TARIFF ORDER

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

Petition No. 245/2017

For

Electricity Department, Government of Puducherry (PED)

28th March 2018

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
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Table of Contents

List of Tables

List of abbreviations

Abbreviation	Full Form
A&G	Administration & General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
Ckt. Km	Circuit Kilometer
COD	Commercial Operation Date
Commission/JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
Cr	Crore
DELP	Domestic Efficient Lightening Program
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
EA 2003	The Electricity Act, 2003
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HP	Horse Power
HT	High Tension
IEX	Indian Energy Exchange Limited
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JERC	Joint Electricity Regulatory Commission for the State of Goa and Union Territories
KSEB	Kerala State Electricity Board
KVA	Kilo Volt Ampere
KWh	Kilo Watt Hour

Abbreviation	Full Form
LT	Low Tension
MOD	Merit Order Dispatch
MU	Million Units
MW	Mega Watt
MYT	Multi-Year Tariff
NFA	Net Fixed Assets
NTPC	National Thermal Power Corporation
O&M	Operation and Maintenance
OHOB	One Hut One Bulb
PED	Electricity Department, Govt. of Puducherry
PGCIL	Power Grid Corporation of India Ltd.
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
PPA	Power Purchase Agreement
PPCL	Puducherry Power Corporation Limited
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Dispatch Centre
SOP	Standard of Performance
SRPC	Southern Regional Power Committee
T&D	Transmission & Distribution
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Limited
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory
WART	Weighted Average Retail Tariff

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Shri. M. K. Goel (Chairperson)

Smt. Neerja Mathur (Member)

Petition No. 245/2017

In the matter of

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

And in the matter of

Electricity Department, Government of Puducherry (PED)..Petitioner

ORDER

Dated: 28th March 2018

a) This Order is passed in respect to the Petition filed by the Electricity Department, Government of Puducherry (PED) (herein after referred to as “The Petitioner” or “PED” or “The Licensee”) for approval of True-up of the FY 2016-17, Annual Performance Review (APR) of the FY 2017-18, Aggregate Revenue Requirement (ARR) and Tariff proposal for the FY 2018-19 before the Joint Electricity Regulatory Commission (herein after referred to as “The Commission” or “JERC”).

b) On receipt of the Petition, the Commission scrutinised its contents and requisitioned further information/clarifications on the data gaps observed in the Petition to take a prudent view. The Commission also held a Technical Validation Session to determine its sufficiency and the veracity of the information submitted. Further, suggestions /comments/objections were invited from the public/stakeholders. A Public Hearing was held and the stakeholders/public were heard. The schedule of activities performed in the course of this quasi-judicial process is given below:

Table 1: Timelines w.r.t the Petition filed by PED

Particular	Details
Date of Admission	7th December 2017
Public Hearing	27th December 2017
Technical Validation Session	2nd January 2018

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

d) The regulatory surcharge as approved shall be applicable for all the bills raised on or after 1st April 2018 onwards and shall remain applicable till further Orders of the Commission.

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

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

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

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

Place: Gurugram
Date: 28th March 2018

(Certified Copy)

Keerti Tewari

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted the Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "the Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2 May, 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" (hereinafter referred to as "JERC" or "the Commission") vide notification no. 23/52/2003-R&R (Vol. II) dated 30th May, 2008.

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

1.2. About Electricity Department, Government of Puducherry (PED)

Puducherry Electricity Department (PED) is a deemed distribution licensee as per section 14 of the Electricity Act 2003, performing the functions of transmission and distribution of electricity in the Union Territory of Puducherry. The only generating station in Puducherry is a 32.5 MW combined cycle gas power plant in Karaikal owned by the Puducherry Power Corporation Limited (PPCL). The entire power requirement of Puducherry is met from the power allocated from the Central Generating Stations, Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO), Kerala State Electricity Board (KSEB) and from Puducherry Power Corporation Limited (PPCL).

1.3. Multi-Year Distribution Tariff Regulations, 2014

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

1.4. Filing and Admission of the Present Petition

The Electricity Department, Government of Puducherry (PED) filed the Petition for True-up of the FY 2016-17, APR of the FY 2017-18 and ARR and Tariff Proposal for the FY 2018-19 vide letter dated 29th November 2017. On preliminary scrutiny of the Petition, certain data gaps were observed on which the reply of the Petitioner was sought. The Petition was also scrutinized in terms of the JERC (Conduct of Business) Regulations, 2009. The Petition was admitted on 7th December 2017 and numbered as Petition No. 245/2017. A letter indicating gaps in the information as well as the documentation was sent to the Petitioner.

1.5. 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 technical due diligence and validation of data of the Petitions filed by the utilities, obtaining and analysing information/clarifications received from the utilities, and submitting relevant issues for consideration of the Commission.

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

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

Table 2: Timelines of the interaction with the Petitioner

S. No	Subject	Date
1	Issue of 1st Discrepancy Note	7th December 2017
2	Reply received from Petitioner	21st December 2017
		27th December 2017
3	Technical Validation Session	2nd January 2018
4	Issue of 2nd Discrepancy Note	2nd January 2018
5	Reply received from Petitioner	13th February 2018
		1st March 2018
		8th March 2018
6	Public Hearing	27th December 2017

1.6. Notice for Public Hearing

The Commission published Public Notices in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing to be conducted by the Commission.

Table 3: Details of Public Notices published by the Commission

S.No.	Date	Name of Newspaper	Language	Place of Circulation
1	12th December 2017	The Daily Thanthi	Tamil	Pondy & Karaikal
2	13th December 2017	The Hindu	English	Chennai
		The Hindu	English	Vizhak (Yanam)
		The Hindu	English	Kochi (Mahe)
3	14th December 2017	Andhra Jyoti	Telugu	Yanam
		Mathrubhumi	Malayalam	Mahe
4	23rd December 2017	The Hindu	English	Chennai
		The Hindu	English	Kochi (Mahe)
		The Hindu	English	Vishaz(Yanam)
5	24th December 2017	The Daily Thanthi	Tamil	Pondy & Karaikal
		The Maalai Malar	Tamil	Pucucherry
		Andhra Jyoti	Telugu	Yanam
		Mathrubhumi	Malayalam	Mahe

The Public Notices were also published by the Petitioner in the following newspapers for inviting objections/ suggestions from the stakeholders on the Tariff Petition:

Table 4: Details of Public Notices published by the Petitioner

S.No.	Date	Name of Newspaper	Language	Place of Circulation
1	9th December 2017	The New Indian Express	English	Chennai
		The New Indian Express	English	Trichy (Karaikal)
		The New Indian Express	English	Kozikode (Mahe)
		The New Indian Express	English	Vijaywada (Yanam)
		The Daily Thanthi	Tamil	Pondy & Tanjore
		Dinakaran	Tamil	Pondy & Trichy (Karaikal)
2	14th December 2017	Janamitra	Telugu	Yanam
3	16th December 2017	Kerala Kaumudi	Malayalam	Mahe

1.7. Public Hearing

The Public Hearing was held on 27th December 2017 from 11:00 am onwards at ""PMSSS Hall, Laporte Street" at Puducherry to discuss the issues related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the hearing have been examined by the Commission. The issues discussed during the public hearing and/or written comment made by the stakeholders, the responses of the Petitioner thereon and the views of the Commission, have been summarized in Chapter 2 of this Order.

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

2.1. Regulatory Process

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

The Public Hearing was held on 27th December 2017 from 11:00 am onwards at Puducherry. During the Public Hearing, a few of the stakeholders who had submitted their comments in writing also presented their views in person before the Commission. Other participants from the general public, who had not submitted written objections earlier, were also given an equal opportunity to present their views/suggestions in respect of the Petition.

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

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

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/observations to make the process responsive and efficient. The submissions of the Stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Increase in tariff would discourage growth of industries in the region

Stakeholder's Comment:

A decrease in energy sales for HT category is observed in previous years, hence, the increase in tariff would only discourage any further expansion or addition in numbers of Industrial consumers.

Petitioner's Response:

Industrial tariff in UT of Puducherry is lower than the neighbouring States. An increase in tariff is sought on account of increased cost of power purchase from the respective Central Generating Stations through its allocated capacity. A HT industrial tariff comparison of PED vis-à-vis the neighbouring States is reproduced below:

Table 5: HT Industrial Tariff Comparison across neighbouring states

States	Fixed Charge	Energy charge	Remarks
Puducherry	Rs 250/kVA/month	Rs 5.25/unit (existing) Rs 5.80/unit (proposed)	-
Tamil Nadu	Rs 350/kVA/month	Rs 6.35/unit	HT industry IA
Kerala	Rs 300/kVA/month	Rs5.50/unit	HT Industry(A)
Andhra Pradesh	Rs 475/kVA/month	Rs 6.33/unit	HT Industry(general) 11kV
Telangana	Rs 390/kVA/month	Rs 6.65/unit	HT Industry(general) 11kV
BESCOM	Rs 210/kVA/month	Rs 6.65/unit(<1lakh units) Rs 6.95/unit(>1 lakh units)	HT2(a)(i)

Based on the above tariff comparison, it is clear that the industrial tariff in UT of Puducherry is comparatively lower than the neighbouring States. Therefore, it is evident that the reason for decrease in Industrial consumers in the UT is not due to higher tariff.

Commission's View:

The Commission has noted the submission of the Petitioner. The Commission is of the view that any extraordinary increase in tariffs that would hamper the interests of the consumers should be avoided but at the same time also believes that the tariff should accurately reflect the cost to serve of a particular category. The Commission while determining the tariff has tried to balance the interest of the Petitioner and all stakeholders. The Commission has been guided by the principles laid down in the Electricity Act 2003, National Tariff Policy and MYT Regulations, 2014. The process of tariff determination followed by the Commission has been elaborated in Chapter 6 of this Order.

2.2.2. Revenue from sale of surplus power

Stakeholder's Comment:

The Petitioner has not considered any revenue from sale of surplus power while determining the ARR for the FY 2018-19. The Petitioner should ensure that any sale of power should be done in a manner that extracts the best possible rates and benefits the Licensee.

Petitioner's Response:

The Petitioner does not procure excess power than it's requirement from the allocated share of power from the Central Generating Stations (CGS). It underdraws the scheduled power on account of lower demand which gets accounted for under the Unscheduled Interchange (UI) mechanism. The UI power is accounted under the head of sale of surplus power in line with Commission's approach in Tariff Order of FY 2017-18. As the UI quantum of power is not projected and is considered based on actuals, it is not accounted for in the FY 2018-19 in line with Commission's approach. In the absence of substantial power generation of its own, it is not practically possible for the department to have any long term agreement with CGS as per the requirement of the department during the peak and non-peak hours. Further, there is regulation of CERC on the technical minimum to surrender the surplus power. In order to tide over the above issue, the department sells the Un-Requisitioned Surplus power as per the guidelines issued by the Government of India.

Commission's View:

The Commission has noted the Petitioner's submission. In the previous years the Petitioner has not witnessed any surplus power. The only excess power is on account of UI under-drawal which as the Petitioner rightfully submitted is incidental in nature. The Commission, while estimating the revised Power Purchase Cost of FY 2017-18 and FY 2018-19 has estimated a quantum of surplus power due to higher availability and lower demand. The Commission has adjusted the revenue on account of this sale of power in the total power purchase cost. The Commission has assumed the Average RTC per unit rate for calendar year 2017 to estimate revenue from sale of power. The Commission, in this regard agrees with the stakeholder's submission that the Petitioner should devise a comprehensive power procurement strategy in order to efficiently optimize the power purchase cost.

2.2.3. Metering of Agriculture category consumers

Stakeholder's Comment:

Agriculture continues to be un-metered even though the Commission has given several deadlines for installation of meters. This loss is being burdened on the paying category of consumers.

Petitioner's Response:

The percentage of consumption by the Agricultural consumers is only around 2.0 % and the tariff applicable for the Agricultural consumer is on flat rate basis based on H.P. per pumpsets in service. However the department is in the process of providing of meters to the Agricultural Consumers as directed by the Commission.

Commission's View:

Metering of this category would allow accurate energy accounting and identifying the demand and Load Pattern that shall be used for determination of energy charges for this category. The primary reason for not approving an Energy Charge for this category is that the consumption of the category is unknown. The Commission directs the Petitioner to expedite the process and complete the metering of all consumers falling under the Agriculture category within this financial year.

2.2.4. ToD tariff should be applicable to disincentivise industrial consumption during peak hours

Stakeholder's Comment:

The Commission should seriously consider incentive for industries to run their units in the night when Pondicherry currently has surplus power and does not draw the allotted quantity from its power vendors. To disincentivise the industry running during peak hour, PED resorts to unscheduled load shedding disrupting the efficient planning of labour, material and maintenance. It is therefore requested that during peak hours, a disincentive should be given by way of higher tariff. Thereafter a night time tariff which is significantly lower will achieve a better utilization of the available infrastructure and the same should be priced at variable cost to improve the financial and revenue mix of the Electricity Department.

Petitioner's Response:

Because of decrease in industrialisation, no industrial consumer has approached the department to implement the TOD tariff, even though TOD tariff is already made available. Industries are running round the clock and the department is also ready to adopt the TOD tariff on specific request from the consumer. However, providing of TOD meters in all the HT industries is under process.

Commission's View:

The Commission has noted the stakeholder's suggestion. The Petitioner in the compliance of directives has submitted that the work of installing ToD compatible meters for all HT/EHT consumers along with necessary modifications in software shall be completed by March 2018. The Petitioner is directed to complete the work within the assured timelines and submit a compliance report within 3 months of issuance of this Order. The Petitioner is also directed to widely publicize the implementation of ToD tariff to the HT/EHT consumers so that they can immediately start availing the benefits of the ToD tariff mechanism.

2.2.5. Category wise cost of service is not determined

Stakeholder's Comment:

As per the Electricity Act 2003, PED should determine the "Cost to Service" for each category of consumers which is not being followed.

Petitioner's Response:

For computing the cost of service, it is necessary to carry out the detailed load flow study considering the seasonal fluctuations as well as the system load factor. There is also a need to carry out detailed Demand analysis (including analysis on system loading, hourly load curves, Peak Maximum Demand (PMD), Simultaneous Maximum Demand (SMD), coincidental and non-coincidental peaks) and transmission and distribution loss assessment based on historical and real time data. Such detailed study is usually carried out on a sample feeder basis selected in a scientific manner whereby selection of such feeders and consumer samples for load studies and loss studies should be representative of the consumer groups/network types etc.

It is also submitted that as per MYT Regulations, 2014, while allocating the demand related cost, the basis of average coincident peak demand of the tariff categories (average of past 12 months) is required to be undertaken. After considering the above factors, PED is of the view for computation of consumer category-wise cost of supply, a detailed analysis is required which is a time consuming process. PED is yet to carry out the load flow exercise which also needs to undertake the seasonal fluctuation. The Petitioner requests the Commission to exempt it from submission of consumer category-wise cost of supply due to the above reason.

Commission's View:

The Commission has noted the Petitioner's submission. The Petitioner's request to exempt itself from submission of category wise cost of supply is not acceptable. The Commission directs the Petitioner to expedite the activities in this regard and submit a quarterly report on the efforts undertaken to conduct a Load Flow Study as mentioned by the Petitioner for determining the Category wise Cost of Service.

2.2.6. Unbundling & Corporatization of PED

Stakeholder's Comment:

The Electricity Act 2003 calls for unbundling the generation and transmission and separating this activity from Government control. This was supposed to be achieved by forming independent Corporations to be controlled by the Electricity Regulatory Commissions. Majority of the States in the country have established separate Corporations for transmission and generation. Pondicherry has a separate Corporation for generation. However, for transmission and distribution, it continues as a department of Government viz., Pondicherry Electricity Department. This goes against the Act and against the in-principle approval granted by the Government of Puducherry to start the reformation process. Hence the Commission may insist on forming of Corporation as per the Electricity Act.

Petitioner's Response:

Based on the in-principle approval granted by the Government of Puducherry to start the reformation process, the department had taken all efforts to form independent corporations but the same was withdrawn based on the decisions taken by the Government and approval of the Commission. However, as per the directions of the Commission, the department is initiating action to take up the matter again with the Government and a final decision will be taken as per the decision of the Government.

Commission's View:

The Commission in this regard had issued a directive to the Petitioner in the Tariff Order of FY 2017-18. The Petitioner in the compliance status has submitted that the Unbundling and Corporatization of PED is being placed before the Reforms Steering Committee constituted under the chairmanship of Secretary (Power). The recommendations of the Committee will be submitted to the Government for their approval. The Commission will wait for the decision of the Govt.

2.2.7. Audited Fixed Asset Register (FAR) is not submitted for the latest year

Stakeholder's Comment:

Fixed Assets Register continues to be old and not updated which is a basic financial criteria for any enterprise. This would help determine the correct depreciation or amortization and therefore the balance sheet.

Petitioner's Response:

The asset registers have been prepared and submitted to the Commission from the FY 2009-10 to FY 2015-16 during the true-up exercise of the respective years. Further, updated asset register for the FY 2016-17 has been submitted to the Commission.

Commission's View:

The Commission has noted the Petitioner's submission. The Petitioner in the True-up of FY 2016-17 has not submitted the audited Fixed Asset Register. The Commission in this regard directs the Petitioner to expedite the process of audit of FAR for the FY 2016-17. The Commission further directs the Petitioner to submit the audited FAR in the True up of FY 2017-18 during the proceedings of the next tariff cycle.

2.2.8. Tariff across categories does not reflect the cost of supply

Stakeholder's Comment:

As per Sec 61 G of the Electricity Act 2003, tariff should progressively reflect the cost of supply. It is understood that it is a social obligation of the Government to provide cheap or free electricity to farmers and domestic consumers. However, in terms of Tariff Policy issued by the Ministry of Power and under Sec. 3 of the Act, tariff should be within + 20% of the average cost of supply. In order to arrive at the actual / additional cross-subsidy, PED should file cost of supply to each class of consumers.

Petitioner's Response:

The Petitioner is making all efforts to reduce the cross-subsidy for all categories and bring it within +/-20% of the average cost of supply in accordance with the guidelines prescribed in Tariff Policy, 2016. The cross-subsidy would be brought within the +/-20% range gradually over next few years.

Commission's View:

The Commission has noted the stakeholder's submission. The Commission observes that the cross-subsidy is on the higher side as compared to other States. The Commission, while approving the Retail Tariff for the FY 2018-19 has been guided by the principles laid down in the EA 2003, the Tariff Policy, 2016 and the National Electricity Policy. The Commission has tried to ensure that the cross-subsidization levels are as far as possible within the permissible limits. This has been done by increasing the tariff for cross- subsidized categories at a slightly higher rate than the average tariff increase. The tariffs are determined in a manner that they prudently reflect the cost of supply. Chapter 6 of this Order provides a detailed approach adopted by the Commission for determining the Retail Tariff for the FY 2018-19.

2.2.9. Determination of accurate Cross- Subsidy Surcharge

Stakeholder's Comment:

Cross-subsidy surcharge on open access needs to be reworked by calculating the cost to service of each category.

Petitioner's Response:

In the absence of adequate data to calculate cost to service, cross-subsidy surcharge on open access has been worked out in line with the methodology adopted by the Commission in the Tariff Order of FY 2017-18.

Commission's View:

The Commission, in this Order has determined the Voltage Wise Cost of supply (VCoS). In the absence of requisite data, the VCoS has been determined on the basis of certain assumptions. Based on the derived VCoS, the Cross-subsidy surcharge at each voltage level is determined that shall be applicable to different category of consumers.

A detailed approach adopted for determination of Cross-Subsidy Surcharge has been discussed in Chapter 7 of this Order.

2.2.10. Payment of Interest on Consumer Security Deposits to consumers

Stakeholder's Comment:

Interest on security deposit continues to be unpaid to consumers despite several Orders from the Commission. This is a serious disregard of Commission's Orders and interest should be paid for all years from the date of the Orders immediately.

Petitioner's Response:

Interest on security deposit is being paid to all the HT consumers and also to some of the LT consumers as per the budgetary provision of the Government of Puducherry. PED is in the process of completing the above exercise in respect of the remaining LT consumers.

Commission's View:

The Commission has noted with serious concern that the Petitioner has not paid Interest on the Consumer Security Deposits to all the consumers in the time bound manner as per the provisions of JERC Supply Code Regulations, 2010. The Commission in the True-up of the FY 2016-17 has considered the Interest on Security Deposits as per the actuals paid to the consumers. The Petitioner is directed to clear the backlog of payment of Interest on Consumer Security Deposit within the FY 2018-19 and report the compliance to the Commission along with the filing of the Petition for the next tariff cycle.

2.2.11. Replacement of defective meters

Stakeholder's Comment:

Loss of energy due to defective meters is substantial and efforts should be undertaken to ensure all the defective meters are replaced.

Petitioner's Response:

With the financial assistance from the Government of India under various Central schemes such as R-APDRP, IPDS, DDUGJY and Smart Grid Pilot Project, the requirement of meters to an extent of around 1,55,000 Nos. have been contemplated and the procurement of meters is in progress. All the defective meters will be replaced in a phased manner and the same is expected to be completed in a period of six months.

Commission's View:

The Commission has taken note of the Petitioner's submission. The Commission directs the Petitioner to expedite the procurement of meters and submit an Action Plan for replacement of defective electricity meters in a phased manner within 3 months of issue of this Tariff Order.

2.2.12. Energy Audit of the Discom

Stakeholder's Comment:

PED has not carried out any Energy Audit and arrived at the T&D losses for FY 2016-17 without any basis.

Petitioner's Response:

PED has provided the DLMS Energy meters to all the EHT & HT Feeders. Similarly, DLMs Energy meters have already been provided in the Distribution Transformers of around 1300 No. and action also been taken to provide the Energy meters in the balance Distribution Transformers under the Central assistance scheme of DDUGJY. The Energy Audit will be conducted on completion of the entire work.

Commission's View:

The Commission takes a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. The Commission directs the Petitioner to expedite the process to complete energy audit of all the distribution transformers and provide a status report of compliance to the Commission within 3 months of issue of this Order.

2.2.13. Adoption of Demand Side Management

Stakeholder's Comment:

The Department should proactively adopt Demand Side Management in order to reduce wasteful consumption and the cost of supply.

Petitioner's Response:

PED has already requested all the Government Departments to replace the existing conventional lighting arrangements with LED, energy efficient equipment's in respect of fan, Air Conditioner etc. It is also procuring energy efficient transformers as per the guidelines issued by the CEA.

Commission's View:

The Commission has taken note of the efforts undertaken by the Petitioner in Demand Side Management. The Commission directs the Petitioner to continue with these efforts and submit a quarterly compliance report. The Commission would like to bring to the notice of the stakeholder that an additional amount has been allowed towards payment to the Energy Efficiency Services Limited (EESL) along with the A&G expenses approved in ARR of FY 2017-18 and FY 2018-19. The EESL scheme has been approved by the Commission for promotion of Demand Side Management within the territory wherein consumers are provided with LED bulbs at subsidized rates. The Commission has also directed the Petitioner to go in for National Street Lighting Program and UJALA scheme rolled out for all consumer categories. The stakeholder is requested to get in contact with the nearest PED office to avail the various schemes prevalent in the Territory.

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

3.1. Background

Under the MYT regime, Order on Aggregate Revenue Requirement (ARR) for the 1st MYT Control Period (FY 2016-17 to FY 2018-19) and Wheeling & Retail Supply Tariff for the FY 2016-17 was issued on 24th May 2016 (hereinafter referred to as the "MYT Order"). Subsequently, the Commission issued the Tariff Order for FY 2017-18, determining the Aggregate Revenue Requirement (ARR) and the tariff for FY 2017-18, Annual Performance Review (APR) of FY 2016-17 and True-up of FY 2014-15 and FY 2015-16 on 16th May 2017 (hereinafter referred to as the "APR Order").

The Commission, now, in this Chapter carries out the True-up of FY 2016-17, being the first year of the Control Period in accordance with the principles laid down in the MYT Regulations, 2014. The True up for the FY 2016-17 has to be carried out in accordance to Regulation 8(2) of the MYT Regulations, 2014, stated as following:

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

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

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

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

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

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

3.2. Energy Sales

Petitioner's Submission

The Petitioner has submitted the total quantum of energy sales for FY 2016-17 as 2466.27 MU as against an approved energy sales quantum of 2566.17 MU in the APR Order.

Commission's Analysis

The MYT Regulations, 2014 stipulate that the variation in sales constitutes "uncontrollable factors" that are beyond the control of the Petitioner and cannot be mitigated. Regulation 9.1 of the MYT Regulations, 2014 in this regard stipulates the following:

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

(a) *Force Majeure events, such as acts of war, fire, natural calamities, etc.*

(b) Change in law;
(c) Taxes and Duties;
(d) Variation in sales; and
(e) Variation in the cost of power generation and/or power purchase due to the circumstances specified in these Regulations;"

The Commission, in the Technical Validation Session (TVS), sought justifications for the decrease in energy sales from the Petitioner, against which, the Petitioner submitted that there was a decrease in sales due to lesser demand in the territory and consumers under the HT/EHT consumers availing Open Access.

The table below provides the energy sales approved by the Commission in the APR of FY 2016-17, the Petitioner's submission and quantum of energy sales now trued-up by the Commission.

Table 6: Energy Sales (MU) trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Domestic	758.39	710.03	710.03
2	OHOB	10.00	10.21	10.21
3	Commercial	204.45	210.92	210.92
4	Agriculture	56.85	57.28	57.28
5	Public lighting	24.00	24.24	24.24
6	LT Industrial & Water Tank	186.00	190.67	190.67
7	Temporary supply - LT&HT	6.00	8.00	8.00
8	HT 1 Industrial	966.31	944.15	944.15
9	HT 2 - Government & water tank	64.01	62.03	62.03
10	HT 3 - EHT	290.01	258.96	258.96
	Total	**2566.17**	**2466.27**	**2466.27**

The Commission approves 2466.27 MU as energy sales in the True-up of the FY 2016-17.

3.3. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has submitted the total Open Access Sales for the FY 2016-17 as 37.01 MU against an approved sales quantum of 16.27 MU in the APR Order. The Petitioner has submitted the actual Open Access Purchase of 37.38 MU.

Commission's Analysis

The following table provides the Open Access Sales and Purchase approved by the Commission in the APR Order, the Petitioner's submission and sales now trued-up by the Commission based on the information submitted by the Petitioner.

Table 7: Open Access Sales (MU) and Purchase trued-up by the Commission

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Sales	16.27	37.01	37.01
2	Open Access Purchase	-	37.38	37.38

The Commission approves Open Access Sales of 37.01 MU and Purchase of 37.38 MU in the True-up of the FY 2016-17.

3.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the APR Order due to non-availability of requisite loss percentage figures.
- For Central Generating Stations (CGS), the actual losses are now working out to be 2.15% against an approved figure of 2.24% in the APR Order.

Commission's analysis

The Commission has verified the Inter-State losses from the supporting documentary evidence submitted by the Petitioner. The Commission accordingly approves the Inter-State Losses as shown in the following table:

Table 8: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Government Stations	2.24%	2.15%	2.15%

The Commission approves the Inter-State Transmission Loss as 2.15% for CGS stations and 4.00% for TANGEDCO in the True-up of the FY 2016-17.

3.5. Intra- State Transmission & Distribution (T&D) loss

Petitioner's submission

The Petitioner has submitted that it has achieved an Intra-State T&D loss of 13.78% in the FY 2016-17 against target of 11.50% in FY 2016-17.

Commission's analysis

The Commission has verified the Intra-State T&D loss levels based on the information available of energy drawal of the UT on the Southern Region Power Committee (SRPC) website and the energy sales as approved above. The Commission is constrained to consider Intra-State T&D loss of 13.78% in the FY 2016-17 for the purpose of determination of Energy Balance against an approved T&D loss of 11.50% in the APR Order.

Since, the Petitioner has not been able to achieve the Intra-State T&D loss target for the year, the disincentive for the same has to be borne by the Petitioner in accordance with the MYT Regulations, 2014. The calculation of the same has been discussed in detail in "Section 3.19.: Incentive/Disincentive towards over/under-achievement of norms of distribution losses section" of this Order.

The table below provides the Intra-State T&D loss approved in the APR of FY 2016-17, Petitioner's submission and as approved by the Commission now.

Table 9: Intra-State distribution loss (%)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	T&D Losses (%)	11.50%	13.78%	13.78%

The Commission, while Trueing UP for FY 2016-17, has considered the actual Intra-State T&D loss of 13.78% for the FY 2016-17 and imposed disincentive on the Petitioner in accordance to the MYT

Regulations, 2014 for underachievement of Intra-State distribution loss trajectory for FY 2016-17 approved by the Commission in the APR Order.

3.6. Power Purchase Quantum & Cost

Petitioner's submission

The Petitioner submitted that it meets its total energy requirement from its allocation of the Central Generating Stations (CGS) and the State utilities like TANGEDCO, KSEB and PPCL. PPCL is a generating company within the UT of Puducherry catering to the requirement of the Karaikal region. KSEB supplies energy for the Mahe region under the UT of Puducherry. The power purchase quantum and cost for FY 2016-17, as submitted by the Petitioner has been shown in the table below:

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

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
A	**Central Sector Power Stations**					
I	**NTPC**	**1213.78**	**102.81**	**246.07**	**5.94**	**354.81**
	KSTPS	-	-	-	(0.03)	(0.03)
	RSTPS Stage I & II	559.96	38.76	122.41	1.48	162.65
	RSTPS Stage -III	119.75	13.11	26.26	0.21	39.57
	Talcher Stage- II	450.68	35.70	74.87	5.22	115.79
	Simhadri Stage- II	83.40	15.24	22.53	(0.94)	36.83
II	**NLC and NTPL**	**711.87**	**86.13**	**185.66**	**0.27**	**272.07**
	NLC TPS II Stage I	333.84	28.45	88.69	0.40	117.54
	NLC TPS II Stage II	102.35	9.96	27.12	(0.00)	37.07
	NLC TPS I (Expn)	101.43	13.37	25.68	(0.17)	38.88
	NLC TPS II (Expn)	47.17	10.33	11.62	(0.01)	21.94
	NTPL	127.09	24.03	32.56	0.05	56.63
III	**NPCIL**	**545.50**	**-**	**155.09**	**18.70**	**173.79**
	Madras Atomic Power Station	46.74	-	9.65	0.54	10.19
	Kaiga Stage I & II	219.82	-	65.59	5.26	70.85
	Kundakulum Unit I & II	278.94	-	79.85	12.9	92.75
IV	**Others**	**336.39**	**27.81**	**111.23**	**3.92**	**142.96**
	TNEB (Pondy)	-	-	-	-	-
	TNEB (Karaikal)	167.51	-	58.31	2.77	61.08
	Vallur Thermal Project	123.97	24.67	30.02	1.12	55.81
	KSEB	44.91	3.15	22.90	0.02	26.07
V	**UI Over Drawal**	**25.93**	**-**	**0.75**	**0.00**	**0.75**
B	**Within State Generations**	**231.32**	**23.25**	**54.39**	**0.07**	**77.72**

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
	PPCL	231.32	23.25	54.39	0.07	77.72
C	**Other Charges**	**-**	**-**	**-**	**62.20**	**62.20**
	PGCIL Transmission Charges, Wheeling & Other Charges	-	-	-	61.09	61.09
	POSOCO	-	-	-	1.10	1.10
D	**RPO Compliance Cost**	**-**	**-**	**-**	**0.00**	**-**
E	**Rebate**	**-**	**-**	**-**	**(17.98)**	**(17.98)**
	Total Power Purchase Cost	**3064.80**	**240.00**	**753.19**	**73.11**	**1066.31**

Commission's analysis

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

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

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

The Petitioner procures power mainly from NTPC Stations, NPCIL stations, KSEB and TANGEDCO. No power has been purchased through IEX/ Bilateral Purchase etc. The Petitioner submitted the overall Power Purchase cost as Rs 1066.30 Cr inclusive of transmission charges but exclusive of revenue on account of UI Under-drawal/ sale of surplus power.

The Commission has verified the power purchase quantum and the cost as per the monthly station-wise bills submitted by the Petitioner for each source of power purchase. The cost has further been reconciled with the audited annual accounts of the FY 2016-17. As per the submissions of the Petitioner, the Commission has also considered the rebate on account of early payments made for the power purchase bills as part of the power purchase cost. The Central transmission charges along with the POSOCO charges have been considered as per actuals incurred by the Petitioner.

The revenue and quantum on account of surplus power sale/UI Underdrawal has been reduced by the Commission from the Gross Power Purchase to arrive at the Net Power Purchase quantum and cost. The Commission has also approved the cost on account of UI Over-drawal post verification of any penal UI along with the Power Purchase Cost.

The Petitioner has submitted that no cost has been incurred towards the compliance of Renewable Purchase Obligation (RPO) during the FY 2016-17. The compliance status of RPO has been discussed in detail in the subsequent section. The following table provides the summary of the power purchase quantum and the cost approved by the Commission for the FY 2016-17.

Table 11: Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
A	**Central Sector Power Stations**					
I	**NTPC**	**1213.78**	**102.81**	**246.07**	**5.94**	**354.81**
	KSTPS	-	-	-	(0.03)	(0.03)
	RSTPS Stage I & II	559.96	38.76	122.41	1.48	162.65
	RSTPS Stage -III	119.75	13.11	26.26	0.21	39.57
	Talcher Stage- II	450.68	35.70	74.87	5.22	115.79
	Simhadri Stage- II	83.40	15.24	22.53	(0.94)	36.83
II	**NLC and NTPL**	**711.87**	**86.13**	**185.66**	**0.27**	**272.07**
	NLC TPS II Stage I	333.84	28.45	88.69	0.40	117.54
	NLC TPS II Stage II	102.35	9.96	27.12	(0.00)	37.07
	NLC TPS I (Expn)	101.43	13.37	25.68	(0.17)	38.88
	NLC TPS II (Expn)	47.17	10.33	11.62	(0.01)	21.94
	NTPL	127.09	24.03	32.56	0.05	56.63
III	**NPCIL**	**545.50**	**-**	**155.09**	**18.70**	**173.79**
	Madras Atomic Power Station	46.74	-	9.65	0.54	10.19
	Kaiga Stage I & II	219.82	-	65.59	5.26	70.85
	Kundakulum Unit I & II	278.94	-	79.85	12.9	92.75
IV	**Others**	**336.39**	**27.81**	**111.23**	**3.92**	**142.96**
	TNEB (Pondy)	-	-	-	-	-
	TNEB (Karaikal)	167.51	-	58.31	2.77	61.08
	Vallur Thermal Project	123.97	24.67	30.02	1.12	55.81
	KSEB	44.91	3.15	22.90	0.02	26.07
V	**UI Over-drawal**	**25.93**	**-**	**0.75**	**0.00**	**0.75**
B	**Within State Generations**	**231.32**	**23.25**	**54.39**	**0.07**	**77.72**
	PPCL	231.32	23.25	54.39	0.07	77.72
C	**Other Charges**	**-**	**-**	**-**	**62.20**	**62.20**
	PGCIL Transmission Charges, Wheeling & Other Charges	-	-	-	61.09	61.09
	POSOCO	-	-	-	1.10	1.10

S. No.	Particulars	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
D	**RPO Compliance Cost**	-	-	-	0.00	-
E	**Rebate**	-	-	-	(17.98)	(17.98)
F	**UI Underdrawal/Surplus power Sale/URS/RRAS etc.**	(116.67)	-	-	(12.45)	(12.45)
	Total Power Purchase Quantum and Cost	**2948.13**	**240.00**	**753.19**	**60.66**	**1053.85**

The Commission approves power purchase quantum of 2948.13 MU and cost of Rs 1053.85 Cr in the True-up of the FY 2016-17.

3.7. Renewable Purchase Obligation (RPO)

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and revised the RPO targets, according to which the Petitioner had to purchase 4.85% of its total consumption (including 1.65% from Solar) from renewable sources for the FY 2016-17.

In the Tariff Order of FY 2017-18, while undertaking the True-up of FY 2015-16, it was observed that the Petitioner was successful in achieving the cumulative Solar RPO target till FY 2015-16, however, there was a pending cumulative backlog of 45.64 MU against the Non-Solar RPO till FY 2015-16.

For the FY 2016-17, the Petitioner had a standalone target of 119.61 MU comprising of 40.69 MU Solar and 78.92 MU Non-Solar. Against the compliance target, the Petitioner has only been able to procure 0.50 MU of power that has been injected into the Discom Grid via Solar Rooftop Net Metering. The Petitioner has evidently failed to clear the backlog till FY 2015-16 and comply with the standalone RPO target for FY 2016-17.

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

Table 12: Compliance status of Renewable Purchase Obligation (RPO) (In MU)

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17
1	Solar Target	0.25%	0.30%	0.40%	0.40%	0.60%	0.85%	1.65%
2	Non-Solar Target	0.75%	1.70%	2.60%	2.60%	2.70%	2.70%	3.20%
	Total Target	**1.00%**	**2.00%**	**3.00%**	**3.00%**	**3.30%**	**3.55%**	**4.85%**
3	Sales Within UT	2182.48	2321.29	2474.98	2365.72	2366.31	2398.00	2466.27
	RPO Target							
5	Solar	5.46	6.96	9.90	9.46	14.20	20.38	40.69

S. No	Particulars	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 17
6	Non-Solar	16.37	39.46	64.35	61.51	63.89	64.75	78.92
	Total RPO Target	**21.82**	**46.43**	**74.25**	**70.97**	**78.09**	**85.13**	**119.61**
	RPO Compliance (Actual Purchase)							
7	Solar	0.00	0.00	0.00	0.00	0.00	0.00	0.50
8	Non-Solar	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total RPO Compliance (Actual Purchase)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.50**
	RPO Compliance (REC Certificate Purchase)							
9	Solar	0.00	0.00	0.00	0.00	0.00	69.00	0.00
10	Non-Solar	0.00	0.00	48.00	112.00	90.69	14.00	0.00
	Total RPO Compliance (REC Certificate)	**0.00**	**0.00**	**48.00**	**112.00**	**90.69**	**83.00**	**0.00**
	RPO Compliance (REC+ Actual)							
11	Solar	0.00	0.00	0.00	0.00	0.00	69.00	0.50
12	Non-Solar	0.00	0.00	48.00	112.00	90.69	14.00	0.00
	Total RPO Compliance	**0.00**	**0.00**	**48.00**	**112.00**	**90.69**	**83.00**	**0.50**
	Cumulative Requirement till current year							
13	Solar	5.46	12.42	22.32	31.78	45.98	66.36	107.06
14	Non-Solar	16.37	55.83	120.18	181.69	245.58	310.33	389.25
	Total	**21.82**	**68.25**	**142.50**	**213.47**	**291.56**	**376.69**	**496.30**
	Cumulative Compliance till current year							
15	Solar	0.00	0.00	0.00	0.00	0.00	69.00	69.50
16	Non-Solar	0.00	0.00	48.00	160.00	250.69	264.69	264.69
	Total	**0.00**	**0.00**	**48.00**	**160.00**	**250.69**	**333.69**	**334.19**
	Net Shortfall in RPO Compliance till current year							
17	Solar	5.46	12.42	22.32	31.78	45.98	-2.64	40.19
18	Non-Solar	16.37	55.83	72.18	21.69	-5.11	45.64	124.56
	Total	**21.82**	**68.25**	**94.50**	**53.47**	**40.87**	**43.00**	**164.75**

The Commission notes that there is a net shortfall in RPO compliance till the FY 2016-17 of 164.75 MU (40.19 MU – Solar and 124.56 MU – Non-Solar). The Commission has dealt with the cost associated with covering this shortfall in the APR for the FY 2017-18. No cost has been considered towards compliance of RPO in FY 2016-17 as the Petitioner hasn't purchased any Renewable power (other than 0.50 MU from Solar Rooftop Net Metering) or REC's during the year.

3.8. Energy Balance

Petitioner's submission

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

Table 13: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Energy Sales within the UT (MUs)-A1	2466.27
2	Energy Drawal by TANGEDCO (MUs)-A2	16.79
3	Sale to Open Access Consumer (MUs)-A3	37.01
4	Total Sales (MUs) (A1+A2+A3)	2520.07
5	T&D Losses (%)	13.78%
6	Energy Required for the Territories (MUs)	2922.90
7	Sales to common pool consumers / UI (MUs)	116.67
8	**Energy Requirement @ State/UT Periphery (MUs)**	**3039.57**
B	**Energy Availability**	
1	Gross Energy Purchase (MUs)- B1	3038.87
2	Power purchase from Common Pool / UI / Others (MUs)- B2	25.93
3	Open access power at the periphery (MUs)- B3	37.38
4	Total Power Purchase (MUs) (B1+B2+B3)	3102.18
5	External Losses (MUs)	62.61
6	**Net Energy Availability (MUs)**	**3039.57**

Commission's analysis

The information submitted by the Petitioner on power purchase quantum, UI over/ under drawl, IEX/ Bilateral purchase etc. has been examined and accordingly the energy balance for the FY 2016-17 is derived. The following table provides the energy balance approved in the APR of the FY 2016-17, the Petitioner's submission and now trued-up by the Commission.

Table 14: Energy Balance (MU) approved by Commission

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
A	**Energy Requirement**			
1	Sales Within Territory	2566.17	2466.27	2466.27
2	Sales to TANGEDCO	18.11	16.79	16.79
3	Sale to Open access consumer	16.27	37.01	37.01
4	Total Sales	2600.55	2520.07	2520.07
5	Distribution losses (%)	11.50%	13.78%	13.78%
6	**Energy required at the State/UT Periphery (MU)**	**2938.47**	**2922.90**	**2922.90**
B	**Energy Availability**			
1	Total Power purchase quantum at Ex-bus	3010.55	3038.87	3038.87
2	Power Purchase from UI Over-drawal / Traders / Exchange	14.36	25.93	25.93
3	UI Underdrawal	56.14	116.67	116.67
4	**Total Power Purchase by PED at Ex-bus (1+2-3)**	**2968.77**	**2948.13**	**2948.13**
5	Open access purchase	-	37.38	37.38

S. No.	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
6	Total Power Purchase Quantum	2968.77	2985.52	2985.52
7	PGCIL Losses (MU)	46.57	62.61	62.61
	Net Power Purchased at State/UT Periphery (6-7)	**2922.20**	**2922.90**	**2922.90**

3.9. Operation & Maintenance (O&M) Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

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

3.9.1. Employee Expenses

Petitioner's submission

The Petitioner has incurred actual employee expenses of Rs 93.69 Cr against the approved expenses of Rs 85.66 Cr in the APR of FY 2016-17. The following table provides the employee expenses as submitted by the Petitioner:

Table 15: Employee Expenses submitted by the Petitioner (In Rs Cr)

S. No.	Particulars	Petitioner's Submission
	Salaries & Allowances	
1	Salary	105.61
2	Wages	0.65
3	Stipend	1.50
4	Transport Allowance	0.49
5	Overtime allowance	1.23
6	Total	109.46
7	Less: Add/Deduct share of others	0.86
8	Total	108.60
9	Less: Amount capitalized	14.92
	Total Employee Expenses	**93.69**

Commission's analysis

The Commission, in accordance with the MYT Regulations doesn't allow any deviation in the employee expenses against those approved in the APR Order and maintains the same Employee Expenses as approved in the APR Order for FY 2016-17.

However, the increase in salaries and wages on account of recommendations of the 7th Pay Commission is an uncontrollable expenditure, hence, any increase on account of 7th Pay Commission recommendation should be a pass through. The Commission, in the APR of FY 2016-17 had approved an additional expenditure towards the 7th Pay Commission of Rs 9.57 Cr The Petitioner further submitted that the actual employee expenses as submitted in the Petition consist of the impact of the 7th Pay Commission. The Petitioner was asked to furnish the detailed working of the impact of the 7th Pay Commission separately for the FY 2016-17. The Petitioner has failed to provide the detailed working of the 7th Pay Commission but submitted that a lumpsum payout of Rs 15.48 Cr has been made on account of 7th Pay Commission increase in the FY 2016-17. The Commission, for now, approves the amount as submitted, but directs the Petitioner to submit the detailed working of the impact on account of the 7th Pay Commission in the tariff proceedings for the next year.

The table below provides the employee expenses approved in the APR Order, submitted by the Petitioner and now trued-up by the Commission.

Table 16: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	76.09	93.69	76.09
2	Impact of 7th Pay Commission	9.57	0.00	15.48
3	**Total Employee Expenses**	**85.66**	**93.69**	**91.57**

The Commission approves Employee Expenses of Rs 91.57 Cr in the True-up of the FY 2016-17.

3.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has incurred A&G expenses of Rs 12.30 Cr against the approved expenses of Rs 10.02 Cr in the APR Order. The following table provides the A&G expenses as submitted by the Petitioner:

Table 17: A&G Expenses submitted by Petitioner (In Rs Cr)

S. No.	Particulars	Petitioner's Submission
1	Rent, rates & taxes	0.28
2	Other Professional charges including Regulatory Expenses (License + Petition Fees)	1.54
3	Office Expenses including Legal, Professional & Special Service Charges	1.90
4	Advertisement & Publicity	0.19
5	Other A&G Charges	0.18
6	Others	0.54
7	Other material related expenses	0.06
8	EESL Charges	7.61
	Total	**12.30**

Commission's analysis

A&G expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits.

The Petitioner has submitted that the A&G expenses also include an expense of Rs 7.61 Cr towards DSM based Efficient Lighting Programme (DELP) scheme for LED Bulbs, implemented in the Union Territory of Puducherry. The Commission while undertaking the APR of FY 2016-17 had made a provision of Rs 4.79 Cr against this head. The Commission, now in the True-up of FY 2016-17, approves the actual expenditure as incurred by the Petitioner.

As variation in O&M expenses is controllable, the Commission approves the same A&G expenses as approved in the APR Order along with an additional expenditure towards DELP as shown in the table below:

Table 18: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Administration & General Expenses (A&G)	5.23	4.69	5.23
2	EESL annual payout towards DELP Charges	4.79	7.61	7.61
	Total A&G Expenses	**10.02**	**12.30**	**12.84**

The Commission approves the Administrative & General (A&G) expenses of Rs 12.84 Cr in the True-up of FY 2016-17.

3.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has incurred R&M expenses of Rs 9.38 Cr against the approved expenses of Rs 18.61 Cr in the APR Order. R&M expenses are incurred towards day to day maintenance of the distribution network of the PED and form an integral part of the Petitioner's efforts towards reliable and quality power supply as also in the reduction of T&D losses in the system.

Commission's analysis

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

Table 19: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Repair & Maintenance Expenses (R&M)**	**18.61**	**9.38**	**18.61**

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 18.61 Cr in the True-up of FY 2016-17.

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

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

Table 20: O&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Employee Expenses	85.66	93.69	91.57
2	Administrative & General Expenses (A&G)	10.02	12.30	12.84
3	Repair & Maintenance Expenses	18.61	9.38	18.61
	Total Operation & Maintenance Expenses	**114.29**	**115.37**	**123.02**

The Commission approves the Operation & Maintenance (O&M) Expenses of Rs 123.02 Cr in the True-up of FY 2016-17.

3.10. Capitalisation

Petitioner's submission

The Petitioner submitted the actual capitalisation for the FY 2016-17 as Rs 15.25 Cr against an approved capitalization of Rs 63.40 Cr in the APR of FY 2016-17.

Commission's analysis:

The Commission observed that the capital expenditure and capitalisation achieved by the Petitioner is much lower, almost one- fourth of the amount approved by the Commission in the APR of FY 2016-17. The Petitioner from the last two financial years has been continuously achieving lower capitalisation than approved.

Lower capital expenditure signifies that enough efforts have not been undertaken in enhancing the reliability and quality of supply to the consumers. In addition, lower capital expenditure may also signify that sufficient measures aren't being taken to provide electricity supply to the un-electrified areas and setting up of sufficient distribution infrastructure with the growing demand. Accordingly, the Commission directs the Petitioner to increase its efforts towards undertaking capital expenditure activities necessary for improving the service quality and targeting 24x7 supply to all consumers.

The table below provides the capitalisation approved in the APR Order, the Petitioner's submission and the capitalisation approved by the Commission now:

Table 21: Capital Expenditure and Capitalisation approved by the Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Capitalisation	63.40	15.25	15.25

The Commission approves the Capitalisation of Rs 15.25 Cr in the True-up of FY 2016-17.

3.11. Capital Structure

Petitioner's Submission

The Petitioner has submitted that the majority of capital assets have been created out of equity contribution from the Government of Puducherry and the actual borrowing of loan is only to the extent of the R-APDRP, DDUGJY and IPDS schemes.

Commission's analysis

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

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

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

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

The Commission sought details of assets created out of consumer contribution/ grants from the Petitioner, on which the Petitioner has responded that no assets have been created out of consumer contribution/ grants.

In accordance with the MYT Regulations, 2014, and the submissions made by the Petitioner, the Commission has determined the Capital Structure for FY 2016-17 as follows:

Table 22: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	660.92	660.92	660.92
2	Addition During the FY	63.40	15.25	15.25
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	724.32	676.17	676.17

Table 23: Normative Loan addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	139.56	139.56	139.56
2	Add: Normative Loan During the year	44.38	10.68	10.67
3	Less: Normative Repayment equivalent to Depreciation	29.95	24.81	37.78*
4	Closing Normative Loan	153.99	125.43	112.45

**Deprecation has been calculated in the next section*

Table 24: Normative Equity addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	198.28	198.28	198.28
2	Additions on account of new capitalisation	19.02	4.57	4.57
3	Closing Equity	217.30	202.85	202.85

3.12. Depreciation

Petitioner's submission

The Petitioner has submitted the actual depreciation of assets as per the audited annual accounts of FY 2016-17.

The depreciation as claimed by the Petitioner has been tabulated below:

Table 25: Depreciation submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Opening Gross Fixed Assets	660.92
2	Addition During the FY	15.25
3	Adjustment/Retirement During the FY	0.00
4	Closing Gross Fixed Assets	676.17
5	Average Gross Fixed Assets	668.55
6	Weighted Average Depreciation rate (%)	3.71%
	Depreciation	**24.81**

Commission's analysis

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

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

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

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

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

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

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

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

Table 26: Depreciation Rate (%)

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

Based on the above depreciation rates and the actual asset addition during the year the weighted average depreciation rate is computed as 5.65% against a rate of 4.32% approved in the APR of FY 2016-17.

The Commission has calculated the depreciation on average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the opening GFA approved in the APR of FY 2016-17.

The following table provides the calculation of depreciation during the FY 2016-17:

Table 27: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Gross Fixed Assets	660.92	660.92	660.92
2	Addition During the FY	63.40	15.25	15.25
3	Adjustment/Retirement during the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	724.32	676.17	676.17
5	Average Gross Fixed Assets	692.62	668.55	668.54
6	Weighted Avg. rate of Depreciation (%)	4.32%	3.71%	5.65%
	Depreciation	**29.95**	**24.81**	**37.78**

The Commission approves depreciation of Rs 37.78 Cr in the True-up of FY 2016-17

3.13. Interest and Finance Charges

Petitioner's submission

The Petitioner has calculated the Interest on Loan on normative basis. The opening balance of loans for FY 2016-17 is considered same as approved by the Commission in the APR Order. The normative loan addition in FY 2016-17 has been computed as 70% of the actual capitalisation for FY 2016-17. Further, the Petitioner has also claimed certain expenses pertaining to the bank charges, finance costs etc. in addition to the Interest on Loan.

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

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

Commission's analysis:

The MYT Regulations, 2014 stipulate that the rate of interest to be considered while determining the ARR shall be the weighted average interest rate of the actual loan portfolio. Regulation 24 of the MYT Regulations, states the following:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Commission for the purpose of calculation of Interest on Loan has considered interest rate equivalent to SBI PLR @ 14.05%, as on 1st April 2016. Further, in accordance with the MYT Regulations, 2014, the interest has been calculated on the average loan during the year with the opening loan considered equivalent to the opening loan approved in the APR of FY 2016-17. The addition of loan has been considered as explained above and the repayment is considered same as per accrued depreciation during the year. Additionally, the Commission also allows expenditure towards financing charges as per actuals as reflected in the annual accounts.

The following table provides the Interest and Finance charges as approved by the Commission:

Table 28: Interest and Finance charges approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Normative Loan	139.56	139.56	139.56
2	Add: Normative Loan During the year	44.38	10.68	10.67
3	Less: Normative Repayment= Depreciation	29.92	24.81	37.78
4	Closing Normative Loan	154.02	125.43	112.45
5	Average Normative Loan	146.79	132.49	126.01
6	Rate of Interest (%)	14.05%	14.05%	14.05%
7	**Interest on Loan**	**20.62**	**18.62**	**17.70**
8	Financing Charges	2.43	2.54	2.54
	Interest and Finance Charges	**23.06**	**21.15**	**20.24**

The Commission approves the Interest and Finance Charges of Rs 20.24 Cr in the True-up of the FY 2016-17

3.14. Return on Equity (RoE)

Petitioner's submission

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

Commission's analysis:

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

(a) *the Return on equity shall be computed on 30% of the capital base or actual equity, whichever is lower: Provided that assets funded by consumer contribution, capital subsidies/grants and corresponding depreciation shall not form part of the capital base. Actual equity infused in the Distribution Licensee as per book value shall be considered as perpetual and shall be used for computation in this Regulation.*

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

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

As mentioned above, the total asset capitalisation other than the Central Government schemes during the year has been funded by equity. The Commission for the purpose of equity addition during the year, has limited it to 30% of total capitalisation as prescribed in the MYT Regulations, 2014. The RoE has been calculated on the average of opening and closing of equity during the year @ 16% post-tax basis with opening equity considered the same as approved in the APR Order. The following table provides the RoE approved by the Commission now:

Table 29: RoE approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Equity	198.28	198.27	198.28
2	Additions on account of new capitalisation	19.02	4.58	4.57
3	Closing Equity	217.30	202.85	202.85
4	Average Equity	207.79	200.56	200.57
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**33.25**	**32.09**	**32.09**

The Commission approves a Return on Equity of Rs 32.09 Cr in the True-up of FY 2016-17

3.15. Interest on Security Deposits

Petitioner's submission

The Petitioner submitted that Interest on the Consumer Security Deposits on normative basis is calculated as Rs 13.15 Cr, however, only Rs 3.50 Cr has been paid to the consumers and the balance is proposed to be paid during the subsequent years. The Petitioner has considered the amount actually paid to the consumer in the True-up of FY 2016-17.

Commission's analysis:

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

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

The Commission approves the actual interest on security deposit disbursed to the consumers in their bills, as submitted by the Petitioner. The Interest amount has also been reconciled with the audited annual accounts of FY 2016-17. The Petitioner, also provided documentary evidence in support of the budgetary provision made by the Government for payment of Interest on Consumer Security Deposits to consumers.

The following table provides the interest on security deposit as approved in the APR of FY 2016-17, the Petitioner's submission and the interest now approved by the Commission:

Table 30: Interest on Consumer Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Opening Security Deposit	136.67	161.58	136.67
2	Add: Deposits During the year	5.00	16.13	16.13
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	141.67	177.70	152.80
5	Average Security Deposit	139.17	169.64	144.73
6	Rate of Interest (%)	7.75%	7.75%	6.50%
7	**Interest on Security Deposit on normative basis**	10.79	13.15	9.41
	Interest on Security Deposit paid to consumers	**4.00**	**3.50**	**3.50**

The Commission approves interest on security deposit as Rs 3.50 Cr in the True-up of FY 2016-17

3.16. Interest on Working Capital

Petitioner's submission

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

The Working Capital requirement for the Control Period has been computed considering the following parameters:

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The Petitioner has not claimed any Interest on Working Capital as the Working Capital requirement for the year is coming out to be negative.

Table 31: Interest on Working Capital submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Receivables of two months of billing	206.30
2	Less: Power Purchase Cost for one month	88.86
3	Inventory Based on Annual Requirement for Previous FY for 2 months	6.78
4	Total Working Capital Requirement	124.22
5	Less: Security Deposit excluding BG/FDR	177.70
6	Net Working Capital	(53.48)
7	Rate of Interest (%)	9.30%
	Interest on Working Capital	**0.00**

Commission's analysis:

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

"Working capital for retail supply activity of the licensee shall consist of:
- *(i) Receivables of two months of billing*
- *(ii) Less power purchase cost of one month*
- *(iii) Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt*
- *(iv) Inventory for two months based on annual requirement for previous year.*

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

The Commission for determination of Working Capital requirements of the Petitioner during the year has considered the receivables as proportionate ARR for 2 months, the net power purchase cost after adjusting the rebate in power purchase bills, the consumer security deposit and the inventory for two months as per the audited annual accounts of FY 2016-17.

With regards to the interest rate, the Commission has considered the SBI Base rate as on 1st April 2016, as stipulated in the MYT Regulations, 2014. Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 32: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Receivables of two months of billing	218.86	206.30	205.09
2	Less: Power Purchase Cost for one month	93.51	88.86	87.82
3	Inventory Based on Annual Requirement for Previous FY for 2 months	6.77	6.78	6.78
4	Total Working Capital Requirement	132.12	124.22	124.04

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
5	Less: Security Deposit excluding BG/FDR	178.37	177.70	144.73
6	Net Working Capital	(46.25)	(53.48)	(20.69)
7	Rate of Interest (%)	9.30%	9.30%	9.30%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

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

3.17. Provision for Bad & Doubtful Debts

Petitioner's submission

The Petitioner hasn't claimed any amount towards bad and doubtful debts for the year.

Commission's analysis:

As per Regulation 29 of the MYT Regulations, 2014:

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

It is observed that as per the audited accounts, the licensee has not written off any amount in the FY 2016-17. Therefore, the Commission does not approve any amount under the provision for bad and doubtful debts.

3.18. Non-Tariff Income (NTI)

Petitioner's submission

According to the Petitioner, Non-Tariff Income comprises of Meter Rent, late payment charges, interest on staff loans, income from trading of power, reconnection fee, UI sales/ Sales to Exchanges and miscellaneous income among others. The Petitioner has claimed a Non-Tariff Income of Rs 12.98 Cr against the approved NTI of Rs 8.10 Cr by the Commission inclusive of Open Access charges. The Non –Tariff Income as submitted by the Petitioner has been shown in the table below:

Table 33: Non- Tariff Income as submitted by Petitioner (In Rs Cr)

S. No	Particulars	Petitioner's Submission
1	Open Access Income	8.47
2	Income from Trading of materials	0.06
3	Misc./Other Receipts	4.44
	Total	**12.98**

Commission's analysis:

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

Table 34: Non- Tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Open Access Income	-	8.47	8.47
2	Income from Trading of materials	-	0.06	0.06
3	Misc./Other Receipts	-	4.44	4.44
	Total	**8.10**	**12.98**	**12.98**

The Commission approves Non-Tariff Income of Rs 12.98 Cr in the True-up of FY 2016-17.

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

Petitioner's submission:

No submission has been made in this regard.

Commission's analysis:

In the APR of the FY 2016-17, the Commission had approved the distribution loss level of 11.50%. As discussed earlier, the Petitioner has only been able to achieve an Intra-State T&D Loss of 13.78%. Thus, there is an underachievement of the loss target. The Commission, in accordance with Regulations 10 & 11 of the MYT Regulations, 2014 (reproduced below) therefore has determined the disincentive towards underachievement of the target of Intra-State distribution loss for FY 2016-17.

"10. Mechanism for Sharing of Gains with Respect to Norms and Targets Mechanism for pass through of gains or losses:

10.1 The licensee shall pass on to the consumers, the 70% of the gain arising from over achievement of the norms laid down by the Commission in these Regulations or targets set by the Commission from time to time and retaining balance 30% with themselves.

10.2 The approved aggregate gain or loss to the Distribution Licensee on account of uncontrollable factors shall be passed through, as an adjustment in the tariff of the Distribution Licensee, as specified in these Regulations and as may be determined in the Order of the Commission passed under these Regulations.

10.3 The Distribution Licensee shall submit such details of the variation between expenses incurred and revenue earned and the figures approved by the Commission, in the prescribed format to the Commission, along with the detailed computations and supporting documents as may be required for verification by the Commission.

10.4 Nothing contained in this Regulation 10 shall apply in respect of any gain or loss arising out of variations in the price of fuel and power purchase, which shall be dealt with as specified by the Commission from time to time.

11. Mechanism for Sharing of Losses with Respect to Norms and Targets

(1) the licensee 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 disincentive has been derived by calculating the additional cost of power procured due to under achievement of the stipulated Intra-State T&D loss target of 11.50% by the Petitioner, at the Average Power Purchase cost (APPC) of Rs. 3.66/kWh. The APPC has been derived at State/UT Periphery based on the Power Purchase cost approved in the True-up above and the Energy at State/UT Periphery computed after grossing up the retail energy sales (2466.27 MU) and sales to TANGEDCO (16.79 MU) with the approved Intra-State T&D Loss (13.78%).

The assessment of disincentive for higher Intra-State T&D Loss is shown in the following table:

Table 35: Disincentive towards underachievement of Intra-State distribution loss (In Rs Cr)

S. No	Particulars	Petitioner's Submission	Trued-up by Commission
1	Retail Sales	2,466.27	2466.27
2	T&D Loss (%)	11.50%	13.78%
3	Power Purchase at State/UT Periphery	2786.75	2860.50
4	Gain/(Loss) (MU)		(73.75)
5	Average Power Purchase Cost (APPC)		3.66
6	Gain/ (Loss) (Rs Cr)		(26.99)
	Sharing (30% to PED in case of gain and 100% in case of loss) (Rs Cr)		**(26.99)**

The Commission determines and approves Rs 26.99 Cr as a disincentive for underachieving the Intra-State Distribution Loss target in the True-up of FY 2016-17.

3.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of Rs 1237.78 Cr is submitted for approval in the True-up of FY 2016-17.

Commission's analysis

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

Table 36: Aggregate Revenue Requirement approved by Commission for FY 2016-17 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Power Purchase Cost	1116.73	1053.85	1053.85
2	Operation & Maintenance Expenses	114.29	115.37	123.02
3	Depreciation	29.92	24.81	37.78
4	Interest and Finance charges	23.06	21.15	20.24
5	Interest on Working Capital	0.00	0.00	0.00
6	Interest on Security Deposit	4.00	3.50	3.50
7	Return on Equity	33.25	32.09	32.09
8	Provision for Bad and Doubtful Debts	0.00	0.00	0.00
9	Incentive/ (Disincentive) on achievement of norms	0.00	0.00	(26.99)
10	**Total Revenue Requirement**	**1321.23**	**1250.76**	**1243.50**
11	Less: Non-Tariff Income	8.10	12.98	12.98
	Net Revenue Requirement	**1313.13**	**1237.78**	**1230.51**

The Commission approves net Aggregate Revenue Requirement of Rs 1230.51 Cr in the True-up of the FY 2016-17.

3.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the net actual revenue for the FY 2016-17 as Rs 1192.11 Cr against revenue of 1230.43 Cr approved by the Commission in the APR Order. The Petitioner submitted, that the Rs 1209.09 Cr is the Gross Revenue from sale of power to consumers from which an amount of Rs 16.99 Cr has been deducted on account of power factor rebate to consumers. The table below provides the revenue at existing tariff as submitted by the Petitioner:

Table 37: Revenue at existing tariff submitted by the Petitioner for FY 2016-17 (In Rs Cr)

S. No	Category	Revenue from Demand Charges (Rs Cr)	Revenue from Energy Charges (Rs Cr)	Total Revenue (Rs Cr)
1	**Domestic**	**16.19**	**153.97**	**170.16**
	0 - 100 units	6.02	29.18	35.19
	101 - 200 units	3.31	38.09	41.40
	201 - 300 units	2.71	41.64	44.35
	Above 300 units	3.01	45.07	48.08
	OHOB	1.15	0.00	1.15
2	**Commercial**	**6.25**	**122.41**	**128.66**
	0 - 100 units	1.00	19.83	20.83
	101 - 250 units	0.94	24.80	25.74
	Above 250 units	4.31	77.78	82.09
3	**Agriculture**	**1.95**	**0.00**	**1.95**
	Small farmers	0.06	0.00	0.06
	Other farmers	1.89	0.00	1.89
4	**Public lighting**	**4.52**	**16.36**	**20.88**
5	**LT Industrial & Water Tank**	**0.69**	**100.24**	**100.92**
	LT Industrial	0.67	78.15	78.81
	Water tank	0.02	22.09	22.11
6	**Temporary supply - LT&HT**	**0.00**	**7.80**	**7.80**
7	**HT 1 Industrial**	**80.67**	**495.68**	**576.35**
	HT I(a) for contract demand upto 5000 kVA	73.48	456.72	530.20
	HT I(b) for contract demand upto 5000 kVA	7.19	38.96	46.15
8	**HT 2 – Govt. & Water Tank**	**6.33**	**41.87**	**48.20**
9	**HT 3 - EHT**	**22.11**	**132.07**	**154.18**
10	**Less: Incentives to consumers**			**16.99**
	Total	**138.70**	**1070.39**	**1192.11**

Commission's analysis

The Commission analysed the sales and revenue figures for each consumer category and sub-category by applying various levels of checks. Further, while verifying the consumer category wise revenue it was observed that the total revenue was reflected as Rs 1192.17 Cr in the annual accounts. There was a variation of Rs 0.06 Cr observed in the revenue from sale of power as submitted in the Petition and as reflected in the annual accounts. Clarification was sought in this regard against which the Petitioner submitted that the same is attributable to the revenue of Temporary consumer category. Other than this, the category wise and slab wise revenue as submitted by the Petitioner is found to be in order. The category/ slab wise revenue as approved in the APR of FY 2016-17, Petitioner's submission and now Trued-up by the Commission is shown in the following table:

Table 38: Revenue at existing tariff approved by Commission for FY 2016-17 (In Rs Cr)

S. No	Category	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	**Domestic**	**196.95**	**170.16**	**170.16**
	0 - 100 units	39.36	35.19	35.19
	101 - 200 units	32.51	41.40	41.40
	201 - 300 units	50.68	44.35	44.35
	Above 300 units	72.95	48.08	48.08
	OHOB	1.15	1.15	1.15
2	**Commercial**	**127.64**	**128.66**	**128.66**
	0 - 100 units	15.40	20.83	20.83
	101 - 250 units	17.20	25.74	25.74
	Above 250 units	95.03	82.09	82.09
3	**Agriculture**	**1.36**	**1.95**	**1.95**
	Small farmers	0.04	0.06	0.06
	Other farmers	1.31	1.89	1.89
4	**Public lighting**	**16.75**	**20.88**	**20.88**
5	**LT Industrial & Water Tank**	**97.94**	**100.92**	**100.92**
	LT Industrial	80.23	78.81	78.81
	Water tank	17.71	22.11	22.11
6	**Temporary supply - LT&HT**	**4.86**	**7.80**	**7.86**
7	**HT 1 Industrial**	**588.81**	**576.35**	**576.35**
	HT I(a) for contract demand upto 5000 kVA	-	530.20	530.20
	HT I(b) for contract demand upto 5000 kVA	-	46.15	46.15
8	**HT 2 – Govt. Water Tank**	**49.27**	**48.20**	**48.20**
9	**HT 3 - EHT**	**169.97**	**154.18**	**154.18**
10	**Less: Incentives to consumers**	**22.82**	**16.99**	**16.99**
	Total	**1230.43**	**1192.11**	**1192.17**

The Commission approves the revenue from the sale of power as Rs 1192.17 Cr in the True-up of the FY 2016-17.

3.22. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, the standalone revenue gap of Rs 45.68 Cr is arrived at in the True-up of FY 2016-17.

Commission analysis

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

Table 39: Standalone Revenue Gap/ Surplus for FY 2016-17 (In Rs Cr)

S. No	Particulars	Approved in APR Order	Petitioner's Submission	Trued-up by Commission
1	Net Revenue Requirement	1313.13	1237.78	1230.51
2	Total Revenue	1230.43	1192.11	1192.17
	Net Gap / (Surplus)	**82.70**	**45.68**	**38.34**

The Commission, in the True-up of FY 2016-17 approves a standalone gap of Rs 38.34 Cr. The treatment of the standalone gap has been discussed in Chapter 6 Tariff Principles and Design.

4. Chapter 4: Annual Performance Review of FY 2017-18

4.1. Background

The Tariff Order for the FY 2017-18 was issued by the Commission on 16th May 2017 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2017-18. This Chapter covers the Annual Performance Review (APR) of the FY 2017-18 vis-à-vis the cost parameters approved by the Commission in the Tariff Order of FY 2017-18. The Annual Performance Review for the FY 2017-18 is to be carried out as per the following provisions of Regulation 8 of the JERC for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014:

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

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

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

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

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

4.2. Approach for the Review for the FY 2017-18

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M Expenses, interest on long-term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2017-18 has been done based on the actual data as provided by the Petitioner for the FY 2017-18 of the Power Purchase Quantum and the Cost, Energy Sales, Capitalisation etc. depending on which the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the MYT Regulations, 2014 and on the basis of the norms approved in the MYT Order dated 24th May 2016 and Tariff Order of FY 2017-18.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted a revised estimate of energy sales as 2566.58 MU for the FY 2017-18, based on the actual energy sales for the first 6 months (H1) of the financial year. The energy sales for H2 (second half of FY

2017-18) have been considered as twice the actual energy sales for H1, for all the categories except the domestic and commercial categories. The sales for domestic and commercial categories for H1 and H2 have been considered in the ratio of 55:45 (H1:H2).

Commission's Analysis

The audited figures for FY 2016-17 and provisional information provided by the Petitioner for the first 6 months of the FY 2017-18 have been examined by the Commission. The Commission, for identifying the trend in energy sales for various categories has determined the proportion of actual energy sales in H1 of FY 2017-18 over energy sales of H1 of FY 2016-17 for each category. Using this proportion, the Commission has extrapolated the actual energy sales in H1 of FY 2017-18 to derive the annual energy sales for each category. For categories such as LT Industrial & Water Works and HT-1, the growth rate of energy sales for H1 of FY 2017-18 was observed to be negative as compared to H1 of FY 2016-17. The Commission in order to estimate the sales for H2 of FY 2017-18 has maintained the same growth rate for these categories as observed in H1 of FY 2017-18.

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

Table 40: Energy Sales (MU) approved by the Commission

S. No.	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Domestic	891.74	733.82	744.75
2	OHOB	10.38	10.21	10.22
3	Commercial	217.71	222.92	233.57
4	Agriculture & Cottage Industries	57.00	57.28	57.28
5	Public Lighting	29.32	24.24	27.52
6	LT Industrial	237.75	199.67	147.36
7	Water Works			37.43
8	HT-1	1069.53	946.24	930.18
9	HT-2	68.18	68.18	65.53
10	HT-3	398.99	296.02	273.75
11	Hoardings/Signboards	-	-	-
12	Temporary	-	8.00	8.00
	Total	**2980.60**	**2566.58**	**2535.58**

The Commission approves energy sales of 2535.58 MU in the APR of FY 2017-18.

4.4. Open Access Sales and Purchase

Petitioner's Submission

The Open Access consumers have scheduled total power of 20.22 MU during H1 of FY 2017-18 and actual Open Access Purchase of 20.39 MU. The Petitioner has not projected any energy sales/purchase under Open Access in the remaining months of FY 2017-18.

Commission's Analysis

The Commission in this regard sought month on month data of Open Access Sales. The Petitioner submitted the actual monthly data till the month of November 2017. On analysis of the information submitted, it is observed that on an average, energy sales of 2.97 MU per month have been availed under Open Access. The Commission for the purpose of projection of open access sales for the complete year has assumed the same average sale per month during the remaining months of FY 2017-18. Corresponding to the quantum of Open Access sales, the Commission has projected the quantum of Open Access purchase assuming a T&D loss percentage of 1.50%.

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

Table 41: Open Access sales (MU) and purchase approved by the Commission

S. No	Category	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Open Access Sales	-	20.22	35.59
2	Open Access Purchase	-	20.39	36.13

The Commission now approves open access sales of 35.59 MU and purchase of 36.13 MU in the APR of FY 2017-18.

4.5. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the ARR of FY 2017-18 due to non-availability of requisite loss figure.
- For Central Generating Stations such as NTPC and NPCIL etc., the transmission loss has been considered as per the weekly data published on the Southern Regional Power Committee (SRPC) website.

Commission's analysis

The Commission in the APR of FY 2017-18 considers the transmission loss levels in line with those approved in the True-up of FY 2016-17.

The table below provides the Inter-State Transmission Losses submitted and now approved by the Commission.

Table 42: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Government Stations	4.97%	2.04%	2.15%

The Commission approves the Inter-State Transmission Loss as 2.15% for CGS stations and 4.00% for TANGEDCO in the APR of FY 2017-18.

4.6. Intra-State Transmission and Distribution (T&D) loss

Petitioner's submission

The Petitioner has proposed to revise the Intra-State T&D loss level to 13.20% against an approved loss of 11.25% in the MYT Order. The Petitioner further submitted that it has been achieving significant reduction in T&D losses in the past years and is having one of the lowest T&D losses in India. The efforts towards reduction of these losses shall be continued in the future. However, the loss reduction is a slow process and as the loss levels come down further, reduction in loss becomes difficult. Since PED has already achieved a T&D loss of sub-fifteen level, loss reduction trajectory cannot be considered at the same rate considered previously. Therefore, the Petitioner has requested to revise the Intra-State T&D loss level to 13.20% from 11.25%.

Commission's analysis

The Commission had approved loss level of 11.25% for FY 2017-18 in the MYT Order dated 24th May 2016 while determining ARR for the FY 2017-18. The Commission had approved the loss level trajectory by reducing the level of losses by 0.25% per year based on the various factors such as proposed capital expenditure during each year, base loss levels at the starting of the MYT Period etc. The Commission in the APR of FY 2017-18, finds it appropriate to retain the loss level of 11.25% as approved in the MYT Order for the FY 2017-18.The following table provides the Intra-State distribution loss approved in the MYT Order, the Petitioners submission and now approved by the Commission.

Table 43: Intra-State distribution loss (%)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	11.25%	13.20%	11.25%

The Commission approves Intra-State T&D loss of 11.25% in the APR of FY 2017-18.

4.7. Power Purchase Quantum & Cost

Petitioner's submission:

The Petitioner, meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and the State utilities like TANGEDCO, KSEB and PPCL. PPCL is a generating company within the UT of Puducherry catering to Karaikal region of PED. KSEB supplies power to Mahe region under the UT of Puducherry. The quantum and cost of power purchase for FY 2017-18 have been estimated in the following manner:

The Petitioner has projected the quantum of power purchase by considering the actual power purchase for the 1st half of the year FY 2017-18 (i.e. April 2017 – September 2017) and considering power purchase under the principle of MOD for second half H2 of FY 2017-18. The key assumptions for estimating the power purchase quantum and costs are as under:

1. **Power Purchase Quantum**

   The power purchase quantum for H2 of FY 2017-18 has been considered under the principle of Merit Order Dispatch (MOD). The must run stations have been identified as all the NPCIL plants, KSEB, TNEB and PPCL. The remaining quantum of power is envisaged to be purchased from the remaining available sources.

2. **Power Purchase Cost**

   The Power purchase cost under MOD has been arrived at as follows:

   - The fixed charges for all the generating stations have been taken same as incurred in FY 2016-17.
   - The variable cost for FY 2017-18 has been computed considering the actual average variable cost of each source for first six months period of April- September 2017.
   - The other costs which includes ED, Cess, Incentive etc. and supplementary charges are considered on actual basis paid in first six months period from April – September 2017.
   - An additional cost of Rs 54.04 Cr has been considered for TANGEDCO (Karaikal) in FY 2017-18 pertaining to prior period charges (April 2014 to October 2017) which would be raised in the second half of the current year.
   - For TANGEDCO (Karaikal), the rate for first seven months of FY 2017-18 has been considered as Rs 3.62/ kWh and for the remaining five months rate of Rs 5.47/ kWh has been considered based on the communication received from TANGDECO.

- The power purchase cost for power over-drawl from the grid is considered on actual basis paid in first six months period of April - September 2017 only. For H2 FY 2017-18, over-drawl is not assumed under the principle of MOD.

- The Transmission Charges for FY 2017-18 are considered as per POC computation and actually incurred in H1. However, for H2 calculation, the similar amount as charged in H1 of FY 2017-18 has been considered.

The Petitioner has a Renewable Purchase Obligation of 6.70% (inclusive of 2.50% Solar RPO) in FY 2017-18. The overall RPO target for FY 2017-18 comes out to be 64.16 MU from Solar and 107.80 MU from Non-Solar. The Petitioner plans to procure 133.3 MUs of Non-Solar RECs in the second half of the year and 0.75 MUs of physical solar power under the net metering arrangement. The quantum and cost towards RPO compliance have been shown in the table below. The same has been included in the overall power purchase cost estimated for FY 2017-18.

Table 44: RPO Compliance cost as submitted by Petitioner (In Rs Cr)

Particulars	Total	Solar obligation	Non- Solar obligation
Sales (MU)		**2566.58**	
RPO Obligation (%)	6.70%	2.50%	4.20%
RPO Requirement (MU)	171.96	64.16	107.80
RPO met through purchase of physical power/RECs (MU)	134.05	0.75	133.30
Cost of RPO compliance thru RECs (Rs Cr)			20.00
Outstanding RPO @ the end of previous year (MUs)	162.11	37.56	124.56
RPO pending at the end of the year (MUs	200.02	100.97	99.05

As outlined in the above table, the estimated cost towards RPO compliance is considered as Rs 20.00 Cr at a rate of Rs 1.50/kWh (IEX Average Clearing Price).

The revised Power Purchase Cost for the FY 2017-18 has been tabulated below:

Table 45: Power Purchase cost submitted by Petitioner for FY 2017-18 (In Rs Cr)

S. No.	Source	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
A	**Central Generating Stations**					
I	**NTPC**	**1134.53**	**102.81**	**244.32**	**(27.44)**	**319.69**
	RSTPS Stage I & II	486.36	38.76	116.73	(28.24)	127.26
	RSTPS Stage -III	123.01	13.11	28.84	0.65	42.59
	Talcher Stage- II	424.76	35.70	69.56	0.05	105.30
	Simhadri Stage- II	100.40	15.24	29.20	0.48	44.92
II	**NLC and NTPL**	**1063.57**	**86.13**	**304.28**	**76.42**	**466.83**
	NLC TPS II Stage I	510.11	28.45	146.66	69.81	244.92
	NLC TPS II Stage II	207.72	9.96	59.72	(0.02)	69.66
	NLC TPS I (Expn)	118.77	13.37	31.83	3.54	48.75

S. No.	Source	Energy Units (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Other Charges (Rs Cr)	Total Charges (Rs Cr)
	NLC TPS II (Expn)	66.99	10.33	17.54	3.08	30.95
	NTPL	159.97	24.03	48.52	-	72.55
III	**NPCIL**	**517.49**	**-**	**161.78**	**1.90**	**163.68**
	MAPS	46.77	-	9.69	0.14	9.83
	KAPS Stage I	137.70	-	41.08	0.62	41.71
	KAPS Stage II	125.60	-	37.48		37.48
	Kudankulam U1	62.70	-	22.22	1.05	23.27
	Kudankulam U2	144.72	-	51.30	0.09	51.39
IV	**Others**	**398.26**	**27.81**	**160.38**	**55.68**	**243.88**
	TNEB (Pondy)	-	-	-	-	-
	TNEB (Karaikal)	226.59	-	99.49	54.04	153.53
	Vallur Thermal Project	126.97	24.67	35.86	1.64	62.17
	KSEB	44.70	3.15	25.03	-	28.18
V	**Over/ Under Drawal**	**18.13**	**-**	**1.10**	**-**	**1.10**
B	**State Generating Station**	**216.37**	**23.25**	**44.86**	**-**	**68.11**
	PPCL	216.37	23.25	44.86	-	68.11
						-
C	**Other Charges**		**-**	**-**	**59.94**	**59.94**
	PGCIL Transmission Charges, Wheeling & Other Charges				59.65	59.65
	POSOCO				0.29	0.29
D	**RPO Compliance Cost**				**20.00**	**20.00**
E	**Rebate**				**(18.82)**	**(18.82)**
	Total	**3348.35**	**240.00**	**916.72**	**106.56**	**1324.41**

Commission's Analysis:

The Commission while estimating the power purchase quantum and cost for FY 2017-18 has considered the actual quantum and cost of power till December 2017, as submitted by the Petitioner. The quantum and cost of power procurement for the quarter of October – December 2017 was submitted by the Petitioner in reply to the discrepancy note. The Commission has projected the quantum of energy and cost for the remaining 3 months of the FY 2017-18. The methodology followed for projecting the quantum and cost for the remaining months of FY 2017-18 has been discussed as follows:

4.7.1. Availability of power

Availability of energy from NTPC Stations:

- The energy availability from Talcher Stage II Power Station has been estimated based on the average energy available during the months of January – March in the last three financial years FY 2014-15 to FY 2016-17.
- For Ramagundam Thermal Power Station (RSPS Stage I, II & III) quantum of energy available has been considered the same as that of FY 2016-17 during the months of January 2017- March 2017 due to intermittent scheduling in the past years.
- For Simhadri Stage II, the availability of power for the remaining months has been projected considering average quantum of energy available during these months in FY 2016-17 and FY 2015-16.

Availability of energy from NLC Stations:

- The energy availability from NLC TPS II Stage I and NLC TPS I (Expansion) Power Stations has been considered based on the average of energy available in the FY 2015-16 and FY 2014-15. The energy availability during FY 2016-17 has not been considered due to irregular scheduling during a significant part of the year.
- For NLC TPS II Stage II, the availability of power for the remaining months has been projected based on the average energy scheduled by this station during the last three years in the months of January- March.
- Since the power stations NLC TPS-II (Expansion) and NTPL got commissioned in FY 2016-17, the energy scheduled during the months of January- March in FY 2016-17 has been considered as it is in FY 2017-18.

Availability of energy from NPCIL plants:

- The energy availability from Madras Atomic Power Station (MAPS) and Kaiga Stage I & II has been estimated based on the last 3 years average of quantum of energy scheduled from FY 2014-15 to FY 2016-17.
- The Kundakulum Power Station’s Unit I & II were fully operational only in FY 2016-17, therefore, the energy availability for the remaining months has been considered the same as that in FY 2016-17.

Availability of energy from TANGEDCO, KSEB, Vallur Thermal Plant and PPCL:

- The Petitioner submitted that power procurement from TANGEDCO served the consumers in the Karaikal Region. From FY 2018-19 the power availability for this region shall be met from CGS stations. Therefore, in accordance with the Petitioner’s submission, the Commission has considered the same quantum of energy available as in December 2017 for the remaining three months of FY 2017-18.
- The allocation of power from KSEB has been replaced with an allocation from CGS stations. The power procured from KSEB served the consumers in the Mahe Region. Accordingly, no energy availability has been considered in the remaining months of FY 2017-18 from KSEB.
- The energy availability from Vallur Thermal Station has been estimated based on the average energy available in the last 3 years FY 2014-15 to FY 2016-17 during the months of January- March.
- Energy availability from PPCL has been estimated based on the average PLF achieved by the station during the first 9 months of FY 2017-18.

Availability of energy from Open Market/Unscheduled Interchange

- The energy deficit/surplus for the FY 2017-18, as discussed in the section of energy balance later in the Order, has been assumed to be purchased/ sold in the open market.
- No power has been projected under UI for the remaining months of FY 2017-18. The UI Over-drawal/ Under-drawal in the first 9 months of FY 2017-18 has been considered as per actuals submitted by the Petitioner.

4.7.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations have been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2017 to September 2017 for all the stations.
- For procurement of power from the Open Market, the Average Round the Clock (RTC) rate for the southern region during the calendar year 2017 has been considered.
- The cost towards UI Over-drawal/ Underdrawal has been considered as per actuals incurred by the Petitioner in the first 9 months of FY 2017-18
- The additional cost towards prior period charges in case of TANGEDCO, as submitted by the Petitioner, shall be considered as per actuals in the True-up of FY 2017-18 next year.

Fixed Charges:

- The fixed costs have been considered based on the tariff Orders issued by the CERC for respective Central Generating Stations.
- For PPCL, the fixed cost as approved in the Tariff Order for FY 2017-18, issued by the Commission has been considered.
- The Fixed cost has been apportioned on the basis of PED's share in each power station and average annual plant availability factor achieved during the last five years by each plant.

Other Charges:

No other charges have been considered for the FY 2017-18.

4.7.3. Transmission Charges

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

For this purpose, the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010 have been considered.

4.7.4. Total Power Purchase Cost

The following table provides the Power Purchase Quantum and Cost approved by the Commission for FY 2017-18:

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

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Total (Rs Cr)	Avg. Rate (@ UT Periphery) (Rs/kwh)
NTPC				
RSTPS Stage I & II	546.41	534.66	164.79	3.08
RSTPS Stage -III	145.39	142.27	43.92	3.09
Talcher Stage- II	457.79	447.95	102.84	2.30
Simhadri Stage- II	83.01	81.23	40.31	4.96
Sub-Total-NTPC	**1232.61**	**1206.11**	**351.87**	**2.92**
NLC and NTPL				
NLC TPS II Stage I	406.51	397.77	152.90	3.84
NLC TPS II Stage II	144.08	140.98	54.51	3.87
NLC TPS I (Expn)	118.83	116.27	43.46	3.74
NLC TPS II (Expn)	68.80	67.32	33.26	4.94
NTPL	116.93	114.41	61.90	5.41
Sub-Total-NLC and NTPL	**855.14**	**836.76**	**346.04**	**4.14**
NPCIL				
Madras Atomic Power Station	49.58	48.51	10.36	2.14
Kaiga Stage I & II	272.81	266.95	82.50	3.09
Kundakulum Unit I & II	248.71	243.36	92.45	3.80
Sub-Total-NPCIL	**571.10**	**558.82**	**185.31**	**3.32**
Others				
TNEB (Karaikal)	177.37	170.28	67.83	3.98
Vallur	113.17	110.74	56.18	5.07
KSEB	30.13	30.13	22.37	7.43
Sub-Total-Others	**320.67**	**311.14**	**146.38**	**4.70**
State Generation				
PPCL	215.56	215.56	68.63	3.18
Sub-Total-State Generation	**215.56**	**215.56**	**68.63**	**3.18**
UI Over-drawal/ (Under-drawal)	**-**	**(47.23)**	**(4.55)**	**0.96**
Open Market	**-**	**(224.17)**	**(71.06)**	**3.17**
RPO				
Solar	-	-	15.54	-
Non-Solar	-	-	34.66	-
Sub-Total RPO	**-**	**-**	50.19	**-**
Total Power Purchase Quantum and Cost	**3195.08**	**2856.98**	**1072.82**	**3.76**

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Total (Rs Cr)	Avg. Rate (@ UT Periphery) (Rs/kwh)
Transmission Charges			**62.11**	**-**
Total Power Purchase Quantum and Cost including transmission charges	**3195.08**	**2856.98**	**1134.92**	**3.97**

The Commission approves the revised quantum of power purchase as 2856.98 MU at State/ UT Periphery with total cost of Rs 1134.92 Cr in the APR of FY 2017-18.

4.8. Renewable Purchase Obligations (RPOs)

Petitioner's submission:

As mentioned in the previous section, the Petitioner has considered the cost of compliance of RPO as Rs 20.00 Cr towards purchase of Non-Solar RECs pertaining to 133.30 MU at a rate of Rs 1.50/kWh. The Petitioner has also considered 0.75 MU of solar power from net metering towards compliance of Solar RPO. No cost has been considered against the same.

Commission's analysis:

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

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

The Commission notified the JERC (Procurement of Renewable Energy), (Third Amendment) Regulations, 2016 on 22nd August 2016 and approved the revised RPO targets, as per which the Petitioner has to purchase 6.70% of its total consumption (including 2.50% from Solar) from renewable sources for the FY 2017-18.

The Petitioner is also required to clear the backlog of 164.75 MU (Solar – 40.19 MU and Non-Solar – 124.56 MU) upto the FY 2016-17, as discussed in the True-up Chapter.

The Petitioner in a written submission also agreed to cover the cumulative backlog and the RPO target for FY 2017-18 by 31st March 2018. In accordance with the JERC for the State of Goa and UTs (Procurement of Renewable Energy) Regulations, 2010 and the Petitioner's submission, the table below provides the Renewable Purchase Obligation for the FY 2017-18 as determined by the Commission based on the revised estimate of energy sales:

Table 47: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2017-18
Sales within State (MU)	**2535.58**
RPO obligation (in %)	**6.70%**
Solar	2.50%
Non-Solar	4.20%
RPO obligation for the year (in MU)	**169.88**

Description	FY 2017-18
Solar	63.39
Non-Solar	106.49
Backlog upto FY 2016-17	**164.75**
Solar	40.19
Non-Solar	124.56
Total RPO to be covered for the year	**334.63**
Solar	103.58
Non-Solar	231.05

The Commission has not considered 0.75 MU of power from net metering, as estimated by the Petitioner, the same shall be considered on actual basis at the time of True-up of FY 2017-18. The Commission has assumed the rate of purchase for Solar and Non-Solar REC as Rs 1.50/ kWh (IEX Average Clearing Price) due to non–availability of Solar REC's.

The Commission has computed the following cost towards compliance of RPO which has been considered in the total power purchase cost approved by the Commission in the previous section.

Table 48: Cost towards compliance of Renewable Purchase Obligation (RPO) (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)	Avg. Rate (Rs/kWh)
Solar	103.58	15.54	1.50
Non-Solar	231.05	34.66	1.50
Total	**334.63**	**50.19**	**1.50**

4.9. *Energy Balance*

Petitioner's submission

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

Table 49: Energy Balance (MU) submitted by Petitioner

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within the UT	2566.58
2	Sales to TANGEDCO	13.98
3	Sale to Open access consumers	20.22
4	Total Sales	2600.78
5	Distribution losses (%)	13.20%
6	Energy required for the Territory (MU)	2996.34
7	Sales to common pool consumers / UI	49.61
8	**Energy Requirement @ periphery**	**3045.95**
B	**Energy Availability**	
1	Net thermal generation (Own+ IPP + Share from Central Stations)	3069.16
2	Power purchase from Common Pool / UI / Traders / Exchange / Others	18.13

S. No.	Particulars	Petitioner's Submission
3	Open access power at periphery	20.39
4	Net Power Purchased	3107.68
5	Transmission Losses	61.73
6	**Total Energy Availability**	**3045.95**

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The Commission while approving the Energy Balance has not considered energy drawal by TANGEDCO as the matter is sub-judice. The same shall be considered as per actuals in the True-Up of FY 2017-18. The table below provides the Energy Balance as approved by the Commission in the ARR Order of FY 2017-18, the Petitioner's submission and the Energy Balance now approved by the Commission.

Table 50: Energy Balance (MU) approved by Commission

Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement for Discom			
Energy sales within the State/UT	2980.60	2566.58	2535.58
Energy Drawal By TANGEDCO	0.00	13.98	0.00
Less: Energy Savings	40.11	0.00	0.00
Total Sales within the State/UT	**2940.49**	**2580.46**	**2535.58**
Distribution losses (%)			
Energy Sales within State/UT	11.25%	13.20%	11.25%
MU	372.74	392.44	321.41
Energy required at State/UT Periphery by Discom	**3313.23**	**2973.00**	**2856.99**
Open Access			
Open Access Sales	0.00	20.22	35.59
Pooled Losses			
%	-	-	1.50%
MU	0.00	0.17	0.54
Energy Required for Open Access	**0.00**	**20.39**	**36.13**
Total energy required at State/UT Periphery	**3313.23**	**2993.39**	**2893.13**
Energy Transactions at Periphery			
Add: Sales in Unscheduled Interchange	0.00	49.61	74.42
Add: Sales in Power Exchanges	0.00	0.00	0.00
Less: Purchase under UI (MU)	0.00	18.13	27.20
Less: Open Access Purchase (MU)	0.00	20.39	36.13
Total energy scheduled at State Periphery from Tied-up Sources (MU)	3313.23	3007.43	2904.21
Energy Available at State/UT periphery from firm sources	3313.23	3007.43	3128.39
Deficit/(Surplus)	**0.00**	**0.00**	**(224.17)**

In the ARR Order for FY 2017-18, the Commission did not approve any deficit/surplus of power and had estimated that the complete requirement shall be met from the firm sources. However, now in the APR of FY 2017-18, the Commission has estimated a surplus quantum of 224.17 MU. The revenue from this sale of surplus power has been discussed and considered in the Total Power Purchase Cost approved for FY 2017-18 in the previous section.

4.10. Operation & Maintenance Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

4.10.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted employee expenses of Rs 94.17 Cr against the approved expenses of Rs 81.74 Cr in the ARR Order. The employee expenses are determined in accordance with the MYT Regulations and the methodology prescribed by the Commission in the MYT Order. For the Review of FY 2017-18, the normative per employee cost has been suitably escalated by moving average WPI of the previous 3 Financial Years. The Petitioner has also included an additional cost of Rs 15.48 Cr on account of 7th Pay Commission in FY 2017-18.

Commission's analysis

In accordance with the MYT Regulation, the Commission doesn't allow any deviation in the employee expenses against those approved in the APR Order and considers the same Employee Expenses as approved in the APR Order for FY 2017-18. Further as discussed while approving the employee expenses for FY 2016-17, the Commission is of the opinion that increase in salaries and wages on account of recommendations of 7th Pay Commission is an uncontrollable expenditure. Hence any increase on account of 7th Pay Commission recommendation should be a pass through. The Petitioner in this regard was asked to furnish the details of the impact of 7th Pay Commission in FY 2017-18. However, the Petitioner has failed to submit the same therefore in absence of the said information the Commission approves the same amount of Rs 15.48 Cr towards 7th Pay Commission as approved in the True-up of FY 2016-17. The impact shall be considered as per actuals in the True-up of FY 2017-18 next year. The table below provides the Employee Expenses approved in the ARR of FY 2017-18, the Petitioner's submission and employee expenses now approved by the Commission:

Table 51: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	81.74	78.69	81.74
2	Impact of 7th Pay Commission	0.00	15.48	15.48
3	**Total Employee Expenses**	**81.74**	**94.17**	**97.22**

The Commission now approves employee expenses of Rs 97.22 Cr in the APR of the FY 2017-18.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted a revised estimate of A&G expenses, calculated in accordance with the MYT Regulations and the methodology prescribed by the Commission in the ARR Order considering revised inflation numbers. In addition to the A&G expenses, the Petitioner has also submitted an amount of Rs 3.85 Cr incurred by the Petitioner towards payment of charges to EESL related to DELP scheme approved by the Commission.

Commission's analysis

In accordance with the MYT Regulations the Commission now approves the same A&G Expenses as approved in the ARR Order for FY 2017-18. The Commission further allows the additional cost towards DELP scheme as submitted by the Petitioner.

Table 52: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	5.56	5.40	5.56
2	EESL annual payout towards DELP Charges	0.00	3.85	3.85
	Total A&G Expenses	**5.56**	**9.25**	**9.41**

The Commission now approves the Administrative & General (A&G) expenses of Rs 9.41 Cr in the APR of the FY 2017-18.

4.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has submitted a revised estimate of R&M expenses in accordance with the MYT Regulations and the methodology prescribed by the Commission in the ARR Order considering revised inflation numbers.

Commission's analysis

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

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

Table 53: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**22.02**	**18.78**	**22.02**

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 22.02 Cr in the APR of FY 2017-18.

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

The following table provides the O&M expenses approved in the ARR of FY 2017-18, Petitioner's submission and now approved by the Commission.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	81.74	94.17	97.22
2	Administrative & General Expenses (A&G)	5.56	9.25	9.41
3	Repair & Maintenance Expenses	22.02	18.78	22.02
	Total Operation & Maintenance Expenses	**109.32**	**122.20**	**128.65**

The Commission approves the Operation & Maintenance (O&M) Expenses of Rs 128.65 Cr in the APR of FY 2017-18.

4.11. Capital Expenditure & Capitalisation

Petitioner's submission

The Petitioner has submitted revised capital expenditure of Rs 48.31 Cr and capitalisation of Rs 64.49 Cr during the year. The Commission approved a capital expenditure of Rs 206.53 Cr and capitalisation of Rs 156.14 Cr in the MYT Order.

Commission's analysis:

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. The following table provides the details of capital expenditure and capitalisation during FY 2017-18.

Table 55: Capital Expenditure & Capitalisation during FY 2017-18 (In Rs Cr)

S. No.	Particulars	Capital Expenditure	Capitalisation
1	Plan schemes	33.31	41.18
2	R-APDRP Project	15.00	23.31
3	DDUGJY & IPDS	0.00	0.00
	Total	**48.31**	**64.49**

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

Table 56: Capital Expenditure and Capitalisation approved by the Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	206.53	48.31	48.31
1	Capitalisation	156.14	64.49	64.49

The Commission approves capital expenditure of Rs 48.31 Cr and capitalisation of Rs 64.49 Cr in the APR of FY 2017-18.

4.12. Capital Structure

Petitioner's Submission

The Petitioner submitted that the majority of capital assets shall be created out of equity contribution from Government of Puducherry and the actual borrowing of loan is only to the extent of implementing of the R-APDRP, DDUGJY and IPDS schemes.

Commission's analysis

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

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

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

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

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

Table 57: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	765.41	676.17	676.17
2	Addition During the FY	156.14	64.49	64.49
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	921.55	740.66	740.66

Table 58: Normative Loan addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	183.03	125.43	112.45
2	Add: Normative Loan During the year	109.30	45.14	45.14
3	Less: Normative Repayment equivalent to Depreciation	37.96	26.51	40.04*
4	Closing Normative Loan	254.37	144.06	117.56

**Depreciation calculated in next section*

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	217.30	202.85	202.85
2	Additions on account of new capitalisation	46.84	19.35	19.35
3	Closing Equity	264.14	222.20	222.20

4.13. Depreciation

Petitioner's submission

For computation of Depreciation, the opening balance of the GFA for the FY 2017-18 is taken same as the closing balance of FY 2016-17, as approved above, and subsequently the proposed capitalisation during the FY 2017-18 is added. The Depreciation rate has been considered based on the applicable depreciation rates as specified in the MYT Regulations, 2014.

Commission's analysis

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

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

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

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

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

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

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

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

Table 60: Depreciation Rate (%)

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

The Commission has considered the same weighted average depreciation rate as approved in the True-up of FY 2016-17 for calculation of depreciation in FY 2017-18, as the Petitioner has failed to submit the asset wise capitalisation during the year. The depreciation has been calculated on the average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the closing GFA of FY 2016-17 as approved in the True-up. The net addition during the year has been considered equivalent to capitalisation as approved above. The following table provides the calculation of depreciation during the year FY 2017-18.

Table 61: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	765.41	676.17	676.17
2	Addition During the FY	156.14	64.49	64.49
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	921.55	740.66	740.66
5	Average Gross Fixed Assets	843.48	708.41	708.41
6	Weighted Average Depreciation rate (%)	4.50%	3.74%	5.65%
	Depreciation	**37.96**	**26.51**	**40.04**

The Commission now approves depreciation of Rs 40.04 Cr in the APR of the FY 2017-18.

4.14. Interest and Finance Charges

Petitioner's submission

The Petitioner has calculated the Interest on Loan on normative basis according to the MYT Regulations, 2014. The opening balance of loans for FY 2017-18 is considered same as the closing balance of FY 2016-17. The normative loan addition in FY 2017-18 has been computed as 70% of the capitalisation proposed during FY 2017-18. Further, the Petitioner has also considered certain expenses towards to the bank charges, finance charges, etc. along with Interest on Loan.

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

Commission's analysis:

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

The Commission, similar to the approach followed in the True-up of FY 2016-17, has considered the rate of interest as SBI PLR as on 1st April 2017 @ 13.85%. Interest on Loan has been calculated on the average loan during the year with opening loan considered equivalent to the closing loan approved in the True-up of 2016-17. The net addition in overall loan portfolio has been considered on normative basis as explained above and the repayment is considered equivalent to depreciation accrued during the year.

The additional cost towards finance charges has been considered on the same levels as approved in the True-up of FY 2016-17.

The following table provides the Interest and Finance Charges as approved by the Commission:

Table 62: Interest and Finance Charges approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	183.03	125.43	112.45
2	Add: Normative Loan During the year	109.3	45.15	45.14
3	Less: Normative Repayment equivalent to Depreciation	37.96	26.51	40.04
4	Closing Normative Loan	254.37	144.06	117.56
5	Average Normative Loan	218.70	134.74	115.00
6	Rate of Interest (%)	14.05%	14.05%	13.85%
7	Interest on Loan	30.73	18.93	15.93
8	Finance Charges	2.27	2.66	2.54
	Interest and Finance Charges	**33.00**	**21.59**	**18.46**

The Commission approves Interest and Finance Charges of Rs 18.46 Cr in the APR of the FY 2017-18.

4.15. Return on Equity (RoE)

Petitioner's submission

Return on Equity (RoE) is computed in accordance with the MYT Regulations 2014, RoE is computed on 30% of the capital base. Opening equity is considered equivalent to closing equity for FY 2016-17 and additional equity to the tune of 30% is proposed to be capitalized during the year. Accordingly, RoE is computed at 16% post-tax.

Commission's analysis:

RoE has been calculated on normative basis on the average of opening and closing of equity during the year at the rate of 16% (on post-tax basis) with an opening equity considered equivalent to the closing equity of FY 2016-17 as approved in the True-up. Income Tax payable shall be considered taken on actual basis at the time of True-up. The following table provides the RoE approved in the ARR of FY 2017-18, the Petitioner's submission and RoE now approved by the Commission.

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

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	217.30	202.85	202.85
2	Additions on account of new capitalisation	46.84	19.35	19.35
3	Closing Equity	264.14	222.20	222.20
4	Average Equity	240.72	212.53	212.53
5	Return on Equity (%)	16.00%	16.00%	16.00%
	Return on Equity	**38.52**	**34.00**	**34.00**

The Commission approves the Return on Equity of Rs 34.00 Cr in the APR of the FY 2017-18.

4.16. Interest on Security Deposits

Petitioner's submission

Interest on consumer security has been calculated on normative basis however the Petitioner has requested to allow only Rs 3.50 Cr as same shall be paid to the consumers in FY 2017-18. The Petitioner has proposed the balance amount shall be disbursed in the subsequent years.

Commission's analysis:

Interest on Security Deposits has been calculated in accordance with the MYT Regulations, based on the average of opening and closing consumer security deposits during the year. The opening security deposit has been derived based on the closing security deposit as approved in the True-up of FY 2016-17. The addition during the year has been considered the same as submitted by the Petitioner. The same shall be considered as per actuals in the True-up of FY 2017-18. The rate of interest has been considered equivalent to RBI Bank rate as on 1st April 2017 in accordance with the MYT Regulations, 2014. The table below provides the calculation of interest on consumer security deposits for the year.

Table 64: Interest on Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	187.41	177.70	152.80
2	Add: Deposits During the year	21.31	16.13	16.13
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	208.72	193.83	168.92
5	Average Security Deposit	198.07	185.76	160.86
6	Rate of Interest (%)	7.75%	6.75%	6.50%
	Interest on Security Deposit (IoSD)	**15.35**	**12.54**	10.46
	IoSD to be paid to consumers	**15.35**	**3.50**	**10.46**

The Commission approves Interest on Security Deposit as Rs 10.46 Cr in the APR of the FY 2017-18.

4.17. Interest on Working Capital

Petitioner's submission

Interest on Working Capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) Regulations, 2014.

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

The Petitioner has computed the Interest on Working Capital at rate of 9.30%, the prevailing SBI Base Rate as on 1st April 2017.

Commission's analysis:

The Commission has considered the receivables as proportionate ARR for 2 months, the revised power purchase cost of FY 2017-18 as determined above and the average consumer security deposit amount during the year for computing the Working Capital Requirement for the year. The inventory for two months has been considered on the same levels as per the audited annual accounts of FY 2016-17.

The Commission has considered the SBI Base rate as on 1st April 2017 for calculation of interest, as stipulated in the MYT Regulations, 2014.

Accordingly, the Interest on Working Capital has been calculated, as shown in the table below:

Table 65: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	232.71	240.59	227.00
2	Less: Power Purchase Cost for one month	98.52	104.11	94.58
3	Inventory Based on Annual Requirement for Previous FY for 2 months	4.65	7.77	6.78
4	Total Working Capital Requirement	138.84	144.25	139.21
5	Less: Security Deposit excluding BG/FDR	208.72	193.83	160.86
6	Net Working Capital	(69.88)	(49.58)	(21.65)
7	Rate of Interest (%)	9.30%	9.30%	9.30%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

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

4.18. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

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

4.19. Non-Tariff Income

Petitioner's submission

The Petitioner submitted that the Non-Tariff Income comprises of Meter Rent, late payment charges, interest on staff loans, income from trading, reconnection fee, UI sales/ Sales to Exchanges and miscellaneous income among others. The Petitioner has claimed a Non-Tariff Income of Rs 9.26 Cr against approved of Rs 2.93 Cr by the Commission. The Petitioner has considered the revenue items such as "Income from trading materials" and "Miscellaneous receipts" on the same levels as per actuals in FY 2016-17. Further, the Petitioner has also considered revenue estimated from Open Access sales as part of the Non-Tariff Income.

Commission's analysis:

The Commission also has considered the same NTI as approved in the True-up of FY 2016-17 excluding the revenue from Open Access sales. The revenue from Open Access sales has been considered separately while determining the revenue gap/ surplus for the year. The NTI approved in the ARR Order, the Petitioner's submission and the NTI now approved by the Commission is shown in the table below:

Table 66: Non-Tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Open Access Income	-	4.75	-
2	Income from Trading of materials	-	0.06	0.06
3	Misc./Other Receipts	-	4.44	4.44
	Total	**2.93**	**9.26**	**4.51**

The Commission approves Non-Tariff Income of Rs 4.51 Cr in the APR of the FY 2017-18

4.20. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of Rs 1443.55 Cr after adjusting the Non -Tariff Income for FY 2017-18.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the Commission has considered and approved the revenue requirement in the APR of the FY 2017-18 as provided in the table below:

Table 67: Aggregate Revenue Requirement approved by the Commission for FY 2017-18 (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Net Power Purchase Cost (inclusive of cost towards RPO and sale of surplus power)	1182.27	1245.01	1134.92
2	Operation & Maintenance Expenses	109.32	122.20	128.65
3	Depreciation	37.96	26.51	40.04
4	Interest and Finance charges	33.00	21.59	18.46
5	Interest on Working Capital	0.00	0.00	0.00
6	Interest on Security Deposit	15.35	3.50	10.46
7	Return on Equity	38.51	34.00	34.00
8	Provision for Bad & Doubtful Debts	0.00	0.00	0.00
9	**Total Revenue Requirement**	**1416.41**	**1452.81**	**1366.54**
10	Less: Non-Tariff Income	2.93	9.26	4.51
11	**Net Revenue Requirement**	**1413.48**	**1443.55**	**1362.03**

The Commission now approves the net ARR of Rs 1362.03 Cr in the APR of FY 2017-18.

4.21. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the revenue from the sale of power at existing tariff as Rs 1299.37 Cr determined on the basis of energy sales in the territory for FY 2017-18. The estimated revenue for FY 2017-18 is based on the six month actual revenue at the existing tariff. The revenue for remaining six months of FY 2017-18 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2017-18 dated 16th May, 2017. Further, the Petitioner has considered the revenue from Cottage Industries along with the Domestic category due to minimal sales and connected load and same tariff as Domestic category. The following table provides the category wise revenue determined by the Petitioner for FY 2017-18.

Table 68: Revenue at existing tariff submitted by Petitioner (In Rs Cr)

S. No.	Category	Sales (MU)	Demand Charges (Rs Cr)	Energy Charges (Rs Cr)	Regulatory Surcharge @4% (Rs Cr)	Total Revenue (Rs Cr)
1	**DOMESTIC & COTTAGE**					
a	0 – 100 units	256.84	6.26	28.25	1.38	35.89
b	101 – 200 units	249.50	3.44	43.66	1.88	48.99
c	201 – 300 units	124.75	2.82	43.66	1.86	48.34
d	Above 300 Units	102.73	3.13	47.26	2.02	52.40
e	OHOB	10.21	1.15	-	0.05	1.20
	Total	**744.03**	**16.79**	**162.83**	**7.19**	**186.81**
2	**COMMERCIAL**					
a	0 – 100 Units	44.58	1.04	20.95	0.88	22.87
b	101 – 250 Units	46.81	0.97	26.22	1.09	28.27
c	Above 250 Units	131.52	4.47	82.20	3.47	90.14
	Total	**222.92**	**6.48**	**129.37**	**5.43**	**141.28**
3	**AGRICULTURE**					
a	Small farmers	8.00	0.06	-	0.00	0.06
b	Other farmers	49.28	1.89	-	0.08	1.96
	Total	**57.28**	**1.95**	**-**	**0.08**	**2.02**
4	**PUBLIC LIGHTING**	**24.24**	**4.54**	**16.36**	**0.84**	**21.73**
5	**LT INDUSTRIAL AND WATER TANK**					
a	LT Industrial	159.23	0.67	81.21	3.28	85.15
b	Water tank	40.44	0.02	23.86	0.96	24.83
	Total	**199.67**	**0.69**	**105.07**	**4.23**	**109.99**
6	**TEMPORARY SUPPLY - LT&HT**	**8.00**	**-**	**7.80**	**0.31**	**8.11**
7	**HT 1 INDUSTRIAL**					
a	HT I(a) for contract demand upto 5000 kVA	861.91	75.00	452.50	21.10	548.60

S. No.	Category	Sales (MU)	Demand Charges (Rs Cr)	Energy Charges (Rs Cr)	Regulatory Surcharge @4% (Rs Cr)	Total Revenue (Rs Cr)
b	HT I(b) for contract demand upto 5000 kVA	84.33	7.86	44.27	2.09	54.22
	Total	**946.24**	**83**	**497**	**23**	**603**
8	**HT 2 - GOVT. WATER TANK**	**68.18**	**6.71**	**46.02**	**2.11**	**54.85**
9	**HT 3 - EHT**	**296.02**	**23.10**	**150.97**	**6.96**	**181.03**
	Grand Total	**2566.58**	**143.12**	**1115.20**	**50.33**	**1299.37**

Commission analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the tariff rates applicable for FY 2017-18. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has not projected any revenue from Power factor incentive etc. and the same shall be considered as per actuals while truing up of the FY 2017-18. The Commission, similar to the Petitioner, has considered the revenue form Cottage Industries along with the Domestic Category. The Commission has not considered the revenue from Regulatory Surcharge @4% along with revenue from Retail Tariff due to its diverse nature. The same has been considered while approving the revenue gap/ surplus for FY 2017-18. The revenue from category/ sub-category/ slab-wise revenue as computed by the Commission for FY 2017-18 has been shown in the following table:

Table 69: Revenue at existing tariff computed by Commission (In Rs Cr)

S. No.	Category	Sales (MU)	Revenue from Energy Charges (Rs Cr)	Revenue from Fixed charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
1	**DOMESTIC**	**744.75**	**163.86**	**15.41**	**179.27**	**2.41**
	0-100 units	282.26	31.05	6.16	37.21	1.32
	101-200 units	231.62	40.53	3.39	43.92	1.90
	201-300 units	126.61	44.31	2.77	47.09	3.72
	Above 300 units	104.27	47.96	3.08	51.04	4.90
2	**HUT SERVICES/ OHOB**	**10.22**	**0.00**	**1.15**	**1.15**	**1.13**
3	**COMMERCIAL**	**233.57**	**135.55**	**6.39**	**141.94**	**6.08**
	0-100 units	46.71	21.96	1.02	22.98	4.92
	101-250 units	49.05	27.47	0.96	28.43	5.80
	Above 250 units	137.81	86.13	4.41	90.54	6.57
4	**AGRICULTURE SERVICES**	**57.28**	**0.00**	**1.95**	**1.95**	**0.34**
(i)	Agriculture	57.28	0.00	1.95	1.95	0.34
	Small Farmers	8.00	0.00	0.06	0.06	0.07
	Other farmers	49.28	0.00	1.89	1.89	0.38
5	**PUBLIC LIGHTING**	**27.52**	**18.58**	**4.54**	**23.12**	**8.40**
6	**LT INDUSTRIAL & WATER WORKS**	**184.78**	**97.23**	**0.69**	**97.92**	**5.30**
(i)	LT Industrial	**147.36**	**75.15**	0.67	75.83	5.15
(ii)	Water Tanks	37.43	22.08	0.02	22.10	5.90

S. No.	Category	Sales (MU)	Revenue from Energy Charges (Rs Cr)	Revenue from Fixed charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
7	**HIGH TENSION-I**	**930.18**	**488.34**	**65.11**	**553.46**	**5.95**
(i)	HT 1 (a) For contract demand up to 5000 kVA/Industrial	857.08	449.97	59.31	509.27	5.94
(ii)	HT 1 (b) For contract demand up to 5000 kVA/Commercial	73.10	38.38	5.80	44.18	6.04
8	**HIGH TENSION-II**	**65.53**	**44.23**	**4.81**	**49.04**	**7.48**
9	**HIGH TENSION-III**	**273.75**	**139.61**	**16.58**	**156.19**	**5.71**
10	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
11	**TEMPRORARY**	**8.00**	**7.80**	**0.00**	**7.80**	**9.75**
	TOTAL	**2535.58**	**1095.21**	**116.63**	**1211.84**	**4.78**

The Commission, has determined revenue from the sale of power at existing tariff (excluding Revenue from Regulatory Surcharge) as Rs 1211.84 Cr in the APR of FY 2017-18.

4.22. Revenue from Open Access Charges

Petitioner's submission

The Petitioner submitted the revenue from Open Access Charges as per applicable Open Access Charges in FY 2017-18.

Commission analysis

The Commission has determined the Revenue from Open Access sales (determined above) as per charges applicable during FY 2017-18.

Table 70: Revenue from open access approved by Commission (In Rs Cr)

Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
Revenue from Open Access	-	4.75	8.19

The Commission approves Revenue from Open Access as Rs 8.19 Cr in the APR of FY 2017-18

4.23. Standalone Revenue Gap/Surplus

Petitioner's submission

Based on the ARR and the revenue from Retail tariff and Open Access sales, the standalone revenue gap of Rs 144.18 Cr is arrived at in the APR of FY 2017-18.

Commission analysis

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

Table 71: Standalone Revenue Gap/ Surplus at existing tariff (In Rs Cr)

S. No	Particulars	Approved in ARR Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	1413.18	1443.55	1362.03
2	Revenue from Retail Sales at Existing Tariff	1499.91	1249.04	1211.84
3	Revenue from Regulatory Surcharge (@4%)	-	50.33	48.47
4	Revenue from Open Access Charges	-	-*	8.19
5	**Total Revenue**	**1499.91**	**1299.37**	**1268.50**
	Net Gap /(Surplus)	**(86.42)**	**144.18**	**93.53**

**The Petitioner has considered the revenue from Open Access as part of the NTI*

The standalone gap at existing retail tariff is Rs 93.53 Cr in the APR of FY 2017-18. The estimated gap is carried over to the next year.

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

5.1. Background

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

"6.ARR Forecast

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

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

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

(a) Estimates of quantum of electricity to be supplied to consumers and wheeled on behalf of Distribution System Users for each financial year within the Control Period; and

(b) Prevailing tariff as at the date of making the application."

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

This Chapter analyses the individual elements constituting the Aggregate Revenue Requirement for the FY 2018-19, approved in the MYT Order dated 24th May 2016 and re-computes the same considering the actual information available of various parameters for the FY 2016-17 as per the audited accounts and the provisional information provided by the Petitioner for FY 2017-18. The revised ARR and revenue at existing tariff is determined for the FY 2018-19 to arrive at the revised revenue gap/surplus for the year.

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

Petitioner's Submission

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

The following table provides the number of consumers and energy sales as submitted by the Petitioner:

Table 72: No. of consumers and Energy sales (MU) as submitted by Petitioner

S. No.	Particulars	Petitioner's Submission No. of consumers	Connected Load (kW/kVA)	Energy Sales (MU)
1	Domestic	337845	-	770.23
2	OHOB	35537	-	10.21
3	Commercial	55762	-	238.42
4	Agriculture	6965	59538	57.28
5	Public Lighting	50609	-	24.24
6	LT Industrial & Water Tanks	6708	-	204.91
7	HT 1 Industrial & Commercial	470	286200	971.38
8	HT 2 Government & Water Tank	63	22500	71.78
9	HT 3 EHT	7	89000	296.02
10	Temporary	-	-	5.00
	Total consumers	**493966**	**457238**	**2649.46**

Commission's Analysis

For projecting the number of consumers, connected load and energy sales for each category, the historical trends in the past 6 years (FY 2011-12 to FY 2016-17) and the provisional data for the first 6 months of FY 2017-18 are considered. The Compound Annual Growth Rate (CAGR) and the Year on Year (y-o-y) increase for each category has been calculated and using the appropriate growth rate the category wise consumers, connected load and energy sales are projected. The tables below provide the trends observed in the growth in the number of consumers, connected load and energy sales for the Petitioner.

Table 73: Growth in No. of consumers

Category	Y-o-y growth FY13/ FY12	FY14/FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	CAGR 5 year	4 year	3 year	2 year	1 year
Domestic	4.79%	5.40%	5.25%	6.94%	2.28%	4.92%	4.95%	4.81%	4.58%	2.28%
OHOB	0.07%	0.13%	0.01%	0.00%	0.00%	0.04%	0.03%	0.00%	0.00%	0.00%
Commercial	3.66%	4.21%	3.59%	10.09%	0.80%	4.43%	4.62%	4.76%	5.34%	0.80%
Agriculture & Cottage Industries	0.45%	-0.71%	0.57%	0.07%	0.67%	0.21%	0.15%	0.44%	0.37%	0.67%
Public Lighting	0.21%	2.14%	0.75%	0.32%	0.39%	0.76%	0.90%	0.49%	0.36%	0.39%
LT Industrial	1.71%	3.24%	1.36%	1.66%	0.62%	1.71%	1.71%	1.21%	1.14%	0.62%
Water Works	6.68%	0.00%	0.00%	32.94%	17.70%	10.79%	11.84%	16.09%	25.09%	17.70%
HT-1	4.49%	3.58%	-5.07%	5.10%	1.39%	1.83%	1.17%	0.38%	3.22%	1.39%
HT-2	4.65%	8.89%	8.16%	0.00%	13.21%	6.89%	7.46%	6.98%	6.40%	13.21%
HT-3	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hoardings/Sign boards	-	-	-	-	-	-	-	-	-	-
Temporary	-	-	-	-	-	-	-	-	-	-
Total	**3.54%**	**4.27%**	**3.94%**	**5.77%**	**1.68%**	**3.83%**	**3.90%**	**3.78%**	**3.71%**	**1.68%**

Table 74: Growth in Connected Load

Category	Y-o-y growth FY13/ FY12	FY14/FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	CAGR 5 year	4 year	3 year	2 year	1 year
Domestic	-	-	-	-	-	-	-	-	-	-

Category	Y-o-y growth					CAGR				
	FY13/ FY12	FY14/FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
OHOB	-	-	-	-	-	-	-	-	-	-
Commercial	-	-	-	-	-	-	-	-	-	-
Agriculture & Cottage Industries	0.34%	-0.34%	0.00%	-25.00%	33.33%	0.00%	-0.09%	0.00%	0.00%	33.33%
Public Lighting	-	-	-	-	-	-	-	-	-	-
LT Industrial	-	-	-	-	-	-	-	-	-	-
Water Works	-	-	-	-	-	-	-	-	-	-
HT-1	2.67%	-0.68%	-12.05%	2.87%	2.16%	-1.18%	-2.12%	-2.59%	2.51%	2.16%
HT-2	-12.55%	14.20%	3.71%	2.00%	7.81%	2.64%	6.83%	4.48%	4.87%	7.81%
HT-3	-17.54%	4.99%	-7.19%	2.00%	-2.26%	-4.34%	-0.72%	-2.55%	-0.15%	-2.26%
Hoardings/Sign boards	-	-	-	-	-	-	-	-	-	-
Temporary	-	-	-	-	-	-	-	-	-	-
Total	**-2.75%**	**0.97%**	**-8.90%**	**-1.31%**	**4.88%**	**-1.53%**	**-1.22%**	**-1.94%**	**1.74%**	**4.88%**

Table 75: Growth in Energy Sales

Category	Y-o-y growth					CAGR				
	FY13/ FY12	FY14/FY13	FY15/ FY14	FY16/ FY15	FY17/ FY16	5 year	4 year	3 year	2 year	1 year
Domestic	8.14%	3.25%	5.87%	6.26%	3.68%	5.42%	4.76%	5.26%	4.96%	3.68%
OHOB	1.62%	20.90%	-17.29%	0.00%	2.10%	0.74%	0.52%	-5.48%	1.04%	2.10%
Commercial	8.72%	-0.71%	0.67%	8.66%	6.53%	4.69%	3.71%	5.23%	7.59%	6.53%
Agriculture & Cottage Industries	0.43%	0.35%	0.00%	0.00%	0.49%	0.25%	0.21%	0.16%	0.25%	0.49%
Public Lighting	16.25%	-6.81%	0.00%	0.00%	-6.78%	0.20%	-3.46%	-2.31%	-3.45%	-6.78%
LT Industrial	6.69%	22.43%	-5.99%	3.07%	-9.38%	2.78%	1.83%	-4.24%	-3.36%	-9.38%
Water Works	7.69%	-5.68%	-32.46%	3.07%	4.24%	-5.92%	-9.05%	-10.14%	3.65%	4.24%
HT-1	4.18%	-13.53%	-0.31%	1.91%	5.85%	-0.63%	-1.80%	2.45%	3.86%	5.85%
HT-2	1.01%	7.23%	14.74%	7.22%	3.38%	6.62%	8.07%	8.34%	5.28%	3.37%
HT-3	9.97%	-3.50%	-2.16%	-16.15%	-3.37%	-3.40%	-6.48%	-7.45%	-9.99%	-3.37%
Hoardings/Sign boards	-	-	-	-	-	0.00%	0.00%	0.00%	0.00%	0.00%
Temporary	44.79%	-50.17%	-39.41%	14.38%	14.29%	-10.59%	-20.74%	-7.48%	14.33%	14.29%
Total	**6.62%**	**-4.41%**	**0.03%**	**1.34%**	**2.85%**	**1.22%**	**-0.09%**	**1.40%**	**2.09%**	**2.85%**

Using the appropriate growth rate from the trends observed above, the number of consumers, connected load and energy sales have been estimated for FY 2018-19. For all categories, the growth rate is applied over the estimates of FY 2017-18, as determined in the previous Chapter.

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

Table 76: Number of consumers approved by Commission

Category	Growth Rate		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	5 year CAGR	4.92%	335412	337845	344979
OHOB	Subjective Rate	0.00%	35539	35537	35539
Commercial	5 year CAGR	4.43%	53224	55762	56801

Category	Growth Rate		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Agriculture & Cottage Industries	5 year CAGR	0.21%	6836	6965	6929
Public Lighting	5 year CAGR	0.76%	51774	50609	51016
LT Industrial	5 year CAGR	1.71%	6827	6559	6707
Water Works	Subjective Rate	0.00%	124	149	133
HT-1	5 year CAGR	1.83%	472	470	456
HT-2	5 year CAGR	6.89%	63	63	69
HT-3	Subjective Rate	0.00%	8	7	7
Hoardings/Signboards	Subjective Rate	0.00%	-	-	-
Temporary	Subjective Rate	0.00%	-	-	-
Total			**490279**	**493966**	**502636**

Table 77: Connected Load approved by Commission (kVA)

Category	Growth Rate		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	-	-	-	-	-
OHOB	-	-	-	-	-
Commercial	-	-	-	-	-
Agriculture & Cottage Industries	Subjective Rate	0.00%	44654	44415	44415
Public Lighting	-	-	-	-	-
LT Industrial	-	-	-	-	-
Water Works	-	-	-	-	-
HT-1	2 year CAGR	2.51%	361298	286200	317656
HT-2	5 year CAGR	2.64%	32029	22500	22225
HT-3	Subjective Rate	0.00%	126958	89000	83743
Hoardings/Signboards	-	-	-	-	-
Temporary	-	-	-	-	-
Total			**564939**	**442115**	**468039**

Table 78: Energy Sales approved by Commission (MU)

Category	Growth Rate		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Domestic	5 year CAGR	5.42%	970.39	770.23	785.14
OHOB	Subjective Rate	0.00%	10.38	10.21	10.22
Commercial	3 year CAGR	5.23%	228.62	238.42	245.79
Agriculture & Cottage Industries	5 year CAGR	0.25%	57.00	57.28	57.43
Public Lighting	5 year CAGR	0.20%	30.51	24.24	27.58
LT Industrial	Subjective Rate	0.00%	210.73	162.41	147.36
Water Works	Subjective Rate	0.00%	41.64	42.50	37.43
HT-1	Subjective Rate	0.00%	1133.70	971.38	930.18
HT-2	2 year CAGR	5.28%	71.74	71.78	68.98

Category	Growth Rate		Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
HT-3	Subjective Rate	5.28%	422.93	296.02	288.20
Hoardings/Signboards	Subjective Rate	0.00%	-	-	-
Temporary	Subjective Rate	0.00%	-	5.00	8.00
Total			**3177.04**	**2649.46**	**2606.31**

The Commission approves number of consumer as 502636, connected load as 468039 kVA and energy sales of 2606.31 MU in the ARR of FY 2018-19.

5.4. Inter-State Transmission Loss

Petitioner's submission

The Petitioner has submitted the Inter-State Transmission Loss for different power stations as follows:

- For TANGEDCO, the Inter-State losses have been considered as 4%, on similar lines as approved by the Commission in the APR Order due to non-availability of requisite loss percentage figure.
- For Central Generating Stations such as NTPC and NPCIL etc., the transmission loss as per the weekly data published on the Southern Regional Power Committee (SRPC) website has been considered.

Commission's analysis

The Commission in the ARR of FY 2018-19 considers the transmission loss levels in line with those approved in the APR of FY 2017-18.

The table below provides the Inter-State Transmission Losses submitted and now approved by the Commission:

Table 79: Inter-State Transmission Loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	TANGEDCO	4.00%	4.00%	4.00%
2	For Central Generating Stations (CGS)	4.97%	2.04%	2.15%

The Commission approves Inter –State Transmission Loss of 4.00% for power received from TANGEDCO and 2.15% for power received from Central Generating Stations in the ARR of FY 2018-19.

5.5. Intra-State Transmission and Distribution (T&D) loss

Petitioner's submission

The Petitioner has proposed to revise the Intra-State T&D loss to 12.50% against an approved loss of 11.00% in the MYT Order.

Commission's analysis

The Commission approves the Intra-State T&D loss at the same level as approved in the MYT Order.
The following table provides the Intra-State T&D loss approved in the MYT Order, the Petitioners submission and T&D Loss now approved by the Commission.

Table 80: Intra-State T&D loss (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Intra-State distribution loss	11.00%	12.50%	11.00%

The Commission approves Intra-State T&D loss of 11.00% in the ARR of FY 2018-19.

5.6. Power Purchase Quantum & Cost

Petitioners Submission

The Petitioner meets its total energy requirement from its allocation from the Central Generating Stations (CGS) and State utilities like TANGEDCO and PPCL. PPCL is a generating company within the UT of Puducherry catering to Karaikal region of PED.

The Petitioner has projected the quantum of power purchase based on the energy availability in the past years and applying the principle of Merit Order Dispatch (MOD). The key assumptions considered for estimating the quantum and cost are as follows:

- MOD for FY 2018-19: The power purchase quantum has been projected under the principle of MOD. The must run stations have been identified as all the NPCIL plants and PPCL. The remaining quantum of power is envisaged to be purchased from the remaining available sources.
- No Energy availability has been projected from KSEB due to swapping of energy availability quantum with an increased allocation from CGS stations.
- Energy availability from TANGEDCO has been considered upto an extent of 50 MU as the transmission line for evacuation of power is under construction. The work is expected to be completed in the first quarter of the FY 2018-19. Any shortfall in the region shall be met from Central Generating Stations.
- The Power purchase cost under MOD has been arrived at as follows:
    - The fixed charges for all the generating stations have been taken the same as incurred in FY 2016-17.
    - The variable cost for FY 2018-19 has been computed considering actual average per unit variable cost of each source incurred in first six months period of April- September 2017.
    - The Transmission Charges for FY 2018-19 have been considered the same as that in FY 2017-18.

The Petitioner has a Renewable Purchase Obligation of 9.00% (inclusive of 3.60% Solar RPO) in FY 2018-19 based on the projected energy sales. The overall RPO target for FY 2018-19 comes out to be 95.38 MU from Solar and 143.07 MU from Non-Solar. The Petitioner has proposed to procure 196.35 MU of physical solar power at a rate of Rs 3.50/kWh from NTPC and to cover the pending RPO through purchase of Renewable Energy Certificates (REC's) at a rate of Rs 1.50/kWh. The quantum and cost towards RPO compliance have been shown in the table below. The same has been included in the overall power purchase cost estimated for FY 2018-19.

Table 81: RPO Compliance cost as submitted by Petitioner (In Rs Cr)

Particulars	Total	Solar obligation	Non- Solar obligation
Sales (MU)		**2649.46**	
RPO Obligation (%)	9.00%	3.60%	5.40%
RPO Requirement (MU)	238.45	95.38	143.07

Particulars	Total	Solar obligation	Non- Solar obligation
Outstanding RPO @ the end of previous year (MUs)	200.02	100.97	99.05
RPO met through purchase of physical power/RECs (MU)	438.47	196.35	242.12
Cost of RPO compliance thru RECs (Rs Cr)			24.21

The Power Purchase Cost for the FY 2018-19 has been tabulated below:

Table 82: Power Purchase quantum (MU) and Cost (In Rs Cr) submitted by Petitioner

S. No.	Source	Energy Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Total Charges (Rs Cr)
A	**Central Sector Power Stations**				
I	**NTPC**	**1134.53**	**102.81**	**244.32**	**347.13**
	RSTPS Stage I & II	486.36	38.76	116.73	155.49
	RSTPS Stage -III	123.01	13.11	28.84	41.95
	Talcher Stage- II	424.76	35.70	69.56	105.25
	Simhadri Stage- II	100.40	15.24	29.20	44.44
II	**NLC and NTPL**	**1063.57**	**86.13**	**304.28**	**390.41**
	NLC TPS II Stage I	510.11	28.45	146.66	175.11
	NLC TPS II Stage II	207.72	9.96	59.72	69.68
	NLC TPS I (Expn)	118.77	13.37	31.83	45.20
	NLC TPS II (Expn)	66.99	10.33	17.54	27.87
	NTPL	159.97	24.03	48.52	72.55
III	**NPCIL**	**613.28**	**-**	**195.73**	**195.73**
	MAPS	46.77		9.69	9.69
	KAPS Stage I	137.70		41.08	41.08
	KAPS Stage II	125.60		37.48	37.48
	Kudankulam U1	127.13		45.07	45.07
	Kudankulam U2	176.08		62.41	62.41
					-
IV	**Others**	**176.97**	**24.67**	**63.21**	**87.88**
	TNEB (Pondy)				-
	TNEB (Karaikal)	50.00	-	27.35	27.35
	Vallur Thermal Project	126.97	24.67	35.86	60.53
V	**RE Power Purchase (Solar)**	**193.85**	**-**	**67.85**	**67.85**
B	**Within State Generations**				
	PPCL	216.37	23.25	44.86	**68.11**
					-
C	**Transmission Charges**		-	-	**59.94**

S. No.	Source	Energy Purchase (MU)	Fixed Charges (Rs Cr)	Variable Charges (Rs Cr)	Total Charges (Rs Cr)
	PGCIL Transmission Charges, Wheeling & Other Charges				59.94
D	**RPO Compliance Cost**				24.21
E	**Rebate**				(18.82)
F	**Total**	**3398.57**	**236.86**	**920.25**	**1222.44**

Commission's Analysis

The Commission has projected the power purchase quantum and cost for FY 2018-19 based on the actual monthly data for 9 months for FY 2017-18 and 12 months data for FY 2016-17, FY 2015-16 and FY 2014-15, as submitted by the Petitioner. For projecting availability of power, firm allocation from various generating stations has been considered. The source wise methodology followed for projecting the quantum and cost of power procurement has been detailed as follows:

5.6.1. Availability of power

Availability of energy from NTPC & NLC Stations:

- The energy availability from all the NTPC and NLC stations have been done based on average Plant Load Factor (PLF) of the respective stations in the last 4-5 years depending on the status of operation of the plant during the year.

Availability of energy from NPCIL plants:

- The energy availability from Madras Atomic Power Station (MAPS) and Kaiga Stage I & II has been estimated based on the average PLF of the plant during the last 3 years from FY 2014-15 to FY 2016-17.
- The Kundakulum Power Station's Unit I & II were fully operational only in FY 2016-17, therefore, the energy availability for the year has been considered the same as that in FY 2016-17.

Availability of energy from TANGEDCO, KSEB, Vallur Thermal Plant and PPCL:

- The Petitioner in the Petition has projected 50 MU from TANGEDCO. In the Technical Validation Session (TVS) held in the Commission's office, the Petitioner confirmed that the power availability for the Karaikal region in FY 2018-19 shall be met from CGS stations. Therefore, in accordance with the Petitioner's submission, the Commission has not considered any energy availability from TANGEDCO in FY 2018-19.
- The allocation of power from KSEB has been replaced with allocation from CGS stations, as submitted by the Petitioner. The power procured from KSEB served the consumers in the Mahe Region. Accordingly, no energy availability has been considered to be procured from this source in FY 2018-19 and the consumers of the Mahe region are envisaged to be served from additional allocation from CGS stations.
- The energy availability from Vallur Thermal Station has been estimated based on the average PLF achieved by the plant in the last 5 years.
- Energy availability from PPCL has been considered the same as in FY 2017-18.

Availability of energy from Open Market/Unscheduled Interchange

- The energy deficit/surplus for the FY 2018-19, as discussed in the section of energy balance later in the Order, has been assumed to be purchased/ sold in the open market.
- No power purchase has been projected under UI Underdrawal/ Overdrawal.

5.6.2. Power Purchase Cost

Variable Charges:

- The per unit variable costs for various power stations have been computed by taking the average of the actual per unit variable cost during the first 6 months from April 2017 to September 2017 for all the stations.
- For procurement of power from Open Market, the Average Round the Clock (RTC) rate for the southern region during the calendar year 2017 has been considered.

Fixed Charges:

- The Fixed costs have been considered based on the tariff Orders issued by the CERC for respective Central Generating Stations,
- For PPCL the fixed cost as approved in the Tariff Order issued for FY 2018-19 has been considered.
- The Fixed cost has been apportioned on the basis of PED's share in each station and the average annual plant availability factor achieved during the last five years by the plant.

Other Charges:

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

5.6.3. Transmission Charges

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

The transmission charges are determined based on the latest quarterly Point of Connection (PoC) rates approved by the Central Electricity Regulatory Commission (CERC) in accordance with Regulation 17(2) of the Central Electricity Regulatory Commission (Sharing of Inter-State Transmission Charges and Losses) Regulations, 2010.

5.6.4. Total Power Purchase Cost

The following table provides the Power Purchase quantum and cost approved by the Commission for FY 2018-19:

Table 83: Power Purchase Quantum (MU) and cost (Rs Cr) approved by the Commission

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed Charges (Rs Cr)	Total (Rs Cr)	Avg. Rate (@ UT Periphery) (Rs/kwh)
NTPC						
RSTPS Stage I & II	534.21	522.73	128.21	37.14	165.36	3.16
RSTPS Stage -III	137.88	134.91	32.33	10.14	42.47	3.15
Talcher Stage- II	456.96	447.13	74.83	31.63	106.46	2.38

Details of the stations	Power Purchase at Generator Periphery (MU)	Power Purchase at UT periphery (after adjusting ISTS Losses) (MU)	Variable Charges (Rs Cr)	Fixed Charges (Rs Cr)	Total (Rs Cr)	Avg. Rate (@ UT Periphery) (Rs/kwh)
Simhadri Stage- II	101.83	99.64	29.61	16.58	46.19	4.64
Sub-Total-NTPC	**1230.88**	**1204.41**	**264.98**	**95.49**	**360.48**	**2.99**
NLC and NTPL						
NLC TPS II Stage I	479.81	469.50	144.33	33.79	178.12	3.79
NLC TPS II Stage II	186.21	182.21	55.85	13.43	69.28	3.80
NLC TPS I (Expn)	120.57	117.98	33.47	10.91	44.37	3.76
NLC TPS II (Expn)	51.16	50.06	14.24	4.26	18.49	3.69
NTPL	142.55	139.49	41.85	25.18	67.03	4.81
Sub-Total-NLC and NTPL	**980.31**	**959.23**	**289.74**	**87.56**	**377.30**	**3.93**
NPCIL						
Madras Atomic Power Station	45.25	44.27	9.38	0.00	9.38	2.12
Kaiga Stage I & II	242.93	237.71	72.48	0.00	72.48	3.05
Kundakulum Unit I & II	278.94	272.94	98.88	0.00	98.88	3.62
Sub-Total-NPCIL	**567.11**	**554.92**	**180.74**	**0.00**	**180.74**	**3.26**
Others						
TNEB (Karaikal)	0.00	0.00	0.00	0.00	0.00	0.00
Vallur	123.68	121.02	34.93	23.16	58.09	4.80
KSEB	0.00	0.00	0.00	0.00	0.00	0.00
Sub-Total-Others	**123.68**	**121.02**	**34.93**	**23.16**	**58.09**	**4.80**
State Generation						
PPCL	215.56	215.56	51.31	35.54	86.85	4.03
Sub- Total State Generation	**215.56**	**215.56**	**51.31**	**35.54**	**86.85**	**4.03**
Open Market	**(126.71)**	**(126.71)**	**(40.17)**		**(40.17)**	**3.17**
RPO						
Solar			14.07	-	14.07	0.00
Non-Solar			21.11	-	21.11	0.00
Sub-Total- RPO			**35.19**	**-**	**35.19**	**0.00**
Total Power Purchase Quantum and Cost	**2990.83**	**2928.43**	**816.71**	**241.75**	**1058.46**	**3.61**
Transmission Charges					**67.17**	**0.00**
Total Power Purchase Quantum and Cost including transmission charges	**2990.83**	**2928.43**	**816.71**	**241.75**	**1125.64**	**3.84**

The Commission approves the quantum of power purchase as 2928.43 MU at State/ UT Periphery with total cost of Rs 1125.64 Cr for the FY 2018-19.

5.7. Renewable Purchase Obligations (RPOs)

Petitioner's submission:

As mentioned in the previous section, The Petitioner has proposed to procure 196.35 MU of physical solar power at a rate of Rs 3.50/kWh from NTPC and the pending RPO through purchase of Renewable Energy Certificates (REC's) at a rate of Rs 1.50/kWh.

Commission's analysis:

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

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

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

The Petitioner has been unable to furnish the documentary evidence in support of the solar power proposed to be procured from NTPC. The required RPO has been assumed to be covered through procurement of REC's. The Commission has considered the per unit rate of Rs 1.50/kwh (IEX Average Clearing Price) to cover the Solar RPO and the same rate for covering the Non-Solar RPO. The total cost towards RPO compliance has been considered in the total power purchase cost approved earlier.

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

Table 84: Summary of Renewable Purchase Obligation (RPO) (MU)

Description	FY 2017-18
Sales within State (MU)	**2606.31**
RPO obligation (in %)	**9.00%**
Solar	3.60%
Non-Solar	5.40%
RPO obligation for the year (in MU)	**234.57**
Solar	93.83
Non-Solar	140.74
RPO compliance (REC certificate purchase)	**234.57**
Solar	93.83
Non-Solar	140.74

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

Table 85: Cost towards compliance of Renewable Purchase Obligation (RPO) (In Rs Cr)

Description	RPO (MU)	Total Cost (Rs Cr)	Avg. Rate (Rs/kWh)
Solar	93.83	14.07	1.50
Non-Solar	140.74	21.11	1.50
Total	**234.57**	**35.19**	**1.50**

5.8. Energy Balance

Petitioner's submission

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

Table 86: Energy Balance submitted by Petitioner (MU)

S. No.	Particulars	Petitioner's Submission
A	**Energy Requirement**	
1	Total Sales within the UT	2649.46
2	Sales to TANGEDCO	0.00
3	Sale to Open access consumers	0.00
4	Total Sales	2649.46
5	Distribution losses (%)	12.50%
6	Energy required for the Territory (MU)	3027.96
7	Sales to common pool consumers / UI	0.00
8	**Energy Requirement @ periphery**	**3027.96**
B	**Energy Availability**	
1	Net thermal generation (Own+ IPP + Share from Central Stations)	2889.62
2	Power purchase from Common Pool / UI / Traders / Exchange / Others	193.85
3	Open access power at periphery	-
4	Net Power Purchased	3083.47
5	Transmission Losses	55.51
6	**Total Energy Availability**	**3027.96**

Commission's analysis

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

Table 87: Energy Balance (MU) approved by Commission

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Energy Requirement for Discom			
Energy sales within the State/UT	3136.93	2649.46	2606.31
Energy Drawal By TANGEDCO	0.00	0.00	0.00
Less: Energy Savings	0.00	0.00	0.00

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Total Sales within the State/UT	**3136.93**	**2649.46**	**2606.31**
Distribution losses (%)	-		
Energy Sales within State/UT	11.00%	12.50%	11.00%
MU	387.71	378.50	322.12
Energy required at State/UT Periphery by Discom	**3524.64**	**3027.96**	**2928.43**
Open Access			
Open Access Sales	0.00	0.00	35.59
Pooled Losses			
%	-	-	1.50%
MU	0.00	0.00	0.54
Energy Required for Open Access	**0.00**	**0.00**	**36.13**
Total energy required at State/UT Periphery	**3524.64**	**3027.96**	**2964.56**
Energy Transactions at Periphery			
Add: Sales in Unscheduled Interchange	0.00	0.00	0.00
Add: Sales in Power Exchanges	0.00	0.00	0.00
Less: Purchase under UI (MU)	0.00	0.00	0.00
Less: Open Access Purchase (MU)	0.00	0.00	36.13
Total energy scheduled at State/UT Periphery from Tied-up Sources (MU)	3524.64	3027.96	2928.43
Energy Available at State/UT periphery from firm sources	3524.64	3027.96	3055.15
Deficit/(Surplus)	**0.00**	**0.00**	**(126.71)**

The Commission approved an energy surplus of 126.71 MU in FY 2018-19. The Commission directs the Petitioner to sale this surplus power judiciously so as to optimize the Power Purchase Cost. The revenue from sale of surplus power has been considered in the total power purchase cost approved for FY 2018-19.

5.9. Operation & Maintenance (O&M) Expenses

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

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

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

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

(c)Depreciation and working capital requirements;

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

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

(f)Variation in Wires Availability and Supply Availability;

(g)Variation on account of inflation;"

5.9.1. Employee Expenses

Petitioner's submission

The Petitioner has submitted employee expenses of Rs 97.30 Cr against the approved expenses of Rs 88.94 Cr in the MYT Order. The employee expenses are determined in accordance with the MYT Regulations and the methodology prescribed by the Commission in the MYT Order. The normative per employee cost has been suitably escalated by moving average WPI of the previous 3 Financial Years. The employee expenses are inclusive of additional expenditure of Rs 15.48 Cr on account of 7th Pay Commission, assumed same as in FY 2017-18.

Commission's analysis

As discussed, any variation in the O&M Expense is controllable except expenses arising due to factors which are beyond the control of the Petitioner. Thus, in accordance with the MYT Regulations, 2014, the Commission approves the same Employee Expenses as approved in the MYT Order along with an additional expense on account of the 7th Pay Commission. The Petitioner has failed to submit the supporting details and calculation of the impact of 7th Pay Commission. Therefore, the impact has been considered the same as approved in the APR of FY 2017-18.

The table below provides the employee expenses approved in the MYT Order, the Petitioner's submission and employee expenses now approved by the Commission.

Table 88: Employee Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	88.94	81.82	88.94
2	Impact of 7th Pay Commission	-	15.48	15.48
3	**Total Employee Expenses**	**88.94**	**97.30**	**104.42**

The Commission approves Employee Expenses of Rs 104.42 Cr in the ARR of FY 2018-19.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's submission

The Petitioner has submitted a revised estimate of A&G expenses, calculated in accordance with the MYT Regulations and the methodology prescribed by the Commission in the MYT Order considering revised inflation numbers. The Petitioner has also submitted a provision of Rs 5.00 Cr towards EESL charges and a provision of Rs 2.40 Cr towards implementation of Smart Grid Project in Puducherry.

Commission's analysis

In accordance with the MYT Regulations the Commission now approves the same A&G Expenses as approved in the MYT Order for FY 2018-19. In addition, the Commission approves a provision towards EESL charges and implementation of Smart Grid Project during the year.

Table 89: A&G Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Administration & General Expenses (A&G)	6.05	5.62	6.05
2	EESL annual payout towards DELP Charges	0.00	5.00	5.00
3	Expenditure towards Smart Grid Project	0.00	2.40	2.40
	Total A&G Expenses	**6.05**	**13.02**	**13.45**

The Commission approves the Administrative & General (A&G) expenses of Rs 13.45 Cr in the ARR of FY 2018-19.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's submission

The Petitioner has calculated the R&M Expenses in accordance with the MYT Regulations 2014 and the methodology prescribed by the Commission in MYT Order.

Commission's analysis

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

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

Table 90: R&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	**Repair & Maintenance Expenses (R&M)**	**26.51**	**20.57**	**26.51**

The Commission approves the Repair & Maintenance (R&M) expenses of Rs 26.51 Cr in the ARR of FY 2018-19.

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

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

Table 91: O&M Expenses approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Employee Expenses	88.94	97.30	104.42
2	Administrative & General Expenses (A&G)	6.05	13.02	13.45
3	Repair & Maintenance Expenses	26.51	20.57	26.51
	Total Operation & Maintenance Expenses	**121.50**	**130.88**	**144.38**

The Commission approves the Operation & Maintenance (O&M) expenses of Rs 144.38 Cr in the ARR of FY 2018-19.

5.10. Capital Expenditure & Capitalisation

Petitioner's submission

The Petitioner has submitted revised capital expenditure of Rs 68.31 Cr and capitalisation of Rs 54.31 Cr during the year. The Commission approved capitalisation of Rs 143.86 Cr in the MYT Order.

Commission's analysis:

The Commission with regard to the capital expenditure and capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents. The following table provides the details of capital expenditure and capitalisation proposed by the Petitioner in FY 2018-19.

Table 92: Capital Expenditure & Capitalisation during FY 2017-18 (In Rs Cr)

S. No.	Particulars	Capital Expenditure	Capitalisation
1	Plan schemes	46.64	17.33
2	R-APDRP Project	5.00	16.67
3	DDUGJY & IPDS	16.67	12.00
	Total	**68.31**	**54.31**

Thus, in accordance with the submission of the Petitioner, the Commission approves the capitalisation for the year as shown in the table below:

Table 93: Capital Expenditure and Capitalisation approved by the Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	102.09	68.31	68.31
2	Capitalisation	143.86	54.31	54.31

The Commission approves capital expenditure of Rs 68.31 cr. and capitalisation of Rs 54.31 Cr in the ARR of FY 2018-19.

5.11. Capital Structure

Petitioner's Submission

The Petitioner submitted that the majority of the capital assets are proposed to be created out of equity contribution from Government of Puducherry and the actual borrowing of loan is only to the extent of the R-APDRP, DDUGJY and IPDS schemes.

Commission's analysis

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

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

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

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

In accordance with the MYT Regulations, 2014, the Commission has determined the Capital Structure for FY 2018-19 as follows:

Table 94: GFA addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	921.55	740.66	740.66
2	Addition During the FY	143.86	54.31	54.31
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	**Closing Gross Fixed Assets**	**1065.41**	**794.97**	**794.97**

Table 95: Normative Loan addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	254.37	144.06	117.56
2	Add: Normative Loan in the year	100.70	38.02	38.02
3	Less: Normative Repayment equivalent to Depreciation	45.80	29.65	43.39*
4	**Closing Normative Loan**	**309.27**	**152.43**	**112.18**

**Depreciation calculated in next section*

Table 96: Normative Equity addition approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	264.14	222.20	222.20
2	Additions on account of new capitalisation	43.16	16.29	16.29
3	**Closing Equity**	**307.30**	**238.49**	**238.49**

5.12. Depreciation

Petitioner's submission

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

Commission's analysis

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

Table 97: Depreciation Rate (%)

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

The Commission has considered the same weighted average depreciation rate as considered in FY 2017-18. The depreciation has been calculated on the average Gross Fixed Assets (GFA) with the opening GFA considered equivalent to the closing GFA of FY 2017-18, as approved in the Chapter for APR above. The net addition during the year has been considered equivalent to capitalisation as approved above. The following table provides the calculation of depreciation during the year FY 2018-19.

Table 98: Depreciation approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Gross Fixed Assets	921.55	740.66	740.66
2	Addition During the FY	143.86	54.31	54.31
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	1065.41	794.97	794.97
5	Average Gross Fixed Assets	993.48	767.815	767.81
6	Weighted Average Depreciation rate (%)	4.61%	3.86%	5.65%
	Depreciation	**45.80**	**29.65**	**43.39**

The Commission approves depreciation of Rs 43.39 Cr in the ARR of FY 2018-19.

5.13. Interest and Finance Charges

Petitioner's submission

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

The repayment of loans has been considered equal to the depreciation during FY 2018-19. Further the rate of interest has been considered as SBI PLR @ 14.05%. The Petitioner has also considered certain financial costs pertaining to the bank charges, finance charges, etc.

Commission's analysis:

The Commission has determined the Interest on Loan in accordance with the MYT Regulations, 2014. The Commission has considered the actual capitalisation of assets as approved in the foregoing paragraphs. Repayment has been considered equivalent to depreciation allowed during the year.

The Commission, similar to the approach followed in previous years, has considered the rate of interest as prevailing SBI Prime Lending Rate (PLR) of 13.40% (As on 1st January 2018). Further, in accordance with the MYT Regulations, 2014, the Interest on Loan has been calculated on the average loan during the year with opening loan considered equivalent to the closing loan approved in APR for FY 2017-18.

The additional cost towards finance charges has been considered on the same levels as approved in the APR for FY 2017-18.

The table below provides the Interest and Finance Charges approved by the Commission

Table 99: Interest and Finance Charges approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Normative Loan	254.37	144.06	117.56
2	Add: Normative Loan During the year	100.70	38.02	38.02

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
3	Less: Normative Repayment equivalent to Depreciation	45.80	29.65	43.39
4	Closing Normative Loan	309.27	152.43	112.18
5	Average Normative Loan	281.82	148.25	114.87
6	Rate of Interest (%)	14.05%	14.05%	13.40%
7	Interest on Loan	39.60	20.83	15.39
8	Finance Charges	2.39	2.80	2.54
	Interest and Finance Charges	**41.99**	**23.63**	**17.93**

The Commission approves Interest and Finance Charges as Rs 17.93 Cr in the ARR of FY 2018-19.

5.14. Return on Equity (RoE)

Petitioner's submission

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

Commission's analysis:

The RoE has been calculated on normative basis on the average of opening and closing of equity during the year at a rate of 16% (on post-tax basis) with the opening equity considered equivalent to the closing equity of FY 2017-18. Addition during the year is considered to the tune of 30% of assets capitalized during the year. Income Tax payable shall be considered taken on actual basis at the time of True-up. The following table provides the RoE approved by the Commission in the MYT Order, the Petitioner's submission and now approved by the Commission.

Table 100: RoE approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Equity	-	222.20	222.20
2	Additions on account of new capitalisation	-	16.29	16.29
3	Closing Equity	-	238.49	238.49
4	Average Equity	-	230.34	230.35
5	Return on Equity (%)	-	16.00%	16.00%
	Return on Equity	**26.46**	**36.86**	**36.86**

The Commission approves Return on Equity of Rs 36.86 Cr in the ARR of FY 2018-19.

5.15. Interest on Security Deposits

Petitioner's submission

The Petitioner has determined the Interest on Security Deposits on normative basis with the addition in security deposit considered same as in FY 2017-18. The Rate of Interest is considered as RBI Base Rate of 6.75%.

Commission's analysis:

The Interest on Security Deposits is computed in accordance with the MYT Regulations, based on average of opening and closing consumer security deposits during the year. The Commission has considered the same addition in consumer security deposits during the year as proposed by the Petitioner. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. The following table provides the calculation of Interest on Consumer Security Deposits for the year.

Table 101: Interest on Security Deposits approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Opening Security Deposit	208.72	193.83	168.92
2	Add: Deposits During the year	21.31	16.13	16.13
3	Less: Deposits refunded	0.00	0.00	0.00
4	Closing Security Deposit	230.04	209.96	185.05
5	Average Security Deposit	219.38	201.90	176.99
6	Rate of Interest (%)	7.75%	6.75%	6.25%
	Interest on Security Deposit	**17.00**	**13.63**	**11.06**

The Commission approves Interest on Security Deposit as Rs 11.06 Cr in the ARR of FY 2018-19.

5.16. Interest on Working Capital

Petitioner's submission

The Interest on Working Capital has been calculated based on the normative principles outlined in the JERC (Multi-Year Distribution Tariff) Regulations, 2014.

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

(a) Receivables of two months of billing

(b) Less power purchase cost of one month

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

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

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

Commission's analysis:

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

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

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

Table 102: Interest on Working Capital approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Receivables of two months of billing	249.90	227.00	229.12
2	Less: Power Purchase Cost for one month	104.14	94.32	93.80
3	Inventory Based on Annual Requirement for Previous FY for 2 months	4.65	7.77	6.78
4	Total Working Capital Requirement	150.41	140.45	142.10
5	Less: Security Deposit excluding BG/FDR	230.04	209.96	176.99
6	Net Working Capital	(79.63)	(69.51)	(34.89)
7	Rate of Interest (%)	9.30%	9.30%	8.65%
	Interest on Working Capital	**0.00**	**0.00**	**0.00**

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

5.17. Provision for Bad & Doubtful Debts

Petitioner's submission

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

Commission's analysis

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

5.18. Non-Tariff Income

Petitioner's submission

The Petitioner has claimed a Non-Tariff Income of Rs 4.51 Cr against approved of Rs 3.08 Cr by the Commission. The Petitioner has considered the Non-Tariff Income on the same levels as in FY 2016-17 excluding the income from Open Access Charges.

Commission's analysis:

The Commission has considered the same NTI as approved in FY 2017-18 for FY 2018-19. The NTI approved in the MYT Order, Petitioner's submission and now approved by the Commission is shown in the table below:

Table 103: Non -tariff Income approved by Commission (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Income from Trading of materials	-	0.06	0.06
2	Misc./Other Receipts	-	4.44	4.44
	Total	**3.08**	**4.51**	**4.51**

The Commission approves Non-Tariff Income of Rs 4.51 Cr in the ARR of FY 2018-19.

5.19. Aggregate Revenue Requirement (ARR)

Petitioner's submission

Based on the expenses as detailed above, the net aggregate revenue requirement of Rs 1361.98 Cr has been derived at after adjusting the Non -Tariff Income for FY 2018-19.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the revenue requirement for the FY 2018-19 is approved as provided in the following table:

Table 104: Aggregate Revenue Requirement approved by Commission for FY 2018-19 (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Net Power Purchase Cost (inclusive of cost towards RPO and sale of surplus power)	1249.50	1131.85	1125.64
2	Operation & Maintenance Expenses	121.50	130.89	144.38
3	Depreciation	45.80	29.65	43.39
4	Interest and Finance charges	41.99	23.63	17.93
5	Interest on Working Capital	0.00	0.00	0.00
6	Interest on Security Deposit	17.00	13.63	11.06
7	Return on Equity	26.46	36.86	36.86
8	**Total Revenue Requirement**	**1502.45**	**1366.49**	**1379.25**
9	Less: Non-Tariff Income	3.08	4.51	4.51
10	**Net Revenue Requirement**	**1499.37**	**1361.98**	**1374.75**

The Commission approves net ARR of Rs 1374.75 Cr for FY 2018-19.

5.20. Revenue at existing Retail Tariff

Petitioner's submission

The Petitioner has submitted the revenue from sale of power at existing tariff as Rs 1339.62 Cr based on the projected energy sales, connected load and number of consumers. The revenue for FY 2018-19 has been computed based on the retail tariff notified by the Commission in the Tariff Order for the FY 2017-18 dated 16th May 2017. The table below provides the category wise revenue computed by the Petitioner for FY 2018-19.

Table 105: Revenue submitted by Petitioner (In Rs Cr)

S. No	Category	Energy Sales (MU)	Demand Charges (Rs Cr)	Energy Charges (Rs Cr)	Total Charges (Rs Cr)
1	**DOMESTIC & COTTAGE**				
a	0 – 100 units	231.07	6.49	25.42	31.90
b	101 – 200 units	169.45	3.57	29.65	33.22
c	201 – 300 units	115.53	2.92	40.44	43.36
d	Above 300 units	254.18	3.24	116.92	120.16
e	OHOB	10.21	1.15	-	1.15
	Total	**780.44**	**17.37**	**212.43**	**229.80**
2	**COMMERCIAL**				-

S. No	Category	Energy Sales (MU)	Demand Charges (Rs Cr)	Energy Charges (Rs Cr)	Total Charges (Rs Cr)
a	0 - 100	35.76	1.07	16.81	17.88
b	101 - 250	33.38	1.00	18.69	19.70
c	> 250	169.28	4.62	105.80	110.41
	Total	**238.42**	**6.69**	**141.30**	**147.99**
3	**AGRICULTURE**				
a	Small farmers	8.00	0.06	-	0.06
b	Other farmers	49.28	1.89	-	1.89
	Total	**57.28**	**1.95**	**-**	**1.95**
4	**PUBLIC LIGHTING**	**24.24**	**4.55**	**16.36**	**20.91**
5	**LT INDUSTRIAL AND WATER TANK**				
a	LT Industrial	162.41	0.68	82.83	83.51
B	Water tank	42.50	0.02	25.07	25.09
	Total	**204.91**	**0.69**	**107.90**	**108.60**
6	**TEMPORARY SUPPLY - LT&HT**	**5.00**	**-**	**4.88**	**4.88**
7	**HT 1 INDUSTRIAL**				
a	HT I(a) for contract demand upto 5000 kVA	881.70	76.50	462.89	539.39
b	HT I(b) for contract demand upto 5000 kVA	89.68	9.36	47.08	56.44
	Total	**971.38**	**86**	**510**	**596**
9	**HT 2 - GOVERNMENT & WATER TANK**	**71.78**	**6.75**	**48.45**	**55.20**
10	**HT 3 - EHT**	**296.02**	**23.50**	**150.97**	**174.47**
	Total	**2649.46**	**147.36**	**1192.26**	**1339.62**

Commission analysis

The Commission has determined the revenue from revised retail sales as based on the same methodology as followed while approving the revenue for FY 2017-18. The category wise/ sub-category wise and slab wise revenue at retail tariff is determined as per the applicable tariff rates. The revenue from demand and energy charges have been projected for each category/ sub-category and slab. The category/ sub-category/ slab wise revenue as computed by the Commission for FY 2018-19 has been shown in the table below:

Table 106: Revenue from existing retail tariff (In Rs Cr)

S. No.	Category	Sales (MUs)	Energy Charges (Rs Cr)	Fixed charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
1	**DOMESTIC & COTTAGE**	**785.14**	**172.74**	**16.17**	**188.91**	**2.41**
	0-100 units	297.57	32.73	6.47	39.20	1.32
	101-200 units	244.18	42.73	3.56	46.29	1.90
	201-300 units	133.47	46.72	2.91	49.63	3.72
	Above 300 units	109.92	50.56	3.23	53.80	4.89
2	**HUT SERVICES/ OHOB**	**10.22**	**0.00**	**1.15**	**1.15**	**1.13**

S. No.	Category	Sales (MUs)	Energy Charges (Rs Cr)	Fixed charges (Rs Cr)	Total (Rs Cr)	ABR (Rs/unit)
3	**COMMERCIAL**	**245.79**	**142.64**	**6.67**	**149.31**	**6.07**
	0-100 units	49.16	23.10	1.07	24.17	4.92
	101-250 units	51.62	28.90	1.00	29.91	5.79
	Above 250 units	145.01	90.63	4.60	95.24	6.57
4	**AGRICULTURE SERVICES**	**57.43**	**0.00**	**1.95**	**1.95**	**0.34**
(i)	Small Farmers	8.02	0.00	0.06	0.06	0.07
(ii)	Other farmers	49.41	0.00	1.89	1.89	0.38
5	**PUBLIC LIGHTING**	**27.58**	**18.61**	**4.57**	**23.19**	**8.41**
6	**LT INDUSTRIAL & WATER WORKS**	**184.78**	**97.23**	**0.70**	**97.94**	**5.30**
(i)	LT Industrial	147.36	75.15	0.69	75.84	5.15
(ii)	Water Tanks	37.43	22.08	0.02	22.10	5.90
7	**HIGH TENSION-I**	**930.18**	**488.34**	**70.60**	**558.94**	**6.01**
(i)	HT 1 (a) For contract demand up to 5000 kVA/Industrial	857.08	449.97	64.30	514.27	6.00
(ii)	HT 1 (b) For contract demand up to 5000 kVA/Commercial	73.10	38.38	6.29	44.67	6.11
8	**HIGH TENSION-II**	**68.98**	**46.56**	**4.94**	**51.50**	**7.47**
9	**HIGH TENSION-III**	**288.20**	**146.98**	**16.58**	**163.56**	**5.68**
10	**HOARDINGS/SIGNBOARDS**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
11	**TEMPRORARY**	**8.00**	**7.80**	**0.00**	**7.80**	**9.75**
	TOTAL	**2606.31**	**1120.93**	**123.33**	**1244.26**	**4.77**

The Commission has determined revenue from sale of power at existing tariff as Rs 1244.26 Cr for FY 2018-19.

5.21. Revenue from Open Access Charges

Petitioner's submission

The Petitioner has not projected any sales and revenue from Open Access in FY 2018-19.

Commission analysis

The Commission has determined the Revenue from Open Access sales (determined above) as per charges applicable during FY 2018-19, as determined by the Commission in Chapter 7 of this Order.

Table 107: Revenue from Open Access approved by Commission (In Rs Cr)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Revenue from Open Access	-	-	11.57

The Commission approves revenue from Open Access as Rs 11.57 Cr for FY 2018-19.

5.22. Standalone Revenue Gap/ Surplus

Petitioner's submission

Based on the ARR submitted and the revenue from retail tariff, a standalone revenue gap of Rs 22.36 Cr is arrived for the FY 2018-19.

Commission analysis

Based on the approved ARR and existing retail tariff, the following Revenue Gap/Surplus is arrived at for the FY 2018-19:

Table 108: Standalone Revenue Gap/ Surplus (In Rs Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Net Revenue Requirement	1499.37	1361.98	1374.75
2	Revenue from Retail Sales at Existing Tariff	-	1339.62	1244.26
3	Revenue from Open Access Charges	-	-	11.57
4	**Total Revenue**	**-**	**1339.62**	**1255.83**
	Net Gap /(Surplus)	**-**	**22.36**	**118.92**

The standalone gap at existing retail tariff is Rs 118.92 Cr for FY 2018-19. The estimated gap is considered while determining the retail tariff for FY 2018-19, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for FY 2018-19 has kept in view the principles of determination of tariff set out in the Electricity Act, 2003 (EA, 2003), Tariff Policy, 2016 and the MYT Regulations, 2014.

The Commission, with this Tariff Order, has tried to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also directs to maintain a healthy balance between the interests of the Utilities and the reasonableness of the cost of power being supplied to consumers. The Commission has also taken into consideration PED's submissions as well as the public responses in these proceedings.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. Since the majority of the energy sales within PED's jurisdiction is of industrial nature, the Commission has attempted to ensure that, while industries and commerce are promoted, it is not at the cost of other segments of society.

6.2. Applicable Regulations

Regulation 36 of MYT Regulations, 2014 states the following:

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

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

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

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

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

Step 3: Allocation of Cost

(i) Allocation of Demand Costs: Demand costs of all three functions shall be allocated among consumer categories on the basis of average coincident peak demand of the tariff categories (average of past 12 months). To facilitate determination of average coincident peak demand for the various tariff categories, load research shall be made an integral part of the operations of the DISCOMs and systematic load research exercises shall be initiated.

(ii) Allocation of Energy Costs: Energy related costs of Distribution functions shall be allocated to consumer categories on the basis of ratio of electricity consumption of each consumer category to the total electricity consumption under the purview of the Distribution Licensee. Energy related costs of Power purchase shall be allocated to various tariff categories on the basis of block approach on merit order dispatch and incremental principle, where each tariff category shall be allocated the incremental (energy related) power purchase cost on the basis of their respective share in the

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

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

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

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

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

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

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

g. Tariff Design

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

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

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

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

6.3. Consolidated Revenue Gap/ Surplus

Petitioner's Submission

The Petitioner has proposed a consolidated revenue gap of Rs 212.21 Cr till FY 2018-19. The standalone and consolidated revenue gap as submitted by the Petitioner has been tabulated below:

Table 109: Standalone Revenue Gap/ Surplus submitted by Petitioner (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Net Revenue Requirement	1237.78	1443.55	1361.98
Revenue from Retail Sales at Existing Tariff inclusive of Regulatory Surcharge applicable in FY 2017-18	1192.11	1299.37	1339.62
Standalone Gap /(Surplus) for the year	**45.68**	**144.18**	**22.36**

Table 110: Consolidated Revenue Gap/ Surplus submitted by Petitioner (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Gap /(Surplus)	0.00	45.68	189.85
Add: Gap/(Surplus)	45.68	144.18	22.36
Closing Gap /(Surplus)	45.68	189.85	212.21
Carrying Cost	0.00	0.00	0.00
Final Closing Gap/ (Surplus)	**45.68**	**189.85**	**212.21**

Commission's analysis

The Petitioner while projecting consolidated revenue gap has not considered the carrying cost and the opening revenue gap approved for FY 2016-17 by the Commission in the Tariff Order of FY 2017-18 and carrying cost. The Commission further notices that the Petitioner has not taken any long term loan or working capital loan. As per the preamble of the Electricity Act, 2003, the Commission is required to balance the interest of all the stakeholders while determining the tariff. The Commission for the purpose of calculation of the cumulative gap has considered the carrying cost @ 8.00% which is the opportunity cost for the Petitioner.

The Commission, in the APR Order for FY 2016-17 had approved a revenue gap of Rs 50.16 Cr till 31st March 2016. Taking into account the previous gap, the Commission determines the consolidated revenue gap/ surplus at the end of FY 2018-19 as shown below:

Table 111: Standalone Revenue Gap/ Surplus determined by Commission (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Net Revenue Requirement	1230.41	1362.03	1374.75
Revenue from Retail Sales at Existing Tariff	1192.17	1211.84	1244.26
Revenue from Regulatory Surcharge	-	48.47	-
Revenue from Open Access	-*	8.19	11.57
Standalone Gap /(Surplus) for the year	**38.24**	**93.53**	**118.92**

**Included in the Net ARR*

Table 112: Consolidated Revenue Gap/ Surplus determined by Commission (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Opening Gap /(Surplus)	50.16	94.05	198.85
Add: Gap/(Surplus)	38.34	93.53	118.92
Closing Gap /(Surplus)	88.50	187.58	317.76
Average Gap/ (Surplus)	69.33	140.82	258.30
Carrying Cost (@8.00% p.a.)	5.55	11.27	20.66
Final Closing Gap/ (Surplus)	**94.05**	**198.85**	**338.43**

The Commission determines a consolidated revenue gap of Rs 338.43 Cr till FY 2018-19 at existing tariff.

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

As derived from above, the resultant consolidated revenue gap till the end of FY 2018-19 is Rs 338.43 Cr, signifying that the revenue from existing tariff is not commensurate with the costs incurred by the Petitioner. In this present situation, in order to cover this revenue deficit and to be financially sustainable, the retail consumer tariffs demand a tariff increase. However the revenue gap being substantial, recovering this entirely from increase in consumer tariffs may lead to a tariff shock. Hence, the Commission proposes to recover a certain proportion of this gap by continuing the Regulatory Surcharge imposed in the Tariff Order of FY 2017-18 and the remaining through increase in Retail Tariff. The individual approach adopted and the applicability of the same has been discussed in the following sections.

6.4.1. Tariff Proposal

Petitioner's Submission

In order to bridge the gap of Rs 212.21 Cr, the Petitioner has proposed to increase the energy charges for only Domestic, Commercial LT Industrial and HT Industrial category. The table below provides the tariff proposal submitted by the Petitioner. Further, the Petitioner has requested to continue the Regulatory surcharge @4% imposed in the previous Tariff Order for FY 2017-18 in FY 2018-19 as well. The proposed tariff and the revenue from Regulatory Surcharge will help in earning an additional revenue of Rs 128.64 Cr. The Petitioner has requested to allow the balance revenue gap of 83.57 Cr to be claimed in the next Financial Year.

The category wise existing and proposed tariff submitted by the Petitioner is as under:

Table 113: Retail Tariff proposed by Petitioner

S. No	Consumer Category	Existing Tariff		Proposed Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
1	**DOMESTIC PURPOSES**				
a.	0-100 units per month	Rs 40/connection / month	1.10	Rs 40/connection/ month	1.40
b.	101-200 units per month		1.75		2.10
c.	201-300 units per month		3.50		3.90
d.	Above 300 units per month		4.60		5.05
2	**HUT SERVICES (OHOB)**				
a.	Hut Services	Rs 27/connection / month	-	Rs 27/connection/ month	-
3	**COMMERCIAL**				
a.	0-100 units per month	Rs 100/connection/ month	4.70	Rs 100/connection/ month	5.30
b.	101-250 units per month		5.60		6.20
c.	Above 250 units per month		6.25		6.85
4	**AGRICULTURE SERVICES**				
I	**Agriculture**				
a.	Small Farmers	Rs 9/HP/month	-	Rs 9/HP/month	-
b.	Other Farmers	Rs 27/HP/month	-	Rs 27/HP/month	-
		and Service Charges Rs 225 per service per annum	-	and Service Charges Rs 225 per service per annum	-
5	**PUBLIC LIGHTING**				
a.	Public Lighting	Rs 75/pole/ month	6.75	Rs 75/pole/ month	7.25
6	**LT INDUSTRIAL AND WATER WORKS**				

S. No	Consumer Category	Existing Tariff		Proposed Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
a.	LT Industrial	Rs 86 /connection/ month	5.10	Rs 86 /connection/ month	5.60
b.	Water Tanks	Rs 100/connection/ month	5.90	Rs 100/connection/ month	6.40
7	**HIGH TENSION – 1**				
a.	HT 1 (a) For contract demand up to 5000 kVA/Industrial	Rs 250 per kVA per month	5.25	Rs 250 per kVA per month	5.80
b.	HT 1 (b) For contract demand up to 5000 kVA/Commercial	Rs 250 per kVA per month	5.25	Rs 250 per kVA per month	5.80
8	**HIGH TENSION – 2**				
a.	High Tension – 2	Rs 250 per kVA per month	6.75	Rs 250 per kVA per month	7.30
9	**HIGH TENSION – 3**				
a.	High Tension – 3	Rs 220 per kVA per month	5.10	Rs 220 per kVA per month	5.65
10	**TEMPORARY SUPPLY**				
a.	Lights or combined installation of lights and fans, motive power, heating and others	Minimum charges of Rs 200 per connection per month or part thereof	9.75	Minimum charges of Rs 200 per connection per month or part thereof	10.35
b.	Special Illumination	Minimum charges of Rs 500 per connection per month or part thereof	10.00	Minimum charges of Rs 500 per connection per month or part thereof	10.60
c.	Construction and testing purpose for load exceeding 130 HP or 97 kW	Minimum charges of Rs 500 per connection per month or part thereof	10.00	Minimum charges of Rs 500 per connection per month or part thereof	10.60
11	**HOARDINGS/SIGNBOARDS**				
a.	Hoardings/signboards	Rs 120 per kVA per month or part thereof	8.00	Rs 120 per kVA per month or part thereof	8.60

Commission's analysis

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

Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.

2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time promotes intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers

3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.

4. Affordability: Assessing affordability of electricity for Domestic & Commercial consumers for defining slab ranges and setting tariffs

5. Revenue stability: Utilities should ensure adequate fixed cost recovery from fixed/demand charges

6. Avoiding tariff shocks: Tariff shocks should be prevented and consumers should be kept informed about the future trends in tariffs

7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs

8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.

9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

Keeping in view the above principles, the Commission has determined and restructured the Retail Tariff applicable for FY 2018-19 as per the following:

1. Relatively higher tariff increase has been done for cross-subsidized categories such as Domestic, and Agriculture than cross-subsidizing categories such as Commercial, LT and HT category, in order to ensure that tariffs progressively reflect the cost of supply.

2. The Commission has done away with the annual service charge applicable of Rs 225/connection/year on the 'Agriculture Service Other Farmers' category in this Order.

3. The Commission noticed that earlier the Industrial consumers were falling under three different categories. The Commission has now created an "Industries" category consisting of the following sub-categories:

   - LT Industries – Earlier denoted as LT Industrial under the category LT Industrial and Water Works

   - HT Industries (For Supply at 11 kV, 22 kV or 33 kV) - Earlier named as "High Tension-1 (a)" category has now been renamed as "HT Industries (For Supply at 11 kV, 22 kV or 33 kV)" applicable for industrial consumers connected at 11 kV, 22 kV and 33 kV voltage levels.

   - EHT Industries (For Supply at 110 kV or 132 kV)"- Earlier named as "High Tension-3" category has been renamed as "EHT Industries (For Supply at 110 kV or 132 kV)" applicable for industrial consumers connected at 110 kV and 132 kV voltage levels.

4. Due to the resultant restructuring of the Industries category, the sub category LT Waterworks earlier present under LT Industrial and Waterworks category has been created separately.

5. The High Tension-2 category has been renamed as "HT Others" applicable to State and Central Government establishments of non-industrial and non-commercial nature.

6. The High Tension 1 (b) For contract demand up to 5000 kVA/Commercial category has been renamed as "HT Commercial (For contract demand up to 5000 kVA)" and classified under the Commercial category having LT & HT Commercial sub-categories.

The restructured tariff and its applicability to consumers have been shown in the Section 8.1 and Section 8.2 respectively, of this Tariff Order.

6.4.2. Tariff Increase and Schedule:

As described in earlier section, the current tariff is not covering the entire cost of the Petitioner for FY 2018-19. The substantial revenue gap at the end of FY 2018-19 necessitates an increase in Retail Tariff. The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 114: Existing and approved tariff

S. No	Consumer Category	Existing Tariff		Approved Tariff	
		Fixed Charge	Energy Charge Rs/kWh	Fixed Charge	Energy Charge Rs/kWh
1	**DOMESTIC PURPOSES**				
a.	0-100 units per month	Rs 40/connection / month	1.10	Rs 40/connection/ month	1.30
b.	101-200 units per month		1.75		2.25
c.	201-300 units per month		3.50		3.95
d.	Above 300 units per month		4.60		5.10
2	**HUT SERVICES (OHOB)**				
a.	Hut Services	Rs 27/connection / month	-	Rs 35/connection/ month	-
3	**COMMERCIAL**				
I	**LT Commercial**				
a.	0-100 units per month	Rs 100/connection/ month	4.70	Rs 120/connection/ month	5.15
b.	101-250 units per month		5.60		6.15
c.	Above 250 units per month		6.25		6.85
II	**HT Commercial (For contract demand up to 5000 kVA)**	**Rs 250 per kVA per month**	**5.25**	**Rs 350 per kVA per month**	**5.40**
4	**AGRICULTURE SERVICES**				
I	**Agriculture**				
a.	Small Farmers	Rs 9/HP/month	-	Rs 10/HP/month	-
b.	Other Farmers	Rs 27/HP/month	-	Rs 45/HP/month	-
		and Service Charges Rs 225 per service per annum	-	-	-
II	**Cottage Industries /Poultry Farms/ Horticulture/Pisciculture**				
a.	0-100 units per month	Rs 40/connection/ month	1.10	Rs 40/connection/ month	1.30
b.	101-200 units per month		1.75		2.25
c.	201-300 units per month		3.50		3.95
d.	Above 300 units per month		4.60		5.10
5	**PUBLIC LIGHTING**				

S. No	Consumer Category	Existing Tariff Fixed Charge	Existing Tariff Energy Charge Rs/kWh	Approved Tariff Fixed Charge	Approved Tariff Energy Charge Rs/kWh
a.	Public Lighting	Rs 75/pole/ month	6.75	Rs 100/pole/ month	6.75
6	**INDUSTRIES**				
a.	LT Industries	Rs 86 /connection/ month	5.10	Rs 100 /connection/ month	5.60
b.	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	Rs 250 per kVA per month	5.25	Rs 350 per kVA per month	5.30
c.	EHT Industries (For Supply at 110 kV or 132 kV)	Rs 220 per kVA per month	5.10	Rs 420 per kVA per month	5.00
7	**LT WATER WORKS**	**Rs 100/connection/ month**	**5.90**	**Rs 120/connection/ month**	**6.40**
8	**HT OTHERS**	**Rs 250 per kVA per month**	**6.75**	**Rs 450 per kVA per month**	**6.50**
9	**TEMPORARY SUPPLY**				
a.	Lights or combined installation of lights and fans, motive power, heating and others	Minimum charges of Rs 200 per connection per month or part thereof	9.75	Minimum charges of Rs 200 per connection per month or part thereof	9.75
b.	Special Illumination	Minimum charges of Rs 500 per connection per month or part thereof	10.00	Minimum charges of Rs 500 per connection per month or part thereof	10.00
c.	Construction and testing purpose for load exceeding 130 HP or 97 kW	Minimum charges of Rs 500 per connection per month or part thereof	10.00	Minimum charges of Rs 500 per connection per month or part thereof	10.00
10	**HOARDINGS/SIGNBOARDS**				
a.	Hoardings/signboards	Rs 120 per kVA per month or part thereof	8.00	Rs 120 per kVA per month or part thereof	8.00

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

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

Table 115: Revenue from approved retail tariff determined by Commission (In Rs Cr)

S. No.	Category	Sales (MUs)	Energy Charges (Rs Cr)	Fixed charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs/unit)	K Factor
1	**DOMESTIC & COTTAGE**	**785.14**	**202.41**	**16.17**	**218.58**	**2.78**	**0.53**
	0-100 units	297.57	38.68	6.47	45.15	1.52	0.29
	101-200 units	244.18	54.94	3.56	58.50	2.40	0.46
	201-300 units	133.47	52.72	2.91	55.63	4.17	0.79
	Above 300 units	109.92	56.06	3.23	59.29	5.39	1.03

S. No.	Category	Sales (MUs)	Energy Charges (Rs Cr)	Fixed charges (Rs Cr)	Total Charges (Rs Cr)	ABR (Rs/unit)	K Factor
2	**HUT SERVICES/ OHOB**	**10.22**	**0.00**	**1.49**	**1.49**	**1.46**	**-**
3	**COMMERCIAL**	**318.89**	**195.87**	**17.99**	**213.86**	**6.71**	
(i)	LT Commercial	245.79	156.39	8.01	164.40	6.69	1.27
	0-100 units	49.16	25.32	1.28	26.60	5.41	1.03
	101-250 units	51.62	31.74	1.20	32.94	6.38	1.22
	Above 250 units	145.01	99.34	5.52	104.86	7.23	1.38
(ii)	HT 1 (b) For contract demand up to 5000 kVA/Commercial	73.10	39.48	9.99	49.46	6.77	1.29
4	**AGRICULTURE SERVICES**	**57.43**	**0.00**	**2.99**	**2.99**	**0.52**	**-**
(i)	Agriculture	57.43	0.00	2.99	2.99	0.52	-
	Small Farmers	8.02	0.00	0.07	0.07	0.08	-
	Other farmers	49.41	0.00	2.92	2.92	0.59	-
5	**PUBLIC LIGHTING**	**27.58**	**18.61**	**6.10**	**24.71**	**8.96**	**1.71**
6	**INDUSTRIES**	**1292.63**	**680.87**	**138.70**	**819.57**	**6.34**	
(i)	LT Industrial	147.36	82.52	0.80	83.32	5.65	1.08
(ii)	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	857.08	454.25	102.03	556.28	6.49	1.24
(iii)	EHT Industries (For Supply at 110 kV or 132 kV)	288.20	144.10	35.88	179.98	6.24	1.19
7	**LT Water Tanks**	**37.43**	**23.95**	**0.02**	**23.97**	**6.41**	**1.22**
8	**HT OTHERS**	**68.98**	**44.84**	**10.07**	**54.91**	**7.96**	**1.52**
9	**HOARDINGS/SIGN BOARDS**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**-**
10	**TEMPRORARY**	**8.00**	**7.80**	**0.00**	**7.80**	**9.75**	**1.86**
	TOTAL	**2606.31**	**1174.36**	**193.53**	**1367.89**	**5.25**	

The Commission approves revenue from approved Retail Tariff of Rs 1367.89 Cr for the FY 2018-19 against a Net Revenue Requirement of Rs 1374.75 Cr

The average increase in the retail tariff now approved by the Commission vis-à-vis prevailing tariff is 9.94%. The table below provides the category wise Average Cost of Supply (ACoS), Existing Average Billing Rate (ABR), Approved ABR and the existing and approved recovery vis-à-vis the (ACoS).

Table 116: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)
Domestic	5.27	2.41	2.78	15.70%
OHOB	5.27	1.13	1.46	29.63%
Commercial	5.27	6.08	6.71	10.25%
Agriculture	5.27	0.34	0.52	53.49%
Public Lighting	5.27	8.41	8.96	6.58%
Industries	5.27	5.83	6.40	9.68%
LT Water Works	5.27	5.90	6.41	8.48%
HT Others	5.27	7.47	7.96	6.62%
Temporary Supply	5.27	9.75	9.75	0.00%
Total	**5.27**	**4.77**	**5.26**	**9.94%**

6.4.4. Regulatory Surcharge

As is evident from the above, with an average tariff increase of 9.94%, the revenue from Approved Retail Tariff recovers the standalone Net Revenue Requirement of FY 2018-19. The Commission has tried to limit the tariff increase in each category in order to safeguard the interests of consumers by avoiding abnormal increase in tariffs. However, the cumulative revenue gap till the end of FY 2017-18 resulting from the True-up of FY 2016-17 and APR of FY 2017-18 is yet to be recovered. The table below provides the cumulative revenue gap till FY 2018-19.

Table 117: Revenue Gap/ Surplus (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Net Revenue Requirement (a)	1230.41	1362.03	1374.75
Revenue from Retail Sales at Existing Tariff (b)	1192.17	1211.84	1244.26
Revenue from Open Access (c)	-*	8.19	11.57
Standalone Gap /(Surplus) for the year at existing tariff (d=a-b-c)	38.34	93.53	118.92
Revenue from Retail Sales at Approved Tariff (e)	-	-	1367.89
Standalone Gap /(Surplus) for the year at approved tariff (f=a-c-e)	-	-	(4.71)
Opening Gap /(Surplus) (g)	50.16	94.05	198.85
Standalone Gap /(Surplus) addition for the year at Approved tariff (f)	38.34	93.53	(4.71)
Closing Gap /(Surplus) (h=g+f)	88.50	187.58	194.13
Average Gap/ (Surplus) (i=(g+h)/2)	69.33	140.82	196.49
Carrying Cost (@8.00% p.a.)(j)	5.55	11.27	15.72
Final Closing Gap/ (Surplus) (h+j)	**94.05**	**198.85**	**209.85**

**Included in Net ARR*

It can be observed from the table above that the increase in tariff is not enough to recover the cumulative revenue gap. Therefore, the Commission, in order to recover revenue gap inclusive of the carrying cost, has decided to continue with the Regulatory Surcharge of 4.00%. The Surcharge shall be applicable on all consumers. The revenue from the Regulatory Surcharge and the resultant gap after factoring both the additional revenue from Regulatory Surcharge has been discussed subsequently. In order to moderate the tariff increase to consumers the Commission has decided to recover this cumulative gap till FY 2017-18, till further Orders of the Commission.

Applicability and Conditions of the Regulatory Surcharge

- This Regulatory Surcharge shall be applicable to all consumer categories served by the Petitioner.
- The Surcharge shall also be applicable to consumers opting for open access.
- The Regulatory Surcharge shall be levied in the monthly/ bimonthly bill as a percentage of the total Energy and Demand charges payable by the consumer
- The Surcharge shall be applicable for all the bills raised on or after 1st April 2018 and shall continue till further Orders of the Commission.

6.4.5. Revised Revenue Gap/ Surplus

On considering the additional revenue from tariff increase and Regulatory Surcharge, the resultant Revenue Gap/Surplus has been shown in the table below:

Table 118: Revised Revenue Gap/ Surplus with Regulatory Surcharge approved by Commission (In Rs Cr)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Net Revenue Requirement (a)	1230.41	1362.03	1374.75
Revenue from Retail Sales at Existing Tariff (b)	1192.17	1211.84	1244.26
Revenue from Open Access (c)	-*	8.19	11.57
Standalone Gap /(Surplus) for the year at existing tariff (d=a-b-c)	38.34	93.53	118.92
Opening Gap /(Surplus) (e)	50.16	94.05	198.85
Add: Gap/(Surplus) (d)	38.34	93.53	118.92
Total Gap to be recovered in FY 2018-19 (e+d)	-	-	317.76
Less: Additional Revenue on account of tariff increase (f)	-	-	123.63
Less: Additional Revenue on account of Regulatory Surcharge (g)	-	-	55.18
Closing Gap /(Surplus) (h=e+d-f-g)	88.50	187.58	138.95
Average Gap/ (Surplus) ((e+h)/2)	69.33	140.82	168.90
Carrying Cost (@8.00% p.a.)(i)	5.55	11.27	13.51
Final Closing Gap/ (Surplus) (h+i)	**94.05**	**198.85**	**152.47**

The Commission approves a cumulative revenue gap of Rs 152.47 Cr till FY 2018-19.

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

7.1. Wheeling Charges

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

Petitioner's submission:

As per clause 33 of MYT Regulations, the distribution licensee needs to maintain separate books of accounts for wheeling and retail supply business. However, the distribution licensee has not segregated the accounts based on the wheeling and retail supply business as yet. The regulation also states that in the absence of such accounts, the ratio of the segregation may be decided by the Commission based on the data obtained from the distribution licensee. The present accounts of the licensee are maintained in a consolidated manner and the licensee does not have segregated accounts for each of the above businesses. Further, certain segments of business cannot be segregated into two business categories e.g. sub-station catering to both wires and supply business.

Accordingly, it has to rely on certain assumptions for segregation of total expenses into wires and supply business. However, in line with the Regulations, an endeavor has been made to analyse the expenses and incomes attributable to each business and based on assumptions, the ratio for segregation of the expenses under Retail Supply and Wires Business has been worked out and is tabulated below.

Table 119: Allocation matrix as submitted by Petitioner

Particulars	Allocation (%)		FY 2018-19		
	Wheeling	Supply	Wheeling (Rs Cr)	Supply (Rs Cr)	Total (Rs Cr)
Cost of power purchase for full year	*0%*	*100%*	0.00	1131.85	1131.85
Employee costs	*70%*	*30%*	68.11	29.19	97.30
Repair and Maintenance Expenses	*90%*	*10%*	18.51	2.06	20.57
Administration and General Expenses	*50%*	*50%*	6.51	6.51	13.02
Depreciation	*90%*	*10%*	26.68	2.96	29.65
Interest and Finance charges	*90%*	*10%*	21.27	2.36	23.63
Interest on Working Capital	*22%*	*78%*	0.00	0.00	0.00
Return on Equity	*90%*	*10%*	33.17	3.69	36.86
Interest on consumer security deposit	*0%*	*100%*	0.00	13.63	13.63
Total Revenue Requirement			**174.25**	**1192.24**	**1366.49**
Less: Non-Tariff Income	*0%*	*100%*	0.00	4.51	4.51
Net Revenue Requirement			**174.25**	**1187.71**	**1361.98**

PED submitted that the apportionment of wheeling charges has to account for losses and therefore in the absence of the voltage wise details, PED has considered the bifurcation of wheeling cost based on the sales and losses at each voltage level. The voltage wise loss levels are taken as approved by the Commission in its last Tariff Order dated 16th May, 2017.

Accordingly, the Petitioner has submitted wheeling charges of Rs 0.56/kWh at LT Voltage level, Rs 0.58/kWh at HT Voltage level and Rs 0.72/kWh at EHT Voltage level for 2018-19. The computation of Wheeling charges as submitted by the Petition has been shown in the following table:

Table 120: Wheeling Charge calculation as submitted by Petitioner

Particulars	Unit	Formula	FY 2018-19
Wheeling Cost	Rs Cr	A	174.25
Wheeling Cost at EHT network	Rs Cr	B=A*12.16%	21.41
Input required for sales at EHT network	MU	C	299.01
Wheeling Charges for EHT network usage	**Rs/kWh**	**D=B/C*10**	**0.72**
Wheeling Cost at HT network	Rs Cr	E=A*35.58%	62.65
Input required for sales at HT network	MU	F	1080.99
Wheeling Charges for HT network usage	**Rs/ kWh**	**G=E/F*10**	**0.58**
Wheeling Cost for LT network	Rs Cr	H=A*52.25%	92.00
Input required for sales at LT level	MU	I	1647.95
Wheeling Charges for LT network usage	**Rs/ kWh**	**J=H/I*10**	**0.56**

Commission's analysis:

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

Table 121: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2018-19		
	Wheeling	Supply	Wheeling (Rs Cr)	Supply (Rs Cr)	Total (Rs Cr)
Cost of power purchase for full year	*0%*	*100%*	0.00	1125.64	1125.64
Employee costs	*70%*	*30%*	73.09	31.33	104.42
Administration and General Expenses	*50%*	*50%*	6.73	6.73	13.45
Repair and Maintenance Expenses	*90%*	*10%*	23.86	2.65	26.51
Depreciation	*90%*	*10%*	39.05	4.34	43.39
Interest and Finance charges	*90%*	*10%*	16.14	1.79	17.93
Interest on Working Capital	*22%*	*78%*	0.00	0.00	0.00
Interest on consumer security deposit	*22%*	*78%*	2.43	8.63	11.06
Return on NFA /Equity	*90%*	*10%*	33.17	3.69	36.86
Provision of Bad & Doubtful Debt	*0%*	*100%*	0.00	0.00	0.00
Total Revenue Requirement			**194.47**	**1184.78**	**1379.25**
Less: Non-Tariff Income	*0%*	*100%*	0.00	4.51	4.51
Net Revenue Requirement			**194.47**	**1180.28**	**1374.75**

To determine the wheeling charges, the wheeling costs are allocated on the basis of voltage levels. The wheeling charges are levied for distribution network utilized by the Open Access consumers and primarily comprises of O&M Expenses and other costs as provided in the table above.

The methodology adopted for allocating the derived wheeling costs at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers.

- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation shown in the table below.

- The resultant cost at EHT voltage level is divided among LT, HT and EHT voltage levels on the basis of input energy at respective voltage levels as the EHT network is used by consumers at all voltage levels. Similarly, allocated cost at HT voltage level is divided between HT and LT voltage levels. The cost at LT voltage level is allocated completely to LT voltage level

  The energy input has been determined assuming the loss level of EHT voltage as 1.50% and loss level at HT voltage as 4.00%, the same as approved in the Tariff Order of FY 2017-18. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 11.00% as approved in the ARR of FY 2018-19.

Table 122: Parameters assumed for voltage wise allocation of wheeling charges

Category	No. of Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)	Energy Input (MU)
Low Tension (LT) Level	502104	50.00%	1318.94	16.48%	1579.20
High Tension (HT) Level	525	40.00%	999.16	5.44%	1056.65
Extra High Tension (EHT) Level	7	10.00%	323.79	1.50%	328.72
Total	**502636**	**100.00%**	**2641.89**	**11.00%**	**2964.56**

Accordingly, the Commission approves the Wheeling Charges as follows:

Table 123: Wheeling Charges approved by Commission

Category	O&M (Rs Cr)	Others (Rs Cr)	Total (Rs Cr)	Energy Sales (MU)	Wheeling Charges (Rs/kWh)
Low Tension (LT) Level	103.63	69.58	173.21	1318.94	1.31
High Tension (HT) Level	0.05	20.21	20.26	999.16	0.20
Extra High Tension (EHT) Level	0.00	1.01	1.01	323.79	0.03
Total	**103.68**	**90.79**	**194.47**	**2641.89**	

The Commission approves wheeling charge of Rs 1.31/ kWh at LT voltage level, Rs 0.20/kWh at HT voltage level and Rs 0.03/kWh at EHT voltage level

7.2. Additional Surcharge

Petitioner's submission:

The Petitioner has not proposed any additional surcharge in the Petition and has requested to approach the Commission on case to case basis for approval.

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa And Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling

charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act:

Provided that such additional surcharge shall not be levied in case Open Access is provided to a person who has established a captive generation plant for carrying the electricity to the destination of his own use."

Regulation 4.5 (2) of the said Regulations stipulate:

This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.

Further, Regulation 5.2 (1) (b) states the following:

The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3 Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Table 124: Additional Surcharge approved by Commission

Particulars	FY 2018-19
Total Power Purchase cost approved	**1125.64**
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	241.75
Energy Sales including Open Access Sales (MU)	2641.89
Additional Surcharge (Rs/kWh)	**0.92**

Earlier, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. As per the Open Access Regulations, 2017, a consumer now is only required to pay fixed charges on Admissible Drawal rather than on total contracted load.

The Commission approves an Additional Surcharge of Rs 0.92/kwh for FY 2018-19.

The Commission directs the Petitioner to submit quarterly details of the power stranded on account of consumers opting for open access alongwith the Additional Surcharge recovered from these consumers. The Commission will analyse the information and change the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's submission:

As per the National Electricity Policy, a surcharge is to be levied by the respective State Commission on consumers switching to alternate supplies under the open access. This is to compensate the host distribution licensee serving such consumers who are permitted Open Access under Section 42 (2) of the Electricity Act, for loss of cross-subsidy element built into the tariff of such consumers. An additional surcharge may also be levied under sub-section (4) of Section 42 of the said Act for meeting the fixed cost of the distribution licensee arising out of its obligation to supply in cases where consumers are allowed open access.

Cross-subsidy surcharge (CSS) has been determined in accordance with the formula specified in the Tariff Policy, 2016.

The category-wise CSS applicable arrived on consideration of the components ABR, C, L & D as proposed by the Petitioner is as follows:

Table 125: Cross-Subsidy Surcharge as proposed by the Petitioner

Particulars	Unit	HT	EHT
T (Tariff payable by the relevant category of consumers, including reflecting the Renewable Purchase Obligation)	Rs/kWh	6.79	6.44
C (per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligations)	Rs/kWh	3.67	3.67
D (aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level)	Rs/kWh	0.58	0.72
L (aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level)	%	3.50%	1%
Surcharge	**Rs/kWh**	**2.41**	**2.02**

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses at each voltage level are assumed for LT, HT & EHT voltage categories. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 11.00%, as approved in the ARR for FY 2018-19. Voltage wise losses assumed at each level have been shown in the table below:

Table 126: Voltage Wise Losses considered by the Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	11.68%	16.48%
High Tension (HT) Level	4.00%	5.44%
Extra High Tension (EHT) Level	1.50%	1.50%
Total	**11.00%**	**11.00%**

Using these losses the energy input at each voltage level is determined based on the energy sales. The table below shows the energy input at each voltage level

Table 127: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	1318.94	16.48%	1579.20
High Tension (HT) Level	999.16	5.44%	1056.65
Extra High Tension (EHT) Level	288.20	1.50%	292.59
Total	**2606.31**	**11.00%**	**2928.43**

Now the overall ARR approved for FY 2018-19 is divided into variable and fixed ARR with variable ARR comprising of variable power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.
- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to EHT level is then further allocated to EHT, HT and LT levels on the basis of input energy, as the EHT network is utilized by all EHT, HT and LT network consumers. Similarly, the cost allocated to HT is distributed to both HT and LT voltage level.
- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 128: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	No. of Consumers
Low Tension (LT) Level	1579.20	50%	502104
High Tension (HT) Level	1056.65	40%	525
Extra High Tension (EHT) Level	292.59	10%	7
Total	**2928.43**	**100%**	**502636**

The Variable component of the Power purchase cost is allocated on the basis of energy input.

The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories.

Accordingly, the VCoS is determined as shown in the table below:

Table 129: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (Rs Cr)	Allocated Variable Cost (Rs Cr)	Total Cost (Rs Cr)	Energy Sales (MU)	VCoS (Rs/kwh)
Low Tension (LT) Level	391.51	440.42	831.93	1318.94	6.31
High Tension (HT) Level	134.62	294.69	429.31	999.16	4.30
Extra High Tension (EHT) Level	31.91	81.60	113.51	288.20	3.94
Total	**558.04**	**816.71**	**1,374.75**	**2606.31**	

The VCoS as determined is used to determine the Cross-Subsidy Surcharge

Table 130: Cross-Subsidy Surcharge

Category	VCoS (Rs/kWh)	ABR (Rs/kWh)	Cross- Subsidy (Rs/kWh)
Low Tension (LT) Level	6.31	4.00	(2.31)
High Tension (HT) Level	4.30	6.61	2.32
Extra High Tension (EHT) Level	3.94	6.24	2.31

The Cross-Subsidy Surcharge is coming out to be negative for LT voltage level, Rs 2.32/kWh for HT and Rs 2.32/kWh for EHT voltage levels.

Therefore, the Commission approves nil Cross-Subsidy Surcharge at LT Voltage level, Rs 2.32/kWh at HT Voltage Level and Rs 2.31/kWh at EHT Voltage levels, in FY 2018-19.

8. Chapter 8: Tariff Schedule

8.1. Tariff Schedule

Table 131: Tariff Schedule*

S. No	Consumer Category	Fixed Charge	Energy Charge
1	**DOMESTIC PURPOSES (A2)**		
a.	0-100 units per month	Rs 40.00/connection/ month	1.30 Rs/kWh
b.	101-200 units per month		2.25 Rs/kWh
c.	201-300 units per month		3.95 Rs/kWh
d.	Above 300 units per month		5.10 Rs/kWh
2	**HUT SERVICES (A3) (OHOB)**		
a.	Hut Services	Rs 35.00/connection/ month	-
3	**COMMERCIAL (A1)**		
I	**LT Commercial**		
a.	0-100 units per month	Rs 120.00/connection/ month	5.15 Rs/kWh
b.	101-250 units per month		6.15 Rs/kWh
c.	Above 250 units per month		6.85 Rs/kWh
II.	**HT Commercial (For contract demand up to 5000 kVA)**	**350.00 Rs/kVA/month**	**5.40 Rs/kWh**
4	**AGRICULTURE SERVICES (D)**		
I	**Agriculture (D1)**		
a.	Small Farmers	Rs 10.00/HP/month	-
b.	Other Farmers	Rs 45.00/HP/month	-
II	**Cottage Industries /Poultry Farms/ Horticulture/Pisciculture (D2)**		
a.	0-100 units per month	Rs 40.00/connection/ month	1.30 Rs/kWh
b.	101-200 units per month		2.25 Rs/kWh
c.	201-300 units per month		3.95 Rs/kWh
d.	Above 300 units per month		5.10 Rs/kWh
5	**PUBLIC LIGHTING**		
a.	Public Lighting	Rs 100.00/pole/ month	6.75 Rs/kWh
6	**INDUSTRIES**		
a.	LT Industries	Rs 100.00 /connection/ month	5.60 Rs/kWh
b.	HT Industries (For Supply at 11 kV, 22 kV or 33 kV)	350.00 Rs/kVA/month	5.30 Rs/kWh
c.	EHT Industries (For Supply at 110 kV or 132 kV)	420.00 Rs/kVA/month	5.00 Rs/kWh
7	**LT Water Tanks**	**Rs 120.00/connection/**	**6.40 Rs/kWh**

S. No	Consumer Category	Fixed Charge month	Energy Charge
8	**HT Others**	**450.00 Rs/kVA/month**	**6.50 Rs/kWh**
9	**TEMPORARY SUPPLY**		
a.	Lights or combined installation of lights and fans, motive power, heating and others	Minimum charges of Rs 200.00/ connection/ month or part thereof	9.75 Rs/ kWh
b.	Special Illumination	Minimum charges of Rs 500.00/ connection/ month or part thereof	10.00 Rs/ kWh
c.	Construction and testing purpose for load exceeding 130 HP or 97 kW	Minimum charges of Rs 500.00/ connection/ month or part thereof	10.00 Rs/ kWh
10	**HOARDINGS/SIGNBOARDS**		
a.	Hoardings/signboards	120.00 Rs/kVA/month or part thereof	8.00 Rs/kWh

**A Regulatory Surcharge of 4.00% shall be applicable to all the consumer categories as a percentage of the total Energy and Demand charges payable by the consumer towards recovery of past accumulated deficit.*

8.2. Applicability

Table 132: Applicability of Tariff Schedule

LT Supply Limit for all LT categories

For single phase connection, the connected load shall not exceed 4 kW, and for 3 phase connection, the connected load shall not exceed 130 HP or 97 kW

DOMESTIC PURPOSES (A2)

This tariff is applicable to services for lights, fans, Air-conditioning, Heating and other small domestic appliances etc. used for:

a) Genuine domestic purposes including common services for stair-case, lifts, water tanks in the purely domestic apartments.
b) Supply to actual places of public worship such as temples, mosques, churches etc.
c) Ashrams and Mutts, Non-commercial orphanage homes and old people homes run by religious and charitable institutions, social welfare and voluntary organizations.
d) Youth hostels, Harijan hostels, Rehabilitation Centres, Anganwadies and Balwadies run by Social Welfare Department.
e) For own residences where one room is set apart for the purpose of consultation by doctors, lawyers, engineers, architects and auditors.
f) To handloom in residence of handloom weavers (regardless of the fact whether outside labour is employed or not) and to handloom in sheds erected.
g) To the residences where supply from a house is extended to tailoring shops, job typing, document writing, laundry pressing, and small caterers set up in the verandah of the house with small lighting load only (one tube light only).

HUT SERVICES (A3)

For supply to bonafide hut services with only two numbers of 40 W Florescent Tube lights

Note

1. Hut is defined as a living place not exceeding 300 sq. ft. or 27.87 sq. m. with mud wall/brick wall or thatched wall and thatched roof only. Hut does not include farm huts. If any of the conditions is changed at a later stage, this concessional supply will be discontinued and the consumer will have to take metered supply.
2. The tariff under this item is also applicable for houses constructed for economically weaker sections under the "Chief Minister's 5000 houses programme" and houses constructed by the District Rural Development

Agency under Indira Awaas Yojana and by the Adi Dravidar Welfare Department having a living space not exceeding 300 sq. ft. or 27.87 sq.

3. The consumer under this category should use only two numbers of 40 watts florescent tube lights. He should not use bulbs/tube lights of higher wattage or connect any other electrical equipment/ appliances other than those mentioned above. Supply from such services should not be tapped for any other purposes including functions, public meetings and also for neighboring huts. If at any time, any unauthorized load or extension, use of higher wattage bulbs or use of service for other purposes is detected, the service will be disconnected forthwith.

COMMERCIAL (A1)

LT Commercial

This tariff is for Lights and combined installation of lights and fans, mixed loads of lights and power, heating and air-conditioning applicable to:

a) Non-domestic and non-industrial consumers, trade and commercial premises
b) Educational institutions, hostels, public libraries
c) Hotels, Restaurants, Boarding and Lodging Homes
d) Hospitals, Private clinics, Nursing Homes, Diagnostic Centres, X-ray Units etc.
e) IT related development Centres and Service Centres
f) Common services for Stair-case, lifts, water tanks etc. in the purely commercial/ combination of commercial and domestic.

HT Commercial

For Commercial Establishments including Laboratories, Hotels, Marriage Halls, Cinema Theatres, Private educational Institutions, Private Hospitals, shopping Malls, Telephone exchanges, broadcasting companies with contracted maximum demand upto 5000 kVA. New High Tension consumers who want to avail a contract demand above 5000 kVA or existing High Tension consumers who want to enhance their demand beyond total contract demand of 5000 kVA should avail power at 110 kV or 132 kV as the case may be.

AGRICULTURE SERVICES (D)

Agriculture (D1)

For supply to bonafide agricultural services with a connected load of not less than 3 HP per service

Note

1. Electricity will be supplied under the tariff category "Small farmers" to those consumers whose families are solely dependent on the income derived from their agricultural land holding, which should not exceed two and half acres of wet land or five acres of dry land. A certificate to this effect from Revenue authority shall be produced. "Small farmer" means a person whose total holding, whether as owner, tenant or mortgaged with possession or partly in one capacity and partly in another, does not exceed two-and-a half acres of wet lands or five acres of dry land. In computing the extent of land held by a person who owns both wet and dry lands, two acres of dry land shall be taken as equivalent to one acre of wet land.
2. The above concession will be withdrawn if resale of energy or unauthorized load / extension or use for other purpose is detected by the Department.
3. Agricultural power loads below 3 H.P. will be charged under Tariff Category A1. A bonafide farmer may use his motor in the Agricultural Service for allied agricultural purposes such as sugarcane crushing, thrashing etc.
4. Power supply to Farm Houses shall be metered separately and charged under domestic tariff (A2).

Payment of Tariff Charges by Agriculture Consumers

1. The Tariff shall be collected in three equal installments payable in April, August and December in each year. The installments shall be payable before the 15th of the respective months.
2. For new service, the first installment shall be proportionate to the number of whole months remaining till the month in which the first installment is due. Fraction of a month shall be reckoned as a whole month.

Cottage Industries /Poultry Farms/ Horticulture/Pisciculture (D2)

It is applicable to bonafide cottage industries, horticultural nurseries including plant tissue culture media, bona fide poultry farms and Pisciculture.

Note:

(a) Cottage industries

The following conditions should be satisfied in order that an industry may be classified as a bonafide cottage industry:

1) It should be conducted entirely within the home, the home being deemed to be permanent residence of the proprietor.
2) The industry shall not cause any residence to constitute a factory within the meaning of the Factories Act, 1948 or any amendment thereof.
3) Not more than two persons outside the immediate family of the proprietor shall be employed in the factory.
4) It should be certified by the Director of Industries that the industry for which power is used is a cottage industry.
5) The produce is not purely utilized mainly for the domestic consumption of the proprietor but should also be available for sale to the public.

(b) Poultry farms

The following conditions should be satisfied in order that the service may be classified as a bona fide poultry farm.

1) The capacity of the farm shall be a minimum of 100 birds and maximum of 5,000 birds (both layer and broiler birds).
2) The application of the beneficiary seeking such concession shall be verified and recommended by the Animal Husbandry Department.

(c) Horticultural/Pisciculture

1) The applications of the beneficiary seeking such concession shall be verified and recommended by the Director, Agriculture Department. For Pisciculture, applications of the beneficiary seeking such concession shall be verified and recommended by the Director, Fisheries Department.

PUBLIC LIGHTING

This tariff will apply to public lighting in markets, bus stands, traffic signals, high mast lights on public ways, public parks, public lighting in notified industrial estates

INDUSTRIES

LT Industries

Applicable to low tension industrial consumers including lighting in the industrial services.

HT Industries (For Supply at 11 kV, 22 kV or 33 kV)

The supply voltage for HT consumer's upto 5000 kVA will be 33 kV, 22 kV or 11 kV as the case may be. Applicable to industrial establishments, IT and ITES based Companies registered under Factories Act/ Companies Act with contracted maximum demand upto 5000 kVA. New High Tension consumers who want to avail a contract demand above 5000 kVA or existing High Tension consumers who want to enhance their demand beyond total contract demand of 5000 kVA should avail power at 110 kV or 132 kV as the case may be.

EHT Industries (For Supply at 110 kV or 132 kV)

Applicable to all types of industries supplied at 110 KV or 132 KV as the case may be.

LT WATERWORKS

Applicable to low tension consumers with Water Tanks including lighting in the premises maintained by State Government Departments/Undertakings and Local Bodies.

HT OTHERS

Applicable to State and Central Government establishments of non-industrial and non-commercial nature.

TEMPORARY SUPPLY

NOTE:

1. The rate for Special illumination shall apply to weddings, garden-parties and other Private/Government functions when the illumination is obtained through bulbs fastened in other surfaces of wall of buildings, on trees and poles inside the compound and in pandal etc., outside the main building.

2. In cases where such Special illumination is done in the existing regular services the energy utilized for such illumination shall be metered separately and the consumption will be charged under Special illumination charge as levied under temporary supply.
3. Wherever such Special illumination is done unauthorisedly, a penal charge of Rs 500 for service shall be levied in addition to the existing tariff of the installation.
4. Other conditions for connection of line and service connection charges, dismantling, security deposit etc. will be as per the rules now in force.

For supply required at short notice that is within three days from the date of application for temporary service connections, an urgency charge of Rs 50 shall be paid along with other normal tariff charges

HOARDINGS/SIGNBOARDS

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 under commercial category.

8.3. General Terms and Conditions

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

a) The tariff indicated in this tariff schedule is the tariff rate payable by the consumers of Union Territory of Puducherry.

b) A Regulatory Surcharge of 4.00% shall be applicable to all the consumer categories as a percentage of the total Energy and Demand charges payable by the consumer towards recovery of past accumulated deficit.

c) These tariffs are exclusive of electricity duty, tax on sale of electricity, taxes and other charges levied by the Government or other competent authorities from time to time.

d) Unless otherwise agreed to, these tariffs for power supply are applicable to single point of supply.

e) The power supplied to a consumer shall be utilized only for the purpose for which supply is taken and as provided for in the tariff. 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.

Provided that

i. if a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh

ii. If either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.

f) If connected load of a domestic category is found to be at variance from 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.

g) **Power Factor Charges for HT and EHT**

The monthly average power factor shall mean the ratio expressed as percentage of total kWh to total kVAh supplied during the month. The ratio shall be rounded off two decimals.

i. The monthly average power factor of the supply shall be maintained by the consumer not less than 90% (lagging). If the monthly average power factor of a consumer falls below 90% (90% lagging), such consumer shall pay a surcharge in addition to his normal tariff @ 1% on billed demand and energy charges for each fall of 1% in power factor upto 70%(lagging)

ii. In case the monthly average power factor of the consumer is more than 95% (95% lagging), a power factor incentive @ 1% on demand and energy charges shall be given for each increase of 1% in power factor above 95%(lagging)

iii. If the average power factor falls below 70% (lagging) consecutively for 3 months, the licensee reserves the right to disconnect the consumer's service connection without prejudice for the levy of the surcharge.

h) 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 & Supply Code Regulation.

i) 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.

j) The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 85% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulation. If such over-drawal is more than 20% of the contract demand then the connections shall be disconnected immediately.

Explanation: Assuming the contract demand as 100 KVA, maximum demand at 120 KVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 KVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

k) Unless specifically stated to the contrary, the figures of energy charges relates to Rs per unit (kWh) charge for energy consumed during the month.

l) **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. In case of delay less than a month, the surcharge will be levied at 2% per month on proportionate basis considering a month consists of 30 days. 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.

m) **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 Consumer Security Deposit) which remains with the licensee at the end of the month. Such a rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

n) **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.

o) **Time of Day (TOD) Tariff**

i. Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off-peak load period, shall be recorded by installing a ToD meter.

ii. The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Table 133: Applicability of ToD Tariff

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

iii. Applicability and Terms and Conditions of TOD tariff:

1. The Commission directs the Petitioner to introduce the TOD tariff as mentioned above urgently including installation of the Smart Meters to capture ToD consumption.
2. The facility of aforesaid TOD tariff shall not be available to the HT/EHT consumers having captive power plants and/or availing supply from other sources through wheeling of power
3. The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff
4. In the event of applicability of the TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply

p) The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula specified in Chapter 9 of this Tariff Order. Such charges shall be recovered / refunded/adjusted in accordance with the terms and conditions specified in the FPPCA mechanism.

q) 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.

r) Schedule of service charges and other charges would be as approved in this Tariff Order.

8.4. Schedule of Other Charges

Table 134: Schedule of Other Charges

S. No.	Description	Charges (In Rupees)
A	**Charges for Service Connections**	
A1	**New LT overhead service lines**	
1	One hut one Bulb	Nil

S. No.	Description	Charges (In Rupees)
2	Other single phase Services	250
3	Three phase Services	500
4	L.T C.T operated Meter services	3000
5	H.T Services	5000
A2	**New LT underground service lines**	
1	Single Phase services	500
2	Three phase Services	1000
A3	**Rating / re-rating of services**	
1	Single phase Services	125
2	Three phase Services	250
3	L.T C.T operated Meter service	1500
4	H.T Service	2500
Note: The above charges under (A1) & (A2) will be applicable for addition or alteration or reduction of connected load and enhancement or reduction of CMD or alteration of internal Electrical installations.		
B	**Testing for Installation**	
1	Domestic lighting / Commercial lighting / Agriculture Services	200
2	Other LT Services	900
3	HT/EHT Services	7500
Note: Testing for servicing a new installation (or of an extension or alteration) - For the first test No Charge. Subsequent testing warranted due to absence of contractor or his representative (or) due to defects in wiring of consumer's premises or at the request of the consumer or at occasions that warrant testing of installations for the second time for reasons attributable to the consumers		
C	**Testing for meters and metering arrangements**	
1	Single phase direct meter	150
2	Three phase direct meter up to 50 A	200
3	L.T C.T coil test	800
4	H.T Tri-vector Meter (0.5 class accuracy or CT operated LT meters)	1500
5	H.T Tri-vector Meter (0.2 class accuracy)	2000
6	H.T Metering Cubicle	3500
D	**Testing of HT/EHT Consumer Protective Equipment**	
1	Testing charges for protective relays (Earth fault, line fault etc.)	4500
2	Testing charges for one set of current transformer	4500
3	Testing charges for one set of potential transformers	4500
4	Testing charges for one set of circuit breaker	4500

S. No.	Description	Charges (In Rupees)
5	Testing charges for measurement of earth resistance	3000
6	Testing charges for Transformer oils	500
E	**Disconnection/Re-connection Charges**	
1	Disconnection of L.T service on request	100
2	Disconnection of HT service on request	500
3	Reconnection of L.T Service (on all occasions)	100
4	Reconnection of HT Service (on all occasions)	500
F	**Title Transfer of Services**	
1	Domestic	250
2	Commercial Lighting Installation	500
3	All other LT installation	1000
4	HT/EHT Services	2000
G	**Furnishing of Certified Copies (To be issued to the consumer only)**	
1	Issue of duplicate Monthly bills for a month	10
2	Contractor's completion-cum test report	10
3	Ledger Extract	**20**/calendar year or part thereof
4	Agreement	50
5	Estimate	50
H	**Meter Rent Charges**	
1	Single Phase meter	10/- per meter/ month or part thereof
2	Three Phase meter	25/- per meter/ month or part thereof
3	LT C.T operated meters	200/- per meter/ month or part hereof
4	HT/EHT metering equipment	500/- per meter/ month or part thereof
I	**Fuse Renewal Charges**	
1	Domestic	NIL
2	Commercial	50
3	L.T Industrial	50
4	High Tension/Extra High Tension Installation	250
J	**Shifting of Meter Board at Consumer's Request**	
1	LT Single Phase Supply	125
2	LT Three Phase Supply	250

9. Chapter 9. Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short-term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Despatch Center (SLDC)/ Regional Load Despatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long-term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within the region (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawal/Under-drawal from the Grid and the Inter-State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market-determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal /hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of FY 2016-17 will be undertaken by the Commission once the audited accounts of FY 2016-17 are available. If the audited accounts for FY 2016-17 are prepared timely, the impact of true-up of various cost and revenue items is allowed in the tariff of FY 2018-19, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

9.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Indian Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub-clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub-clause 8.2.1-(1)
"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November, 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:
"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

9.2. Existing formula

The Commission first introduced the provision for adjustment of fuel surcharge in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) Regulations, 2009 notified on 08 February 2010. The relevant Clause 7 of the Regulations is provided below:
"7. Fuel Surcharge Formula
(1) The fuel cost revisions for the generating companies/units owned by the licensee that are due to reasons beyond the control of the generating companies / the licensee be in accordance with the fuel surcharge formula as may be decided by the Commission from time to time.
(2) The generating company or the licensee may determine such charge in accordance with the specified formula and recover the same from such categories of consumers or the licensees, as the case may be after following procedure and the terms and conditions attached thereto."

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

On 30 June, 2014 the Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (except Delhi) (Multi-Year Distribution Tariff) Regulations, 2014 wherein the Commission proposed to adopt the same methodology as prescribed in the Joint Electricity Regulatory Commission for the State of Goa and UT's (Terms and conditions for determination of tariff) (First Amendment) Regulations, 2009 in the MYT Period. Clause 19 of the Regulations is shown as follows
"*19. Treatment of Incremental Power procurement cost*
The Distribution Licensee shall recover the incremental cost on account of fuel & power purchase adjustment in accordance with FPPCA formula provided in JERC Terms & Condition for determination of Tariff (first amendment) Regulations, 2009."

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

"**1. *Recovery Periodicity (Cycle)***

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

2. *Formula*

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

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

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

Where

$$c = \{(X - A) * \frac{Tapproved}{100}$$

$$b = (1 - \frac{Yapproved}{100})$$

Where:

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

3. Other Terms and conditions

a) For the purpose of Fuel and Power Purchase Cost Adjustment, all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain shall be considered. However, the bills or credits of earlier period received by the distribution licensee earlier than the period under consideration will not be considered for the purpose of FPPCA.

b) The variation in fuel and power purchase cost adjustment with respect to the approved per unit power purchase cost, as per the formula specified above shall be recoverable/payable based on units billed for each category of consumers except BPL & Agriculture.

c) Per unit rate of FPPCA to be billed to consumers is worked out in Paisa after rounding off to the next lower integer in case of fraction less than 0.5 and to the next higher integer in case of fraction equal to or greater than 0.5.

d) The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:

- *Step 1: Determination of Value of K*

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

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

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

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

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

4. Duties of the licensees and Designated officer

a) Every distribution licensee shall appoint a designated officer not below the rank of Executive Engineer with Name, Designation, Telephone no. & Fax and Place of Posting, who shall compute, certify and post the PPCA calculations, PPCA chargeable & related data summary on the licensees website and clarify to consumers query, if any.

b) The Designated Officer shall send certified copy of FPPCA calculations immediately to Joint Electricity Regulatory Commission."

9.3. Need to review the existing mechanism

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

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

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

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

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

Table 135: Key Takeaways

S. No.	Parameter	Takeaways
1.	*Time Period*	• Time period for levy of the FPPCA is quarterly in most of the States except in Chhattisgarh and Bihar where recovery is on bi-monthly and monthly basis respectively.
2.	*Approval Process*	• Some of the SERC's allow the Discoms to recover FPPCA charges upto a certain limit via automatic route (without approval of the Commission) thereby reducing the administrative burden. However, in most of the States like Maharashtra, Kerala, Madhya Pradesh etc. prior approval from the Commission is required.
3.	*Elements included while determining FPPCA charges*	• In all the States, power purchase cost from long term approved sources is considered while calculating the FPPCA charges • Central Transmission charges are considered in the States of Gujarat, Maharashtra, Delhi and Uttar Pradesh; • Adjustments (Under-recovery/ Over-recovery) due to previous FPPCA period is considered in the States like Bihar, Karnataka , Kerala and Maharashtra; • Power Purchase cost from short term sale/ purchase, bilateral exchange, IEX etc. is considered in the States of Gujarat, Maharashtra and Uttar Pradesh; • In States like Karnataka and Madhya Pradesh, only variable cost of power purchase is considered while calculating the FPPCA charges; • In Uttar Pradesh (UP) any kind of arrears/refunds etc. in the period are also considered

S. No.	Parameter	Takeaways
4.	*Elements excluded while determining FPPCA charges*	• Short term power procurement cost is excluded while calculating FPPCA in most of the States except Gujarat, Maharashtra and Uttar Pradesh • In UP, power purchase cost from unapproved plants is excluded • DSM charges are excluded in most of the States • In Bihar, the Regulations categorically define exclusion of any kind of penalties due to delayed payment, while calculating FPPCA charges • In Chhattisgarh power purchase cost from renewable sources is excluded. • In the NCT of Delhi, past arrear/ credits are not considered unlike UP where they are considered.
5.	*Categories excluded*	• Almost all categories are covered under the ambit of the FPPCA charges except in the State of Kerala where the domestic consumers upto a certain consumption limit are not levied FPPCA charges. • In Gujarat State, the FPPCA charges for the Agriculture category are subsidized by the State Government.
6.	*T&D losses considered for determination*	• In most of the States, the T&D losses approved in the Tariff Order are considered for calculation of gross units; however, in Gujarat and Bihar, the approved or actual losses whichever are lower are considered • In Maharashtra, the actual T&D losses are considered.
7.	*Notification via Regulations/ Tariff Order*	• In most of the States like Delhi, Maharashtra, Madhya Pradesh etc., the FPPCA methodology is defined in the Tariff regulations except in Karnataka and Kerala where individual regulations are notified.
8.	*Ceiling within a month (%) for recovery*	• In States like Maharashtra, Gujarat, Bihar and Karnataka, the upper ceiling of the FPPCA charges is provided which is applicable to all categories.
9.	*Ceiling within a month for a category*	• Ceiling of the FPPCA charges in a quarter for categories such as Domestic and Agriculture in Chhattisgarh State.
10.	*Recovery Mechanism*	• FPPCA charges are recovered from the consumers and are part of their electricity bills • In some States like Gujarat and Madhya Pradesh, a uniform FPPCA charge is recovered depending on the billed units while in States like Maharashtra and UP, the category wise FPPCA charges based on the category ABR is determined

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

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

9.4. New formula

Based on the review of the existing formula and examination of the formulas and the best practices adopted by the various SERC's, the Commission proposes the following mechanism for calculation and passing on of variations in the Fuel and Power Purchase Cost Adjustment (FPPCA) in the end consumer tariff, which shall come into force w.e.f. 1st April 2018 (i.e. Power Purchased by the Licensee from 1st April 2018 onwards). For power purchased by the Licensee for the period from 1st January 2018 till 31st March 2018, the FPPCA will be calculated based on the earlier formula.

1. **Periodicity for recovery (Cycle)**
   The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.
   For example, FPPCA for the quarter April- June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. **Chargeability**
   FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. **Formula**
   The FPPCA formula shall contain the following three components:

   1. Power Purchase Cost adjustments which shall contain the following elements:
      - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
      - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).
      - Variation on account of Deviation Settlement Mechanism – Shall be allowed, but the incentive/penalty shall be excluded

   2. Transmission cost adjustments which shall contain the following elements:
      - Variation on account of Central Transmission Charges including arrears/ revisions.
      - Variation on account of State Transmission charges including arrears/revisions

   3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
      - Any adjustments /reversals due to over recovery of charges
      - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
      - Any other adjustments on account of factors not envisaged at the time of tariff fixation

   4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{Rs.}}{\boldsymbol{Unit}}\right) = .\left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \boldsymbol{10}}{\{[\boldsymbol{PPOact} * (\boldsymbol{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\boldsymbol{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

Where:

- $Pact(in\ Rs.Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ Rs.Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost
- $Oact\ (in\ Rs.Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ Rs.Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ \ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact\ (in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{Rs}{unit}) = \left(\frac{(Papp + Tapp) * 10}{\{[PPOapp * (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp\ \ (in\ Rs.Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power

- $Tapp\ (in\ Rs.Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
  - Inter-State transmission charges (PGCIL charges),
  - Intra-State transmission charges
- $PPOapp\ \ (in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp\ \ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp\ \ (in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp\ (in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp\ \ (in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp\ (in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, the Commission suggests that all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to 10% of the ABR for a consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission atleast one week before levying the same on the consumers.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:

   - Step 1: Determination of Value of K

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

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

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

   $$FPPCA\ \left(\frac{Rs.}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute the fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the FPPCA formula as approved by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as Rs 4.43/kWh for the FY 2018-19.

Table 137: Rapproved determined by Commission for FY 2018-19

Particulars	Amount
Total Power Purchase Cost (Rs Cr), P_{app}	1,058.46
Transmission Charges (Rs Cr), T_{app}	67.17
Power Purchase Quantum from CGS Stations at Generator Periphery (NTPC, NPCIL, NLC, Vallur) (MU), PPO_{app}	2,901.98
Approved Inter-State Transmission Loss (%), TL_{app}	2.15%
Power Purchase Quantum from sources within State (PPCL) (MU), PPI_{app}	215.56
Quantum of Sale of Surplus Power (MU), PSO_{app}	126.71
Approved Intra-State T&D Loss (%), DL_{app}	11.00%
Energy Sales for Hut Services and Agriculture consumer category (MU), Z_{app} (MU)	67.65
R_{app} (Rs/kWh)	**4.43**

10. Chapter 10: Directives

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

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

10.1. Directives continued in this Order

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

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

10.1.1. Preparation of Asset and Depreciation Register

Originally Issued in Tariff Order dated 5th February 2010
Commission's Directive in Tariff Order for FY 2017-18 *The Commission directs that in the future True-up Petition be duly submitted along with the audited accounts and the asset and depreciation registers for the respective year on time.*
Petitioner's Response in Present Tariff Petition *The Asset and Depreciation Register has been updated upto FY 2015-16. The updated Registers for FY 2016-17 will be produced at the time of Technical validation.*
Commission's Response *The Commission observes that the Petitioner is yet to ensure full compliance of this directive. The Commission directs the Petitioner to update the asset register till FY 2017-18 before filing of the Tariff Petition in the next year.*

10.1.2. Accounting of Consumer Security Deposits etc. under appropriate head of accounts

Originally Issued in Tariff Order dated 5th February 2010
Commission's Directive in Tariff Order for FY 2017-18 *The Commission observes that the Petitioner is yet to ensure full compliance of this directive. The Commission directs the Petitioner to pay the full interest on consumer deposit in the FY 2017-18 to the eligible consumers and update the status to the Commission.*
Petitioner's Response in Present Tariff Petition

The Department is maintaining a separate head of account for the consumer security deposit from the FY 2012-13 onwards. Based on the directions of Hon'ble Commission, payment of interest is being made to those consumers. The payment of the interest is also being made based on the allocation of funds by the Government of Puducherry for the period from FY 2012-13. *As far as the details of the security deposit made prior to the FY 2012-13, all the deposits made by the consumers towards security deposits as well as the consumer contribution deposits were put together in a single head of account. The above issue can only be resolved after tracing out the details of the security deposits from the old policy files.* *The interest payable to the security deposit made from the FY 2009-10 can be done only on tracing out of the details of the security deposit through new software system, which is being implemented under R-APDRP scheme.* *The Department therefore prays to consider the additional time required to process the above work.*
Commission's Response *The Commission observes that the Petitioner is yet to ensure full compliance of this directive. In the FY 2016-17 the Petitioner has only paid Rs 3.50 Cr to consumers against an approved amount of Rs 4.00 Cr The Commission directs the Petitioner to pay the full interest on consumer deposit in the FY 2018-19, as computed, to the eligible consumers and update the status to the Commission within 3 months of issue of this Order.*

10.1.3. Energy Audit and T&D Losses

Originally Issued in Tariff Order dated 5th February 2010
Commission's Latest Directive in Tariff Order for FY 2017-18 *The Commission notes that considerable time has already been given to the Petitioner to fulfill compliance of the said directive. However, the energy audit report has still not been submitted before the Commission. The Commission expects compliance of the said directive during FY 2017-18 failing which strict action would be initiated by the Commission under various provisions of the JERC Regulations. The energy audit report should be submitted before the Commission along with the next ARR & Tariff filing.*
Petitioner's Response in Present Tariff Petition *All the distribution transformers in Mahe and Yanam regions have been provided with the meters. The recording of readings of the distribution transformer meters is being taken regularly every month and losses on each feeder up to 11 KV level are being worked out.* *As far as the Puducherry and Karaikal regions are concerned, there are 2475 nos. of distribution transformers in service, out of which around 1450 nos. of transformers have been provided with the meters. Under the scheme DDUGJY, 1168 nos. of distribution transformers have been considered for the provision of metering. The EDP has programmed to complete the metering of all DTs in the current financial year itself. It is also expected that the new software under R-APDRP will be installed and commissioned before March 2018. The software provides DT wise grouping of consumers and enables the Department to calculate losses up to LT level.* *The EDP therefore requests that the time limit may please be extended to the FY 2018-19 to conduct energy audit upto LT level and submit to the Hon'ble Commission.*
Commission's Response *The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. The Commission directs the Petitioner to expedite the process to complete energy audit of all distribution transformers in the said areas within 3 months of issuance of this Order and report the compliance to the Commission.*

10.1.4. Estimation of the consumption by agriculture pump-sets

Originally Issued in Tariff Order dated 5th February 2010

Commission's Latest Directive in Tariff Order for FY 2017-18

Work of the metering of the distribution transformers connected to agriculture consumers should be expedited. The Commission directs the Petitioner to submit the status report regarding metering of the distribution transformers connected to agriculture consumers before 31st July 2017 and complete the work of metering with the FY 2017-18.

Petitioner's Response in Present Tariff Petition

The procurement of the meters for both the DT metering and Agricultural consumers has been contemplated in the DDUGJY scheme and the entire works are programmed to be completed during the current financial year itself. However, based on the meters already provided in the DTs connected to the agricultural consumers, the consumption pattern of the agricultural consumers will be submitted during the Technical Validation Session for the tariff petition for the FY 2018-19.

Commission's Response

The Commission observes that the Petitioner is yet to ensure full compliance of this directive. The Commission directs the Petitioner to submit the status report regarding metering of the distribution transformers connected to agriculture consumers before 31st July 2018 and complete the work of metering in the FY 2018-19.

10.1.5. Metering of consumer installations / replacement of non-functional or defective Meters

Originally Issued in Tariff Order dated 5th February 2010

Commission's Latest Directive in Tariff Order for FY 2017-18

The Commission in the Business Plan Order dated 4th December 2015, has expected full compliance of the 100% metering programme by FY 2017-18 and has accordingly approved the capital expenditure for this scheme for FY 2016-17 and FY 2017-18. No carryover of capital expenditure has been allowed during FY 2018-19. Further, the Commission in the Business Plan Order had directed as below:

Quote

"The Commission directs the department to provide detailed plan to undertake metering in the different areas, especially Karaikal. The details regarding plan of distribution of meters in different areas of Puducherry needs Tobe elaborated and submitted before the Commission."

Unquote

The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. The Petitioner is directed to submit the present status of replacement of defective meters, meters already available, additional meters proposed to be ordered and timeline for receipt of additional meters. The status report must be submitted by 31st July 2017 along with the plan and the schedule for 100% replacement of defective meters.

Petitioner's Response in Present Tariff Petition

At present, the department is having around 55,000 meters in stock and the defective and electromechanical meters are being replaced. Order has been placed for the replacement of existing meters with smart meters in 35,600 services and the same is expected to commence in the month of March 2018.

Action has also been initiated to procure around 1,10,000 meters under the central assistance scheme of IPDS and DDUGJY and the same will be utilized for the replacement of the existing defective and electromechanical meters. The department has programmed to replace all the defective and electromechanical meters in the current financial year itself.

Commission's Response

The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. Since the Petitioner has proposed to replace all defective meters in FY 2017-18, the compliance status of the same has to be submitted by the Petitioner on or before 30th April 2018.

10.1.6. Load Shedding and ensuring proper service to the consumers

Originally Issued in Tariff Order dated 5th February 2010

Commission's Latest Directive in Tariff Order for FY 2017-18

The Petitioner is directed to submit the compliance of the directive before 30th September 2017.

Petitioner's Response in Present Tariff Petition

The infrastructure for the operation of the 24X7 call centre has already been created. However, the operation of the call centre is pending for the completion of the software implementation by the firm under R-APDRP scheme. It is programmed to put the 24X7 call centre in operation by March 2018.

Commission's Response

The action taken is noted. The Petitioner is directed to submit the compliance of the directive before 30th May 2018.

10.1.7. Employee Cost/Manpower Study

Originally Issued in Tariff Order dated 5th February 2010

Commission's Latest Directive in Tariff Order for FY 2017-18

The Commission has taken a serious view of the fact that the Petitioner is yet to ensure full compliance despite repeated directives of the Commission. The Commission directs the Petitioner that the employee cost/manpower study should be submitted before the Commission before 30th November 2017.

Petitioner's Response in Present Tariff Petition

It is submitted that the restructuring proposal submitted by the Government of Puducherry is still under consideration of the Ministry of Power. The Ministry of Power has raised some queries on the proposal and the same is being attended by the Expert Committee appointed by the Government of Puducherry.

Commission's Response

The Commission has noted the efforts taken by the Petitioner. The Commission directs the Petitioner that the employee cost/manpower study should be submitted along with the filing of the next tariff petition.

10.1.8. Connected Load/Contract Demand-based fixed charges for LT Industrial and Commercial categories

Originally Issued in Tariff Order dated 12th June 2012

Commission's Latest Directive in Tariff Order for FY 2017-18

The Petitioner is directed to have effective project management and complete the compliance of the directive before filing of next Tariff Petition for the FY 2017-18.

Petitioner's Response in Present Tariff Petition

EDP submits that the consumer indexing activities of all consumers in the urban areas wherein enumeration of connected load, is included in the upgrading/ implementing the new software under Part-A (IT) of R-APDRP scheme. Connected load enumeration would be taken up by this department while upgrading/ implementing the new software under Part-A (IT) of R-APDRP scheme. The EDP therefore requests that the

department may be permitted to provide connected load/ contract demand based fixed charges for LT Industrial and Commercial categories from the FY 2019-20.
Commission's Response *Action taken by the Petitioner is noted. The Petitioner is directed to have effective project management and complete the compliance of the directive before filing of next Tariff Petition.*

10.1.9. Proposal of the Energy Charges for the agriculture category

Originally Issued in Tariff Order dated 10th April 2013
Commission's Latest Directive in Tariff Order for FY 2017-18 *The Commission noted that the directive has not been complied with in the present Tariff Petition also. The Commission directs the Petitioner to submit an action plan for 100% metering of agriculture consumers by 31st July 2017 and submit a proposal for energy tariff based billing for agricultural consumers along with the next Tariff Petition.*
Petitioner's Response in Present Tariff Petition *It is requested that as the department has programmed to provide static meters to all the agricultural consumers in the current financial year itself, the department may be permitted to submit a proposal for energy tariff based billing for the agricultural consumers along with the tariff petition for the FY 2019-20.*
Commission's Response *The Commission noted that the directive has not been complied with in the present Tariff Petition also. The Commission directs the Petitioner to submit an action plan for 100% metering of agriculture consumers by 31st July 2018 and submit a proposal for energy tariff based billing for agricultural consumers along with the next Tariff Petition.*

10.1.10. Information for determination of voltage wise wheeling charges

Originally Issued in Tariff Order dated 24th May 2016
Commission's Latest Directive in Tariff Order for FY 2017-18 *The Commission notes that Petitioner has not complied with the directive and has given reasons for non-compliance which are not tenable. The Petitioner is directed to provide the details of voltage wise assets and expenses along with the allocation methodology (based on best judgement of the Petitioner) for the determination of voltage wise wheeling charges in the next tariff petition.*
Petitioner's Response in Present Tariff Petition *It is submitted that FA Schedules have been prepared for the transmission, HT distribution and LT distribution separately for the FY 2016-17 and the same methodology will be adopted for the subsequent years.*
Commission's Response *The Commission notes that Petitioner has not complied with the directive and has given reasons for non-compliance which are not tenable. The Commission in this Tariff Order has determined the voltage wise wheeling charges based on certain assumptions. However, in order to determine the voltage wise wheeling charges more prudently, the Commission directs the Petitioner to submit a proposal supported by the study of the relevant parameters.*

10.1.11. New Bill Format

Originally Issued in Tariff Order dated 24th May 2016

Commission's Latest Directive in Tariff Order for FY 2017-18

The Commission observes that the Petitioner has not fully complied with the directive. The Commission now directs the Petitioner to finalize and introduce the new bill format (including the adjustment of the Solar Power fed to the Grid) within 1 month of issuance of this Order and report the compliance to the Commission.

Petitioner's Response in Present Tariff Petition

Presently, spot billing system is in vogue and switching to any other billing system would require major modification in the billing software which would also require more time. However, the metering, billing and collection system is being upgraded to the latest RDBMS platform under part-A (IT) of R-APDRP scheme which is likely to be completed by March 2018. It is also mentioned that the consumer indexing activities of all consumers in the urban areas wherein enumeration of connected load, is also included in the above scheme. Hence, the new bill format along with the connected load enumeration including the adjustment of the solar power fed into the grid would be adopted by this department while upgrading/ implementing the new software under Part-A (IT) of R-APDRP scheme.

Commission's Response

The Commission observes that the Petitioner has not fully complied with the directive. The Commission now directs the Petitioner to finalize and introduce the new bill format (including the adjustment of the Solar Power fed to the Grid) within 2 months of issuance of this Order and report the compliance to the Commission.

10.1.12. Time of Day (ToD) Tariff for HT/ EHT consumers

Originally Issued in Tariff Order dated 24th May 2016

Commission's Latest Directive in Tariff Order for FY 2017-18

The Petitioner is directed to introduce ToD tariff for the HT/EHT consumers during FY 2017-18 as per the terms & conditions of ToD tariff as laid out in the Chapter on 'Tariff Schedule' of this Tariff Order.

The Commission notes that the ToD compatible meters need to be provided for Puducherry and Karaikal regions also. The Petitioner is directed to complete the work of installing ToD compatible smart meters for all HT/EHT consumers along with necessary modifications in software within 3 months of issuance of this Order and report the compliance to the Commission. The Petitioner is also directed to widely publicize the implementation of ToD tariff to the HT/EHT consumers so that they can immediately start availing the benefits of ToD tariff mechanism.

Petitioner's Response in Present Tariff Petition

It is submitted that the Department is carrying out necessary modification in software and the work is expected to be completed by the end of March 2018.

Commission's Response

The action taken is noted. The Petitioner is directed to complete the work of installing ToD compatible smart meters for all HT/EHT consumers along with necessary modifications in software within 3 months of issuance of this Order and report the compliance to the Commission. The Petitioner is also directed to widely publicize the implementation of ToD tariff to the HT/EHT consumers so that they can immediately start availing the benefits of ToD tariff mechanism.

10.1.13. Open Access

Originally Issued in Tariff Order dated 12th June 2012

Commission's Latest Directive in Tariff Order for FY 2017-18

The Commission observes that while the permission for the open access has been accorded, the Petitioner is yet to comply with the directive of setting up of the STU and SLDC (nodal agency). The Petitioner is directed to submit the action plan for 100% compliance of this directive within 1 month of issuance of this Order. The

Commission also directs the Petitioner to provide actual voltage wise losses and voltage wise assets for the FY 2016-17 along with the next filing of the Tariff Petition.
Petitioner's Response in Present Tariff Petition *The subject matter of setting up of the STU and SLDC (nodal agency) is being placed before the Reforms committee constituted under the chairmanship of Secretary (Power) and the recommendations of the committee will be submitted to the Government for their approval. The decision of the Government will be intimated soon after its receipts from the Government.*
Commission's Response *The Commission has noted the submission of the Petitioner. The Petitioner is directed to submit a status report within 2 months of issuance of this Order and submit monthly progress updates for the review of the Commission.*

10.1.14. Category wise Connected Load

Originally Issued in Tariff Order of FY 2017-18
Commission's Latest Directive in Tariff Order for FY 2017-18 *The Commission has observed that the information pertaining to connected load of all the consumer categories is not made available by the Petitioner. The Commission directs the Petitioner to maintain and submit the information of connected load for all the categories in all future filings of the Tariff Petitions before the Commission.*
Petitioner's Response in Present Tariff Petition *The EDP submits that the consumer indexing activities of all consumers in the urban areas wherein enumeration of connected load, is included in the upgrading/ implementing the new software under Part-A (IT) of R-APDRP scheme. Connected load enumeration would be taken up by this department while upgrading/ implementing the new software under Part-A (IT) of R-APDRP scheme. The EDP therefore requests that the department may be permitted to provide connected load details for all categories from the FY 2019-20.*
Commission's Response *The Commission has noted the submission of the Petitioner. The Petitioner is directed to maintain and submit the data for connected load for all categories in all future filing of tariff petition.*

10.2. New Directives issued in this Order

10.2.1. Capital Expenditure and Capitalisation

It is noticed that the Petitioner for FY 2017-18 and FY 2018-19 has proposed a capitalization of only Rs 64.49 Cr and Rs 54.31 Cr against the approved capitalisation of Rs 156.14 Cr and Rs 143.86 Cr respectively, in the MYT Order. Lower capital expenditure has direct impact on the reliability and quality of supply to consumers. Therefore, the Petitioner is directed to improve its efforts towards capital expenditure and further take steps towards strengthening the distribution network. The Petitioner is directed to submit quarterly status report on capital expenditure and capitalization from FY 2018-19 onwards.

10.2.2. Determination of Category wise/ Voltage wise Cost of supply

The Petitioner is hereby directed to submit a proposal for category wise cost of supply along with the Tariff Petition for the next year. The Petitioner in this regard is directed to start collecting category wise and voltage wise data on losses, connected load, asset allocation etc. for prudent determination of the cost of supply.

10.2.3. Replacement of defective meters

The Petitioner is directed to ensure that all the defective meters in the State are replaced at the earliest. Further, the Petitioner should ensure installation of electronic meters for all its consumers. The Petitioner in this regard is directed to submit a status report of the same within 3 months of issue of this Order.

10.2.4. Compliance towards Renewable Purchase Obligation (RPO)

The Petitioner has a pending RPO backlog of 164.75 MU till FY 2016-17. In its submission, the Petitioner has assured of clearing the cumulative backlog till FY 2016-17 by the end of FY 2017-18 along with the standalone target for FY 2017-18. Further, the Commission had also imposed penalty of Rs 13.53 Cr on the Petitioner in the previous Order for non-compliance of RPO targets upto FY 2015-16, which the Petitioner has failed to deposit. The Petitioner in this regard is directed to submit a compliance statement of the same within 1 month of issue of this Order.

10.3. Directives dropped in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it has been observed that some of the directives issued in previous Tariff Orders are no longer required.

The Commission is of the view that since these directions have been complied with satisfactorily, these directions are no longer required in the present context and are required to be dropped or replaced with new directions. No further compliance/status is required to be submitted by the Petitioner for the following directives:

10.3.1. Pilferage of Energy

Originally Issued in Tariff Order dated 5th February 2010
Commission's Latest Directive in Tariff Order for FY 2017-18 *The Commission directs that theft of energy should be identified and action should be taken against the persons indulging in theft of energy. The concerned official(s) should ensure that the inspection of services is carried out regularly and quarterly status reports should be submitted before the Commission in a timely manner. Action taken report should be submitted to the Commission, on the identified misuse of the supply of electricity.*
Petitioner's Response in Present Tariff Petition *It is submitted that quarterly reports regarding pilferage of energy are being submitted to the Hon'ble Commission regularly.*
Commission's Response *The Petitioner has complied with the directive. The Commission has decided to drop this directive with the advisory that the Petitioner should continue to submit the Action Report on quarterly basis on the identified misuse of the supply of electricity*

10.3.2. Enforcement Cell

Originally Issued in Tariff Order dated 12th June 2012
Commission's Latest Directive in Tariff Order for FY 2017-18 *Action taken by the Petitioner is noted. The Petitioner should continue regular inspection and also continue submission of quarterly report to the Commission regarding the same.*
Petitioner's Response in Present Tariff Petition *It is submitted that quarterly reports in this regard are being submitted to the Hon'ble Commission regularly.*

Commission's Response

Since the Petitioner has complied with the directive the Commission has decided to drop this directive in this Order. The Petitioner however should continue regular inspection and submit quarterly reports to the Commission.

10.3.3. Technology upgradation

Originally Issued in Tariff Order dated 10th April 2015

Commission's Latest Directive in Tariff Order for FY 2017-18

The Commission observes that while the Petitioner is undertaking works in this regard, no specific timeline has been mentioned by the Petitioner for the full compliance of this directive. The Commission now directs the Petitioner to submit a detailed action plan for ensuring 100% compliance of this directive within 1 month of issuance of this Order.

Petitioner's Response in Present Tariff Petition

All the mechanical relays in the Marapalam, Kurumbapet and Kalapet 110/22 KV Sub-stations have been replaced by new Numerical relays under the R-APDRP scheme. The oil RMUs have been replaced with 11 KV SF6 SCADA RMUs in the areas covered under R-APDRP scheme.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner. The Commission decides to drop this directive and directs the Petitioner to continue its efforts towards technology upgradation and improving the quality and reliability of supply to all its consumers.

10.3.4. Unbundling & Corporatization

Originally Issued in Tariff Order dated 10th April 2015

Commission's Latest Directive in Tariff Order for FY 2017-18

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 2 months of issuance of this Order and submit monthly progress updates for the review of the Commission.

Petitioner's Response in Present Tariff Petition

Unbundling and Corporatization is being placed before the Reforms Steering Committee constituted under the chairmanship of Secretary (Power) and the recommendations of the committee will be submitted to the Government for their approval. On receipt of the decision of the Government, the same will be submitted to the Hon'ble Commission.

Commission's Response

The Commission has noted the submission of the Petitioner. As the decision of Unbundling and Corporatisation is being reviewed by the Reform Steering Committee, the Commission drops this directive.

Annexures

Annexure 1: List of Stakeholders

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

Table 136: List of Stakeholders

S.No.	Name of Stakeholder
1	Muruganandham
2	M. Nandhakumar
3	Vaibala
4	Brabakar
5	Sundar Raj
6	G. Vazhumuni
7	RM. Bairavan
8	S. Desikan
9	S. Lenin Durai
10	B. Vijayan Vengatesan
11	Chakravarthy
12	Lenin
13	Narayanasamy
14	P. Ragupathy
15	M. Manimaran
16	K. Kurunathan
17	R. Ramalingam
18	G. Karthikeyan
19	K. Kaliyamurugan
20	R. Rajasekar
21	P. Gopal
22	Asoka Subramanian
23	R. Govindaraj
24	M. Narayanasamy
25	K.K. Sivalingam
26	P. Baskar
27	A. Sekar
28	Shanmugam

S.No.	Name of Stakeholder
29	Confederation of Indian Industries (CII) Puducherry State Council
30	Open Access Users Association (OAUA)
31	Snam Alloys Pvt. Limited
32	Karaikal Industries Forum
33	Chemfab Alkalis Limited
34	Chambre De Commerce
35	Hotels Association of Pondicherry
36	Human Rights and Consumer Protection Society
37	Chemplast Sanmar Limited