



**ARUNACHAL PRADESH STATE ELECTRICITY REGULATORY  
COMMISSION**

**Determination of Aggregate Revenue Requirement  
for FY 2018-19**

**&**

**Order on**

**Distribution Tariff (Retail Supply) for FY 2018-19,**

**True-up for FY 2016-17,**

**Review for FY 2017-18**

**For**

**Department of Power,**

**Government of Arunachal Pradesh**

**Issued on 31-05-2018**

**Arunachal Pradesh State Electricity Regulatory Commission**

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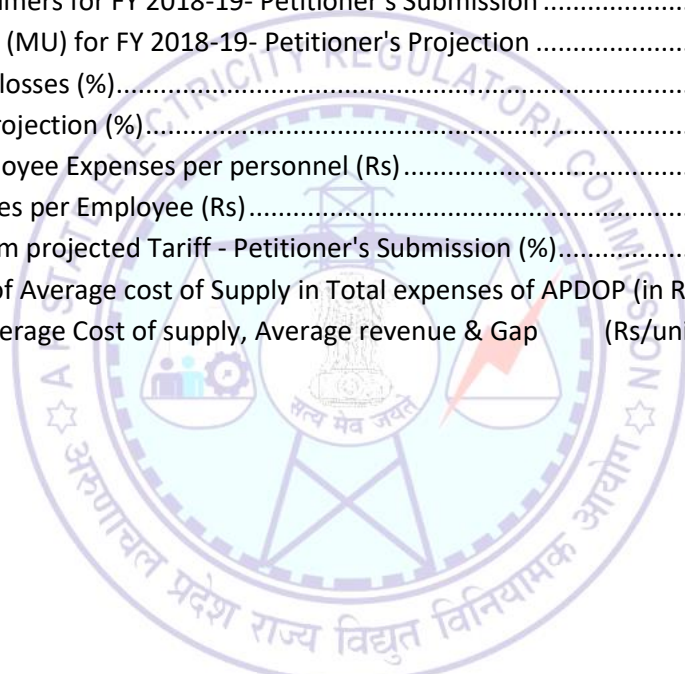
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### List of Abbreviations

Abbreviation	Explanation
APSERC	Arunachal Pradesh State Electricity Regulatory Commission
ARR	Aggregate Revenue Requirement
APDOP	Arunachal Pradesh Deptt. of Power
AT&C	Aggregate Technical & Commercial
AGTPP	Agartala Gas Thermal Power Plant
AGBPP	Assam Gas Based Power Project
BPL	Below poverty line
CGS	Central Generating Stations
DHPD	Dept. of Hydro Power Development
DG	Diesel Generator
FY	Financial Year
EA	Electricity Act, 2003
GOI	Government of India
HEP	Hydro Electric Project
HT	High Tension
KJP	Kutir Jyoti Program
kV	Kilo Volt
LT	Low Tension
MU	Million Unit
MOU	Memorandum of Understanding
MW	Mega Watt
NTPC	National Thermal Power Corporation
NTP	National Tariff Policy
NEEPCO	North Eastern Electric Power Corporation Ltd.
NERLDC	North Eastern Regional Load Despatch Centre
NERPC	North Eastern Regional Power Committee
O&M	Operation & Maintenance
OTPC	ONGC Tripura Power Company
PGCIL	Power Grid Corporation of India Limited
RHEP	Ranganadi Hydro Electric Project
REA	Regional Energy accounting
SHP	Small Hydro Power
SAC	State Advisory Committee
TP	Tariff petition
T&D	Transmission & Distribution
UI	Unscheduled Interchange

Before

**The Arunachal Pradesh State Electricity Regulatory Commission (APSERC)**

**Itanagar, Arunachal Pradesh**

**Petition No. TP 01 of 2018**

**In the matter of:**

***Determination of Aggregate Revenue Requirement and Retail Supply Tariff for sale of electricity by Arunachal Pradesh Department of Power to the consumers in the State of Arunachal Pradesh for the FY 2018-19***

AND

***Department of Power, Govt. of Arunachal Pradesh -----Petitioner***

**And in the matter of Suo Moto:**

***True-up of ARR for FY 2016-17,  
Review of ARR for FY 2017-18***

In respect of Department of Power, Govt. of Arunachal Pradesh

***Present:***

**RP Singh, Chairperson**

**ORDER**

(Passed on 31-05-2018)

The Commission in exercise of the powers vested in it under section 62(1)(d) read with Section 62(3) and Section 64 (3)(a) of the Electricity Act, 2003 and APSERC (Terms and Conditions for Determination of Tariff) Regulations, 2011 and other enabling provisions in this regard, issues this order, determining the ARR and the Retail Tariff for the Financial Year 2018-19 for supply of electricity by the Department of Power, Arunachal Pradesh (APDOP) to the Consumers of Electricity in the state of Arunachal

Pradesh. The Regulations state that the Distribution Licensee shall file the tariff Petition for a FY, complete in all respects, along with requisite fee as prescribed in the APSERC (Commission's Fee) Regulations, 2011 and amendments thereof on or before 30th November of the preceding year. Hence the tariff petition for the FY 2018-19 should have been filed by the Licensee on or before 30th November 2017.

However, APDOP filed the petition for FY 2018-19 before the Commission on 27-02-2018. After verification, it was found that the Petition lacked some critical information. After several interactions with the petitioner wherein the Commission sought additional information. The Commission finally admitted the petition on 30/03/2018.

This order consists of nine chapters that includes detailed analysis of the ARR and approved Retail Supply Tariff Rates for the FY 2018-19. The Commission directs the licensee to publish the order in two leading newspapers, one in Hindi and the other in English, having wide circulation in the State within 7 days of the issue of this Tariff Order. The publication shall include a general description of the tariff and its effect on the various classes of consumers. Further, the Commission directs the Licensee to take all necessary steps for implementation of this order so that the energy bills are prepared accordingly, strictly in terms of the approved tariff. The directives contained in the Chapter-7 should be strictly adhered to and compliance thereof, as desired by the Commission must be placed before it within the stipulated time by APDOP.

This order shall be effective from 01.06.2018 and shall remain in force until 31.03.2019.

**Date-**

**(R.P. SINGH)**

**Place- Itanagar**

**Chairperson, APSERC**



## 1. Introduction

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### 1.1 Arunachal Pradesh State Electricity Regulatory Commission

In exercise of the powers conferred by the Electricity Act, 2003, (hereinafter referred to as Act) the Government of Arunachal Pradesh constituted the Electricity Regulatory Commission for the State of Arunachal Pradesh to be known as “**Arunachal Pradesh State Electricity Regulatory Commission**” as notified on 07.05.2010 (hereinafter referred to as Commission). The Commission constituted is a one-member body designated to function as an autonomous authority responsible for regulation of the power sector in the State of Arunachal Pradesh. The powers and functions of the Commission are as prescribed in the Act. The office of the Commission is presently located at Itanagar, Arunachal Pradesh. The Commission started functioning with effect from 02.03.2011 with the objective and purpose for which the commission has been established.

### 1.2 Functions of the Commission

1.2.1. As per Section 86 of the Act, the Commission shall discharge the following functions, namely

- (a) Determine the Tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case may be, within the State, provided that where open access has been permitted to a category of consumers under Section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;
- (b) Regulate Electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;
- (c) Facilitate Intra-State transmission and wheeling of electricity;
- (d) Issue licenses to persons seeking to act as transmission licensees, distribution licensees and electricity traders with respect to their operations within the State;
- (e) Promote co-generation and generation of electricity from renewable sources of

energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

- (f) Adjudicate upon the disputes between the licensees and generating companies; and to refer any dispute for arbitration;
- (g) Levy fee for the purpose of this Act;
- (h) Specify State Grid Code consistent with the Grid Code specified under Clause of sub- section (1) of Section 79;
- (i) Specify or enforce standards with respect to quality, continuity and reliability of service by licensees;
- (j) Fix the trading margin in the Intra-State trading of electricity, if considered, necessary;
- (k) Discharge such other functions as may be assigned to it under the Act.

**1.2.2.** Further, the Commission also advise the State Government on all or any of the following matters, namely

- (a) Promotion of competition, efficiency and economy in activities of the electricity industry;
- (b) Promotion of investment in electricity industry;
- (c) Reorganization and restructuring of electricity industry in the State;
- (d) Matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by State Government.

**1.2.3.** The Arunachal Pradesh State Commission ensures transparency while exercising its powers and discharging its functions.

**1.2.4.** In discharge of its functions, the State Commission is guided by the National Tariff Policy (NTP) brought out by GOI in compliance to Section 3 of the Act. The objectives of NTP are to:

- (a) Ensure availability of electricity to consumers at reasonable and competitive rates;
- (b) Ensure financial viability of the sector and attract investments;
- (c) Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimize perceptions of regulatory risks;
- (d) Promote competition, efficiency in operation and improvement in quality of supply.

**1.2.5.**The Commission has so far notified the following Regulations to facilitate its functioning.

- (a) State Advisory Committee (SAC) Notification- 2011 and amendments thereof
- (b) Conduct of Business Regulations- 2011
- (c) Redressal of Grievances and Electricity Ombudsman Regulations- 2011 and amendments thereof
- (d) Fee Regulations-2011 and amendments thereof
- (e) Grant of Intra State Trading License Regulations-2011
- (f) Determination of ARR and retail tariff Regulations-2011
- (g) Terms and Conditions for Tariff Determination from Renewable Energy Sources Regulations- 2012 and amendments thereof
- (h) Renewable Power Purchase Obligations and Its Compliance Regulations- 2012 and amendments thereof
- (i) State Grid Code Regulations-2012 amendments thereof
- (j) Terms and Conditions of Intra-state Open Access Regulations-2012
- (k) Electricity Supply Code Regulation-2013 and its amendments thereof
- (l) Multi Year Tariff Regulation – 2013 and its amendments thereof
- (m) Service Conditions of Staff Regulations-2015
- (n) Standard of Performance Regulations- 2015
- (o) Rooftop Solar Grid Interactive Systems Based On Net Metering- 2016
- (p) Terms and Conditions for Tariff Determination from Renewable Energy Sources Regulation - 2012 (1st Amendment) 2017
- (q) Payment of Fees (1st Amendment) 2017

### **1.3 Arunachal Pradesh - Geographical Reality**

The total area of the State of Arunachal Pradesh is 83573 sq. kms. The State is having a population of around 13.82 lakh (2011 census). It is bounded by Assam in South, Bhutan in West, China in North, and Nagaland and Myanmar in East. Its Capital Itanagar is about 380 kms from Guwahati, the Capital of Assam.

### **1.4 Arunachal Pradesh Department of Power**

Arunachal Pradesh Department of Power (APDOP) is a deemed licensee in terms of Section 14 of the Electricity Act, 2003. It being an integrated utility is responsible for transmission and distribution of electricity in the State of Arunachal Pradesh and for trading of Electricity. It is responsible for power supply in the State of Arunachal Pradesh.

It has an allocation of Power from Central Generating Stations of 165.58 MW (Inc. 156 MW from firm share and 10 MW unallocated power), that translates to about 742.94 MU/ year based on % allocation of MW from each plant and a normal PLF of each plant which is wheeled through the PGCIL network of North Eastern Region out of which 48.60 MW, around 149 MU is free power from Ranganadi HEP as 12% quota is being allocated for home state as per the latest allocation order by NERPC dated 31.07.2016.

Further, APDOP also receives about 62.17 MU from DHPD @ Rs. 2.46/ Unit (as per Actual figs for FY 2016- 17).

It also owned some small diesel generating units and kept as standby with annual generation capacity of about 0.25 MUs / year and a total installed capacity of 20.45 MW, which is to be operated in exigencies as and when required as per Tariff Order for FY 2017-18. The Power generated by these DG sets is not included in the total energy balance of APDOP. However, the cost of Fuel and lubricants is added in the O&M expenses of ARR.

During the FY 2018-19, APDOP has projected to serve about 2, 35,638 consumers with an annual energy consumption of about 408.45 MU as per the Tariff petition. The consumers are broadly classified into seven categories as follows:

#### **I. Non Commercial Consumers (Domestic)**

- II. Commercial Consumers (Non-Industrial)
- III. Industrial Consumers (both HT & LT)
- IV. Public Lighting and Water Supply Consumers
- V. Agricultural Consumers
- VI. Bulk Mixed Consumers
- VII. Temporary Consumers

### **1.5 ARR and Tariff Petition for FY 2018-19: Filing**

As per the Regulation 17.1 of APERC (Terms and Conditions for Determination of Tariff and Formats for Tariff Filing) Regulations, 2011, each Generating Company and Distribution Licensee shall file the Tariff petition on or before 30th November of current year for fixing the Tariff for the next financial year. However, APDOP filed the tariff Petition for FY 2018-19 on 27-02-2018 which should have been filed on or before 30-11-2017 as per the above said Regulations. In the petition, APDOP has estimated an ARR of Rs.689.83 crores and worked out a Revenue gap of Rs. 507.91 crores.

### **1.6 Admission of Petition and Hearing Process**

The Commission observed that the ARR filed by the petitioner was incomplete and lacking critical and vital information as specified in Commission's (Terms and Conditions for Determination of Tariff) Regulations, 2011 and Multi Year Tariff Regulation- 2013. Additional information and details related to the Tariff petition was sought vide Letter No. APERC/RA-9/II/2018-19/1157-59 dated 23<sup>rd</sup> March, 2018 from DOP. Pending receipt of additional information, the Tariff Petition was finally admitted on 30-03-2018 and marked as case No. TP 1 of 2018 to avoid further delay in processing of ARR.

On admitting the ARR and Tariff Petition of APDOP for FY 2018-19, the Commission directed APDOP to publish the summary of its Petition and proposed tariff in local newspapers in abridged form and manner as approved in accordance with section 64(2) of the Electricity Act, 2003 to invite comments/ objections from various stakeholders.

The copies of the Petition and other related documents were made available to Consumers and other interested parties at a nominal price of Rs 250/ copy in the office of the Chief

Engineer (Power), Western Electrical Zone, Department of Power, Vidyut Bhawan, Itanagar-791111. A copy of the Petition was made available on the website of APDOP ([www.arunachalpower.org.in](http://www.arunachalpower.org.in)) and also on the website of the Commission ([www.apserc.nic.in](http://www.apserc.nic.in)) in downloadable format.

A Public Notice was also issued by APDOP inviting objections/ suggestions from various stakeholders on the petition on or before 10-04-2018 and subsequent to that the date of filing replies by APDOP was fixed on or before 07.05.2018 by the Commission.

The Copy of the above Public Notice is enclosed in Annexure I of this Order.

**Public Response to the Tariff Petition:**

On admitting the ARR and Tariff Petition of DoP, AP for FY 2018-19, the Commission directed the DoP, AP to make available, the copies of Petition to general public, post the Petition on their website and also invite comments/objections from various stakeholders by publishing the petition in abridged form in local newspapers.

Through the public notice, the stakeholders/public were invited to furnish their objections and suggestions on the petition on or before 07-05-2018.

The Commission received comments/ suggestions from M/S Salasar Industries Pvt. Ltd. Vide Petition No. SSI/Power/2018-19/I dated 1<sup>st</sup> May, 2018 and also from SMS Industries via e-mail dated 10<sup>th</sup> May, 2018.

In order to ensure transparency in the process of determination of Tariff and ARR as envisaged in Electricity Act 2003, hearing was conducted at the Commission's office in Itanagar for the Group of Industries and the Deptt. of Power on 29-05-2018. All relevant concerns/issues were addressed by the parties and the Commission took into account of the same.

**Proceedings of the Hearing**

The points raised by the Group of Industries are enumerated below.

**1. The Security Deposit (SD) needs to be reduced from 2 months to 1 month average**

**Billing.**

- 2. The SD amounting to more than 1 Lakh, the consumers shall be allowed to deposit in the form of Fixed Deposit (FD) from schedule banks of RBI. This will have major impact as the DOP need not to pay interest on this form of SD.**

M/S Salasar Industries and SMS Industries were Petitioners and from Department of Power Sri. Gumdo Doji, CE, WEZ and Sri. Hage Mima, EE, WEZ were Respondents. However, both the Petitioners didn't turn up and the Commission on their behalf heard from the Respondent. Further, all the points as raised by the Commission has also heard.

**Reply to Issue No. 1:**

The respondent submitted that it is due to the consumers who are in the habit of not clearing monthly electrical bills for months. In such case, the bills can be adjusted from the two months average billing. Nevertheless, Department of Power has agreed to reduce average billing from two months to one month as petitioned for in the interest of all stakeholders.

**Reply to Issue No. 2:**

The respondent with regard to Fixed deposit submitted that if Security Deposit is made in Fixed Deposit form it may be more beneficial to the Department of Power & all other stakeholders. Adding further, Mr.Hage Mima, EE (E) expressed the bottleneck that since Department of Power being a govt. department, expecting it to work under corporate set up as far as accountability on interest is concerned may be too early at this stage. This is one reason why Department of Power often fails to keep track of the regulatory requirements as outlined in supply code. He requested the Hon'ble Commission, instead to bring an amendment so that interest-bearing part is removed from supply code as was in vogue in the past years.

With regard to the additional information sought by the Commission, DOP admitted that due to lack of proper- Infrastructure and non- availability of Data they are not able to furnish the details in totality as required by the Commission. However, the respondent assured the Commission to provide all the necessary details at the earliest.

Taking cognizance of the matter and the subsequent submission by the respondent, the Commission directed Department of Power to continuously maintain the data needed. Further, the Commission will review the Status of actual Data compilation required to submit along with Tariff Petition and will proceed the matter in subsequent Hearings.

## 1.7 Layout of the Order

This Order is organized into nine Chapters:

- (a) **Chapter 1** provides a brief about APSERC, APDOP, some of the details about the tariff setting process, the admission process of petition and about the Hearing.
- (b) **Chapter 2** provides details of the Status on Compliance of Directives and Advisories by APDOP which were issued by the Commission in its last Tariff order for FY 2017-18.
- (c) **Chapter 3** provides details about the Power Supply position in Arunachal Pradesh and Summary of the Petition submitted by APDOP for determination of ARR and Retail Supply Tariff for FY 2018-19.
- (d) **Chapter 4** covers the True up for FY 2016-17 and Review for FY 2017-18.
- (e) **Chapter 5** provides analysis of the petition for determination of ARR and Retail Supply Tariff for FY 2018-19 and Commission's Approval on the same.
- (f) **Chapter 6** provides details about the Renewable Power Purchase Obligation of various Obligated Entities.
- (g) **Chapter 7** describes about the Wheeling Charges for APDOP for FY 2018-19.
- (h) **Chapter 8** list out various Directives and Advisories issued by the Commission to APDOP for FY 2018-19.
- (i) **Chapter 9** provides details about the Tariff Philosophy, Design and Approved Tariff Structure for FY 2018-19 by the Commission

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## 2. Compliance of Directives

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### 2.1.Introduction

As per Regulation 17.3 of APSERC (Terms and Conditions for Determination of Tariff and Formats for Tariff Filing) Regulations, 2011 the Generating Company and Licensee shall submit a statement on compliance of the directives issued by the Commission in its last tariff order.

But it is found that not only the Licensee i.e. APDOP didn't submit any Statement on Compliance of the Directives issued by the Commission in its last Tariff Order but also gave petty reasons for not complying the Directives issued by the Commission.

For eg. On page (i) of the TP filled by APDOP for FY 2018-19 the petitioner states that-

#### Quote

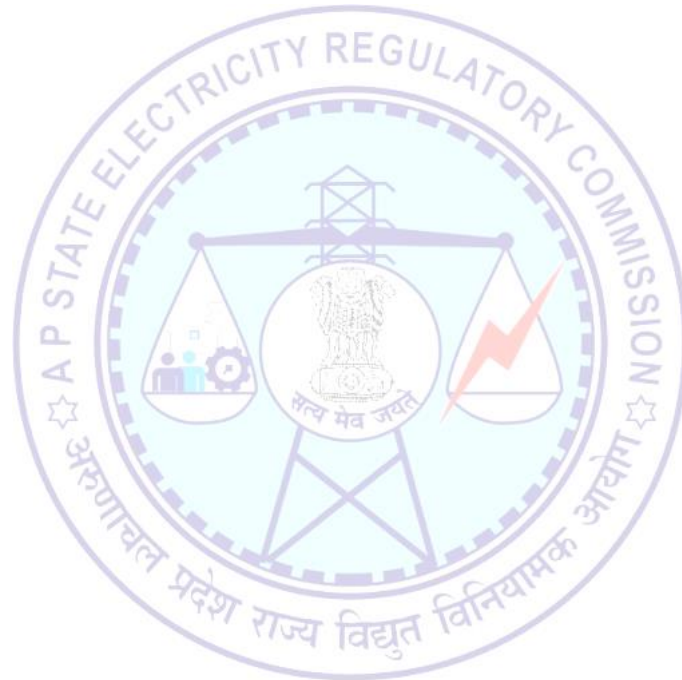
"4. The petitioner though has to file petition under Multi Year Tariff Format, but because of non-availability of sufficient data, the petitioner is filing for single year tariff.

5. The petitioner, being government department, is unable to function like incorporated company in the matter of profit making business plan, audits, accounts etc. Hence, data/information as required by MYT regulation is not available, as a result, petition for single year i.e. for FY 2018-19 is hereby filed for necessary action of Hon'ble Commission as deemed fit. "

#### Unquote.

How come the Petitioner can make an excuse of being a Govt. Deptt. for not functioning efficiently and productively and for not maintaining the sufficient data which is not only a duty of the licensee but also a statutory requirement as per the Electricity Act, 2003. This isn't just a matter of casual negligence by the Licensee but also a breach of Laws and Regulations laid down under EA, 2003. Despite regular notifications and directions by the Commission APDOP hasn't been able to show any progress on Directives and Advisories issued by the Commission time and again.

The Commission once again directs the Licensee to submit the Compliance report on all the Directives and Advisories issued by the Commission in its Tariff Order and also to comply strictly with the Regulations laid down under EA, 2003 and issued by APERC from time to time for development of Power Sector of the State.



## 2.2.Commission's Report on Compliance of Directives

**Table 1 Report on Compliance of Directives by APDOP- Commission's Analysis**

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.1	<p><b>Step towards digitization</b></p> <p>APDOP was advised to adopt web based system for online payment of electricity bills, which is a welcome step towards digitization. APDOP was also advised to introduce e-payment mode through various Apps, SMS phone alerts on billing and payment of electricity bills etc.</p>	NIL	<p>Web based online payment of electricity bills is under implementation under IPDS. On line Payment system shall be introduced in major towns of Arunachal Pradesh as soon as IPDS scheme is completed</p>	<p>This directive was given in Commission's Tariff Order for FY 2017-18 that has not been complied by the APDOP. This process would have definitely benefitted the department and the consumers, and would save human efforts and resources.</p>

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.2	<p><b>Prepaid Metering</b></p> <p>The Commission directed APDOP to spearhead the installation of prepaid metering in the State especially for consumers whose billing recovery is poor.</p>	NIL	<p>Many of the consumers have been provided with prepaid meters in Naharlagun and Itanagar of Capital complex.</p> <p>Remaining consumers of entire Arunachal Pradesh shall be taken up phase wise manner.</p>	<p>This directive was given in Commission's Tariff Order for FY 2017-18, which has not been complied by the APDOP. This step could have ensured better revenue realization.</p>
7.3	<p><b>Maintenance of accounts, records, and conducting audit.</b></p> <p>It was directed that APDOP shall build up the fixed asset registers separately for Diesel Generation, Transmission and Distribution. Existing assets as on 31.3.2013 and new assets being added with new investments are to be entered in this register with quantities and costs.</p>	NIL	<p>APDOP maintains accounts and records and is audited by Accountant General as per CPWD manuals. APDOP has so far no staffing set up expert in maintaining records and accounts as per formats provided in the MYT regulations.</p>	<p>APDOP informed in its letter dated 20.03.2013 that the fixed assets register is not available. A separate register shall be maintained by the APDOP for Diesel Generators, Transmission and the Distribution Assets. Format of the fixed asset register is already given by the Commission</p>

APSERC order on ARR & Tariff Petition of APDOP for FY 2018-19

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.4	<p><b>Interest on Working Capital</b></p> <p>DOP was directed to include Interest on Working Capital in ARR for 2018-19 petition</p>	NIL	<p>APDOP is executing department of Government of Arunachal Pradesh, executes the projects funded by the government, and maintains it on government fund. Even if government fund or grant is not received, APDOP cannot resort to borrowing of money from banks/financial institutions independently.</p>	<p>Commission feels that the concept of notional interest can be thought of by the DOP. The underlying logic is that if no grant or fund is received from the State Government, fund has to be arranged by the Department by resorting to borrowing from banks/financial institutions for which interest had to be paid. Payment of interest would have been then met out of income by way of tariff by the DOP.</p>

APSERC order on ARR & Tariff Petition of APDOP for FY 2018-19

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.5	<p><b>Interest on Loan</b></p> <p>DOP was directed to include Interest on Working Capital in ARR for 2018-19 petition</p>	NIL	No project under APDOP is implemented on loan since last many years, so, interest on loan does not arise.	The Commission observes that in case APDOP has to undertake any augmentation/project work & no grant or fund is received from the State Government; fund has to be arranged by the Department by resorting to borrowing from banks/financial institutions for which interest had to be paid.
7.6	<p><b>Return on Equity</b></p> <p>DOP was directed to include Return on Equity in ARR for 2018-19 petition</p>	NIL	APDOP is not incorporated or registered as company or any similar body, hence it has no shareholders so no equities. Therefore ROE is Nil.	As per APSERC Regulation, ROE shall be built up in ARR and Tariff structure. The sale of power is a commercial activity hence pricing should also be on commercial basis which is the basic spirit of tariff policy endorsed by CERC. Same is being claimed by all DISCOMS and Govt. Power Departments.

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.7	<p><b>POC and other charges</b></p> <p>DoP was directed to provide PoC losses as well as other charges like PoC charges (PGCIL charges), NERLDC charges and Reactive charges etc. along with Petition</p>	NIL	POC and other charges are reflected in power purchase cost section at Table 2.1	NIL
7.8	<p><b>Energy Audit for Energy Accounting</b></p> <p>DOP was directed to carry a full-fledged energy auditing of the complete distribution network.</p>	NIL	Under IPDS, DDUGJY, and Comprehensive Schemes provisions of metering are included. After completion these schemes energy accounting and auditing shall be started.	The Commission observes a huge loss of Energy what APDOP purchases which is theoretically not justifiable at all. So, it is an ardent need for APDOP to conduct a full fledge energy auditing of the complete distribution network. If necessary outsourcing of Energy accounting may be carried out for one-time basis by Accredited Energy Auditing Agency.

Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.9	<b>Discrepancy in Energy drawl &amp; Projected Data</b>	NIL	No Update from DOP	APDOP is directed to apply the latest available data for an accurate load forecasting and future projection. APDOP may use better statistical tool for proper load forecasting.
7.10	<b>T&amp;D Losses &amp; Conducting Energy Audit</b>	NIL	No response from APDOP in this regard.	APDOP should conduct energy audit immediately and assess losses accurately in the distribution system. Energy audit shall help to identify high loss areas to take remedial measures.
7.11	<b>Sale of Power Outside the State</b>	NIL	Agreeing with Hon'ble commission, APDOP shall stop purchasing surplus power and sell it outside state through IEX.	The Commission is in the opinion that APDOP should avoid purchase of surplus power to sale outside the state at an average rate. This attracts loss to APDOP hence the Commission does not encourage such sale of power outside the state and directs APDOP not to involve in such a loss proposition



Clause No.	Directives	Compliance Status	APDOP's Remark	Commissions Observation
7.12	<b>Introduction of Slab based Tariff</b>	<b>NIL</b>	In absence of 100% metering assessment of feasibility of slab-based tariff could not be done by APDOP. Therefore, at this stage introduction of slab based tariff may create confusions at energy billing level than beneficial.	Slab based tariff would encourage the habit of energy conservation amongst consumers.
7.13	<b>Updation of Cost Data accounts</b> DOP was directed to update Cost Data Book in context to Arunachal Pradesh and subjected to ratification by Commission	<b>NIL</b>	No Update	<b>NIL</b>
7.14	<b>Determination of Connected Load of Consumers</b> DOP was directed to furnish connected load of consumers as per APSERC Electricity Supply Code regulations	<b>NIL</b>	No Update	<b>NIL</b>

### 3. Power Supply Position and Summary of the Petition

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#### 3.1 Power Supply Position

APDOP meets the energy demand of its Consumers by getting power from 3 different sources which are shown below:

- 1) **Power from CGS-** APDOP has a firm allocation of Power from CGS of 165.58 MW (including 156 MW from firm share and 10 MW unallocated power), that translates to about 742.94MU/ year based on % allocation of MW from each plant and a normal PLF of each plant, including free power from Ranganadi HEP, NEEPCO. It is getting free Power from RHEP to the tune of 149 MU. It also purchases power through open market to meet its requirement in the State particularly, during peak hours and lean hydro season and sells surplus power from allocated energy outside the State during the peak hydro season.  
From this FY 2018-19, APDOP will be getting power from newly constructed NEEPCO hydro power plant- Pare 110 MW that is having a design Energy of 506.42 MU.
- 2) **Power from DHPD-** It receives about 62.17 MU from DHPD @ Rs. 2.69/Unit (as per Tariff Order issued by Commission for FY 2017-18). This includes drawl of entire power generated by DHPD.
- 3) **Power from DG Sets-** It also has small diesel generating units of its own with annual generation capacity of about 0.57 MUs / annum to be operated in exigencies as and when required.
- 4) However, Per Capita Consumption of Power in Arunachal Pradesh is much lower than that of All India's average. As per the Actual figs submitted by APDOP the per capita consumption of electricity for FY 2016-17 comes out to be a meagre 233.03 kWh while the National Average fig for FY 2016-17 is 1075 kWh.
- 5) During FY 2018-19, APDOP has projected to serve around 2,35,638

consumers with an annual energy consumption of about 408.45 MU as per the Tariff petition for FY 2018-19.

- 6) However, as per North Eastern Regional Power Committee/Load Generation Balance Report of the north eastern region for the year 16-17 and Year 17-18 the State of Arunachal Pradesh has the following table on demand, availability and surplus (+)/deficit (-) energy data(MU);

S.No	Particulars	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Total
<b>Arunachal Pradesh</b>														
i)	Net Energy Requirement	67	71	68	68	73	73	73	68	68	68	59	74	830
ii)	Net Energy Availability Own Source	5	5	4	6	6	6	6	4	4	3	3	4	56
iii)	Net Energy Availability Central Sector	41	53	78	86	73	68	61	48	50	48	42	51	699
iv)	Surplus/Deficit(+/-)	-21	-13	14	24	6	1	-6	-16	-14	-17	-14	-19	-75

\*Source: NERPC

Further to the above, APDOP may also refer the below latest totals sales (MU) and no. of Consumer's as per data on DOP Website.

SL. No.	Particulars	FY 2017-18	FY 2016-17
1	No of Consumers	241784	222204
2	Total Sales in MU	457.71	376.22

\*Source: DOP Management Information system website

Keeping in view of the above, the Commission feels, APDOP may take reference/co-relate the latest data for future load forecasting/projection and Power Purchase etc.

### 3.2 Summary of the Petition

#### A. Aggregate Revenue Requirement

APDOP in its petition Table 4.1 has submitted the ARR and Revenue gap Projected for FY 2018-19, Estimated for FY 2017-18 and actual Figs for FY

2016-17 for meeting its expenses and the estimated revenue with the existing tariff. The ARR and revenue gap as submitted by the petitioner is shown in Table below.

**Table 2 ARR -Petitioner's Submission (Rs in Crs)**

S.L No.	Particulars	Previous Year 2016-17 (Actual)	Current Year 2017-18 (Estimated)	Ensuing Year 2018-19 (Projected)
1	Cost of Power Purchase	292.66	289.75	287.86
2	Fuel Cost	21.25	23.38	25.71
3	Employee costs	232.79	296.21	325.84
4	Repair & Maintenance expenses	20.00	32.07	43.935
5	Adm. & Gen. Expenses	4.5	5.4	6.48
6	Depreciation	0.00	0.00	0
7	Interest charges	0.00	0.00	0
8	Return on equity	0.00	0.00	0
9	Income Tax	0.00	0.00	0
10	<b>Total revenue requirement</b>	<b>571.2</b>	<b>646.81</b>	<b>689.82</b>
11	Non-tariff income	3.33	3.57	3.81
12	Revenue from existing tariff	140.74	147.78	155.03
13	Sale through Energy Exchange	12.21	14.95	18.29
14	Deviation export	3.95	4.35	4.78
15	<b>Total Income</b>	<b>160.23</b>	<b>170.65</b>	<b>181.91</b>
16	<b>Revenue gap (10-15)</b>	<b>410.97</b>	<b>476.16</b>	<b>507.91</b>

**B. Revenue Gap and Recovery**

**Table 3 Revenue Gap & Recovery-FY 2018-19 -Petitioner's Submission**

Sl. No.	Description of Items	Rs. (In Crores)
1	Aggregate Revenue Requirement	689.83
2	Total Income	181.91

Sl. No.	Description of Items	Rs. (In Crores)
3	Revenue gap (1-2)	507.91
4	<b>Expected Government Grant</b>	<b>507.91</b>
5	Net Revenue Gap (3-4)	0

The Petitioner in the Petition for FY 2018-19 of table 4.2 has shown that the revenue gap will be covered through Government Grant as shown in the Table above.

### 3.3 Tariff- Existing Vs Proposed

In its Petition, APDOP has submitted the proposed Tariff for the FY 2018-19 as same as the existing Tariff with no changes for any Category of the Consumers as detailed in Table below:

**Table 4 Proposed Tariff for FY 2018-19**

Sl no	Category of Consumers	Existing Tariff (Rs/ kWh)	Proposed Tariff (Rs/ kWh)
1	Non-Commercial (Domestic)	1 - Phase, 230 Volt	4.00
2		3 - Phase, 400 Volt	4.00
3		1 - Phase, 230 Volt KJP & BPL connections	2.65
4		3 - Phase, 11 KV	3.40
5		3 - Phase, 33 KV	3.25
6	Commercial (Non-Industrial)	1 - Phase, 230 Volt	5.00
7		3 - Phase, 400 Volt	5.00
8		3 - Phase, 11 KV	4.20
9		3 - Phase, 33 KV	4.00
10	Public Lighting & Water Supply	1 - Phase, 230 Volt	5.10
11		3 - Phase, 400 Volt	5.10
12		3 - Phase, 11 KV	4.20
13		3 - Phase, 33 KV	4.00
14	Agricultural	1 - Phase, 230 Volt	3.10
15		3 - Phase, 400 Volt	3.10
16		3 - Phase, 11 KV	2.75
17		3 - Phase, 33 KV	2.65
18	Industrial	1 - Phase, 230 Volt	4.30

Sl no	Category of Consumers	Existing Tariff (Rs/ kWh)	Proposed Tariff (Rs/ kWh)
19		3 - Phase, 400 Volt	4.30
20		3 - Phase, 11 KV	3.85
21		3 - Phase, 33 KV	3.50
22		3- Phase, 132 KV	3.35
23	Bulk Mixed	3 - Phase, 11 KV	3.75
24		3 - Phase, 33 KV	3.40
25		3- Phase, 132 KV	3.25
26	Temporary Consumers	6.50	6.50

### 3.4 Prayer of Petitioner

APDOP in its petition for FY 2018-19 has prayed to the Commission for:

1. To admit this Petition for approval of Retail Tariff for FY 2018-19 and determination of ARR for FY 2018-19.
2. To approve proposed retail tariff for FY 2018-19.
3. To approve proposed ARR for FY 2018-19.
4. The petitioner though has to file petition under Multi Year Tariff Format, but because of non-availability of sufficient data, the petitioner is filing for single year tariff.
5. The petitioner, being government department, is unable to function as incorporated company in the matter of profit making business plan, audits, accounts etc. Hence data/information as required by MYT regulation is not available, as a result, petition for single year i.e. for FY 2018-19 is hereby filed for necessary action of Hon'ble Commission as deemed fit.
6. To grant any other relief as the Hon'ble Commission may consider appropriate.
7. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
8. The petitioner craves leave of the Hon'ble Commission to allow further submissions, additions and alterations to this petition as may necessary from time to time.

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## 4. True Up, Review & Analysis of ARR & Tariff Petition

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### 4.1 Process of Review and Truing Up

- (1) The Commission shall undertake a review of the expenses and revenues approved by the Commission in the Tariff Order. While doing so, the Commission shall consider variations between approvals and revised estimates/ pre-actuals of sale of electricity, income and expenditure for the relevant year and permit necessary adjustments/ changes in case such variations are for adequate and justifiable reasons. Such an exercise shall be called '**Review**'.
- (2) (i) After audited accounts of a year are made available, the Commission shall undertake similar exercise as above with reference to the final actual figures as per the audited accounts. This exercise with reference to audited accounts shall be called '**Truing Up**'.
- (ii) The Truing Up for any year will ordinarily not be considered after more than one year of 'Review'.
- (3) The revenue gap of the ensuing year shall be adjusted because of review and truing up exercises.
- (4) While approving such expenses/ revenues to be adjusted in the future years as arising out of the Review and / or Truing up exercises, the Commission may allow the carrying costs as determined by the Commission of such expenses/revenues. Carrying costs shall be limited to the interest rate approved for working capital borrowings.
- (5) For any revision in approvals, the licensee would be required to satisfy the Commission that the revision is necessary due to conditions beyond its control.
- Analysis of the ARR & Tariff Petition for FY 2018-19 is undertaken by the Commission after the True up for FY 2016-17 and Review for FY 2017-18 as detailed below.

## 4.2 True-up for FY 2016-17

While the petitioner has not specifically requested for True up of FY 2016-17, the Commission on the basis of the data available with him that was submitted as "Actuals" for FY 2016-17 by the petitioner, has undertaken True up exercise of various parameters on Suo- Moto basis considering the Multi Year Tariff Regulations- 2013 notified by APSERC on 18th October 2013 that indicates the following in regard to True up:

### Quote

"From the first year of the Control Period and onwards, the Petition shall comprise of: Truing Up for FY 2012-13, if any, to be carried out under APSERC (Terms and Conditions of Tariff) Regulations, 2011 and onwards in accordance with these Regulations;"

### Unquote

Since, APDOP is currently operating, as a department within the Govt. of Arunachal Pradesh, the system of account keeping is on cash receipt and expense basis i.e. proforma accounts.

The objective of True up or Review of ARR is to reconcile the data which might reflect differently during True up / Review either due to data inaccuracies at the time of submission of the Petition or due to any reason outside the control of the Petitioner during the period under review. This analysis prepares the Commission & the Petitioner with an objective of course correction for further years.

The APDOP has not submitted the audited accounts for the FY 2016-17. Therefore, True up for FY 2016-17 cannot be done. However, APDOP has stated that though the accounts are not audited, the data furnished for the FY 2016-17 are "Actuals" and Provisional True up may be done with regard to these actual figs. Therefore, the Commission has done a Provisional True up for FY 2016-17 with reference to the actual figs submitted by APDOP and later on after getting Audited figs the Commission



will undertake the True up for FY 2016-17. The True up exercise done by the Commission for FY 2016-17 is discussed in the succeeding paragraphs.

### 4.3 Energy Sales

The actual Energy sales (370.8 MU) within the State is more than the approved Energy Sales 355.06 MU for FY 2016-17. However, since this is an Uncontrollable Factor as per Regulation 16 of APSERC, MYT Regulations- 2013, the Commission now approves energy sales for the FY 2016-17 at 370.8 MU as per the actuals furnished by APDOP as shown below in Table below:

**Table 5 Energy Sales approved by the Commission for FY 2016-17**

Sl. No	Description	Unit	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1.	Energy Sales within the State	MU	355.06 (Table 5.5)	370.8 (Table 2.2)	370.8

### 4.4 AT & C Losses

**Table 6 AT & C losses approved by the Commission for FY 2016-17**

Sl. No	Description	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1.	AT&C Losses	52% (Table 5.6)	57% (Table 2.4)	44%

In the above Table, the actual AT&C losses of 57% is more than the approved losses by the Commission for the FY 2016-17. It is observed that the Petitioner did not take adequate steps to reduce the AT&C losses by examining the health of each component of distribution system.

The higher AT&C losses is also, a non-productive waste of Power. The lower AT&C losses will save the exchequer of Govt. of Arunachal Pradesh and enable development of Energy Sector to be healthier which in turn will generate economic activities in the

State of Arunachal Pradesh.

Hence, the Commission now approves AT&C Loss level at 44% for the FY 2016-17 as against the actual loss level as this falls under the category of controllable Factor as per Clause 16 of APSERC MYT Regulations- 2013.

#### 4.5 Total Energy Requirement

**Table 7 Total Energy Requirement approved by the Commission for FY 2016-17**

Sl. No	Description	Unit	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1.	Total Energy Requirement	MU	691.76 (Table 5.6)	888.67 (Table 2.5)	693.34

The total Energy requirement accounting for AT&C losses, as approved by the Commission was 691.76 MU which is quite lower than actual energy requirement as submitted by APDOP at actual sales and AT&C loss level i.e. 888.67 MU only due to the exorbitant AT & C loss levels. More Energy requirement at the periphery of APDOP means more Power is required to be purchased and hence more Power purchase cost, which eventually led to the requirement of higher subsidy to be provided by the Government as inefficiencies in the distribution system, cannot be recovered through Consumer Tariff and are met through Govt. subsidy only. However, the Commission approves the Total Energy Requirement at 693.34 MU as per the approved AT & C loss level of 44%.

#### 4.6 Total Power Purchase

Although, this component is an Uncontrollable factor as per Regulation 16 of APSERC, MYT Regulations- 2013, the Commission does not approve the actual Figure of Total Power purchase at 888.10 MU as shown in Table below. This is due to the reason that despite not allowing UI as a source to purchase power, APDOP has purchased a hefty 82.99 MU from the same. This is breach of Directions of the Commission and a wrong and unfair practice that has been followed by APDOP for a long time despite

numerous directions by the Commission to not consider UI as a source of Power procurement. Hence taking strong measures this time, the Commission does not approve the Energy taken from UI and approves the Total Power purchase as 805.11 MU.

**Table 8 Total Quantum of Approved Power Purchase for FY 2016-17 (MU)**

Sl no	Description	unit	As per the Tariff Petition for FY 2016-17	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1	from CGS	MU	391.33	391.33	593.94	593.94
2	DHPD	MU	52.03	52.03	62.17	62.17
3	UI	MU	150.12	116.20	82.99	0
4	Free power	MU	131.95	131.95	149	149
	<b>Total</b>	<b>MU</b>	<b>726.38</b>	<b>691.51</b>	<b>888.10</b>	<b>805.11</b>

#### 4.7 Power Purchase Cost

The figures at Sl. 2 & 3 of Table 9 below reflect that more Quantum of power (MU) was purchased more than approved by the Commission and so was the total Power Purchase cost (Rs Crs). However, the Commission does not approve the Cost of power purchase as per the Actuals submitted by APDOP and lessen the cost of UI purchase from Total power purchase cost of Rs 292.66 Crs as shown in table below. As against the Actuals, the Commission approves the Cost of power purchase at Rs 275.05 Crs.

**Table 9 Total Cost of Power purchase Approved for FY 2016-17**

Sl. No	Description	Unit	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1.	Total Energy Requirement	MU	691.76 (Table 5.6)	888.10 (Table 2.5)	693.34
2.	Total Power Purchase	MU	559.56 (Table 5.8)	739.10 (Table 2.5)	805.11
3.	Cost of Power Purchase	Rs Crs	207.65 (Table 5.8)	292.6 (Table 2.6)	275.05

Whatever the Revenue Gap comes for FY 2016-17 after Truing Up, the cost of Rs 17.61 Crs of Energy taken from UI shall be borne by the Licensee himself and should not be provided through Govt. Grant to APDOP.

#### 4.8 Fuel Cost

APDOP has DG sets of different capacities owned by himself installed at different locations with total installed capacity of about 30 MW. These DG sets are kept as standby and used as and when required. The power generated from it is not included in the power purchase cost. The Expenditure on DG sets is included in the Fuel Cost. As per Clause 16 of APERC, MYT Regulations- 2013, Fuel Cost is a Controllable Expense.

**Table 10 Fuel Cost approved by the Commission for FY 2016-17**

Sl. No	Description	Unit	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (Trued Up)
1.	Fuel cost	Rs. Crs	0.79 (Table 5.24)	21.25 (Table 2.11)	0.79

From the above table it is observed that Rs 0.79 Crs was approved by the Commission in Tariff Order for FY 2016-17 for Fuel Cost but Rs 21.25 Crs was given as actuals by APDOP. However, the Commission approves Fuel Cost at Rs 0.79 Crs against the actual Fuel Cost of Rs 21.25 Crs.

#### 4.9 Total Revenue Requirement

The Total Revenue Requirement for the FY 2016-17 submitted by APDOP in Tariff petition for FY 2016-17, approved by the Commission in its Tariff Order for FY 2016-17, actuals furnished by the APDOP and now approved by the Commission are furnished in the Table below.

From the Table it can be observed that an amount of Rs 406.71 Crs was filed by APDOP in its Tariff Petition of FY 2016-17 but Rs 436.42 Crs was approved by the

Commission in the Tariff Order for 2016-17. The Actual Figure for FY 2016-17 as submitted by APDOP in Tariff Petition of FY 2018-19 is Rs 571.2 Crs. However, as seen from the calculations below the Approved Total Revenue Requirement comes out to be Rs 531.78 Crs by the Commission as against the actual Figure of Rs 533.13 Crs.

**Table 11 Total Revenue Requirement (Rs Crs)- Commission's Analysis**

Sl no	Description	As per the Tariff Petition for FY 2016-17	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (True Up)
1	Cost of power purchase	178.99	207.65	292.66	<b>275.05</b>
2	Employee cost	197.5	197.5	232.79	232.79
3	Repair & Maintenance cost	24.26	24.26	20.00	20
4	Administrative cost	1.1	1.1	4.5	4.5
5	Fuel cost	4.87	0.79	21.25	<b>0.79</b>
6	Depreciation	0	0	0	0
7	Interest on working capital	0	0	0	<b>0</b>
8	Interest & Finance charges	0	0	0	0
9	Return on Equity	0	0	0	0
10	Solar compliance	0	4.19	0	<b>0</b>
11	Annual license fee	0	0.18	0	<b>0</b>
12	Investment for training & safety of personnel	0	0.75	0	<b>0</b>
<b>13</b>	<b>Total Revenue requirement</b>	<b>406.71</b>	<b>436.428</b>	<b>571.2</b>	<b>533.13</b>

Since, the Total revenue requirement as approved by the Commission after True- up is less than the Actual Revenue requirement as submitted by the Petitioner, there is no need to revise the amount of Grant received by DOP for FY 2016-17 by the State Govt.

#### 4.10 Revenue GAP and Average Cost of Supply

As shown in Table below, True up for the FY 2016-17 indicates that the Revenue gap has been increased to ₹ 372.9 Crores, as against ₹ 276.51 Crores approved by the Hon'ble Commission in the Tariff Order for the FY 2016-17.

Also, the Average Cost of Supply has increased to Rs 14.27/unit as against Rs 10.82/unit approved by the Commission in its Tariff Order for the FY 2016-17.

**Table 12 Revenue GAP and Average Cost of Supply- Commissions' Analysis**

Sl. No	Description	Unit	As per the Tariff Petition for FY 2016-17	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (True Up)
1	Revenue from energy sale within the state	Rs Crs	141.06	141.06	140.74	140.74
2	Revenue from surplus sale of power	Rs Crs	14.65	14.65	12.21	12.21
3	Non- tariff Income	Rs Crs	3.33	3.33	3.33	3.33
4	Deviation Export	Rs. Crs	2.81	0	3.95	3.95
5	Total Income	Rs Crs	159.04	159.04	160.23	160.23
6	Total Revenue Requirement	Rs Crs	406.48	436.42	571.2	533.13
7	<b>Revenue Gap</b>	<b>Rs Crs</b>	<b>247.44</b>	<b>276.51</b>	<b>410.97</b>	<b>372.9</b>
8	Net Revenue Requirement	Rs Crs	403.15	433.09	567.87	529.18
9	Energy Sales	MU	400.06	400.06	370.8	370.8
10	<b>Average cost of supply</b>	<b>Rs/unit</b>	<b>10.08</b>	<b>10.82</b>	<b>15.31</b>	<b>14.27</b>

No other parameter of the ARR has been noticed to have impacted the ARR for FY 2016-17 and there is no ARR gap or surplus required to be carried forward to further years. As such, no impact is required to be passed on to the Consumers due to True Up by the Commission for the FY 2016-17. No amount of ARR is generated for adjustment as Regulatory Asset or surplus for FY 2016-17 or later years.

#### 4.11 Summary of True Up for FY 2016-17

Table 13 True Up of ARR for FY 2016-17

Sl. No	Description	Unit	Approved in the Tariff order for FY 2016-17	Actuals as per Petitioner's Submission	Now approved (True Up)
1.	Energy Sales within the State	MU	355.07	370.8	370.8
2.	AT & C Loss	%	44	53.64	52
3.	Total Energy Requirement	MU	695.22	888.67	808.9
4.	Total Power Purchase	MU	694.83	888.10	805.11
5.	Cost of Power Purchase	Rs Crs	188.91	292.66	275.05
6.	Fuel cost	Rs. Crs	1.26	21.25	0.79
7.	Total Revenue Requirement	Rs Crs	437.63	571.2	531.78
8.	Amount Realized from Tariff	Rs. Crs	132.65	140.74	140.74
9.	Revenue Gap	Rs Crs	281.01	410.97	391.04
10.	Average Cost of Supply	(Rs/kWH)	10.80	15.31	14.27

#### 4.12 Approach for Review of ARR for FY 2017-18

While, the Petitioner has not specifically requested for the Review of FY 2017-18 also, similar to no request from the Petitioner for the True up of FY 2016-17, the Commission on the basis of data submitted by the petitioner, has reviewed ARR for FY 2017-18 on Suo Moto, vis-a-vis determined earlier by the Commission in its ARR order dated 29 February 2016. The Review of ARR for FY 2017-18 has been carried out as per the provisions of Terms and Conditions of APSERC (Determination of Tariff and Formats for Tariff Filing) Regulations-2011, notified on 26th Dec. 2011, as indicated under Regulation 15 "Review and Truing- Up".

In view of the above, the Commission has reviewed the variations between Approved and Estimated data for sale of electricity, income and expenditure for FY 2017-18 and permitted necessary adjustments in cases where variations seemed to be for reasonable and justifiable reasons. The Estimated values for FY 2017-18 has been submitted by the Petitioner in the Petition for FY 2018-19 as shown below in Table.

**Table 14 Review of ARR for FY 2017-18**

Sl. No	Description	Unit	Approved in the Tariff Order for FY 2017-18	Estimated value as per the Petitioner	% Change from Approved
1	Energy Sales within the State	MU	378.08 (Table 38)	389.21 (Table 2.2)	2.94%
2	Total number of Consumers	Nos.	241361 (Table 16)	224418 (Table 2.2)	(-)7.01%
3	T&D Loss	%	44% (Table 21)	49.33% (Table 2.4)	12.11%
4	Total Energy Requirement	MUs	640.81 (Table 5.6)	873.22 (Table 2.5)	36.26%
5	Power Purchase cost	Rs Crs	196.63 (Table 39)	289.75 (Table 2.6)	47.35%
6	Total Revenue Requirement	Rs Crs	423.5 (Table 39)	646.8 (Table 2.11)	52.72%
7	Total Income	Rs Crs	157.71 (Table 39)	170.64 (Table 4.1)	8.19%

In the Review Process of ARR for FY 2017-18, some deviations have been noticed by the Commission. APDOP has to maintain a check on these deviations and put in efforts to get the auditing of the accounts urgently for proper Truing up before next Tariff Petition for ARR & Tariff determination for FY 2019-20.

\*\*\*\*\*



## 5. Analysis of ARR for FY 2018-19

### 5.1 Growth of Consumers

In its Tariff Petition for FY 2018-19, APDOP has projected to serve about 2,35,638 consumers with an annual energy consumption of 408.45 MU during FY 2018-19.

The consumers are classified into seven categories as shown below:

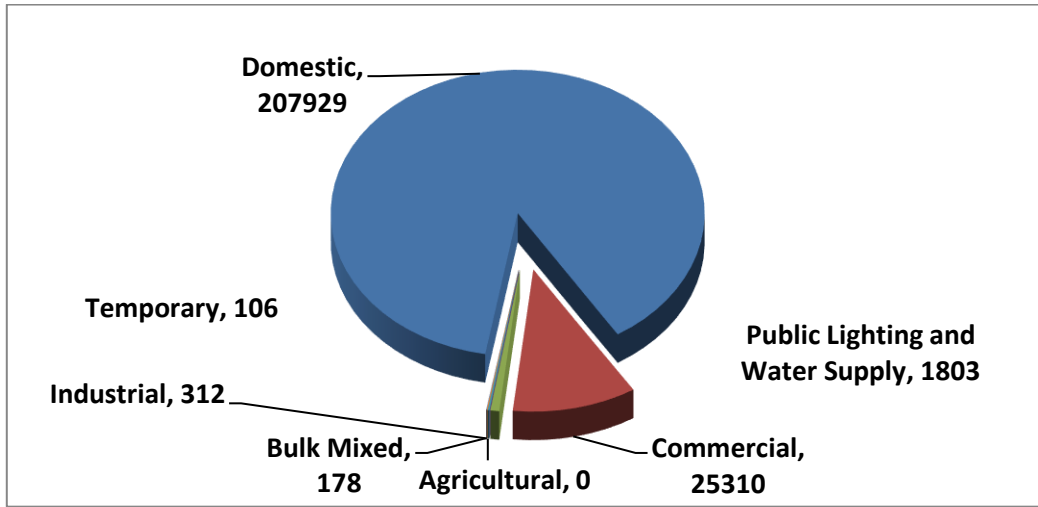
- i. Domestic
- ii. Commercial
- iii. Industrial
- iv. Public Lighting and water Supply
- v. Bulk Mixed
- vi. Temporary, and
- vii. Agriculture

The category wise consumers' growth as projected by the Petitioner for FY 2018-19 is depicted in the Table below. To analyze the trajectory of consumer base latest figures are compared with the actual figures of FY 2016-17 and estimated Figures for FY 2017-18.

**Table 15 No. of Consumers- Petitioner's Submission**

Sl. no	Category of consumers	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)
1	Domestic	188597	198027	207929
2	Commercial	22957	24105	25310
3	Public Lighting & Water Supply	1637	1718	1803
4	Agricultural	17	0	0
5	Industrial	283	297	312
6	Bulk Mixed	162	170	178
7	Temporary	96	101	106
	<b>Total</b>	<b>213749</b>	<b>224418</b>	<b>235638</b>

**Figure 1 No. of Consumers for FY 2018-19- Petitioner's Submission**



## 5.2 Category- wise Energy Sales

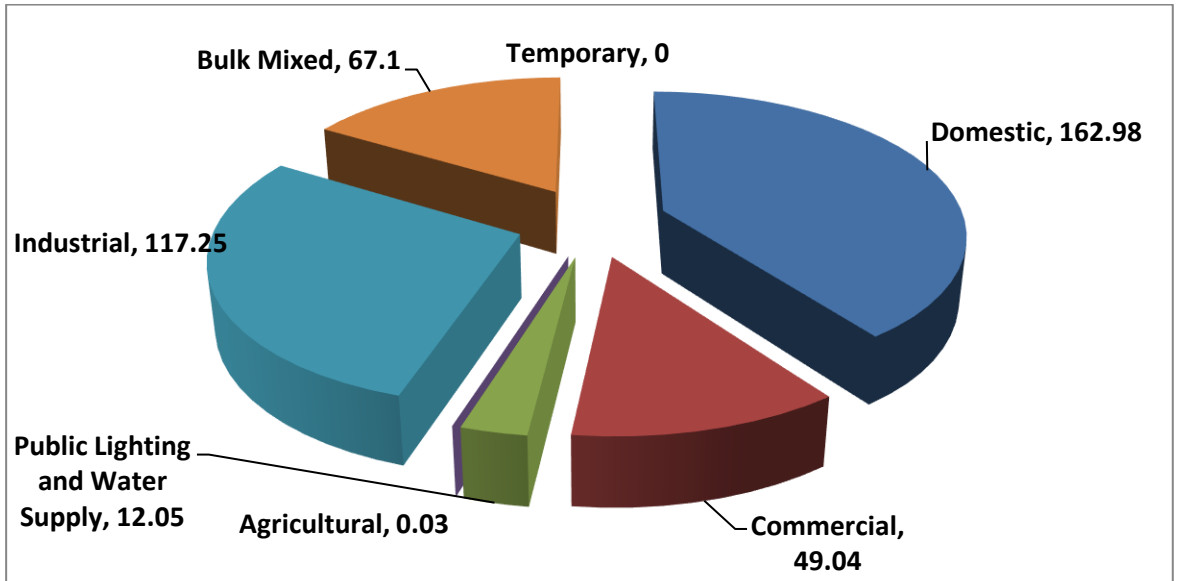
APDOP has provided actual sales for FY 2016-17, estimated for FY 2017- 18 and projected energy sales to various category of consumers for FY 2018-19 as shown below in Table:

**Table 16 Energy sales- Petitioner's Submission**

SL No	Category of Consumers	Previous Year 2016-17 (Actual)		Current Year 2017-18 (Estimated)		Ensuing Year 2018-19 (Projected)	
		No of Consumers	Energy Sale (MU)	No of Consumers	Energy Sale (MU)	No of Consumers	Energy Sale (MU)
<b>1</b>	<b>Non Commercial Consumers (Domestic)</b>						
LT							
a)	1-Phase, 230V	138765	106.76	145703	112.10	152988	117.71
b)	3-Phase, 400V	2192	18.25	2302	19.16	2417	20.12
HT							
c)	3-Phase, 11KV	49	3.43	51	3.60	54	3.78
d)	3-Phase, 33KV		0.13				
e)	KJP & BPL Connection	47591	19.38	49971	20.35	52470	21.37
<b>2</b>	<b>Commercial Consumers (Non-Industrial)</b>						
LT							

SL No	Category of Consumers	Previous Year 2016-17 (Actual)		Current Year 2017-18 (Estimated)		Ensuing Year 2018-19 (Projected)	
		No of Consumers	Energy Sale (MU)	No of Consumers	Energy Sale (MU)	No of Consumers	Energy Sale (MU)
a)	1-Phase, 230V	21206	21.85	22266	22.94	23379	24.09
b)	3-Phase, 400V	1606	16.76	1686	17.60	1770	18.48
HT							
c)	3-Phase, 11KV	130	5.51	137	5.79	144	6.08
d)	3-Phase, 33KV	15	0.35	16	0.37	17	0.39
<b>3 Public Lighting and Water Supply Consumers</b>							
LT							
a)	1-Phase, 230V	1426	4.51	1497	4.74	1572	4.98
b)	3-Phase, 400V	180	2.34	189	2.46	198	2.58
HT							
c)	3-Phase, 11KV	27	3.87	28	4.06	29	4.26
d)	3-Phase, 33KV	4	0.21	4	0.22	4	0.23
<b>4 Agricultural Consumers</b>							
LT							
a)	1-Phase, 230V	3	0.02	0	0.02	0	0.02
b)	3-Phase, 400V	14	0.01	0	0.01	0	0.01
<b>5 Industrial Consumers</b>							
LT							
a)	1-Phase, 230V	77	0.64	81	0.67	85	0.70
b)	3-Phase, 400V	167	3.71	175	3.90	184	4.10
HT							
c)	3-Phase, 11KV	22	2.6	23	2.73	24	2.87
d)	3-Phase, 33KV	14	21.46	15	22.53	16	23.66
e)	3-Phase, 132KV	3	77.93	3	81.83	3	85.92
<b>6 Bulk Mixed Consumers</b>							
	3-Phase, 11KV	141	19.2	148	20.16	155	21.17
	3-Phase, 33KV	20	6.87	21	7.21	22	7.57
	3-Phase, 132 KV	1	34.79	1	36.53	1	38.36
<b>7 Temporary Consumer</b>							
	LT/HT	96	0.22	101	0.23	106	0
<b>Grand Total</b>		<b>213749</b>	<b>370.80</b>	<b>224418</b>	<b>389.21</b>	<b>235638</b>	<b>408.45</b>

**Figure 2 Energy Sales (MU) for FY 2018-19- Petitioner's Projection**



**Commission's Analysis**

Reasonable projection of category-wise energy sales is very essential for determining the energy required to be purchased to meet the Energy demand and likely revenue by sale of electricity. In table below Energy Sales for some last years is compiled by the Commission.

**Table 17 Energy Sales (MU) - Commission's Analysis**

Sl No	Category of consumers	2015-16 (Actual)	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)
1	Domestic	138.59	147.95	155.21	162.98
2	Commercial	39	44.47	46.7	49.04
3	Public Lighting Water Supply	11.89	10.93	11.48	12.05
4	Agricultural	0.02	0.03	0.03	0.03
5	Industrial	97.03	106.34	111.66	117.25
6	Bulk Mixed	60.14	60.86	63.9	67.10
7	Temporary	0.02	0.22	0.23	0.00
	<b>Total</b>	<b>346.69</b>	<b>370.80</b>	<b>389.21</b>	<b>408.45</b>

Sales forecast using CAGR technique is a tried and tested method and is used extensively across other Indian states and formally accepted by the Regulators also. In the Table below CAGR is calculated using Actual values of FY 2014-15, FY 2015-16

and FY 2016-17 as submitted by the Petitioner.

**Table 18 CAGR & Approved Energy Sales (MU)**

Sl No	Category of Consumers	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	CAGR of 3 yrs (in%)	Approved for FY 2017-18	Approved for FY 2018-19 (As per CAGR)
<b>1</b>	<b>Domestic</b>						
a	LT	112.87	115.12	125.01	0.11	126.91	140.56
b	HT	0.8	1.67	3.56	3.45	1.84	4.03
c	KJP & BPL	20.63	21.8	19.38	-0.06	24.03	22.57
<b>2</b>	<b>Commercial</b>						
a	LT	30.78	34.51	38.61	0.25	38.05	47.73
b	HT	2.85	4.49	5.86	1.06	4.96	10.20
<b>3</b>	<b>Public Lighting and Water Supply</b>						
a	LT	7.02	7.29	6.85	-0.02	8.04	7.84
b	HT	4.16	4.6	4.08	-0.02	5.06	4.97
<b>4</b>	<b>Agricultural</b>						
a	LT	0	0.02	0.03		0.00	0.03
b	HT	0	0	0		0.00	0.00
<b>5</b>	<b>Industrial</b>						
a	LT	56.6	3.35	4.35	-0.92	3.69	4.80
b	3-Phase, 11KV	2.01	1.48		0.29	1.63	2.90
c	3-Phase, 33KV	9.32	16.74	21.46	1.30	18.46	24.00
d	3-Phase, 132KV	1	75.46	77.93	76.93	79.00	85.92
<b>6</b>	<b>Bulk Mixed</b>						
a	3-Phase, 11KV	59.97	18.22	19.2	-0.68	20.09	21.17

SI No	Category of Consumers	2014-15 (Actual)	2015-16 (Actual)	2016-17 (Actual)	CAGR of 3 yrs (in%)	Approved for FY 2017-18	Approved for FY 2018-19 (As per CAGR)
b	3-Phase, 33KV	2.74	5.36	6.87	1.51	5.91	8.00
c	3-Phase, 132KV	0.92	36.56	34.79	36.82	40.14	38.36
<b>7</b>	<b>Temporary</b>						
a	LT/HT	0.11	0.22	0.22	1.00	0.26	0.52
	<b>Total</b>	<b>311.78</b>	<b>346.89</b>	<b>368.2</b>		<b>378.08</b>	<b>423.61</b>

### Agricultural Consumers

For Agricultural consumers a discrepancy is observed in Energy sales as shown in the Table below. Although the number of consumers are shown as NIL, there is some Energy sales corresponding to it. The Commission directs APDOP to verify the same and provides further clarification to the Commission.

**Table 19 Energy Sales (MU) for Agricultural Consumer**

Consumer	FY 2017-18 (Estimated)		FY 2018-19 (Projected)	
	No. of Consumers	Energy Sale (MU)	No. of Consumers	Energy Sale (MU)
1 phase, 230 V	0	0.02	0	0.02
3 Phase, 400 V	0	0.01	0	0.01

The Commission approves energy sales of **423.61 MU for FY 2018-19**, as against 408.45 MU projected by APDOP as shown in the Table below:

**Table 20 Category wise Energy Sales Approved for FY 2018-19 (MU)**

Sl. No	Category of consumers	Projected	Approved for FY 2018-19
1	Domestic	162.98	167.16
2	Commercial	49.04	57.93
3	Public Lighting and Water Supply	12.05	12.81
4	Agricultural	0.03	0.03
5	Industrial	117.25	117.62
6	Bulk Mixed	67.10	67.53
7	Temporary	0.00	0.52
	<b>Total</b>	<b>408.45</b>	<b>423.61</b>

### 5.3 Losses: Distribution and AT&C

The distribution losses for FY 2018-19 as projected by the Petitioner is shown below.

**Table 21 Distribution and AT&C losses for FY 2018-19: Petitioner's Projections**

Sl. No	Particulars	Calc	Unit	FY 2016-17 (Actual)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)
1	Generation (own as well as any other connected generation net after deducting auxiliary consumption) within	A	MU	62.74	65.08	71.56
2	Input energy (metered Import) received at interface points of DISCOM	B	MU	825.93	808.13	795.09
3	Input energy (metered Export) by the DISCOM at interface point of DISCOM network.	C	MU	88.87	105.07	124.53

Sl. No	Particulars	Calc	Unit	FY 2016-17 (Actual)	FY 2017-18 (Estimated)	FY 2018-19 (Projected)
4	Total energy available for sale within the licensed area to the consumers of the	$D=A+B-C$	MU	799.80	768.14	742.12
5	Energy billed to metered consumers within the licensed area of the DISCOM	E	MU	370.80	389.21	408.45
6	Energy billed to unmetered consumers within the licensed area of the DISCOM	F	MU			
7	Total energy billed	$G=E+F$	MU	370.80	389.21	408.45
8	Amount billed to consumer within the licensed area of DISCOM	H	Rs. Crs	178.40	137.56	144.44
9	Amount realized by the DISCOM out of the amount Billed at	I	Rs. Crs	230.95	125.50	132.50
10	Collection efficiency (%) (= Revenue realized/ Amount billed)	$J=(I/H) \times 100$	%	129.46	91.23	91.73
11	Energy realized by the DISCOM	$K=J \times G$	MU	480.02	355.09	374.69
12	Distribution Loss (%)	$L=\{(D-G)/D\} \times 100$	%	53.64	49.33	44.96
13	AT & C Loss (%)	$M=\{(D-K)/D\} \times$		<b>39.98</b>	<b>53.77</b>	<b>49.51</b>

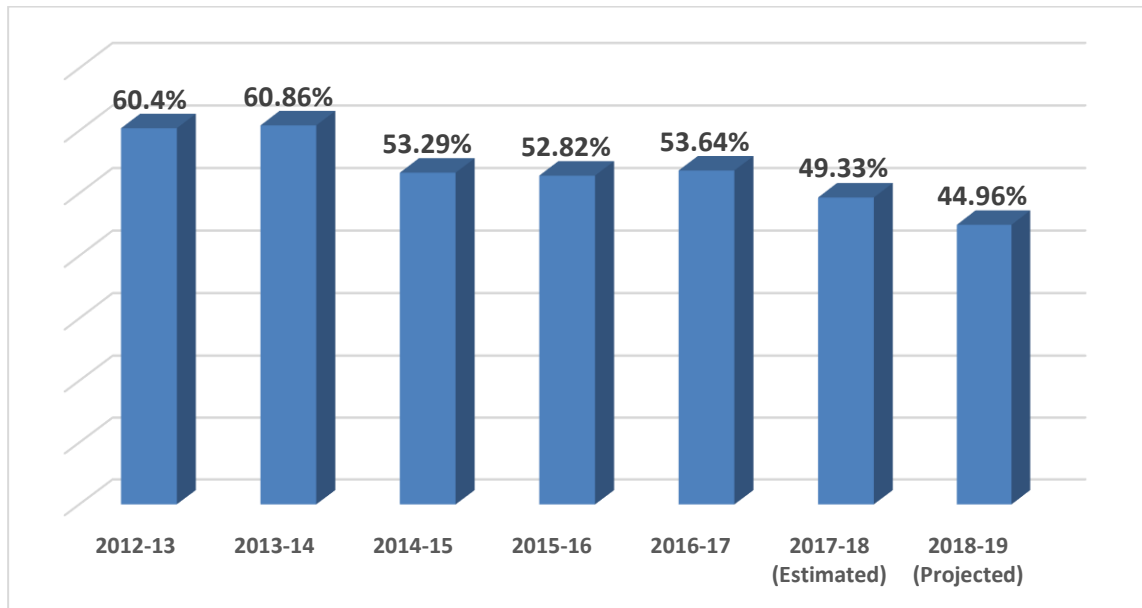
### Commissions' Analysis

#### Distribution Losses-

The Commission has compiled the actual, estimated and projected Distribution losses as submitted by the petitioner for some last years and shown it in the Figure below:



**Figure 3 Distribution losses (%)**



#### **AT&C Losses-**

For FY 2016-17, the Commission has observed that the Petitioner has taken 129.46% Collection efficiency taking into account the arrears. Theoretically this value is correct but practically the Collection Efficiency cannot be more than 100%. In this case, the Commission has allowed the **Collection Efficiency for FY 2016-17 as 92%** which is same for FY 2017-18 and FY 2018-19 as projected by the Petitioner. Corresponding to this AT&C losses are coming out to be **57% for FY 2016-17 as approved by the Commission.**

The AT&C losses were approved at 53% for FY 2013-14 in Tariff Order dated 30.05.2013 taking the baseline of FY 2011-12 when actual AT&C losses were 59%. In addition, the Commission in its Tariff order for FY 2013-14 has approved AT&C losses for FY 2014-15 & FY 2015-16 at 50% and 47% respectively as per APSERC (Tariff) Regulations, 2011. Again, for FY 2016-17 and FY 2017-18 the Commission approved AT&C losses at 44% and 41% respectively as per the same principle as adopted by the Commission before.

The Commission had advised APDOP in regard to AT&C losses as a directive under para 6.2.5 of the Tariff Order for FY 2013-14

**Quote**

*“APDOP should prepare a ‘Road Map’ on priority for reduction of AT&C losses indicating the measures proposed to be implemented to achieve the reduction for next three years including the cost involvement and the sources identified for funding.”*

**Unquote.**

APDOP neither provided any information to the Commission for reduction of its AT&C losses nor followed the Commission's direction to segregate the AT&C and Distribution losses. It should analyse the reasons for high distribution losses for each segment of its network and should take effective measures to reduce the losses by proper accounting of energy sales at each level, conducting voltage-wise energy audit, by providing meters on all feeders etc. APDOP needs to take immediate action to arrest pilferage of energy, replacement of defective meters/ stopped meters, electro-mechanical meters with automatic meters. In addition to above, automatic meters should also be provided to all un-metered connections at the earliest in a time bound manner.

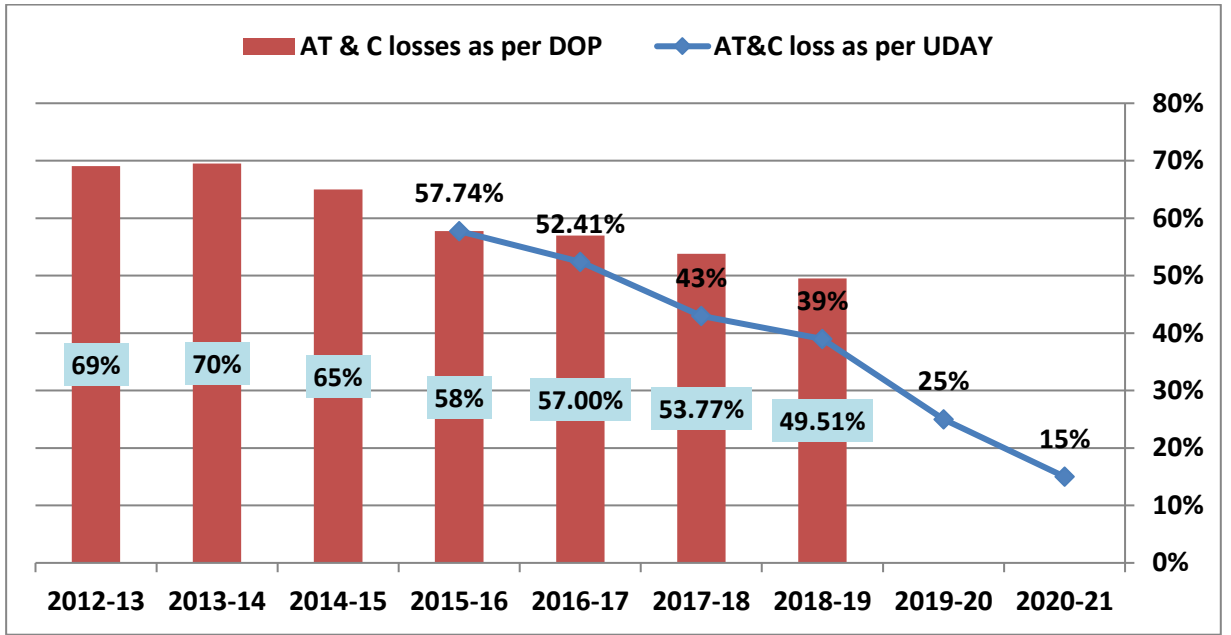
As per the Bipartite MoU UDAY, which was signed by Govt. of Arunachal Pradesh with GoI on 29-03-2017, it is agreed upon that Govt. of Arunachal Pradesh will endeavour to reduce its AT&C losses from **57.74% in FY 2015-16 to 15% by FY 2020-21** as per the following trajectory shown in the Table below:

**Table 22 AT&C loss level as per UDAY**

Year	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
AT&C losses	57.74%	52.41%	43%	39%	25%	15%

In Figure below, a comparison of AT&C loss levels is made as per actual values submitted by DOP and as per the values of UDAY MoU.

Figure 4 AT&C loss Projection (%)



The actual value of AT&C losses of 57% for FY 2106-17 and what the DOP has committed in UDAY MOU has a wide variation. The Commission again directed APDOP to put efforts for reducing its AT&C losses so that they can achieve the trajectory that they have submitted to Govt. of India.

As per Regulation 71 (a) of APSERC (Terms and Conditions for Determination of Tariff and Formats for Tariff Filing) Regulations -2011, It shall be obligatory on the licensee whose AT&C losses during the previous year are in excess of 30 percent, to project reduction of such losses by a minimum of 3 percent during the year for which a Tariff Application is made.

The Commission following APSERC (MYT) Regulations, 2013 has made a trajectory for AT&C losses as shown below-

FY	2016-17	2017-18	2018-19	2019-20	2020-21
AT&C losses	44%	41%	38%	35%	32%

Therefore, **the Commission approves the AT&C losses at 38 % for FY 2018-19.**

The energy requirement of APDOP to meet the energy demand would be the sum of energy sales to consumers within the State adding the AT&C Losses, as worked out in Table below:

**Table 23 Energy Requirement approved by the Commission for FY 2018-19**

Sl. No	Energy Requirements	Formulae/ Unit	Approved for FY 2018-19
1	Energy required for sale inside the state	MU	423.61
2	AT&C losses approved	%	38.00
3	Energy Requirement within the State with AT&C losses (MU)	Sl 1/(1-Sl 2)	683.24
4	AT&C losses approved (MU)	Sl 3- Sl 1	259.63

#### 5.4 Sources of Power procurement for FY 2018-19

##### A. Own Generation

APDOP owns some DG Sets with a total installed capacity of about 20.45 MW and projected a generation of about 0.63 MU for FY 2018-19.

The Commission approves generation from **DG Sets at 0.63 MU** for the FY 2018-19 as projected by the Petitioner.

##### B. Power from DHPD

DHPD owns 116 micro, mini and small hydroelectric power stations (SHPs), with a total installed capacity of 68.51 MW and projected generation of 59.41 MU for FY 2017-18 from these micro, mini and small HEPs. While, APDOP has projected a generation of 70.93 MU for the FY 2017-18 from SHPs owned by DHPD.

The Commission taking into account the generation from the newly inaugurated Zhangdongrong Mini hydel project (2× 500 kW) in West Kameng district of the State approves energy available from **DHPD at 62 MU** for the FY 2018-19 against the projected value of 70.93 MU by APDOP.

##### C. Power from Central generating Stations (CGS)

The balance energy requirement of APDOP is mainly met from allocation of power from Central Generating Stations of NEEPCO, NHPC, NTPC and other

sources such as OTPC Pallatna and Open Power Market, as detailed in Table below:

**Table 24 Central Sector Allocation - Petitioner's Submission**

Sl. No.	Station	Capacity (MW)	Firm allocation to AP		Actual Energy Utilised (MU)
			(In %)	(In MW)	
<b>1. NHPC</b>					
A	LOKTOK	105	4.94	5.19	35.47
<b>2. NEEPCO</b>					
A	RHEP	405	6.462	26.17	80.85
B	Free Power		12	48.60	149.00
C	KOPILI-I	200	5.191	10.38	50.03
D	KOPILI-II	25	5.992	1.50	6.08
E	Khandong	50	4.194	2.10	7.97
F	AGBPP	291	5.694	16.57	84.37
G	AGTPP				4.02
H	AGTPP-II				0.20
I	AGTCCPP	135	6.702	9.05	55.02
J	DOYANG	75	6.852	5.14	16.98
<b>3. NTPC</b>					
A	FARAKKA	1600	0.19	3.04	16.87
B	KAHALGAON	840	0.19	1.60	9.60
C	TALCHAR	1000	0.14	1.40	11.01
D	Bg TPP	250	5.133	12.83	92.12
<b>4. OTPC</b>					
A	PALATANA	726.6	3.03	22.02	123.35
	<b>Total</b>			<b>165.58</b>	<b>742.94</b>

### Commission's Analysis

The data of Share allocation of every Generating Station as mentioned in the table above by the petitioner is found to be correct by the Commission. The Commission has also considered generation from upcoming **Pare HEP of NEEPCO for 9 months** of FY 2018-19. Its design energy is taken as 506.42 MU at 90% dependable year and 95% machine availability. After going through the NERPC- Regional Energy Accounting (REA) for North East Region for FY 2016-17, the Commission observed the data as shown in the table below.

**Table 25 Firm Allocation of power from CGS- Commission's Analysis**

Sl No	Station	Capacity (MW)	Firm allocation to AP		Scheduled Energy (Projected)	Scheduled Energy (Approved)
			(In %)	(In MW)		
1	LOKTAK	105	4.94	5.19	35.47	35.47
2	Ranganadi HEP	405	6.462	26.17	80.85	80.85
3	Free Power from RHEP		12	48.60	149.00	149.00
4	Pare HEP	110	6.462	7.11	-	24.30
5	Free power from PHEP		12	13.20	-	45.12
6	KOPILI-I	200	5.191	10.38	50.03	50.03
7	KOPILI-II	25	5.992	1.50	6.08	6.08
8	Khandong	50	4.194	2.10	7.97	7.97
9	AGBPP	291	5.694	16.57	84.37	84.37
10	AGTPP	-	-	-	4.02	4.02
11	AGTPP- II	-	-	-	0.20	0.20
12	AGTCCPP	135	6.702	9.05	55.02	55.02
13	DOYANG	75	6.852	5.14	16.98	16.98
14	FARAKKA	1600	0.19	3.04	16.87	16.87
15	KAHALGAON	840	0.19	1.60	9.60	9.60
16	TALCHAR	1000	0.2	2.00	11.01	11.01
17	Bg TPP	250	5.133	12.83	92.12	92.12
18	PALATNA GPP	726	3.03	22.00	123.35	123.35
	<b>Total</b>			<b>186.47</b>	<b>742.95</b>	<b>812.37</b>

APERC order on ARR & Tariff Petition of APDOP for FY 2018-19

Table 26 Scheduled Energy drawl (MWhr) month wise for FY 2016-17

Source- REA, NERPC

Sl.No	Stations	Apr-16	May- 16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Total
1	Loktak	1242.79	3604.06	3585.99	3747.48	3553.64	3625.87	3646.91	3592.21	3531.42	2812.82	973.07	1553.504	35469.77
2	RHEP	7667.27	7191.19	10051.63	17187.86	7998.42	9948.11	7956.08	3454.14	2594.25	2037.68	1699.70	3067.860	80854.18
3	Free power	14141.94	13266.36	18577.41	31895.58	14739.30	18387.84	14654.76	6268.26	4708.86	3691.44	3078.00	5588.37	148998.12
4	kopili-I	0.00	2750.20	7054.69	6987.99	7147.62	7056.55	4892.05	3350.76	4181.53	2872.64	1596.92	2136.4033	50027.35
5	kopili-II	513.82	995.66	761.92	870.80	903.89	588.38	596.75	289.92	36.16	25.75	109.84	384.296	6077.20
6	Khandong	359.22	917.66	1246.90	1297.58	908.31	741.86	467.77	838.19	411.40	402.03	209.86	173.401	7974.18
7	AGBPP	8324.12	8747.13	8032.99	7212.95	6168.38	4057.70	7964.71	6597.11	6416.45	7243.14	6420.48	7185.551	84370.71
8	AGTPP	4024.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4024.32
9	AGTPP- II	196.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	196.31
10	AGTCCPP	0.00	4629.87	4807.90	5521.50	4694.81	4164.47	5799.24	5379.31	5350.63	5331.54	4606.86	4738.344	55024.47
11	Doyang	132.22	241.35	1834.15	3344.70	3526.89	3552.57	1705.40	1086.89	556.37	403.93	318.67	274.219	16977.35
12	Farakka	704.55	1588.80	1984.04	1496.41	737.59	687.37	1938.28	1977.50	1942.36	2056.35	-	1754.083	16867.32
13	Kahalgaoon	888.15	1064.78	1021.31	768.40	347.06	270.46	1026.98	988.90	1078.57	1070.55	-	1076.467	9601.63
14	Talcher	1225.63	1335.24	1211.02	976.54	474.42	441.89	1149.53	951.82	744.05	1319.99	-	1182.899	11013.02
15	Bg TPP	7526.35	8045.52	8461.79	6771.90	5871.58	5899.79	8180.37	8281.53	8946.69	7407.54	7798.64	8932.79	92124.49
16	Palatana GPP	7035.36	10936.67	10146.82	10358.96	11535.78	10766.67	11628.94	10686.65	7660.73	8718.02	11394.8	12478.1	123347.49
	<b>Total</b>	<b>53982.04</b>	<b>65314.48</b>	<b>78778.56</b>	<b>98438.65</b>	<b>68607.69</b>	<b>70189.52</b>	<b>71607.76</b>	<b>53743.18</b>	<b>48159.46</b>	<b>45393.41</b>	<b>38206.84</b>	<b>50526.29</b>	<b>742947.89</b>

Therefore, the Commission approves the total amount of Energy available from **CGS as 812.37 MU** including **free power of 194.12 MU** against the projected value of 742.94 MU by APDOP for the FY 2018-19.

The table below captures all the sources of Power procurement for FY 2018-19 available with APDOP to meet the needs of consumers as projected by the Petitioner and as approved by the Commission.

**Table 27 Energy available for purchase (MU)**

SI No	Sources of Power Procurement	Energy Available (MU) Projected	Energy Available (MU) Approved
1	DHPD	70.93	62
2	CGS	593.94	618.25
3	Free Power	149	194.12
4	From DG Set	0.63	0.63
	Deviation Import (UI)	52.15	-
	<b>Total Energy Available</b>	<b>866.65</b>	<b>875</b>

## 5.5 Energy Requirement and Availability

The petitioner has projected energy requirement of 866.65 MU for FY 2018-19 as depicted in the table below:

**Table 28 Energy Requirement for FY 2018-19- Petitioner's Submission (in MU)**

S.L No.	Item	Previous Year 2016-17 (Actual)	Current Year 2017-18 (Estimated)	Ensuing Year 2018-19 (Projected)
<b>A</b>	<b>ENERGY REQUIREMENT</b>			
1	Energy sales within the	370.80	389.21	408.45
2	Sales outside State (Bilateral+ UI)	88.87	105.07	124.53
3	TOTAL SALES	459.67	494.28	532.98
4	Distribution Losses			
I)	MU	429.00	378.93	333.67
II)	%	53.64	49.33	44.96
5	Total energy requirement (3+4)	888.67	873.22	866.65



S.L No.	Item	Previous Year 2016-17 (Actual)	Current Year 2017-18 (Estimated)	Ensuing Year 2018-19 (Projected)
<b>B</b>	<b>ENERGY AVAILABILITY</b>			
1	Power Purchase from			
	a) DHPD	62.17	64.48	70.93
	b) Central Stations	593.94	593.94	593.94
	c) Deviation Import (UI)	82.99	65.19	52.15
2	Net Power Purchase (a+b+c)	739.10	723.62	717.03
3	Free Power from RHEP, NEEPCO	149.00	149.00	149.00
4	From DG Set	0.57	0.60	0.63
<b>5</b>	<b>Total energy availability</b>	<b>888.67</b>	<b>873.22</b>	<b>866.65</b>

### Commission's Analysis

The Commission has considered the Table above for calculating approved energy available for FY 2018-19 to arrive at the total Energy requirement for the energy balance.

In the table below for Energy Balance for FY 2018-19, **AT&C losses are assumed as 38 %** as per the trajectory set by the Commission for AT&C losses under this Order. State transmission losses of 8.5% was submitted by the Transmission Planning and monitoring Zone of APDOP in their Petition for approval of ARR and Tariff proposal for FY 2018-19 to the Commission. This value of State- transmission losses seems to be impractical as the value of these losses comes out to be between 4 - 4.5% elsewhere in the country. Hence, the Commission after due- diligence considered **State- transmission losses as 4.5%.**

Further, transmission losses in PGCIL network (CTU losses) are also considered that have been derived from NERLDC transmission losses for FY 2016-17 taking an average of **2.7% in the NER** during the period from 04-04-2016 to 12-03-2017 as quoted from NERPC.

In addition, Sales outside the State are not considered in the Energy requirement as the actual requirement of Energy is only within the State. It is only during high hydro

season and off- peak hours when APDOP requires to sell the Surplus power outside the State.

**Table 29 Energy Balance for FY 2018-19- Commission's Approval**

Sl. No	Item	Formulae	By APDOP	Commission's analysis
<b>A. Energy Requirement</b>				
1	Energy sale inside the state (MU)		408.45	423.61
2	AT&C losses (%)		49.51	38%
3	Energy Requirement within the state (MU)	Sl 1/(1-Sl 2)	808.97	683.24
4	State transmission losses (%)		-	4.50%
5	<b>Total Energy requirement at State periphery for sale within the State (MU)</b>	<b>Sl 3/(1-Sl 4)</b>	<b>808.97</b>	<b>715.44</b>
6	Sales outside State (Energy Exchange and UI) (MU)		124.53	-
<b>B. Energy Availability</b>				
7	From DG Set (MU)		0.63	0.63
8	Purchase from DHPD (MU)		70.93	62
9	Free Power from NEEPCO (MU)		149	194.12
10	From Renewable sources		0	0
11	Purchase from Central Generating Stations (CGS) (exc. free Power from RHEP) (MU)		593.94	618.25
12	UI (deviation Import) (MU)		52.15	-
13	Total Energy available	Sum (Sl 7 to Sl 12)	866.65	875
14	CTU transmission losses (%)		2.7	2.70%
15	CTU transmission losses (on energy from CGS and UI) (MU)	(Sl 11+ Sl 12) × SL 14	17.44	16.69
16	<b>Total Energy available at State periphery for sale within the State (MU)</b>	<b>Sl 13- Sl 15</b>	<b>849.21</b>	<b>858.31</b>
17	<b>Surplus/ (Deficit) Energy at State Transmission periphery</b>	Sl 16- Sl 5	40.24	142.87

The energy balance table above shows that a surplus energy of 142.87 MU is available for the FY 2018-19 with APDOP.

## 5.6 Power Purchase Cost

Table 30 Power purchase Cost for FY 2017-18- Petitioner's Projection

Sl No	Station	Energy received (MU)	Power Purchase Cost (Rs Crs)	PGCIL, NERLDC & Other Charges (Rs)	Total Power Purchase Cost (Rs)	Unit Cost (Rs./KWH)
<b>1 NHPC</b>						
	LOKTAK	35.47	10.17	2.06	12.23	3.45
<b>2 NEEPCO</b>						
a	RHEP	80.85	23.3	4.70	28.00	3.46
b	Free Power	149.00		8.66	8.66	0.58
c	KOPILI-I	50.03	14.19	2.91	17.10	3.42
d	KOPILI-II	6.08	2.06	0.35	2.41	3.97
e	Khandong	7.97	2.49	0.46	2.95	3.71
f	AGBPP	84.37	28.26	4.90	33.16	3.93
g	AGTPP	4.02	1.25	0.23	1.48	3.69
h	AGTPP-II	0.20	0.06	0.01	0.07	3.58
i	AGTCCPP	55.02	19.12	3.20	22.32	4.06
j	DOYANG	16.98	6.18	0.99	7.17	4.22
<b>3 NTPC</b>						
A	FARAKKA	16.87	7.17	0.98	8.15	4.83
B	KAHALGAON	9.60	5.80	0.56	6.36	6.62
C	TALCHAR	11.01	5.27	0.64	5.91	5.37
D	Bg TPP	92.12	45.38	5.36	50.74	5.51
<b>4 OTPC</b>						
	PALATNA	123.35	45.87	7.17	53.04	4.3
5	Deviation Import	82.99	17.06	0.55	17.61	2.12
6	DHPD	62.17	15.29		15.29	2.46
	<b>Total</b>	<b>888.10</b>	<b>248.92</b>	<b>43.74</b>	<b>292.66</b>	<b>3.30</b>

**Commission's Analysis**

The power drawn from DHPD has been shown to purchase at Rs. 2.46/unit by the petitioner which is revised by the Commission as **Rs 2.69/unit** as the Commission has approved Tariff for Hydro power generation at Rs 2.69/ kWhr.

APDOP has taken energy rates for different Stations for FY 2018-19 same as the actual energy rates (Rs/unit) for FY 2016-17 as shown in Table above. But some change in power purchase price might be there due to change in a lot of variables. In addition, there is a wide variation in Energy Rates as shown by APDOP and as found by the Commission from REA, NERPC. Therefore, the Commission directs APDOP to furnish their Energy purchase bills before Commission for verifying the total power purchase Cost. The actual power purchase cost for FY 2016-17 as approved by the Commission is shown below-

**Table 31: Power purchase cost for FY 2016-17 (Rs Crs)**

SI No	Station	Energy received (MU)	Power purchase cost	Transmission, NERLDC, other charges	Total power purchase cost	Unit cost (Rs/unit)
1	<b>NHPC</b>					
	Loktak HPS	35.47	7.44	2.06	9.50	<b>2.68</b>
2	<b>NEEPCO</b>					
	Ranganadi HPS	80.85	34.32	4.70	39.02	<b>4.83</b>
	Free power from RHEP	149.00		8.66	8.66	<b>0.58</b>
	Pare HEP	24.30	5.88	1.41	7.29	<b>3.00</b>
	Free power from PHEP	45.12		2.62	2.62	<b>0.58</b>
	Kopili-I HPS	50.03	5.38	2.91	8.29	<b>1.66</b>
	Kopili- II HPS	6.08	0.96	0.35	1.31	<b>2.16</b>
	Khandong HPS	7.97	1.49	0.46	1.95	<b>2.45</b>
	AGBPP	84.37	28.26	4.90	33.16	<b>3.93</b>
	AGTPP	4.02	1.25	0.23	1.48	<b>3.69</b>
	AGTPP-II	0.20	0.06	0.01	0.07	<b>3.64</b>
	AGTCCPP	55.02	19.12	3.20	22.32	<b>4.06</b>
	Doyang HPS	16.98	7.48	0.99	8.47	<b>4.99</b>
3	<b>NTPC</b>					
	Farakka	16.87	7.17	0.98	8.15	<b>4.83</b>
	Kahalgaon	9.60	5.80	0.56	6.36	<b>6.62</b>

SI No	Station	Energy received (MU)	Power purchase cost	Transmission, NERLDC, other charges	Total power purchase cost	Unit cost (Rs/unit)
	Talcher	11.01	5.27	0.64	5.91	<b>5.37</b>
	Bongaigaon TPP	92.12	45.38	5.36	50.74	<b>5.51</b>
4	<b>OTPC</b>					
	Palatana GPP	123.35	27.24	7.17	34.41	<b>2.79</b>
	DHPD	62.00	16.68		16.68	<b>2.69</b>
	<b>Total</b>	<b>874.37</b>	<b>219.18</b>	<b>47.22</b>	<b>266.40</b>	<b>3.05</b>

### Merit Order Dispatch (MOD)

When Load dispatch centres receive injection request into the grid by various generators with quoted price, they arrange those requests in ascending order of their prices. Preference to supply power is given to least price power plant, then second least and so on. This process continues till demand required is matched with supply from generators. This mechanism is known as **Merit order dispatch**. It is for safeguarding the interest of consumer.

After a full- fledged State Load dispatch Centre, APDOP can purchase the energy in an efficient manner. The overall objective is that the total demand is met in such a way, so as to incur a minimum power purchase cost.

As depicted in table below power from the utility may forego power from **five Central generating stations** whose power purchase cost is comparatively high than others using MOD principle after reaching the total requirement of 715.44 MU.

Also the Commission hasn't allowed any procurement of power from UI (deviation Import) as UI isn't a source of power procurement, rather it is a mechanism for maintaining the Grid frequency and for settlement against any deviation of the Grid frequency. The Commission also directs APDOP not to include UI in power purchase source while submitting tariff petitions in later year.

**Table 32: Power Purchase cost (Rs Crs) for FY 2018-19- Commission's Approval**

Sl.no	Source	Cost (Rs/Kwh)	Energy received (MU)	Energy allowed by MOD (MU)	Total Cost for Commission's Approval (Rs Crs)
1	Loktak	2.68	35.47	35.47	9.50
2	Ranganadi HEP	4.83	80.85	80.85	39.02
3	Free power RHEP	0.58	149.00	136.65	7.94
4	Pare HEP	3.00	32.40	24.30	7.29
5	Free power PHEP	0.58	60.16	45.12	2.62
6	kopili-I	1.66	50.03	50.03	8.29
7	kopili-II	2.16	6.08	6.08	1.31
8	khandong	2.45	7.97	7.97	1.95
9	AGBPP	3.93	84.37	84.37	33.16
10	AGTPP	3.69	4.02	4.02	1.48
11	AGTPP-II	3.64	0.20	0.20	0.07
12	AGTCCPP	4.06	55.02	55.02	22.32
13	Doyang	4.99	16.98	-	0.00
14	Farakka	4.83	16.87	-	0.00
15	Kahalgaon	6.62	9.60	-	0.00
16	Talchar	5.37	11.01	-	0.00
17	Bg TPP	5.51	92.12	-	0.00
18	ONGC palatna	2.79	123.35	123.35	34.41
19	DHPD	2.69	62.00	62.00	16.68
	<b>Total</b>		<b>897.51</b>	<b>715.44</b>	<b>186.06</b>

The Commission against Rs 292.66 Crs as projected by the Petitioner approves the above amount of Rs 226.73 Crs to purchase 821.43 MU during FY 2018-19.

The Commission directed APDOP that it should avoid purchasing of costly surplus power to sale outside state at an average rate. In addition, the commission has reduced the UI/Deviation import to zero, as the Commission do not consider it a source of Power Procurement.

## 5.7 ARR for FY 2018-19- Petitioner's Submission

APDOP in its Tariff petition for FY 2018-19 has projected a total revenue requirement of Rs. 689.83 Crores for 2018-19 as mentioned hereunder in table below.

**Table 33 ARR, Income & Revenue Gap- Petitioner's Projection**

Sl. No.	Particulars	Projected (Rs. Crs)
1	Cost of power Purchase	287.86
2	Fuel cost	25.71
3	Employee cost	325.84
4	R &M expenses	43.9359
5	Administration and general expenses	6.48
6	Depreciation	0
7	Interest on Working Capital	0
8	Interest charges	0
9	Return on NFA /Equity	0
10	Provision for Bad Debit	0
11	Renewable energy(solar) purchase obligation	0
12	Annual license fee for 2017-18	0
13	Safety Harness & Skilling/Training	0
<b>14</b>	<b>Total Revenue requirement</b>	<b>689.83</b>
15	Less: non-tariff income	3.81
16	Net revenue requirement	686.02
17	Revenue from existing tariff	155.03
18	sale through Energy exchange	18.29
19	Deviation export	<b>4.78</b>
21	Total Annual Income	181.91
<b>22</b>	<b>Revenue Gap</b>	<b>507.92</b>
23	Regulatory asset	0
24	Energy Sales (MU)	408.45
<b>25</b>	<b>Average Cost of Supply (Rs/ kWh)</b>	<b>16.80</b>

The expenses projected by APDOP and the Commission's analysis are discussed hereunder.

## 5.8 Fuel Cost

APDOP has claimed Rs. 25.71 crores towards Fuel Cost for an estimated 0.63 MU generation during the FY 2018-19 by the DG sets which is equivalent to a generation cost of Rs. 408.09 per unit, which is not only exorbitant but also unbelievable.

### Commission's Analysis

The Commission approves **fuel cost at Rs. 2.205 crores** only for FY 2018-19 for a projected generation of 0.63 MU for which the per unit generation cost is coming out to be @ Rs. 35 per unit against Employee Cost

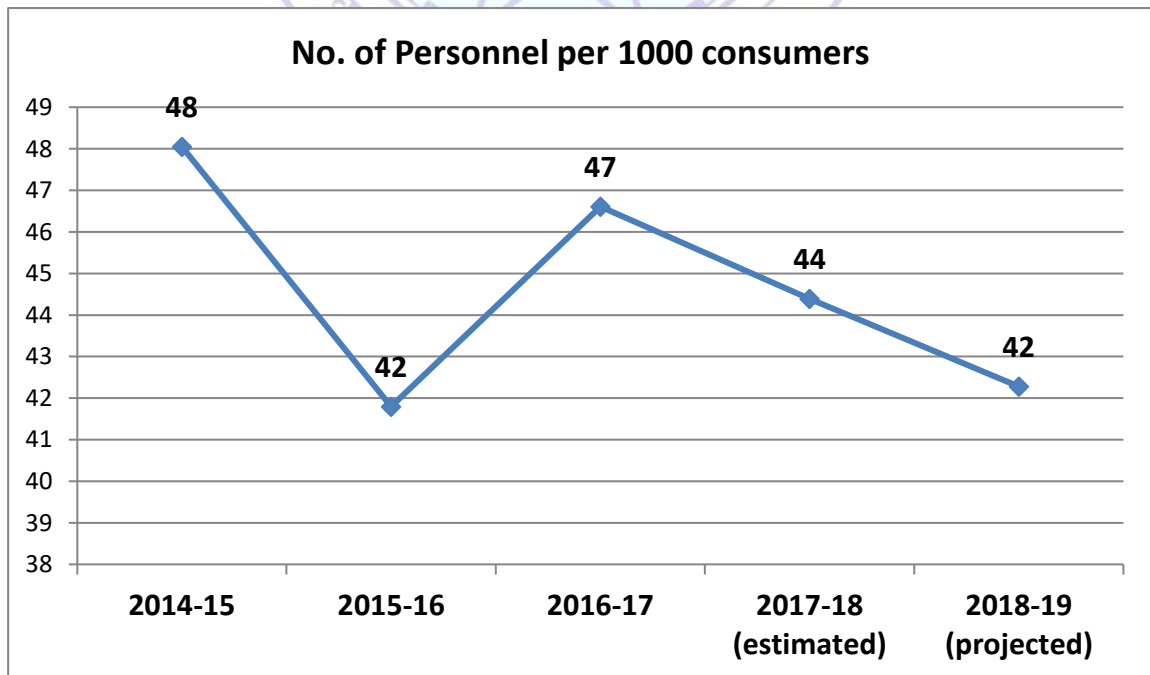
The Petitioner has submitted Employees' Costs towards Salaries and Allowances, as shown in the following table.

**Table 34 Employees Cost - Petitioner's Projection (Rs Crs)**

SI No	Particulars	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)
1	Salaries & allowances of Employees	232.79	296.21	325.84

### Commission's Analysis

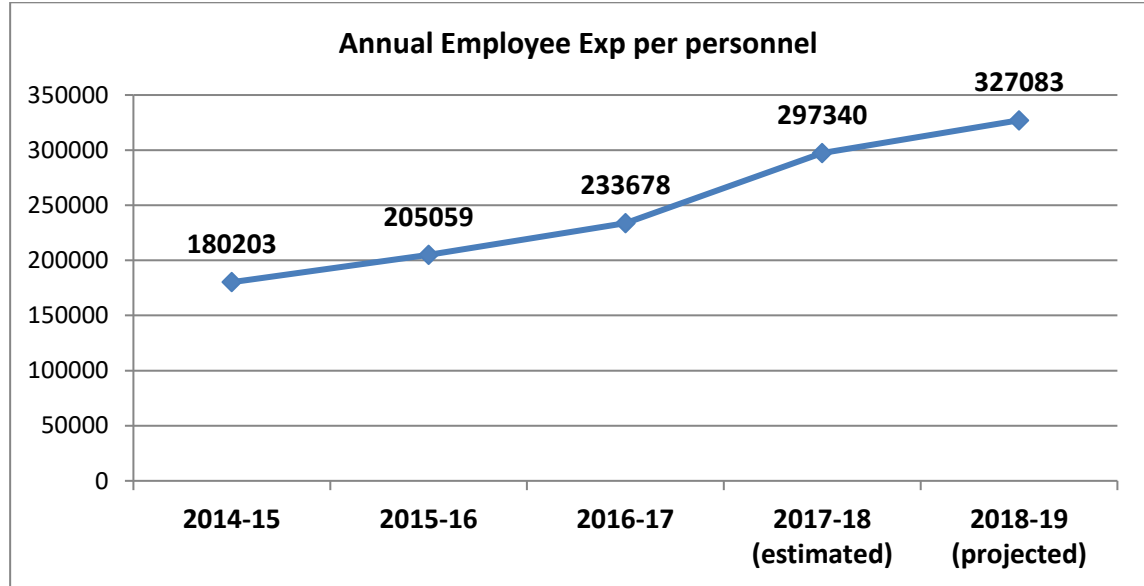
The employee's productivity parameters over some last few years are shown below:





It observed that No. of Personnel's per 1000 consumers is showing a downward trend from FY 2014-15 to FY 2018-19.

**Figure 5 Annual Employee Expenses per personnel (Rs)**



It is observed that Annual Employee expenses per personnel (in Rs) is showing an upward trend as shown in Fig 5 above.

The Commission allows Rs. **352.84 Crs. towards Employees' expenses** for FY 2018-19 as projected by the Petitioner.

## 5.9 Repair & Maintenance Expenses

**Table 35 Repair Maintenance Cost- Petitioner's Submission (Rs Crs)**

Sl. no	Particulars	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)
1	Maintenance of Assets	20.00	32.07	43.94

### Commission's Analysis

The Commission finds **Rs. 43.94 crores towards R&M expenses** for the FY 2018-19 as reasonable and approves the same.

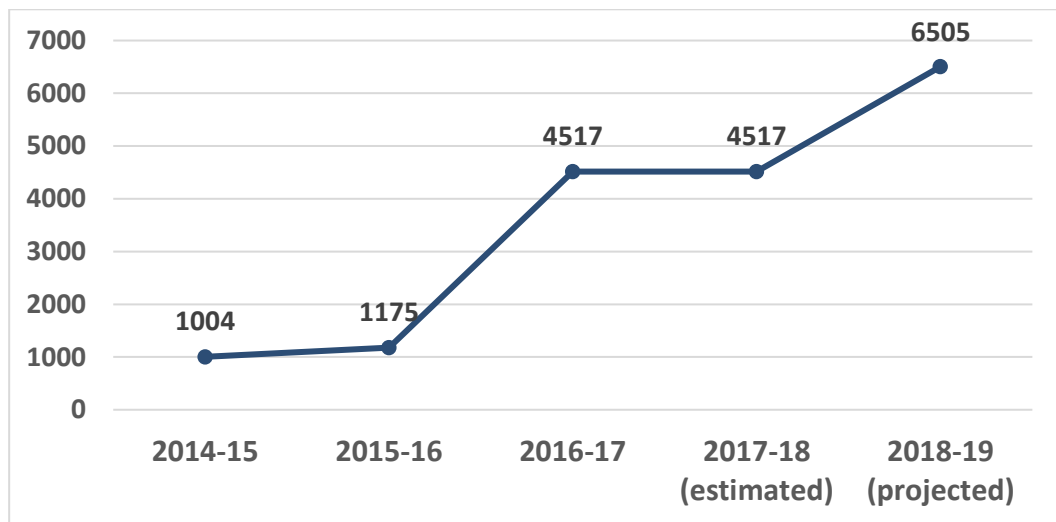
## 5.10 Administrative & General (A&G) Expenses

Table 36 A&G expenses - Petitioner's Submission (Rs Crs)

Sl. no	Particulars	2016-17 (Actual)	2017-18 (Estimated)	2018-19 (Projected)
1	A&G Expenses	4.50	5.40	6.48

### Commission's Analysis

Figure 6 A&G Expenses per Employee (Rs)



It is observed from the Fig above that A&G expenses (Rs) per employee is also showing an upward trend from some last years.

An amount of **Rs. 6.48 Crores projected by APDOP towards Administrative & General Expenses** for FY 2018-19 is found reasonable and accordingly approved by the Commission.

## 5.11 Operations & Maintenance (O&M) Expenses

The total approved O&M expenses worked out above are summarized as here under:

**Table 37 O&M cost (Rs Crs)**

Sl .no	Particulars	Approved for FY 2018-19
1	Employee Cost	325.84
2	Repairs & Maintenance expenses	43.94
3	Administrative & General ( A&G) Expenses	6.48
	<b>Total</b>	<b>376.26</b>

### 5.12 Depreciation

The Commission observed that DOP didn't claim any depreciation in their petition. The reason cited by the DOP is they are managing the affairs of the department on Govt. AP fund/ grant only without borrowing from any source and acquisition of new assets out of such grant.

The Commission feels that the depreciation should be a part of ARR and tariff design. The sale of power is a commercial activity hence pricing should also be on commercial basis which is the basic spirit of tariff policy endorsed by CERC. Otherwise, this will lead to the creation of huge gap between annual income and annual revenue requirement which ultimately have to be subsidised by Govt of Arunachal Pradesh.

However, the Commission approves depreciation as **NIL** as APDOP is running purely on Government's Grant.

### 5.13 Interest on loans & Finance Charges

DOP's made an assertion in this regard as "APDOP being a Government Department is not allowed to take loan; hence interest on loan does not arise. Therefore, expenses on interest on loan may be considered as Nil and APDOP shall not claim any for purpose of ARR".

The Commission approves DOP's claim against interest on loan as **NIL**.

### 5.14 Interest on Working Capital

Commission observed that DOP didn't claim any interest on working capital in their petition.

Commission feels that the concept of notional interest can be thought of by the DOP. The underlying logic is that if no grant or fund is received from the State Government, fund has to be arranged by the Department by resorting to borrowing from banks/financial institutions for which interest had to be paid. Payment of interest would have been then met out of income by way of tariff by the DOP. Moreover, as per principle of costing, it admits inclusion of notional interest to bring the pricing at realistic level. This would also obviate the logic of replacing assets only with government money.

However, the Commission approves DOP's claim against interest on working capital as **NIL**.

### **5.15 Return on equity**

DOP made an assertion in this regard that "APDOP being a Government Department, all funding comes from Government as grant. Hence, there is no loan as well as equity, as a result return on equity may also be considered as Nil".

As per APSERC (Tariff determination) Regulations, ROE shall be built up in ARR and Tariff structure.

However, the Commission approves DOP's claim against Return on Equity (ROE) as **NIL**.

### **5.16 Provision for Bad and Doubtful Debts**

APDOP has not made any provision for Bad and Doubtful Debts for the FY 2018-19 which is accepted by the Commission.

### **5.17 Renewable Power Purchase Obligations**

APDHPD has number of hydro stations with a rating of < 25 MW that come under Renewable Energy Compliance. APDOP is drawing 100% power generated by these small/mini/micro hydro stations which is enough to meet the Renewable Energy Compliance for non-Solar RPOs as per the Regulations for Renewable Power Purchase

Obligations and its Compliance Regulation 2012, dated 11th April 2012, defined for FY 2012-13 onwards.

APDOP has however not been able to fulfil the Renewable Power Purchase Compliance for Solar power.

### Commission's Analysis

So, in view of the above Non- Compliance of Solar RPO by APDOP, the Commission suo- moto allows in ARR, a provision of Rs. 2.33 Crores for purchase of Solar power or Solar RECs at the Floor price for Solar RPO Compliance for FY 2018-19. More details about RPO is given in Chapter 6.

### 5.18 Annual License Fee for Deemed Distribution Licensee

As per the provisions of the **APSERC (Fee) Regulations 2011**, and amended thereafter, Annual License Fee is to be paid by every licensee including the Deemed Licensee. APDOP though a deemed distribution licensee has not paid the same for FY 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18 and is due for 2018-19 as well.

The annual license fee for a distribution licensee including a deemed licensee as per above mentioned Regulations is 0.067 paise per unit of energy handled/ to be handled in a particular year (including T&D losses). The amount of Annual License Fee accumulated on APDOP's end from 2012-13 onwards and required to be paid to APSERC is shown in Table below:

**Table 38 Total Annual license fee since 2012-13**

Particulars	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Energy Handled(MU)	645.55	630.61	725.78	816.02	794.55	-
License Fee Rate (Paise)	0.067	0.067	0.067	0.067	0.067	-
<b>Total Fee (in Rs Cr)</b>	<b>0.04</b>	<b>0.04</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>	<b>0.05</b>

As per **APSERC (Fees) Regulations, amended in 2017**, the annual license fee for a distribution licensee including a deemed licensee is Rs 5 lakhs/ year.

Therefore, The Commission approves suo- moto, a provision of **Rs. 0.05 Crores in the ARR for annual license fee for FY 2018-19.**

### 5.19 Non-Tariff Income

APDOP has estimated Rs. 3.81 crores towards Non-Tariff Income for the FY 2018-19 which the Commission considers reasonable and approves it.

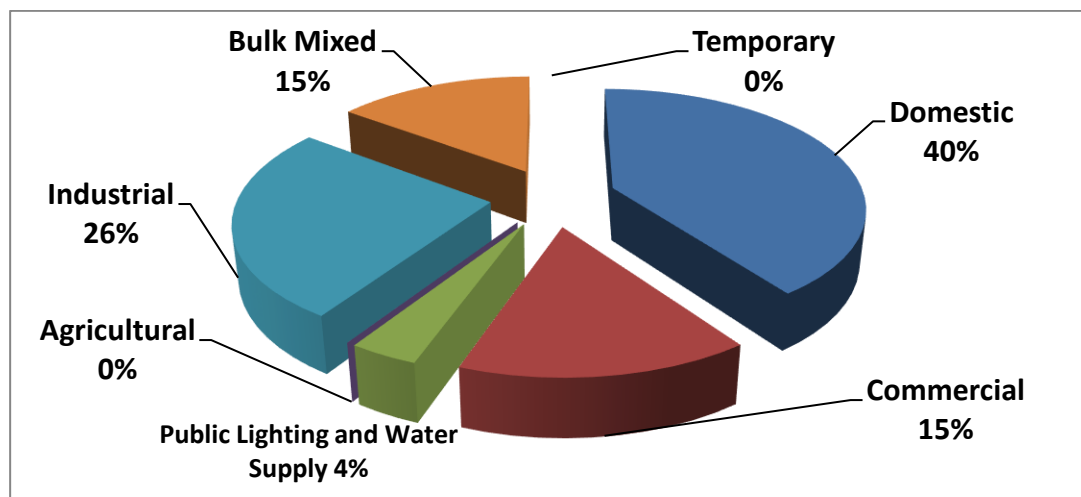
### 5.20 Investment for Training & Safety of Personnel

The Commission also lays stress on improving the Skills and multiskilling of its manpower as well as on safety harness for the manpower of APDOP. Therefore, the Commission makes a provision of **Rs 0.75 Crores** in the ARR with a directive to utilize the amount effectively for Training & Safety of Personnel's.

### 5.21 Estimated Revenue at Proposed tariff for consumers

APDOP has projected revenue from sale of energy with existing tariff at 155.03 Crores for sale of 408.45 MU within the State with an average revenue rate of 3.79/kWH and ₹ 23.07 Crores from sale of energy outside the State for sale of 124.53 MU with an average rate of ₹ 1.85/kWH. The Commission observes that APDOP purchase a costly power at an average rate Rs. 3.00/kWH and sells the same outside the state at a lower price of Rs. 1.85/kWH. Category wise revenue projected by APDOP for FY 2018-19 is provided in Fig below.

**Figure 7 Revenue from projected Tariff - Petitioner's Submission (%)**



It is observed that the revenue from domestic category contributes about 40% followed by HT Industrial (26%). Hence, impact of change in tariff on the revenue is mostly dependent on these categories. The revenue approved at the projected Tariff is detailed in Table below.

**Table 39 Revenue from projected Tariff- commission's Approval**

Category of consumers	Sales Approved (MU)	Average Rate (Rs/kwhr)	Revenue Approved (Rs Crs)
Domestic	167.16	3.80	63.58
Commercial	57.93	4.86	28.14
Public Lighting and Water Supply	12.81	4.75	6.08
Agricultural	0.03	3.33	0.01
Industrial	117.62	3.43	40.36
Bulk Mixed	67.53	3.43	23.13
Temporary	0.52	6.54	0.34
<b>Total</b>	<b>423.61</b>	<b>3.82</b>	<b>161.63</b>

APDOP has not provided the details of category wise / slab wise connected load / contracted demand for different categories of consumers. APDOP is hereby directed to furnish the category wise / slab wise connected load / contracted demand of consumers of all the categories along with the next Tariff petition.

The Commission approves the revenue from the projected tariff at ₹ **161.63 Crores on sale inside state of 155.03 MU** and Rs. 23.07 Crores on sale outside state.

## 5.22 ARR for FY 2018-19 – Commission's Approval

**Table 40 ARR for FY 2018-19 Commission's Approval**

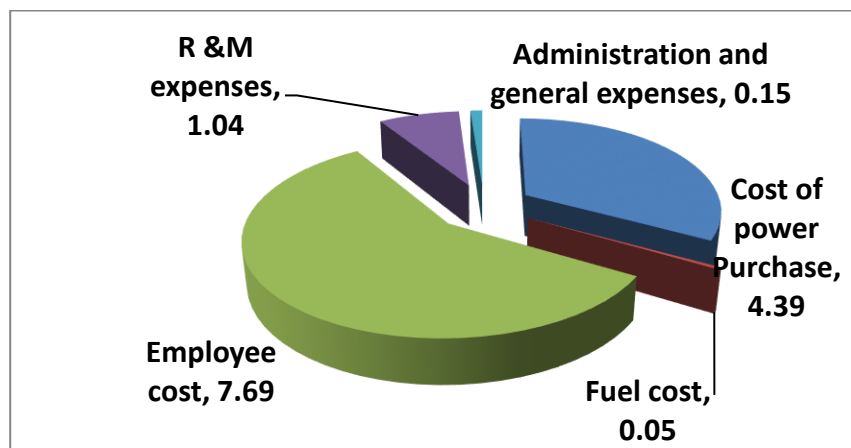
Sl no.	Item of expense	Projected (Rs Crs)	Approved (Rs Crs)
1	Cost of power Purchase	287.86	186.06
2	Fuel cost	25.7125	2.205
3	Employee cost	325.84	325.84
4	R &M expenses	43.9359	43.9359
5	Administration and general expenses	6.48	6.48

Sl no.	Item of expense	Projected (Rs Crs)	Approved (Rs Crs)
6	Depreciation	0	0
7	Interest on Working Capital	0	0
8	Interest charges (including interest on working capital)	0	0
9	Return on NFA /Equity	0	0
10	Provision for Bad Debit	0	0
11	Renewable energy(solar) purchase obligation	0	2.69
12	Annual license fee for 2017-18	0	0.05
13	Safety Harness & Skilling/Training	0	0.75
14	<b>Total Revenue requirement</b>	<b>689.83</b>	<b>568.01</b>
15	Less: non-tariff income	3.81	3.81
16	Net revenue requirement	686.02	564.20
17	Revenue from existing tariff	155.03	161.47
18	Revenue from surplus sale of power	23.07	23.07
21	<b>Total Annual Income</b>	<b>181.91</b>	<b>188.35</b>
22	Total Gap	507.92	379.66
23	Regulatory asset	0	0
24	Energy Sales (MU)	408.45	423.61
25	Average Cost of Supply (Rs/ kWh)	16.80	13.32

The Revenue gap of ₹ 379.66 Crores has been arrived at on the basis of the projected data for the FY 2018-19. The Revenue Gap is about 67.29 % of the net ARR. The average cost of supply per unit for the FY 2018-19 is Rs. 13.32 & average revenue realised from tariff is ₹ 3.82. **The average revenue gap (Rs/unit) is 9.5.**

The figure below shows the distribution of Average cost of supply of APDOP.

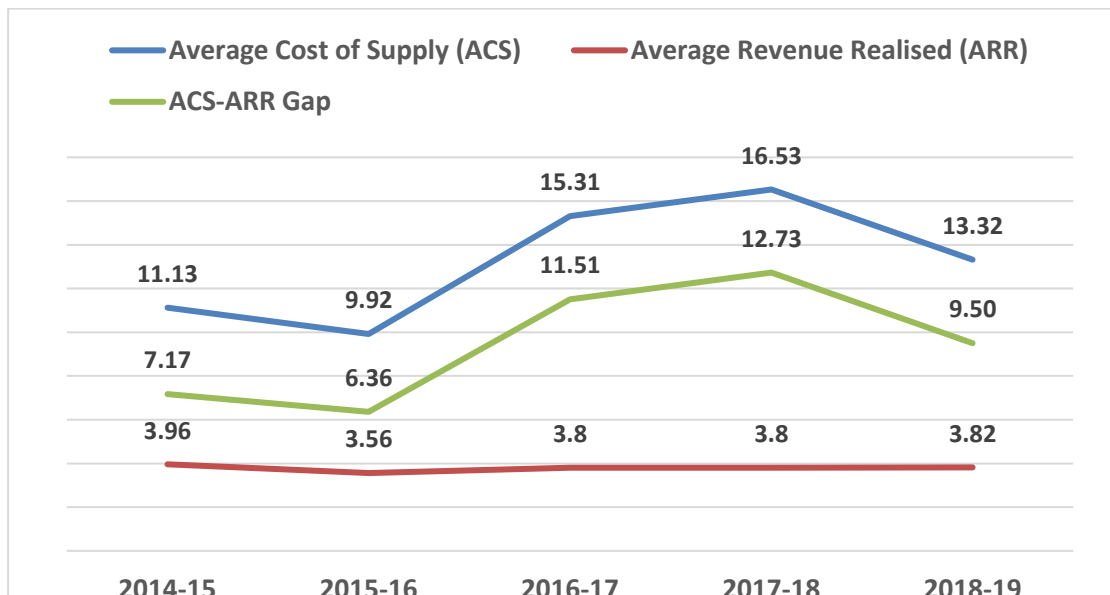
**Figure 8 Distribution of Average cost of Supply in Total expenses of APDOP (in Rs)**





The chart below provides the trend for Average Cost of supply, Average revenue & Revenue Gap over the past few years.

**Figure 9 Trend for Average Cost of supply, Average revenue & Gap (Rs/unit)**



It is observed that average cost of supply has increased from ₹ 11.13 per unit in FY 2014-15 to ₹ 13.32 in FY 2018-19. While, average revenue realized has decreased from ₹ 3.96 per unit in FY 2014-15 to ₹ 3.82 in FY 2018-19 which shows a decrease in revenue realization and an alarming condition for APDOP. Also the increase in average revenue gap from ₹ 7.17 per unit in FY 2014-15 to ₹ 9.50 in FY 2018-19 is not a good sign for the Financial health of APDOP and also calls for improvement in the working of distribution Licensee.

The Commission is of the view that the APDOP shall make efforts to bridge the revenue gap by improving its operational efficiency by utilizing its huge manpower as Employee cost is around 57.7 % of total cost of Supply.

The Commission also observes that a sizeable quantum of power is purchased by the APDOP for meeting the energy demand of the State. APDOP needs to make efforts to manage Power procurement from different sources of generation, so as to incur a

minimum cost of power purchase. Currently cost of power purchase is around 33 % of total cost of supply.

Also APDOP shall strive for reduction of AT&C losses which, in turn, would reduce the revenue gap.

### **5.23 Recovery of Revenue Gap for the FY 2018-19**

As seen from para above, there is a huge revenue gap of ₹ 379.66 Crores during the FY 2018-19 which is 67.29 % of the net ARR.

The Petitioner hasn't proposed an increase in tariff for any Category of the Consumers to meet this revenue Gap. Tariff is a sensitive subject having substantial impact on social, economic and financial well-being of the public at large as well as the viability and growth of power sector. Recovery of entire Gap through tariff hike is not practicable as this would make power unaffordable to the general consumers.

APDOP being a Government Department funded by budgetary support from State Government, proposes to absorb this unrecovered Revenue Gap.

### **5.24 Regulatory Assets**

#### **Commissions View**

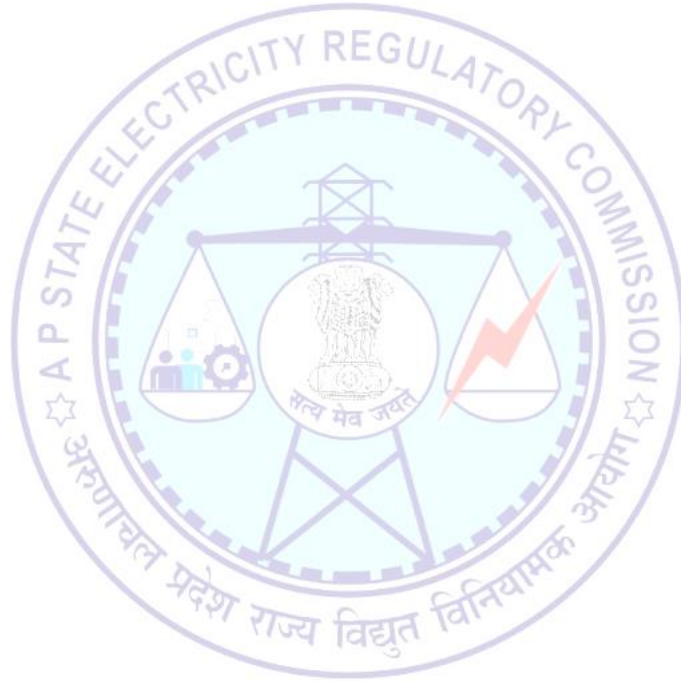
As per the National Tariff Policy, 2016, the losses incurred in the previous years that are of the nature of deferred expenditure, and can be recovered from consumers in future, shall be allowed as Regulatory Asset by the Regulatory Commission.

APDOP has filed tariff petition for the fifth time after APSERC came into existence, and the gap projected by the petitioner cannot be recovered in the next two to three years through retail tariff from the consumers. Even if Regulatory Asset is created, it cannot be liquidated in the next three or four years.

Therefore, the Commission does not consider any need of Regulatory Assets for the remaining unadjusted Revenue gap. APDOP shall improve its performance by reducing AT&C losses and exercising controls over the O&M Expenditure to make improvement in the revenue gap.

As such, all efforts shall be made by APDOP to ensure the gradual reduction in net gap between the ARR and revenue and the budgetary support from the State Govt.

**Hence, the Commission does not approve any Regulatory Asset to get reflected in the ARR for FY 2018-19.**



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## 6. Renewable Power Purchase Obligation

As per the APSERC (Renewable Power Purchase Obligation and Its Compliance, 2nd Amendment) Regulations, 2016, the applicable RPO levels for the FY 2018-19 are 10.25% for Non-Solar and 6.75% for Solar power on Ministry of Power vide order no. 23/3/2016-R&R dated 22<sup>nd</sup> July 2016 as shown in the Table below .

**Table 41** Calculation of RPO compliance for FY 2018-19

Particulars	Units consumed excluding hydro but inc. T&D losses (MUs)	Solar RPO (%)	RPO (MU)	Price of RPO (₹/unit)	Amount (Rs Crs)
Solar	345.52	6.75%	23.32	1	2.33
Non- Solar	784.46	10.25%	80.41	Fulfilled through SHP purchase	

As intimated by the APDOP vide their letter no. CE(P)/WEZ/SLDC/Tariff/Part-I/2013-14/148 dated 02/3/2013, they will either procure the quantity of solar power on account of FY 2012-13 in FY 2013-14 or will purchase equivalent solar REC. However, the compliance of the same has not been submitted to the Commission yet in spite of reminders from the Commission. The APDOP is also required to comply with the Solar RPO for the FY 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18.

APDOP has not projected any power purchase as per RPO regulation, 2016. This is a non-compliance to the APSERC Regulations and to the guidelines of Govt. of India (MoP). DOP can further refer the table above wherein power purchase obligation against solar RPO (including T&D losses) worked out to be around 23.32 MU and the corresponding power purchase cost comes around Rs 2.33 Cr.

It is purchased through other sources of power at an average price of Rs. 2.76/unit against the power purchase through RPO (Solar) and the cost comes around Rs 6.44 Cr. Therefore, this is a loss (approx. Rs 4.11 Crs) to the Licensee in case it does not oblige solar RPO.

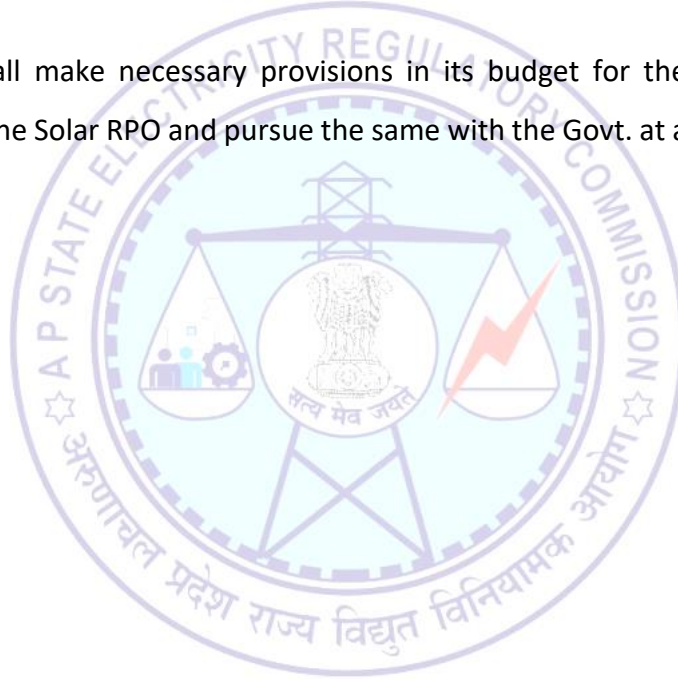
Further, APDOP is requested to review and confirm for compliance to solar RPO. The APDOP is directed to submit the report of status on compliance of the Renewable

Power Purchase Obligation of Solar Power for the FY 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18 and the road map for compliance during 2018-19 to the Commission immediately in view of the revised RPO trajectory issued by the Commission in compliance with the new Tariff Policy- 2016 of the Govt. of India as shown in the Table below.

**Table 42** Minimum Quantum of Purchase (%) from Renewable Sources

Year	Total (%)	Non-Solar (%)	Solar (%)
2016-17	11.50	8.75	2.75
2017-18	14.25	9.5	4.75
2018-19	17.00	10.25	6.75

The APDOP shall make necessary provisions in its budget for the FY 2018-19 for compliance of the Solar RPO and pursue the same with the Govt. at appropriate level.

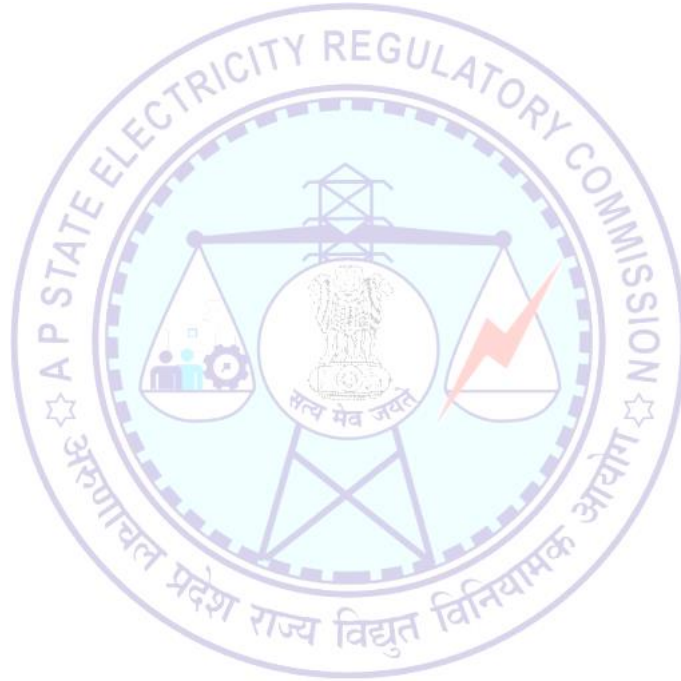


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## 7. Wheeling Charges

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Calculation of Wheeling Charges shall be done separately under APSERC (Intra- State Open Access) Regulations. The Commission shall determine Wheeling Charges, Open-access charges and other charges used for procurement of Power through Open-access under a separate Order.



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## 8. Directives

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Commission observes from the Petition filed by APDOP for FY 2018-19, that there are some important issues, which need immediate attention of APDOP to improve its efficiency in power delivery and reduction of costs. The Commission had also issued similar directives in its tariff order for FY 2014-15, 2015-16, 2016-17 and 2017-18. The Commission is deeply concerned that the APDOP is not taking any initiative for complying with these directives. The APDOP has not even submitted the action plan even once during the last three years. It is in this context, that the Commission considered it necessary that the APDOP set up a Regulatory Compliance Cell manned by a team who is sensitive to understanding the Electricity Act and Electricity Regulations. Such a Regulatory Compliance cell will co-ordinate and pursue with all concerned to comply with the directives issued by the Commission from time to time particularly in its tariff orders. After all the directives issued by the Commission are in the interest of the APDOP. APDOP shall take prompt action on the following directives and submit implementation report and the progress achieved by it in implementing the directives to the Commission from time to time.

APDOP is hereby again directed to furnish up to date compliance of all directives issued till date along with latest observations made at Chapter-2 above.

In addition, the Commission also added the following additional directives to the APDOP for further compliance.

### 8.1 Step towards digitization

APDOP should adopt web based system for online payment of electricity bills, which is a welcome step towards digitization. APDOP is also advised to introduce e-payment mode through various Apps, SMS phone alerts on billing and payment of electricity bills etc. which would definitely benefit the department and the consumers and would save human efforts and resources.

## **8.2 Prepaid metering**

The APDOP is directed to spearhead the installation of prepaid metering in the State especially for consumers whose billing recovery is poor. Prepaid metering will ensure better revenue collection.

## **8.3 Maintenance of accounts and records and conducting audit:**

The Commission does not agree to DOP's assertion at Petition Submission Point No. 5, "...being government department, is unable to function like incorporated company in the matter of profit making business plan, audits, accounts etc. Hence, data/information as required by MYT regulation is not available; as a result, petition for single year i.e. for FY 2018-19 is hereby filed for necessary action of Hon'ble Commission as deemed fit."

Commission preserves a different view about maintenance of accounts and records and conducting audit thereof. Any fund whether public or private irrespective of the source should be utilized by maintaining proper accounts and records more so in respect of public money. It is also a fact that utilization of fund by every government office/department is subject to audit and scrutiny by the office of the Accountant General. APDOP is no exception. Some sort of books and records etc. have to be maintained by APDOP though may not be purely on commercial principle. It is therefore suggested that appropriate books and records of receipts and utilization of public fund along with record of fixed assets have to be maintained by APDOP for submission to the Commission at the earliest. If necessary outsourcing of the services of private accounting firm may also be obtained for one time in case of non-availability of competent personnel with the department.

## **8.4 Interest on Working Capital**

Commission observed that DOP didn't claim any interest on working capital in their petition though same is a part of ARR & tariff structure as per APSERC regulation. Commission feels that the concept of notional interest can be thought of by the DOP. The underlying logic is that if no grant or fund is received from the State Government,



fund has to be arranged by the Department by resorting to borrowing from banks/financial institutions for which interest had to be paid. Payment of interest would have been then met out of income by way of tariff by the DOP. Moreover, as per principle of costing, it admits inclusion of notional interest to bring the pricing at realistic level. This would also obviate the logic of replacing assets only with government money.

However, the Commission approves DOP's claim against interest on working capital as nil for the said year but directs DOP to include in future petition.

### **8.5 Interest on Loan**

The APDOP made an assertion in this regard as "APDOP being a Government Department is not allowed to take loan; hence interest on loan does not arise. Therefore, expenses on interest on loan may be considered as Nil and APDOP shall not claim any for purpose of ARR".

The Commission observes that in case APDOP has to undertake any augmentation/project work & no grant or fund is received from the State Government; fund has to be arranged by the Department by resorting to borrowing from banks/financial institutions for which interest had to be paid.

The Commission approves DOP's claim against interest on loan as nil for the said year but directs DOP to include in future petition.

### **8.6 Return on Equity (ROE):**

APDOP made an assertion in this regard "APDOP being a Government Department, all funding comes from Government as grant. Hence, there is no loan as well as equity, as a result return on equity may also be considered as Nil".

As per APSERC Regulation, ROE shall be built up in ARR and Tariff structure. The sale of power is a commercial activity hence pricing should also be on commercial basis which is the basic spirit of tariff policy endorsed by CERC. Same is being claimed by all DISCOMs and Govt. Power Departments.

The Commission approves DOP's claim against Return on Equity (ROE) as nil for the said year but directs DOP to include in future petition.

### **8.7 PoC loss and other charges**

APDOP is directed to provide PoC losses as well as other charges like PoC charges (PGCIL charges), NERLDC charges and Reactive charges etc. along with Petition. Refer the Annexure-II & III.

### **8.8 Energy Audit for Energy Accounting**

The Commission observes a huge loss of Energy what APDOP purchases which is theoretically not justifiable at all. So, it is an ardent need for APDOP to conduct a full fledge energy auditing of the complete distribution network. If necessary outsourcing of Energy accounting may be carried out for one-time basis by Accredited Energy Auditing Agency.

### **8.9 Discrepancy in Energy drawl & Projected Data**

APDOP is directed to apply the latest available data for an accurate load forecasting and future projection. APDOP may use better statistical tool for proper load forecasting.

### **8.10 T&D Losses & Conducting Energy Audit**

APDOP should conduct energy audit and assess losses accurately in the distribution system. For carrying out energy audit, meters are required to be provided for all the feeders at 220 KV, 132 KV, 33KV & 11 kV levels and also at all the distribution transformers. Energy audit shall help to identify high loss areas to take remedial measures. The APDOP is also directed to compile the following information:

Sl No	Category of Feeder	No's of Feeder metered	No's of Feeder unmetered
1	220 kV		
2	132 kV		
3	33 kV		
4	11 kV		
5	Distribution Transformers		

### **8.11 Sale of Power outside the State**

The Commission is in the opinion that APDOP should avoid purchase of surplus power to sale outside the state at an average rate. This attracts loss to APDOP hence the Commission does not encourage such sale of power outside the state and directs APDOP not to involve in such a loss proposition. For any such future transaction if required, then APDOP has to furnish necessity of such transaction along with relevant details.

However, the Commission approves the sale of Power outside the state for 2018-19 only.

### **8.12 Introduction of Slab based tariff**

The APDOP did not conduct the techno-commercial study for assessing the feasibility of introducing Unit Consumed Slab Based Tariff w.e.f FY 2014-15 as directed by the Commission in its tariff order 2013-14 as it did not make any proposal to this effect in their Tariff Petition for the FY 2014-15, 2015-16, 2016-17, 2017-18 and 2018-19. During the last SAC Meeting, it was decided that slab based tariff shall be introduced and the APDOP shall propose the same in its tariff petition of 2018-19 which the APDOP has not done. However, the APDOP is again directed to conduct this exercise at the earliest and appraise the Commission for introducing it. Any difficulty felt by the APDOP in introducing this may be shared by the APDOP with the Commission.

This will have an added advantage to encourage the habit of energy conservation amongst the consumers.

In this regard, APDOP is directed to incorporate slab based Tariff and minimum charges in their next petition. Accordingly, APDOP has to analyse and define judiciously the tariff slabs and minimum charges for various consumer categories and invariably submit the details along with the next Tariff Petition for FY 2019-20. APDOP may consider the below table as reference.

Consumer Category	Existing Rate(Rs/k Wh)	Consumption/M onth	Proposed Tariff(Rs/k Wh)	Minimum Charges(Rs/kW/m onth)
<b>Non Commercial Consumers ( Domestic LT &amp; HT)</b>				
1- Phase,230 V	4	0-50 Units		
		51-100 Units		
		101-200 Units		
		201-400 Units		
		401 Units & Above		
3-Phase,400V	4	0-100 Units		
		101-200 Units		
		201-300 Units		
		301-500 Units		
		500 Units & Above		
KJP & BPL Connection	2.65	0-50 Units		
		51-100 Units		
		101-200 Units		
		201 Units& above		
3-Phase,11kV	3.4			
3-Phase,33kV	3.25			
<b>Public Lighting &amp; Water Supply Consumers(LT &amp; HT)</b>				
1-Phase,230 Volt	5.10	0-50 Units		
		51-100 Units		
		101-200 Units		
		201-400 Units		
		401 Units & Above		
3-Phase,400 Volt	5.10	0-100 Units		
		101-200 Units		
		201-300 Units		
		301-500 Units		
		500 Units & Above		
3-Phase,11kV	4.20			
3-Phase,33kV	4.00			

<b>Agricultural Consumers(HT &amp; LT)</b>				
1-Phase,230 Volt	3.1	0-50 Units		
		51-100 Units		
		101-200 Units		
		201-400 Units		
		401 Units & Above		
3-Phase,400 Volt	3.1	0-100 Units		
		101-200 Units		
		201-300 Units		
		301-500 Units		
		500 Units & Above		
3-Phase,11kV	2.75			
3-Phase,33kV	2.65			
<b>Industrial Consumers(HT &amp; LT)</b>				
1-Phase,230 Volt	4.3	0-50 Units		
		51-100 Units		
		101-200 Units		
		201-400 Units		
		401 Units & Above		
3-Phase,400 Volt	4.3	0-100 Units		
		101-200 Units		
		201-300 Units		
		301-500 Units		
		500 Units & Above		
3-Phase,11kV	3.85			
3-Phase,33kV	3.5			
3-Phase,132kV	3.35			
<b>Bulk Mixed Consumers</b>				

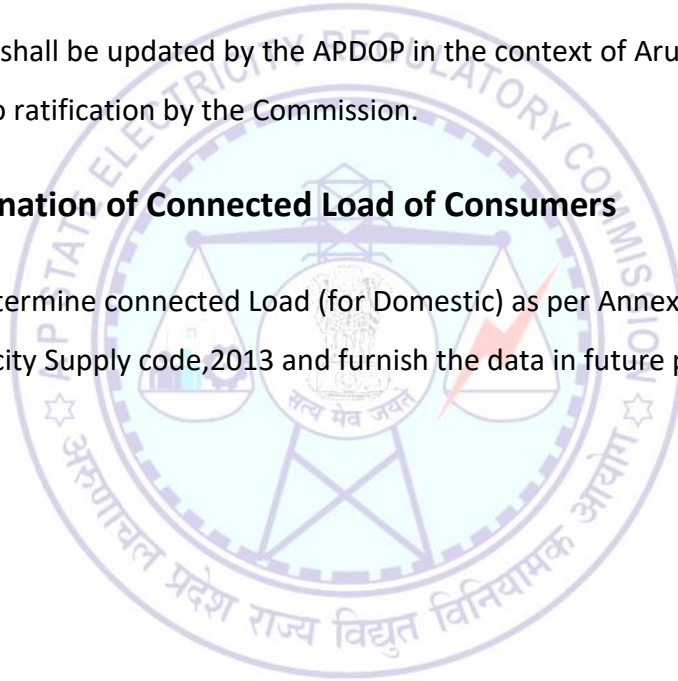
3-phase,11kV	3.75			
3-Phase,33kV	3.4			
3-Phase,132kV	3.25			
<b>Temporary Consumer(LT &amp; HT)</b>				
LT & HT	6.35			

### 8.13 Updating of cost data accounts

Cost Data Book shall be updated by the APDOP in the context of Arunachal Pradesh, and is subject to ratification by the Commission.

### 8.14 Determination of Connected Load of Consumers

APDOP shall determine connected Load (for Domestic) as per Annexure 11.8 of APSERC, Electricity Supply code,2013 and furnish the data in future petitions.



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## 9. Tariff Philosophy and Design

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### 9.1 Tariff Principles

8.1.1 The Commission in determining the ARR of APDOP for the FY 2018-19 and the Retail Supply tariff has been guided by the provisions of the Electricity Act, 2003, the National Tariff Policy, 2016, Regulations on Terms and Conditions of Tariff issued by the Central Electricity Regulatory Commission (CERC) and Regulations on Terms and Conditions for determination of Tariff notified by the APSERC. Section 61 of the Act lays down the broad principles, which shall guide determination of retail tariff. As per these principles the tariff should progressively reflect the cost of supply and also reduce cross subsidies within the period to be specified by the Commission. The Act also lays special emphasis on safeguarding consumer interests and also requires that the cost should be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by the factors, which encourage competition, efficiency, economical use of resources, good performance and optimum investment. NTP notified by Gol provides comprehensive guidelines for determination of tariff and also working out of the revenue requirement of power utilities. The Commission has endeavoured to follow these guidelines as far as possible.

8.1.2 The Electricity Act, 2003 requires consideration of MYT principles and Tariff Policy mandates that the MYT framework be adopted for determination of tariff from 1st April 2006. Though APSERC's Multi Year Tariff Regulations, 2013 has been made effective w.e.f 23rd October'2013, APDOP has filed the petition in accordance to Tariff Regulations, 2011 citing the reason of lack of requisite and reliable data required for MYT Regime. The present MIS and regulatory reporting system of the APDOP is not adequate for any such exercise at this stage. There has been no initiative taken up to assess voltage wise losses in the absence of metering of feeders, distribution transformers and consumers. Technical and commercial losses are yet to be segregated at quantified voltage wise. Moreover, APDOP has to start preparing/ compiling its Annual Accounts, profit-

loss accounts, balance sheet at the level of the Head of the Deptt. in the manner directed by the Commission in its directives in Chapter-8. Under these conditions it would not be practicable to implement the MYT framework this year. In view of the above and considering the plea of APDOP, the Commission has granted exemption for this year but strictly directs APDOP to file the Tariff Petition from next year in accordance with the MYT, Regulations.

8.1.3 The Tariff Policy mandates that Tariff should be within plus/ minus 20% of the average cost of supply by 2010-11 and requires Commissions to lay down a road map for reduction of cross subsidy. But it is not possible for the Commission to lay down the road map for reduction of cross subsidy, mainly because of lack of data regarding cost of supply at various voltage levels. APDOP has not furnished the voltage-wise network cost. The Commission has gone on the basis of average cost of supply in the absence of relevant data for working out consumer category wise cost of supply.

## 9.2 Tariff categories

1. **Domestic**
  - a) Kutir Jyoti
  - b) Domestic LT
  - c) Domestic HT
2. **Commercial**
  - a) Commercial LT
  - b) Commercial HT
3. **Public Lighting & Water Works**
  - a) Public Lighting & Water works LT
  - b) Public Lighting & Water Works HT
4. **Agriculture**
  - a) Agricultural LT
  - b) Agricultural HT
5. **Industrial**
  - a) Industrial LT
  - b) Industrial HT



**6. Mixed Bulk Consumers HT**

**7. Temporary Consumers LT**

**9.3 Approved Tariff by the Commission for FY 2018-19**

Tariff proposed by the APDOP and approved by the Commission is shown in Table below:

The Tariff schedule indicating category wise Tariff, miscellaneous charges and general terms and conditions of supply as approved by the Commission are attached in Schedule I, II and III.

**Table 43 Approved Tariff Structure by the Commission for FY 2018-19**

Sl no	Category of Consumers	Existing Tariff	Proposed Tariff	Approved Tariff	
1	Domestic	1 - Phase, 230 Volt	4.00	4.00	4.00
2		3 - Phase, 400 Volt	4.00	4.00	4.00
3		1 - Phase, 230 Volt KJP & BPL connections	2.65	2.65	2.65
4		3 - Phase, 11 KV	3.40	3.40	3.40
5		3 - Phase, 33 KV	3.25	3.25	3.25
6	Commercial	1 - Phase, 230 Volt	5.00	5.00	5.00
7		3 - Phase, 400 Volt	5.00	5.00	5.00
8		3 - Phase, 11 KV	4.20	4.20	4.20
9		3 - Phase, 33 KV	4.00	4.00	4.00
10	Public Lighting & Water Supply	1 - Phase, 230 Volt	5.10	5.10	5.10
11		3 - Phase, 400 Volt	5.10	5.10	5.10
12		3 - Phase, 11 KV	4.20	4.20	4.20
13		3 - Phase, 33 KV	4.00	4.00	4.00
14	Agricultural	1 - Phase, 230 Volt	3.10	3.10	3.10
15		3 - Phase, 400 Volt	3.10	3.10	3.10
16		3 - Phase, 11 KV	2.75	2.75	2.75

SI no	Category of Consumers	Existing Tariff	Proposed Tariff	Approved Tariff
17	3 - Phase, 33 KV	2.65	2.65	2.65
18	Industrial	1 - Phase, 230 Volt	4.30	4.30
19		3 - Phase, 400 Volt	4.30	4.30
20		3 - Phase, 11 KV	3.85	3.85
21		3 - Phase, 33 KV	3.50	3.50
22		3- Phase, 132 KV	3.35	3.35
23	Bulk Mixed	3 - Phase, 11 KV	3.75	3.75
24		3 - Phase, 33 KV	3.40	3.40
25		3- Phase, 132 KV	3.25	3.25
26	Temporary	1 - Phase, 230 Volt	6.50	6.50
27		3 - Phase, 400 Volt	6.50	6.50

This order shall come into force with effect from 01-06-2018 and shall remain effective till 31<sup>st</sup> march 2019. The order shall be given wide publicity by the petitioner for information to the general public within seven days of the issue of the order positively.

**Date:**

**(R.P. Singh)**

**Place: Itanagar**

**Chairman, APSERC**

## 9.4 Schedule-I

### Category-1 Non- Commercial Consumers (Domestic)

**Definition:** The consumers under this category are defined as consumers using the electrical energy for domestic and non-profit purpose such as lights, fans, heating devices, Televisions, VCR/VCP, Radio, Refrigerator, Air - conditioners, lift motors and all others appliances only for bonafide residential & non-residential but non-commercial use. This will also cover consumption of energy supplied for Government owned Residential and Non-Residential Buildings Educational and Research Institutions. Charitable Institutions, Government owned Hospitals and Dispensaries, farm houses, Religious premises like Churches, Temples, Mosques, community halls and any other Institutions, Religious printing press (not engaged in commercial activity or private again, excluding those which are specially covered under other categories of this Tariff) or classifications as may be amended by the Commission from time to time.

### Category -2 Commercial Consumers (Non Industrial)

**Definition:** The consumers under this category are defined as non -industrial commercial consumers such as installations of commercial places, Government undertaking, public sector undertaking, Commercial houses, markets, and optical houses. Restaurant, Bars, tailoring shops, Refreshment and tea stalls, show-cases of advertisement, Hoarding theatres, cinemas, Hotels, Lodging and Boarding, Private nursing Homes and Hospitals, religious Hospitals, private run schools and Hostels and Boarding facilities and other educational institute demanding fees, photographic studios, Battery charging units, repair workshops and Newspapers press (newspaper printing press only) Petrol Pumps, etc or classifications as may be amended by the Commission from time to time.

### Category - 3 Public Lighting and Water Supply Consumers

**Definition:** This category of the consumers shall be applicable to public Street Lighting Systems in Municipality Towns, sub-Towns / Villages, etc. including Signal system, Ropeways on Roads and park lighting in areas of Municipality Town. Sub - town /

villages. Pumps & equipment for public water supply systems and Treatment plants and associated applications shall also be covered in this category or classifications as may be amended by the Commission from time to time.

#### **Category - 4 Agricultural Consumers**

**Definition:** The consumers in agricultural fields /firms for the purpose of (a) Pumps field lighting & other applications for farmers in their irrigation and cultivation & not connected to any attached commercial or industrial installations in the agricultural field of farm or classifications as may be amended by the Commission from time to time.

#### **Category - 5 Industrial Consumers**

**Definition:** The Industrial consumers shall cover all Government registered Industrial power consumers which are not covered by category No.2 (supply for Commercial Purposes), such as steel fabrication, motor body builders, power handloom industry, poultry farming, pisciculture, prawn culture, floriculture in green house, mushroom production, cold storage unit of pisciculture, agriculture, horticulture and any other type of industry where raw material is covered into finished products with the help of electrical motive power, colour photo labs. Government owned printing press and other printing press (Primarily engaged in printing for commercial gain), and government owned, public sector industries, etc. or classifications as may be amended by the Commission from time to time.

**Note:** All Non-Industrial & Commercial consumers within the same complex under a single service connection shall also be treated as industrial consumers if the total distribution is integrated in the industrial complex and load on non-industrial side is below 10% of the total sanctioned load.

#### **Category - 6 Bulk Mixed Consumers**

**Definition:** The Bulk mixed consumers are those consumers drawing bulk powers at HT voltage having a mixed load of all categories of consumers such as a village, a town, a city, a colony, or a State or Region etc. drawing power at one metering point. It will

also include a University Campus, All India radio complex College complex. Defence Installations, Railway complex, Government Complexes, etc. who arranges their own distribution of power with approval of competent authority. This will not include Industrial complex which may consist mixed load category 1, 2, 3 & 5 or classifications as may be amended by the Commission from time to time.

### **Category - 7 Temporary Consumers**

**Definition:** A Temporary consumers are those who would consume electricity for a limited period of time, which could be determined at its initial application itself such as:

- a) For marriage, Puja, religious / public function / gathering, festivals and ceremonies which are of temporary nature up to a period not exceeding 90 days in case of metered supply.

#### **Supply systems:**

- a) Single phase, 50Hz, 230 Volts.
- b) Three Phases, 50 Hz, 400 Volts.

**Note:** Temporary connection shall be given at HT supply only on specific agreements of supply.

#### **Notes:**

- a) Temporary services connection shall require prior approval from the next higher load sanctioning authority.
- b) The energy cost as per tariff above along with connection and disconnection charge will be realized in advance from the applicant before making the supply available to him.
- c) Applicant at his own expenses shall arrange the complete wiring for which temporary supply of power is required. It will also be the responsibility of the applicant to ensure that the wiring conforms to the technical & safety requirement as specified by authorities.

## 9.5 Schedule- II – Miscellaneous Charges

1. **Meter Rent:** The Energy meter and its allied instruments required for registering energy consumed as deemed to be under the ownership of the supplier, shall attract following monthly rental charges against regular maintenance, repair and labour cost of its replacement.

- I. **Prepaid Consumers:** - As an incentive monthly rent for energy meter for prepaid consumer shall be NIL.
- II. **Post-paid Consumers:-** For post-paid consumers monthly rent for energy meter if provided by APDOP shall be as per following table. In case the energy meter is purchased and installed at the cost of consumers then there shall be no meter rent.

Sl.	Voltage Level	Energy Meter Specification	Rent. Rs/ Month
1.	Meter Rent		
A	LT Metering- AC		
	i.	Single Phase 220V	16.00
	ii.	Three Phase 400 V between phases ( without CT)	26.00
	iii.	Three Phase 400 V between phases ( with CT)	68.00
B	HT Metering- AC Complete Energy meter with CT/PT & other monitoring and indication requirement for AC Three phase HT supply		
	i.	11 KV system	670.00
	ii.	33 KV system	3350.00
	iii.	132 KV system	13401.00
C	Shifting Charges for Meters		
	i.	if resulted from reconstruction / modification of building and on the request of the consumer	Per shifting Rs. 168.00
	ii.	If, the shifting is in the interest of the department.	Free of cost

2.	Replacement of the energy meter and its associated fittings and equipment shall be as per provisions of A.P. Electricity Supply Code-		
	i.	The supplier shall replace the meters & the allied fitting & the equipment free of cost in case of scheduled replacement under normal wear & tear of ageing or technology change.	
	ii.	The Consumer shall bear all the necessary cost in case of temporary shifting of the meters & its associated fittings and the equipment.	

	iii.	The Consumers shall have to bear the cost if replacement due to negligence of the consumer or losses attributable to the negligence of the consumer.	
3.		Charges for testing of Meters at the request of consumers	For each time
	i.	For AC Single Phase LT Energy Meter	134.00
	ii.	For energy meter without CT for AC three phase LT Supply	202.00
	iii.	For energy meter with CT for AC three phase LT supply	336.00
	iv.	For energy meter AC three phase HT supply	670.00

#### 4. Testing of Consumer's Installation:

##### Testing & Inspection charges of consumer's installation: -

Should any consumer require the services of the supplier for testing, Inspection & certification of the supplier's electrical installation on technical grounds, following charges shall be paid in advance along with the application.

Sl.	Testing at Consumer Installation	Charges per Installation in Rs.
i.	1 phase service Wiring installations	202.00
ii.	3 phase service Wiring installations	320.00
iii.	HT Line installation of 11 KV system	670.00
iv.	HT Line installation of 33 KV & above system	1336.00

#### 5. Disconnection and reconnection:

Charges towards each disconnection and reconnection as the case may be whether for punitive measures or on the request of the consumer, shall be as follows:

Sl.	Category of Work	Charges per Consumer (Rs)
i.	All categories of connections	134.00
ii.	Disconnection only	134.00

**6. Charges for new service connection or Replacement of connection wire,** cut out, fuse etc. or any other works / jobs etc. shall be guided as per the provisions of the A.P. Electricity Supply Code-2013.

Service	Fee (Rs)
Special meter reading on Consumer's Request	50
Calibration of Check meter upon request	100

**7. Re-rating of Installation & revised load sanction:**

Fees for rerating of the consumer's installation at the request of the consumer & for revised load sanction-

- I. Rs. 134/- per case for LT supply voltage systems.
- II. Rs. 670/- per case for HT supply voltage systems.

**8. Security amount for providing Electric Plant & Meter to the premises of Consumers: (interest bearing/ refundable)**

All consumers except under special provisions made under Govt. policy, such as under KJP or BPL household electrification, interest bearing meter security shall have to be paid against the energy meter provided. The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013.

Sl.	Meter Specification	Security Amount (Rs)
i.	For AC single phase LT supply of connected load	1336.00
ii.	For AC three phase LT supply of connected (without CT) load	2681.00
iii.	For AC three phase LT supply CT operated	4691.00
iv.	For AC three phase HT supply, CT & PT operated	33448.00

**Note:** In case of deposit works/ or of a new connection where this amount is incorporated into an estimate, then no separate security amount on account of the above is required to be deposited by the consumer.



**8.1. Security Deposit: (interest bearing refundable / adjustable)**

To safe guard the Licensee against default of non-payment of bills against energy consumed, interest bearing security deposit shall be deposited by the consumer in advance before the service is provided in accordance to the provisions of A.P. Electricity Supply Code-2013 (KJP & BPL household connection shall not pay Security deposit as per present policy of the Govt.) The interest rate shall be as defined in Para 4.119 of the Arunachal Pradesh Electricity Supply Code-2013. A sample calculation showing Security Deposit payable per KW of connected load for new connections is given below:

**RATES OF SECURITY DEPOSIT (As per A.P. Electricity Supply Code-2013)**

Formula for calculating security Deposit for new connection = Load x Load Factor of the category in which consumer falls as per Electricity supply code x (Billing cycle + 30 days) x 24 hours x Current Tariff)

Sl.No.	Category of Consumers	As per A.P. Electricity Supply Code, 2013 (Per KW)
1.	Domestic Category:	
	LT 230 Volts	Rs. 1728.00
	LT 440 Volts	Rs. 1728.00
	HT 11 KV	Rs. 1469.00
	HT 33 KV	Rs. 1404.00
	KJP	Nil as per Govt. Policy
2.	Commercial Category	
	LT 230 Volts	Rs. 3600.00
	LT 440 Volts	Rs. 3600.00
	HT 11 KV	Rs. 3024.00
	HT 33 KV	Rs. 2880.00
3.	Public Lighting:	
	LT 230 Volts	Rs 2938.00
	LT 440 Volts	Rs. 2938.00
	11 KV	Rs .2419.00
	33 KV	Rs. 2304.00
4.	Agricultural Consumers:	
	LT 230 Volts	Rs 1473.00

	LT 440 Volts	Rs. 1473.00
	11 KV HT	Rs. 1307.00
	33 KV HT	Rs. 1259.00
5.	Industrial Consumers:	
	LT 230 Volts	Rs. 3096.00
	LT 440 Volts	Rs. 3024.00
	HT 11 KV - Single shift	Rs. 2772.00
	HT 11 KV - Double shift	Rs. 4158.00
	HT 11 KV - Continuous	Rs. 5400.00
6.	Industrial Consumers: 33 KV	
	HT 33KV - Single shift	Rs. 2448.00
	HT 33KV - Double shift	Rs. 3672.00
	HT 33KV - Continuous	Rs. 4896.00
7.	Industrial Consumers: 132 KV & Above	
	Single shift	Rs. 2340.00
	Double shift	Rs. 3510.00
	Continuous	Rs. 4680.00
8.	Bulk Mixed Consumers:	
	HT 11 KV (LF-50%)	RS. 2700.00
	HT 33 KV (LF-50%)	Rs. 2448.00
	EHT 132 KV & above (LF-50%)	Rs. 2340.00
9.	Public Water Supply	
	LT (220 V & 400 V )	Rs. 2424.00
	HT 11 KV	Rs. 1996.00
	HT 33 KV	Rs. 1901.00

## 8.2. Charges for Testing of Transformer Oil:

The departmental charge for testing oil of private owned transformers for each sample of oil shall be charged Rs. 134.00 per sample test.

## 9.6 Schedule - III General Conditions of Supply

(as per Annexure 11.20 of APSERC, Electricity Supply Code, 2013 Regulations)

1. **Payment:** The bill shall be paid in full inclusive of all arrears if the consumer within the last day for payment indicated on the body of the bill. However the consumer making payment in full within due date indicated on the body of the bill will be entitled to avail rebate.
2. **Application for Connection:** The Consumer shall apply for service connection as per the provisions of A.P. Electricity Supply Code-2013.
3. **Surcharge/Penalty for late payment of bill:** If payments is not received within last date for payment, the bill will be treated as invalid and the amount outstanding will be carried over to the next month's bill as arrear. Simple interest @2% will be charged as penalty on outstanding amount each 30 days successive period or part thereof until the amount is paid in full.
4. **Sanctioning Authority:** Service connection shall be given only after load sanction by the competent authority as per delegation of power accorded as under.

### Categories of consumers

- |   |                 |
|---|-----------------|
| a. AE (E) up to 5 KW of connected load-         | 1,2,3,4,5 & 7   |
| b. EE up to 50 KW of connected load-            | 1,2,3,4,5 & 7   |
| c. SE up to 500 KW of connected load-           | 1,2,3,4,5,6 & 7 |
| d. CE Full power of connected load above 500KW- | 1,2,3,4,5,6 & 7 |

Security deposit and cost of service connection shall have to be deposited in advance on receipt of technically sanctioned estimate.

### 5. Rebate:

**For Post-Paid Consumers:** Rebate of 3.0% on the bill amount shall be available to the billed amount on current bills if the dues are cleared within due dates. The electricity bill shall show the amounts to be paid within due date (after 3% discount) and payable after due date.

**For Pre-Paid Consumers:** Rebate of 5% on re-charge amount shall be made available for pre-paid consumers.

**6.Single Point Delivery:** The above tariff is based on the supply being given through a single point of delivery and metering at one voltage. Supply at other points at other voltage shall be separately metered and billed for and shall be considered as separate connection.

**7.Mixed Load:** Mixed domestic and commercial establishment shall be treated as commercial establishments if the load on commercial side is more than 10% of the total connected load.

**8.Metering Point:** The metering point shall be the point of delivery of energy at the declared nominal voltage.

**9.Billing Cycle:** Normally the billing cycle shall on monthly basis.

**10.Minimum charge:** A consumer shall not have to pay the minimum charge and have been abolished.

**11.Ownership meter:** The energy meter and its allied instrument used for registration of energy data only shall deem to be the property of the supplier and the consumer shall have no right over it for ownership after the commencement of supply.

All consumers getting their supply at HT but metered on LT side of the transformer shall be charged an additional 3% over the metered consumption.

**12. Maintenance & Replacement of Energy meter:** It shall be governed by the provisions of A.P. Electricity Supply Code-2013.

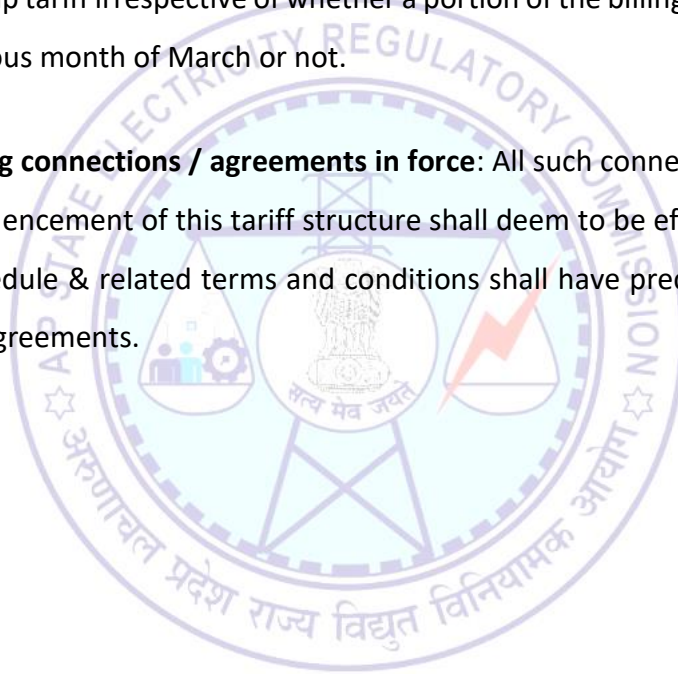
**13.Default:** A Consumer shall be automatically called a defaulter if he fails to clear all the outstanding & current bills accumulated for a period of 2 months. On being a defaulter, the consumer shall be liable for disconnection after adjustment of security deposit against the energy bill account

After adjustment of security deposit, if the consumer desires for reconnection the consumer shall have to clear all outstanding dues and pay fresh security deposit.

**14. Watch and Ward of Meters:** The consumers shall be responsible for the safe custody of meter(s), MCBs/CB etc. if the same are installed within the consumer's premises. The consumer shall promptly notify the licensee about any fault, accident or problem noticed with the meter.

**15. Billing :** All the bills raised within billing cycle of April month shall have the stepped-up tariff irrespective of whether a portion of the billing cycle falls within the previous month of March or not.

**16. Existing connections / agreements in force:** All such connections the before the commencement of this tariff structure shall deem to be effected under this tariff schedule & related terms and conditions shall have precedence over the existing agreements.



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**10.ANNEXURES**

**Annexure I. PGCIL, NERLDC and Reactive charges for FY 2016-17**

Month	NERLDC Charges (Rs Crs)	PGCIL Charges (Rs Crs)
Apr-16	0.064	2.19
May-16	0.062	2.19
Jun-16	0.061	2.19
Jul-16	0.061	4.52
Aug-16	0.061	4.52
Sep-16	0.061	4.52
Oct-16	0.061	2.92
Nov-16	0.061	2.92
Dec-16	0.044	2.92
Jan-17	0.044	2.42
Feb-17	0.044	2.42
Mar-17	0.044	2.42
<b>Total</b>	<b>0.669</b>	<b>36.15</b>

**Reactive Charges**

Sl.No.	Beneficiaries	Payable to Pool	Receivable From Pool	From	To
1	<b>ARUNACHAL PRADESH</b>	44380.83	0.00	04-04-2016	10-04-2016
2		28560.09	0.00	11-04-2016	17-04-2016
3		6686.55	0.00	18-04-2016	24-04-2016
4		9433.71	0.00	25-04-2016	01-05-2016
5		11505		02-05-2016	08-05-2016
6		3125.07		09-05-2016	15-05-2016
7		16254.81		16-05-2016	22-05-2016
8		3470.61		23-05-2016	29-05-2016
9		9945.78		30-05-2016	05-06-2016
10		28014.48		06-06-2016	12-06-2016
11		25025.91		13-06-2016	19-06-2016

APERC order on ARR & Tariff Petition of APDOP for FY 2018-19

Sl.No.	Beneficiaries	Payable to Pool	Receivable From Pool	From	To
12		19931.34		20-06-2016	26-06-2016
13		17310.93		27-06-2016	03-07-2016
14		5109.78		04-07-2016	10-07-2016
15		37478.22		11-07-2016	17-07-2016
16		25974.78		18-07-2016	24-07-2016
17		30255.81		25-07-2016	31-07-2016
18		53270.1		01-08-2016	07-08-2016
19		27051.96		08-08-2016	14-08-2016
20		30139.59		15-08-2016	21-08-2016
21		24632.01		22-08-2016	28-08-2016
22		41584.53		29-08-2016	04-09-2016
23		39852.15		05-09-2016	11-09-2016
24		44254.86		12-09-2016	18-09-2016
25		44103.54		19-09-2016	25-09-2016
26		0		26-09-2016	02-10-2016
27		45998.16		03-10-2016	09-10-2016
28		46327.32		10-10-2016	16-10-2016
29		51889.5		17-10-2016	23-10-2016
30		61176.18		24-10-2016	30-10-2016
31		78413.79		31-10-2016	06-11-2016
32		109609.11		07-11-2016	13-11-2016
33		136540.17		14-11-2016	20-11-2016
34		110660.94		21-11-2016	27-11-2016

APERC order on ARR & Tariff Petition of APDOP for FY 2018-19

Sl.No.	Beneficiaries	Payable to Pool	Receivable From Pool	From	To
35		89554.14		28-11-2016	04-12-2016
36		76840.53		05-12-2016	11-12-2016
37		64308.66		12-12-2016	18-12-2016
38		69683.25		19-12-2016	25-12-2016
39		80929.29		26-12-2016	01-01-2017
40		64023.57		02-01-2017	08-01-2017
41		55929.9		09-01-2017	15-01-2017
42		45046.95		16-01-2017	22-01-2017
43		46044.96		23-01-2017	29-01-2017
44		58175.91		30-01-2017	05-02-2017
45		61016.28		06-02-2017	12-02-2017
46		69297.93		13-02-2017	19-02-2017
47		73493.55		20-02-2017	26-02-2017
48		72713.55		27-02-2017	05-03-2017
49		33201.48		06-03-2017	12-03-2017
50		48776.13		13-03-2017	19-03-2017
51		48244.95		20-03-2017	26-03-2017
52		23642.19		27-03-2017	02-04-2017
		2348890.83			



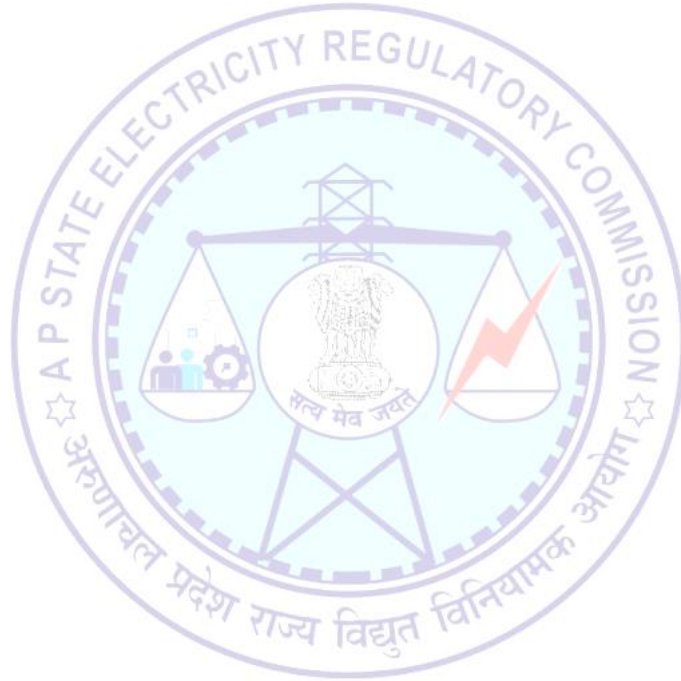
**Annexure II. Network/Transmission loss for NER**

TO DATE	APPLICABLE PoC LOSS %								
	I	II	III	IV	V	VI	VII	VIII	IX
10 April 2016	2.5	2.25	2	1.75	1.5	1.25	1	0.75	0.5
17 April 2016	2	1.75	1.5	1.25	1	0.75	0.5	0.25	0
24 April 2016	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4	0.15
01 May 2016	2.45	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45
08 May 2016	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
15 May 2016	2	1.75	1.5	1.25	1	0.75	0.5	0.25	0
22 May 2016	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3	0.05
29 May 2016	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4	0.15
05 June 2016	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
12 June 2016	2	1.75	1.5	1.25	1	0.75	0.5	0.25	0
19 June 2016	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
26 June 2016	2.5	2.25	2	1.75	1.5	1.25	1	0.75	0.5
03 July 2016	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
10 July 2016	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
17 July 2016	2.45	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45
24 July 2016	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
31 July 2016	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
07 August 2016	2.65	2.4	2.15	1.9	1.65	1.4	1.15	0.9	0.65
14 August 2016	2.65	2.4	2.15	1.9	1.65	1.4	1.15	0.9	0.65
21 August 2016	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3
28 August 2016	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3
04 September 2016	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3
11 September 2016	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4	0.15
18 September 2016	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6	0.35
25 September 2016	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6	0.35
02 October 2016	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3
09 October 2016	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
16 October 2016	2.1	1.85	1.6	1.35	1.1	0.85	0.6	0.35	0.1
23 October 2016	2.4	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4
30 October 2016	2.6	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6
06 November 2016	2.25	2	1.75	1.5	1.25	1	0.75	0.5	0.25
13 November 2016	2.25	2	1.75	1.5	1.25	1	0.75	0.5	0.25
20 November 2016	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6	0.35
27 November 2016	2.4	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4
04 December 2016	2.4	2.15	1.9	1.65	1.4	1.15	0.9	0.65	0.4
11 December 2016	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6	0.35
18 December 2016	2.25	2	1.75	1.5	1.25	1	0.75	0.5	0.25
25 December 2016	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
01 January 2017	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2
08 January 2017	2.25	2	1.75	1.5	1.25	1	0.75	0.5	0.25
15 January 2017	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3	0.05
22 January 2017	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45	0.2

APSERC order on ARR & Tariff Petition of APDOP for FY 2018-19

TO DATE	APPLICABLE PoC LOSS %								
29 January 2017	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55	0.3
05 February 2017	2.45	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45
12 February 2017	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
19 February 2017	2.57	2.32	2.07	1.82	1.57	1.32	1.07	0.82	0.57
26 February 2017	2.45	2.2	1.95	1.7	1.45	1.2	0.95	0.7	0.45
05 March 2017	2.5	2.25	2	1.75	1.5	1.25	1	0.75	0.5
12 March 2017	2.6	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6
19 March 2017	2.55	2.3	2.05	1.8	1.55	1.3	1.05	0.8	0.55
26 March 2017	2.9	2.65	2.4	2.15	1.9	1.65	1.4	1.15	0.9
02 April 2017	2.6	2.35	2.1	1.85	1.6	1.35	1.1	0.85	0.6

Average Transmission loss for NER = 2.7% (Source: NERLDC)



**Annexure III. Public Notice**

**GOVERNMENT OF ARUNACHAL PRADESH**

**DEPARTMENT OF POWER**

No.CEP/WEZ/COM-10/TARIFF/2017-18/147-50

Dated Itanagar the 11<sup>th</sup> 04, 2018

**PUBLIC NOTICE**

1. The Department of Power, Arunachal Pradesh, the deemed Distribution Licensee for sale of power within the State of Arunachal Pradesh, under the provisions of Electricity Act 2003, has filed a petition for approval of Aggregate Revenue Requirement (ARR) and determination of retail supply. Tariff for the FY 2018-19 before the Hon'ble Arunachal Pradesh State Electricity Regulatory Commission (APSERC), under the Section 61,62 and 64 of the Electricity Act, 2003. The Summary of the ARR filed before the Commission for FY 2018-19 is as follows:

**Aggregate Revenue Requirement (ARR) for the FY 2018-19**

(Rs. In Crores)

S.L.No.	Particulars	Previous Year 2016-17 (Actual)	Current Year 2017-18 (Estimated)	Ensuing Year 2018-19 (Projected)
1	Cost of Power Purchase	292.66	289.75	287.86
2	Fuel Cost	21.25	23.38	25.71
3	Employee costs	232.79	296.21	325.84
4	O&M expenses	20.00	32.07	43.94
5	Adm. & Gen. Expenses	4.50	5.40	6.48
6	Depreciation	0.00	0.00	0.00
7	Interest charges	0.00	0.00	0.00
8	Return on equity	0.00	0.00	0.00
9	Income Tax	0.00	0.00	0.00
10	Non-tariff income	3.33	3.57	3.81
11	<b>Total revenue requirement</b>	567.87	643.23	686.02
12	<b>Less- Sale of Power outside State</b>	16.16	19.30	23.07
13	<b>Net ARR</b>	551.71	623.93	662.95

**Revenue Gap at existing tariff rates**

(Rs. In Crore)

Sl. No.	Description of Items	FY 2016-17	FY 2017-18	FY 2018-19
1	Net Aggregate Revenue Requirement (ARR)	551.71	623.93	662.95
2	Less: Projected Revenue at existing Tariff rates	140.74	147.78	155.03
3	<b>Revenue gap (1-2)</b>	410.97	476.16	507.92

**Other parameters of Tariff petition FY-2018-19**

Sl. No.	Description of Items	Details
1	Distribution Loss	44.96 %
2	Billing Efficiency	55.04 %
3	Total No. of employees	9962
4	Energy Sale within the State (MU)	408.45
5	Average cost of Supply (Rs/unit)	16.23
6	Average Revenue Realized (Rs/unit)	3.79
7	Revenue Gap (Rs/unit)	12.44

- The filing of the petition has been taken on record by the Hon'ble Commission for the Financial Year 2018-19.
- The existing Tariffs and Proposed Tariffs pursuant to Annual Revenue Requirement sought through the petition is indicated in the schedule below:

Sl no	Category of Consumers	Existing Tariff (Rs/kWh) for 2017-18	Proposed Tariff (Rs/kWh) for 2018-19
1	<b>Domestic</b>	1 - Phase, 230 Volt	4.00
2		3 - Phase, 400 Volt	4.00
3		1 - Phase, 230 Volt KJP & BPL connections	2.65
4		3 - Phase, 11 KV	3.40
5		3 - Phase, 33 KV	3.25
6	<b>Commercial</b>	1 - Phase, 230 Volt	5.00
7		3 - Phase, 400 Volt	5.00
8		3 - Phase, 11 KV	4.20
9		3 - Phase, 33 KV	4.00
10	<b>Public Lighting &amp; Water Supply</b>	1 - Phase, 230 Volt	5.10
11		3 - Phase, 400 Volt	5.10
12		3 - Phase, 11 KV	4.20
13		3 - Phase, 33 KV	4.00
14	<b>Agricultural</b>	1 - Phase, 230 Volt	3.10
15		3 - Phase, 400 Volt	3.10
16		3 - Phase, 11 KV	2.75
17		3 - Phase, 33 KV	2.65
18	<b>Industrial</b>	1 - Phase, 230 Volt	4.30
19		3 - Phase, 400 Volt	4.30
20		3 - Phase, 11 KV	3.85

Sl no	Category of Consumers	Existing Tariff (Rs/kWh) for 2017-18	Proposed Tariff (Rs/kWh) for 2018-19
21	3 - Phase, 33 KV	3.50	3.50
22	3- Phase, 132 KV	3.35	3.35
23	3 - Phase, 11 KV	3.75	3.75
24	<b>Bulk Mixed</b> 3 - Phase, 33 KV	3.40	3.40
25	3- Phase, 132 KV	3.25	3.25
26	<b>Temporary</b> 1 - Phase, 230 Volt	6.50	6.50
27	3 - Phase, 400 Volt	6.50	6.50

4. The Department of Power has proposed no any modification/alteration in existing tariff.
5. The copy of the petition referred at Para 1 above can be obtained from the office of the Chief Engineer (Power), Western Electrical Zone, Department of Power, Vidyut Bhawan, Zero Point Tiniali, Itanagar-791111, Arunachal Pradesh by the interested persons and consumers and consumers' association on any working day at a rate of Rs 250/-per set. The Petition is also available in the website of Department of Power, Arunachal Pradesh viz. [www.arunachalpower.org.in](http://www.arunachalpower.org.in) and also on the website of the Commission [www.apserc.nic.in](http://www.apserc.nic.in) and can be downloaded from there.
6. Objections/suggestion, if any on the ARR fillings and tariff proposals submitted by the Department of Power, Government of Arunachal Pradesh, may be filed with the Secretary, Arunachal Pradesh State Electricity Regulatory Commission, O.T. Building, 2nd floor, Niti Vihar Market, T.T. Marg, Niti Vihar, Itanagar – 791111 in person or through registered post or through email [atapserc-arn@gov.in](mailto:atapserc-arn@gov.in) so as to reach the Secretary, APSERC on or before\*07/05/2018 and simultaneously endorsing a copy to the Chief Engineer (Power), Western Electrical Zone, Department of Power, Itanagar, Arunachal Pradesh.
7. The Objection/suggestions as above should carry full name and postal address including contact mobile/telephone no's of the person sending the objections. If the objection is filed on behalf of any organization or any class of consumers, same should also be mentioned. It may also be specifically mentioned if the person putting in objection/comments also wants to be heard in person by the Commission.
8. The Arunachal Pradesh State Electricity Regulatory Commission (APSERC), after perusing the written objections received in response to this notice may invite such objectors as it may consider appropriate for a hearing on the specified date which will be notified by the Commission in due course through a Public Notice.

\*at least 15days' time be given from the date of Publication.

Sd/-

Chief Engineer(Power)  
Western Electrical Zone,  
Department of Power  
Vidyut Bhawan, Itanagar-791111