05	
Total energy requirement at state periphery (MU)	i=g+h	2,519.86	2,396.66	2,432.75	
Energy purchased through UI at periphery (MU)	j	-	-	49.78	
Open access purchase at periphery (MU)	k	431.37	444.14	467.43	
Energy required at periphery from tied-up sources (MU)	l=i-(j+k)	2,088.49	1,952.52	1,915.54	
Interstate Losses (%)	m	3.66%	3.66%	3.69%	
Interstate Losses (MU)	n=l/(1-m)-l	79.34	91.05	73.37	
Total requirement from tied up sources at generator end (MU)	o=l+n	2,167.83	2,043.57	1,988.92	
Total requirement from tied up sources & UI at generator end (MU)	p=o+j	2,167.83	2,043.57	2,038.70	
Total requirement in the UT including Open access purchase (MU)	q=p+k	2,599.20	2,487.71	2,506.12	
Gross Availability*	A=B+C+D+ E+F	2,599.20	2,487.71	2,506.12	
Power Purchase from Renewable Sources	В	112.60		61.84	
NPCIL	С	138.99	2 042 57	115.81	
Unscheduled Interchange	D	-	2,043.57	49.78	
Power Purchase from other sources	Е	1,916.23		1,811.27	
Open Access Purchase	F	431.37	444.14	467.43	

^{*} Detailed in section 4.7

4.11. Operation and Maintenance Expenses

(1) Employee Expenses

Petitioner's Submission:

The revised estimate of employee expenses for the FY 2016-17 is Rs. 12.59 crore as compared to Rs. 11.19 crore approved by the Commission in its Tariff Order dated 6th April 2016.

Commission's Analysis:

FY 2016-17

FY 2017-18

As per the Clause 21 (b) of the MYT Regulations, 2014 the norm for employee expenses shall be defined in terms of the combination of the number of personnel per 1000 consumers and the number of personnel per sub-station along with annual expenses per personnel. The Commission in its Tariff Order dated 6th April, 2016 had determined the norm of 4.59 employees per '000 consumers and cost of Rs 3,46,095 per employee (end of the FY 2013-14).

Moving average WPI of the previous 3 years is shown in the following Table:

Financial Year	WPI	% age increase	Avg 3 Years increase
FY 2010-11	143.32	-	-
FY 2011-12	156.13	8.94%	-
FY 2012-13	167.62	7.36%	-
FY 2013-14	177.64	5.98%	-
FY 2014-15	181.19	2.00%	7.43%
FY 2015-16	176.67	-2.49%	5.11%

Table 4-8: Calculation of WPI for projection of Per Employee Cost Norms

Keeping in view of the above mentioned norms and the WPI inflation rates, along with the number of consumers now considered by the Commission, the Commission has recomputed the employee expenses for the review of the FY 2016-17 as follows.

Table 4-9: Employee Expenses computed by the Commission for the FY 2016-17 (Rs. crore)

Sr. No	Particulars		FY 15	FY 16	FY 17
1	Employee Expenses Per Employee	0.035	0.037	0.039	0.040
2	No of Employee Per '000 Consumers				4.59

1.83%

1.83%

Sr. No	Particulars	FY 14	FY 15	FY 16	FY 17
3	No of Consumers '000				61
4	No. of Employees as per norms				279
5	No of Employee submitted by the Petitioner				240
6	No. of Employees finally considered by the Commission				279
7	Employee Expenses				11.10

Accordingly, the employee expenses as projected by the Petitioner and approved by the Commission are as follows:

Table 4-10: Employee Expenses approved by the Commission for the FY 2016-17 (Rs. crore)

Particulars	Approved in Tariff	Petitioner's	Approved by
	Order dated 6 th	Submission	Commission
	April 2016	(APR)	(APR)
Employee Expenses	11.19	12.59	11.10

The Commission approves the employee cost of Rs. 11.10 crore in the Review of the ARR for the FY 2016-17. The treatment of the employee expenses during the True-up would be in accordance with the Provisions of Regulations 9.2, 10 and 11 of the JERC MYT Regulations, 2014.

(2) Administration and General Expenses

Petitioner's Submission:

The revised estimates of A&G expenses for the FY 2016-17 is Rs. 6.34 crore as compared to Rs. 4.99 crore approved by the Commission in its Tariff Order dated 6th April 2016.

Commission's Analysis:

As per the Clause 21 (b) of the MYT Regulations, 2014, the norm for A&G Expenses shall be defined in terms of a combination of A&G expenses per personnel and A&G expenses per 1000 consumers. The Commission reiterates that as per the Regulation provisions for one-time expenses are provided and the same shall be allowed on 'as and when basis' after due prudence check by the Commission. Based on an average of A&G expenses per employee, base A&G expenses per employee of Rs. 154216 have been considered at the end of the FY 2013-14 to be reasonable for the MYT Control Period. Similarly, base A&G expenses per '000 consumers have been considered as Rs. 7,10,652 at the end of the FY 2013-14 to be reasonable for the MYT Control Period. The Commission has considered the weightage of these two factors in the overall A&G computation as 50:50.

Keeping in view the above mentioned norms and the WPI inflation rates, along with the number of consumers now considered by the Commission, the Commission has

recomputed the Administrative and General expenses for the review of the FY 2016-17 as follows:

Table 4-11: A&G Expense computed by the Commission for the FY 2016-17 (In Rs. crore)

Sr. No	Particulars	FY 14	FY 15	FY 16	FY 17
1	Average A&G Expenses Per Employee	0.015	0.017	0.017	0.018
2	Average A&G Expenses Per '000 Consumers	0.071	0.076	0.080	0.082
3	No of Employee				279
4	No of Consumers '000				61
5	A&G Expenses Per Employee - 50%				2.47
6	A&G Expenses Per '000 Consumers - 50%				2.48
7	A&G Expenses				4.96

Accordingly, the A&G expenses as projected by the Petitioner and approved by the Commission are as follows:

Table 4-12: A&G Expenses approved by the Commission for the FY 2016-17 (Rs. crore)

Particulars	Approved in Tariff	Petitioner's	Approved by
	Order dated 6 th	Submission	Commission
	April 2016	(APR)	(APR)
A&G Expenses	4.99	6.34	4.96

The Commission thus approves A&G expenses of Rs. 4.96 crore in the Review of the ARR for the FY 2016-17. The treatment of the A&G expenses during the True-up would be in accordance with the Provisions of Regulation 9.2, 10 and 11 of the JERC MYT Regulations, 2014.

(3) Repair and Maintenance Expenses

Petitioner's Submission:

The revised estimate of R&M expenses for the FY 2016-17 is Rs. 13.01 crore as compared to Rs. 11.98 crore approved by the Commission in its Tariff Order dated 6th April 2016.

Commission's Analysis:

As per the Regulation 21 (b) and 21.2 of the MYT Regulations, 2014, the norm for R&M Expenses shall be defined in terms of percentage of opening gross fixed assets for estimation of R&M expenses. The "K-factor" of 2.76% was considered by the Commission in its Tariff Order dated 6th April, 2016. The Commission has considered the closing GFA of the FY 2015-16 as approved under the True-up process as the opening GFA for the FY

2016-17. Inflation Index (CPI and WPI) has been considered with weightage of 60:40. The average of the CPI Index of the last 3 years is 7.2% and the average of the WPI of the last 3 years is 1.83%. Keeping in view the above, the R&M expenses approved by the Commission for review of the FY 2016-17 are shown in the Table below:

Table 4-13: Repair and Maintenance Expense approved by the Commission for the FY 2016-17 (In Rs. crore)

Sr. No	Particulars	FY 17
1	Opening GFA	468.12
2	K Factor Approved by the Commission	2.76%
3	Inflation index (60:40=CPI:WPI)	5.05%
4	R&M Expenses	13.57

Accordingly, the employee expenses as projected by the Petitioner and approved by the Commission are as follows:

Table 4-14: R&M Expenses approved by the Commission for the FY 2016-17 (Rs. crore)

Particulars	Approved in Tariff	Petitioner's	Approved by
	Order dated 6 th	Submission	Commission
	April 2016	(APR)	(APR)
R&M Expenses	11.98	13.01	13.57

The Commission approves R&M expenses of Rs. 13.57 crore in the Review of the ARR for the FY 2016-17. The treatment of the A&G expenses during the True-up would be in accordance with the Provisions of Regulation 9.2, 10 and 11 of the JERC MYT Regulations, 2014.

Summary of O&M Expense for the FY 2016-17

The O&M expenses as submitted and approved for the FY 2016-17 are as shown below:

Table 4-15: 0&M Expenses approved by the Commission for the FY 2016-17 (Rs. crore)

S. No.	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
1	Employee Expenses	11.19	12.34	11.10
2	A&G Expenses	4.99	6.34	4.96
3	R&M Expenses	11.98	13.01	13.57
	Total O&M Expenses	28.16	31.69	29.63

The Commission based on the analysis done in the foregoing paragraphs, has approved total O&M Expenses of Rs 29.63 crore in the Review of the ARR for the FY 2016-17 as compared to the O&M expenses of Rs. 28.16 crore approved in the Tariff Order dated 6th April 2016.

4.12. Capital Expenditure and Capitalization

Petitioner's Submission:

The capital expenditure and capitalization of Rs. 71.98 crore and Rs. 54.70 crore respectively have been considered which are same as approved by the Commission for the FY 2016-17 in its Tariff Order dated 6th April 2016.

Commission's Analysis:

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for the FY 2016-17 are required to maintain the reliable supply for the consumers of the Petitioner. The Commission also notes that the Petitioner has not sought any deviation in the capital expenditure and capitalization as approved in the MYT Order dated 06th April 2016 and accordingly approves provisional capital expenditure of Rs. 71.98 crore and capitalization of Rs. 54.70 crore in the review of the FY 2016-17.

4.13. GFA and Depreciation

Petitioner's Submission:

The Commission in its Tariff Order dated 6th April 2016 has approved the opening GFA, addition of assets and closing GFA for the FY 2016-17 at Rs. 404.41 crore, Rs. 54.70 crore and Rs. 459.11 crore respectively.

The opening GFA in FY 2016-17 is Rs. 449.21 crore and assets worth Rs. 54.70 crore will be added during FY 2016-17, resulting in the closing GFA at Rs 503.91 crore in the FY 2016-17.

Further, the depreciation has been charged on the basis of the straight-line method, on the Gross Fixed Assets at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets. For computing the depreciation, the depreciation rates as specified in the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 have been applied.

The Commission is requested to approve the depreciation of Rs. 23.73 crore as against depreciation of Rs. 21.69 crore approved by the Commission in its Order dated 6th April, 2016.

Commission's Analysis:

The Commission has considered the closing GFA of Rs 468.12 crore as approved in the previous chapter in the True-up of the FY 2015-16 as the opening GFA of the FY 2016-17. Considering the capitalization of Rs. 54.70 crore as approved in previous section, the closing GFA comes to be Rs. 522.82 crore. Further, the addition in assets for the FY 2016-17 has been considered in the same proportion across different asset classes as per the actual addition in FY 2015-16, subject to the True-up based on the audited accounts.

The depreciation rates for distribution assets as specified by CERC (Terms and Conditions of Tariff) Regulations, 2014 have been used to calculate the depreciation.

The GFA and depreciation approved by the Commission for the FY 2016-17 is shown in the Table below:

S No.	Particulars (Rs Cr)	Approved as per T.0 dated 6 th April 2016	Petitioner's Submission (APR)	Approved by the Commission (APR)
1	Opening Gross Fixed Assets	404.41	449.21	468.12
2	Addition During the FY	54.70	54.70	54.70
3	Closing Gross Fixed Assets	459.11	503.91	522.82
4	Average Gross Fixed Assets	431.76	476.56	495.47
5	Rate of Depreciation (%)	5.02%	4.98%	5.07%
6	Depreciation for the FY	21.69	23.73	25.10

Table 4-16: GFA & Depreciation approved by the Commission for the FY 2016-17

Therefore, the Commission approves the depreciation of Rs 25.10 crore for the Review of the ARR for the FY 2016-17.

4.14. Interest and Finance Charges **Petitioner's Submission**:

The addition in the normative loan has been considered on the assets capitalized during the FY 2016-17 (based on normative debt-equity ratio of 70:30 as per the MYT Regulations 2014). Further the interest rate of 14.75% has been considered for computation of interest cost for long-term loans.

As per Regulation 24 of the MYT Regulations 2014, if the equity actually deployed is more than 30% of the capital cost, then the equity in excess of 30% would be considered as the normative loan. Actual loan or normative loan, if any shall be referred to as gross normative loan. The normative loan outstanding as on 1st April of the MYT Control Period shall be computed by deducting the cumulative repayment as approved by the Commission till 31st March of the current year. Further, the Commission has considered the capitalization of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalization has considered the normative debt equity ratio of 70:30. Repayment has been considered to be equal to the depreciation allowed during the year. The Commission has considered the interest rate (SBI PLR) as for the FY 2016-17 i.e. at the start of the FY 2016-17 i.e. 14.05%. (https://www.sbi.co.in/portal/web/interest-rates/benchmark-prime-lending-rate historical-data).

The calculation for the interest on the normative loan is given in the Table below:

Table 4-17: Interest and Finance Charges approved by the Commission for the FY 2016-17 (In Rs. crore)

Sr. No.	Particulars	Approved as per T.O dated 6 th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
1	Opening Normative Loan	87.07	118.30	131.66
2	Add: Normative Loan during the year	38.29	38.29	38.29
3	Less: Normative Repayment	21.69	23.73	25.10
4	Closing Normative Loan	103.67	132.86	144.85
5	Average Normative Loan	95.37	125.58	138.25
6	Rate of Interest (SBI PLR)	14.05%	14.75%	14.05%
7	Interest on Normative Loan	13.40	18.52	19.42

Therefore, the Commission approves interest and finance charges of Rs 19.42 crores in the Review of the ARR for the FY 2016-17.

4.15. Interest on Working Capital

Petitioner's Submission:

Interest on Working Capital has been claimed in accordance with the Regulation 25 of the JERC MYT Regulations, 2014 at interest rate of 14.75%. Interest on Working Capital of Rs. 2.85 crore has been claimed for the FY 2016-17 as against Rs. 2.89 crore approved by the Commission in its Tariff Order dated 6th April, 2016.

As per Regulation 25 of JERC (Multi Year Distribution Tariff) Regulations 2014, Working capital shall consist of

- 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 rate on working capital has been considered as 9.30% (SBI base rate as on 05th October 2015) as per Regulations i.e. this is the base rate at the start of the relevant FY (https://www.sbi.co.in/portal/web/interest-rates/base-rate-historical-data) because no further rate has been announced.

The calculation for the interest on the normative loan is given below:

Table 4-18: Interest on Working Capital approved by the Commission for the FY 2016-17 (Rs. crore)

Particulars (Rs Cr)	Approved as per T.O dated 6th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
Receivables of 2 Months Billing	150.07	135.14	141.79
Less: Power Purchase Cost 1 Month	80.35	62.77	60.54
Less: Consumer Security Deposit Excl. BG/FDR	39.34	53.99	45.22
Add: Inventory Based on Annual Requirement for Previous FY for 2 months	0.69	0.96	0.96
Total Working after deduction of Security Deposit	31.06	19.34	36.99
SBI Base Rate (%)	9.30%	14.75%	9.30%
Interest on Working Capital	2.89	2.85	3.44

Therefore, the Commission approves interest on Working Capital of Rs 3.44 crores in the Review of the ARR for the FY 2016-17.

4.16. Interest on Security Deposit

Petitioner's Submission:

The Commission in its Tariff Order dated 6th April, 2016 has approved Rs. 3.05 crore as interest payable on consumer security deposits. Further a provision of Rs. 3.45 crore towards payment of interest on consumer security deposits in FY 2016-17 has been made.

The Commission has considered the closing balance of the security deposit of the FY 2015-16 as determined in the previous chapter as the opening balance of the security deposit in the FY 2016-17. Addition in the security deposit has been taken as per the submission made by the Petitioner in the first six months of the FY 2016-17. The Commission has considered the RBI Bank Rate (as on 1st April 2016 i.e. 7.75%) for calculation of the Interest rate and the computation of interest on consumer security deposit is shown below:

Table 4-19: Interest on Security Deposit approved by the Commission for the FY 2016-17 (Rs. crore)

Particulars	Approved as per T.O dated 6 th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
Opening Consumer Security Deposit	39.34	39.34	44.46
Net Addition During the year			1.52
Closing Consumer Security Deposit	39.34	39.34	45.97
Average Deposit	39.34	39.34	45.22
Bank Rate	7.75%		7.75%
Interest on Consumer Security Deposit	3.05	3.45	3.50

Therefore, the Commission approves interest on consumer security deposit of Rs 3.50 crores in the Review of the ARR for the FY 2016-17.

4.17. Return on Equity

Petitioner's Submission:

As per the MYT Regulations, 2014, the Petitioner is entitled to Return on Equity (RoE). The RoE has been computed on the actual paid up equity. The Rate of Return has been taken as 16% as per the MYT Regulations. The RoE of Rs. 7.17 crore has been claimed as against Rs. 8.00 crore approved by the Commission in its Order dated 6th April, 2016.

Commission's Analysis:

As per Regulation 27 of the JERC (Multi Year Distribution Tariff) Regulations, 2014, Return on Equity shall be computed on 30% of the capital base or actual equity whichever is lower based on approved capitalization, 16% post tax return on equity shall be considered irrespective of whether the distribution licensee has claimed return on equity in the ARR Petition. Opening equity for the FY 2016-17 has been considered as the closing balance of the FY 2015-16 as per the balance sheet for the FY 2015-16. The Commission has further considered equity addition in the FY 2016-17 equal to 30% of the capitalization approved by the Commission for the FY 2016-17. The same would be subject to True-up on the basis of the audited accounts of the FY 2016-17. Further, RoE should be computed on the

average equity for the FY. It is observed that in the Order dated 6th April, 2016 the RoE had been computed on the closing balance of equity. In the present Order, the Commission has computed the RoE on average equity for the FY. Accordingly, RoE computed by the Commission for the FY 2016-17 is as shown in the Table below:

Table 4-20: Return on Equity approved by the Commission for the FY 2016-17 (Rs. crore)

Sr. No.	Particulars	Approved as per T.O dated 6 th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
1	Opening equity	28.42		41.98
2	Addition in Equity	21.59		16.41
3	Closing Equity	50.01		58.39
4	Average Equity Amount	39.21		50.19
5	Return on Equity	8.00	7.17	8.03

Therefore, the Commission approves Return on Equity of Rs 8.03 crore in the Review of the ARR for the FY 2016-17.

4.18. Non-Tariff Income

Petitioner's Submission:

Rs. 19.14 crore has been claimed towards Non-Tariff income for the FY 2016-17.

Commission's Analysis:

The Commission has escalated the actual Non-Tariff income for the FY 2015-16 by 5% to arrive at the Non-Tariff Income for the FY 2016-17. **The Commission approves an amount of Rs 19.20 crore towards Non-Tariff Income in the Review of the ARR for the FY 2016-17**.

4.19. Aggregate Revenue Requirement for Review of the FY 2016-17

Petitioner's Submission:

Based on the Review for the FY 2016-17, the Commission is requested to approve an ARR of Rs. 821.29 crore.

The Commission has reviewed the various elements of the ARR for the FY 2016-17 based on the items of expenditure discussed in this Chapter and the same have been summarized in the following Table:

Table 4-21: Aggregate Revenue Requirement for the FY 2016-17 (Rs. crore)

		FY 2016-17			
Sr. No	Particulars	Approved as per T.O dated	Petitioner's Submission	Approved by Commission	
		6 th April 2016	(APR)	(APR)	
1	Cost of power purchase for full year	964.22	753.27	726.49	
2	Employee costs	11.19	12.59	11.10	
3	Administration and General Expenses	4.99	6.34	4.96	
4	Repair and Maintenance Expenses	11.98	13.01	13.57	
5	Depreciation	21.69	23.73	25.10	
6	Interest and Finance charges	13.40	18.52	19.42	
7	Interest on Working Capital	2.89	2.85	3.44	
8	Interest on Security Deposit	3.05	3.45	3.50	
9	Return on Equity	8.00	7.17	8.03	
10	Total Revenue Requirement	1,041.40	840.93	815.63	
11	Less: Non-Tariff Income	19.97	19.14	19.20	
12	Less: Revenue from Surplus Power Sale through Exchange/UI	30.97	0.40	0.13	
13	Net Revenue Requirement	990.46	821.39	796.30	

The Commission approves the Aggregate Revenue Requirement of Rs. 796.30 crore in the Review of the ARR for the FY 2016-17.

4.20. Revenue at approved Retail Tariff of the FY 2016-17

Petitioner's Submission:

The projected revenue for the FY 2016-17 stands Rs. 823.96 crore as against Rs. 905.02 crore approved by the Commission in its Tariff Order dated 24th May 2016 respectively

Commission's Analysis:

The revised figures of revenue from the sale of power have been calculated at the approved tariff structure of the FY 2016-17. The Commission has computed the revenue for the FY 2016-17 based on the revised figures of sales approved in the previous sections. The Commission has also estimated the open access income based on open access charges (Rs/kWh) as determined for the applicable category in the Tariff Order dated 6th April 2016.

Further, based on the Petitioner's submission in its response to the data gaps, the Commission has separately considered refund of FPPCA of Rs. 9.57 crore for the period from April to December in FY 2016-17 towards reduction in revenue for the FY 2016-17, which shall be subject to True-up of the FY 2016-17.

Table 4-22: Revenue at Approved Retail Tariff including open access (In Rs. crore)

		FY 2016-17			
S.	Category / Consumption Slab	Approved as per	Petitioner's	Approved by	
No.	Category / Consumption Stab	T.O dated 6th	Submission	Commission	
		April 2016	(APR)	(APR)	
A	Domestic	25.83	19.51	24.26	
1	0-50 units	0.02	2.95	0.02	
2	51-200 units	2.53	7.05	2.35	
3	201 - 400 units	4.33	3.34	4.62	
4	401 and above	18.93	6.16	17.26	
5	Low Income Group (LIG)	0.01	0.01	0.01	
В	Commercial	15.90	15.53	18.04	
1	1- 100 units	5.16	5.07	5.76	
2	101 and above units	10.75	10.47	12.28	
С	Agriculture	0.20	0.20	0.21	
1	Up to 10 HP	0.12	0.13	0.13	
2	Above 10 HP	0.08	0.08	0.08	
D	LTP Industry	63.30	60.27	63.82	
E	Public Lighting	4.67	2.82	3.20	
F	Public Water Works	1.46	1.08	1.08	
G	HT	782.17	710.54	740.10	
1	11/ 66 kV	555.98	506.35	529.04	
2	HT Ferro	226.19	204.19	211.07	
Н	Hoardings/ Signboards	-	-	-	
I	Temporary	-	0.84	-	
		-	-	-	
J	Total	893.52	810.81	850.73	
K	Add: Open Access Income	11.49	13.15	32.18	
L	Gross Revenue	905.02	823.96	882.91	
M	Recovery on account of PPC variations/(Refund of Excess)			(9.57)	
N	Net Revenue	905.02	823.96	873.34	

The Commission has considered the Gross Revenue from the sale of retail power including open access income for the Review for the FY 2016-17 at Rs. 882.91 crore, and Net Revenue of Rs. 873.34 crore after taking into account the refund of the excess amount of Rs. 9.57 crore towards PPC variation, subject to True-up based on the audited accounts of the FY 2016-17.

4.21. Revenue Surplus/Deficit for review of the FY 2016-17

Petitioner's Submission:

The gross revenue surplus for the FY 2016-17 is Rs. 2.57 crore as against the revenue gap of Rs. 76.90 crore approved by the Commission in its Order dated 6th April, 2016. Further the net revenue surplus for the FY 2016-17, including surplus of Rs. 158.84 crore carried forward from the FY 2015-16, works out to Rs. 161.42 crore.

Commission's Analysis:

The Commission considering the carry forward surplus from the FY 2015-16 along with the holding cost and also the revenue for Petitioner including FPPCA has arrived at the revenue gap/ (surplus) for the FY 2016-17. The standalone and cumulative revenue Gap/(Surplus) as approved by the Commission for the FY 2016-17 is shown in the Table below:

Table 4-23: Revenue Gap/(Surplus) approved by the Commission for the FY 2016-17 (Rs. crore)

			FY 2016-17	
Sr. No	Particulars	Approved as per T.O dated 6th April 2016	Petitioner's Submission (APR)	Approved by Commission (APR)
1	Net Revenue Requirement	990.46	821.39	796.30
2	Revenue from Retail Sales including Open Access	913.56	823.96	882.91
3	Net Gap / (Surplus)	76.90	(2.57)	(86.61)
4	Recovery on account of PPC variations/(Refund of Excess)			(9.57)
5	Gap/(Surplus) after adjusting PPC variations	76.90	(2.57)	(77.04)
6	Gap/(Surplus) for the previous year	(116.55)	(158.84)	(184.19)
7	Carrying Cost / (Holding Cost)	(10.84)		(20.71)
8	Past Arrears/Refunds to Consumers/Rebate			
9	Total Gap/ (Surplus)	(50.49)	(161.41)	(281.94)
10	Additional revenue from proposed Tariff	(8.55)		
11	Revenue Gap/ (Surplus), if any, after proposed Tariffs	(41.94)	(161.41)	(281.94)

The Commission approves the estimated revenue surplus of Rs. 281.94 crore including the holding cost of Rs. 20.71 crore on the carry forward surplus from the FY 2015-16 in the Review of the ARR for the FY 2016-17. This estimated revenue surplus is carried over to next year and has accordingly been considered in the ensuing year i.e. FY 2017-18.

Chapter 5. Approval of various ARR components for the ARR of the FY 2017-18

5.1.Approach for Approval of the Aggregate Revenue Requirement for the FY 2017-18

This chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2017-18, approved in the MYT Order dated 6^{th} April, 2016 and recomputes the same considering the actual values of various parameters for the FY 2015-16 as per the audited accounts and H1 figure of the FY 2016-17. The revised ARR for the FY 2017-18 is compared with revenue at the existing tariff (as determined in the MYT Order dated 6^{th} April 2016) for the FY 2017-18 to arrive at revised revenue gap/(surplus) for the year.

5.2. Number of Consumers, Connected Load and Energy Sales

Petitioner's Submission:

The number of consumers, connected load and energy sales for the FY 2017-18 have been projected on the basis of the historical growth till the first half of the FY 2016-17 and the revised figures have been submitted for the approval of the Commission.

Commission's Analysis:

The Commission has projected the number of consumers and sales on the basis of the average growth in the past three years whereas the connected load has been considered the same as submitted by the Petitioner. The Commission has further considered the number of consumers, connected load and energy sales in different slabs in the same ratio as the actuals of the FY 2015-16. The number of Consumers, Connected Load and Sales as submitted by the Petitioner and as approved by the Commission for the FY 2017-18 are as follows:

S No	Categories	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
1.	Domestic	48937	48938	49227
2.	0-50 units			83
3.	51-200 units			6543
4.	201 - 400 units		_	9252

Table 5-1: Number of Consumers approved by the Commission for the FY 2017-18

S No	Categories	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
5.	401 and above			33349
6.	Low Income Group (LIG)			0
7.	Commercial	8668	8633	8564
8.	1- 100 units			3426
9.	101 and above units			5149
10.	Agriculture	1272	1296	1297
11.	Up to 10 HP			0
12.	Above 10 HP			0
13.	LTP Industry	1806	1852	1948
14.	Public Lighting	555	549	539
15.	Public Water Works	109	125	138
16.	НТ	804	796	784
17.	11/66 kV	775		824
18.	HT Ferro	29		24
19.	Hoardings/ Signboards			0
20.	Temporary		0	0
21.	Total	62151	62189	62497

Table 5-2: Connected Load (kVA) approved by the Commission for the FY 2017-18

S No	Categories	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
1.	Domestic including LIG	132124	132124	132124
2.	Commercial	21984	21984	21984
3.	Agriculture	5391	5391	5391
4.	LTP Industry	116537	116537	116537
5.	Public Lighting	1884	1884	1884
6.	Public Water Works	905	905	905
7.	НТ	749158	749158	749158
(a)	11/66 kV	659113		662429
(b)	HT Ferro	90045		86729
	Total	1027983	1027983	1027983

Table 5-3: Sales (MU) approved by the Commission for the FY 2017-18

S No	Categories	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
1.	Domestic	108.99	110.44	96.06
2.	0-50 units	0.18		0.16
3.	51-200 units	14.47		12.74
4.	201 - 400 units	20.47		19.99
5.	401 and above	73.77		63.06
6.	Low Income Group (LIG)	0.10		0.10
7.	Commercial	51.08	51.62	59.13
8.	1- 100 units	20.43		23.65
9.	101 and above units	30.65		35.49
10.	Agriculture	2.56	2.72	2.81
11.	Up to 10 HP	1.84		1.95
12.	Above 10 HP	0.81		0.86
13.	LTP Industry	172.82	168.95	175.16
14.	Public Lighting	12.49	7.19	7.82
15.	Public Water Works	4.14	2.89	2.95
16.	НТ	1572.39	1480.13	1499.91
<i>17.</i>	11/66 kV	1101.27	,	1048.81
18.	HT Ferro	471.12		451.10
19.	Hoardings/ Signboards			
20.	Temporary	0.00	1.56	0.00
21.	Total	1924.47	1825.51	1843.86

Therefore, the Commission approves the total number of consumers at 62,497 with total connected load of 10,27,983 kVA and total sales of 1,843.86 MU for the FY 2017-18.

5.3. Open Access Sales and Energy Savings

Petitioner's Submission:

Open access sales have been estimated as 458.71 MU with the estimated open access purchase of 466.35 MU. Energy savings for the FY 2017-18 have been estimated as 0.35 MU.

Commission's Analysis:

The Commission has estimated the Open Access purchase and sale for the FY 2017-18 by considering 5% growth rate over the approved figures of Rs. 467.43 crore and 459.77 crore for the FY 2016-17. The Commission therefore approves the Open Access sales as 482.75

MU and the Open Access purchase of 490.80 MU. The Commission has considered the energy savings of 0.35 MU at the same level as submitted by the Petitioner.

5.4.Intra –State Transmission and Distribution (T&D) Loss

Petitioner's Submission:

Intra-State Transmission and Distribution Loss has been considered at 8.40% as per the MYT Order dated 6th April 2016 for the FY 2017-18.

Commission's Analysis:

The Commission in its last MYT Order dated 6th April 2016 had approved T&D loss of 8.40% for the FY 2017-18, and retains the same for the Tariff determination process of the FY 2017-18.

5.5.Inter – State Transmission Loss

Petitioner's Submission:

The Inter-State Transmission Loss of 3.66% has been considered for the FY 2017-18.

Commission's Analysis:

The Commission has approved the Inter-State Transmission Loss of 3.69% for the FY 2017-18 based on the recent 52 weeks moving average of regional losses till the end of January, 2017 which would be revised based on actuals during the True-up exercise.

5.6. Power Purchase Quantum & Cost for the FY 2017-18

Petitioner's Submission:

Power Purchase Quantum as projected by the Petitioner:

The Electricity Department has firm and infirm power allocations in Central Sector Generating Stations of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), NTPC Sail Power Company Ltd (NSPCL) and Ratnagiri Gas and Power Private Limited (RGPPL).

For projecting the power availability for the FY 2017-18, average allocation of firm and infirm power from the Western Region generation stations (NTPC and NPCIL) of Western Regional Power Committee has been considered. For projecting the power purchase from the Eastern Region NTPC generating stations, an allocation of 1.30 MW from KhSTPP has been taken into account. Additionally, 70 MW allocation from NSPCL Bhilai power station has been considered.

The power purchase quantum for the FY 2017-18 from the NTPC stations has been calculated based on the installed capacity of each plant and by applying the average PLF for the previous four years (FY 12 to FY 15) 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, FY 2013-14 and FY 2014-15 has been considered.

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

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 considered for full allocation.

As detailed in Section 5.7 regarding the fulfillment of RPO obligations, 45.64 MU of Solar power and 76.67 MU of Non-Solar power shall have to be purchased during the FY 2017-18. The RPO targets shall be met by purchasing Solar and Non-Solar power through the exchange, procuring Solar energy through own generation and by purchasing Renewable Energy Certificates. 31.64 MU of solar power have been considered to be purchased by way of RECs during FY 2017-18 at Rs. 3.50 per unit.

Following assumptions have been considered for projection of power purchase cost for the FY 2017-18:

- Fixed cost for the FY 2017-18 has been projected considering a 5% escalation over the estimated fixed cost for various stations for the FY 2016-17.
- Variable cost for each NTPC generating stations for the FY 2017-18 has been projected considering the increase in the actual average variable cost per unit during FY 2016-17 over FY 2015-16.
- Other charges (tax, incentives, etc.) for the FY 2017-18 have been projected at a level as estimated for the FY 2016-17.
- For nuclear plants i.e. KAPP and TAPP single part Tariff increase in the actual average variable cost per unit has considered for projecting the power purchase cost for the FY 2017-18.

Commission's Analysis:

The power purchase quantum approved by the Commission in its last Tariff Order dated 6th April 2016 for the FY 2017-18 was 2347.04 (excluding open access purchase) at an approved power purchase cost of Rs. 1046.99 crore including transmission charges.

A) Power Purchase Quantum for the FY 2017-18

The Petitioner has firm allocation in the Central Sector Generating Stations of NTPC, NPCIL, NSPCL and other stations. The Commission has considered the following assumptions while estimating the energy availability from the above stations:

- **Allocation of Share:** The Commission has considered the firm and infirm allocation from various generating stations as per the allocation specified in the notification dated 30th January 2017 of WRPC.
- **Gross Energy Availability:** The Commission has estimated the gross energy availability from the existing stations based on the installed capacity and the average plant load factor for the past five years. The availability from each station has been considered based on merit order dispatch. However, the fixed charges are approved for full allocation. The net energy sent out has been considered after considering the applicable auxiliary consumption as per the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 and as approved by the Commission in its Tariff Order dated 6th April 2016. The Commission has not considered any purchase of power from UI overdrawal for the FY 2017-18.

The Petitioner in reply to the specific query raised by the Commission submitted the following details of power procurement through renewable energy sources and REC purchase for the FY 2017-18:

Table 5-4: Details of purchase of renewable power and REC for the FY 2017-18 as submitted by the Petitioner (MU)

Particulars	FY 2017-18
Physical Power (Total)	90.67
Solar	14.00
Non Solar	76.67
REC (Total)	31.64
Solar	31.64
Non Solar	0.00
Total (REC + Physical Power)	122.31
Solar	45.64
Non Solar	76.67

As detailed in Section 5.7 the Commission has estimated the total Renewable Purchase Obligation for the FY 2017-18 as 46.10 MU for Solar and 77.44 MU for Non solar renewable power, whereas the Petitioner has planned to procure 45.64 MU from Solar and 76.67 MU from Non solar sources (including both physical power and RECs). The Commission has considered the REC quantum as per the Petitioner's submission and has also considered the additional REC which would be required to meet the RPO obligation for the FY 2017-18.

B) Power Purchase Cost for the FY 2017-18

The Commission has considered the following assumptions to arrive at the Power purchase cost for the FY 2017-18:

- **Fixed Charges:** The fixed charges are considered based on the formula specified for the stations in the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014. The Annual Fixed Charges for each station have been taken as per the latest Tariff Orders for the respective stations as applicable.
- **Variable Charges:** The Commission has considered the average variable cost for the period April 2016 to September 2016 verified by the Commission from the power purchase bills submitted by the Petitioner for consideration of the per unit variable charges for the FY 2017-18.
- **Merit Order:** For determining the power purchase cost, merit order dispatch principles have been applied. The must-run stations have been assumed at the top of the merit order and the variable cost incurred for meeting the energy requirement within the State has been calculated from the plants at the top of the merit order.
- **Transmission Charges:** The transmission charges for the FY 2017-18 have been considered as per the POC charges applicable as per (Order No.L-1/44/2010-CERC Dated 28.07.2016). The Other Charges (MSTCL etc.) have been considered at the same level as considered for the FY 2016-17.
- **Renewable Power purchase cost:** As also discussed Section 4.7 in this Order, considering the substantial reduction in Tariff for solar and wind power in recent auctions / bids, purchase of physical Solar power has been estimated at Rs. 4.00/kWh. Further, purchase of physical non-solar power has been estimated at Rs. 4.50/kWh and the same would be revisited at the time of True-up for the FY 2017-18. The Commission has further considered the cost of purchase of REC (both Solar and Non Solar) at the revised floor price of Rs. 1000 approved by the CERC applicable from 1st April 2017. The same shall be revisited during the Review and True-up of the FY 2017-18.

Based on the above, the total power purchase quantum and cost from various sources as approved by the Commission for the FY 2017-18 is mentioned below:

Table 5-5: Power Purchased Quantum (MU) and Cost (Rs. crore) approved by the Commission for the FY 2017-18

Sr.			Cost (Rs. crore)			Per Unit	
No.	Particulars	Energy MUs	Fixed	Variable	Other	Total	(Paisa/kW h)
A	NTPC	1,230.30	175.10	209.80	-	384.91	313
1	KSTPP 1&2	354.80	24.09	56.27		80.37	227
2	KSTPP 3	44.27	6.22	7.15		13.37	302

Sr.				Cost (R	s. crore)		Per Unit
No.	Particulars	Energy MUs	Fixed	Variable	Other	Total	(Paisa/kW h)
3	VSTPP 1	89.85	7.50	16.37		23.87	266
4	VSTPP 2	62.72	4.46	11.06		15.51	247
5	VSTPP 3	76.16	8.50	13.23		21.72	285
6	VSTPP 4	85.64	13.82	14.99		28.81	336
7	VSTPP 5	50.44	8.83	6.25		15.08	299
8	KAWAS GPP	78.75	19.27	17.83		37.09	471
9	GANDHAR GPP	154.25	29.40	33.93		63.33	411
10	SIPAT 1	166.61	25.52	23.18		48.70	292
11	SIPAT 2	66.83	9.49	9.55		19.04	285
16	KHSTPS 2		5.91				
17	MAUDA		12.10				
В	NSPCL	610.17	120.74	95.05	-	215.79	354
1	BHILAI (ALLOCATED)	610.17	120.74	95.05		215.79	354
С	NPCIL	143.94	-	24.53	-	24.53	170
1	KAPPS	63.08	-	-	_	-	-
2	TAPPS 3&4	80.86	-	24.53		24.53	303
D	OTHERS	52.18	28.79	-	-	28.79	552
1	RGPPL	52.18	28.79	-		28.79	552
E	RPO	90.67	-	43.39	-	43.39	479
1	Solar	14.00		5.60		5.60	400
2	Non Solar	76.67		34.50		34.50	450
3	Solar REC			3.21		3.21	
4	Non Solar REC			0.08		0.08	
	DVII /IEV						
F	PXIL/IEX						
G	Other Charges	-	-	-	-	59.62	-
1	PGCIL CHARGES	-	-	-	-	55.22	-
2	MSTCL	-	-	-	-	3.93	-
3	WRLDC	-	-	-	-	0.47	-
	TOTAL	9 40 5 0 5	224.62	272 77		757.02	257
Н	TOTAL	2,127.27	324.63	372.77	-	757.02	356

Therefore, the Commission approves the total power purchase quantum of 2127.27 MU and total power purchase cost (including transmission and other charges) of Rs. 757.02 crore for the FY 2017-18.

Further, any variation on account of Fuel and Power Purchase cost shall be calculated as per the formula specified by the Commission and any impact shall be passed directly to the

consumers. The Petitioner will compute fuel and power procurement cost variations on a quarterly basis and adjustment shall be made in the consumer bills starting after a month following the end of the quarter. For the purposes of calculation, the approved per unit cost of power purchase (Rapproved) shall be taken as 326 paisa per unit for the FY 2017-18.

5.7. Renewable Purchase Obligation

Petitioner's Submission:

To meet the RPO for the FY 2017-18, Petitioner has submitted the plan to procure REC and physical power of 45.64 MU from Solar sources and 76.67 MU from Non-solar sources.

Commission's Analysis:

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 total consumption from renewable sources for the FY 2017-18 of which 2.50% shall be from Solar.

The RPO status for the FY 2017-18 as per the proposed renewable purchase plan submitted by the Petitioner is shown in the Table below:

Table 5-6: Summary of RPO Compliance as per the proposed plan submitted by Petitioner up to end of the FY 2017-18 (MU)

Particulars	FY 2017-18
Total	6.70%
Solar	2.50%
Non Solar	4.20%
	(MU)
Sales Within the UT (MU)	1,843.86
RPO Obligation	123.54
- Solar	46.10
-Non Solar	77.44
RPO Compliance (Actual Purchase)	90.67
- Solar	14.00
-Non Solar	76.67
RPO Compliance (REC Certificate Purchase)	31.64
- Solar	31.64
-Non Solar	0.00
Total RPO Compliance	122.31
- Solar	45.64

Particulars	FY 2017-18
-Non Solar	76.67
Shortfall in RPO Compliance for current year	1.23
- Solar	0.46
-Non Solar	0.77

It is observed that as per the plan submitted by the Petitioner, Solar and Non-Solar RPO may have a shortfall of 0.46 MU and 0.77 MU respectively.

5.8.Surplus Energy Sale/UI sales

Petitioner's Submission:

Rs. 1.96 crore has been claimed as revenue from the sale of surplus power of 19.57 MU during the FY 2017-18.

Commission's Analysis:

As detailed in the section 5.6, the Commission has applied merit order dispatch principles in estimating the power procurement requirement of the Petitioner. In view of the same, the Commission has considered Nil sale of surplus power for the FY 2017-18 and thereby Nil revenue for the FY 2017-18. However, in case there is surplus power available with the Petitioner, the same must be sold at optimum rates so as to recover the maximum cost paid at the time of purchase of power.

5.9.Energy Balance

Petitioner's Submission:

The overall energy requirement (including open access) at the generator end for the FY 2017-18 has been assessed as 2608.35 MU.

Commission's Analysis:

The energy requirement for the FY 2017-18 is drawn based on the approved Inter-State losses, intra-State T&D losses, energy sales to retail consumers and energy sales to open access consumers as discussed in the foregoing paragraphs.

The gross energy requirement approved for the FY 2017-18 is shown in the following Table, along with the energy requirement submitted by the Petitioner:

Table 5-7: Energy Requirement approved by the Commission for the FY 2017-18 (MU)

			FY 2017-18	
Particulars	Formula	Approved in Order dated 6 th April, 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
Energy sales within the State/UT (MU)	a	1,924.56	1,825.51	1,843.86
Open Access Sales (MU)	b	431.64	458.71	482.75
Energy Savings (MU)	С	0.35	0.35	0.35
Total Sales within the State/UT (MU)	d=a+b-c	2,355.85	2,283.87	2,326.26
T&D (%)	e	8.40%	8.40%	8.40%
T&D (MU)	f=d/(1-e)-d	216.04	209.44	213.33
Energy Required at periphery for sale within the state (MU)	g=d+f	2,571.89	2,493.31	2,539.59
Sales to Common pool consumers / UI sales (MU)	h	142.18	19.57	-
Total energy requirement at state periphery (MU)	i=g+h	2,714.07	2,512.88	2,539.59
Energy purchased through UI at periphery (MU)	j	-	-	-
Open access purchase at periphery (MU)	k	452.94	466.35	490.80
Energy required at periphery from tied-up sources (MU)	l=i-(j+k)	2,261.13	2,046.53	2,048.79
Interstate Losses (%)	m	3.66%	3.66%	3.69%
Interstate Losses (MU)	n=l/(1-m)-l	85.90	95.47	78.48
Total requirement from tied up sources at generator end (MU)	o=l+n	2,347.04	2,142.00	2,127.27
Total requirement from tied up sources & UI at generator end (MU)	p=o+j	2,347.04	2,142.00	2,127.27
Total requirement in the UT including Open access purchase (MU)	q=p+k	2,799.97	2,608.35	2,618.07
Gross Availability*	A=B+C+D+E+F	2,799.97	2,608.35	2,618.07
Power Purchase from Renewable Sources	В	123.80		90.67
NPCIL	С	175.45	2,141.99	143.94
Unscheduled Interchange	D	-	1,892.	
Power Purchase from other sources	Е	2,047.79		
Open Access Purchase * Datailed in section 5.6	F	452.94	466.35	490.80

^{*} Detailed in section $\overline{5.6}$

Accordingly, the Commission approves the energy requirement of 2127.27 MU (2618.07 MU – 490.80 MU) excluding open access purchase at the generator end for the FY 2017-18.

5.10. Operation and Maintenance Expenses

Petitioner's Submission:

Employee expenses, A&G expenses and R&M expenses have been projected as Rs. 12.73 crore, Rs. 6.66 crore and Rs. 13.53 crore respectively. Thus, the O&M expenses for FY 2017-18 have been projected as Rs. 32.92 crore.

Commission's Analysis:

Employees Expenses

The Commission has already approved the norms for employee expenses (4.59 employees per 1000 consumers and Rs. 3,46,095 per employee - *base FY 2013-14*) in the MYT Order dated 6th April, 2016.

The average WPI increase as considered by the Commission is tabulated below:

Financial Year	WPI	% age increase	Avg 3 Years increase
FY 2013-14	177.64	5.98%	-
FY 2014-15	181.19	2.00%	7.43%
FY 2015-16	176.67	-2.49%	5.11%
FY 2017-18	-	-	1.83%
FY 2017-18	-	-	1.83%

Keeping in view of the above mentioned norms and the WPI inflation rates, along with the number of consumers now considered by the Commission, the Commission has recomputed the employee expenses for the FY 2017-18 as follows:

Table 5.8: Employee expenses as per norms for the FY 2017-18 (Rs crore)

Sr. No	Particulars	FY 14	FY 15	FY 16	FY 17	FY 18
1	Employee Expenses Per Employee	0.035	0.037	0.039	0.040	0.041
2	No of Employee Per '000 Consumers				4.59	4.59
3	No of Consumers '000				61	62
4	No. of Employees as per norms				279	287
5	Employee Expenses				11.10	11.62

Accordingly, the employee expenses as projected by the Petitioner and approved by the Commission are shown in the following Table:

Table 5.9: Employee expenses approved by the Commission for the FY 2017-18 (Rs crore)

		FY 2017-18			
Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
Employee Expenses	12.05	12.73	11.62		

Therefore, the Commission approves employee expenses of Rs. 11.62 crore for the FY 2017-18 and the treatment of the employee expenses during the True-up would be done in accordance with the provisions of Regulation 9.2, 10 and 11 of the MYT Regulations, 2014.

A&G Expenses:

The Commission has already approved the norms for Administrative and General expenses (Rs. 1,54,216 per employee and Rs. 7,10,652 per 1000 consumers - base FY 2013-14, in ratio 50:50) in the MYT Order dated 6th April, 2016.

Keeping in view the above mentioned norms and the WPI inflation rates, along with the number of consumers now considered by the Commission, the Commission has recomputed the Administrative and General expenses for review of the FY 2017-18 as follows:

Table 5-10: A&G Expenses as per Norms (Rs. crore)

Sr. No	Particulars	FY 14	FY 15	FY 16	FY 17	FY 18
1	Average A&G Expenses Per Employee	0.015	0.017	0.017	0.018	0.018
2	Average A&G Expenses Per '000 Consumers	0.071	0.076	0.080	0.082	0.083
3	No of Employee				279	287
4	No of Consumers '000				61	62
5	A&G Expenses Per Employee - 50%				2.47	2.59
6	A&G Expenses Per '000 Consumers - 50%				2.48	2.60
7	A&G Expenses approved				4.96	5.19

Accordingly, the Administrative and General expenses as projected by the Petitioner and approved by the Commission are shown in the following Table:

Table 5.11: Administrative and General expenses approved by the Commission for the FY 2017-18 (Rs crore)

		FY 2017-18				
Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)			
Administrative and general expenses	5.38	6.66	5.19			

Therefore, the Commission approves A&G expenses of Rs. 5.19 crore for the FY 2017-18 and the treatment of the A&G expenses during the True-up would be done in accordance with the provisions of Regulation 9.2, 10 and 11 of the MYT Regulations, 2014.

R&M Expenses

The Commission has already approved the norms for Repair and Maintenance expenses (K-factor of 2.76%) in the Tariff Order dated 6th April, 2016

The average weighted average inflation index as considered by the Commission is tabulated below:

Financial Year	СРІ	%age Increase	WPI	%age Increase	Wt. avg. %age Increase	Avg 3 Years Increase
FY 2009-10	162.75		130.81			
FY 2010-11	179.75	10.45%	143.32	9.56%	10.09%	
FY 2011-12	194.83	8.39%	156.13	8.94%	8.61%	
FY 2012-13	215.17	10.44%	167.62	7.36%	9.21%	
FY 2013-14	236.00	9.68%	177.64	5.98%	8.20%	9.30%
FY 2014-15	250.83	6.29%	181.19	2.00%	4.57%	8.67%
FY 2015-16	265.00	5.65%	176.67	-2.49%	2.39%	7.33%
FY 2017-18						5.05%
FY 2017-18						5.05%

Keeping in view the above mentioned norms and the inflation index, along with the opening GFA (approved in foregoing paragraphs), the Commission has recomputed the Repair and Maintenance expenses for the FY 2017-18 are shown in the following Table:

Table 5-12: R&M Expenses as per norms for the FY 2017-18 (In Rs. crore)

Sr. No	Particulars	FY 18
1	Opening GFA	522.82
2	K Factor Approved by the Commission	2.76%
3	Inflation index (60:40=CPI:WPI)	5.05%
4	R&M Expenses	15.16

Accordingly, the R&M expenses as projected by the Petitioner and approved by the Commission are as follows:

Table 5.13: Repair and Maintenance expenses approved by the Commission for the FY 2017-18 (Rs crore)

	FY 2017-18			
Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)	
Repair and maintenance expenses	13.60	13.53	15.16	

Therefore, the Commission approves R&M expenses of Rs. 15.16 crore for the FY 2017-18 and the treatment of the R&M expenses during the True-up would be done in accordance with the provisions of Regulation 9.2, 10 and 11 of the MYT Regulations, 2014.

O&M Expenses: The overall summary of the O&M expenditure estimated by the Petitioner vis-à-vis that approved by the Commission for the FY 2017-18 is given below:

Table 5-14: 0&M Expenses approved by the Commission for the FY 2017-18 (Rs. crore)

		FY 2017-18				
S. No.	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
1	Employee Expenses	12.05	12.73	11.62		
2	A&G Expenses	5.38	6.66	5.19		
3	R&M Expenses	13.60	13.53	15.16		
4	Total O&M Expenses	31.03	32.92	31.97		

Therefore, the Commission approves an O&M expense of Rs. 31.97 crore for the FY 2017-18.

5.11. Capital Expenditure and Capitalization

Petitioner's Submission:

Total capital investment of Rs. 121.82 crore for the FY 2017-18 along with a capitalization of Rs. 101.88 crore has been projected for the FY 2017-18, which is in line with the amount approved by the Commission in its Order dated 6th April, 2016.

Commission's Analysis:

The Commission observes that the capital expenditure and the capitalization submitted by the Petitioner for the FY 2017-18 is required to maintain the reliable supply for the consumers of the Petitioner.

The Commission also notes that the Petitioner has not sought any deviation in the capital expenditure and capitalization as approved in the MYT Order dated 06^{th} April 2016 and accordingly approves the capital expenditure and capitalization as approved in its Order dated 6^{th} April, 2016 as below:

Table 5-15: Capital Expenditure and Capitalization approved by the Commission for the FY 2017-18 (Rs. crore)

Particulars	FY 2017-18		
Particulars	Projected	Approved	
Capex	121.82	121.82	
Capitalization	101.88	101.88	

5.12. Gross Fixed Assets and Depreciation

Petitioner's Submission:

The closing GFA for the FY 2016-17 has been considered as the opening GFA for the FY 2017-18. Further, GFA addition of Rs. 101.88 crore in FY 2017-18 has been considered to work out the closing GFA of Rs. 605.88 crore for the FY 2017-18.

The depreciation has been computed based on rates specified in CERC (Terms & Conditions of Tariff) Regulations, 2014. Depreciation is charged on the basis of straight-line method on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. Rs. 27.87 crore has been computed as depreciation.

Commission's Analysis:

Regulation 23 of JERC (Multi Year Distribution Tariff) Regulations, 2014 specifies that depreciation for the assets shall be calculated annually at the rates specified by CERC from time to time.

The depreciation rates for distribution assets as specified by CERC (Terms and Conditions of Tariff) Regulations, 2014 have been used to calculate the depreciation.

Table 5-16: Depreciation rate specified by Hon'ble CERC

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

Addition in assets for the FY 2017-18 has been considered in the same proportion of different asset classed as per the actual addition in FY 2015-16, subject to True-up based on the audited accounts.

Accordingly, the Gross Fixed Assets and Depreciation for the FY 2017-18 are computed as follows:

Table 5-17: GFA and Depreciation as approved by the Commission for the FY 2017-18 (Rs. crore)

			FY 2017-18	
S. No.	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
1	Opening Gross Fixed Assets	459.11	503.91	522.82
2	Addition During the FY	101.88	101.88	101.88
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	560.99	605.79	624.70
5	Average Gross Fixed Assets	510.05	554.85	573.76
6	Rate of Depreciation (%)	5.06%	5.02%	5.10%
7	Depreciation for the FY	25.82	27.87	29.27

Therefore, the Commission approves a depreciation of Rs. 29.27 crore for the FY 2017-18.

5.13. Interest on Loan

Petitioner's Submission:

Normative debt-equity ratio of 70:30 has been considered on the assets proposed to be capitalized in the FY 2017-18 as per the MYT Regulations 2014. Further, repayment has been considered equal to depreciation for the FY 2017-18 and the interest rate of 14.75% has been considered for computation of interest cost for long-term loans which is similar to

the prevailing SBI Prime Lending Rate. Accordingly, Rs. 22.80 crore has been computed as Interest on loan.

Commission's Analysis:

As per Regulation 24 of MYT Regulations. 2014, if the equity actually deployed is more than 30% of capital cost, then the equity in excess of 30% would be considered as normative loan. Actual loan or normative loan, if any shall be referred to as gross normative loan. The normative loan outstanding as on 1st April, 2017 shall be computed by deducting the cumulative repayment as approved by the Commission at the end of the FY 2016-17. Further, the Commission has considered the capitalization of assets as approved in the foregoing paragraphs. The Commission for the purpose of funding of the capitalization has considered the normative debt equity ratio of 70:30. Repayment has been considered to be equal to depreciation allowed during the FY. Further, the Commission has considered the interest start of the FY 2017-18 rate (SBI PLR) at i.e. 13.85% (https://www.sbi.co.in/portal/web/interest-rates). The calculation for the interest on the normative loan is given in the Table below:

Table 5-18: Interest on Normative Loan approved by the Commission for the FY 2017-18 (Rs crore)

			FY 2017-18	
S. No.	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
1	Opening Normative Loan	103.67	132.86	144.85
2	Add: Normative Loan during the year	71.32	71.32	71.32
3	Less: Normative Repayment Equal to Depreciation	25.82	27.87	29.27
4	Closing Normative Loan	149.17	176.31	186.89
5	Average Normative Loan	126.42	154.59	165.87
6	Rate of Interest (SBI PLR)	14.05%	14.75%	13.85%
7	Interest on Normative Loan including bank charges	17.76	22.80	22.97

Therefore, the Commission approves an Interest on Loan of Rs. 22.97 crore for the FY 2017-18.

5.14. Interest on Working Capital

Petitioner's Submission:

The Petitioner has computed the Interest on Working Capital for the FY 2017-18 based on normative basis as per the JERC (Multi Year Distribution Tariff) Regulations, 2014.

The working capital requirement for the FY 2017-18 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 rate of interest of 14.75% has been considered for computing the Interest on Working Capital, being the SBI Prime Lending Rate as on 1st April of the year.

Commission's Analysis:

As per Regulation 25 of the MYT Regulations 2014, the Working Capital shall consist of

- 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 rate on Working Capital has been considered as 9.10% (SBI base rate as on 1st April 2017) as per Regulations i.e. the base rate at the start of the relevant FY. The calculation for the interest on the Working Capital is given below:

Table 5-19: Interest on Working Capital approved by the Commission for the FY 2017-18 (Rs crore)

		FY 2017-18			
S. No.	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)	
1	Receivables of 2 Months Billing	161.80	140.60	149.00	
2	Less: Power Purchase Cost 1 Month	87.25	71.46	63.09	
3	Less: Consumer Security Deposit Excl. BG/FDR	39.34	53.99	45.97	
4	Add: Inventory Based on Annual Requirement for Previous FY for 2 months	0.69	1.00	0.96	
5	Total Working after deduction of Security Deposit from Working Capital Requirement	35.89	16.15	40.89	
6	SBAR Rate (%)	9.30%	14.75%	9.10%	
7	Interest on Working Capital	3.34	2.38	3.72	

Therefore, the Commission approves an Interest on Working Capital of Rs. 3.72 crore for the FY 2017-18.

5.15. Interest on Security Deposit

Petitioner's Submission:

Rs. 3.45 crore has been claimed as interest on consumer security deposits during FY 2017-

Commission's Analysis:

The Commission has considered the closing balance of security deposit of the FY 2016-17 as determined in the previous chapter as the opening balance of security deposit in the FY 2017-18. No addition in security deposit has been envisaged by the Commission in the FY 2017-18. The Commission has considered the RBI bank Rate for calculation of Interest rate as on finalization of Order i.e. 6.50% and the detailed computation of interest on consumer security deposit is shown in the following Table:

Table 5-20: Interest on Security Deposit approved by the Commission for the FY 2017-18 (Rs crore)

Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)
Opening Consumer Security Deposit	39.34		45.97
Net Addition During the year			
Closing Consumer Security Deposit	39.34		45.97
Average Deposit	39.34		45.97
Bank Rate	7.75%		6.50%
Interest on Consumer Security Deposit	3.05	3.45	2.99

Therefore, the Commission approves Interest on Security Deposit as Rs. 2.99 crore for the FY 2017-18.

5.16. Return on Equity

Petitioner's Submission:

As per the MYT Regulations 2014, RoE has been computed on the paid up equity and the rate of return has been taken as 16%. An amount of Rs. 12.06 crore has been claimed as RoE as against Rs. 12.89 crore approved by the Commission in its MYT Order dated $6^{\rm th}$ April, 2016.

Commission's Analysis:

As per Regulation 27 of MYT Regulations, 2014, Return on Equity shall be computed on 30% of capital base or actual equity whichever is lower based on approved capitalization. Further, 16% post tax Return on Equity shall be considered irrespective of whether the distribution licensee has claimed return on equity in the ARR Petition. The approved

closing equity for the FY 2016-17 has been taken as the opening equity for FY 2017-18. The Commission has further considered equity addition in FY 2017-18 equal to 30% of capitalization approved by the Commission for the FY 2017-18. RoE has been computed on the average equity for the FY. It is observed that in the Order dated 6th April, 2016 the RoE had been computed on the closing balance of equity. The Commission for determination of ARR for the FY 2017-18 has computed the RoE on average equity for the FY.

Return on Equity as submitted by the Petitioner and approved by the Commission for the FY 2017-18 is as shown in the following Table:

FY 2017-18 **Approved in Tariff** Petitioner's Approved by the **Particulars** Sr. No. Order dated 6th **Submission** Commission April 2016 (ARR) (ARR) **Opening Equity** 50.01 58.39 1 Addition in Equity on Account of New 30.56 2 30.56 Capitalization 80.57 3 Post Tax Equity/Closing Equity 88.96 **Average Equity Amount** 73.68 Return on Equity @ 16% 12.89 12.06 11.79

Table 5-21: Return on Equity approved by the Commission for the FY 2017-18 (Rs crore)

Therefore, the Commission approves Return on Equity of Rs. 11.79 crore for the FY 2017-18.

5.17. Non-Tariff Income

Petitioner's Submission:

Rs. 20.05 crore has been claimed as Non-Tariff income against Rs. 20.97 crore approved by the Commission for the FY 2017-18 in its Order dated 6th April, 2016.

Commission's Analysis:

The Commission has escalated the Non-Tariff income for the FY 2016-17 (as approved in the previous chapter) by 5% to arrive at the Non-Tariff Income for the FY 2017-18 as shown in the following below:

	o. Particulars	FY 2017-18			
Sr. No.		Approved in Tariff Order dated 6 th	Petitioner's Submission	Approved by the Commission	
		April 2016	(ARR)	(ARR)	
1	Total	20 97	20.05	20 16	

Table 5-22: Non- Tariff Income approved by the Commission for the FY 2017-18 (Rs crore)

Therefore, the Commission approves Non-Tariff Income of Rs. 20.16 crore for the FY 2017-18.

5.18. Aggregate Revenue Requirement for the FY 2017-18

Petitioner's Submission:

The Commission is requested to approve the ARR of Rs. 936.98 crore for the FY 2017-18.

Commission's Analysis:

The Commission has considered and approved the Aggregate Revenue Requirement for the FY 2017-18 on the basis of the items of expenditure discussed in the preceding paragraphs in this Chapter and the same has been summarized in the following Table vis-à-vis the Petitioner's submission:

Table 5-23: Aggregate Revenue Requirement approved by the Commission for the FY 2017-18 (Rs crore)

	Particulars	FY 2017-18			
Sr. No		Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)	
1	Cost of power purchase for full year	1,046.99	857.51	757.02	
2	Employee costs	12.05	12.73	11.62	
3	Administration and General Expenses	5.38	6.66	5.19	
4	Repair and Maintenance Expenses	13.60	13.53	15.16	
5	Depreciation	25.82	27.87	29.27	
6	Interest and Finance charges	17.76	22.80	22.97	
7	Interest on Working Capital	3.34	2.38	3.72	
8	Interest on Security Deposit	3.05	3.45	2.99	
9	Return on NFA /Equity	12.89	12.06	11.79	
10	Total Revenue Requirement	1,140.88	958.99	859.74	
11	Less: Non-Tariff Income	20.97	20.05	20.16	
12	Less: Revenue from Surplus Power Sale through Exchange/UI	42.65	1.96	-	
13	Net Revenue Requirement	1,077.26	936.98	839.58	

The Commission approves the Aggregate Revenue Requirement for the FY 2017-18 as Rs. 839.58 crore.

5.19. Revenue from existing Retail Tariff for the FY 2017-18

Petitioner's Submission:

Revenue from sale of power at existing retail Tariff has been estimated at Rs 857.40 crore (including open access revenue) for the FY 2017-18.

Commission's Analysis:

The Commission has observed that there is discrepancy in the data as provided in the Petition and the corresponding information provided in the technical formats by the Petitioner. In the technical formats of the Petition, the Petitioner has submitted the revenue from retail sale of power as Rs 856.99 crore for the FY 2017-18. However for working out the ARR for the FY 2017-18, the Petitioner has considered the revenue of Rs. 857.40 crore (including open access revenue). The Commission has estimated the open access income of Rs. 33.79 crore based on the open access charge as approved by the Commission in the Tariff Order dated 6th April, 2016. The Commission, based on the existing retail Tariff for the FY 2016-17 and approved sales, number of consumers and connected load as discussed in the foregoing paragraphs, has calculated the revenue from retail sale of power for the FY 2017-18 as follows:

Table 5-24: Revenue from Existing Retail Tariff approved by the Commission for the FY 2017-18 (Rs crore)

			FY 2017-18			
S. No.	Category / Consumption Slab	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
A	Domestic	28.12	21.58	25.26		
1	0-50 units	0.02		0.02		
2	51-200 units	2.76		2.45		
3	201 - 400 units	4.72		4.90		
4	401 and above	20.60		17.88		
5	Low Income Group (LIG)	0.01		0.01		
В	Commercial	17.02	18.05	19.63		
1	1- 100 units	5.52		6.37		
2	101 and above units	11.50		13.26		
C	Agriculture	0.21	0.22	0.22		
1	Up to 10 HP	0.13		0.14		
2	Above 10 HP	0.08		0.09		
D	LTP Industry	65.70	64.97	66.52		
E	Public Lighting	5.25	3.05	3.28		
F	Public Water Works	1.57	1.11	1.13		
G	НТ	844.72	733.77	777.94		
1	11/66 kV	600.64		558.21		
2	HT Ferro	244.07		219.73		
Н	Hoardings/ Signboards	-	-	-		
I	Temporary	-	0.84	-		
J	Total	962.58	843.59	893.99		
K	Add: Open Access Income	12.07	13.81	33.79		
L	Gross Total	974.65	857.40	927.78		

Therefore, the Commission approves revenue from existing retail Tariff (including open access income of Rs. 33.79 crore) of Rs. 927.78 crore for the FY 2017-18.

5.20. Revenue Surplus/Deficit at existing Tariff for the FY 2017-18

Petitioner's Submission:

The standalone revenue gap for the FY 2017-18 is Rs. 79.58 crore as against the revenue gap of Rs. 92.65 crore approved by the Commission in its Order dated 6th April, 2016. Further, the cumulative revenue surplus for the FY 2017-18 including surplus of Rs. 161.41 crore till end of the FY 2016-17 works out to Rs. 81.83 crore.

Commission's Analysis:

The Commission considering the carry forward surplus from the FY 2016-17 along with the holding cost and also the revenue for Petitioner including FPPCA has arrived at the revenue gap/ (surplus) for the FY 2017-18. Standalone and cumulative revenue Gap/(Surplus) as approved by the Commission for the FY 2017-18 is shown in the following Table:

Table 5-25: Revenue Gap/(Surplus) at existing Tariff approved by the Commission for the FY 2017-18 (Rs crore)

		FY 2017-18			
Sr. No	Particulars	Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)	
1	Net Revenue Requirement	1,077.26	936.98	839.58	
2	Revenue from Retail Sales including Open Access	984.61	857.40	927.78	
3	Net Gap / (Surplus)	92.65	79.58	(88.20)	
4	Recovery on account of PPC variations/(Refund of Excess)				
5	Gap/(Surplus) after adjusting PPC variations	92.65	79.58	(88.20)	
6	Gap/(Surplus) for the previous year	(41.94)	(161.41)	(281.94)	
7	Carrying Cost / (Holding Cost)			(29.67)	
8	Past Arrears/Refunds to Consumers/Rebate				
9	Total Gap/ (Surplus)	50.71	(81.83)	(399.81)	

The Commission approves the standalone surplus for the FY 2017-18 as Rs. 88.20 crore and the cumulative surplus as Rs. 399.81 crore including holding cost of Rs. 29.67 crore at existing tariff. The treatment of this surplus is dealt in the Chapter "Tariff Philosophy & category wise Tariffs for the FY 2017-18".

Chapter 6. Tariff Philosophy & Category Wise Tariffs for the FY 2017-18

6.1.Preamble

The Commission, in determining the ARR and Retail supply tariff for the FY 2017-18, is guided by the provisions of the Electricity Act, 2003, the Tariff Policy, Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC), and the MYT Regulations, 2014 notified by JERC under Section 64 of the Act which lay down the broad principles for determination of retail tariff.

6.2. Tariff for the FY 2017-18

Petitioner's submission

Considering the standalone revenue gap of Rs. 79.58 crore for the FY 2017-18 and previous year revenue surplus of Rs. 161.41 crore, the cumulative revenue surplus works out to be Rs. 81.83 crore at the end of the FY 2017-18. In view of the estimated revenue surplus of Rs. 81.83 crore at the end of the FY 2017-18, no increase has been proposed in the Tariff for the FY 2017-18. The category wise existing and proposed Tariff is as under:

Table 6-1: Existing and Proposed Tariff for the FY 2017-18 proposed by the Petitioner

		Existing	Proposed (FY 2017-18)		
		Y 2016-17)			
Tariff Structure	Energy		Energy		
	Charges	Fixed Charges	Charges	Fixed Charges	
	(Rs/Kwh)		(Rs/Kwh)		
LT-D/Domestic					
1 st 50 Units	1.20	Rs./Consumer/Month	1.20	Rs./Consumer/Month	
51 to 200 Units	1.80	Single Phase: Rs. 20	1.80	Single Phase: Rs. 20	
201 to 400 Units	2.20	Three Phase: Rs. 45	2.20	Three Phase: Rs. 45	
Beyond 401 Units	2.55	7	2.55		
Low Income Group		Rs. 10/connection		Rs. 10/connection	
		/month		/month	
LT-C/Commercial					
1st 100 Units	2.65	Rs./Consumer/Month	2.65	Rs./Consumer/Month	
Beyond 100 Units	3.65	Single Phase: Rs. 25	3.65	Single Phase: Rs. 25	
		Three Phase: Rs. 50		Three Phase: Rs. 50	
LT- Ag/ Agriculture					
Up to 10 HP per unit	0.70		0.70		
Beyond 10 HP per unit	1.00		1.00		
LTP Motive Power(Including					

		Existing 7 2016-17)	Proposed (FY 2017-18)	
Tariff Structure	Energy Charges (Rs/Kwh)	Fixed Charges	Energy Charges (Rs/Kwh)	Fixed Charges
Public Water Work)				
For the category	3.50	Rs. 25/HP/month	3.50	Rs. 25/HP/month
LT-PL/Public Lighting				
Public Lighting	4.20		4.20	
LT-Public Water Works				
For the category	3.70	Rs. 25/HP/month	3.70	Rs. 25/HP/month
HT				
HTC General Industrial / Motive				
Power 11KV or 66KV having				
CMD above 100KVA				
For all units	4.70	Rs. 105/kVA/month	4.70	Rs. 105/ kVA /month
HT Industrial((Ferro				
Metallurgical/ Steel Melting/				
Steel Rerolling Power Intensive)				
For all units	4.55	Rs. 275/ kVA /month	4.55	Rs. 275/ kVA /month
Hoardings/Sign Boards				
For all units	7.00	Rs. 100/ kVA /month	7.00	Rs. 100/ kVA /month

The Commission is also requested to approve the Fuel Power Purchase Cost Adjustment (FPPCA) formula indicating the "K" factor for the FY 2017-18, which can take care of any variation in the ARR over and above the approved level for the FY 2017-18.

Commission's Analysis

The Commission has approved the standalone surplus for the FY 2017-18 as Rs. 88.20 crore and cumulative surplus as Rs. 399.81 crore at the existing tariff.

Further, while finalizing the Tariff Design for the FY 2017-18, the Commission has taken into consideration the Tariff Policy, 2016 and relevant directions given by the Hon'ble APTEL in the judgment in O.P. no. 1 of 2011 as mentioned below:

The abstract from the Tariff Policy, 2016 relevant for tariff determination is as under:

"8.3. Tariff design: Linkage of tariffs to cost of service

It has been widely recognized that rational and economic pricing of electricity can be one of the major tools for energy conservation and sustainable use of ground water resources. In terms of the Section 61(g) of the Act, the Appropriate Commission shall be guided by the objective that the tariff progressively reflects the efficient and prudent cost of supply of electricity.

The State Governments can give subsidy to the extent they consider appropriate as per the provisions of section 65 of the Act. Direct subsidy is a better way to support the poorer categories of consumers than the mechanism of cross subsidizing the tariff across the board. Subsidies should be targeted effectively and in transparent manner. As a substitute of cross subsidies, the State Government has the option of raising resources through mechanism of electricity duty and giving direct subsidies to only needy consumers. This is a better way of targeting subsidies effectively.

Accordingly, the following principles would be adopted:

- 1. Consumers below poverty line who consume below a specified level, as prescribed in the National Electricity Policy may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply.
- 2. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within $\pm 20\%$ of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.
- 3. While fixing tariff for agricultural use, the imperatives of the need of using ground water resources in a sustainable manner would also need to be kept in mind in addition to the average cost of supply. Tariff for agricultural use may be set at different levels for different parts of a state depending on the condition of the ground water table to prevent excessive depletion of ground water. Section 62 (3) of the Act provides that geographical position of any area could be one of the criteria for tariff differentiation. A higher level of subsidy could be considered to support poorer farmers of the region where adverse ground water table condition requires larger quantity of electricity for irrigation purposes subject to suitable restrictions to ensure maintenance of ground water levels and sustainable ground water usage.
- 4. Extent of subsidy for different categories of consumers can be decided by the State Government keeping in view various relevant aspects. But provision of free electricity is not desirable as it encourages wasteful consumption of electricity. Besides in most cases, lowering of water table in turn creating avoidable problem of water shortage for irrigation and drinking water for later generations. It is also likely to lead to rapid rise in demand of electricity putting severe strain on the distribution network thus adversely affecting the quality of supply of power. Therefore, it is necessary that reasonable level of user charges is levied. The subsidized rates of electricity should be permitted only up to a pre-identified level of consumption beyond which tariffs reflecting efficient cost of service should be charged from consumers. If the State Government wants to reimburse even part of this cost of electricity to poor category of consumers the amount can be paid in cash or any other suitable way. Use of prepaid meters can also facilitate this transfer of subsidy to such consumers.

5. Metering of supply to agricultural/rural consumers can be achieved in a consumer friendly way and in effective manner by management of local distribution in rural areas through commercial arrangement with franchisees with involvement of panchayat institutions, user associations, cooperative societies etc. Use of smart meters may be encouraged as a cost effective option for metering in cases of "limited use consumers" who are eligible for subsidized electricity."

Further, keeping in view the relevant directions given by the Hon'ble APTEL in the judgment in O.P. no. 1 of 2011 as mentioned below, the Commission has taken a considered view in this regard.

Directions given by the Hon'ble APTEL in the Judgment in O.P. no. 1 of 2011 are as follows:

1)	 	 	
2)	 	 	

Quote

- 4) In determination of ARR/tariff, the revenue gaps ought not to be left and Regulatory Asset should not be created as a matter of course except where it is justifiable, in accordance with the Tariff Policy and the Regulations. The recovery of the Regulatory Asset should be time bound and within a period not exceeding seven years at the most and preferably within Control Period. Carrying cost of the Regulatory Asset should be allowed to the utilities in the ARR of the year in which the Regulatory Assets are created to avoid problem of cash flow to the distribution licensee.
- 5) Truing up should be carried out regularly and preferably every year. For example, truing up for the financial year 2009-10 should be carried out along with the ARR and tariff determination for the financial year 2011-12.
- 6) 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."

On detailed analysis of the previous True-ups/APR, the Commission observes that the recovery from approved retail Tariffs is on the higher side as compared to the expenses, thereby resulting in increase in the surplus on standalone as well as cumulative basis. Taking cognizance of this matter, the Commission held another Technical Validation Session with the Petitioner on 11th May 2016. In this meeting, the Petitioner accepted the

surplus situation; and also informed that it has been receiving arrear bills from the CGS and hence the power purchase cost would increase in the FY 2017-18 leading to a decrease in the surplus to some extent. The Commission understands that the Central Electricity Regulatory Commission (CERC) has recently issued Tariff Orders with higher tariffs for the Control Period FY 2014-19, which are applicable on retrospective basis. Based on these Orders, the CGS have now started issuing the bills for the arrears against the power sold from the FY 2014-15 onwards.

The Commission is of the view that as the arrears have to be paid for the power purchase cost incurred in the last 3 years, the cumulative carried forward surplus of Rs. 281.94 crore along with holding cost of Rs. 29.67 crore amounting to Rs. 311.61 crore can be used to settle such arrear amounts.

However, the standalone surplus of Rs. 88.20 crore in the FY 2017-18 has been utilized for giving benefit to the consumers by way of reduction in the energy charges only.

Accordingly, the Commission considers it appropriate to reduce the energy charges by an average of 9.68% for the FY 2017-18 across the board to benefit the consumers of the Petitioner.

The Commission has also received request from the Stakeholders to change the slab of 0-50 units in domestic category to 0-80 units. The Commission has decided to revise the lowest consumption slab of the domestic consumers from the existing 0-50 units to 0-100 units (instead of 0-80 units) to bring it at par with other Union Territories under its jurisdiction.

Accordingly, the approved Tariff for the FY 2017-18 is shown in the Table below:

Revised Tariff Approved for the Existing Tariff for the FY 2016-17 FY 2017-18 Sr. **Category / Consumption Slab Energy Energy** No. **Fixed Charges Fixed Charges** Charges Charges (Rs/kWh) (Rs/kWh) LT-D/Domestic 1. 0-50 Units 1.20 1.10 Rs/Consumer/Month Rs/Consumer/Month 51-100 Units 1.80 1.10 Single Phase: Rs 20 Single Phase: Rs 20 101 to 200 Units 1.80 1.60 Three Phase: Rs 45 Three Phase: Rs 45 201 to 400 Units 2.20 1.95

Table 6-2: Tariff approved by the Commission for the FY 2017-18

Sr.		Existing Tar	Existing Tariff for the FY 2016-17		riff Approved for the FY 2017-18
Sr. No.	Category / Consumption Slab	Energy Charges (Rs/kWh)	Fixed Charges	Energy Charges (Rs/kWh)	Fixed Charges
	Beyond 401 units	2.55		2.30	
	Low Income Group		Rs.10/Connection/ month		Rs.10/Connection/ month
2	LT-C/Commercial				
	1st 100 Units	2.65	Rs/Consumer/Month	2.40	Rs/Consumer/Month
	Beyond 100 Units	3.65	Single Phase: Rs 25 Three Phase: Rs 50	3.25	Single Phase: Rs 25 Three Phase: Rs 50
3	LT- Ag/ Agriculture				
	Up to 10 HP per unit	0.70		0.65	
	Beyond 10 HP per unit	1.00		0.90	
4	LT Industry				
	For the category	3.50	Rs.25.00 / HP / month	3.10	Rs.25.00 / HP / month
5	LT-PL/Public Lighting				
	Public Lighting	4.20		3.75	
6	LT-Public Water Works				
	For the category	3.70	Rs.25.00 / HP / month	3.30	Rs.25.00 / HP / month
7	нт				
Α	HTC General Industrial / Motive Pov	ver 11KV or 66K	V having CMD above 100F	VA	
	For all units	4.70	Rs.105 / KVA / Month	4.15	Rs.105 / KVA / Month
В	HT Industrial (Ferro Metallurgical /	Steel Melting / S	teel Rerolling Power Inte	nsive)	
	For all units	4.55	Rs.275 / KVA / Month	4.10	Rs.275 / KVA / Month
8	Hoardings / Sign Boards				
	For all units	7.00	Rs.100 / KVA / Month	6.20	Rs.100 / KVA / Month

6.3. Revenue from Approved Retail Tariff for the FY 2017-18

The Commission, based on the approved retail Tariff for the FY 2017-18 and approved sales, number of consumers and connected load as discussed in the previous Chapter, has calculated the revenue as follows:

Table 6-3: Revenue computed from Approved Retail Tariff for the FY 2017-18 (Rs. crore)

Sr. No	Category/ Slab of Consumers	Sales	Revenue at Approved Tariff	Average Billing Rate (ABR)*	"K" factor for FPPCA formula for the FY 2017-18
Α	Domestic	96.06	22.93	239	
1	0-100 units	0.16	0.02	122	0.28
2	101-200 units	12.74	2.20	172	0.40
3	201 - 400 units	19.99	4.40	220	0.50

Sr. No	Category/ Slab of Consumers	Sales	Revenue at Approved Tariff	Average Billing Rate (ABR)*	"K" factor for FPPCA formula for the FY 2017-18
4	401 and above	63.06	16.31	259	0.59
5	Low Income Group (LIG)	0.10	0.01	99	
В	Commercial	59.13	17.62	298	
1	1- 100 units	23.65	5.78	244	0.56
2	101 and above units	35.49	11.84	334	0.77
С	Agriculture	2.81	0.20	73	
1	Up to 10 HP	1.95	0.13	65	
2	Above 10 HP	0.86	0.08	90	
D	LTP Industry	175.16	59.51	340	0.78
E	Public Lighting	7.82	2.93	375	0.86
F	Public Water Works	2.95	1.02	344	0.79
G	НТ	1,499.91	699.95	467	
1	11/66 kV	1,048.81	500.52	477	1.09
2	HT Ferro	451.10	199.43	442	1.01
I	Hoardings/ Signboards	-	-	-	-
J	Temporary			-	-
K	Total	1,843.86	804.17	436	1.00
L	Open Access Revenue		33.79		
M	Gross Total		837.96		

^{*} Average Billing Rate means the average revenue realization from the category i.e. revenue/sales and revenue is inclusive of both the fixed charges and variable charges

Table 6-4: Revenue at approved Retail Tariff approved by the Commission for the FY 2017-18 (Rs. crore)

	Category / Consumption Slab		FY 2017-18					
S. No.		Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)				
A	Domestic	28.12	21.58	22.93				
1	0-100 units	0.02		0.02				
2	101-200 units	2.76		2.20				
3	201 - 400 units	4.72		4.40				
4	401 and above	20.60		16.31				
5	Low Income Group (LIG)	0.01		0.01				
В	Commercial	17.02	18.05	17.62				
1	1- 100 units	5.52		5.78				
2	101 and above units	11.50		11.84				
С	Agriculture	0.21	0.22	0.20				
1	Up to 10 HP	0.13		0.13				
2	Above 10 HP	0.08		0.08				

	Category / Consumption Slab	FY 2017-18				
S. No.		Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
D	LTP Industry	65.70	64.97	59.51		
E	Public Lighting	5.25	3.05	2.93		
F	Public Water Works	1.57	1.11	1.02		
G	НТ	844.72	733.77	699.95		
1	11/66 kV	600.64		500.52		
2	HT Ferro	244.07		199.43		
Н	Hoardings/ Signboards	-	-	-		
I	Temporary	-	0.84	-		
J	Total	962.58	843.59	804.17		
К	Add: Open Access Income	12.07	13.81	33.79		
L	Gross Total	974.65	857.40	837.96		
M	Recovery on account of PPC variations/(Refund of Excess)	-	-	-		
N	Net Total Revenue	974.65	857.40	837.96		

The Commission approves the revenue from retail Tariff (including open access income) of Rs. 837.96 crore for the FY 2017-18.

6.4. Revenue Gap/ (Surplus) at approved Tariff for the FY 2017-18

Considering the revised revenue at approved Tariff, the Commission hereby approves the revenue deficit/(surplus) till the FY 2017-18 as follows:

Table 6-5: Revenue Gap/(Surplus) at approved Tariff approved by the Commission for the FY 2017-18 (Rs crore)

		FY 2017-18				
Sr. No	Particulars	Approved in Tariff Order dated 6th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
1	Net Revenue Requirement	1,077.26	936.98	839.58		
2	Revenue from Retail Sales including Open Access	984.61	857.40	837.96		
3	Net Gap / (Surplus)	92.65	79.58	1.62		
4	Recovery on account of PPC variations/(Refund of Excess)					
5	Gap/(Surplus) after adjusting PPC variations	92.65	79.58	1.62		
6	Gap/(Surplus) for the previous year	(41.94)	(161.41)	(281.94)		
7	Carrying Cost / (Holding Cost)			(29.67)		

Sr. No	Particulars	FY 2017-18				
		Approved in Tariff Order dated 6 th April 2016	Petitioner's Submission (ARR)	Approved by the Commission (ARR)		
8	Past Arrears/Refunds to Consumers/Rebate					
9	Total Gap/ (Surplus)	50.71	(81.83)	(311.61)		

As discussed in foregoing paragraphs, the Commission is of the view that as the arrears have to be paid for the power purchase cost incurred in the last 3 years, the cumulative carried forward surplus including holding cost can be settled with such arrear amount.

Accordingly, the Commission directs the Petitioner to adjust the above stated cumulative surplus of Rs 311.61 crore as on 31st March 2017 with the following under intimation to the Commission on quarterly basis duly indicating the surplus utilized and the balance surplus:

- The arrear bills issued by the CGS.
- The refund of excess cross-subsidy surcharge as directed in the Order dated 9th May 2017 in the Petition No. 231/2017.
- Positive FPPCA

Chapter 7. Open Access Charges for the FY 2017-18

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

In order to facilitate open access, the Commission has approved the Open Access Charges for the FY 2017-18. It is seen from the Petitioner's submission that the Transmission and Distribution business have not been segregated and ED-DD continues to function as an integrated utility. In view of the fact that the expenses of the utility are considered and approved on a consolidated basis, the Commission finds it appropriate to approve "Nil" transmission charges for the open access consumers in the UT of Daman and Diu.

7.2. Allocation Matrix

Petitioner's Submission:

Allocation of ARR into wheeling and Retail Supply of Electricity for the FY 2017-18 is shown in the Table below:

Table 7-1: Allocation of ARR between Wheeling and Retail as submitted by the Petitioner (Rs crore)

Annual Revenue Requirement	nual Revenue Requirement Allocation (%)		Allo	Allocation FY 2017-18		
Rs. crore	Wheeling	Supply	Total	Wheeling	Supply	
Fuel Cost	0%	100%	-	-	-	
Power Purchase Cost	0%	100%	857.51	-	857.51	
Employee	70%	30%	12.73	8.91	3.82	
R&M	50%	50%	13.52	6.76	6.76	
A&G	90%	10%	6.67	6.00	0.67	
Depreciation	90%	10%	27.87	25.08	2.79	
Interest Cost on Long-term Capital Loans	90%	10%	22.80	20.52	2.28	
Interest on Working Capital Loans	22%	78%	2.38	0.52	1.86	
Interest on Security Deposit	0%	100%	3.45	-	3.45	
Return on Equity	90%	10%	12.07	10.86	1.21	
Provision for Bad Debt	0%	100%	-	-	-	
Annual Revenue Requirement			958.99	78.65	880.34	
Less: Non-Tariff Income	0%	100%	20.05	-	20.05	
Less: Revenue from Surplus Power Sale	0%	100%	1.96	-	1.96	
Less Revenue from OA consumer	0%	100%	-	-	-	
Net Revenue Requirement			936.98	78.65	858.33	

Commission's Analysis:

As per Regulation 33 of the JERC MYT Regulations 2014,

"Segregation of Wheeling Business and Retail Supply Business

The Distribution Licensee shall maintain separate books of accounts for Wheeling Business and Retail Supply Business for such period until accounts are segregated and separate books of accounts are maintained, the Commission shall decide the ratio of allocation of all expenses and return component, based on data obtained from the Distribution Licensees. The following broad principles shall be followed for allocation of costs towards wheeling business and supply business, out of the total annual revenue requirements determined:

- (a) Power purchase cost shall be allocated to the Supply business;
- (b) Operation and Maintenance expenses shall be segregated between wheeling and supply businesses in such manner as may be determined by the Commission;
- (c) Majority of the capital expenditure related expenses, viz., depreciation, interest and return on equity, shall be included under the wheeling business."

It is evident from the above that there has to be a proper bifurcation of all expenses between functions of the wheeling business (wire business) and the retail supply business of the Petitioner and separate books of accounts have to be maintained.

However, the Commission observes that the Petitioner is yet to provide actual details of bifurcation of expenses. In the absence of these details, the Commission finds it appropriate to continue with the allocation matrix as considered in the last Order. Accordingly, the allocation between the wheeling and the retail supply business for the FY 2017-18 as per the approved ARR in this Order is provided in the following Table:

Table 7-2: Allocation of ARR between Wheeling and Retail as approved by the Commission (Rs. crore)

Douticulous	Allocation (%)		Allocation FY 2017-18			
Particulars	Wheeling	Supply	Total	Wheeling	Supply	
Power Purchase Cost	0%	100%	757.02	0.00	757.02	
Employee	70%	30%	11.62	8.14	3.49	
R&M	50%	50%	15.16	7.58	7.58	
A&G	90%	10%	5.19	4.67	0.52	
Depreciation	90%	10%	29.27	26.35	2.93	
Interest Cost on Long-term Capital Loans	90%	10%	22.97	20.68	2.30	
Interest on Working Capital Loans	22%	78%	3.72	0.82	2.90	
Interest on Security Deposit	0%	100%	2.99	0.00	2.99	
Return on Equity	90%	10%	11.79	10.61	1.18	
Provision for Bad Debt	0%	100%	0.00	0.00	0.00	

Particulars	Allocation (%)		Allocation FY 2017-18		
Particulars	Wheeling	Supply	Total	Wheeling	Supply
Annual Revenue Requirement			859.74	78.84	780.90
Less: Non-Tariff Income	0%	100%	20.16	0.00	20.16
Less: Revenue from Surplus Power Sale	0%	100%	0.00	0.00	0.00
Net Revenue Requirement			839.58	78.84	760.74

7.3. Voltage Wise Wheeling Charges

Petitioner's Submission:

The Petitioner has considered the voltage wise losses for the FY 2017-18 as considered by the Commission in its MYT Order dated 6^{th} April, 2016 and has arrived at a wheeling charge of Rs 0.39/kWh for the FY 2016-17.

Commission's Analysis:

In the absence of the details of bifurcation of assets and expenses, the Commission has decided to continue the determination of wheeling charges for HT/EHT and LT level. Accordingly, the total approved wheeling ARR is bifurcated between the HT/EHT level and LT level based on the sales and losses. The Commission has considered the losses at the HT and EHT level at 1.81% for the FY 2017-18 as per the Energy Audit Report for the FY 2015-16.

To arrive at the network usage, the input energy at each level has been arrived as shown in the Table below:

Table 7-3: Determination of input energy for network usage percentage

Sr. No	Particulars	Unit	Amount
1	Sales at 11 kV and above (HT/EHT Level)	MU	1,499.91
2	Losses in % for HT/EHT Network		1.81%
3	3 Losses in MU for HT/EHT Network		27.65
4	4 Input required for sales at 11 kV & above		1,527.56
5	5 Projected total input at periphery		2,048.79
6 Projection of HT/EHT network usage		%	74.56%
7	Balance proportion of LT network usage	%	25.44%

Accordingly the wheeling cost has been considered in the ratio of 74.56:25.44 and the wheeling charge so arrived has been shown in the following Table:

Sr. No	Particulars	Unit	Formulae	Amount
1	Wheeling Cost	Rs crore	A	78.84
2	Wheeling Cost for HT/EHT network	Rs crore	B=A*74.56%	58.78
3	Input required for sales at 11 kV & above	MU	С	1,527.56
4	Wheeling charges for HT/EHT network usage	Rs/kWh	D=B/C*10	0.38

Table 7-4: Wheeling Charge Approved

Accordingly, the Commission hereby approves wheeling charge for HT/EHT category as Rs 0.38/kWh for the FY 2017-18.

7.4. Cross-Subsidy Surcharge

The Government of India has notified the National Tariff Policy, 2016 on 28th January 2016. The Cross subsidy surcharge is based on the following formula given in the Tariff Policy, 2016 as below:

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 Computation of cross subsidy surcharge for EHT/HT consumers getting supply above 11 KV voltage level is given below.

The cross subsidy surcharge shall be taken as 'Nil' if negative.

The calculation of cross-subsidy surcharge is given below:

Table 7-5: Calculation of "T" Approved

Particular	Sale (MU)	Revenue from approved Tariff (Rs crore)	Average Tariff (Rs/kWh)
T (Tariff payable)	1,499.91	699.95	4.67

Table 7-6: Calculation of "C" Approved

Particulars	Quantum (MU)	Power purchase cost (Rs crore)	Average Cost (Rs/kWh)
Power purchase at generator end excluding open access purchase	2,127.27	757.02	3.56
Less: Interstate Losses	78.48		
C (W. Avg Cost of Power Purchase)	2,048.79	757.02	3.69

Table 7-7: Cross-Subsidy Surcharge Approved

Cross Subsidy Surcharge	Unit	HT & EHT Industry
T (Tariff payable by the relevant category of consumers,	Rs. Per kwh	4.67
including reflecting the Renewable Purchase Obligation)	TOTAL TOTAL TOTAL	1.07
C (per unit weighted average cost of power purchase by the		
Licensee, including meeting the Renewable Purchase	Rs. Per kwh	3.69
Obligations)		
D (aggregate of transmission, distribution and wheeling charge	Rs. Per kwh	0.38
applicable to the relevant voltage level)	NS. I CI KWII	0.30
L (aggregate of transmission, distribution and commercial losses,		
expressed as a percentage applicable to the relevant voltage	%	1.81
level)		
R (per unit cost of carrying regulatory assets)	Rs. Per kwh	0
Surcharge	Rs. Per kwh	0.52

Therefore, the Commission approves cross subsidy surcharge of Rs 0.52 /kWh for the FY 2017-18.

7.5. Application and Agreement Fees

The application and agreement fees are approved as Rs. 5000/- and Rs. 50,000/- respectively.

Chapter 8. Tariff Schedule

8.1. Tariff Schedule

Sr. No.	CATEGORY	FIXED CHARGES PER CONNECTED	ENERGY CHARGES
		LOAD OR PART THEREOF PER MONTH	(Rs./kWh)
1.	DOMESTIC		
i	0-100 units	Rs/Consumer/Month	1.10
ii	101-200 units	Single Phase: Rs 20 Three Phase: Rs 45	1.60
iii	201-400 units	Inree Phase: Rs 45	1.95
iv	401 and above		2.30
v	Low Income Group (Up to 2x40 W bulbs only)	Power supply to low income group connections will be charged at Rs.10 per service connection per month	
		For any unauthorized increase in the load beyond 2*40 watts, penal charges at the rate of Rs.20 per month per point will be levied and the installation will be liable for disconnection.	
2.	COMMERCIAL		
i	1-100 units	Rs/Consumer/Month	2.40
ii	101 units and above	Single Phase: Rs 25 Three Phase: Rs 50	3.25
3.	LT INDUSTRIAL		
i	LTP Motive Power (for all units)	Rs.25.00/- per HP or part thereof	3.10
ii	LT Public Water Works (For all units)		3.30

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. 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.

Sr. No.	CATEGORY	FIXED CHARGES PER CONNECTED	ENERGY CHARGES
		LOAD OR PART THEREOF PER MONTH	(Rs./kWh)
4.	НТ/ЕНТ		
i	High Tension Consumer (For all units)	Rs.105.00/kVA/month or part thereof	4.15
ii	HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive (For all units)	Rs.275.00/- per kVA per month	4.10

1. **Penalty Charges:** Twice the applicable charges.

- 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.
- b) If Industries are overdrawing power by more than 20% of the Contract Demand, their electricity connection will be disconnected immediately.

2. Power Factor Charges

- (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).
- (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).
- (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.
- (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

3. Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 75% of the Contract demand
- (c) Actual Demand Established

5.	AGRICULTURE		
i	For sanctioned load up to 10 HP	-	0.65
ii	Beyond 10 HP and up to 99 HP sanctioned load	-	0.90

1. 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. 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.

Sr. No.	CATEGORY	FIXED CHARGES PER CONNECTED	ENERGY CHARGES			
		LOAD OR PART THEREOF PER MONTH	(Rs./kWh)			
6.	PUBLIC LIGHTING					
i	For all units	-	3.75			
7.	HOARDINGS/SIGNBOARDS					
i	Hoarding/Signboards	Rs.100 per kVA per Month or part thereof	6.20			
8.	Temporary Supply					
	Tariff for Temporary Connection shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both.					
	For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.					
	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.					

8.2. Schedule of Other Charges:

Sr. No.	Description	Charges (in Rs.)
Α	Meter Rent	
1.	Single Phase	Rs.10 per month or part thereof
2.	Three Phase	Rs.25 per month or part thereof
3.	LT Meter with MD indicator	Rs.200 per month or part thereof
4.	Tri- vector Meter	Rs.500 per month or part thereof
	ype of meters to be installed in consumer premises will be decided having connected load above 50 HP will be provided with L.T.M.D	
В	Reconnection Charges	
1.	Single Phase LT	Rs.50
2.	Three Phase LT	Rs.100
3.	HT	Rs.1000
С	Service Connection Charges	
1.	Single Phase LT	Rs.250
2.	Three Phase LT	Rs.1000
3.	HT (First 500 KVA)	Rs.10000
4.	HT (Beyond 500 KVA)	Rs.1000 per 100 KVA or part thereof

Sr. No.	Description	Charges (in Rs.)
D	Extra Length Charges	
1.	Single Phase	Rs.25/meter
2.	Three Phase	Rs.50/meter
	length chargeable will be beyond the permissible 30 meters free for all categories except agriculture. Free length in respect of	
E	Cost of HT Connection	
	of setting up HT connection would be borne by the consumer and e category. 15% supervision charges shall be recovered by ED-DD	
F	Service connection charges for- Under Ground Lines	
1.	Single phase consumers - Area outside municipal limit	Full cost plus 15% supervision charges
2.	Single phase consumers - Area within municipal limit	Rs. 150/- plus Rs. 40/- per meter beyond 30 meters
3.	Three phase consumers - Area outside municipal limit	Full cost plus 15 % supervision charges
4.	Three phase consumers - Area within municipal limit	Rs. 550/- plus Rs. 60 /- per meter beyond 30 meters
	se of all the connections (both industrial and non-industrial) U/ y the Department will have to be provided by the consumer at his	
G	Testing Fee for various Metering Equipment	
1.	Single Phase	100
2.	Three Phase	300
3.	Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	500
4.	Three Phase Tri-vector Meter (0.5 Class) 11 kV HT Consumer	500
5.	Three Phase Tri-vector Meter (0.2 Class) 66KV EHT Consumers	1000
6.	Combined CTPT Unit for 11 KV Consumer	500
7.	66 KV C T / PT Unit	500
8.	Three Phase CT Block	300
9.	CT Coil	100
Н	Fees (Non-refundable) for submission of Test Report of wiring Completion	
1.	Single Phase Lighting / Domestic	10
2.	Three Phase Lighting / Domestic	25
3.	Single Phase Lighting / Non Domestic	50
4.	Three Phase Lighting / Non Domestic	100
5.	Three Phase LT Industries	250
6.	Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	50

Sr. No.	Description	Charges (in Rs.)	
7.	HT Industries up to 500 KVA	1000	
8.	8. HT Industries up to 2500 KVA 5000		
9.	9. HT Industries above 2500 KVA 10000		

8.3.Applicability

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 for 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 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. HT 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.	

Category	Applicability	Point of Supply/Notes
8. Public Lighting		
9. Hoardings / Signboards	This schedule shall apply for supply of Electricity for lighting external advertisements, external hoardings and displays at departments stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations shall be separately metered and charged at the Tariff applicable for "Advertisements and Hoardings" category, except such displays which are for the purpose of indicating / displaying the name and other details of the shop, commercial premises itself. Such use of electricity shall be covered under the prevailing Tariff for such shops or commercial premises. The connection for "Advertisements and Hoardings" category would be covered under the permanent supply of connection.	
10. Temporary Supply	The Temporary Tariff 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.	
	years.	

8.4.General Terms and Conditions

- 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 load, 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 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 provision of the Act and the Supply Code Regulation.
- 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 75% 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 relates to paisa per unit (kWh) charge for 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 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 consumption period for which 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 FPPCA formula separately notified by the Commission under the Regulation. 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 2017-18.

Chapter 9. Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now compulsorily submit:

- The detailed action plan for compliance of all the directives within 1 month of the issuance of this Order.
- The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections within 10 days of the end of each quarter of the calendar year.

9.1.Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to take appropriate action under Section 142 of the Electricity Act 2003 and various other provisions of the Act, and Regulations framed by JERC.

9.1.1. Roadmap for reduction in cross-subsidy

Originally Issued in Tariff Order dated 22nd March 2013

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Petitioner is directed to propose a road map for an increase in the Tariff rate which progressively reduces to bring the gap between per unit Tariff and the average cost of supply over a period of 5 years in two phases i.e. first 3 years from FY 2013-14, FY 2014-15 and FY 2015-16, a review thereafter and further reduction during FY 2016-17 and FY 2017-18.

The Petitioner is directed to submit the report by 30 September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

Petitioner's Response in Present Tariff Petition

ED-DD would like to submit that almost 90% of the sales in the UT of Daman and Diu is HT and EHT sales. In such a scenario it would not be feasible to reduce the cross subsidy and bring the Tariff of the domestic consumers at par with the HT consumers.

Commission's Response

The Commission notes with serious concern that the Petitioner is yet to submit the road map despite repeated directives of the Commission and despite the Petitioner's earlier submissions that report on the road map for reduction of cross subsidy is under preparation, Submitting the fact that almost 90% of the sales in the UT of Daman and Diu are HT and EHT sales as justification for not being able to reduce the cross subsidy cannot be accepted..

The Commission now directs the Petitioner to prepare and submit the above mentioned report within 3 months of issuance of this Order. Any further non-compliance will be viewed very seriously by the Commission.

9.1.2. 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 6th April 2016

The Petitioner is directed to provide the details of voltage wise assets and expenses along with the allocation methodology if any for the determination of voltage wise wheeling charges in the next Tariff Petition.

Petitioner's Response in Present Tariff Petition

The details of voltage-wise assets and expenses along with the allocation methodology shall be submitted to the Hon'ble Commission shortly.

Commission's Response

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..

9.1.3. Management Information System

Originally Issued in Tariff Order dated 22nd March 2013

Commission's Latest Directive in Tariff Order dated 6th April 2016

The Petitioner is directed to submit the quarterly reports in the RIMS formats specified by CERC from the implemented computerized system.

The Petitioner hasn't submitted the Annexure. A copy of the latest report prepared in the RIMS format with RACE (Revenue Administration through Computerized Energy Billing System) shall be

submitted by 30th June 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

Petitioner's Response in Present Tariff Petition

The RIMS format were submitted along with the MYT Petition. The formats were again re-submitted on 15^{th} July 2016 to the Commission. The same have been submitted along with the present Tariff Petition.

Commission's Response

The action taken is noted and the Petitioner is directed to continue submission of the reports on quarterly basis.

9.1.4. Unbundling and Corporatization of Electricity Department as per Electricity Act 2003

Originally Issued in Tariff Order dated 6th April, 2016

Commission's Latest Directive in Tariff Order Dated 6th April 2016

Reforms in the Energy sector are absolutely necessary to overhaul the energy sector to make it more vibrant and commercially, viable. As part of the reforms envisaged, the state government will have to consider seriously, the huge monopolistic role of government departments in the generation, transmission and distribution of electricity in the state.

The Electricity Department, Daman and Diu, in consultation with the Government of Daman and Diu, should initiate action for unbundling of the Electricity Department into separate Generation, Transmission and Distribution Departments duly Corporatizing the same.

The action plan for the same may be submitted to the Commission by 31st December, 2015.

The Commission directs the Petitioner that reforms in the Energy sector are absolutely necessary to overhaul the energy sector to make it more vibrant and commercially, viable. It should initiate action for unbundling of the Electricity Department into separate Generation, Transmission and Distribution Departments duly Corporatizing the same.

Petitioner's Response in Present Tariff Petition

The key function of the EDDD is distribution of electricity in the Union Territory and hence there is very limited scope and usefulness of unbundling the ED-Daman and Diu.

Commission's Response

The Commission has taken a serious view of the fact that the Petitioner is yet to undertake any action on this directive. The Petitioner is directed to take up the matter of unbundling and corporatization of the department with the Government within 3 months of issuance of this Order and submit monthly progress updates for the review of the Commission.

9.1.5. Implementation of Smart Grid

Originally Issued in Tariff Order dated 6th April 2016

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Petitioner is directed to submit a detailed action plan by 30th September 2016 for roll out of smart grid in Daman and Diu within this MYT Control Period.

Petitioner's Response in Present Tariff Petition

Meters under the Energy Management System (EMS) have been installed at the substation and the Distribution Transformers throughout the territory of the UT of Daman and Diu to monitor the loading of the distribution system and also for energy accounting purposes. Further, all the consumers having connected load till 20 HP have also been covered under the EMS to monitor their energy consumption and loading pattern. The ED-DD is now in the process of covering the consumers below 20 HP including the domestic and commercial consumers under the EMS.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner. The Commission directs the Petitioner to complete the Roll-out of Smart Grid in the FY 2017-18 and submit quarterly progress reports to the Commission.

9.1.6. Promotion of Solar Generation

Originally Issued in Tariff Order dated 6th April 2016

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Petitioner is directed to take-up with the Government for formulation of a comprehensive policy for promotion of solar energy in its licensee area especially among the industrial consumers.

Petitioner's Response in Present Tariff Petition

The draft Solar Policy for the UT of Daman and Diu has been prepared and is under the consideration of the Administration. As soon as the Solar Policy is finalized, the same shall be submitted to the Commission.

Commission's Response

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.

9.1.7. Demand Side Management and Energy Conservation

Originally Issued in Tariff Order dated 22nd March 2013

Commission's Latest Directive in Tariff Order Dated 6th April 2016

Even after 8 months as directed earlier by the Commission, the utility is still in the process of sharing the scope of work and not the result of the study. The Commission directs that the process of completion of the study be expedited and the same shall be submitted to the Commission by 30th November 2012.

The Petitioner is directed to submit the details by 30th September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

Petitioner's Response in Present Tariff Petition

The document containing a comprehensive scheme for DSM covering the LED lighting, demand response and peak load shavings etc. is being submitted along with this Petition as Annexure II.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner. The Commission directs the Petitioner to roll out the comprehensive scheme for DSM in the FY 2017-18 and submit monthly progress reports to the Commission.

9.1.8. Enforcement Cell

Originally Issued in Tariff Order dated 22nd March 2013

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Petitioner is directed to submit the status of the functioning of enforcement cell and quarterly progress report detailing number of cases, amount involved sub-judice cases, and reduction in losses as a consequence. The 1st status report for the FY 2011-12, first half of FY 2012-13 i.e. April to September 2012 is to be submitted in the ARR filing for the FY 2013-14.

The Petitioner is directed to ensure submission of the reports on half yearly basis as already directed by 30^{th} September 2016 failing which the Commission will be constrained to take appropriate action under various provisions of Electricity Act 2003 and Regulations framed by JERC.

Petitioner's Response in Present Tariff Petition

The report on the enforcement cell is being submitted along with this Petition as Annexure III.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner. The Commission directs the Petitioner to continue the submission of quarterly status reports to the Commission

9.2. Directives dropped in this Tariff Order

After examining the compliance notes and supporting documents submitted by the Petitioner in the present Petition, the Commission is of the view that since some of the directives have been complied with satisfactorily, these directives are no longer required. No further compliance/status is required to be submitted by the Petitioner for the following directives:

9.2.1. Renewable Purchase Obligation (RPO)

Originally Issued in Tariff Order dated 6th April, 2016

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Commission has taken note of the submission of the Petitioner regarding steps being taken to fulfil the RPO obligation and appreciates efforts being made to fulfil the RPO obligation. The Commission expects that the Petitioner would give priority to obtaining the physical solar and non-solar power. Further, actual compliance would be reviewed at the time of true-up of the respective years and all pending RPOs up-to FY 2014-15 (based on actual) must be accounted for while submitting the data for the FY 2015-16. Supporting details such as purchase of RECs, bills from solar/non-solar plants for the respective years must be duly submitted along with the MYT filing.

The Commission, directs, that all pending RPO obligations up-to FY 2015-16 must be fulfilled by 31st March 2016 and no backlog would be allowed to be carried forward to the Control Period FY 2016-17 to FY 2018-19.

Action taken is noted. The Petitioner is directed to submit the further compliance this directive i.e. fulfillment of RPO up to FY 2015-16 by 30th June 2016.

Petitioner's Response in Present Tariff Petition

The details of RPO purchased by the ED-DD till FY 2015-16 are being enclosed along with this Petition as Annexure IV.

Commission's RESPONSE

The Commission appreciates the efforts undertaken by the Petitioner. The Commission observes that the backlog of RPO has been fulfilled by the Petitioner. Thus, the Commission decides to drop this directive with an advisory that the Petitioner should continue efforts for 100% compliance of Renewable Purchase Obligation as notified by the Commission from time to time.

9.2.2. Billing and Collection Efficiency

Originally Issued in Tariff Order dated 6th April 2016

Commission's Latest Directive in Tariff Order Dated 6th April 2016

The Commission has noted in the submission of the Petitioner that the actual collection efficiency for the FY 2012-13 is 88.56% and for the FY 2013-14 is 92.68%. Such collection figures are very low and Commission does not find such low levels of collection as acceptable. Further, the collection efficiency considered by the Petitioner for the control period is in the range of 95-97% which needs improvement as it directly impacts the revenue stream (on cash basis) of the Petitioner.

The Commission gives strict directions to the Petitioner to improve the collection efficiency and recover timely dues from the consumers. Quarterly status-report in this regard should be submitted to the Commission.

Petitioner's Response in Present Tariff Petition

The report on the collection of arrears is being submitted along with this Petition as Annexure V.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner and decides to drop this directive with an advisory that the Petitioner should continue efforts for the recovery of arrears within the provisions of the Electricity Act 2003 and the Regulations framed thereunder.

9.3. New Directives

9.3.1. Treatment of the accumulated surplus

Commission's latest directive in Present Tariff Order

The Commission directs the Petitioner to adjust the cumulative revenue surplus with:

- 1. The arrear bills issued by CGS.
- 2. The refund of excess cross-subsidy surcharge as directed in the Order dated 09th May 2017 in the Petition No. 231/2017.
- 3. Positive FPPCA

Accordingly, the Petitioner is directed not to levy any FPPCA till this surplus is fully adjusted.

9.3.2. Impact of variation in amount of Security Deposit

Commission's latest directive in Present Tariff Order

As detailed in section 3.13, average security deposit of Rs 43.06 crore is available with the Petitioner against Rs 53.99 crore claimed in the True-up Petition for the FY 2015-16.

The Commission further observes that the opening amount of security deposit as on 1st April, 2015 now submitted by Petitioner varies from the closing amount for the FY 2014-15 (as approved by the Commission during the True-up of the FY 2014-15 on the basis of past

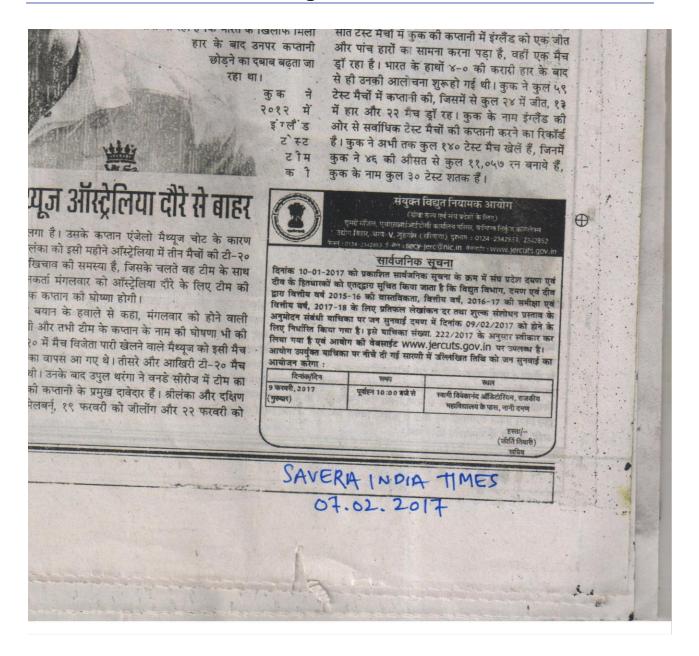
submissions of the Petitioner).

The Commission directs the Petitioner to submit the details and impact of such variation in the ARR of the FY 2014-15 and the same shall be factored in during the Tariff determination process for the next financial year.

Annexure 1: Public Notices published by the Petitioner



Annexure 2: Public Notices published by the Commission for intimation of Public Hearing



Annexure 3: List of Objectors/Stakeholders

The following is the list of the stakeholders who have submitted objections/ suggestions:

Sl. No.	Name of Stakeholder	Representation (in Writing)	Representation (In Person)
1.	Shri Umesh Patel, President (NGO), Youth Action Force, Daman	✓	
2.	Shri K.C.Parekh, Daman Industries	✓	
3.	Shir Vasu Patel, General Secretary, BJP, Daman	✓	
4.	Shri Mohanbhai L. Bamania (Hotelier)	✓	
5.	Shri Ukarda Bava	✓	
6.	Shri Kishorebhai Kapadia - (BJP Secretary)	✓	
7.	Shri Mangeshbhai Aarya – (Chamber of commerce)	✓	
8.	Shri Dipesh Tandel, District President, BJP, Daman District	✓	