



**ARUNACHAL PRADESH STATE ELECTRICITY  
REGULATORY COMMISSION**

**AGGREGATE REVENUE REQUIREMENT FOR FY 2024-25 to FY  
2026-27 AND RETAIL SUPPLY TARIFF ORDER FOR FY 2024-25**

**For  
Department of Power,  
Government of Arunachal Pradesh**

**Issued on 26-07-2024**

**Arunachal Pradesh State Electricity Regulatory Commission**

**2<sup>ND</sup> FLOOR, O.T. BUILDING, NITI VIHAR MARKET, T. T.  
MARG, ITANAGAR – 791 111**

Tel No: 0360-3562791, Website: [www.apserc.nic.in](http://www.apserc.nic.in)

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**Arunachal Pradesh State Electricity Regulatory Commission (APSERC)**  
**Itanagar, Arunachal Pradesh**

**Petition No.: TP - 03 -2024**

**In the matter of:**

Determination of Aggregate Revenue Requirement (ARR) for Control Period for FY 2024-25 to FY 2026-27 and Retail Supply Tariff for FY 2024-25 based on the ARR and Tariff Petition filed by Department of Power, Government of Arunachal Pradesh.

**In the matter**

*Department of Power, Government of Arunachal Pradesh (APDOP)*

*Petitioner*

**CORAM:**

**Shri R. K. Joshi, Chairperson**

**Shri Nich Rika, Member (Law)**

**ORDER**

**(Passed on 26 July, 2024)**

1. 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 (Multi Year Tariff) Regulations, 2018 and other enabling provisions in this regard, issues this order, determining the Business Plan for FY 2024-25 to FY 2026-27 and ARR and the Retail Tariff for the Financial Year 2024-25 for supply of electricity by the Department of Power, Arunachal Pradesh (APDOP) to the consumers of electricity in the state of Arunachal Pradesh.
2. The MYT Regulations, 2018 state that the Distribution Licensee shall file the tariff petition for a FY including Business Plan for a control period, complete in all respects, along with requisite fee as prescribed in the APSERC (Fees) Regulations, 2011 and amendments thereof on or before 30<sup>th</sup> November of the preceding year. Hence, the tariff petition for the FY 2024-25 along with Business Plan should have been filed by the Licensee on or before 30.11.2023. However,

APDOP filed the Petition for FY 2024-25 along with Business Plan before the Commission on 04.01.2024. The Commission admitted the petition on 23.02.2024.

3. After verification, it was found that the petition lacked some critical information. The Commission directs the Petitioner to submit the necessary information. During “Technical Validation Session” with the Petitioner, the Commission sought additional information. The required information verbally assured to be provided by the Petitioner. The Petitioner submitted partial data in this regard, which have been considered.
4. This order consists of seven chapters that includes detailed analysis of the Business Plan for the control period, ARR and approved Retail Supply Tariff Rates for the FY 2024-25.
5. 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 and tariff schedule approved by the Commission.
6. 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.
7. This retail tariff order shall be effective from 01-07-2024 and shall remain in force till 31.03.2025, unless amended or revised.

**Date : 26- 07 - 2024**

**Place: Itanagar**

**S/d-**

**Shri Nich Rika,  
Member (Law)**

**S/d-**

**Shri R. K. Joshi  
Chairperson**

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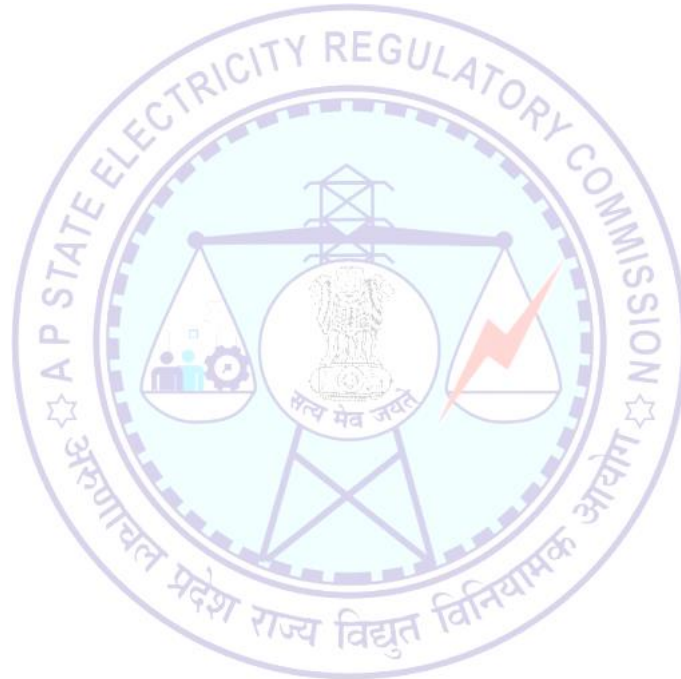
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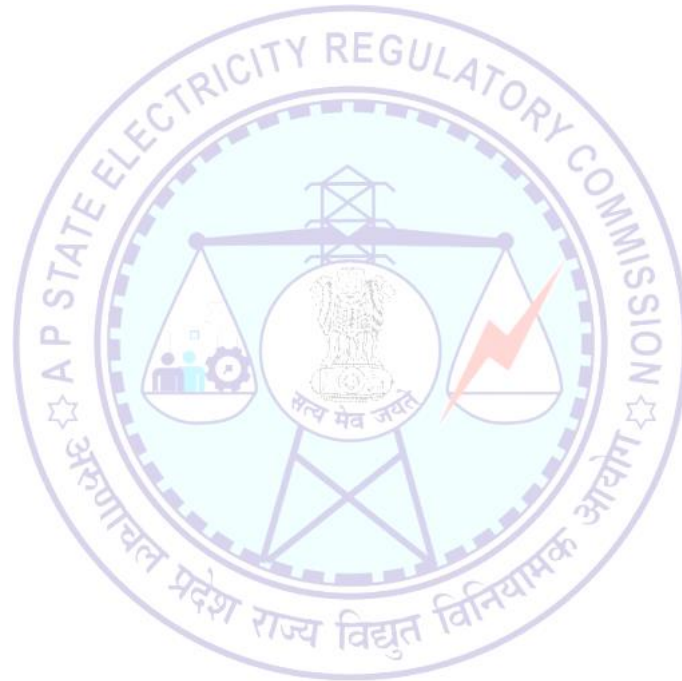


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**List of Abbreviations used**

AGBPP	Assam Gas Based Power Plant
AGTCCPP	Agartala Gas Thermal Combine Cycle Power Plant
APDOP	Arunachal Pradesh Department of Power
APSERC	Arunachal Pradesh State Electricity Regulatory Commission
ARR	Aggregate Revenue Requirement
AT&C	Aggregate Technical and Commercial
BPL	Below Poverty Line
CAGR	Compound Annual Growth Rate
DG	Diesel Generating
DHPD	Department of Hydro Power Development
FY	Financial Year
HEP	Hydro Electric Project
HT	High Tension
KJP	Kutir Jyoti Program
kV	Kilo Volt
kW	Kilo Watt
LT	Low Tension
MU	Million Unit
MW	Mega Watt
NLDC	National Load Dispatch Centre
NHPC	National Hydro Power Corporation
NTPC	National Thermal Power Corporation
NEEPCO	North Eastern Electric Power Corporation
NERLDC	North Eastern Regional Load Dispatch Centre
NERPC	North Eastern Regional Power Committee
O&M	Operation and Maintenance
OTPC	ONGC Tripura Power Company
PGCIL	Power Grid Corporation of India Ltd
RLDC	Regional Load Dispatch Centre
R&M	Repair and Maintenance
SHEP	Small Hydro Electric Project

SLDC	SLDC State Load Dispatch Centre
SPSU	SPSU State Public Sector Undertaking
T&D	T&D Transmission and Distribution



# Chapter 1: Introduction

## 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 **Arunachal Pradesh State Electricity Regulatory Commission** has been functioning with effect from 02.03.2011 with the objective and purpose for which the Commission has been established i.e., to discharge its functions as per Section 86 of the Act. The Commission had been functioning as per provisions of prevalent laws/rules till the retirement of Shri R P Singh, the then Chairperson of the Commission from the post of Chairperson on 31.12.2019. The Post of Chairperson remained vacant till 17.07.2023 and hence no regulatory activities were taken up during this intervening period. After a gap of about three and half years the two-member Commission was constituted vide notified No. PWRS/W-1075/2004/Pt/5715/37 dated 19.07.2023. Thereafter, the Commission continues to discharge the functions as envisaged in the Act.

## 1.2. Functions of the State Commission

Section 86 of the Act, provides as follows:-

### **“86. Functions of State Commission. -**

*(1) 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 this Act.*
- (2) *The State Commission shall advise the State Government on all or any of the following matters, namely: -*
- (i) *promotion of competition, efficiency and economy in activities of the electricity industry;*
  - (ii) *promotion of investment in electricity industry;*
  - (iii) *reorganization and restructuring of electricity industry in the State;*
  - (iv) *matters concerning generation, transmission, distribution and trading of electricity or any other matter referred to the State Commission by State Government.*
- (3) *The State Commission shall ensures transparency while exercising its powers and discharging its functions.*
- (4) *In discharge of its functions, the State Commission shall be guided by the National Electricity Policy, National Electricity Plan and Tariff Policy published under section 3.”*

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

The total area of the State of Arunachal Pradesh is 83,743 sq. km. The state is situated in the extreme north-east of India and is bounded by independent countries on three sides and by Assam and Nagaland states on one side. There are Bhutan, China and Myanmar on the west, north and east of this state, respectively, and the Indian states Assam and Nagaland on the south. The State is having a population of around 13.83 lakh (2011 census). Its capital, Itanagar is about 380 km from Guwahati, the capital of Assam.

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

Arunachal Pradesh Department of Power (APDOP) (hereinafter referred to as ‘Petitioner’) is a deemed licensee in terms of Section 14 of the Act. 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 295.50 MW and 108.54 MW from power generators within the state. The Petitioner has submitted that around 709.52 MU were procured in FY 2022-23 and 576.80 MU of free units were received during the period. APDOP at present has 2.98 lakh consumers with an annual energy consumption of about 582.10 MU in FY 2022-23 as per the tariff petition. The consumers are broadly classified into seven categories as follows:

- a) Non-Commercial Consumers (Domestic)

- b) Commercial Consumers (Non-Industrial)
- c) Industrial Consumers (both HT and LT)
- d) Public Lighting and Water Supply Consumers
- e) Agricultural Consumers
- f) Bulk Mixed Consumers
- g) Temporary Consumers

### **1.5. ARR for the Control Period FY 2024-25 to FY 2026-27 and Tariff Proposal for FY 2024-25:**

As per the provisions of the APSERC (Multi Year Tariff) Regulations, 2018, (hereinafter referred to as 'MYT Regulations, 2018') the Distribution Licensee is required to file the tariff petition on or before 30<sup>th</sup> November of each year for fixing the tariff for the next financial year. APDOP filed the tariff petition for FY 2024-25 on 04.01.2024, which should have been filed on or before 30.11.2023 as per the above said Regulation.

Further, it is noted that, the Petitioner had earlier filed a petition for approval of Multi-Year Tariff and Multi-Year Revenue Requirement in the year 2022 for the year FY 2022-23, FY 2023-24, and FY 2024-25, but due to the absence of the Commission, the petition was not considered. Accordingly, APDOP has been following the tariff order of 2018-19.

The Petitioner has now filed the petition for ARR for the Control Period FY 2024-25 to FY 2026-27 and Tariff Proposal for FY 2024-25.

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

The Commission received the tariff petition from the Petitioner on 04.01.2024 instead of 30.11.2023 as provided in MYT Regulations, 2018. The Commission observed that the ARR filed by the Petitioner was incomplete without the necessary supporting document/ information and lacking critical and vital information as specified in MYT Regulations 2018. Additional information and details related to the tariff petition were sought vide Letter No. APSERC/RA-9/II/2024-25/126-27 dated 24.05.2024 from the Petitioner. The information was partially submitted by the Petitioner vide letter No. CE(COM)/Tariff/31/2024-25/572-73 dated 30.05.2024.

On admitting the ARR and tariff petition of APDOP for FY 2024-25, the Commission directed APDOP to publish the summary of its petition and proposed tariff in two local newspapers in

abridged form and manner as approved in accordance with Section 64(2) of the Act, to invite comments/ objections from the stakeholders.

The copies of the petition and other related documents were made available to consumers and other interested parties at a nominal price 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 published by APDOP in leading newspapers on 27.02.2024 inviting objections/ suggestions from the stakeholders on the petition on or before 22.03.2024. The copy of the above Public Notice is enclosed as **Annexure I** of this order.

### **1.7. Public Response to the Tariff Petition:**

On admitting the ARR and tariff petition of APDOP for FY 2024-25, the Commission directed the APDOP 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 two local newspapers.

Accordingly, through the public notice, comments / suggestion were invited from the stakeholders/public on the petition on or before 22.03.2024. No written comments were received by the Commission/ APDOP in this regard.

In order to ensure transparency in the process of determination of Tariff and ARR as envisaged in Act, a public hearing was called by the Commission by publishing Public Notice in the two newspaper on 12.06.2024. The Public Notice was also uploaded on Commission's website (copy is enclosed as **Annexure II**). However, no stakeholder had attended the hearing at the Commission's office in Itanagar on scheduled date 18<sup>th</sup> June 2024. The Commission had not received comments / suggestion from any of the stakeholders on the tariff petition filed by the Petitioner during and before the public hearing.

### **1.8. Proceedings of the Technical Validation Session**

The Commission had called Technical Validation Session (TVS) on 18.06.2024. During the TVS, the Petitioner summarized the submission made in its tariff proposal before the Commission. The Commission thereafter sought information from the Petitioner on following points:



- The Commission observed that in the Petition, the energy sold to outside state projected to be increased by 5% in MYT Period from FY 22-23 level. The Commission pointed out that the energy sold outside the state should be based on energy balance (i.e. demand vs availability) in a particular year and not based on earlier year estimates. The Commission asked the Petitioner to prepare energy balance considering the supply from the state and inter-State generating sources and demand in the license area. The Petitioner agree for the same.
- The Commission observed that the Petitioner in its petition mentioned that bills from APDCL has not been received for last few years. On enquiry, the Petitioner clarified that a few bills are received from APDCL and submitted the copy of the same to the Commission.
- The Commission directed the Petitioner to submit the recruitment and retirement plan of its employees. The Petitioner submitted that the same is under preparation and the Petitioner shall submit the same, once it is completed. The Commission directed the Petitioner to expedite the same and submit it at the time of filing next year petition.
- The Commission observed that after repeated directions of the Commission regarding submission of proposal for introduction of two-part tariff to the consumers, the Petitioner fails to do so and has not included any such proposal in the current tariff petition. The Commission asked the Petitioner to explain the reasons for the same. The Commission further enquired with the Petitioner if the billing software used by the Petitioner can adopt two-part billing system. The Petitioner submitted that they are working on two-part tariff design and shall come up with proposal in this regard during next year tariff filing. The Petitioner requested to continue with single part tariff structure during FY 2024-25.
- The Commission observed that in spite of repetitive directive for introduction of slab-based tariff, no slab-based tariff has been proposed in this petition by the Petitioner. The Petitioner submitted that the information regarding the consumer wise connected load shall be taken from the field office and same shall be submitted in the next tariff petition.
- The Commission observed that a letter from Government regarding grants for FY 2024-25 has been submitted by the Petitioner. However, the letter mentioned about budgetary support to meet the revenue gap and did not mention about consumer category-wise grant as envisaged in the Act. The Petitioner was directed to take up the matter with the Government.

- It has been noticed that the expenditure towards State Transmission Utility (STU) and SLDC is not included in present ARR. The Petitioner was asked to submit separate tariff petition for determination of transmission tariff and SLDC fees and charges as soon as possible.
- The Commission directed the Petitioner to prepare and submit the Asset register of its distribution business as well as action taken report on compliance of the observations made by the energy auditor in the Energy Audit Report. The Petitioner submitted that it will take action on the observations made by the Commission.

## 1.9. 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 background regarding orders issued by the Commission, procedural history and subsequent filing of tariff petition by the Petitioner for the MYT Control Period FY 2024-25 to FY 2026-27.
- c. **Chapter 3** provides details about the power supply position and summary of the petition
- d. **Chapter 4** provides brief details about the Business Plan for the MYT Control Period FY 2024-25 to FY 2026-27.
- e. **Chapter 5** provides analysis of the petition for determination of ARR and Retail Supply Tariff for FY 2024-25 to FY 2026-27 and Commission's Approval on the same.
- f. **Chapter 6** provides details about the Wheeling Charges for FY 2024-25.
- g. **Chapter 7** provides details about the compliance of directives given by the Commission.
- h. **Chapter 8** deals with tariff philosophy and tariff design along with approved tariff categories and tariff rates for FY 2024-25.



## Chapter 2: Procedural History

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1. The Petitioner, the Department of Power, is a government department functioning under the Government of Arunachal Pradesh, is the sole electricity Distribution Utility for the entire state of Arunachal Pradesh and is a deemed Distribution Licensee as per the third provision of Section 14 of the Act.
2. The Petitioner had earlier filed a petition for approval of Multi-Year Tariff and Multi-Year Revenue Requirement in the year 2022 for the year FY 2022-23, FY 2023-24, and FY 2024-25, but due to the absence of the Commission, the petition was not considered and as a result it got lapsed. As a result, the APDOP had been following the tariff order of 2018-19.
3. The Commission had been functioning as per provisions of prevalent laws/rules till the retirement of the then Chairperson on 31.12.2019. The Post of Chairperson remained vacant from 1.01.2020 till 17.07.2023 and hence no regulatory activities were taken up during this period.
4. After the joining of the new Chairperson and the member in the Commission on 18.07.2023, Regulatory matters were taken up immediately, with special focus on scrutiny of the tariff petition(s) filed by the utility.
5. On 7.07.2023, the Petitioner filed the Retail Multi Year Tariff Petition for the FY 2023-24 to FY 2025-26 and True-up for the years FY 2018-19 to FY 2021-22. Since the Commission was not functional during the period, no action was taken of the petition.
6. As the filing of petition was late by about nine months, the petition was returned to the Petitioner with a direction to review the petition and incorporates the latest data/information and resubmit the petition for control period FY 2024-25 to FY 2026-27 on or before 30.11.2023.
7. As per Section-64 of the Act read with Multi-Year Tariff Regulations 2018 as amended from time to time, the Distribution Licensee is required to file petition for determination of Aggregate Revenue Requirement (ARR) and Retail Supply Tariff every year by the end of November of preceding year.
8. The Petitioner had prayed to consider the continuation of tariff of FY 2018-19 until the new order is issued based on the fresh petition as interim measure to ensure uninterrupted services to the consumers and also to meet the mandatory pre-qualification requirements of the Revamped Distribution Sector Scheme (RDSS), a flagship program under Ministry of Power, Government of India.

9. The Petitioner also filed a petition vide CE(COM)/Tariff/31/2023-24/1097-98 dated 21.08.2023 for allowing the tariff approved vide Order dated 31.05.2018 for FY 2018-19 to be continued for FY 2023-24. The petition was admitted on 14.09.2023 and after following the due regulatory proceedings envisaged in the Act, the Commission issued the tariff order for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 on 25.10.2023.
10. Further, the Commission also issued true-up orders for the FY 2017-18 to FY 2022-23 on 9.01.2024.
11. The instant petition filed by the Petitioner is for Multi-Year Aggregate Revenue Requirement (ARR) for the Control Period from FY 2024-25 to FY 2026-27 with year-wise details and petition for revenue from the sale of power at the existing tariff and projected revenue gap/surplus for FY 2024-25 and retail tariff proposal for the FY 2024-25 under Sections 62 and 64 of the Act.
12. The petition was filed on 4.01.2024 and was admitted on 23.02.2024. The Commission issued letter (vide Letter No. APSERC/RA-9/II/2024-25/126-27 dated 24.05.2024) regarding data gaps, which were partially replied by the Petitioner.
13. Public Hearing in the matter was called by the Commission on 18.06.2024, however, no stakeholders were attended the public hearing on the specified date. A Technical Validation Session (TVS) was conducted on the same day. During the TVS, the Commission discussed various issues and Petitioner submitted its reply regarding those issues. The Commission had not received comments / suggestions from any of the stakeholders on tariff petition filed by APDOP.

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## Chapter 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 different sources which are shown below:

#### 3.1.1 Power Supply scenario during FY 2020-21, FY 2021-22 and FY 2022-23

- 1) **Power from CGS** - APDOP has a firm allocation of Power from CGS of 295.50 MW. The Petitioner has submitted that around 709.52 MU were procured in FY 2022-23 and 576.80 MU of free units were received during the same period. APDOP is getting free Power from NEEPCO to the tune of 576.80 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.
- 2) **Power from DHPD** – Department of Hydro Power Development (DHPD) has an installed capacity of 81.54 MW consisting of different capacities located in different locations of Arunachal Pradesh. The Petitioner has submitted that they have received about 76.60 MU, 48.06 MU and 41.97 MU during FY 2020- 21, FY 2021-22 and FY 2022-23 respectively from DHPD. As DHPD is also under the Arunachal Pradesh Government (AP) and hence, APDOP does not pay the cost of power to DHPD and hence be treated as **Free Power**.
- 3) **Power from HPDCL** - Arunachal Pradesh Hydro Power Development Corporation Limited (HPDCL) is a State Public Sector Undertaking and has commissioned a 3 MW small hydropower project at Zemithang of Tawang district of Arunachal Pradesh over the Sumbachu River and started commercial operation in the year 2020-21. The Petitioner has received about 0.83 MU in FY 2020-21, 4.69 MU in FY 2021-22 and 5.24 MU in FY 2022-23 at provisional tariff of Rs. 3.61/kWh.
- 4) **Power from Dikshi SHP** - Dikshi SHP is a small hydropower project of 24 MW in Rupa of West Kameng District developed by Devi Energy Pvt. Ltd, an Independent Power Producer (IPP). This project was commissioned in year 2019 and declared COD on 19.09.2019. The Petitioner entered into a PPA with Devi Energy

Pvt. Ltd. for purchasing the entire power generated from this project. APDOP purchased power to the tune of 16.30 MU in FY 2020-21, 47.99 MU in FY 2021-22 and 65.17MU in FY 2022-23 at Rs. 5.25/kWh.

- 5) **Power from APEDA** - The Arunachal Pradesh Energy Development Agency (APEDA) is under the Ministry of Power, Government of Arunachal Pradesh, which is responsible for the development of Non-Conventional Energy in the state. APEDA has developed various capacities of Solar Power plants across the state with an installed capacity of 4.188 MW. The Petitioner has received 0.52 MU, 0.47 MU and 0.96 MU of energy free of cost during FY 2020-21, FY 2021-22 and FY 2022-23 respectively since it is also under the State Government The energy received from the Solar Power Plants, is utilized to partially meet up the annual Solar Renewable Power Purchase Obligation (RPO) of the state.
- 6) **Power from Open Market** – During exigencies, the Petitioner has purchased power from Real-Time Market (RTM) or Day Ahead Market (DAM) from IEX to meet the energy requirement of the state. The Petitioner has purchased 0.65 MU in FY 2020-21, 3.94 MU in FY 2021-22 and 6.15 MU in FY 2022-23 to meet the power shortage in the respective financial years.
- 7) **Banking:** - The Petitioner is also engaged in banking of energy during the high hydro season and takes back during the lean hydro season @ 5% above in case of forward banking and sometimes APDOP takes energy in advance from the party and returns to them @ 5% above as and when power is available. As such, there is no financial implication for this activity. The energy imported via Banking was 36.12 MU, 64.80 MU and 39.37 MU in FY 2020-21, FY 2021-22 and FY 2022-23 respectively.
- 8) **Diesel Generation (DG) Sets:** - DG sets have been used purely as a temporary arrangement to meet any energy requirement in case of non-availability of power from other sources. The energy generated through DG set during FY 2020-21, FY 2021-22 and FY 2022-23 were 0.36 MU, 0.39 MU and 0.28 MU respectively.
- 9) **Per Capita Consumption of electricity:** The Per Capita Consumption of electricity in Arunachal Pradesh is much lower than that of All India's average. As per the figures provided by CEA the per capita consumption of electricity in FY 2021-22 was 645 kWh while the National Average was 1255 kWh.

### 3.1.2 Power Supply projections for the period FY 2023-24 to FY 2026-27

- 1) **Energy Sale Forecast within the State:** For the period FY 2023-24 to FY 2026-27, APDOP has projected the energy sale within the state for FY 2023-24, 2024-25, 2025-26 and 2026-27 at 641.33MU, 707.53MU, 781.61MU, and 864.67MU respectively.
- 2) **Energy Sale Forecast outside the State through Power Exchange, bilateral contracts and banking:** The Petitioner is selling surplus power outside the state through Power Exchange or under bilateral contracts or engaged in banking of energy during the high hydro season and taking back during the lean hydro season. Accordingly, the Petitioner has projected 472.56 MU, 494.71 MU, 518.05 MU and 542.63 MU for FY 2023-24, 2024-25, 2025-26 and 2026-27 respectively.
- 3) **Power Purchase Estimation:** Based on the above energy requirement as projected by the Petitioner, the Power Purchase requirement for FY 2023-24, 2024-25, 2025-26 and 2026-27 is expected to be 1521.81MU, 1520.74 MU, 1519.93 MU, and 1519.38 MU respectively. Accordingly, the Petitioner has requested the Commission to approve the power purchase cost for FY 2023-24, 2024-25, 2025-26 and 2026-27 at Rs 498.48 Cr, 522.34 Cr, 547.39 Cr, and 573.69 Cr respectively.

### 3.2 Summary of the Petition: Aggregate Revenue Requirement

The ARR and revenue gap as submitted by the Petitioner is shown in Table below.:

**Table 1: Aggregate Revenue Requirement, Income and Revenue Gap in Existing tariff - Petitioner's Submission** (₹ in Cr)

S. No.	Particulars	Current Year (Estimated)	MYT Control Period (Projected)		
		FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1	Return on Equity Capital	--	--	--	--
2	Interest on Loan Capital	--	--	--	--
3	Depreciation	--	--	--	--
4	Power Purchase Expenses	498.48	522.34	547.39	573.69
5	Interstate Transmission Charges	117.95	123.67	129.70	136.04
6	Intrastate Transmission Charges	12.02	12.62	13.25	13.92

S. No.	Particulars	Current Year (Estimated)	MYT Control Period (Projected)		
		FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
7	Fees and charges of NERLDC / NERPC	1.18	1.23	1.29	1.36
8	O&M expenses	428.54	453.05	478.97	506.36
9	Interest on working Capital	--	--	--	--
10	Provision for bad and doubtful debt	--	--	--	--
11	Total Revenue Requirement	1,058.17	1,112.92	1,170.60	1,231.38
12	Revenue from Existing Tariff	245.26	270.51	298.78	330.48
13	Other income (non-tariff)	45.81	50.53	55.81	61.73
14	Total revenue within state (including other income)	291.07	321.05	354.59	392.21
15	Revenue from Sale of Surplus Power	226.99	238.34	250.25	262.77
16	Total Annual Income (14+15)	518.06	559.38	604.85	654.97
17	Revenue gap (11-16)	540.11	553.54	565.76	576.40
18	Total Energy Sale (MU)	1,113.89	1,202.24	1,299.66	1,407.30
19	Gross Energy Input (MU)	1,521.81	1,520.74	1,519.93	1,519.38
20	Average Cost of Supply (ACS) (11/19 - Rs/Kwh)	6.95	7.32	7.70	8.10

The Petitioner has requested the Commission to approve the estimated Aggregate Revenue Requirement for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at Rs. 1058.17 Cr, Rs. 1112.92 Cr, Rs 1170.60 Cr, and Rs.1231.38 Cr respectively.

### 3.3 ARR and ACS Gap from FY 2023-24 to FY 2026-27

The ACS and ARR Gap has been calculated as per the guidelines of Central Electricity Authority. The ACS-ARR gap from FY 2023-24 to FY 2026-27 is shown in the table below.



**Table 2: ARR and ACS Gap from FY 2023-24 to FY 2026-27-Petitioner's Submission** (₹ in Cr)

S. No.	Particulars	Current Year (Estimated)	MYT Control Period (Projected)		
		FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
1	Total Revenue Requirement	1,058.17	1,112.92	1,170.60	1,231.38
2	Gross Energy Input (MU)	1,521.81	1,520.74	1,519.93	1,519.38
3	Revenue from Existing Tariff	245.26	270.51	298.78	330.48
4	Other income (Late payment, meter rent etc.)	45.81	50.53	55.81	61.73
5	Total revenue within state (including other income)	291.07	321.05	354.59	392.21
6	Revenue from sale of surplus power	226.99	238.34	250.25	262.77
7	Total Annual Income	518.06	559.38	604.85	654.97
8	Grant (1-7)	540.11	553.54	565.76	576.40
9	Average Cost of Supply (ACS) (Rs/Kwh) (1/2*10)	6.95	7.32	7.70	8.10
10	Average Realisable Revenue (Rs/kWh) [(7+8)/2*10]	6.95	7.32	7.70	8.10
11	ACS – ARR Gap (9-10)	--	--	--	--

### 3.4 Tariff- Existing Vs Proposed for FY 2024-25

With the aforesaid expected grant from Government, the Petitioner has proposed the following tariff for FY 2024-25.

**Table 3: Proposed Tariff for FY 2024-25 - Petitioner's Submission** (₹ in Cr)

S no	Category of Consumers	Existing Tariff (Rs/ kWh)	Proposed Tariff (Rs/ kWh)
1	<b>Non- Commercial (Domestic)</b>	1 - Phase, 230 Volt	4.00
2		3 - Phase, 400 Volt	4.00
3		1 - Phase, 230 Volt KJP and BPL connections	2.65
4		3 - Phase, 11 kV	3.40
5		3 - Phase, 33 kV	3.25
6		1 - Phase, 230 Volt	5.00

S no	Category of Consumers	Existing Tariff (Rs/ kWh)	Proposed Tariff (Rs/ kWh)
7	<b>Commercial (non-industrial)</b>	3 - Phase, 400 Volt	5.00
8		3 - Phase, 11 kV	4.20
9		3 - Phase, 33 kV	4.00
10	<b>Public Lighting and 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
21		3 - Phase, 33 kV	3.50
22		3 - Phase, 132 kV	3.35
23	<b>Bulk Mixed</b>	3 - Phase, 11 kV	3.75
24		3 - Phase, 33 kV	3.40
25		3 - Phase, 132 kV	3.25
26	<b>Temporary Consumers</b>	6.50	6.50

Accordingly, the Petitioner has requested the Commission to approve the Proposed Tariff for the FY 2024-25.

### 3.5 Prayer of Petitioner

The Petitioner, has made the following prayers-

1. To admit this petition for approval of determination of ARR for FY 2024-25 to FY 2026-27 and tariff for the FY 2024-25.
2. To approve the proposed retail tariff for FY 2024-25.
3. To approve the proposed ARR for FY 2024-25 to FY 2026-27.
4. To approve the Business for the FY 2024-25 to FY 2026-27.
5. To grant any other relief as the Commission may consider appropriate.
6. To pass any other order as the Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
7. The Petitioner craves leave of the Commission to allow further submissions, additions, and alterations to this petition as may be necessary from time to time.



## Chapter 4: Business Plan for the Control Period of FY 2024–25 to FY 2026–27

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### 4.1 Petitioners' submission of Business Plan

4.1.1 The Petitioner has prepared a section on Business Plan after the Section dealing with MYT projection in its petition. In the Business Plan section, the Petitioner mentioned that all the information was provided in MYT section.

4.1.2 The Petitioner has made the following submission in their MYT Section of the petition with respect to components of Business Plan for the period FY 2024-25 to FY 2026-27. The summary is provided below.

**(a) Sales/demand forecast**

**i. Category-wise energy Sale Forecast within the State: -**

The Petitioner has forecasted the energy sales considering the Compound Annual Growth Rate (CAGR) of sales of different consumer categories for the preceding 5 years as per provisions of Regulations 10.10(2) of the MYT Regulations, 2018. The Petitioner has submitted that since there is no impact of seasonal change on the energy sales, hence sales forecast on annual basis has been adopted to determine the CAGR. In cases where there CAGR is negative, the growth factor has been considered as NIL. Accordingly, the Petitioner has requested the Commission to approve the projected Energy Sale within the state for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at 641.33 MU, 707.53 MU, 781.61 MU and 864.67 MU respectively.

**ii. Forecast of Sale of Power Outside the State:**

The Petitioner has submitted that the energy forecast for sale outside the state has been calculated assuming annual increment of 5% above the previous year's consumption. The Petitioner has also submitted that as per the Commission's advice through tariff order to reduce the sale outside the state i.e., at IEX as the prices are lower than the purchase price. The Petitioner has submitted that, APDOP is selling power in the IEX at the rate determined in the Exchange for a particular slot. The average selling price at IEX is not much different from the average power purchase cost and sometimes it is on the higher side. Also, APDOP has to resort to sale of power in RTM/DAM

market of IEX as allocation of power especially during peak hours is much higher than the actual requirement of the state. Further, the Petitioner has submitted that they had entered into PPAs with many generators before the inception of IEX and so the immediate termination of PPAs may not be possible. Also, due to availability of free power allocated from the Generating stations located in Arunachal Pradesh, as being the home state, there used to be surplus power, especially during the high hydro season, hence the sale outside the state has to be continued. Hence, energy sales outside the state have been projected with an annual increment of 5.00% during each year of the control period. Accordingly, the Petitioner has requested the Commission to approve the projected Energy Sales of 245.83 MU, 258.12 MU, 271.02 MU and 284.57 MU outside the state through IEX for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026- 27 respectively.

The Petitioner has also submitted that they are selling surplus power under bilateral mode at exchange rate plus 5 paise. Under this mode, APDOP has sold 7.20 MU of energy earning Rs. 1.87 Cr in the FY 2020-21, 96.71 MU of energy earning Rs. 35.73 Cr in the FY 2021-22 and 130.42 MU of energy earning Rs. 80.49 Cr in the FY 2022-23. The Petitioner has further submitted that they have projected to sell energy under bilateral mode to the tune of 136.94 MU, 143.79 MU, 150.98 MU, and 158.53 MU in the years FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 respectively. Accordingly, the Commission is requested to approve the above proposal.

**(b) Distribution loss and Power Purchase Estimation**

The Petitioner has submitted that the power purchase quantum for the current year and for the control period is estimated considering various factors like previous years' energy consumption, energy sale projection, judicious scheduling, likely distribution losses, surplus energy sale during high hydro season, restricting deviation /UI, restricting import from high-cost generators, total energy requirement, etc. The Petitioner has also submitted that deviation import (UI) is projected to be reduced by 5% per year as it is a costly affair. Accordingly, the estimated energy requirement for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 is projected to be 1521.81MU, 1520.74 MU, 1519.93 MU, and 1519.38 MU respectively.

The Petitioner has also emphasized that the ARR is projected to be decreasing every year during the control period. This is because of the implementation of loss reduction schemes such as RDSS. Accordingly, the Petitioner has requested the Commission to approve the above projections for Power Purchase Quantum.

**(c) Power procurement plan**

The Petitioner has submitted that they acquire power from different sources for distribution within the State as well as sell the surplus power outside the state as detailed below. The Petitioner has considered the same sources of power that was available during the previous years to project the power procurement plan for the control period as discussed below.

**i) Central Sector Generating Stations Allocation: -**

The major power requirement is met by power allocation from Central Sector Generating Stations such as NHPC, NEEPCO, NTPC, OTPCL etc. The Petitioner has planned to procure power from these sources during the control period at an estimated cost of Rs 522.34 Cr in the FY 2024-25, Rs 547.39 Cr in the FY 2025-26 and Rs 573.69 Cr in the FY 2026-27. Accordingly, the Petitioner has requested the Commission to approve the above power purchase cost projections.

**ii) Power from within the State:**

There are power generators within the state of Arunachal Pradesh from where DoP is receiving/purchasing the entire power generated by them.

**1.) From Department of Hydro Power Development (DHPD): -**

The Department of Hydro Power Development (DHPD) has an installed capacity of 81.54 MW consisting of different capacities of SHP located in different regions of Arunachal Pradesh. The Petitioner has submitted that they received about 76.60 MU, 48.06 MU and 41.97 MU during FY 2020- 21, FY 2021-22 and FY 2022-23 respectively from DHPD. The Petitioner has further stated that since DHPD is under the Arunachal Pradesh government and hence, APDOP does not pay the cost of power purchased from DHPD and hence be treated as Free Power. The Petitioner has also submitted that if new projects come up, then there will be capacity addition. Accordingly, APDOP has included

power from DHPD in the power procurement plan for the control period.

**2.) Power from Hydro Power Development Corporation of Arunachal Pradesh Limited (HPDCAPL): -**

HPDCAPL is a State Public Sector Undertaking and has commissioned a 3 MW small hydropower project at Zemithang of Tawang district in Arunachal Pradesh over the Sumbachu River. The power plant started commercial operation in the year FY 2020-21. The Petitioner has submitted that they have received about 0.83 MU, 4.69 MU and 5.24 MU at Rs. 3.61/Unit (Provisional tariff) costing Rs.1.91 Cr and Rs 2.68 Cr during FY 2021-22 and FY 2022-23 respectively from this project. Accordingly, APDOP has included power purchase from HPDCAPL in their power procurement plan for the control period on the basis of power received during the previous years.

**3.) Dikshi SHP: -**

Dikshi SHP is a small hydropower project of capacity 24 MW in Rupa of West Kameng District developed by Devi Energy Pvt. Ltd, an Independent Power Producer (IPP). This project was commissioned in the year 2019 and declared COD on 19 September 2019. The APDOP entered into a PPA with Devi Energy Pvt. Ltd for purchasing the entire power generated from this project. APDOP purchased power to the tune of 16.30 MU, 47.99 MU and 65.17MU at Rs. 5.25/unit amounting to Rs. 17.59 Cr, Rs. 22.06 Cr and Rs 34.43 Cr during the year FY 2020-21, FY 2021-22 and FY 2022-23 respectively. Accordingly, APDOP has included power purchase from Dikshi SHP in their power procurement plan for the control period on the basis of power received during the previous years.

**4.) Arunachal Pradesh Energy Development Agency (APEDA)**

The Arunachal Pradesh Energy Development Agency (APEDA) is under the Ministry of Power, Government of Arunachal Pradesh, which is responsible for the development of Non-Conventional Energy in the state. APEDA has developed various capacities of Solar Power plants across the state with an installed capacity of 4.188 MW. From these

plants, APDOP has received about 0.52 MU, 0.47 MU and 0.96 MU of energy free of cost during the year FY 2020-21, FY 2021-22 and FY 2022-23 respectively since it is under the same umbrella of the state Government. The energy so received is utilized to partially meet up the annual Solar Renewable Power Purchase Obligation (RPO) of the state. Accordingly, APDOP has included the power purchased from APEDA in their power procurement plan for the control period on the basis of power received during the previous years.

**iii) Power received from the other sources:**

**1.) Deviation: -**

Deviation is the difference between the actual drawl and the scheduled drawl from the Grid. The charges for the deviations for all the time blocks shall be payable for over drawl by the buyer and under-injection by the seller and receivable for under-drawl by the buyer and over-injection by the seller and will be worked out on the average frequency of a time block at the specified rates. Since APDOP is a buyer, it has over-drawn from the Grid to the tune of 39.92 MU, 48.82 MU and 66.05 MU in the FY 2020-21, FY 2021-22 and FY 2022-23 respectively. The Petitioner has submitted that they have plans to reduce the deviation during the control period by scheduling the power requirement and management.

**2.) IEX Purchase: -**

The Petitioner has submitted that in case of any shortage of power, APDOP resorts to purchasing power from Real-Time Market (RTM) or Day Ahead Market (DAM) from IEX to avoid or minimize deviation. APDOP has purchased 0.65 MU in FY 2020-21, 3.94 MU in FY 2021-22 and 6.15 MU in FY 2022-23 to meet the energy demand. APDOP has submitted that they will try to manage power procurement from IEX so as to reduce the purchase cost from the RTM and DAM during the control period. Accordingly, the Petitioner has requested the Commission to approve the projected / anticipated purchase from power exchanges during the control period.

**3.) Banking: -**

The Petitioner has submitted that banking of energy is done during the high hydro season and taken back during the lean hydro season @ 5% above in case of forward banking and sometimes APDOP takes energy in advance from the party and returns to them @ 5% above as and when power is available. As such, there is no financial implication for this activity. The energy imported through banking was around 36.12 MU, 64.80 and 39.37 MU in the year FY 2020-21, FY 2021-22 and FY 2022-23 respectively. APDOP will engage in banking during the control period based on the seasonal power availability and demand. The inward and outward energy from banking has been considered in projecting the energy balance for the control period.

**4.) Diesel Generation: -**

The Petitioner has submitted that the DG sets are purely a temporary arrangement to as to meet any emergency requirement in case of non-availability of power from any of the other sources and is mostly kept on standby.

The energy generated through DG sets in the year FY 2020-21, FY 2021-22 and FY 2022-23 is 0.36 MU, 0.39 MU and 0.28 MU respectively. Further, APDOP is on the way to phasing out the DG Sets slowly due to its high generation cost. Since the DG sets are owned by APDOP, the power generated from these DG sets are not included in the power purchase cost. The Petitioner has submitted that expenditure on DG sets are included in Operation and Maintenance Costs.

## **4.2 Commission's Analysis**

### **4.2.1 Regulatory framework for submission of Business Plan by licensees**

- (1) As per provisions of Regulations 2.3 of the MYT Regulations, 2018, the date for submission of Business Plan is six (6) months prior to submission of MYT petition. Accordingly, the petition for Business Plan should have been submitted on or before 31.05.2023. However, the Business Plan was submitted by the Petitioner along with the MYT petition for FY 2024-25 to FY 2026-27 vide affidavit dated 04.01.2024.



- (2) It has also been observed that the Petitioner has first drafted the Multi-Year Tariff and projected the ARR for FY 2024-25 to FY 2026-27 and thereafter included the section on Business Plan in their petition which inter-alia is a representation of the Petitioner's submission for power procurement planning for the control period as given in MYT projection.
- (3) However, as per the provisions of Regulations 2.3 of the MYT Regulations, 2018, the Business Plan to be submitted by the distribution licensee should cover the following broad aspects:

***“III. For a Distribution Licensee***

*The Distribution licensees should submit the business plan and power purchase plan, for approval of the Commission, at least six months prior to submission of MYT petitions, comprising the following aspects:*

- a. Sales/demand forecast for each customer category and sub-categories for each year of the control period;*
- b. Distribution loss reduction trajectory for each year of the control period; including details of the measures proposed to be taken for achieving the target loss;*
- c. Power procurement plan in case of long term, medium term and short term based on the sales forecast and distribution loss trajectory for each year of the business plan period; the power procurement plan may also include energy efficiency and demand side management measures;*
- d. Collection efficiency improvement trajectory for each year of the control period;*
- e. Capital investment plan considering the sales/demand forecast, power procurement plan, distribution loss trajectory, targets for quality of supply, etc. The capital investment plan shall be consistent with the perspective plan drawn by the State Transmission Utility (STU), and the investment plan should also include yearly phasing of capital expenditure along with the source of funding, financing plan and corresponding capitalization schedule,*
- f. The appropriate capital structure of each scheme proposed and cost of financing (interest on debt and return on equity), terms of the existing loan agreements, etc.*
- g. Details related to availability of power from renewable energy sources and actions proposed for complying with the RPO specified by the Commission.”*

- (4) The Commission has observed that a Business Plan broadly covers the year wise load growth projection scenario by considering suitable trend analysis wherein the historical trends are used for assessment by the licensee. The Business Plan also focuses on year wise loss reduction with specific action plan. This may include investments related to strengthening of the network infrastructure, addition of network elements and undertaking the Energy Audit to keep close tab on the losses.
- (5) The Petitioner has not prepared the Business Plan section in its true sense and defeat the purpose of preparing a Business Plan for the Control period. The Business Plan gives an overview of the important parameters under MYT control period, which is the base for

projecting MYT. The MYT projection is dependent on parameters reflected in the Business Plan.

- (6) The power availability projection is not made with a trend analysis, as envisaged under the Business Plan in MYT regulations. The availability projection with a simple escalation over last availability is not a scientific method to be considered. The availability from Central Sector Projects should be based on current allocation for Central Sector Projects by Ministry of Power (MoP), Government of India. Similarly, for state sector / Independent Power Producer (IPP), recent development including possibility of new projects to be setup during the control period should be considered. The Petitioner fails to prepare the energy availability projection in this line.
- (7) It is further noted that there is an upcoming 2000 MW plant soon to be commissioned by NHPC in the state with expected Commercial Operation Date (COD) to be around March 2025. The Petitioner will receive additional free power to the tune of 240 MW from the said project. The Petitioner should have included this while estimating total availability from all the sources during the control period. In that scenario, the surplus power available with the Petitioner would be totally different from what has been projected by the Petitioner. As such, the demand – supply scenario, including availability of surplus power for sale outside the state, would then change; thereby changing the Revenue Gap and expected Grant in aid to be required from the State Government.
- (8) The Commission has analysed the components of Business Plan as per provisions given under MYT regulations. The approval of the Commission is given in details in the next chapter of this order, which analysed the ARR for the Control period of FY 2024-25 to FY 2026-27.



## Chapter 5: Analysis of ARR for FY 2024-25 to 2026-27 and Tariff for FY 2024-25

### 5.1 Growth of Consumers

#### (a) Petitioner's submission

The Petitioner in its MYT tariff petition for FY 2024-25 to FY 2026-27, has projected to serve about 2,98,447 consumers. The consumers are broadly classified into seven categories as shown below:

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

To analyse the trajectory of consumer base, latest figures are compared with the actual figures of FY 2022-23 and estimated Figures for FY 2023-24 by the Petitioner. The Table below shows the trends of consumer growth in the last 4 years, and based on this growth the number of consumers for the entire control period has been projected using the average annual growth rate of the last 4 years and is shown in the subsequent table.

**Table 4: Number of consumers in last 5 years - Petitioner's Submission**

Consumer Category	2018-19	2019-20	2020-21	2021-22	2022-23	Average Growth*
	I	II	III	IV	V	
<b>HT and EHT Category</b>						
<b>Non-Commercial Consumers (Domestic)</b>						
AC 50Hz 3-Phase, 11kV	89	88	96	109	121	8
AC 50Hz,3-Phase, 33kV	3	4	4	4	4	0
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 3-Phase, 11kV	166	209	244	276	372	52
AC 50Hz,3-Phase, 33kV	0	6	6	11	13	3
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 3-Phase, 11kV	21	19	20	21	9	0

Consumer Category	2018-19	2019-20	2020-21	2021-22	2022-23	Average Growth*
	I	II	III	IV	V	
AC 50Hz,3-Phase, 33kV	3	0	0	0	0	0
<b>Agricultural Consumers</b>						
AC 50Hz 3-Phase, 11kV	3	0	0	0	5	1
AC 50Hz,3-Phase, 33kV	0	0	1	0	0	0
<b>Industrial Consumers</b>						
AC 50Hz 3-Phase, 11kV	26	59	62	65	76	13
AC 50Hz,3-Phase, 33kV	22	27	27	26	31	2
AC 50Hz 3-Phase, 132kV	3	3	3	3	3	0
<b>Bulk Mixed Consumers</b>						
AC 50Hz 3-Phase, 11kV	139	156	159	138	173	9
AC 50Hz,3-Phase, 33kV	16	15	13	32	15	0
AC 50Hz 3-Phase, 132kV	1	1	1	1	1	0
<b><u>Low voltage category</u></b>						
<b>Non-Commercial Consumers (Domestic)</b>						
AC 50Hz 1-Phase, 230 Volt	1,61,265	1,78,813	1,88,148	1,95,620	1,97,129	8,966
AC 50Hz,3-Phase, 400 Volt	2,511	2,706	2,844	3,197	3,538	257
KJP and BPL connection	58,548	64,273	66,058	64,369	63,085	1,209
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 1-Phase, 230 Volt	23,710	25,098	26,034	27,594	29,675	1,491
AC 50Hz,3-Phase, 400 Volt	1,951	1,914	2,073	2,344	2,486	134
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	1,149	1,202	1,118	1,198	948	0
AC 50Hz,3-Phase, 400 Volt	163	190	185	235	239	19
<b>Agricultural Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	11	4	4	6	8	0
AC 50Hz,3-Phase, 400 Volt	6	16	13	13	7	0
<b>Industrial Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	74	44	48	80	75	0
AC 50Hz,3-Phase, 400 Volt	192	163	173	162	169	0
<b>Temporary Consumer</b>						
LT/HT	87	90	194	240	265	45
<b>Total</b>	<b>2,49,859</b>	<b>2,75,100</b>	<b>2,87,528</b>	<b>2,95,744</b>	<b>2,98,447</b>	

Accordingly, the Petitioner has projected the number of consumers for the control period considering the average growth in terms of number of consumers is shown in the table below:

**Table 5: Projected consumers numbers using an annual average growth rate - Petitioner's Submission**

Consumer Category	Average Growth*	Estimated	MYT control Period (Projected)		
		Current Year	FY 2024-	FY 2025-	FY 2026-
		2023-24	25	26	27
		VI	VII	VIII	IX
<b><u>HT and EHT Category</u></b>					
<b>Non-Commercial Consumers (Domestic)</b>					
AC 50Hz 3-Phase, 11kV	8	129	137	145	153
AC 50Hz,3-Phase, 33kV	0	4	5	5	5
<b>Commercial Consumers (Non-Industrial)</b>					
AC 50Hz 3-Phase, 11kV	52	424	475	527	578
AC 50Hz,3-Phase, 33kV	3	16	20	23	26
<b>Public Lighting and Water Supply Consumers</b>					
AC 50Hz 3-Phase, 11kV	0	9	9	9	9
AC 50Hz,3-Phase, 33kV	0	0	0	0	0
<b>Agricultural Consumers</b>					
AC 50Hz 3-Phase, 11kV	1	6	6	7	7
AC 50Hz,3-Phase, 33kV	0	0	0	0	0
<b>Industrial Consumers</b>					
AC 50Hz 3-Phase, 11kV	13	89	101	114	126
AC 50Hz,3-Phase, 33kV	2	33	36	38	40
AC 50Hz 3-Phase, 132kV	0	3	3	3	3
<b>Bulk Mixed Consumers</b>					
AC 50Hz 3-Phase, 11kV	9	182	190	199	207
AC 50Hz,3-Phase, 33kV	0	15	15	15	15
AC 50Hz 3-Phase, 132kV	0	1	1	1	1
<b><u>Low Voltage Category</u></b>					
<b>Non-Commercial Consumers (Domestic)</b>					
AC 50Hz 1-Phase, 230 Volt	8,966	2,06,095	2,15,061	2,24,027	2,32,993
AC 50Hz,3-Phase, 400 Volt	257	3,795	4,052	4,308	4,565
KJP and BPL connection	1,209	64,294	65,504	66,713	67,922
<b>Commercial Consumers (Non-Industrial)</b>					
AC 50Hz 1-Phase, 230 Volt	1,491	31,166	32,658	34,149	35,640

Consumer Category	Average Growth*	Estimated	MYT control Period (Projected)		
		Current Year 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
		VI	VII	VIII	IX
AC 50Hz,3-Phase, 400 Volt	134	2,620	2,754	2,887	3,021
<b>Public Lighting and Water Supply Consumers</b>					
AC 50Hz 1-Phase, 230 Volt	0	948	948	948	948
AC 50Hz,3-Phase, 400 Volt	19	258	277	296	315
<b>Agricultural Consumers</b>					
AC 50Hz 1-Phase, 230 Volt	0	8	8	8	8
AC 50Hz,3-Phase, 400 Volt	0	7	8	8	8
<b>Industrial Consumers</b>					
AC 50Hz 1-Phase, 230 Volt	0	75	76	76	76
AC 50Hz,3-Phase, 400 Volt	0	169	169	169	169
<b>Temporary Consumer</b>					
LT/HT	45	310	354	399	443
<b>Total</b>		<b>3,10,655</b>	<b>3,22,863</b>	<b>3,35,070</b>	<b>3,47,278</b>

### (b) Commission's Analysis

The Commission has observed that the Petitioners have relied on the actual data pertaining to FY 2018-19 to FY 2022-23 for projection of number of consumers from FY 2023-24 to FY 2026-27.

In order to properly estimate the number of consumers in the absence of connected load for each consumer category which in turn is essential for accurate estimation of sales, the Commission has considered the actual number of consumers as submitted by the Petitioner for the past 5 years and 3 years and has projected the increase in number of consumers considering an appropriate CAGR.

**Table 6: Past period CAGR and Approved consumers numbers for the control period FY 2024-25 to FY 2026-27**

Consumer Category	5 Year CAGR	3 Year CAGR	CAGR Considered	MYT control Period (Projected)		
				FY 2024-25	FY 2025-26	FY 2026-27
<b>HT and EHT</b>						
<b>Non-Commercial Consumers (Domestic)</b>						
AC 50Hz 3-Phase, 11kV	7.98%	12.27%	7.98%	141	152	164

Consumer Category	5 Year CAGR	3 Year CAGR	CAGR Considered	MYT control Period (Projected)		
				FY 2024-25	FY 2025-26	FY 2026-27
AC 50Hz,3-Phase, 33kV	7.46%	--	--	4	4	4
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 3-Phase, 11kV	22.35%	23.47%	22.35%	557	681	833
AC 50Hz,3-Phase, 33kV	--	47.20%	20.00%	19	23	28
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 3-Phase, 11kV	-19.1%	-32.92%	--	9	9	9
AC 50Hz,3-Phase, 33kV	-100%	--	--	0	0	0
<b>Agricultural Consumers</b>						
AC 50Hz 3-Phase, 11kV	13.62%	--	--	5	5	5
AC 50Hz,3-Phase, 33kV	--	-100%	--	0	0	0
<b>Industrial Consumers</b>						
AC 50Hz 3-Phase, 11kV	30.76%	10.72%	10.72%	93	103	114
AC 50Hz,3-Phase, 33kV	8.95%	7.15%	7.15%	35	38	41
AC 50Hz 3-Phase, 132kV	--	--	--	3	3	3
<b>Bulk Mixed Consumers</b>						
AC 50Hz 3-Phase, 11kV	5.62%	4.31%	4.31%	188	196	204
AC 50Hz,3-Phase, 33kV	-1.60%	7.42%	--	15	15	15
AC 50Hz 3-Phase, 132kV	--	--	--	1	1	1
<b>LT</b>						
<b>Non-Commercial Consumers (Domestic)</b>						

Consumer Category	5 Year CAGR	3 Year CAGR	CAGR Considered	MYT control Period (Projected)		
				FY 2024-25	FY 2025-26	FY 2026-27
AC 50Hz 1-Phase, 230 Volt	5.15%	2.36%	5.15%	2,17,949	2,29,170	2,40,969
AC 50Hz,3-Phase, 400 Volt	8.95%	11.54%	8.95%	4,200	4,576	4,986
KJP and BPL connection	2.01%	-2.28%	2.01%	65,652	66,974	68,323
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 1-Phase, 230 Volt	5.77%	6.76%	5.77%	33,198	35,114	37,140
AC 50Hz,3-Phase, 400 Volt	6.25%	9.51%	6.25%	2,806	2,981	3,167
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	-4.69%	-7.92%	--	948	948	948
AC 50Hz,3-Phase, 400 Volt	10.04%	13.66%	10.04%	289	318	350
<b>Agricultural Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	-7.65%	41.42%	--	8	8	8
AC 50Hz,3-Phase, 400 Volt	3.93%	-26.62%	--	7	7	7
<b>Industrial Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	0.34%	25.00%	0.34%	75	75	75
AC 50Hz,3-Phase, 400 Volt	-3.14%	-1.16%	--	169	169	169
<b>Temporary Consumer</b>						
LT/HT	32.11%	16.88%	16.88%	362	423	494
<b>Total</b>				<b>3,26,733</b>	<b>3,41,993</b>	<b>3,58,057</b>

The Commission has analysed the consumer growth over the last 5 years based on 5-year CAGR as well as consumer growth over last 3-year based on 3-year CAGR. Among the two more appropriate value of CAGR is chosen for projecting the consumer numbers. In cases, where the CAGR is either '0' or 'negative', no change in consumer numbers is projected for the ensuing years.



Accordingly, the Commission approves the following consumer numbers for FY 2024-25 to FY 2026-27.

**Table 7: Approved number of consumers for the control period FY 2023-24 to FY 2026-27**

MYT control Period (Projected)		
FY 2024-25	FY 2025-26	FY 2026-27
3,26,733	3,41,993	3,58,057

## 5.2 Category- wise Energy Sales

### (a) Petitioner’s submission –

#### 5.2.1 Forecast within the State

The Petitioner has submitted the category-wise energy sale forecast within the state as tabulated below in table. This forecast is devised by using the Compound Annual Growth Rate (CAGR) of the preceding 5 years as per provisions of the Regulations 10.10(2) of the MYT Regulations, 2018. The Petitioner has further submitted that the category-wise monthly sale for the FY 2022-23, there is no effect on seasonal change, hence annual basis forecast has been adopted instead of a monthly basis.

**Table 8: Forecast for Energy sale within the State for the control period FY 2024-25 to FY 2026-27 based on actual energy sales for last 5 years - Petitioner’s Submission**

Consumer Category	Past Year Energy Consumption data (in MU)					CAGR (5 Years)	Estimate (MU)	Projected Sale in MU			
	FY 18- 19	FY 19- 20	FY 20-21	FY 21- 22	FY 22- 23			FY 23-24	FY 24- 25	FY 25- 26	FY 26- 27
<b>HT and EHT Category</b>											
<b>Non-Commercial Consumers (Domestic)</b>											
AC 50Hz 3-Phase, 11kV	3.58	3.52	4.48	5.33	8.18	22.94%	10.06	12.36	15.20	18.69	
AC 50Hz,3-Phase, 33kV	2.08	3.74	3.86	3.92	4.40	20.61%	5.31	6.40	7.72	9.31	
<b>Commercial Consumers (Non-Industrial)</b>											
AC 50Hz 3-Phase, 11kV	9.60	10.32	10.34	11.37	17.18	15.66%	19.87	22.98	26.58	30.74	
AC 50Hz,3-Phase, 33kV	0.15	0.09	0.28	0.33	0.27	16.31%	0.32	0.37	0.43	0.50	
<b>Public Lighting and Water Supply Consumers</b>											

Consumer Category	Past Year Energy Consumption data (in MU)					CAGR (5 Years)	Estimate (MU)	Projected Sale in MU			
	FY 18- 19	FY 19- 20	FY 20-21	FY 21- 22	FY 22- 23			FY 23-24	FY 24- 25	FY 25- 26	FY 26- 27
AC 50Hz 3-Phase, 11kV	3.75	3.58	3.72	3.00	3.26	--	3.26	3.26	3.26	3.26	
AC 50Hz,3-Phase, 33kV	--	--	--	--	--	--	--	--	--	--	
<b>Agricultural Consumers</b>											
AC 50Hz 3-Phase, 11kV	0.01	--	0.19	--	0.01	--	0.01	0.01	0.01	0.01	
AC 50Hz,3-Phase, 33kV	--	--	0.34	--	--	--	--	--	--	--	
<b>Industrial Consumers</b>											
AC 50Hz 3-Phase, 11kV	12.79	14.38	14.30	18.71	20.17	12.06 %	22.60	25.33	28.38	31.80	
AC 50Hz,3-Phase, 33kV	22.34	21.12	27.85	32.27	38.00	14.20%	43.40	49.56	56.00	64.65	
AC 50Hz 3-Phase, 132kV	104.26	129.84	84.05	157.83	158.52	11.04%	176.02	195.46	217.04	241.01	
<b>Bulk Mixed Consumers</b>											
AC 50Hz 3-Phase, 11kV	18.68	16.98	16.38	16.70	18.51	--	18.51	18.51	18.51	18.51	
AC 50Hz,3-Phase, 33kV	6.82	7.60	8.18	9.14	9.01	7.22%	9.66	10.36	11.11	11.91	
AC 50Hz 3-Phase, 132kV	36.06	22.73	1.49	--	--	--	--	--	--	--	
<b>Low Voltage Category</b>											
<b>Non-Commercial Consumers (Domestic)</b>											
AC 50Hz 1-Phase, 230 Volt	125.51	126.49	131.11	145.19	165.04	7.09%	176.74	189.26	202.67	217.02	
AC 50Hz,3-Phase, 400 Volt	19.63	20.61	22.21	25.34	26.34	7.70%	28.44	30.63	32.98	35.52	
KJP and BPL connection	21.08	24.08	25.72	28.00	32.63	11.54%	36.40	40.60	45.28	50.51	

Consumer Category	Past Year Energy Consumption data (in MU)					CAGR (5 Years)	Estimate (MU)	Projected Sale in MU			
	FY 18- 19	FY 19- 20	FY 20-21	FY 21- 22	FY 22- 23			FY 23-24	FY 24- 25	FY 25- 26	FY 26- 27
<b>Commercial Consumers (Non-Industrial)</b>											
AC 50Hz 1-Phase, 230 Volt	24.74	25.64	25.43	30.35	41.31	13.68%	46.96	53.39	60.69	68.99	
AC 50Hz,3-Phase, 400 Volt	17.32	18.58	17.67	21.73	29.54	14.28%	33.76	38.58	44.09	50.38	
<b>Public Lighting and Water Supply Consumers</b>											
AC 50Hz 1-Phase, 230 Volt	3.37	2.84	2.45	2.62	3.15	--	3.15	3.15	3.15	3.15	
AC 50Hz,3-Phase, 400 Volt	1.59	1.92	2.53	2.38	2.56	12.67%	2.89	3.25	3.67	4.13	
<b>Agricultural Consumers</b>											
AC 50Hz 1-Phase, 230 Volt	--	0.01	0.182	0.010	0.01	73.3%	0.02	0.03	0.05	0.08	
AC 50Hz,3-Phase, 400 Volt	--	0.01	0.061	0.050	0.04	100.00 %	0.07	0.15	0.30	0.60	
<b>Industrial Consumers</b>											
AC 50Hz 1-Phase, 230 Volt	2.17	0.50	0.34	1.63	0.50	--	0.50	0.50	0.50	0.50	
AC 50Hz,3-Phase, 400 Volt	2.12	1.08	0.98	1.26	1.92	--	1.92	1.92	1.92	1.92	
<b>Temporary Consumer</b>											
LT/HT	0.14	0.24	0.372	0.480	1.49	--	1.49	1.49	1.49	1.49	
<b>Total</b>	<b>437.79</b>	<b>455.90</b>	<b>405.11</b>	<b>518.24</b>	<b>582.10</b>		<b>641.33</b>	<b>707.53</b>	<b>781.61</b>	<b>864.67</b>	

In cases where there CAGR is negative, the growth factor has been considered as 'NIL'. The Petitioner has requested the Commission to approve the projected Energy Sales within the state for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at 641.33MU, 707.53MU, 781.61MU, and 864.67MU respectively.

### 5.2.2 Forecast of Sale of Power Outside the State

The energy sale forecast outside the state is calculated assuming annual increment of 5% above the previous year's consumption and is shown in the table below:

**Table 9: Forecast for Energy sale outside the State for the control period FY 2024-25 to FY 2026-27 @5% annual increment over previous years' energy sales - Petitioner's Submission**

Particulars	Unit	Last 5 Years Actuals				Current Year (Estd.)	MYT Control Period (Projected)		
		FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Energy Sale (IEX)	MU	111.85	179.66	168.22	234.12	245.83	258.12	271.02	284.57
Bilateral Sale	MU	--	7.20	96.71	130.42	136.94	143.79	150.98	158.53
Deviation Export	MU	74.94	14.89	13.14	14.76	14.69	13.69	13.26	12.60
Banking Export	MU	0.00	83.52	47.82	71.52	75.10	78.85	82.79	86.93
<b>Total</b>	<b>MU</b>	<b>186.79</b>	<b>285.28</b>	<b>325.89</b>	<b>450.82</b>	<b>472.56</b>	<b>494.71</b>	<b>518.05</b>	<b>542.63</b>

The Petitioner submitted that the Commission in its earlier tariff order advised APDOP to reduce the sale outside the state as the sale price at IEX is lower than the purchase price, in fact, APDOP is selling power in the IEX at the rate determined in the Exchange for a particular slot. The average selling rate at IEX is not much different from the average purchase cost and sometimes it is on higher side. Also, APDOP has to resort to sale of power in RTM/DAM market of IEX, as allocation of power especially during peak hours is much higher than the actual requirement of the state. Further, APDOP entered PPA with many generators before the inception of IEX and so the immediate termination of PPA may not be possible. Also, due to free power allocated from the Generating station located in Arunachal Pradesh, as being the home state, there used to be surplus power, especially during the high hydro season, hence the sale outside the state has to be continued. Hence, steady-outside state sales@5% annual increment has been projected for the ensuing and entire control period. Therefore, the Commission is requested to approve the projected Energy Sale outside the state through IEX for FY 2023-24, 2024-25, 2025-26 and 2026-27 at 245.83 MU, 258.12 MU, 271.02 MU and 284.57 MU respectively.

The APDOP is selling surplus power under bilateral mode @ exchange rate plus 5 paise. Under this mode, the APDOP sold 7.20 MU of energy earning Rs. 1.87 Cr in the FY 2020-21, 96.71 MU of energy earning Rs. 35.73 Cr in the FY 2021-22 and 130.42 MU of energy earning Rs. 80.49 Cr in the FY 2022-23. The Petitioner is planning to sell energy under bilateral mode to the tune of 136.94 MU, 143.79 MU, 150.98 MU, and 158.53 MU in the years 2023-24, 2024-25, 2025-26 and 2026-27 respectively.

### 5.2.3 Total Energy Sale Forecast

The total energy sale forecast both within the state and outside the state as projected by the Petitioner is tabulated in the table below:

**Table 10: Total Energy Sale Forecast - Petitioner's Submission**

Particulars	Unit	Past years Actuals				Current Year Estimates	MYT Control Period (Projections)		
		FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23- 24	FY 24-25	FY 25-26	FY 26-27
Within the State	MU	455.90	405.11	518.25	582.10	641.33	707.53	781.61	864.67
Outside the State	MU	186.79	285.28	325.89	450.82	472.56	494.71	518.05	542.63
<b>Total</b>	<b>MU</b>	<b>642.69</b>	<b>690.38</b>	<b>844.14</b>	<b>1032.92</b>	<b>1113.89</b>	<b>1202.24</b>	<b>1299.66</b>	<b>1407.30</b>

#### (b) Commission's Analysis

The Regulation 10.10 of the APSERC MYT Regulations, 2018 states the following regarding sales forecast:

##### *"10.10 Sales Forecast*

- (1) *The accurate projection of category wise sales is very essential for the assessment of energy input requirement to determine the quantum of generation and quantum of energy to be purchased for the correct assessment of revenue requirement for generation and power purchase.*
- (2) *The licensee may adopt a suitable methodology like CAGR to arrive at the category wise sales for the base year i.e., for the current year.*
- (3) *The licensee shall submit the restricted demand due to system constraints (in MW), unrestricted demand (in MW) and sale of electricity (in MU) for different categories of consumers in its area of supply for previous year, estimated for the current year and forecast for ensuing year.  
Provided where the category wise unrestricted/ restricted demand is not available, these figures may be supplied for the area as a whole. The likely date, by which such data are likely to be available and the steps taken in this regard shall be furnished.*
- (4) *The forecast for the ensuing year shall be on monthly basis to properly capture the seasonality in demand.*
- (5) *The Commission shall examine the estimate of sales for reasonableness based on growth in number of consumers and consumption and demand of electricity in previous years and anticipated growth in the next year and any other factor, which the Commission may consider relevant and approve sale of electricity to consumers with such modifications as deemed fit.*

- (6) *The distribution licensee shall also indicate the particulars of open access consumers, traders and other licensees' category wise using its system. The demand and energy wheeled for them shall be shown separately for,*
- (a) *supply within the area of supply and*
- (b) *Supply outside the area of supply.*
- (7) *The licensee shall assess and estimate sales to unmetered category of consumers, on the basis of the consumption norms sample study or on any other basis determined, or otherwise found reasonable by the Commission.*
- (8) *The licensee shall develop a reliable database of each of the consumer categories such as their demand, energy consumption etc. so as to facilitate accurate forecasting of energy sales for ensuing year.*
- (9) *In case additional electricity is required by any particular consumer category not considered by the commission the licensee shall make an application any time during the year, to the Commission for approval. The application shall indicate the need for such change in consumer mix, the additional supply required and the manner in which the licensee proposes to meet the cost of supply for such change of consumer mix."*

In view of above, it is observed that no information on connected load has been submitted by the Petitioner. Also, as per provisions of the regulations monthly sales estimates were required to be submitted by the Petitioner based on which the energy sales projections for the entire control period should have been done.

Therefore, the Commission has analysed the consumer category wise growth in energy consumption over the last 5 years and determined the 5-year CAGR and 3-year CAGR and based on the outcome the more appropriate value of CAGR has been chosen for projection of energy sales for FY 2023-24 to FY 2026-27. In cases, where the CAGR is either '0' or 'negative', no change in sales is projected for the ensuing years.

Accordingly, the Commission approves the following consumer category wise sales for FY 2024-25 to FY 2026-27 and directs the Petitioner to follow the provisions of the Regulations in future.

**Table 11: Past period CAGR and Approved energy sales for the control period FY 2023-24 to FY 2026-27**

Consumer Category	5 Year CAGR	3 Year CAGR	CAGR Considered	MYT control Period (Projected) (MU)		
				FY 2024-25	FY 2025-26	FY 2026-27
<b>HT and EHT</b>						
<b>Non-Commercial Consumers (Domestic)</b>						
AC 50Hz 3-Phase, 11kV	22.95%	35.13%	22.95%	12.36	15.20	18.69
AC 50Hz,3-Phase, 33kV	20.60%	6.77%	6.77%	5.02	5.35	5.72
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 3-Phase, 11kV	15.66%	28.90%	15.66%	22.98	26.58	30.75
AC 50Hz,3-Phase, 33kV	15.83%	-1.80%	15.83%	0.36	0.42	0.49

Consumer Category	5 Year CAGR	3 Year CAGR	CAGR Considered	MYT control Period (Projected) (MU)		
				FY 2024-25	FY 2025-26	FY 2026-27
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 3-Phase, 11kV	-3.44%	-6.39%	--	3.26	3.26	3.26
AC 50Hz,3-Phase, 33kV	--	--	--	--	--	--
<b>Agricultural Consumers</b>						
AC 50Hz 3-Phase, 11kV	--	--	--	0.01	0.01	0.01
AC 50Hz,3-Phase, 33kV	--	-100%	--	--	--	--
<b>Industrial Consumers</b>						
AC 50Hz 3-Phase, 11kV	12.06%	18.76%	12.06%	25.33	28.38	31.81
AC 50Hz,3-Phase, 33kV	14.20%	16.81%	14.20%	49.56	56.60	64.64
AC 50Hz 3-Phase, 132kV	11.04%	37.33%	11.04%	195.46	217.05	241.02
<b>Bulk Mixed Consumers</b>						
AC 50Hz 3-Phase, 11kV	-0.23%	6.30%	--	18.51	18.51	18.51
AC 50Hz,3-Phase, 33kV	7.21%	4.95%	4.95%	9.92	10.42	10.93
AC 50Hz 3-Phase, 132kV	-100%	-100%	--	--	--	--
<b>Low Voltage Category</b>						
<b>Non-Commercial Consumers (Domestic)</b>						
AC 50Hz 1-Phase, 230 Volt	7.08%	12.20%	7.08%	189.25	202.66	217.02
AC 50Hz,3-Phase, 400 Volt	7.70%	9.04%	7.70%	30.63	32.99	35.53
KJP and BPL connection	11.54%	12.65%	11.54%	40.60	45.28	50.51
<b>Commercial Consumers (Non-Industrial)</b>						
AC 50Hz 1-Phase, 230 Volt	13.67%	27.46%	13.67%	53.38	60.68	68.98
AC 50Hz,3-Phase, 400 Volt	14.28%	29.31%	14.28%	38.58	44.09	50.38
<b>Public Lighting and Water Supply Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	-1.67%	13.46%	--	3.15	3.15	3.15
AC 50Hz,3-Phase, 400 Volt	12.64%	0.63%	0.63%	2.59	2.61	2.63
<b>Agricultural Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	--	-76.56%	--	0.01	0.01	0.01
AC 50Hz,3-Phase, 400 Volt	--	-19.02%	--	0.04	0.04	0.04
<b>Industrial Consumers</b>						
AC 50Hz 1-Phase, 230 Volt	-30.72%	21.99%	--	0.50	0.50	0.50
AC 50Hz,3-Phase, 400 Volt	-2.45%	40.19%	--	1.92	1.92	1.92
<b>Temporary Consumer</b>						
LT/HT	80.62%	100.13%	10.00%	1.80	1.98	2.18
<b>Total</b>				<b>705.24</b>	<b>777.70</b>	<b>858.66</b>

In light of the above submissions, the Commission approves the following energy sales within the state for FY 2023-24 to FY 2026-27.

**Table 12: Approved energy sales for the control period FY 2023-24 to FY 2026-27**

MYT control Period (Projected) (MU)		
FY 2024-25	FY 2025-26	FY 2026-27
705.24	777.70	858.66

### 5.3 Losses: Distribution and AT&C Loss

#### (a) Petitioner's submission

The distribution loss and AT&C loss for FY 2023-24 and projected loss for FY 2024-25 to FY 2026-27 as submitted by the Petitioner is shown in the table below:

**Table 13: AT&C Loss Projection - Petitioner's Submission**

S No	Particulars	Calculation	Current Year (Estd.)	MYT Control Period (Projected)		
			FY23-24	FY24-25	FY25-26	FY26-27
A	Input Energy (MkWh)	A	1049.26	1026.03	1001.88	976.75
B	Transmission Losses (MkWh)	B	28.49	27.66	26.81	25.92
C	Net Input Energy (MkWh)	C=A-B	1020.77	998.36	975.07	950.83
D	Energy Sold (MkWh)	D	641.33	707.53	781.61	864.67
E	Revenue from Sale of Energy including Government Grant (Rs. Cr.)	E	831.18	874.58	920.35	968.61
E (i)	<b>Likely Collection (90% of Tariff and 100% of Grant)</b>	E (i)	802.07	842.48	884.89	929.39
F	Adjusted Revenue from Sale of Energy on Subsidy Received basis (Rs. Cr.)	F	831.18	874.58	920.35	968.61
G	Opening Debtors for Sale of Energy (Rs. Cr.)	G	391.87	420.98	453.08	488.54
H	(i) Closing Debtors for Sale of Energy (Rs. Cr.)	(i)	420.98	453.08	488.54	527.76
	(ii) Any amount written off during the year directly from(i)	(ii)				
I	Adjusted Closing Debtors for sale of Energy (Rs. Cr.)	H (i+ii)	420.98	453.08	488.54	527.76
J	Collection Efficiency (%)	(E (i)+G-I)/E*100	93	92.66	92.29	91.9



S No	Particulars	Calculation	Current Year (Estd.)	MYT Control Period (Projected)		
			FY23-24	FY24-25	FY25-26	FY26-27
K	Units Realized (Mkwh) = [ Energy Sold*Collection efficiency]	D*J/100	596.42	655.58	721.38	794.64
L	Units Unrealized (Mkwh)= [ Net Input Energy-Units Realized]	C-K	424.36	342.78	253.69	156.19
M	<b>AT&amp;C Losses (%) = [{ Units Unrealized/Net Input Energy}*100]</b>	<b>L/C *100</b>	41.57	34.33	26.02	16.43

The Petitioner has submitted that due to the scattered load over a vast geographical area, the distribution loss is comparatively high in Arunachal Pradesh. However, many projects are going on under APDOP, whose target is to reduce distribution loss and AT&C Loss as per trajectories fixed by Government of India. But, because of the slow progress of the projects for the reduction of AT&C losses like IPDS, RDSS, etc, the AT&C loss reduction in Arunachal Pradesh is not up to the expectation. APDOP has followed the revised methodology for calculation of AT&C losses as prescribed by CEA vide communication F.no. CEA-GO-13-25/1/2023-DPR Division/-73 Dt.30.06.2023.

Accordingly, the Petitioner has requested the Commission to approve the Estimated AT&C Loss for FY 2023-24 at 41.57%, and for the FY 2024-25, FY 2025-26 and FY 2026-27 at 34.33%, 26.02%, and 16.43% respectively.

### (b) Commission's Analysis

The Commission in order dated 30.05.2013 in Petition No. TP 01 of 2013 while approving the tariff for the 2013-14 directed under para 6.2.5 as follows-

*“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.”*

Further in Tariff Order dated 31.05.2018 in Petition No. TP 01 of 2018 while approving the tariff for the 2018-19 observed as follows-

*“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*

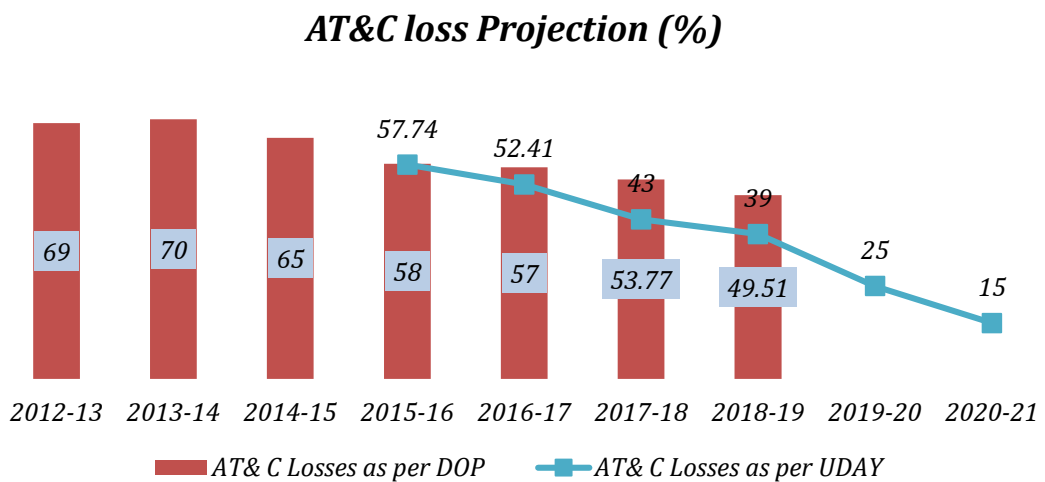
meters should also be provided to all un-metered connections at the earliest in a time bound manner.

As per the Bipartite MoU UDAY, which was signed by Government of Arunachal Pradesh with GoI on 29-03-2017, it is agreed upon that Government 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



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 Government of India.

As per Regulation 71 (a) of APSERC (Terms and Conditions for Determination of Tariff and Formats for Tariff Filling) 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

Year	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”

Further vide order dated 21.02.2024, the Commission had approved the AT&C losses for past period, i.e. FY 2017-18 to FY 2022-23, as given below.

FY	Actual (%)	Approved in True-up (%)
2017-18	63.48	41
2018-19	61.93	63.48

2019-20	33.6	35
2020-21	53.6	32
2021-22	50.70	45
2022-23	56.24	35

Further, the Commission had given the following directives with regard to loss reduction in the said order:

*“1. Since the Revenue Gap created by the Petitioner (which could have been reduced by improving the efficiency as per committed AT&C loss as well as controlling unwarranted UI procurement), is mitigated by the State Government through grants, the trued-up Revenue Gap shall not pass through and reflect in the next tariff petition. **The inefficiency of the distribution licensee cannot be covered by the Grants from public money and concern officials of APDOP should be answerable for it.***

*2. Despite many flagship Schemes specially designed for **reduction of AT&C losses in past and present, the AT&C losses consistently remained above 50%**, and it even rose upto 61.93% in the FY2018-19. Matter needs serious introspection to plug the losses and conduct diagnostic exercise at individual feeder / transformer / subdivision / division / circle and zonal level. Commission hereby direct the APDOP, **to conduct such exercise and submit results to Commission before next petition.** Commission also directs APDOP **to bring down the AT&C losses as per the trajectory issued by the MoP with due consultation with APDOP itself.**”*

It is observed that the distribution losses and the commercial losses are much above loss levels and not much reduction is observed as per provisions of the APSERC MYT Regulations, 2018.

The Regulation 10.14 of the aforesaid regulations states the following:

**“10.14 Aggregate Technical and Commercial (AT&C) Losses:**

*The Distribution Licensee shall recover the approved level of AT&C losses arising from the Retail Supply of electricity:*

*While filing a Tariff Application, the licensee shall provide complete information of the total AT&C Losses during the previous year and that projected for the year for which the application is being made, including the basis on which such losses have been worked out. (Information to be furnished as per the Format of Distribution Licensee in given in Annexure III):*

*Provided that 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 5 percent during the year for which a Tariff Application is made. Any shortfall in the projected level of AT&C losses for such year, in this regard, shall be penalized by an amount equivalent to the cost of the quantum of energy to be lost due to inability of the licensee to plan and achieve reduction of AT&C losses by a minimum of 5 percent from the previous year’s level. Such amount shall be calculated at the average over all unit cost of sale of power.*

*Provided further that failure of a licensee to reduce the AT&C losses during the previous year by 5 percent would be penalized on the same basis as stated against clause (a) above.*

*Provided also that in the case of a licensee whose AT&C losses during the previous year were less than 30 percent, it would be obligatory for such licensee to reduce such AT&C losses by a minimum of 3 percent only during the year for which a Tariff Application is made. Failure to achieve this level of reduction would be penalized in the same manner as set out in clause (a) above.”*

As such, it is observed here that the licensee has failed to submit any concrete report on roadmap for reduction of AT&C losses in light of implementation of flagship scheme such as the ‘Revamped Distribution Sector Scheme (RDSS)’. Also, the progress of licensee is far from satisfactory and there is a huge gap between the targeted losses as per RDSS and actual losses. This means that the licensee is incurring high financial loss against due to high distribution losses and commercial losses, as the Commission has been allowing only the normative losses to be passed on to the consumers.

The Commission is of the opinion that it is utmost necessary to go into the details of such sub-optimal performance of the licensee and at present feels appropriate to consider the target set under RDSS for AT&C losses. Accordingly, the Commission considered the trajectory approved under RDSS and approves the following distribution loss trajectory for FY 2023-24 to FY 2026-27 as shown in the table below:

**Table 14: Approved AT&C loss trajectory for FY 2024-25 to FY 2026-27**

Year	2023-24	2024-25	2025-26	2026-27
AT&C Losses	28%	22%	18%	15%
Distribution loss	--	21.21%*	17.17%*	14.14%*

*\*Considered collection efficiency of 99%*

The Commission has considered the approved AT&C loss level under RDSS for the MYT period and directs the Petitioner to submit loss reduction achievement against targets on quarterly, half yearly and an annual basis.

## 5.4 Sources of Power procurement for FY 2024-25 to 2026-27

### (a) Petitioner’s submission

The Petitioner has submitted that Power from different sources is purchased to meet the demand within the State and thereafter sell the surplus power outside the state as mentioned below:

#### a. Central Sector Generating Stations Allocation

The major power requirement is met by power allocation from Central Sector Generating Stations. Central Sector allocation and power purchased from each generating station in FY 2020-21 to 2022-23 are given in Table below:

**Table 15: Central Sector Allocation of Power and Energy Received (in MU) during the FY 2020-21 to FY 2022-23 - Petitioner's submission**

Source of Power (Station wise)		Installed Capacity (MW)	APDOP share % (As on March'23)	APDOP share (MW)	Energy Received (MU)		
					FY 20-21	FY 21-22	FY 22-23
LOKTAK	NHPC	105	4.94	5.19	30.04	19.38	23.21
KOPILI-I	NEEPCO	200	5.19	10.4	0.00	0.00	0.00
KOPILI-II	NEEPCO	25	5.99	1.5	0.00	0.67	0.00
KHANDONG	NEEPCO	50	4.19	2.1	2.72	11.21	0.00
Panyor Lower	NEEPCO	405	6.46	26.2	89.99	74.41	88.87
Free Energy Panyor L	NEEPCO		12	48.6	165.86	137.03	164.12
DOYANG	NEEPCO	75	6.85	5.14	13.54	6.55	11.71
PARE	NEEPCO	110	5.87	6.5	30.52	24.96	30.74
Free Energy Pare	NEEPCO		13	14.3	67.22	54.88	67.82
KAMENG	NEEPCO	600	1.83	11.0	26.30	46.86	53.18
Free Energy Kameng	NEEPCO		12	7	167.11	304.39	344.87
AGBPP	NEEPCO	291	5.69	16.6	61.698	81.54	96.55
AGTCCPP	NEEPCO	135	6.7	9.0	45.842	52.34	60.20
PALATANA	OTPCL	726.6	3.03	22.0	127.989	116.64	142.92
BgTPP	NTPC	750	5.07	38.03	101.80	131.71	157.22
FARAKKA	NTPC	1600	0.19	3.0	20.73	20.11	20.04
KAHALGAON	NTPC	840	0.24	2.02	9.82	11.34	10.66
TALCHAR	NTPC	1000	0.20	2.00	14.32	13.76	14.20
<b>Total</b>				<b>295.50</b>	<b>975.52</b>	<b>1107.78</b>	<b>1286.32</b>
<b>Total Unit Purchased (MU)</b>					<b>575.33</b>	<b>611.47</b>	<b>709.52</b>
<b>Total Free Unit Received (MU)</b>					<b>400.19</b>	<b>496.30</b>	<b>576.80</b>

The power purchase quantum for the current year and ensuing control period years is estimated considering various factors like previous energy consumptions, energy sale projection, judicious scheduling, likely distribution losses, surplus energy sale during high hydro, restricting deviation import, restricting import from high-cost generators, total energy requirement, etc. and is shown below: -

**Table 16: Central Sector Allocation of Power and Energy Received (in MU) during the FY 2023-24 to FY 2026-27 - Petitioner's submission**

Source of Power (Station wise)		Energy Received (MU)	Multiplying Factor	Current year ( <i>Estimation</i> ) MU	Projection (MU)		
		FY 2022- 23 (Actual)		FY 2023-24	FY 2024- 25	FY 2025- 26	FY 2026- 27
LOKTAK	NHPC	23.21	0%	23.21	23.21	23.21	23.21
KOPILI-I	NEEPCO	0	0%	0	0	0	0
KOPILI-II	NEEPCO	0	0%	0	0	0	0
KHANDONG	NEEPCO	0	0%	0	0	0	0
Panyor Lower	NEEPCO	88.87	0%	88.87	88.87	88.87	88.87
Free Energy Panyor L	NEEPCO	164.12		164.12	164.12	164.12	164.12
DOYANG	NEEPCO	11.71	0%	11.71	11.71	11.71	11.71
PARE	NEEPCO	30.74	0%	30.74	30.74	30.74	30.74
Free Energy Pare	NEEPCO	67.82		67.82	67.82	67.82	67.82
KAMENG	NEEPCO	53.18	0%	53.18	53.18	53.18	53.18
Free Energy Kameng	NEEPCO	344.87		344.87	344.87	344.87	344.87
AGBPP	NEEPCO	96.55	0%	96.55	96.55	96.55	96.55
AGTCCPP	NEEPCO	60.2	0%	60.20	60.20	60.20	60.20
PALATANA	OTPCL	142.92	0%	142.92	142.92	142.92	142.92
BgTPP	NTPC	157.22	0%	157.22	157.22	157.22	157.22
FARAKKA	NTPC	20.04	0%	20.04	20.04	20.04	20.04
KAHALGAON	NTPC	10.66	0%	10.66	10.66	10.66	10.66
TALCHAR	NTPC	14.2	0%	14.20	14.20	14.20	14.20
DHPD	GoAP	41.97	0%	41.97	41.97	41.97	41.97
HPDCL	SPSU	5.24	0%	5.24	5.24	5.24	5.24
DIKSHI	IPP	65.17	0%	65.17	65.17	65.17	65.17
Free Energy Dikshi		11.64	0%	11.64	11.64	11.64	11.64
SOLAR	APEDA	0.96	0%	0.96	0.96	0.96	0.96
Deviation		66.05	-5%	62.75	59.61	56.63	53.8

Source of Power (Station wise)	Energy Received (MU)	Multiplying Factor	Current year ( <i>Estimation</i> ) MU	Projection (MU)		
	FY 2022- 23 (Actual)		FY 2023-24	FY 2024- 25	FY 2025- 26	FY 2026- 27
IEX Purchase	6.15	0%	6.15	6.15	6.15	6.15
Banking (Import)	39.37	5%	41.34	43.41	45.58	47.86
Diesel Generation	0.28	0%	0.28	0.28	0.28	0.28
<b>TOTAL</b>	<b>1523.15</b>		<b>1521.81</b>	<b>1520.74</b>	<b>1519.93</b>	<b>1519.38</b>

**b. Power from within the State**

There are power generators within the state of Arunachal Pradesh from where APDOP is receiving/purchasing the entire power generated by them which is tabulated in the table below:

**Table 17: Power purchased during FY 2020-21 to 2022-23 from the Generators within the State - Petitioner's Submission**

Source of Power		Installed Capacity (MW)	APDOP share (%) (As on March 21)	APDOP share (MW)	Energy Received (MU) (Actuals)		
					FY 20- 21	FY 21- 22	FY 22- 23
DHPD	GoAP	81.54	100	81.54	76.60	48.06	41.97
HPDCL	SPSU	3.0	100	3.0	0.83	4.69	5.24
DIKSHI	IPP	24.0	90	21.6	16.30	47.99	65.17
Free Energy Dikshi			10	2.40	--	2.13	11.64
SOLAR	APEDA				0.52	0.47	0.96
<b>Total</b>				<b>108.54</b>	<b>94.25</b>	<b>103.33</b>	<b>124.98</b>

**(i) From DHPD: -**

Department of Hydro Power Development (DHPD) has an installed capacity of 81.54 MW consisting of different capacities located in different locations of Arunachal Pradesh. APDOP received about 76.60 MU, 48.06 MU and 41.97 MU during FY 2020- 21, 2021-22 and 2022-23 respectively from DHPD. As DHPD is under the same state Government (AP) and hence, APDOP does not pay the cost of power to DHPD and hence may be treated as Free Power. If new projects come up then there will be capacity addition.

**(ii) Power from Hydro Power Development Corporation of Arunachal Pradesh Limited (HPDCAPL): -**

Arunachal Pradesh Hydro Power Development Corporation Limited is a State Public Sector Undertaking and has commissioned a 3 MW small hydropower project at Zemithang of Tawang district of Arunachal Pradesh over the Sumbachu River and started commercial operation in the year 2020-21. The APDOP received about 0.83 MU, 4.69 MU and 5.24 MU @ Rs. 3.61/Unit (Provisional tariff) costing Rs.1.91 Cr and Rs 2.68 Cr during FY 2021-22 and FY 2022-23 respectively from this project.

**(iii) Dikshi SHP: -**

Dikshi SHP is a small hydropower project of capacity 24 MW in Rupa of West Kameng District developed by Devi Energy Pvt. Ltd, an Independent Power Producer (IPP). This project was commissioned in the year 2019 and declared COD on 19 September 2019. The APDOP entered into a PPA with M/s Devi Energy Ltd for purchasing the entire power generated from this project. APDOP purchased power to the tune of 16.30 MU, 47.99 MU and 65.17MU @ Rs. 5.25/unit amounting to Rs. 17.59 Cr, Rs. 22.06 Cr and Rs 34.43 Cr during the year 2020-21, 2021-22 and FY 2022-23 respectively.

**(iv) Arunachal Pradesh Energy Development Agency (APEDA): -**

The Arunachal Pradesh Energy Development Agency is under the Ministry of Power, Government of Arunachal Pradesh, which is responsible for the development of Non- Conventional Energy in the state. APEDA has developed various capacities of Solar Power plants across the state with an installed capacity of 4.188 MW. From these plants, APDOP has received about 0.52 MU, 0.47 MU and 0.96 MU of energy free of cost during the year 2020-21, 2021-22 and 2022-23 respectively since it is under the same umbrella of the state Government. The energy so received is utilized to partially meet up the annual Solar Renewable Power Purchase Obligation (RPO) of the state.

**c. Power received from the other Sources**

The Petitioner has further submitted that during exigencies power is purchased from the market and also banking of energy during the high hydro season and takes back during



the lean hydro season. DG sets are also kept in standby and UI transaction for past period has also been submitted.

**Table 18: Power received from other sources during FY 2020-21 to 2022-23 - Petitioner's submission**

Source of Power	Unit	Energy Received (MU)		
		(Actuals)		
		FY 2020-21	FY 2021-22	FY 2022-23
Deviation	MU	39.92	48.82	66.05
IEX Purchase	MU	0.65	3.94	6.15
Banking (Import)	MU	36.12	64.80	39.37
Diesel Generation	MU	0.36	0.39	0.28
<b>Total</b>	<b>MU</b>	<b>77.04</b>	<b>117.95</b>	<b>111.86</b>

(i) **Deviation: -**

Deviation is the difference between the actual drawl and the scheduled drawl from the Grid. The charges for the Deviations for all the time blocks shall be payable for over-drawl by the buyer and under-injection by the seller and receivable for under-drawl by the buyer and over-injection by the seller and shall be worked out on the average frequency of a time block at the rates specified.

Since APDOP is a buyer, it has over-drawn from the Grid to the tune of 39.92 MU, 48.82 MU and 66.05 MU in the FY 2020-21, 2021-22 and 2022-23 respectively.

(ii) **IEX Purchase: -**

In case of any shortage of power, the APDOP resorts to purchasing power from Real-Time Market (RTM) or Day Ahead Market (DAM) from IEX to avoid or minimize Deviation. APDOP purchased 0.65 MU in FY 2020-21, 3.94 MU in FY 2021-22 and 6.15 MU in FY 2022-23 to meet up the power shortage at that time.

(iii) **Banking: -**

APDOP is engaged in the banking of energy during the high hydro season and takes back during the lean hydro season @ 5% above in case of forward banking and sometimes APDOP takes energy in advance from the party and returns to them @ 5% above as and when power is available. As such, there is no financial implication for this activity.

The energy was imported via Banking to the tune of 36.12 MU, 64.80 MU and 39.37 MU in the year 2020-21, 2021-22 and 2022-23 respectively.

(iv) **Diesel Generation: -**

APDOP has DG sets of different capacities installed at different locations with a total installed capacity of about 20.45 MW. These DG sets are kept on standby and used as and when required. Further, APDOP is on the way to phasing out the DG Sets slowly due to its high generation cost. Since these sets are owned by APDOP, the power generated from it will not be included in the power purchase cost. The Expenditure on DG sets shall be included in Operation and Maintenance Costs. The energy generated through DG set in the year 2020-21, 2021-22 and 2022-23 is 0.36 MU, 0.39 MU and 0.28 MU respectively.

**d. Total Power received**

APDOP does not own any Generating Stations. The power required to cater to the needs of the state is met up by purchasing power from the Central Generating Stations, Independent Power Producers (IPP), Free power received from the hydro generating stations located in the state, Generation from DHPD, APEDA, and Banking. The total energy received by APDOP from different sources in the last three years is as shown below: -

**Table 19: Total Power Received during FY 2020-21 to 2022-23 - Petitioner's submission**

Source of Power	Unit	Energy Received (MU)		
		(Actuals)		
		FY 2020-21	FY 2021-22	FY 2022-23
Central Sector Allocation	MU	975.52	1107.78	1286.32
State Generation (IPP + Own)	MU	94.25	103.33	124.98
From Other Sources	MU	77.04	117.95	111.86
<b>Total</b>	<b>MU</b>	<b>1146.81</b>	<b>1329.06</b>	<b>1523.15</b>

The power purchase quantum for the current year and ensuing control period years is estimated considering various factors like previous energy consumptions, energy sale projection, judicious scheduling, likely distribution losses, surplus energy sale during high hydro, restricting deviation import, restricting import from high-cost generators, total energy requirement, etc. and is shown in table below:

**Table 20: Power Purchase Estimation - Petitioner's submission**

Source of Power (Station wise)		Energy Re- ceived (MU) FY 2022-23 (Actual)	Multi- plying Factor	Current year (Estima- tion) MU FY 2023-24	Projection (MU)		
					FY 2024-25	FY 2025-26	FY 2026-27
LOKTAK	NHPC	23.21	0%	23.21	23.21	23.21	23.21
KOPILI-I	NEEPCO	0	0%	0	0	0	0
KOPILI-II	NEEPCO	0	0%	0	0	0	0
KHANDONG	NEEPCO	0	0%	0	0	0	0
Panyor Lower	NEEPCO	88.87	0%	88.87	88.87	88.87	88.87
Free Energy Panyor L	NEEPCO	164.12		164.12	164.12	164.12	164.12
DOYANG	NEEPCO	11.71	0%	11.71	11.71	11.71	11.71
PARE	NEEPCO	30.74	0%	30.74	30.74	30.74	30.74
<b>Free Energy Pare</b>	NEEPCO	67.82		67.82	67.82	67.82	67.82
KAMENG	NEEPCO	53.18	0%	53.18	53.18	53.18	53.18
<b>Free Energy Ka- meng</b>	NEEPCO	344.87		344.87	344.87	344.87	344.87
AGBPP	NEEPCO	96.55	0%	96.55	96.55	96.55	96.55
AGTCCPP	NEEPCO	60.2	0%	60.2	60.2	60.2	60.2
PALATANA	OTPC	142.92	0%	142.92	142.92	142.92	142.92
BgTPP	NTPC	157.22	0%	157.22	157.22	157.22	157.22
FARAKKA	NTPC	20.04	0%	20.04	20.04	20.04	20.04
KAHALGAON	NTPC	10.66	0%	10.66	10.66	10.66	10.66
TALCHAR	NTPC	14.2	0%	14.2	14.2	14.2	14.2
DHPD	GoAP	41.97	0%	41.97	41.97	41.97	41.97
HPDCL	SPSU	5.24	0%	5.24	5.24	5.24	5.24
DIKSHI	IPP	65.17	0%	65.17	65.17	65.17	65.17
Free Energy Dikshi		11.64	0%	11.64	11.64	11.64	11.64
SOLAR	APEDA	0.96	0%	0.96	0.96	0.96	0.96
Deviation		66.05	-5%	62.75	59.61	56.63	53.8
IEX Purchase		6.15	0%	6.15	6.15	6.15	6.15

Source of Power (Station wise)		Energy Re- ceived (MU)	Multi- plying Factor	Current year (Estima- tion) MU	Projection (MU)		
		FY 2022-23 (Actual)		FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
Banking (Import)		39.37	5%	41.34	43.41	45.58	47.86
Diesel Generation		0.28	0%	0.28	0.28	0.28	0.28
<b>TOTAL</b>		<b>1523.15</b>		<b>1521.81</b>	<b>1520.74</b>	<b>1519.93</b>	<b>1519.38</b>

From the above table, it may be seen that deviation import (UI) is reduced by 5% per year as it is a costly affair. Estimated Energy Requirement for FY 2023-24, 2024-25, 2025-26 and 2026-27 is kept at 1521.81MU, 1520.74 MU, 1519.93 MU, and 1519.38 MU respectively. The aggregate power requirement is decreasing every year. This is because the APDOP shall endeavour to reduce the AT&C loss.

## (b) Commission's Analysis

The Commission has analysed the submissions made by the Petitioner and accordingly, approves the following quantum of energy available for the period FY 2023-24 to FY 2026-27.

### a. Central Sector Allocation:

Considering the actual energy received during the period FY 2020-21, FY 2021-22 and FY 2022-23, the energy availability from central sector has been projected for FY 2024-25 to FY 2026-27, based on average availability of past three years. Since no change in share or allocation is proposed, the Commission has considered the same availability for the entire control period subject to true-up of respective year. For Kopili-I and II, the recent availability as per the submission made by the petitioner in reply to data gap queries raised by the Commission has been considered. No availability from Khandong is considered as per information shared by the petitioner.

**Table 21: Approved energy availability from Central Sector Stations for the period FY 2024-25 to FY 2026-27 (MU)**

Source of Power (Sta- tion wise)		Installed Capacity (MW)	APDOP share % (As on March'23)	APDOP share (MW)	2024-25	2025-26	2026-27
LOKTAK	NHPC	105	4.94	5.19	24.21	24.21	24.21
KOPILI-I	NEEPCO	200	5.19	10.38	11.91	11.91	11.91

Source of Power (Station wise)		Installed Capacity (MW)	APDOP share % (As on March'23)	APDOP share (MW)	2024-25	2025-26	2026-27
KOPILI-II	NEEPCO	25	5.99	1.50	8.35	8.35	8.35
KHAN-DONG	NEEPCO	50	4.19	2.10	-	-	-
Panyor Lower	NEEPCO	405	6.46	26.16	84.4	84.42	84.42
Free Energy Panyor L	NEEPCO		<b>12.00</b>	<b>48.60</b>	<b>155.67</b>	<b>155.67</b>	<b>155.67</b>
DOYANG	NEEPCO	75	6.85	5.14	10.60	10.60	10.60
PARE	NEEPCO	110	5.87	6.46	28.74	28.74	28.74
Free Energy Pare	NEEPCO		<b>13.00</b>	<b>14.30</b>	<b>63.31</b>	<b>63.31</b>	<b>63.31</b>
KAMENG	NEEPCO	600	1.83	10.98	42.11	42.11	42.11
Free Energy Kameng	NEEPCO		<b>12.00</b>	<b>2.00</b>	<b>272.12</b>	<b>272.12</b>	<b>272.12</b>
AGBPP	NEEPCO	291	5.69	16.56	79.93	79.93	79.93
AGTCCPP	NEEPCO	135	6.70	9.05	52.79	52.79	52.79
PALAT-ANA	OTPCL	727	3.03	22.02	129.18	129.18	129.18
BgTPP	NTPC	750	5.07	38.03	130.24	130.24	130.24
FARAKKA	NTPC	1,600	0.19	3.04	20.29	20.29	20.29
KAHAL-GAON	NTPC	840	0.24	2.02	10.61	10.61	10.61
TALCHAR	NTPC	1,000	0.20	2.00	14.09	14.09	14.09
<b>Total</b>				<b>295.50</b>	<b>1,138.59</b>	<b>1,138.59</b>	<b>1,138.59</b>
<b>Total Unit Purchased (MU)</b>					<b>647.49</b>	<b>647.49</b>	<b>647.49</b>
<b>Total Free Unit Received (MU)</b>					<b>491.10</b>	<b>491.10</b>	<b>491.10</b>

**b. State Generation (IPP + Own)**

Based on the actual energy received during the period FY 2020-21, FY 2021-22 and FY 2022-23, the energy availability from within the state has been projected for FY 2024-25 to FY 2026-27. Since no new project or capacity enhancement is proposed, the Commission has considered the same availability for the entire control period subject to true-up of respective year.

**Table 22: Approved energy availability for the period FY 2024-25 to 2026-27**

Source of Power		Installed Capacity (MW)	APDOP share (%) (As on March 21)	APDOP share (MW)	Energy Received (MU) (Projected)		
					2024-25	2025-26	2026-27
DHPD	GoAP	81.54	100	81.54	55.54	55.54	55.54
HPDCL	SPSU	3.0	100	3.0	3.59	3.59	3.59
DIKSHI	IPP	24.0	90	21.6	56.58	56.58	56.58
Free Energy Dikshi			10	2.40	11.64	11.64	11.64
SOLAR	APEDA				0.65	0.65	0.65
Diesel Generation					0.34	0.34	0.34
<b>Total</b>				<b>108.54</b>	<b>128.34</b>	<b>128.34</b>	<b>128.34</b>

The Commission further directs the Petitioner to avoid purchasing of costly surplus power for sale outside the state at a lower rate. In addition, the Commission has not considered the UI/Deviation, as it is not a source of Power Procurement.

## 5.5 Energy Requirement and Availability

### (a) Petitioner's submission

Based on the above submissions, the Petitioner has projected the Net Energy Input in the State, used in AT&C loss projection, which is given below in the Table:

**Table 23: Net Input Energy Calculation Projection - Petitioner's submission**

Particulars	Calculation	Unit	Current Year (Estimated)	MYT Control Period (Projected)		
			FY 23-24	FY 24-25	FY 25-26	FY 26-27
Energy Import from Grid	A	MU	1349.07	1345.93	1342.95	1340.12
Energy Export Out Side the State	B	MU	472.56	494.71	518.05	542.63
Energy Injected in State from Grid	C=A-B	MU	876.51	851.21	824.89	797.48
Transmission loss on C (3.25%)	D	MU	28.49	27.66	26.81	25.92

Particulars	Calculation	Unit	Current Year (Estimated)	MYT Control Period (Projected)		
			FY 23-24	FY 24-25	FY 25-26	FY 26-27
<b>State Own Generation + other Source</b>	E	MU	172.75	174.82	176.99	179.26
Gross Input Energy (including Export outside the state)	F=A+E	MU	1521.81	1520.74	1519.93	1519.38
Input Energy (in the State)	F=C+E	MU	1049.26	1026.03	1001.88	976.75
Net Input Energy (in the State)	G=F-D	MU	1020.77	998.36	975.07	950.83

### (b) Commissions Analysis

The Commission has analysed the submissions made by the Petitioner for calculating approved energy available for the period under consideration. In the table given below, for the Energy Balance for FY 2023-24 to FY 2026-27, the Commission has considered the AT&C losses approved under RDSS for FY 2024-25 to FY 2026-27 and based on collection efficiency of 99%, the Distribution losses for FY 2024-25 to FY 2026-27 is determined. Accordingly, the energy sales have been grossed up to determine the energy requirement within the state.

Further, the State Transmission losses for FY 2024-25 is considered at 3.25%. Further, transmission losses as reported by Grid Controller of India (National Load Despatch Centre) (i.e., CTU losses) are also considered, that have been derived from the actual weekly transmission losses of CTU for FY 2024-25 taking an average of 3.45% during the period from 01-04-2024 to 16-06-2024.

Regarding sale of energy outside of state, commission had earlier on many occasions emphasised the transparency and accountability on the subject. In the directives issued in true up order dated 9<sup>th</sup> January 2024 for FY 2017-23 also, the commission observed that the petitioner has not submitted the supporting documents to demonstrate that the petitioner is making profits by selling its surplus power received from its tied up generating stations in the open market. However, no such documents or information has been submitted by the petitioner in this petition as well. The petitioner has considered a certain quantum of power to be sold in the open market while estimating total demand of the state. However, we are of the view that such quantum to be sold in the open market should be limited to the surplus power after meeting

domestic requirement from the total availability from tied up sources. Accordingly, we have arrived at the approved net energy as shown in the table 24.

Simultaneously, the petitioner is directed not to pre-determined the quantum of surplus power to be sold out side of the state. Further the petitioner is directed to sell such surplus power if any, through a transparent process and submit the procedure adopted by the petitioner in selling surplus power along with supporting documents as directed by the commission in earlier orders.

**Table 24: Approved Net Input Energy for the period FY 2024-25 to FY 2026-27**

Particulars	FY 2024-25	FY 2025-26	FY 2026-27
<b>A. Energy Requirement</b>			
Energy sales within the state as approved for the control period FY 2024-25 to FY 2026-27 (MU)	705.24	777.70	858.66
Distribution loss (in %) (Considering approved AT&C loss of 22% and Collection efficiency at 99%)	21.21%	17.17%	14.14%
<b>Energy Requirement within the state (MU)</b>	895.11	938.93	1000.09
State transmission losses (in %)	3.25%	3.25%	3.25%
<b>Total Energy requirement at State periphery for sale within the State (MU) (A)</b>	<b>925.18</b>	<b>970.47</b>	<b>1033.68</b>
<b>B. Energy availability within the State</b>			
DG set (in MU)	0.34	0.34	0.34
DHPD (in MU)	55.54	55.54	55.54
HPDCAPL (in MU)	3.59	3.59	3.59
DIKSHI (in MU)	56.58	56.58	56.58
DIKSHI (Free power) (in MU)	11.64	11.64	11.64
Solar/APEDA (in MU)	0.65	0.65	0.65
<b>Total Energy Available within the State (B)</b>	<b>128.34</b>	<b>128.34</b>	<b>128.34</b>
<b>C. Energy availability outside the State</b>			
Free power (in MU) (i)	491.10	491.10	491.10
Energy available from Central Generating Stations (in MU) (ii)	647.49	647.49	647.49
<b>Energy available from outside the State generation at State Periphery (in MU) (i + ii)</b>	<b>1138.59</b>	<b>1138.59</b>	<b>1138.59</b>
CTU loss	3.45%	3.45%	3.45%
<b>Energy available from outside the State (Ex-Bus) (in MU) (C)</b>	<b>1179.27</b>	<b>1179.27</b>	<b>1179.27</b>
<b>D. Total Energy available from all sources (in MU) (B + C)</b>	<b>1307.62</b>	<b>1307.62</b>	<b>1307.62</b>
<b>Surplus power sale (in MU) (D-A)</b>	<b>382.44</b>	<b>337.14</b>	<b>273.94</b>



## 5.6 Power Purchase Cost

### (a) Petitioner's submission

The Petitioner has submitted the power purchase cost based on the above estimation of energy requirement by escalating the actual amount paid in the previous year to the Source/Agency by a factor of 5%.

#### a. Power purchase cost excluding Transmission Charges and RLDC

Further, the drawl from Deviation has been proposed to be reduced by 5%, and accordingly, the Power Purchase Cost from deviation is reduced by that extent. The details are shown in the table below:

**Table 25: Power Purchase Cost Projection - Petitioner's submission** (₹ in Crs)

Particulars	Previous Year	Multiplying Factor for	Multiplying Factor for	Current Year (Estimated)	MYT Control Period (projected)		
	FY 22-23 (Actual)			FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
<b>NEEPCO</b>	198.88	0	5	208.82	219.26	230.23	241.74
<b>NTPC (Farakka, Kahal Gaon, Talchar)</b>	18.29	0	5	19.20	20.16	21.17	22.23
<b>NTPC (BGTP)</b>	121.57	0	5	127.65	134.04	140.74	147.77
<b>NHPC</b>	9.27	0	5	9.74	10.22	10.73	11.27
<b>OTPC</b>	39.61	0	5	41.59	43.67	45.85	48.14
<b>Deviation</b>	21.29	-5	5	21.29	21.29	21.29	21.29
<b>Reactive</b>	0	0	5	0.00	0.00	0.00	0.00
<b>Devi Energies</b>	34.43	0	5	36.15	37.96	39.86	41.85
<b>HPDCAPL</b>	2.68	0	5	2.81	2.95	3.10	3.25
<b>APPCPL</b>	21.67	0	5	22.75	23.89	25.08	26.34
<b>Misc. Exp</b>	8.07	0	5	8.47	8.89	9.34	9.80
<b>Total</b>	<b>475.75</b>	<b>0</b>	<b>5</b>	<b>498.48</b>	<b>522.34</b>	<b>547.39</b>	<b>573.69</b>

The Petitioner has requested the Commission to approve the power purchase cost for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at Rs 498.48 Cr, Rs. 522.34 Cr, Rs. 547.39 Cr, and Rs. 573.69 Cr respectively.

#### b. Inter-State and Intra-State Transmission Charges

The Petitioner has submitted that the entire inter-State power transmission in APDOP is transmitted through the PGCIL transmission infrastructure. The transmission charges incurred during the period FY 2019-20 to FY 2022-23 accordingly projected the transmission charges

for the current year FY 2023-24 and for the control period FY 2024-25 to FY 2026-27. The tabulated computation for inter-state transmission charges are shown in table below.

**Table 26: Inter-State Transmission Charges - Petitioner's submission** (₹ in Cr)

Utility	Previous Year (Actual)				Current Year (Estimated)	MYT Control Period (Projected)		
	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26	FY 2026-27
PGCIL	40.58	54.12	28.17	1.9	1.9	1.9	1.9	1.9
CTUIL			74.65	107.83	113.12	118.7	124.57	130.75
APDCL		2.12	2.81	2.79	2.93	3.08	3.23	3.39
<b>Total</b>	<b>40.58</b>	<b>56.23</b>	<b>105.63</b>	<b>112.51</b>	<b>117.95</b>	<b>123.67</b>	<b>129.7</b>	<b>136.04</b>

Accordingly, the Petitioner has requested the Commission to approve the estimated Inter-State Transmission Charges for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at Rs 117.95 Cr, Rs 123.67 Cr, Rs 129.70 Cr, and Rs. 136.04 Cr respectively.

The Petitioner has further submitted that, they are in the process of reducing power import from outside the State as many projects under IPP are coming up in the state. There is also a chargeable 132kV intrastate transmission system constructed by Devi Energy Pvt. Ltd. to evacuate the power generated from the 24 MW Dikshi SHP based on the approved charges of previous years i.e., FY 2019-20 to FY 2021-22.

Accordingly, the Petitioner has determined the transmission charges based on the proposed energy to be imported for the period FY 2024-25 to FY 2026-27. Further, the transmission charges of previous year are escalated by 5% year over year to factor in the yearly cost variations. The projected charges for the control period are shown in table below:

**Table 27: Intra-State Transmission Charges - Petitioner's submission** (₹ in Cr)

Utility	Previous Years (Actual)				Current Year (Estimate)	MYT Control Period (Projected)		
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
Devi Energies	6.99	11.81	11.45	11.45	12.02	12.62	13.25	13.92

Accordingly, the Petitioner has requested the Commission to approve the estimated intra-State Transmission Charges for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 as proposed above for the respective years.

**c. Fees and charges of NLDC/RLDC/SLDC etc**

The Petitioner has submitted that the fees for NERLDC have been estimated with proposed annual increment @ 5% of the actual fees and charges of previous year. The Fees and charges for NERLDC and NERPC during the period FY 2019-20 to FY 2022-23 and projected fees for the control period i.e., FY 2023-24 (Current Year) and for FY 2024-25 to FY 2026-27 are tabulated in the table below.

**Table 28: Fees and charges of NERLDC/NERPC - Petitioner’s submission (₹ in Cr)**

Utility	Previous Years (Actual)				Current Year (Estimated)	MYT Control Period (Projected)		
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27
NERLDC Fee	1.04	0.64	1.01	1.11	1.17	1.22	1.28	1.35
NERPC board fund	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Total</b>	<b>1.05</b>	<b>0.65</b>	<b>1.02</b>	<b>1.12</b>	<b>1.18</b>	<b>1.23</b>	<b>1.29</b>	<b>1.36</b>

Accordingly, the Petitioner has requested the Commission to approve the estimated NERLDC fee and NERPC board fund for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at Rs 1.18 Cr, 1.23 Cr, 1.29 Cr, and 1.36 Cr respectively.

**(b) Commission’s Analysis**

It is observed that Petitioner has considered the actual power purchase cost paid by the licensee for FY 2022-23 and escalated the same by 5%. However, for the purpose of optimised projection of power purchase cost, the cost should reflect the actual / average rate at which power was procured from the generators during the last financial year.

As such, the Commission has considered the actual energy bills of the generators from which the power is procured by the Petitioner to determine the power purchase cost for FY 2024-25, FY 2025-26 and FY 2026-27. The fixed charges and variable charges for each generating station are escalated by 5% each year to arrive at the projected power purchase cost. It is noted that the cost towards DHPD was projected as nil by the Petitioner. However, in past, the Commission approved the power purchase rate from DHPD and based on the same approved charges, the power purchase cost from DHPD is considered. Accordingly, the Commission has determined and approved the power purchase cost for FY 2024-25 to FY 2026-27 as shown in the tables below:

**Table 29: Approved Power Purchase based on approved quantum of power to be purchased from the Generators during FY 2024-25. (₹ in Cr)**

Source of Power (Station-wise)		Energy (MU)	Fixed charges (Rs Cr)	Variable Charges (Rs/kWh)	Variable charges (Rs Cr)	Other charges (Rs Cr)	Total charges (Rs Cr)
LOKTAK	NHPC	24.21	4.77	1.95	4.71	0.02	9.50
KOPILI-I	NEEPCO	11.91		2.35	2.80		2.80
KOPILI-II	NEEPCO	8.35	0.95	1.52	1.27		2.22
KHANDONG	NEEPCO	--	--		--		--
Panyor Lower	NEEPCO	84.42	13.46	1.40	11.84		25.31
<b>Free Energy Panyor Lower</b>	<b>NEEPCO</b>	<b>155.67</b>			<b>0.00</b>		<b>0.00</b>
DOYANG	NEEPCO	10.60	3.24	3.49	3.70		6.94
PARE	NEEPCO	28.74		5.34	15.35		15.35
<b>Free Energy Pare</b>	<b>NEEPCO</b>	<b>63.31</b>			<b>0.00</b>		<b>0.00</b>
KAMENG	NEEPCO	42.11		4.00	16.85		16.85
<b>Free Energy Kameng</b>	<b>NEEPCO</b>	<b>272.12</b>			<b>0.00</b>		<b>0.00</b>
AGBPP	NEEPCO	79.93	18.72	4.79	38.29		57.01
AGTCCPP	NEEPCO	52.79	6.18	4.37	23.08		29.26
PALATANA	OTPCL	129.18	14.12	2.11	27.19	0.19	41.51
BgTPP	NTPC	130.24	62.64	3.97	51.71	21.84	136.19
FARAKKA	NTPC	20.29	1.80	3.22	6.53	6.05	14.38
KAHALGAON	NTPC	10.61	1.14	2.73	2.90	1.42	5.46
TALCHAR	NTPC	14.09	1.31	1.63	2.30	1.24	4.85
DHPD	GoAP	55.54		3.06	17.00		17.00
HPDCL	SPSU	3.59		3.61	1.29		1.29
DIKSHI	IPP	56.58		5.25	29.70		29.70
<b>Free Energy Dikshi</b>		<b>11.64</b>			<b>0.00</b>		<b>0.00</b>
SOLAR	APEDA	0.65			0.00		0.00
Diesel Generation		0.34			0.00		0.00
<b>Total</b>		<b>1266.93</b>	<b>128.33</b>	<b>54.78</b>	<b>256.51</b>	<b>30.77</b>	<b>415.61</b>

**Table 30: Approved Power Purchase based on approved quantum of power to be purchased from the Generators during FY 2025-26. (₹ in Cr)**

Source of Power (Station-wise)		Energy (MU)	Fixed charges (Rs Cr)	Variable Charges (Rs/kWh)	Variable charges (Rs Cr)	Other charges (Rs Cr)	Total charges (Rs Cr)
LOKTAK	NHPC	24.21	5.01	2.04	4.94	0.02	9.98
KOPILI-I	NEEPCO	11.91	0.00	2.47	2.94		2.94

Source of Power (Station-wise)		Energy (MU)	Fixed charges (Rs Cr)	Variable Charges (Rs/kWh)	Variable charges (Rs Cr)	Other charges (Rs Cr)	Total charges (Rs Cr)
KOPIII-II	NEEPCO	8.35	1.00	1.59	1.33		2.33
KHANDONG	NEEPCO	0	0.00	0.00	0.00		0.00
Panyor Lower	NEEPCO	84.42	14.14	1.47	12.44		26.57
<b>Free Energy Panyor Lower</b>	<b>NEEPCO</b>	<b>155.67</b>			<b>0.00</b>		<b>0.00</b>
DOYANG	NEEPCO	10.6	3.40	3.66	3.88		7.28
PARE	NEEPCO	28.74	0.00	5.61	16.12		16.12
<b>Free Energy Pare</b>	<b>NEEPCO</b>	<b>63.31</b>			<b>0.00</b>		<b>0.00</b>
KAMENG	NEEPCO	42.11	0.00	4.20	17.69		17.69
<b>Free Energy Kameng</b>	<b>NEEPCO</b>	<b>272.12</b>			<b>0.00</b>		<b>0.00</b>
AGBPP	NEEPCO	79.93	19.65	5.03	40.21		59.86
AGTCCPP	NEEPCO	52.79	6.49	4.59	24.23		30.72
PALATANA	OTPC	129.18	14.83	2.21	28.55	0.19	43.58
BgTPP	NTPC	130.24	65.77	4.17	54.29	21.84	141.90
FARAKKA	NTPC	20.29	1.89	3.38	6.86	6.05	14.80
KAHALGAON	NTPC	10.61	1.20	2.87	3.04	1.42	5.66
TALCHAR	NTPC	14.10	1.37	1.71	2.41	1.24	5.03
DHPD	GoAP	55.54		3.06	17.00		17.00
HPDCL	SPSU	3.59		3.79	1.36		1.36
DIKSHI	IPP	56.58		5.51	31.19		31.19
<b>Free Energy Dikshi</b>		<b>11.64</b>			<b>0.00</b>		<b>0.00</b>
SOLAR	APEDA	0.65			0.00		0.00
Diesel Generation		0.34			0.00		0.00
<b>Total</b>		<b>1266.93</b>	<b>134.75</b>	<b>57.37</b>	<b>268.48</b>	<b>30.77</b>	<b>434.00</b>

**Table 31: Approved Power Purchase based on approved quantum of power to be purchased from the Generators during FY 2026-27. (₹ in Cr)**

Source of Power (Station-wise)		Energy (MU)	Fixed charges (Rs Cr)	Variable Charges (Rs/kWh)	Variable charges (Rs Cr)	Other charges (Rs Cr)	Total charges (Rs Cr)
LOKTAK	NHPC	24.21	5.26	2.14	5.19	0.02	10.47
KOPIII-I	NEEPCO	11.91	0.00	2.59	3.09		3.09
KOPIII-II	NEEPCO	8.35	1.05	1.67	1.40		2.44
KHANDONG	NEEPCO	--			--		--
Panyor Lower	NEEPCO	84.42	14.84	1.55	13.06		27.90
<b>Free Energy Panyor Lower</b>	<b>NEEPCO</b>	<b>155.67</b>			<b>0.00</b>		<b>0.00</b>
DOYANG	NEEPCO	10.60	3.57	3.84	4.07		7.65

Source of Power (Station-wise)		Energy (MU)	Fixed charges (Rs Cr)	Variable Charges (Rs/kWh)	Variable charges (Rs Cr)	Other charges (Rs Cr)	Total charges (Rs Cr)
PARE	NEEPCO	28.74	0.00	5.89	16.93		16.93
<b>Free Energy Pare</b>	<b>NEEPCO</b>	<b>63.31</b>			<b>0.00</b>		<b>0.00</b>
KAMENG	NEEPCO	42.11	0.00	4.41	18.57		18.57
<b>Free Energy Ka- meng</b>	<b>NEEPCO</b>	<b>272.12</b>			<b>0.00</b>		<b>0.00</b>
AGBPP	NEEPCO	79.93	20.63	5.28	42.22		62.85
AGTCCPP	NEEPCO	52.79	6.82	4.82	25.44		32.26
PALATANA	OTPC	129.18	15.57	2.32	29.98	0.19	45.74
BgTPP	NTPC	130.24	69.06	4.38	57.01	21.84	147.91
FARAKKA	NTPC	20.29	1.98	3.55	7.20	6.05	15.24
KAHALGAON	NTPC	10.61	1.26	3.01	3.19	1.42	5.87
TALCHAR	NTPC	14.09	1.44	1.80	2.53	1.24	5.22
DHPD	GoAP	55.54		3.21	17.85		17.85
HPDCL	SPSU	3.59		3.98	1.43		1.43
DIKSHI	IPP	56.58		5.79	32.75		32.75
<b>Free Energy Dikshi</b>		<b>11.64</b>			<b>0.00</b>		<b>0.00</b>
SOLAR	APEDA	0.65			0.00		0.00
Diesel Generation		0.34			0.00		0.00
<b>Total</b>		<b>1266.93</b>	<b>141.48</b>	<b>60.24</b>	<b>281.91</b>	<b>30.77</b>	<b>454.16</b>

The Commission approves Rs. 415.61 Cr, Rs. 434.00 Cr and Rs. 454.16 Cr towards power purchase cost for FY 2024-25, FY 2025-26 and FY 2026-27 respectively. It may be noted that the aforesaid power purchase cost and quantum is based on the approved RDSS loss trajectory. The licensee needs to strive towards reducing their losses which is otherwise being met by Government Exchequer. The licensee is also directed to develop a comprehensive roadmap for reducing the Government aid after discussing it with the State Government.

## 5.7 Inter-State and Intra-State Transmission Charges – Commission’s analysis

For CTU charges, recent bills of CTU were reviewed by the Commission and based on the same, CTU charges for MYT period is approved. In case of APDCL, the average transmission charges paid over the last 4 years has been escalated by 5% on annual basis for determination of the transmission charges to be incurred by the Petitioner. Accordingly, the Commission approves the following inter-state transmission charges for the period FY 2024-25 to FY 2026-27:

**Table 32: Approved Inter-State transmission charges** (₹ in Cr)

Utility	MYT Control Period (Projected)		
	FY 2024-25	FY 2025-26	FY 2026-27
CTU	98.01	102.91	108.05
APDCL	3.08	3.23	3.39
<b>Total inter-state transmission charges</b>	<b>101.08</b>	<b>106.14</b>	<b>111.44</b>

In case of Devi Energies Pvt. Ltd., the Commission has reviewed the tariff order dated 20.12.2019 in Petition No. TP 07 of 2018 issued by the Commission and observed that the Commission has determined the transmission charges for Devi Energies for FY 2019-20, FY 2020-21 and FY 2021-22. The Commission noted that the petitioner has proposed the transmission charges considering 5% yearly escalation rate on approved value of FY 2021-22 during the control period. However, the escalation factor considered by the petitioner is merely an assumption and not based on any supporting data. In view of same, the Commission decides to consider the transmission charges approved for FY 2021-22 during the control period from FY 2024-25 to FY 2026-27 without any escalation. The approved intra-State transmission charges for the control period are shown in table below:

**Table 33: Approved Intra-State Transmission Charges** (₹ in Cr)

Utility	MYT Control Period (Projected)		
	FY 24-25	FY 25-26	FY 26-27
Devi Energies (STU Charges)	11.45	11.45	11.45

## 5.8 Fees and charges of NLDC/RLDC/SLDC etc. – Commission’s analysis

The Commission has considered the submission of the Petitioner and accordingly approves the following fees and charges of NERLDC/NERPC for the control period.

**Table 34: Fees and charges of NERLDC/NERPC** (₹ in Cr)

Utility	MYT Control Period (Projected)		
	FY 2024-25	FY 2025-26	FY 2026-27
NERLDC Fee	1.22	1.28	1.35
NERPC board fund	0.01	0.01	0.01
<b>Total</b>	<b>1.23</b>	<b>1.29</b>	<b>1.36</b>

## 5.9 Operations and Maintenance (O&M) Expenses

### (a) Petitioner’s submission

The Petitioner has submitted the operation and maintenance cost of FY 2023-24 to FY 2026-27 based on actual expense incurred in previous years. The break-up of O&M Expense has also been submitted for (1) Employee cost, (2) Repair and Maintenance cost and (3) Administrative and General costs. The Petitioner has submitted that at present there are 9,988 number of employees as tabulated in the table below:

**Table 35: Total No of employees in APDOP (Nos.) - Petitioner’s submission**

Category of Employees	Previous years (Actuals)				Current Year (Estimates)	MYT Control Period (Projected)		
	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23- 24	FY 24- 25	FY 25- 26	FY 26-27
Regular Employees	1,054	1,054	1,054	1,054	1,054	1,054	1,054	1,054
Work Charged Employees	2,786	2,786	2,786	2,786	2,786	2,786	2,786	2,786
Casual Employees	6,148	6,148	6,148	6,148	6,148	6,148	6,148	6,148
<b>Total</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>	<b>9,988</b>

The Petitioner has submitted that the past and projected cost of the aforesaid three components of O&M Expenses for the entire control period has been calculated as per APSERC guidelines provided in the MYT regulation 2018. The O&M expenses of the first year of the control period i.e. 2024-25 have been computed by escalating the average of the previous 3 years by 5.72% twice. For the next years of the control period, the O&M expenses are computed by increasing by 5.72% every year. The details are shown in table 2.11(B).

**Table 36: O&M Expenses projected for APDOP (Nos.) - Petitioner’s submission**

Sl. No	Particulars	Previous Years Actuals				3-year average	Current Year (Estimate)	MYT Control Period (Projected)		
		FY 19- 20	FY 20-21	FY 21- 22	FY 22- 23		FY 23-24	FY 24-25	FY 25-26	FY 26-27
1	Employee Expenses	312.81	315.38	336.88	372.93	341.73	380.82	402.61	425.64	449.98
2	A&G Expenses	5.86	5.46	9.24	15.11	9.94	11.07	11.71	12.38	13.08
3	R&M Expenses	48.18	40.83	28.85	28.96	32.88	36.64	38.74	40.95	43.30
<b>4</b>	<b>Total O&amp;M Expenses</b>	<b>366.85</b>	<b>361.67</b>	<b>374.97</b>	<b>417.00</b>	<b>384.55</b>	<b>428.54</b>	<b>453.05</b>	<b>478.97</b>	<b>506.36</b>



The Petitioner has submitted that the Commission is requested to approve the estimated O&M expenses for FY 2023-24, FY 2024-25, FY 2025-26 and FY 2026-27 at Rs. 428.54 Cr, Rs. 453.05 Cr, Rs. 478.97 Cr and Rs.506.36Cr respectively.

**(b) Commission’s Analysis**

Regulation 4.10 of the MYT Regulations 2018 specify the methodology for computation of O&M Expenses of the DISCOMs. These expenses comprise Employee expenses, Repair and Maintenance (R&M) expenses and Administrative and General (A&G) expenses. The relevant extract for the Regulation is reproduced below:

**“4.10 Operation and Maintenance Expenses (O & M):**

(1) The O&M for generating company, transmission licensee and SLDC shall be determined as per procedure given in subsequent chapters of these Regulations.

(2) The O&M Expense for the Distribution licensee shall be determined as follows:

(a) The **O&M expenses for the first year of the Control Period shall be approved by the Commission taking into account the actual O&M expenses for last five years until Base Year subject to prudence check and any other factors considered appropriate by the Commission.**

(b) The O&M expenses for the nth year and also for the year immediately preceding the Control Period, shall be approved based on the formula given below: -

a.  $O & Mn = R\&Mn + EMPn + A\&Gn$

b. Where –

- O & Mn – Operation and Maintenance expense for the nth year;
- EMPn – Employee Costs for the nth year;
- R&Mn – Repair and Maintenance Costs for the nth year;
- A&Gn – Administrative and General Costs for the nth year;

(a) The above components shall be computed in the manner specified below:

$EMPn = (EMPn-1) \times (1+Gn) \times (CPI \text{ inflation})$

$R\&Mn = K \times (GFA \ n-1) \times (WPI \text{ inflation})$  and

$A\&Gn = (A\&Gn-1) \times (WPI \text{ inflation}) + Provision$

Where

- EMPn-1 – Employee Costs for the (n-1)th year;
- A&Gn-1 – Administrative and General Costs for the (n-1)th year;
- Provision: Cost for initiatives or other one-time expenses as proposed by the Distribution Licensee and validated by the Commission.
- ‘K’ is a constant specified by the Commission in %. Value of K for each year of the control period shall be determined by the Commission in the MYT Tariff order based on licensee’s filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-a-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;
- CPI inflation – is the average increase in the Consumer Price Index (CPI) for immediately preceding three years;
- WPI inflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three years;

- *GFA<sub>n-1</sub>* --- Gross Fixed Asset of the transmission licensee for the *n-1*th year;
- *G<sub>n</sub>* is a growth factor for the *n*th year. Value of *G<sub>n</sub>* shall be determined by the Commission in the MYT tariff order for meeting the additional manpower requirement based on licensee's filings, benchmarking, and any other factor that the Commission feels appropriate."

The Commission has computed the O&M expenses considering the methodology specified in the aforesaid Regulation. For approval of O&M Expenses for the FY 2023-24, following broad approach has been adopted:

- The average of last 3 years' actual audited employee expenses from FY 2020-21 to FY 2022-23 has been considered for deriving the average Employee Expenses (considered the same as expenses for FY 21-22) and then escalated twice at an escalation rate to arrive at the employee expenses for the base year i.e., FY 2023-24.
- The base year expenses so calculated has been escalated once to arrive at normative Employee expenses for FY 2024-25.
- The escalation rate considered for calculating the normative expenses of FY 2023-24 has been derived based on the average yearly growth in last three years, i.e., from FY 2020-21 to FY 2022-23 as shown below

**Table 37: CPI Escalation Rate**

Particulars	Previous years (Actuals)					Base Year	Growth rate of the FY based on Avg. of last 3 years CPI growth rate		
	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23		FY 2023-24	FY 22-23 (FY 20 to FY 22)	FY 23-24 (FY 21 to FY 23)
Annual Average CPI Index Old Base	299.92	322.5	338.69	357.1	377.3	396.55	-	-	-
CPI Growth rate (%)	5.45%	7.53%	5.02%	5.08%	5.65%	5.11%	5.88%	5.25%	5.28%

- Further, the escalation rate considered for calculating the normative expenses for the control period has been derived based on the average yearly inflation of past five years, i.e., from FY 2018-19 to FY 2022-23.

**Table 38: WPI Inflation Rate**

INDEX	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Growth rate of the FY based on Avg. of last 3 years WPI growth rate		
							FY 22-23 (FY 20 to FY 22)	FY 23-24 (FY 21 to FY 23)	FY 24-25 (FY 22 to FY 24)
<b>WPI of All commodities</b>	119.8	121.8	123.4	139.4	152.4	151			
<b>WPI Inflation rate (%)</b>	4.28%	1.67%	1.31%	12.97%	9.33%	-0.92%	<b>5.32%</b>	<b>7.87%</b>	<b>7.12%</b>

- Accordingly, the average O&M Expense for last 5-year actuals is tabulated below:

**Table 39: Last 5-year average of O&M Expenses** (₹ in Cr)

Sl. No.	Particulars	Previous Year (Actuals)					5 Year Average
		FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	
1	Employee Expenses	267.49	312.81	315.38	336.88	372.93	<b>321.10</b>
2	A&G Expenses	7.28	5.86	5.46	9.24	15.11	<b>8.59</b>
3	R&M Expenses	50.55	48.18	40.83	28.85	28.96	<b>39.47</b>
<b>4</b>	<b>Total O&amp;M Expenses</b>	<b>325.32</b>	<b>366.85</b>	<b>361.67</b>	<b>374.97</b>	<b>417</b>	<b>369.162</b>

- Accordingly, the Employee Expense for FY 2024-25 to FY 2026-27 has been determined by escalating the employee expenses as estimated for FY 2023-24 by 5.28% each year (CPI Index) which is the average growth in CPI index for the last 3 financial years FY 2021-22, FY 2022-23 and FY 2023-24 as tabulated and shown above. The formula as given in MYT regulations is considered and as no growth factor is provided by the Petitioner, Gn is considered as zero. The Commission has directed the Petitioner to provide details vide Letter No. APSERC/RA-9/II/2024-25/126-27 dated 24.05.2024. However, no required data has been submitted and hence, Gn (the growth in employee number) is considered as zero.

**Table 40: Approved Employee Cost FY 2024-25 to FY 2026-27** (₹ in Cr)

Particulars	MYT Control Period (Projected)			Growth considered during the MYT Period
	FY 2024-25	FY 2025-26	FY 2026-27	
Employee Expenses	376.71	396.60	417.53	<b>5.28%</b>

- In similar lines, the A&G Expenses for FY 2024-25 to FY 2026-27 has been determined by escalating the actual A&G expenses as estimated for FY 2023-24 by 7.12% each year (WPI index) which is the average growth in WPI for the last 3 financial years FY 2021-22, FY 2022-23 and FY 2023-24 as tabulated and shown below:

**Table 41: Approved A&G Expenses for FY 2024-25 to FY 2026-27** (₹ in Cr)

Particulars	MYT Control Period (Projected)			Growth considered during the MYT Period
	FY 2024-25	FY 2025-26	FY 2026-27	
A&G Expenses	10.45	11.20	12.00	7.12%

- As per Regulations 4.10 above of the APSERC MYT Regulation 2018, R&M Expense is calculated as a percentage of GFA. In the absence of any record of fixed assets, the Commission has considered the average of the actual R&M expenses incurred by the licensee over the past 5 years and accordingly considered 0.38% growth in R&M expense as seen in FY 2022-23 over FY 2021-22 and escalated twice to arrive at the R&M expense for FY 2024-25. The same has been considered for the entire control period without any further escalation subject to final true-up of each year. The approved R&M expenses for the MYT Control period is shown in the table below:

**Table 42: Approved R&M Expenses for FY 2024-25 to FY 2026-27** (₹ in Cr)

Particulars	MYT Control Period (Projected)			Growth considered during the MYT Period
	FY 2024-25	FY 2025-26	FY 2026-27	
R&M Expenses	39.78	39.78	39.78	--

Accordingly, the total O&M Expenses approved by the Commission for FY 2023-24 to FY 2026-27 is tabulated and shown in the table below:

**Table 43: Approved O&M Expenses for FY 2024-25 to FY 2026-27** (₹ in Cr)

Sl. No.	Particulars	MYT Control Period (Projected)		
		FY 2024-25	FY 2023-24	FY 2024-25
1	Employee Expenses	376.71	396.60	417.53
2	A&G Expenses	10.45	11.20	12.00

Sl. No.	Particulars	MYT Control Period (Projected)		
		FY 2024-25	FY 2023-24	FY 2024-25
3	R&M Expenses	39.78	39.78	39.78
4	<b>Total O&amp;M Expenses</b>	<b>426.94</b>	<b>447.57</b>	<b>469.30</b>

## 5.10 Depreciation

### (a) Petitioner's submission

The Petitioner has submitted that the entire asset is under the control of APDOP and created from the grant of the Government of Arunachal Pradesh or the Government of India without any obligation to return. Further, as per the regulatory direction, no depreciation can be claimed on the assets created from subsidies or grants which has no obligation to return. Accordingly, the Petitioner has not claimed any depreciation in their ARR for FY 2023-24 (estimated) and for the MYT control period FY 2024-25 to FY 2026-27.

### (b) Commission's Analysis

The Petitioner has not claimed any depreciation as the assets are created from the subsidies or grants of Government of Arunachal Pradesh or Government of India. Further, the Petitioner is managing the affairs of the department on GoAP fund/ grant without borrowing from any source and acquisition of new assets out of such grant.

Since no asset has been created by the licensee through its own equity or capital, and the entire funding is done through government grant / aid, no depreciation is allowed for the control period. However, Petitioner is directed to create a Fixed Asset Register with details of asset(s) being created through grant / aid and being put to use by the licensee along with the next tariff filing.

## 5.11 Interest on loans and Finance Charges

### (a) Petitioner's submission

The Petitioner has submitted that, APDOP functions under the Government of Arunachal Pradesh. All financial matters of APDOP are controlled by the finance department of the Government. Taking loan(s) and its repayment are decided by State Government. Hence, the

Petitioner cannot take any kind of loan independently and does not have any access to the loan and its repayment process even if the loan is taken for funding the projects under APDOP, as its repayment is handled by the Government from its sources. Therefore, the Petitioner has submitted that expenses on interest on the loan may be considered as 'Nil' in their ARR projections for the control period.

**(b) Commission's Analysis**

In view of the above submissions of the Petitioner, no interest on loan and finance charges are approved for the control period.

**5.12 Interest on Working Capital**

**(a) Petitioner's submission**

The Petitioner has submitted that working capital for APDOP is provided by the Government of Arunachal Pradesh as a grant on 'as and when required' basis, and therefore no interest on working capital is required to be paid by APDOP. Accordingly, interest on working capital may be considered 'Nil' for the control period.

**(b) Commission's Analysis**

In view of the above submissions of the Petitioner, no interest on interest on working capital is approved for the control period.

**5.13 Return on equity**

**(a) Petitioner's submission**

The Petitioner has submitted that APDOP being a Government Department, all funding comes from the State Government/Central Government as a grant without any obligation to pay back. APDOP is not incorporated/registered as a company, hence there is no shareholder/equity. As a result, return on equity capital does not arise. Accordingly, no Return on Equity Capital is being claimed for the control period.

**(b) Commission's Analysis**

In view of the above submissions of the Petitioner, no return on equity is approved for the control period.

## 5.14 Provision for Bad and Doubtful Debts

### (a) Petitioner's submission

The Petitioner has submitted that the department does not have any bad and doubtful debt as per records. Therefore, provision for bad and doubtful debt be considered 'Nil' for the control period.

### (b) Commission's Analysis

In view of the above submissions of the Petitioner, no bad and doubtful debt is approved for the control period.

## 5.15 Renewable Purchase Obligation (RPO)

### (a) Petitioner's submission

The Petitioner has submitted that Renewable Purchase Obligation (RPO) mandates that all electricity distribution licensees should purchase or produce a minimum specified quantity of their requirements from Renewable Energy Sources as per the Act. The State Electricity Regulatory Commissions has fixed the minimum RPO for the State. The status of Solar RPO since FY 2012-13 has been submitted by the Petitioner as shown in table below:

**Table 44: Renewable Energy (Solar) Purchase Obligation - Petitioner's submission**

Year	RPO Applicable on	Quantum of Energy Liable for RPO	SOLAR RPO			
			Solar RPO (in %)	Solar RPO (in MU)	Solar RPO fulfilled by State Generation/REC	(+) Surplus/ (-) Shortfall
			C (in MU)	D	E=C*D%	F
2012-13	Total Consumption	598.62	0.1	0.6	0	-0.6
2013-14	Total Consumption	595.74	0.15	0.89	0	-0.89
2014-15	Total Consumption	689.67	0.2	1.38	0	-1.38
2015-16	Total Consumption	735	0.2	1.47	0	-1.47
2016-17	Excluding Hydro Source	367.67	2.75	10.11	0	-10.11
2017-18	Excluding Hydro Source	409.23	4.75	19.44	0	-19.44
2018-19	Excluding Hydro Source	418.17	6.75	28.23	0	-28.23
2019-20	Excluding LHP	336.28	6	20.18	0.99	-19.19
2020-21	Excluding LHP	267.82	8	21.43	0.52	-20.9
2021-22	Excluding LHP	335.1	10.5	35.19	0.47	-34.72

Year	RPO Applicable on	Quantum of Energy Liabile for RPO	SOLAR RPO			
			Solar RPO (in %)	Solar RPO (in MU)	Solar RPO fulfilled by State Generation/REC	(+) Surplus/ (-) Shortfall
		C (in MU)	D	E=C*D%	F	G=E-F
2022-23	Excluding LHP	286.57	10.5	30.09	0.96	-29.13
<b>TOTAL</b>				<b>169</b>	<b>2.94</b>	<b>-166.06</b>

The Petitioner has submitted that they could not meet-up the Renewable Power Purchase Obligation (RPO) for Solar since the inception of the RPO due to the non-availability of a Solar plant in the vicinity and also due to funding constraints. The total calculated RPO (Solar) from 2012-13 to 2022-23 as tabulated above is 169 MU, out of which the state could fulfil only 2.94 MU (Generation from APEDA and purchase of REC from IEX), and the net RPO (Solar) shortfall is around 166.06 MU. The Petitioner has also submitted that they have purchased RECs in FY 2021-22 and FY 2022-23 as detailed in table below:

**Table 45: REC purchase (FY 21-22, FY 22-23) - Petitioner's submission**

Date of Purchase	REC Number	Serial No.	Nos. of Solar REC	In MU	Remark
30-03-2022	C-IEX_SL001442	IEX_0010000	10000	10	<b>2021-22</b>
27-04-2022	C-IEX_SL000064	IEX_0005000	5000	5	<b>2022-23</b>
25-05-2022	C-IEX_SL000195	IEX_0010000	5000	5	
27-06-2022	C-IEX_SL000536	IEX_0015000	5000	5	
30-08-2022	C-IEX_SL000707	IEX_0030000	15000	15	
28-09-2022	C-IEX_SL000863	IEX_0050000	20000	20	
27-10-2022	C-IEX_SL000975	IEX_0070000	20000	20	
30-11-2022	C-IEX_SL001084	IEX_0090000	20000	20	
<b>Total</b>				<b>100</b>	

As seen from the table above, APDOP has purchased 100 MU of RE (Solar) in the year FY 2021-22 and FY 2022-23. The balance quantum of RE (Solar) is proposed to be met up in the coming years or through an adjustment from other sources.

The Petitioner has further submitted that DHPD has many hydro stations with an installed capacity of less than 25 MW that comes under Renewable Energy Compliance. There are few hydro projects under IPP and SPSU whose installed capacity is less than 25 MW as such these projects also qualify to meet up the RPO (Non-Solar) compliance. The APDOP is drawing 100% of the power generated by these hydro stations which is enough to meet the Renewable Energy Compliance for non-Solar RPO as per the regulation for RPO and its compliance



notified by the Commission and amended from time to time. The details of RPO (non-Solar) target and achievement since the inception of the RPO Compliance Regulation are tabulated below:

**Table 46: RPO (Non-Solar) - Petitioner's submission**

Year	RPO Applicable on	RPO Achievement				
		Quantum of Energy Liable for RPO	Non-Solar RPO (in %)	Non-Solar RPO	Non-Solar RPO fulfilled by State Hydro Generation	(+) Surplus/ (-) Shortfall
		(in MU)	(in %)	(in MU)	(in MU)	(in MU)
A	B	C	D	E=C*D%	F	G=E-F
2012-13	Total Consumption	598.62	4.1	24.54	49.95	25.41
2013-14	Total Consumption	595.74	5.45	32.47	52.84	20.37
2014-15	Total Consumption	689.67	6.8	46.9	52.98	6.08
2015-16	Total Consumption	735	6.8	49.98	58.62	8.64
2016-17	Excluding Hydro Source	367.67	8.75	32.17	62.17	30
2017-18	Excluding Hydro Source	409.23	9.5	38.88	59.81	20.93
2018-19	Excluding Hydro Source	418.17	10.25	42.86	61.71	18.85
2019-20	Excluding LHP	336.28	11.5	38.67	96.17	57.5
2020-21	Excluding LHP	267.82	12.5	33.48	94.2	60.72
2021-22	Excluding LHP	335.1	10.5	35.19	102.85	67.67
2022-23	Excluding LHP	286.57	10.5	30.09	124.02	93.93
	<b>Total</b>			<b>405</b>	<b>815</b>	<b>410</b>

As can be seen from the above table, there is an RPO (non-Solar) surplus of 410 MU. Out of this surplus, APDOP has sold 21.59 MU and earned extra revenue amounting to Rs.8.15 Cr. The detail of the sale of RE power is shown below:

**Table 47: Sale of surplus Non-Solar RE Power - Petitioner's submission**

Month	Energy Sale (in MU)	Revenue Earned (in Crore)
May-21	0.34	0.13
June-21	4.61	1.75
July-21	1.49	0.56
Aug-21	4.8	1.81
Sep-21	5.52	2.09
Oct-21	4.83	1.81
<b>Total</b>	<b>21.59</b>	<b>8.15</b>

**(b) Commission's Analysis**

The Commission had notified the APSERC (Renewable Power Purchase Obligation and its Compliance) Regulations, 2012 on 11.04.2012 and its second amendment was issued on 13.10.2016. In the said Regulations, the Commission has specified Renewable Purchase Obligation (RPO) Solar and Non-Solar RPO till FY 2018 – 19.

The Ministry of Power, GoI, vide order dated 22.07.2022 had issued the Renewable Purchase Obligation (RPO) and Energy Storage Obligation (ESO) trajectory till FY 2029-30. The detailed year wise trajectory is as follows:

<i>Year</i>	<i>Wind RPO</i>	<i>HPO</i>	<i>Other RPO</i>	<i>Total</i>
<b>2022-23</b>	0.81%	0.35%	23.44%	<b>24.61%</b>
<b>2023-24</b>	1.60%	0.66%	24.81%	<b>27.08%</b>
<b>2024-25</b>	2.46%	1.08%	26.37%	<b>29.91%</b>
<b>2025-26</b>	3.36%	1.48%	28.17%	<b>33.01%</b>
<b>2026-27</b>	4.29%	1.80%	29.86%	<b>35.95%</b>
<b>2027-28</b>	5.23%	2.15%	31.43%	<b>38.81%</b>
<b>2028-29</b>	6.16%	2.51%	32.69%	<b>41.36%</b>
<b>2029-30</b>	6.94%	2.82%	33.57%	<b>43.33%</b>

Further, as per the Order, the following conditions were to be met in order to fulfil the RPO for each of the categories as highlighted in the table above:

*“(a) Wind RPO shall be met only by energy produced from Wind Power Projects (WPPs) commissioned after 31 March 2022.*

*(b) HPO shall be met only by energy produced from LHPs (including PSPs), commissioned after 8th March 2019.*

*(e) Other RPO may be met by energy produced from any RE power project not mentioned in (a) and (b) above.*

*6. From F.Y. 2022-23 onwards, the energy from all Hydro Power Projects (HPPs) will be considered as part of RPO. The HPO trajectory, as has been notified earlier will continue to prevail for LHPs commissioned after 8th March 2019. All other HPPs will be considered as part of RPO under category of other RPO’.*

*7. RPO shall be calculated in energy terms as a percentage of total consumption of electricity.*

*8. HPO obligations may be met from the power procured from eligible LHPs (including PSPs) commissioned on and after 8th March, 2019 to 31 March, 2030.*

*9. HPO obligation of the State/Discom may be met out of the free power being provided to the State from LHPs (including PSPs), commissioned after 8th March, 2019 as per agreement at that point of time excluding the contribution towards LADF, if consumed within the State/Discom. Free power (not that contributed for Local Area Development) shall be eligible for HPO benefit.*

*10. In case, the free power mentioned above is insufficient to meet the HPO obligations, then the State would have to buy the additional hydro power to meet its HPO obligations or may have to buy the corresponding amount of Renewable Energy Certificate corresponding to Hydro Power.”*

Further vide corrigendum dated 19.09.2022, the following were clarified:

*"In partial modification of this Ministry's Order No. F. No. 09/13/2021-RCM dated 22nd July 2022 on Renewable Purchase Obligation (RPO) and Energy Storage Obligation Trajectory till 2029-30, the following changes are hereby made:*

*2. The words "LHPs (including PSPs)" in Para 5(b), 8, 9 and 14 and the word "LHPs" in Para 6 of the Order, are substituted with the following words: -*

*"Hydro Power Projects (including PSPs and Small Hydro Projects (SHPs))"*

*3. The words ".... All other HPPs will be considered..." in Para 6 are substituted with the following words: -*

*".... Energy from all other HPPs including free power from HPPs commissioned before 8th March 2019 will be considered..."*

*4. Further, as the Wind Power Projects (WPPs) currently require significant amount of investment when compared to other RE technologies, it was felt that benefit should be given to the States, who had commissioned or tied up with WPPs in the recent past. Accordingly, it has been decided that the share of wind in non-solar RPO (as defined in order dated 29th January 2021) and which was in excess of 7% as on 31 Mar 2022, has been considered for inclusion towards Wind RPO. In accordance with above, Para 5(a) of the order is substituted with the following new para: -*

*(a) Wind RPO shall be met by energy produced from Wind Power Projects (WPPs) commissioned after 31 March 2022 and the wind energy consumed over and above 7% from WPPs commissioned till 31st March 2022.*

Thereafter, vide tariff order dated 25<sup>th</sup> October 2023, the Commission has given the following directives to the APDOP:

*"4. AT&C and RPO trajectory as issued by the Ministry of Power, Government of India and agreed by APDOP with GoI, should be considered for truing up of each period of FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24."*

In light of above, the following is observed:

- The Petitioner has not submitted the projections for RPO in line with the directives of the Commission for the Control Period.
- The Petitioner is dependent on power purchase from DHPD and HPDCL and Dikshi Hydro Power Project. As such, the Petitioner should have submitted the details of HPO from new and old plants commissioned after march 2019 as per the guidelines of the MoP Order and the remaining should have been adjusted as 'Other RPO'.
- In case of Wind RPO the preparedness for compliance should have been shared along with the tariff petition; however, the Petitioner has not submitted any information on compliance of Commission's directives.

- Accordingly, based on approved values of power purchase for the control period FY 2024-25 to FY 2026-27, the Commission approves the minimum quantum of power purchase from renewable sources for fulfilment of RPO compliance for the licensee.

**Table 48: Approved Quantum of RPO for the Control Period (MU)**

Year	Approved Power Purchase Quantum	Wind RPO		HPO		Other RPO		Total	
	MU	%	MU	%	MU	%	MU	%	MU
<b>24-25</b>	1,266.93	2.46%	31.17	1.08%	13.68	26.37%	334.09	29.91%	<b>378.94</b>
<b>25-26</b>	1,266.93	3.36%	42.57	1.48%	18.75	28.17%	356.90	33.01%	<b>418.21</b>
<b>26-27</b>	1,266.93	4.29%	54.35	1.80%	22.80	29.86%	378.31	35.95%	<b>455.46</b>
<b>Total</b>			<b>128.09</b>		<b>55.24</b>		<b>1,069.29</b>		<b>1,252.62</b>

- The Petitioner is directed to comply with the aforesaid trajectory and report the progress in RPO fulfilment on quarterly basis to the Commission.
- Further, it may be noted that 828.80 MU power purchase quantum has been approved by the Commission for each of the FY 2024-25, FY 2025-26 and FY 2027-28 respectively from Hydro Power. This amounts to around 65% of total power purchase approved by the Commission for the period. As such, the estimated power purchase cost associated with purchase of Hydro Power has already been approved by the Commission for the Control period. The Commission therefore directs the Petitioner to bifurcate the above power purchase from hydro power projects and segregate the same into HPO and Other RPO as per the applicable terms and conditions for fulfilment of RPO as per the set RPO trajectory notified by GoI. Further, the Petitioner is directed to develop a comprehensive roadmap for fulfilment of Wind RPO and submit the same before the Commission with the next tariff petition.
- Non-compliance of Commission's directives and non-fulfilment of RPO would entail action as per the applicable provisions of the Act and Regulations.
- Accordingly, the Petitioner is directed to compute the cost for RPO quantum of Wind, HPO and Other power purchase requirement for RPO compliance based on the total energy requirement and submit the same along with the next tariff petition.
- The Arunachal Pradesh State Electricity Regulatory Commission (Renewable Power Purchase Obligation and Its Compliance) Regulations, 2012 and its amendments

specifies, the role of Nodal Agency for RPO compliance monitoring and consequences of default due to non-compliance. The Regulation 6 of the said regulation provide as follows-

*“6. State Agency and its Functions*

*(3) The State Agency shall develop the formats for submission of quarterly progress report in respect of compliance of renewable purchase obligation by the obligated entities and get them approved by the Commission within 3 months of issuance of these Regulations. State Agency may also suggest appropriate action to the Commission, if required, for compliance of the renewable purchase obligation.”*

- The State Agency shall submit the first quarterly report for FY 2024-25 within one month from issuance of this order. Further, the State Agency shall submit the RPO compliance report of past period within six months from the date of issuance of this order.

### **5.16 Annual License Fee and tariff application fee for Deemed Distribution Licensee – Commission’s analysis**

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. The annual license fee for a distribution licensee including a deemed licensee as per above mentioned Regulations is Rs. 5.00 lakh per year for FY 2024-25 to FY 2026-27. Further the annual fees is required to be paid by 15<sup>th</sup> April of each financial year. Any delay in this regard shall attract a penalty of 1.50% per month or part thereof. The distribution licensee is directed to comply with regulations and pay the requisite fees within the stipulated time period.

Further, the fees for application for determination of tariff for supply of electricity, wholesale, bulk or retail by a distribution licensee including a deemed licensee and for determination of tariff / charges of wheeling in respect of such distribution licensee including a deemed licensee is 5 paise per 100kWh proposed to be wheeled during the control period for which the application is made subject to a minimum of Rs 7.50 lakh.

Accordingly, the Annual License fee of Rs. 5.00 lakh per year and Tariff Application fee of Rs.7.5 lakh per year for FY 2024-25, FY 2025-26 and FY 2026-27 during the control period is approved by the Commission.

**Table 49: Annual License fee and tariff application fee for the Control Period (₹ in Cr)**

Particulars	FY 2024-25	FY 2025-26	FY 2026-27
Annual license fee	0.05	0.05	0.05

Particulars	FY 2024-25	FY 2025-26	FY 2026-27
Tariff Application fee @5.00 paise per 100 Units of energy wheeled during the control period subject to a minimum of Rs 7.50 lakh	0.075	0.075	0.075

## 5.17 Non-Tariff Income

### (a) Petitioner's submission

The Petitioner has submitted the following Non-Tariff Income (i.e., LPS, Meter Rent, other charges etc.) for the period FY 2022-23 to FY 2026-27 as shown in the table below:

**Table 50: Non-tariff Income - Petitioner's Submission**

(₹ in Cr)

FY	LPS	Metre Rent	Other Charges	Total
FY 2022-23	38.5	1.94	0.96	<b>41.4</b>
FY 2023-24	42.62	2.14	1.06	<b>45.82</b>
FY 2024-25	47	2.37	1.17	<b>50.54</b>
FY 2025-26	51.9	2.62	1.29	<b>55.81</b>
FY 2026-27	57.41	2.89	1.43	<b>61.73</b>

### (b) Commission's Analysis

The Commission has already approved Rs. 41.59 Cr towards Non-Tariff Income while true-up the tariff of FY 2022-23. We are of the view that it is appropriate to consider the same amount towards Non-Tariff Income for FY 2024-25 to FY 2026-27 subject to true-up of respective financial years.

## 5.18 Investment for Training and Safety of Personnel

The Commission also lays stress on improving the skills and multi skilling of 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 and Safety of Personnel.

## 5.19 Estimated Revenue at Proposed tariff for consumers

### (a) Petitioner's submission

The Petitioner has projected revenue from sale of energy with existing tariff for the control period as can be seen below:

**Table 51: Proposed Revenue at Existing Tariff from sale of energy within the State - *Petitioner's submission*** (₹ in Cr)

FY	Proposed Sales (MU)	Revenue at Existing Tariff (Rs Cr)	Average Rate (Rs/kWh)
2024-25	707.53	270.51	3.82
2025-26	781.61	298.78	3.82
2026-27	864.67	330.48	3.82

The projected revenue from the sale of power outside the state during the control period is as shown below:

**Table 52: Proposed Revenue at Existing Tariff from sale of energy outside the State - *Petitioner's Submission*** (₹ in Cr)

FY	Proposed Sales (MU)	Revenue at Existing Tariff (Rs Cr)	Average Rate (Rs/kWh)
2024-25	415.86	238.34	5.73
2025-26	435.26	250.25	5.75
2026-27	455.70	262.77	5.77

The Revenue projection from sales outside the state has been done by the Petitioner considering sales to Power Exchange (IEX), Bilateral Sales and UI/ Deviation.

### (b) Commission's Analysis

Based on the energy sales within the state approved by the Commission (as detailed in para 5.2 above) and availability of surplus power for sale outside the state (as determined by the Commission in para 5.5 above) the total quantum of energy available with the licensee as a source of revenue is as shown in the table below:

**Table 53: Approved energy available with the licensee for Revenue computation** (in MU)

Particulars	MYT control Period (Projected)		
	FY 2024-25	FY 2025-26	FY 2026-27
Energy Sale within the State	<b>705.24</b>	<b>777.70</b>	<b>858.66</b>
Surplus energy available for sale outside the state	<b>382.44</b>	<b>337.14</b>	<b>273.94</b>

Accordingly, the Commission has worked out the projected revenue at existing tariff for sale of energy within the state for FY 2024-25 as shown in the table below:

**Table 54: Approved Revenue for FY 2024-25 through sale of energy within the state (₹ in Cr)**

Consumer Category	No. of consumers	Ap-proved Sales (MU)	Energy charges (Rs / kWh)	Total Revenue (Rs Cr)	ABR (Rs/kWh)
<b>HT Category</b>					
<b>Non-Commercial Consumers (Domestic)</b>					<b>3.36</b>
AC 50Hz,3-Phase, 11kV	141	12.36	3.40	4.20	
AC 50Hz,3-Phase, 33kV	4	5.02	3.25	1.63	
<b>Commercial Consumers (Non-Industrial)</b>					<b>4.20</b>
AC 50Hz,3-Phase, 11kV	557	22.98	4.20	9.65	
AC 50Hz,3-Phase, 33kV	19	0.36	4.00	0.14	
<b>Public Lighting and Water Supply Consumers</b>					<b>4.20</b>
AC 50Hz,3-Phase, 11kV	9	3.26	4.20	1.37	
AC 50Hz,3-Phase, 33kV	0	0.00	4.00	0.00	
<b>Agricultural Consumers</b>					<b>2.75</b>
AC 50Hz,3-Phase, 11kV	5	0.01	2.75	0.00	
AC 50Hz,3-Phase, 33kV	0	0.00	2.65	0.00	
<b>Industrial Consumers</b>					<b>3.42</b>
AC 50Hz,3-Phase, 11kV	93	25.33	3.85	9.75	
AC 50Hz,3-Phase, 33kV	35	49.56	3.50	17.35	
AC 50Hz,3-Phase, 132 kV	3	195.46	3.35	65.48	
<b>Bulk Mixed Consumers</b>					<b>3.63</b>
AC 50Hz,3-Phase, 11kV	188	18.51	3.75	6.94	
AC 50Hz,3-Phase, 33kV	15	9.92	3.40	3.37	
AC 50Hz,3-Phase, 132 kV	1	0.00	3.25	0.00	
<b>Low Voltage Category</b>					
<b>Non-Commercial Consumers (Domestic)</b>					<b>3.79</b>
AC 50Hz,1-Phase, 230 Volt	217949	189.25	4.00	75.70	
AC 50Hz,3-Phase, 400 Volt	4200	30.63	4.00	12.25	
KJP and BPL connection	65652	40.60	2.65	10.76	
<b>Commercial Consumers (Non-Industrial)</b>					<b>5.00</b>
AC 50Hz,1-Phase, 230 Volt	33198	53.38	5.00	26.69	
AC 50Hz,3-Phase, 400 Volt	2806	38.58	5.00	19.29	
<b>Public Lighting and Water Supply Consumers</b>					<b>5.10</b>
AC 50Hz,1-Phase, 230 Volt	948	3.15	5.10	1.61	
AC 50Hz,3-Phase, 400 Volt	289	2.59	5.10	1.32	
<b>Agricultural Consumers</b>					<b>3.10</b>
AC 50Hz,1-Phase, 230 Volt	8	0.01	3.10	0.00	
AC 50Hz,3-Phase, 400 Volt	7	0.04	3.10	0.01	
<b>Industrial Consumers</b>					<b>4.30</b>
AC 50Hz,1-Phase, 230 Volt	75	0.50	4.30	0.22	
AC 50Hz,3-Phase, 400 Volt	169	1.92	4.30	0.83	



Consumer Category	No. of consumers	Ap- proved Sales (MU)	Energy charges (Rs / kWh)	Total Revenue (Rs Cr)	ABR (Rs/kWh)
<b>HT Category</b>					
<b>Temporary Consumer</b>					<b>6.50</b>
LT/HT	362	1.80	6.50	1.17	
<b>Total</b>	<b>3,26,733</b>	<b>705.24</b>		<b>269.75</b>	<b>3.82</b>

It is also observed that the Petitioner has not provided the details of category wise / slab wise connected load / contracted demand for different categories of consumers. The Petitioner 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 at present, approves the revenue from sale of energy within the state to the tune of 705.24 MU at the existing tariff at Rs. 269.75 Crore.

Further, it may also be noted that the Commission has already approved in para 5.5 above, 382.44 MU for FY 2024-25 as surplus power for sale outside the state. The Commission while trueing-up the tariff of the FY 2022-23 had approved the following:

**Table 55: Approved Revenue from Sale of Surplus Power for FY 2022-23** (₹ in Cr)

Parameter	Value	Unit	Remarks
Energy Sales within the state (1)	582.1	MU	True-up Order FY23, Pg. 29
Total Energy Sales (2)	1018.16	MU	True-up Order FY23, Pg. 34 Table 4.8
<b>Energy Sales outside the state (1 – 2)</b>	<b>436.06</b>	<b>MU</b>	
Revenue from sale of Surplus Power	216.81	Rs Cr	True-up Order FY23, Pg. 34 Table 4.8
<b>Revenue from sale of Surplus Power</b>	<b>4.97</b>	<b>Rs/Unit</b>	

The Average DAM / RTM rates at IEX for the 1<sup>st</sup> quarter of FY 2024-25, are as follows-

**Table 56: DAM / RTM rates at IEX for 1<sup>st</sup> Quarter of FY 2024-25** (₹ in Cr)

Parameter	Value
Avg. DAM Rates (Rs / kWh)	5.08
Avg. RTM Rates (Rs / kWh)	4.65

Accordingly, considering the DAM rate, the expected revenue from sale of surplus power outside the state amounts to around Rs. 194.10 Cr. Accordingly, the Commission approves the project revenue for sale of 382.44 MU with an average rate of Rs. 5.08/kWh.

## 5.20 ARR for FY 2024-25 to FY 2026-27 and Revenue Gap

### (a) Petitioner's submission

Based on the above submissions for Power Purchase and considering all the aspects depicted above, the Petitioner has proposed the Aggregate Revenue Requirements for the entire control period FY 2024-25 to FY 2026-27 which is summarised in the table below:

**Table 57: ARR for the Control Period FY 2024-25 to FY 2026-27- Petitioner's submission (₹ in Cr)**

S. No.	Particulars	MYT Control Period (Projected)		
		FY 2024-25	FY 2025-26	FY 2026-27
1	Return on Equity Capital	--	--	--
2	Interest on Loan Capital	--	--	--
3	Depreciation	--	--	--
4	Power Purchase Expenses	522.34	547.39	573.69
5	Interstate Transmission Charges	123.67	129.70	136.04
6	Intrastate Transmission Charges	12.62	13.25	13.92
7	Fees and charges of NERLDC/NERPC	1.23	1.29	1.36
8	O&M expenses	453.05	478.97	506.36
9	Interest on working Capital	--	--	--
10	Provision for bad and doubtful debt	--	--	--
11	<b>Total Revenue Requirement</b>	<b>1112.92</b>	<b>1170.60</b>	<b>1231.38</b>

The Petitioner has requested the Commission to approve the estimated Aggregate Revenue Requirement for FY 2024-25, FY 2025-26 and FY 2026-27 at Rs. 1058.17 Cr, Rs. 1112.92 Cr, Rs 1170.60 Cr, and Rs.1231.38 Cr respectively.

Further the Petitioner has submitted the ARR, Income and Revenue Gap as shown in the table below:

**Table 58: Revenue Gap at Existing tariff, and projected Average Cost of Supply (ACoS) for FY 2024-25 to FY 2026-27 - Petitioner's submission** (₹ in Cr)

S No.	ARR	MYT Control Period (Projected)		
		FY 2024-25	FY 2025-26	FY 2026-27
1	<b>Total Revenue Requirement</b>	1,112.92	1,170.6	1,231.38
2	<b>Revenue from existing tariff</b>	270.51	298.78	330.48
3	<b>Other income</b>	50.53	55.81	61.73
4	<b>Total revenue (2 +3)</b>	321.05	354.59	392.21
5	<b>Revenue from Sale of Surplus Power</b>	238.34	250.25	262.77
6	<b>Total Annual Income (4 + 5)</b>	559.38	604.85	654.97
7	<b>Revenue gap (1 - 6)</b>	553.54	565.76	576.4
8	<b>Total Energy Sale (MU)</b>	1202.24	1299.66	1407.3
9	<b>Gross Energy Input</b>	1520.74	1519.93	1519.38
10	<b>Average Cost of Supply (ACS) (1/9) (Rs/kWh)</b>	7.32	7.70	8.10

**(b) Commission's Analysis**

The Commission has analysed each of the components of ARR as submitted above by the Petitioner in detail and accordingly after applying the prudence check the Commission approves ARR for the period FY 2024-25 to FY 2026-27 as shown in the table below:

**Table 59: Approved ARR, Revenue Gap at Existing tariff, and projected Average Cost of Supply (ACoS) for FY 2024-25 to FY 2026-27** (₹ in Cr)

S.L No.	Particulars	FY 2024-25	FY 2025-26	FY 2026-27
1	Return on Equity Capital	-	-	-
2	Interest on Loan Capital	-	-	-
3	Depreciation	-	-	-
4	Power Purchase Expenses	415.61	434.00	454.16
5	Inter-state Transmission Charges	101.08	106.14	111.44

S.L No.	Particulars	FY 2024-25	FY 2025-26	FY 2026-27
6	Intra-state Transmission Charges	11.45	11.45	11.45
7	Fees and charges of NERLDC/NERPC	1.23	1.29	1.36
8	O&M expenses	426.94	447.57	469.30
9	<i>Employee Cost</i>	<i>376.71</i>	<i>396.60</i>	<i>417.53</i>
10	<i>A&amp;G Expense</i>	<i>10.45</i>	<i>11.20</i>	<i>12.00</i>
11	<i>R&amp;M Expense</i>	<i>39.78</i>	<i>39.78</i>	<i>39.78</i>
13	Annual License Fee	0.05	0.05	0.05
14	Tariff Filing Fees	0.075	0.075	0.075
15	Training and Safety of Personnel	0.75	0.75	0.75
16	Interest on working Capital	-	-	-
17	Provision for bad and doubtful debt	-	-	-
18	<b>Total Revenue Requirement</b>	957.19	1,001.32	1,048.59
19	less: NTI	41.59	41.59	41.59
20	<b>Net ARR</b>	915.60	959.73	1,007.00
21	Revenue from Existing Tariff	269.75	297.47	328.47
22	Revenue from surplus sale of power	194.10	171.12	139.03
23	<b>Total Annual Income (Revenue)</b>	463.85	468.59	467.50
24	<b>Total Grant-in-aid required</b>	451.75	491.15	539.50
25	Revenue Gap	Nil	Nil	Nil
25	Regulatory Asset	-	-	-
26	Energy Sales within State	705.24	777.70	858.66
27	<b>ACoS (ARR/Energy Sales) (20/26)</b>	12.98	12.34	11.73
28	<b>ACoS ((ARR- revenue from surplus sale of power)/ energy Sales) (i.e. (20-22)/26)</b>	10.23	10.14	10.11

The Commission observed that the ACoS worked out by the Petitioner in **Table 58** above is arrived by dividing ARR by gross energy input which is not average cost of supply in true sense. The ACoS should be ARR divided by Energy sales.

The Grant-in-aid required from State Government of Rs. 451.75 Crore, Rs. 491.15 Crore and Rs. 539.50 Crore for FY 2024-25, FY 2025-26 and FY 2026-27 has been arrived by the Commission on the basis of the approved energy sale, normative AT&C loss trajectory as per RDSS and approved power purchase cost for the FY 2024-25, FY 2025-26 and FY 2026-27. The Grant-in-Aid required is about 47% of the net ARR for FY 2024-25 and around 49% and 52% of net ARR for FY 2025-26 and FY 2026-27 respectively. The per unit Average Cost of Supply, after deducting the income from surplus power sale from ARR, for FY 2024-25 is Rs. 10.23 and Rs.10.14 for FY 2025-26 and Rs. 10.11 for FY 2026-27.

It is noted that the Grant-in-aid support of Rs. 451.75 Crore, Rs. 491.15 Crore and Rs. 539.50 Crore for FY 2024-25, FY 2025-26 and FY 2026-27 computed by the Commission is based on the AT&C loss trajectory approved by MoP in the RDSS scheme. However, in real time due to higher level of AT&C losses in network, the Grant-in-aid support provided by the state government may be on higher side than the above estimates. It can be seen from the submission of Petitioner that the actual AT&C loss level during FY 2023-24 was 41.57% whereas the RDSS targeted AT&C loss during FY 2024-25 is 22%.

The increase in average revenue gap 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 Petitioner needs to make efforts to bridge the revenue gap by improving its operational efficiency and reducing the losses through proper implementation of the ongoing schemes. The Commission also observes that the power purchase cost constitutes around 50% share of the ARR and hence the APDOP needs to make efforts to optimize the power procurement cost by making use of available generation sources in a judicious way.

## **5.21 Recovery of Revenue Gap for FY 2024-25**

### **(a) Petitioner's submission**

The Petitioner has submitted that the category wise cost of supply has not been computed till date and are in process to initiate an exercise and calculate the cost of supply of every category wise consumer after analysis of the various cost factors associated with the supplying power to various categories of consumers.

However, for determining the differential grant for various categories of consumers, the Petitioner has considered average cost of supply of Rs. 11.65 per unit as full cost tariff for recovery of the proposed ARR. The Petitioner has submitted the category wise grant and proposed net tariff for the FY 2024-25 has been calculated as shown in the table below:

**Table 60: Full Cost Tariff (ACoS) for FY 2024-25 - Petitioner’s Submission** (₹ in Cr)

Particulars	Amount (in Rs Cr)
Total Revenue Requirement	1112.92
Revenue from Sale of Surplus Power	238.34
Other income (Late payment, Meter rent etc)	50.53
Revenue requirement from within state	<b>824.05</b>
Energy sale within state (MU)	707.53
Full cost tariff (Rs/kWh)	<b>11.65</b>

The Petitioner has also submitted the category wise grant and net tariff proposal for FY 2024-25 for individual categories along with the comparison of existing and proposed energy charges:

**Table 61: Revenue at Full Cost Tariff for FY 2024-25 - Petitioner’s Submission** (₹ in Cr)

Consumer Category	Full cost Tariff (Rs/kWh)	Revenue at full cost tariff (FY 2024-25)	
		Sale (MU)	Rs in Cr.
<b>HT Category</b>			
<b>Non-Commercial Consumers (Domestic)</b>			
3-Phase, 11kV	11.65	12.36	14.4
3-Phase, 33kV	11.65	6.4	7.46
<b>Commercial Consumers (Non-Industrial)</b>			
3-Phase, 11kV	11.65	22.98	26.76
3-Phase, 33kV	11.65	0.37	0.43
<b>Public Lighting and Water Supply Consumers</b>			
3-Phase, 11kV	11.65	3.26	3.8
3-Phase, 33kV	11.65	0	0
<b>Agricultural Consumers</b>			
3-Phase, 11kV	11.65	0.01	0.01
3-Phase, 33kV	11.65	0	0
<b>Industrial Consumers</b>			
3-Phase, 11kV	11.65	25.33	29.5
3-Phase, 33kV	11.65	49.56	57.73
3-Phase, 132 kV	11.65	195.46	227.65

Consumer Category	Full cost Tariff (Rs/kWh)	Revenue at full cost tariff (FY 2024-25)	
		Sale (MU)	Rs in Cr.
<b>Bulk Mixed Consumers</b>			
3-Phase, 11kV	11.65	18.51	21.56
3-Phase, 33kV	11.65	10.36	12.07
3-Phase, 132 kV	11.65	0	0
<b>Low Voltage Category</b>			
<b>Non-Commercial Consumers (Domestic)</b>			
1-Phase, 230 Volt	11.65	189.26	220.43
3-Phase, 400 Volt	11.65	30.63	35.67
KJP and BPL connection	11.65	40.6	47.28
<b>Commercial Consumers (Non-Industrial)</b>			
1-Phase, 230 Volt	11.65	53.39	62.18
3-Phase, 400 Volt	11.65	38.58	44.93
<b>Public Lighting and Water Supply Consumers</b>			
1-Phase, 230 Volt	11.65	3.15	3.66
3-Phase, 400 Volt	11.65	3.25	3.79
<b>Agricultural Consumers</b>			
1-Phase, 230 Volt	11.65	0.03	0.03
3-Phase, 400 Volt	11.65	0.15	0.17
<b>Industrial Consumers</b>			
1-Phase, 230 Volt	11.65	0.5	0.58
3-Phase, 400 Volt	11.65	1.92	2.23
<b>Temporary Consumer</b>			
LT/HT	11.65	1.49	1.73
<b>Total</b>		<b>707.53</b>	<b>824.05</b>

Further, the Petitioner has also submitted that consumer category wise government grant (in Rs/kWh) and accordingly, the total government grant has been computed and shown in table below:

**Table 62: Government Grant for FY 2024-25 - Petitioner's Submission** (₹ in Cr)

Consumer Category	Government Grant (Rs/kWh)	Total Government Grant	
		Sale (MU)	Rs in Cr.
<b>Non Commercial Consumers (Domestic)</b>			
3-Phase, 11kV	8.25	12.36	10.2
3-Phase, 33kV	8.4	6.4	5.38
<b>Commercial Consumers (Non-Industrial)</b>			
3-Phase, 11kV	7.45	22.98	17.11
3-Phase, 33kV	7.65	0.37	0.28

Consumer Category	Government Grant (Rs/kWh)	Total Government Grant	
		Sale (MU)	Rs in Cr.
<b>Public Lighting and Water Supply Consumers</b>			
3-Phase, 11kV	7.45	3.26	2.43
3-Phase, 33kV	7.65	0	0
<b>Agricultural Consumers</b>			
3-Phase, 11kV	8.9	0.01	0.01
3-Phase, 33kV	9	0	0
<b>Industrial Consumers</b>			
3-Phase, 11kV	7.8	25.33	19.75
3-Phase, 33kV	8.15	49.56	40.38
3-Phase, 132 kV	8.3	195.46	162.17
<b>Bulk Mixed Consumers</b>			
3-Phase, 11kV	7.9	18.51	14.62
3-Phase, 33kV	8.25	10.36	8.54
3-Phase, 132 kV	8.4	0	0
<b>Low Voltage Category</b>			
<b>Non-Commercial Consumers (Domestic)</b>			
1-Phase, 230 Volt	7.65	189.26	144.72
3-Phase, 400 Volt	7.65	30.63	23.42
KJP and BPL connection	9	40.6	36.52
<b>Commercial Consumers (Non-Industrial)</b>			
1-Phase, 230 Volt	6.65	53.39	35.48
3-Phase, 400 Volt	6.65	38.58	25.64
<b>Public Lighting and Water Supply Consumers</b>			
1-Phase, 230 Volt	6.55	3.15	2.06
3-Phase, 400 Volt	6.55	3.25	2.13
<b>Agricultural Consumers</b>			
1-Phase, 230 Volt	8.55	0.03	0.02
3-Phase, 400 Volt	8.55	0.15	0.13
<b>Industrial Consumers</b>			
1-Phase, 230 Volt	7.35	0.5	0.37
3-Phase, 400 Volt	7.35	1.92	1.41
<b>Temporary Consumer</b>			
LT/HT	5.15	1.49	0.77
<b>Total</b>		<b>707.53</b>	<b>553.54</b>

Accordingly, the Petitioner has tabulated the total revenue requirement at full cost tariff with proposed tariff for FY 2024-25 and expected grant from the government as shown in the table below:



**Table 63: Full Cost Tariff, Grant and Proposed Tariff FY 2024-25 - Petitioner's Submission (₹ in Cr)**

Category	Full cost Tariff (Rs./Kwh)	Proposed Tariff (Rs./Kwh)	Expected Grant (Rs./Kwh)	Full Cost Tariff Revenue (Rs Cr.)	Revenue at proposed tariff (Rs Cr.)	Expected Total Grant (Rs Cr.)
<b>Non Commercial (Domestic)</b>						
<b>LT - AC 50 Hz</b>						
1-Phase, 230 Volt	11.65	4	7.65	220.43	75.7	144.72
3-Phase, 400 Volt	11.65	4	7.65	35.67	12.25	23.42
KJP and BPL connection	11.65	2.65	9	47.28	10.76	36.52
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	3.4	8.25	14.4	4.2	10.2
3-Phase, 33kV	11.65	3.25	8.4	7.46	2.08	5.38
<b>Commercial (Non-Industrial)</b>						
<b>LT - AC 50 Hz</b>						
1-Phase, 230 Volt	11.65	5	6.65	62.18	26.69	35.48
3-Phase, 400 Volt	11.65	5	6.65	44.93	19.29	25.64
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	4.2	7.45	26.76	9.65	17.11
3-Phase, 33kV	11.65	4	7.65	0.43	0.15	0.28
<b>Public Lighting And Water Supply</b>						
<b>LT - AC 50 Hz</b>						

Category	Full cost Tariff (Rs./Kwh)	Proposed Tariff (Rs./Kwh)	Expected Grant (Rs./Kwh)	Full Cost Tariff Revenue (Rs Cr.)	Revenue at proposed tariff (Rs Cr.)	Expected Total Grant (Rs Cr.)
1-Phase, 230 Volt	11.65	5.1	6.55	3.66	1.6	2.06
3-Phase, 400 Volt	11.65	5.1	6.55	3.79	1.66	2.13
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	4.2	7.45	3.8	1.37	2.43
3-Phase, 33kV	11.65	4	7.65	0	0	0
<b>Agricultural</b>						
<b>LT - AC 50 Hz</b>						
1-Phase, 230 Volt	11.65	3.1	8.55	0.03	0.01	0.02
3-Phase, 400 Volt	11.65	3.1	8.55	0.17	0.05	0.13
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	2.75	8.9	0.01	0	0.01
3-Phase, 33kV	11.65	2.65	9	0	0	0
<b>Industrial</b>						
<b>LT - AC 50 Hz</b>						
1-Phase, 230 Volt	11.65	4.3	7.35	0.58	0.21	0.37
3-Phase, 400 Volt	11.65	4.3	7.35	2.23	0.82	1.41
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	3.85	7.8	29.5	9.75	19.75
3-Phase, 33kV	11.65	3.5	8.15	57.73	17.35	40.38
3-Phase, 132kV	11.65	3.35	8.3	227.65	65.48	162.17

Category	Full cost Tariff (Rs./Kwh)	Proposed Tariff (Rs./Kwh)	Expected Grant (Rs./Kwh)	Full Cost Tariff Revenue (Rs Cr.)	Revenue at proposed tariff (Rs Cr.)	Expected Total Grant (Rs Cr.)
<b>Bulk Mixed</b>						
<b>HT - AC 50 Hz</b>						
3-Phase, 11kV	11.65	3.75	7.9	21.56	6.94	14.62
3-Phase, 33kV	11.65	3.4	8.25	12.07	3.52	8.54
3-Phase, 132 kV and above	11.65	3.25	8.4	0	0	0
<b>Temporary Consumer</b>	11.65	6.5	5.15	1.73	0.97	0.77
<b>Total</b>				<b>824.05</b>	<b>270.51</b>	<b>553.54</b>

As such, a comparative table has been submitted by the Petitioner between existing tariff and proposed tariff for FY 2024-25 as shown in the table below

**Table 64: Existing Tariff and Proposed Tariff FY 2024-25 - Petitioner's Submission - (in Rs/kWh)**

Category of Consumers	Existing Tariff (Rs/kWh)	Proposed Tariff (Rs/kWh)
<b>Non-Commercial (Domestic)</b>		
<b>LT - AC 50 Hz</b>		
1-Phase, 230 Volt	4.00	4.00
3-Phase, 400 Volt	4.00	4.00
KJP and BPL connection	2.65	2.65
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	3.4	3.4
3-Phase, 33kV	3.25	3.25
<b>Commercial (Non-Industrial)</b>		
<b>LT - AC 50 Hz</b>		
1-Phase, 230 Volt	5.00	5.00
3-Phase, 400 Volt	5.00	5.00
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	4.20	4.20
3-Phase, 33kV	4.00	4.00

Category of Consumers	Existing Tariff (Rs/kWh)	Proposed Tariff (Rs/kWh)
<b>Public Lighting and Water Supply</b>		
<b>LT - AC 50 Hz</b>		
1-Phase, 230 Volt	5.10	5.10
3-Phase, 400 Volt	5.10	5.10
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	4.20	4.20
3-Phase, 33kV	4.00	4.00
<b>Agricultural</b>		
<b>LT - AC 50 Hz</b>		
1-Phase, 230 Volt	3.10	3.10
3-Phase, 400 Volt	3.10	3.10
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	2.75	2.75
3-Phase, 33kV	2.65	2.65
<b>Industrial</b>		
<b>LT - AC 50 Hz</b>		
1-Phase, 230 Volt	4.30	4.30
3-Phase, 400 Volt	4.30	4.30
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	3.85	3.85
3-Phase, 33kV	3.50	3.50
3-Phase, 132kV	3.35	3.35
<b>Bulk Mixed</b>		
<b>HT - AC 50 Hz</b>		
3-Phase, 11kV	3.75	3.75
3-Phase, 33kV	3.40	3.40
3-Phase, 132 kV and above	3.25	3.25
<b>Temporary Consumer</b>	6.50	6.50

The Petitioner, APDOP being a Government Department funded by budgetary support from State Government, has not proposed any tariff hike and hence projected to absorb the unrecovered Revenue Gap.

**Table 65: Revenue Gap and its Recovery for the Entire Control Period - Petitioner's Submission**  
(₹ in Cr)

S.L No.	Particulars	MYT Control Period (Projected)		
		FY 2024-25	FY 2025-26	FY 2026-27
1	Aggregate Revenue Requirement (ARR)	1112.92	1170.6	1231.38

S.L No.	Particulars	MYT Control Period (Projected)		
		FY 2024-25	FY 2025-26	FY 2026-27
2	Less: Other Income	50.53	55.81	61.73
3	Net ARR ( 1-2)	1062.39	1114.79	1169.65
4	Less: Income- Sale of power outside State	238.34	250.25	262.77
5	Net ARR from within the state (3-4)	824.05	864.54	906.88
6	Income from proposed tariff	270.51	298.78	330.48
7	Expected Government Grant	553.54	565.76	576.4
8	Net Revenue Gap (5-6-7)	0	0	0

**(b) Commission’s Analysis**

It can be seen from the above submission that the Petitioner does not propose any increase in tariff for any category of the consumers to meet this revenue gap.

The Commission has already observed in foregoing paras above, that there is a huge gap between the projected revenue requirement for FY 2024-25 and expected revenue earned from existing tariff. It is noted that the existing tariff has been applicable in the state since 2018-19 and there is a need to revise the tariff for better financial viability of the licensee and overall development of the power sector of the state. As envisaged in the Act, the generation, transmission as well as distribution utilities should perform their business on commercial principles and should aim towards self-sustainable operation.

With expectation of about >50% Grant –in –Aid support for power distribution business from the state government is quite high and it may hinder the development of other sector like infrastructure, health, education etc and in turn overall economic development of the state.

However, considering the State Government’s commitment for Grant in aid support for FY 2024-25 and tariff proposal submitted by the petition, the Commission decides not to increase the existing tariff to avoid tariff shock to all categories of the consumers. However, we are of view that APDOP should set some targets and prepare roadmap for financial turnaround of the distribution and transmission sector in consultation with the State Government.

**Table 66: Approved Tariff for FY 2024-25 and projected Revenue** (₹ in Cr)

Consumer Category	No. of consumers	Approved Sales (MU)	Approved Tariff (Rs / kWh)	Revenue (Rs Cr)	Avg. Billing rate (Rs/kWh)
<b>HT Category</b>					
<b>Non-Commercial Consumers (Domestic)</b>					3.36
<b>AC 50Hz,3-Phase, 11kV</b>	141	12.36	3.40	4.20	
<b>AC 50Hz,3-Phase, 33kV</b>	4	5.02	3.25	1.63	

Consumer Category	No. of consumers	Approved Sales (MU)	Approved Tariff (Rs / kWh)	Revenue (Rs Cr)	Avg. Billing rate (Rs/kWh)
<b>Commercial Consumers (Non-Industrial)</b>					4.20
AC 50Hz,3-Phase, 11kV	557	22.98	4.20	9.65	
AC 50Hz,3-Phase, 33kV	19	0.36	4.00	0.14	
<b>Public Lighting and Water Supply Consumers</b>					4.20
AC 50Hz,3-Phase, 11kV	9	3.26	4.20	1.37	
AC 50Hz,3-Phase, 33kV	0	0.00	4.00	0.00	
<b>Agricultural Consumers</b>					2.75
AC 50Hz,3-Phase, 11kV	5	0.01	2.75	0.00	
AC 50Hz,3-Phase, 33kV	0	0.00	2.65	0.00	
<b>Industrial Consumers</b>					3.62
AC 50Hz,3-Phase, 11kV	93	25.33	3.85	9.75	
AC 50Hz,3-Phase, 33kV	35	49.56	3.50	17.35	
AC 50Hz,3-Phase, 132 kV	3	195.46	3.35	65.48	
<b>Bulk Mixed Consumers</b>					3.63
AC 50Hz,3-Phase, 11kV	188	18.51	3.75	6.94	
AC 50Hz,3-Phase, 33kV	15	9.92	3.40	3.37	
AC 50Hz,3-Phase, 132 kV	1	0.00	3.25	0.00	
<b>Low Voltage Category</b>					
<b>Non Commercial Consumers (Domestic)</b>					4.00
AC 50Hz,1-Phase, 230 Volt	217949	189.25	4.00	75.70	
AC 50Hz,3-Phase, 400 Volt	4200	30.63	4.00	12.25	
<b>KJP and BPL connection</b>	65652	40.60	2.65	10.76	
<b>Commercial Consumers (Non-Industrial)</b>					5.00
AC 50Hz,1-Phase, 230 Volt	33198	53.38	5.00	26.69	
AC 50Hz,3-Phase, 400 Volt	2806	38.58	5.00	19.29	
<b>Public Lighting and Water Supply Consumers</b>					5.10
AC 50Hz,1-Phase, 230 Volt	948	3.15	5.10	1.61	
AC 50Hz,3-Phase, 400 Volt	289	2.59	5.10	1.32	
<b>Agricultural Consumers</b>					3.10
AC 50Hz,1-Phase, 230 Volt	8	0.01	3.10	0.00	
AC 50Hz,3-Phase, 400 Volt	7	0.04	3.10	0.01	
<b>Industrial Consumers</b>					4.30

Consumer Category	No. of consumers	Approved Sales (MU)	Approved Tariff (Rs / kWh)	Revenue (Rs Cr)	Avg. Billing rate (Rs/kWh)
AC 50Hz,1-Phase, 230 Volt	75	0.50	4.30	0.22	
AC 50Hz,3-Phase, 400 Volt	169	1.92	4.30	0.83	
Temporary Consumer					3.83
LT/HT	362	1.80	6.50	1.17	
<b>Total</b>	<b>326733</b>	<b>705.24</b>		<b>269.75</b>	<b>3.82</b>

Accordingly, considering the approved revenue of Rs 269.75 Cr as given above, the net revenue gap after considering the Government Grant now stands at nil, as shown in the table below:

**Table 67: Approved Revenue Gap and its Recovery for FY 2024-25** (₹ in Cr)

S.L No.	Particulars	FY 2024-25
1	<b>Aggregate Revenue Requirement (ARR)</b>	<b>957.19</b>
2	Less: Other Income	41.59
3	<b>Net ARR ( 1-2)</b>	<b>915.60</b>
4	Less: Income- Sale of power outside State	194.10
5	<b>Net ARR after deducting the sale of surplus power income (3-4)</b>	<b>721.49</b>
6	Income from proposed tariff	269.75
7	Expected Government Grant	451.75
8	Net Revenue Gap (5-6-7)	0.00

## 5.22 Introduction of Green Tariff

It is observed that the Petitioner has not proposed any Green tariff in the petition. However, as mandated under the Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 notified by the Ministry of Power, Government of India, the Commission is required to determine Green Energy Tariff comprising of the average pooled power purchase cost of the renewable energy, cross-subsidy charges if any, and service charges covering the prudent cost of the distribution licensee for providing the green energy.

The Commission has noticed that MoP, GoI, in exercise of the powers conferred by sub-section (1) read with clause (z) of sub-section (2) of section 176 of the Electricity Act, 2003, has published Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022. Under the said rules, any entity, whether obligated or not may

elect to generate, purchase and consume renewable energy as per their requirements by one or more methods including by requisition from distribution licensee. The relevant extract from the said rule is given below:

*“(C) By requisition from distribution licensee.–(a) Any entity may elect to purchase green energy either upto a certain percentage of the consumption or its entire consumption and they may place a requisition for this with their distribution licensee, which shall procure such quantity of green energy and supply it and the consumer shall have the flexibility to give separate requisition for solar and non-solar;*

*(b) The consumer may purchase on a voluntary basis, more renewable energy, than he is obligated to do and for ease of implementation, this may be in steps of Twenty five per cent and going upto Hundred per cent;*

*(c) The tariff for the green energy shall be determined separately by the Appropriate Commission, which shall comprise of the average pooled power purchase cost of the renewable energy, cross-subsidy charges if any, and service charges covering the prudent cost of the distribution licensee for providing the green energy;*

*(d) Any requisition for green energy from a distribution licensee shall be for a minimum period of one year;*

*(e) The quantum of green energy shall be pre-specified for at least one year;*

*(f) The green energy purchased from distribution licensee or from Renewable Energy sources other than distribution licensee in excess of Renewable Purchase Obligation of obligated entity shall be counted towards Renewable Purchase Obligation compliance of the distribution licensee;*

*(g) The Accounting of renewable energy supplied at distribution licensee level shall be on a monthly basis;”*

The Commission observes that Government of India has taken various initiatives for promoting renewable energy and specific target for renewable energy installation was mentioned under India’s nationally determined contribution (NDC). The target is: “To achieve about 50 percent cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030, with the help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF)”.

Further, the corporate groups are keen to achieve the net-zero or zero-carbon goal. This is increasing demand for renewable electricity and creating a shift in demand patterns away from fossil fuels. The green tariff can help the consumers in this regard.

As mentioned above, the above referred rules mandate the Electricity Regulatory Commissions to determine Green Power Tariff. It is observed that the concept of Green Tariff has been introduced in some States, like Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra and Gujarat for encouraging consumers to use green power, to be supplied



by Distribution Utilities. Further, in accordance with the Section 86(1)(e) of the Electricity Act, 2003, the Commission is mandated to promote renewable energy (RE). The Commission observes that the concept is new in the State of Arunachal Pradesh. The Commission decides to introduce the Green Tariff through this order so the interested consumer could procure power from the Petitioner at Green tariff approved by the Commission.

In view of above the Commission decides to **approve the green tariff as Rs 0.50/kWh**, which will be paid by the willing consumers over and above the normal tariff rates applicable for their respective category.

The following conditions shall be followed in this regard.

- ✓ All consumers (High Voltage and Low Voltage) shall be eligible for opting Green energy on payment of Green Power Tariff, which will be in addition to energy charges.
- ✓ Revenue earned through Green Power Tariff shall be treated as tariff income of Distribution Licenses and shall be part of revenue income from tariff. However, the quantum of such revenue shall be provided by Distribution Licensee to the Commission.
- ✓ The Consumer will have option to select the quantum of green power to be purchased in steps of 25% and going up to 100% of the consumption.
- ✓ The Distribution Licensee will levy Green Power Tariff only for percentage of consumption opted by the Consumer.
- ✓ Any requisition for green energy from a distribution licensee shall be for a minimum period of one year.
- ✓ Distribution Licensee shall process the request of Consumer for Green Power Tariff not later than 30 days from the receipt of the request.
- ✓ Distribution Licensee shall ensure to make wide publicity of this scheme.

The Commission directs the Petitioner to submit the result of Green Tariff implementation scheme in next tariff petition with details like number of consumers opted for the scheme, energy supplied (month wise and consumer category-wise), revenue earned through green tariff (month wise and consumer category-wise).



## Chapter 6: Wheeling Charges

Regulation 3.1 and Regulation 9.5 of the APERC MYT Regulation 2018 provides as follows:

**“9.1 Separation of accounts:**

*The distribution licensee shall segregate the accounts of the licensed business into Wheeling Business and Retail Supply Business and submit separate ARR for respective business. The ARR for wheeling business shall be used to determine wheeling charges recoverable from open access consumers and the ARR for Retail Supply Business to determine retail supply tariff for sale of electricity to different categories of consumers of the licensee, which will be inclusive of wheeling charges” .*

**“9.5 Allocation Matrix:**

*The Wheeling Charges of the Distribution Licensee shall be determined by the Commission on the basis of segregated accounts of Distribution Wires Business:*

*Provided that where the Distribution Licensee is not able to submit audited and certified separate accounts for Distribution Wires Business and Retail Supply Business, the following Allocation Matrix shall be applicable.*

**Table - 1 Allocation matrix for segregation of expenses between Distribution Wires Business and Retail Supply Business.**

<b>Particulars</b>	<b>Wire Business (%)</b>	<b>Retail Supply Business (%)</b>
Power Purchase Expenses	0	100
Intra-State Transmission Charge (Intra and Inter both)	0	100
SLDC Charges	0	100
Open Access Charges	0	100
Employee Expenses	60	40
Administration and General Expenses	50	50
Repair and Maintenance Expenses	90	10
Depreciation	90	10
Interest on Long-term Loan Capital	90	10
Interest on Working Capital and on Consumer Security Deposit	10	90
Bad Debt Written off	0	100
Income Tax	90	10
Contribution to contingency reserves	100	0
Return on Equity	90	10
Non-Tariff Income	10	90

.....”

The Petitioner in the instant case has submitted that they do not have a separate account for the Wire Business and Retail Supply Business, and hence as per provisions of Regulations 9.5, the allocation matrix is followed for segregation of expenses between Distribution Wires Business and Retail Supply Business. Accordingly, the ARR Distribution Wires Business and Retail Supply Business for the entire control period is shown in the table below.

**ARR for Retail Supply Business**

Particulars	MYT Control Period		
	FY 2024-25	FY 2025-26	FY 2026-27
Power Purchase Expenses	415.61	434.00	454.16
Intra-State Transmission Charge (Intra and inter both)	112.53	117.59	122.89
SLDC Charges	1.23	1.29	1.36
Open Access Charges	-	-	-
Employee Expenses	150.68	158.64	167.01
Administration and General Expenses	5.23	5.60	6.00
Repair and Maintenance Expenses	3.98	3.98	3.98
Depreciation	-	-	-
Interest on Long-term Loan Capital	-	-	-
Interest on Working Capital and on Consumer Security Deposit	-	-	-
Bad Debt Written off	-	-	-
Income Tax	-	-	-
Contribution to contingency reserves	-	-	-
Return on Equity	-	-	-
Non-Tariff Income	37.43	37.43	37.43
Annual License Fee	0.05	0.05	0.05
Tariff Filing Fees	0.075	0.075	0.075
Training and Safety of Personnel	0.75	0.75	0.75
<b>TOTAL</b>	<b>652.70</b>	<b>684.54</b>	<b>718.84</b>

**ARR for Wires Business**

Particulars	MYT Control Period		
	FY 2024-25	FY 2025-26	FY 2026-27
Power Purchase Expenses	-	-	-
Intra-State Transmission Charge (Intra and Inter both)	-	-	-
SLDC Charges	-	-	-
Open Access Charges	-	-	-
Employee Expenses	226.03	237.96	250.52
Administration and General Expenses	5.23	5.60	6.00

Particulars	MYT Control Period		
	FY 2024-25	FY 2025-26	FY 2026-27
Repair and Maintenance Expenses	35.80	35.80	35.80
Depreciation	-	-	-
Interest on Long-term Loan Capital	-	-	-
Interest on Working Capital and on Consumer Security Deposit	-	-	-
Bad Debt Written off	-	-	-
Income Tax	-	-	-
Contribution to contingency reserves	-	-	-
Return on Equity	-	-	-
Non-Tariff Income	4.16	4.16	4.16
Annual License Fee	-	-	-
Tariff Filing Fees	-	-	-
Training and Safety of Personnel	-	-	-
<b>TOTAL</b>	<b>262.89</b>	<b>275.20</b>	<b>288.16</b>

Accordingly, the Wheeling Charges for the control period is shown below:

**Table 68: Approved Wheeling Charges for the Control Period**

Particulars	Unit	MYT Control Period		
		FY 2024-25	F Y 2025-26	FY 2026-27
<b>ARR for Wire Business (1)</b>	Rs in Crore	<b>262.89</b>	<b>275.20</b>	<b>288.16</b>
<b>Energy input for wheeling (2)</b>	MU	895.11	938.93	1000.09
<b>Wheeling Charge (1/2)</b>	Rs per Unit	2.94	2.93	2.88

■ ■ ■

## Chapter 7: Tariff Design and Tariff Philosophy

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### 7.1. Tariff philosophy

- 7.1.1.** In determining the ARR and the retail supply tariff for FY 2024-25, the Commission has been guided by the provisions of the Electricity Act, 2003, National Electricity Policy (NEP), Tariff Policy, and the MYT Regulations, 2018. The Commission notes that Section 61 of the Act, lays down the broad principles and guidelines for determination of retail supply tariffs. The basic principle is to ensure that tariff should progressively reflect the cost of supply of electricity and gradually reduce the cross subsidies between categories. The Act, lays special emphasis on safeguarding consumers' interest and requires costs to be recovered in a reasonable manner. The Act mandates that tariff determination should be guided by factors which 'encourage competition, efficiency, economical uses of resources, good performance and optimum investment'. Further, the Act, provides that while determining the tariff, the Commission shall not show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.
- 7.1.2.** It is observed that the Tariff Policy mentions that for achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought within  $\pm 20\%$  of the average cost of supply. The Tariff Policy 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.
- 7.1.3.** Though MYT Regulations, 2018 has provision for submission of tariff petition by 30<sup>th</sup> November of preceding year, the Petitioner has submitted the same during January 2024. It has been observed that the present regulatory reporting system of the APDOP is not adequate as per requirement of MYT regulations. The regulatory framework requires that the Petitioner should submit the information in desired format, which the Petitioner was not able to fulfil. Hence, the Commission had lack of information as per requirement and has finalized the present order on the limited information submitted by the Petitioner. In

view of the above, the Commission directs the Petitioner to file the tariff petition along with required format from next year in accordance with the MYT Regulations in force.

**7.1.4.** Further, in recent past, the Commission had finalised the true-up order based on petition submitted by the Petitioner. The future true-up orders shall be based on Annual Audited Account containing balance sheet and profit and loss sheet, energy audit report, actual bills of the generators and other such information as required under the true-up petition.

**7.1.5.** The Commission observed that historically, the single part tariff (only energy charge) is applicable in the State. The Commission directed the Petitioner to submit the proposal of two-part tariff, which was not followed by the Petitioner. The Commission continues to follow the single part tariff structure for FY 2024-25 and directs the Petitioner to evolve the two-part tariff proposal. The detailed direction is provided under “Directives”.

**7.1.6.** Further, voltage-wise cost of supply is not provided by the Petitioner. The Commission has derived the Average Cost of Supply and average tariff (consumer category wise), i.e. average billing rate in fifth chapter of this order. It is envisaged from the comparison of Average Cost of Supply and average tariff that substantial portion of average cost of supply is being provided by the Government as a Grant. The Petitioner is dependent upon Government grant to meet its expenses. This cannot be sustained in long term. The Petitioner is directed to prepare a roadmap for long term financial viability of the organisation in consultation with Government. So that there could be milestone / target for the Petitioner to operate on commercial principles without relying on financial aid from the Government.

**7.1.7.** It is pertinent to note that the MoP Electricity (Second Amendment) Rules, 2023, dated 26.07.2023 discusses about the framework for financial sustainability of utilities. The relevant part is reproduced below:

*“20. Framework for Financial Sustainability:*

*(1) The Aggregate Technical and Commercial loss reduction trajectory to be approved by the State Commissions for tariff determination shall be in accordance with the trajectory agreed by the respective State Governments and approved by the Central Government under any national scheme or programme, or otherwise.*

*(2) The trajectory for both collection and billing efficiency, for distribution licensee shall be determined by the State Commission in accordance with the trajectory approved under sub-rule (1).*

*(3) All the prudent costs of power procurement, incurred by distribution licensee for ensuring 24x7 supply of electricity to consumers under the Electricity (Rights of Consumers) Rules, 2020 and for meeting requirements as per Resource Adequacy plan prepared under the Electricity (Amendment) Rules 2022 shall be taken into account, provided that the procurement of power*

*has been done in a transparent manner or procurement price has been approved by the Appropriate Commission.*

*(4) All the prudent costs incurred by the distribution licensee for creating the assets for development and maintenance of distribution system in accordance with sub-section (1) of section 42 of the Act shall be pass through:*

*Provided that such pass-through of the cost for the assets created by the distribution licensee shall be subject to following conditions:-*

*(i) the asset has been created in accordance with the capex roll out plan for the licensee approved by the respective State Commission.*

*(ii) the asset has been procured in competitive and transparent manner.*

*(iii) the asset is geo-tagged and properly recorded in Fixed Asset Register.*

*(5) Gains or losses accrued to distribution licensee due to deviation from approved Aggregate Technical and Commercial loss reduction trajectory shall be quantified on the basis of Average Power Purchase Cost and shared between the distribution licensee and consumers. Two third of the gains shall be passed on to the consumers in tariff and rest shall be retained by the distribution licensee. Two third of the losses shall be borne by the distribution licensee and rest shall be borne by the consumers.*

*(6) The operation and maintenance norms for distribution licensee shall be determined by the State Commissions in accordance with the guidelines issued by the Authority.*

*(7) Reasonable Return on Equity shall be permitted, with the assessment of overall risk and the prevalent cost of capital.*

*(8) The Return on Equity by the State Commission shall be aligned with the Return on Equity specified by the Central Commission for generation and transmission in its Tariff Regulations for the relevant period, with appropriate modification taking into account the risks involved in distribution business.”*

The Petitioner should follow the above principle and work accordingly while preparing the next tariff petition.

## **7.2. Tariff categories**

The Commission observes that the Petitioner has not proposed any changes in consumer categories. Hence, the existing consumer categories are kept unchanged. The Commission approves the tariff rates for FY 2024-25 based on the following categories.

1. Domestic
  - a. Kutir Jyoti
  - b. Domestic LT
  - c. Domestic HT
2. Commercial
  - a. Commercial LT
  - b. Commercial HT

3. Public Lighting and Water Works
  - a. Public Lighting and Water works LT
  - b. Public Lighting and 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

### 7.3. Tariff rates

The tariff proposed by the APDOP and approved by the Commission is shown in Table below.

**Table 69: Existing Tariff, Proposed Tariff and Approved Tariff FY 2024-25**

Category of Consumers	Existing Tariff (Rs/kWh)	Proposed Tariff (Rs/kWh)	Approved Tariff (Rs /kWh)
<b>Non-Commercial (Domestic)</b>			
<b>LT - AC 50 Hz</b>			
1-Phase, 230 Volt	4.00	4.00	4.00
3-Phase, 400 Volt	4.00	4.00	4.00
KJP and BPL connection	2.65	2.65	2.65
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	3.4	3.4	3.4
3-Phase, 33kV	3.25	3.25	3.25
<b>Commercial (Non-Industrial)</b>			
<b>LT - AC 50 Hz</b>			
1-Phase, 230 Volt	5.00	5.00	5.00
3-Phase, 400 Volt	5.00	5.00	5.00
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	4.20	4.20	4.20
3-Phase, 33kV	4.00	4.00	4.00
<b>Public Lighting and Water Supply</b>			
<b>LT - AC 50 Hz</b>			



Category of Consumers	Existing Tariff (Rs/kWh)	Proposed Tariff (Rs/kWh)	Approved Tariff (Rs /kWh)
1-Phase, 230 Volt	5.10	5.10	5.10
3-Phase, 400 Volt	5.10	5.10	5.10
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	4.20	4.20	4.20
3-Phase, 33kV	4.00	4.00	4.00
<b>Agricultural</b>			
<b>LT - AC 50 Hz</b>			
1-Phase, 230 Volt	3.10	3.10	3.10
3-Phase, 400 Volt	3.10	3.10	3.10
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	2.75	2.75	2.75
3-Phase, 33kV	2.65	2.65	2.65
<b>Industrial</b>			
<b>LT - AC 50 Hz</b>			
1-Phase, 230 Volt	4.30	4.30	4.30
3-Phase, 400 Volt	4.30	4.30	4.30
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	3.85	3.85	3.85
3-Phase, 33kV	3.50	3.50	3.50
3-Phase, 132kV	3.35	3.35	3.35
<b>Bulk Mixed</b>			
<b>HT - AC 50 Hz</b>			
3-Phase, 11kV	3.75	3.75	3.75
3-Phase, 33kV	3.40	3.40	3.40
3-Phase, 132 kV and above	3.25	3.25	3.25
<b>Temporary Consumer</b>	6.50	6.50	6.50

The Tariff schedule indicating category wise Tariff, miscellaneous charges and general terms and conditions of supply as approved by the Commission are provided in the next sections.



## Chapter 8: Compliance of Directives

The Commission has observed that the Petitioner has not taken any initiative for complying with the directives that the Commission has been issuing from time to time through different orders. In this context, the Commission had also directed the Petitioner to set up a Regulatory Compliance Cell manned by team of experts in understanding the Act and the Regulations. The Commission emphasises on the fact that establishment of such a Regulatory Compliance cell shall result in prompt action on the directives of the Commission. However, the Petitioner has failed to do so and there has been little to no improvement in the operational efficiency of the department.

The Petitioner is hereby again directed to furnish up to date compliance of all directives issued till date within the following additional directives to the APDOP for further compliance.

**(a) Order on ‘Determination of Time of Day (TOD) tariff for Commercial and Industrial consumers in Arunachal Pradesh’ dated 11.03.2024**

The Commission had issued directives for implementation of TOD Tariff for Commercial and Industrial consumers in light of provisions of Rule 8A of the Electricity (Rights of Consumers) Amendment Rules, 2023 vide gazette notification dated 14.06.2023. The Commission had given the following terms and conditions for applicability of TOD tariff.

Applicability of TOD Tariff		
Sl. No.	Time Slot	TOD Tariff
1	0600 to 0800 hrs (Normal)	Normal Tariff
2	0800 to 1600 hrs (Solar hrs)	Twenty percent (20%) less than normal tariff
3	1600 to 1700 hrs (Normal)	Normal Tariff
4	1700 to 2100 hrs (Peak hrs)	1.20 times the Normal Tariff
5	2100 to 0600 hrs (Off Peak hrs)	Normal Tariff

It is imperative to mention here that the Forum of Regulators has already published the importance of implementing TOD tariff way back in 2010. Further, with the increased penetration of renewable energy especially from solar (in the present context for the state of Arunachal Pradesh) the Ministry of Power notified the Electricity (Rights of Consumers) Amendment Rules, 2023 wherein the following Rule has been stated: -

*“(8A) Time of Day Tariff: -The Time-of-Day tariff for Commercial and Industrial consumers having maximum demand more than ten Kilowatt shall be made effective from a date not later*

than 1st April, 2024 and for other consumers except agricultural consumers, the Time-of-Day tariff shall be made effective not later than 1st April, 2025 and a Time-of-Day tariff shall be made effective immediately after installation of smart meters, for the consumers with smart meters:

*Provided that, the Time-of-Day Tariff specified by the State Commission for Commercial and Industrial consumers during peak period of the day shall not be less than 1.20 times the normal tariff and for other consumers, it shall not be less than 1.10 times the normal tariff:*

*Provided further that, tariff for solar hours of the day, specified by the State Commission shall be atleast twenty percent less than the normal tariff for that category of consumers:*

*Provided also that the Time-of-Day Tariff shall be applicable on energy charge component of the normal tariff:*

*Provided also that the duration of peak hours shall not be more than solar hours as notified by the State Commission or State Load Despatch Centre.*

**Explanation:** - For the purposes of this rule, the expression "solar hours" means the duration of eight hours in a day as specified by the State Commission....."

The Petitioner is directed to continue the implementation of TOD tariff and report the impact of the same on the load curve (daily and seasonal basis) to the Commission in the next tariff petition.

**(b) Compliance status of directives issued by the Commission vide true-up order for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 dated 09.01.2024**

Sl No	Directive	Compliance by APDOP	Commission's observations
1.	Since the Revenue Gap created by the Petitioner (which could have been reduced by improving the efficiency as per committed AT&C loss as well as controlling unwarranted UI procurement), is mitigated by the State Government through grants, the trued-up Revenue Gap shall not pass through and reflect in the next tariff petition. The inefficiency of the distribution licensee cannot be covered by the Grants from	NIL	Compliance report with justification be submitted

SI No	Directive	Compliance by APDOP	Commission's observations
	public money and concern officials of APDOP should be answerable for it.		
2	Despite many flagship Schemes specially designed for reduction of AT&C losses in past and present, the AT&C losses consistently remained above 50%, and it even rose upto 61.93% in the FY 2018-19. Matter needs serious introspection to plug the losses and conduct diagnostic exercise at individual feeder / transformer subdivision / division / circle and zonal level. Commission hereby direct the APDOP, to conduct such exercise and submit results to Commission before next petition. Commission also directs, APDOP to bring down the AT&C losses as per the trajectory issued by the MoP with due consultation with APDOP itself.	Not complied	The study report with comprehensive analysis on the roadmap for reduction of AT&C losses has not been executed by the Petitioner and nor has been submitted with the instant petition. The same needs to be dealt with seriously and submit the report to the Commission on or before 30.09.2024.
3	It is seen that the APDOP has been selling its surplus power received from its tied up generating stations in open market outside entities to earn revenue on the understanding that this sort of commercial arrangement has been profitable to APDOP. However,	Not complied	As directed earlier, no supporting documents have been submitted to substantiate the profitability of the process adopted by the petitioner. The Petitioner is again

SI No	Directive	Compliance by APDOP	Commission's observations
	<p>no supporting documents have been submitted with the petition to demonstrate its claim. The APDOP is directed to submit the related documents like the power purchase bills, power selling bills etc., generating station and entity wise to demonstrate that process is optimised and ultimately profitable instead of surrendering it. Justification, along with supporting documents should be provided to the Commission failing which, such commercial arrangement shall be disallowed next time.</p>		<p>directed to submit the documents like power purchase bills, power selling bills generating stations from which this surplus power is received, buying entity for such surplus energy etc to demonstrate that process is optimised and ultimately profitable instead of surrendering such surplus power. The above details and the efforts of the Petitioner to optimise the power procurement cost have to be submitted alongwith next tariff petition. Failure to do so shall result in non-compliance of Commission's directions and liable for panel action. As a principle, the petitioner should not sell such surplus</p>

SI No	Directive	Compliance by APDOP	Commission's observations
			power at the price lower than the average power purchase cost to avoid net loss in the process.
4	It is Mandatory to pay annual license to the Commission by the Licensees/deemed licensees. The DoP, AP a deemed licensee has not paid any annual license fee so far. The DoP, AP is hereby directed pay the annual license fees regularly.	Partly Complied	The Petitioner has deposited the Licensee Fee without the late fine for FY 2017-18 to 2024-25. The Petitioner is hereby directed to pay the balance annual license fees along with the late fine as per the APSERC (Fees) Regulation 2011 and its amendments time to time. The Commission has already considered this expenditure in the ARR.
5	Capacity Development Programme is essential part of any organisation, The DoP, AP, despite keeping provision skilling and training has not spent on it. The DoP, AP should conduct regular training programme.	Not Complied	Reasons for not conducting capacity development program / skill development program / training of employees be submitted.

SI No	Directive	Compliance by APDOP	Commission's observations
6	<p>The liabilities and responsibilities of transmission as well as SLDC are also getting clubbed in these true up Petitions, which is contrary to the provisions of the Electricity Act. Therefore, this practise shall be discontinued by distribution licensee and if not followed, petitions shall be rejected.</p>	Not Complied	<p>The Petitioner in this petition submitted that the ARR presented by them is excluding transmission as well as SLDC expenditure. However, it is not clarified by them how the expenditure of transmission as well as SLDC would be recovered. It is assumed if the same is not included by DoP, then the same will be covered by Grant from State Government The Commission reiterates the direction to file separate ARR petitions for Transmission as well as SLDC positively. Directives of the Commission be complied with in the next tariff petition.</p>
7	<p>It is mentioned in petition that full revenue gap is arranged by the GoAP as a grant through budgetary support. It is observed</p>	Not Complied	<p>The Petitioner needs to submit the next tariff petition with a roadmap for reducing</p>

SI No	Directive	Compliance by APDOP	Commission's observations
	<p>that APDOP is utilising such grant without accounting "Cost of Money" principles into its accounts which is making the state's power eco-system inefficient including uncontrolled AT&amp;C losses. Actually, to know the efficiency of APDOP in utilising these funds of Government Exchequer, the concept of "Cost of Money" in form of ROE, ROI, Interest etc., were ordered by the Commission. However, compliance of the above is not intimated.</p>		<p>AT&amp;C losses, improving billing and collection efficiency and impact / benefit of implementation of RDSS scheme. The long term financial sustainability plan, i.e. without govt support, be prepared.</p>
8	<p>Many other observations of Commission have not been attended in the true up Petition along with non-compliance of directives of the tariff orders. Such non-complied petitions shall be disallowed from next time.</p>	NIL	<p>The Commission has already expressed the displeasure towards the lackadaisical attitude of the Petitioner in compliance of directives. Such non-compliance, may attract panel action.</p>



**(c) Compliance status of directives given through Tariff Order for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 dated 25.10.2023**

Sl No	Directive	Compliance by APDOP	Commission's observations
1.	The Petitioner shall file tariff petition as per APSERC MYT Regulation-2018, in "Two Part Tariff on or before 30 November 2023 for control period starting from 2024-25.	Not Complied	The Petitioner has not proposed the Two-Part Tariff in their tariff petition for FY 2024-25. The Petitioner is again being directed to submit their next tariff petition along with proposal for two-part tariff.
2.	The expenses of distribution licensee, STU and SLDC shall not be clubbed.	Not Complied	Separate petitions be filed for transmission as well as SLDC. Directives of the Commission be complied with before filing of next tariff petition
3.	The Petitioner shall file true up petition on the same assumptions of ARR etc of their petition of FY 2018-19 vis-à-vis actuals of each corresponding FY2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24, separately.	Complied	True-up order for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 was issued vide order dated 09.01.2024. The next true-up petition with audited account be submitted soon.

SI No	Directive	Compliance by APDOP	Commission's observations
4.	For period before FY 2017-18 and FY 2018-19, the AT&C loss trajectory as approved by Commission in its earlier orders should be followed in true up petitions.	--	--

(d) Compliance status of directive given vide tariff order for FY 2018-19 dated 31.05.2018

SI No	Directive	Compliance by APDOP	Commission's observations
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> <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 benefited the department and the consumers, and would save human efforts and resources.</p>	<p>The Petitioner has submitted that Web-based online billing and payment of electricity bills are now operational under IPDS towns. This project covers 9 towns in Arunachal Pradesh. Further, an isolated computerized billing system has been developed at Bomdila and Miao Electrical Divisions which are also operational. Other towns called non-RAPDRP towns consisting of 16 towns are in the pipeline. On completion of these projects, the online Billing, Payment, and SMS alerts system shall be fully operative</p>	<p>Timeline for operationalising the 16 towns under RAPDRP be submitted. Further, impact of digitisation in terms of improvement in Billing and Collection be submitted.</p>

SI No	Directive	Compliance by APDOP	Commission's observations
		in all major towns of Arunachal Pradesh.	
2.	<p><b>Prepaid Metering/Smart Pre-Paid 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> <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>	<p>The Petitioner has submitted that many of the consumers have been provided with prepaid meters in Naharlagun and Itanagar of the Capital complex. These consumers including other consumers of urban areas shall be provided with smart pre-paid meters and remote/rural area consumers shall be provided with pre-paid meters under RDSS.</p>	<p>The status of progress in Smart Metering under RDSS be submitted to the Commission on Quarterly basis with details of quarterly targets vis-à-vis achievement.</p>
3.	<p><b>Maintenance of accounts and records and conducting the audit</b></p> <p>It was directed that APDOP shall build up the <b>fixed asset registers separately for Diesel Generation, Transmission and Distribution</b>. 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> <p>APDOP informed in its letter dated 20.03.2013 that the fixed assets register is not available. A</p>	<p>APDOP maintains accounts and records and gets audited by Accountant General as per CPWD manuals. APDOP has so far, no staffing set up of experts in maintaining records and accounts as per formats provided in the MYT regulations. However, APDOP shall approach the Ministry of Power for providing such a setup.</p>	<p>Fixed Asset Register be developed at the earliest. Also, the licensee needs to segregate the accounts for Transmission as well as SLDC as per the provisions of the Act.</p>

SI No	Directive	Compliance by APDOP	Commission's observations
	<p>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>		
4.	<p><b>Interest in Working Capital:</b> DOP was directed to include Interest on Working Capital in ARR for 2018-19 petition. Commission feels that the concept of notional interest can be thought of by the DOP. <b>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.</b> Payment of interest would have been then met out of income by way of tariff by the DOP</p>	<p>APDOP is executing department of the Government of Arunachal Pradesh and executes the projects funded by the government and then operates and maintains these from the fund provided by the state government. Even if government fund or grant is not provided, APDOP cannot resort to borrowing money from banks/financial institutions independently. APDOP, categorized as an essential service department, in the functioning condition is a must for the government. Hence, there is no interest in working capital.</p>	<p>The submission is noted.</p>
5.	<p><b>Interest on Loan</b></p>	<p>No project under APDOP is implemented on loans taken by the department, so, interest on loans does not arise. For augmentation/project work</p>	<p>The submission is noted.</p>

SI No	Directive	Compliance by APDOP	Commission's observations
		<p>even if government fund or grant is not received, APDOP cannot resort to borrowing money from banks/financial institutions independently.</p>	
6.	<p><b>Return on Equity</b> DOP was directed to include Return on Equity in ARR for 2018-19 petition 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 Government Power Departments.</p>	<p>APDOP is not incorporated or registered as a company or any similar body, hence it has no shareholders so no equities. Therefore, ROE is Nil.</p>	<p>The submission is noted.</p>
7.	<p><b>Energy Audit for Energy Accounting</b> DOP was directed to carry a full-fledged energy auditing of the complete distribution network.  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</p>	<p>The Petitioner has submitted that proper and reliable energy accounting can be done if every transmission and distribution line is properly metered. As of now, many of these lines are not metered. Under IPDS, Comprehensive Schemes, RDSS, and many other projects where provisions of metering are in</p>	<p>The observation made by the energy Auditors in energy Audit report should be studied and a compliance report / action taken report should be submitted within three months from issuance of this order.</p>

SI No	Directive	Compliance by APDOP	Commission's observations
	<p>conduct a full fledged 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.</p>	<p>the pipelines. After completion of these schemes, energy accounting and auditing in every voltage will be possible. Now, APDOP has outsourced the Energy Accounting as per BEE guidelines and Commercial Audit as per guidelines of MoP, of the Deptt. beginning from the year 2021-22, as it being one of the pre-qualification criteria for RDSS scheme and shall try its best to carry forward the same in the coming years provided the necessary fund is given by the state Government The Energy Audit has been completed for the FY 2021-22 and FY 2022-23. Also, Energy Audit Cell has been formed within the Department, with the CE (Com) as the Nodal Officer and SE (Com) as Energy Manager.</p>	
8.	<p><b>POC and Other charges</b></p>	<p>This directive has been complied and inter-State transmission charges, NERLDC/NERPC charges,</p>	<p>The submission is noted.</p>

SI No	Directive	Compliance by APDOP	Commission's observations
		<p>and reactive charges are indicated in sections 3.5, section 3.6, and table 3.1 of chapter III respectively.</p>	
9.	<p><b>Sale of Power Outside the state</b></p>	<p>The Commission has advised in its earlier order to APDOP to reduce the quantum of power sales and then to finally stop purchasing power through IEX. In compliance, the APDOP has proposed a steady-state power sale projection in the current FY and within the entire control period as it cannot be undone instantly as explained earlier.</p>	<p>The Petitioner should study the energy requirement within the state, review the availability and follow the merit order despatch to reduce the outside sales. The month-wise availability from all sources and demand be submitted in the next tariff petition for FY 2025-26.</p> <p>Considering the present demand – supply position of FY 2024-25, the Petitioner shall prepare a proposal towards surrendering the share of high-cost power to MoP, GoI. A report containing demand – supply position (peak-off peak, month-wise, and seasonal) and</p>

SI No	Directive	Compliance by APDOP	Commission's observations
			possibility of surrender of high-cost power shall be submitted before the Commission within one month from issuance of this Order.
10.	<b>Introduction of slab-based tariff</b>	No slab based tariff has been proposed in this Petition	The Petitioner should explore the possibility of introducing the slab-based tariff.

(e) **New Directives for the APDOP for the MYT Control Period:**

**1. Submission of Business Plan**

It has been observed that the Petitioner has first projected the Multi-year ARR for FY 2024-25 to FY 2026-27 and thereafter included the section on Business Plan in their petition, which does not contain the required data. However, as per the provisions of Regulations 2.3 of the MYT Regulations, 2018, the Business Plan to be submitted by the distribution licensee should cover various aspects of the MYT control period. Further, The Business Plan gives an overview of the important parameters under MYT control period, which is the base for projecting MYT. The power availability projection should be made with a trend analysis, as envisaged under the Business Plan in MYT regulations. The availability from Central Sector Projects should be based on current allocation for central sector projects by Ministry of Power (MoP), Government of India. Similarly, for state sector / Independent Power Producer (IPP), recent development including possibility of new projects to be installed during the control period should be considered. The Petitioner should refer the provisions of MYT Regulations, 2018, or its amendments, and prepare the same accordingly.



**2. Procedure to be followed regarding tariff petitions to be submitted in future**

The Commission directs the Petitioner to submit required information / data on affidavit with tariff petitions mandatorily, as per APSERC Conduct of Business Regulations. Otherwise, the petitions will not be considered for further processing. The Petitioner should submit the tariff petitions with required data / information / document to substantiate its claim. The petitions should contain the data format mentioned in the MYT Regulations, 2018. As information in the data format is an important part of the petition, without the same, the petition will not be considered.

While submitting the information, document will be signed verified and supported by affidavit required as per provisions of APSERC Conduct of Business Regulation.

**3. RPO monitoring**

The Commission directs the Petitioner to bifurcate the power purchase from hydro power projects and segregate the same into HPO and Other RPO as per the applicable terms and conditions for fulfilment of RPO as per the set RPO trajectory notified by Government of India. Further, the Petitioner is directed to develop a comprehensive roadmap for fulfilment of Wind RPO and submit the same before the Commission with the next tariff petition. The Commission may penalise the Petitioner for non-compliance of Commission's directives and non-fulfilment of RPO under provisions of the Act and Regulations in case the directives of the Commission are not adhere to.

Accordingly, the Commission directs the Petitioner to compute the cost for RPO quantum of wind, HPO and Other power purchase requirement for RPO compliance based on the total energy requirement and submit the same before the Commission along with the next tariff petition.

Further, the State Agency shall submit the first quarterly report of RPO for FY 2024-25 within one month from issuance of this order. Further, the State Agency shall submit the RPO compliance report of past period as soon as possible.

**4. Periodic reporting of progress under the Revamped Distribution Sector Scheme (RDSS)**

The RDSS is aimed at improving the financial condition and operational efficiencies of state-owned Discoms. Further, the RDSS is a result linked evaluation scheme. Under the scheme it is mandatory for the licensees to meet the specified pre-qualifying criteria every year before the funds can be released under the scheme.

It is observed that the Petitioner has not submitted any information before the Commission after initiating the scheme. The components of scheme, target under each part etc has not been communicated. Accordingly, the Petitioner is being directed to report the quarterly progress of the works undertaken under the scheme with respect to the target envisaged after issuance of this order.

It is to be noted that the Commission has elaborately given the provisions related to prudent check of capital cost under MYT Regulations. The relevant clause is reproduced below:

*“4.3 Capital Cost and Capital Structure:*

*(1) Capital Cost for a project shall include:*

*(a) the expenditure incurred or projected to be incurred, including interest during construction and financing charges, any gain or loss on account of foreign exchange rate variation on the loan during construction up to the date of commercial operation of the project, as admitted by the Commission after prudence check;*

*(b) capitalised initial spares subject to the ceiling rates specified in these Regulations;*

*(c) additional capitalisation:*

*Provided that the assets forming part of the project but not put to use or not in use, shall be taken out of the capital cost.*

*(2) The capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff:*

*Provided that prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan, interest during construction, use of efficient technology, cost overrun and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff.*

*(3) If sufficient justification is provided for any escalation in the Capital Cost, the same may be considered by the Commission subject to the prudence check:*

*Provided that in case the actual capital cost is lower than the approved capital cost, then the actual capital cost will be considered for determination of tariff of the Generating Company or Transmission Licensee or Distribution Licensee.”*

It is clear from the above provision, the capital cost needs validation from the Commission. So, the approval and monitoring of capital cost is utmost necessary and hence the required report should be submitted by the Petitioner.

## **5. Meterisation of Unmetered Connections:**

The Petitioner is being directed to develop a comprehensive roadmap for meterisation of all unmetered connections and submit the action plan within 3 months from issuance of order. Further, in order to monitor the progress of meterisation, the Petitioner is directed to submit the quarterly progress of meterisation to the Commission, after submission of the action plan. The information should be submitted in the format given below.

Name of Circle / Division	Consumer category	No of unmetered consumers as on 1.6.24	Target for the present target	Achievement during current quarter	Deviation w.r.t. target	Cumulative achievement	Remaining number
1	2	3	4	5	6=4-5	7	8=3-7
Total							

**6. Status of Stopped / Defective Meters:**

The Commission directs the Petitioner to submit the quarterly progress report on replacement of stopped / defective meters to the Commission. It is to be noted that as per Supply Code, the defective meters should be replaced within three months. The relevant provisions are provided below:

*“(3) Billing in case of defective/stuck/stopped/burnt meter*

*(a) In case of post-paid defective/stuck/stopped/burnt meter, the consumer shall be billed on the basis of average consumption of the past three billing cycles immediately preceding the date of the meter being found/reported defective. These charges shall be leviable for a maximum period of three months only during which time the licensee is expected to have replaced the defective meter;*

*Provided that in case of average consumption of the past three billing cycles immediately preceding the date of the meter being found/reported defective is not available, the defective meter shall be immediately replaced and the period for which the meter is not recording shall be adjusted based on the average consumption of next three months billing cycles after meter is replaced.”*

The same should be followed in true spirit by the Petitioner.

**7. Quarterly loss reporting**

The Commission observes that in Energy Audit Report, the Energy Auditor mentioned about data discrepancy, particularly data provided by various divisions / sub-divisions. Due to this actual loss cannot be firmed up. Hence, the data should be properly maintained from lowest level of the Petitioner. Hence, proper accounting and monitoring has to be taken up. Hence, the Petitioner is directed to submit the quarterly report on losses in the following format:

Name of Circle / Division	Energy Input (MU)	Energy Sold (MU)	Billing Efficiency (%)	Distribution Loss (MU)	Distribution Loss (%)	Total Bill Demand (Rs Cr)	Total Collection (Rs Cr)	Collection Efficiency (%)	AT&C Loss (%)
1	2	3	$4=3/2$	$5=2-3$	$6=3/2$	7	8	$9=8/7$	$10=100%$ - (4 x 9)
Total									

### 8. Segregation of Technical and Commercial Loss

The Petitioner is directed to submit the detailed methodology for segregation of Technical and Commercial loss and for approval of the Commission. The Petitioner should conduct a study based on the approved methodology within 6 months of issuance of this Order.

### 9. Two Part Tariff with Slab based Tariff for different Consumer Categories

The Petitioner was directed through earlier tariff orders to incorporate slab-based Tariff and minimum charges for various consumer categories and invariably submit the details along with the next tariff petition for FY 2019-20. The Commission had also provided a reference table that the Petitioner could have considered. However, no action was taken by the Petitioner.

The Petitioner is now again directed to introduce two-part tariff (fixed and energy charges) with slab -based approach (telescopic tariff) for different consumer categories in the next tariff petition for FY 2025-26. The reference table provided earlier can be considered as base by the Petitioner.

### 10. Introduction of Rebates

The Petitioner is directed to come up with a proposal for introduction / revision of rebates / incentives to the consumers such as Power Factor Incentive, Load Factor Incentive, Prompt Payment Incentive, Advance Payment Incentive, Online Payment Rebate etc., as applicable, and submit the same to the Commission with the next tariff petition.

### 11. Filing of petition for determination of Miscellaneous Charges

The Commission has already notified the Electricity Supply Code 2024 in light of Ministry of Power, Electricity (Rights of Consumers) Rules 2020 and amendments thereof. Accordingly, the Petitioner is being directed to align their standard operating

procedure as per the provisions of the code and file a petition for approval of cost data book and determination of Miscellaneous Charges separately for FY 2024-25 and onwards. Until then, the charges mentioned under this order will continue. The relevant provisions are reproduced below for reference of the Petitioner.

*“4.3. Approval of Cost Data Book by the Commission*

*(1) The licensee shall submit once in a year, a proposal to the Commission for approval of the cost data book of the rates of materials and work at which the expenditure as per Section 46 of the Act is to be recovered by the licensee and as per Annexure-10.12 of this code/Regulation.*

*(2) The licensee shall publish such proposal in its website and publish an abstract of the proposal in one local daily and in one English daily having wide circulation in the State, as directed by the Commission.*

*(3) The Commission shall, after conducting a public hearing on such proposal, scrutinize the proposal, determine the reasonable rates of materials and work and approve the cost data with or without modification.*

*(4) The cost data approved by the Commission shall be published on the website of the licensee and it shall be valid at least for a period of one year from the date of its issue.*

*Provided that the Commission may, on request from the licensee, enlarge the period of validity of the cost data.*

*4.4. Miscellaneous Charges to be Recovered*

*(1) A schedule of various Electricity Charges that shall be levied by the licensee is incorporated at Annexure 10.13 of this Code. The Commission may revise these charges from time to time through amendments or latest tariff order.*

*(2) The licensee shall charge the consumers the costs for the materials and work as per Cost Data Book of clause 4.3 of above which shall be required for giving supply to the consumer. However, in case the consumer chooses to get the execution of the works done on his/her own, he shall bear only Supervision Charges, as per the Cost Data Book of license provision mentioned at Annexure 10.12 to this Code.”*

**Date : 26-07-2024**

**Place: Itanagar**

**S/d-**

**Shri Nich Rika,  
Member (Law)**

**S/d-**

**Shri R. K. Joshi  
Chairperson**

■ ■ ■ .

## Schedule – I: Tariff Schedule

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

**Applicability:** 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 and 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.

#### Tariff:

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
	<b>LT - AC 50 Hz</b>	
1	1-Phase, 230 Volt	4.00
2	3-Phase, 400 Volt	4.00
3	KJP and BPL connection	2.65
?	<b>HT - AC 50 Hz</b>	
4	3-Phase, 11kV	3.40
5	3-Phase, 33kV	3.25

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

**Applicability:** 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.

**Tariff:**

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
	<b>LT - AC 50 Hz</b>	
1	1-Phase, 230 Volt	5.00
2	3-Phase, 400 Volt	5.00
	<b>HT - AC 50 Hz</b>	
3	3-Phase, 11kV	4.20
4	3-Phase, 33kV	4.00

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

**Applicability:** 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 and 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.

**Tariff:**

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
	<b>LT - AC 50 Hz</b>	
1	1-Phase, 230 Volt	5.10
2	3-Phase, 400 Volt	5.10
	<b>HT - AC 50 Hz</b>	
3	3-Phase, 11kV	4.20
4	3-Phase, 33kV	4.00

**Category - 4 Agricultural Consumers**

**Applicability:** The consumers in agricultural fields /firms for the purpose of (a) Pumps field lighting and other applications for farmers in their irrigation and cultivation and 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.

**Tariff:**

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
	<b>LT - AC 50 Hz</b>	

1	1-Phase, 230 Volt	3.10
2	3-Phase, 400 Volt	3.10
	<b>HT - AC 50 Hz</b>	
3	3-Phase, 11kV	2.75
4	3-Phase, 33kV	2.65

### Category - 5 Industrial Consumers

**Applicability:** 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.

#### Tariff:

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
	<b>LT - AC 50 Hz</b>	
1	1-Phase, 230 Volt	4.30
2	3-Phase, 400 Volt	4.30
	<b>HT - AC 50 Hz</b>	
3	3-Phase, 11kV	3.85
4	3-Phase, 33kV	3.50
5	3-Phase, 132kV	3.35

**Note:** All Non-Industrial and 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

**Applicability:** 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 and 5 or classifications as may be amended by the Commission from time to time.

**Tariff:**

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
1	3-Phase, 11kV	3.75
2	3-Phase, 33kV	3.40
3	3-Phase, 132 kV and above	3.25

**Category - 7 Temporary Consumers**

**Definition:** 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:

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 and safety requirement as specified by authorities.

**Tariff:**

Sl. No.	System of Supply and Metering Point	Tariff (Rs. /kWh)
1	1-Phase, 230 Volt	6.50
2	3-Phase, 400 Volt	6.50

## 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.

- a. Prepaid Consumers: - As an incentive monthly rent for energy meter for prepaid consumer shall be NIL.
- b. 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.No	Energy meter specification	Rent (Rs / month)
1	LT metering – AC	
	Single Phase 220V	20.00
	Three Phase 400 V between phases ( without CT)	50.00
	Three Phase 400 V between phases ( with CT)	100.00
2	HT Metering- AC Complete Energy meter with CT/PT and other monitoring and indication requirement for AC Three phase HT supply	
	11 kV system	500.00
	33 kV system	750.00
	132 kV system	1000.00

**2. Shifting charges of Meter -**

- a. If resulted from reconstruction / modification of building and on the request of the consumer – Per shifting Rs 200.00
- b. If the shifting is in the interest of the department – Free of cost

**3. Replacement of the energy meter and its associated fittings and equipment** shall be as per provisions of A.P. Electricity Supply Code

- a. The supplier shall replace the meters and the allied fitting and the equipment free of cost in case of scheduled replacement under normal wear and tear of ageing or technology change.

- b. The Consumer shall bear all the necessary cost in case of temporary shifting of the meters and its associated fittings and the equipment.
- c. 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.

**4. Charges for testing of Meters at the request of consumers**

Sl.No	Energy meter specification	Charges (Rs in each time)
1	For AC Single Phase LT Energy Meter	50.00
2	For energy meter without CT for AC three phase LT Supply	100.00
3	For energy meter with CT for AC three phase LT supply	200.00
4	For energy meter AC three phase HT supply	1000.00
5	LT-CT (per CT)	100.00
6	CT / PT unit	1500.00
7	HT -CT alone (per set)	750.00
8	132/220 kV metering equipment	1000.00

**5. Testing of Consumer's Installation:**

Testing and Inspection charges of consumer's installation: -

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

Sl.No	Testing at Consumer Installation	Charges per Installation in Rs.
1	1 phase service Wiring installations	100.00
2	3 phase service Wiring installations	200.00
3	HT Line installation of 11 kV system	1000.00
4	HT Line installation of 33 kV and above system	1000.00

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

All consumers except under special provisions made under Government 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 the Arunachal Pradesh Electricity Supply Code.

Sl.No	Energy meter specification	Security deposit amount (Rs)
1	For AC single phase LT supply of connected load	1336.00
2	For AC three phase LT supply of connected (without CT) load	2681.00
3	For AC three phase LT supply CT operated	4691.00
4	For AC three phase HT supply, CT and 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.*

- 7. Charges for new service connection including registration and processing fee, change of name of ownership 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.

For Temporary connection (registration and processing fee): In addition to normal processing fee, additional fee needs to be paid, which is Rs 1000.00 for LT and Rs 5000.00 for HT.

Service Fee:

Special meter reading on Consumer's Request – Rs 50

Calibration of Check meter upon request – Rs 100

- 8. Reduction or enhancement of load/ conversion of service/ reclassification of consumer:**

Sl. No	Consumer type	Charges (Rs)
1	LT 1-Ph	Rs. 75
2	LT 3- Ph	Rs. 200
3	LT industrial	Rs. 300
4	HT connection	Rs. 750

- 9. 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.No	Category of Work	Charges per Consumer (Rs)
1	Disconnection only	
	Single phase	150.00
	Three Phase	250.00
	HT consumers (11 kV and above)	750.00
2	Reconnection	
	Single phase	150.00
	Three Phase	250.00
	HT consumers (11 kV and above)	750.00

#### 10. Security Deposit: (interest bearing refundable / adjustable)

To safeguard the distribution 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. However, KJP and BPL household connection shall not pay Security deposit as per present policy of the Government. The interest rate shall be as defined in the Arunachal Pradesh Electricity Supply Code.

For existing consumer: Review of the consumption pattern of the consumer from April to March of the previous year as per Clause 3.21.6.

For new consumer: The amount of security deposit shall be calculated as per the procedure prescribed in clause 3.21.4 and determine as per Annexure 10.10 of the Supply Code. A sample calculation showing security deposit payable per kW of connected load for new connections is given below:

Formula for calculating security Deposit for new connection (other than industrial consumer) = Load x Load Factor of the category in which consumer falls as per Electricity Supply Code x (One Billing cycle + 30 days) x 24 hours x Current Tariff).

Formula for calculating security deposit for new connection (industrial consumer) = Load x Load Factor of the category in which consumer falls as per Electricity Supply Code x (One Billing cycle) x 24 hours x Current Tariff).

#### Illustration

Category – LT AC 50 Hz (Non Commercial)

Contracted load – 5 kW

Load Factor – 30%

Billing Cycle – 30 days

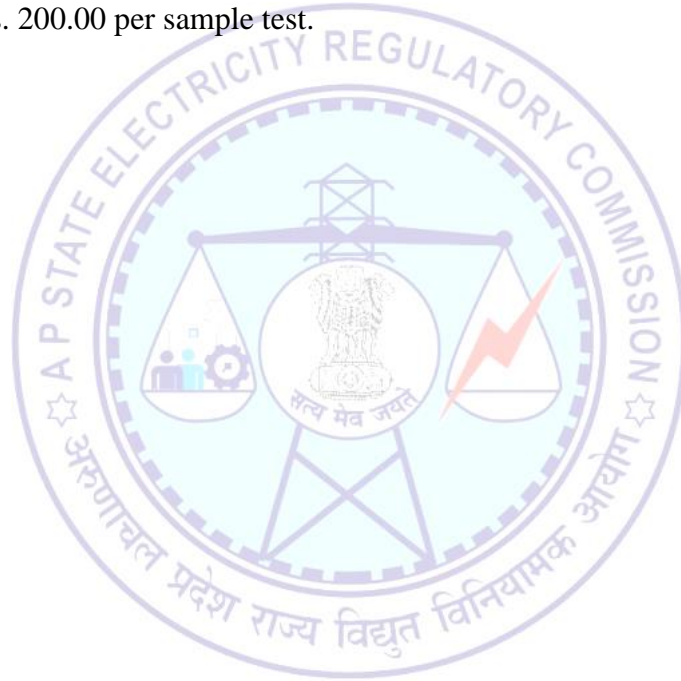
Applicable Tariff – Rs 4.00/kWh

Security Deposit =  $5 \times 0.30 \times (30+30) \times 24 \times 4$   
= Rs 8640

*Consumer category wise Load factor is provided under Annexure 10.10 of the Supply Code.*

### **11. Charges for Testing of Transformer Oil:**

The charge for testing of oil of private owned transformers for each sample of oil shall be charged Rs. 200.00 per sample test.



## Schedule – III: General Conditions of Supply

1. **Payment:** The bill shall be paid in full inclusive of all arrears 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. **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 (late payment surcharge) on outstanding amount for each 30 days successive period or part thereof until the amount is paid in full.
3. **Rebate:** (i) 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. (ii) For Pre-Paid Consumers: Rebate of 5% on recharge amount shall be made available for pre-paid consumers.
4. **Application for Connection:** The Consumer shall apply for service connection as per the provisions of applicable A.P. Electricity Supply Code. Regulation 3.6 provides the details about requisition for new electricity service connection.
5. **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 as mentioned under tariff categories
  - a. AE (E) up to 5 KW of connected load - 1,2,3,4,5 and 7
  - b. EE up to 50 KW of connected load - 1,2,3,4,5 and 7
  - c. SE up to 500 KW of connected load - 1,2,3,4,5,6 and 7
  - d. CE Full power of connected load above 500KW - 1,2,3,4,5,6 and 7Security deposit and cost of service connection shall have to be deposited in advance on receipt of technically sanctioned estimate.
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 be on monthly basis.
10. **Minimum charge:** A consumer shall not have to pay the minimum charge.
11. **Ownership of 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. In case of existing HT consumers having loads up to 50 kW/ 55 kVA and the metering at LT, HT reading for billing purposes shall be computed by adding 2% to the Maximum Demand reading (if applicable) and 3% to the reading kWh recorded on the LT meters towards transformation loss.
12. **Maintenance and Replacement of Energy meter:** It shall be governed by the provisions of applicable A.P. Electricity Supply Code.
13. **Default:** A Consumer shall be automatically called a defaulter if he fails to clear all the outstanding and 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 before the commencement of this tariff structure shall deem to be effected under this tariff schedule and related terms and conditions shall have precedence over the existing agreements.





# Annexure I

GOVERNMENT OF ARUNACHAL PRADESH  
DEPARTMENT OF POWER

No. CE(Com)/Tariff/31/2023-24/2818

Dated Itanagar, the 27<sup>th</sup> February 2024

**PUBLIC NOTICE**

1. The Department of Power, Arunachal Pradesh, the deemed Distribution Licensee for the sale of power within the State of Arunachal Pradesh, under the provisions of the Electricity Act 2003, has filed a petition for Multi-Year Aggregate Revenue Requirement for the FY 2024-25 to 2026-27 and Retail Tariff Proposal for the FY 2024-25 for approval before the Hon'ble Arunachal Pradesh State Electricity Regulatory Commission (APSERC), under the Sections 61,62 and 64 of the Electricity Act, 2003. The Summary of the ARR filed before the Commission for FY 2024-19 is as follows:

**Aggregate Revenue Requirement, Income and Revenue Gap in Existing Tariff**

S.L No.	Particulars	Current Year	MYT Control Period		
		(Estimated) FY 2023-24	(Projected) FY 2024-25	(Projected) FY 2025-26	(Projected) FY 2026-27
	ARR	Rs. In Cr.	Rs. In Cr.	Rs. In Cr.	Rs. In Cr.
1	Return on Equity Capital	-	-	-	-
2	Interest on Loan Capital	-	-	-	-
3	Depreciation	-	-	-	-
4	Power Purchase Expenses	498.48	522.34	547.39	573.69
5	Interstate Transmission Charges	117.95	123.67	129.7	136.04
6	Intrastate Transmission Charges	12.02	12.62	13.25	13.92
7	Fees and charges of NERLDC/NERPC	1.18	1.23	1.29	1.36
8	O&M expenses	428.54	453.05	478.97	506.36
9	Interest on working Capital	-	-	-	-
10	Provision for bad and doubtful debt	-	-	-	-
11	<b>Total Revenue Requirement</b>	<b>1058.17</b>	<b>1112.92</b>	<b>1170.6</b>	<b>1231.38</b>
12	Revenue from EXISTING Tariff	291.07	321.04	354.59	392.2
13	Revenue from Sale of Surplus Power	226.99	238.34	250.25	262.77
14	<b>Total Annual Income (12+13)</b>	<b>518.06</b>	<b>559.38</b>	<b>604.84</b>	<b>654.97</b>
15	Revenue gap (11-14)	540.11	553.54	565.76	576.41
16	Total Energy Sale (MU)	1113.89	1202.24	1299.66	1407.3
17	Gross Energy Input	1521.81	1520.74	1519.93	1519.38
18	Average Cost of Supply (ACS) (11/17 - Rs/Kwh)	6.95	7.32	7.7	8.1

**ACS AND ARR GAP**

S.L No.	Particulars	Current Year	MYT Control Period		
		(Estimated) FY 2023-24	(Projected) FY 2024-25	(Projected) FY 2025-26	(Projected) FY 2026-27
	ACS-ARR Gap	Rs. In Cr.	Rs. In Cr.	Rs. In Cr.	Rs. In Cr.
1	Total Revenue Requirement	1058.17	1112.92	1170.60	1231.38
2	Gross Energy Input	1521.81	1520.74	1519.93	1519.38
3	Total Annual Income	518.06	559.38	604.85	654.97
4	Avg. Cost of Supply (Rs/Kwh) (1/2)	6.95	7.32	7.70	8.10
5	Average Realisable Revenue (Rs/Kwh) (3/2)	3.40	3.68	3.98	4.31
6	ACS-ARR	3.55	3.64	3.72	3.79

**Existing Tariff and Proposed tariff for the FY 2024-25**

Sl. No.	Category of Consumers	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)
<b>Non-Commercial (Domestic)</b>			
<b>LT - AC 50 Hz</b>			
1	1-Phase, 230 Volt	4.00	4.00
2	3-Phase, 400 Volt	4.00	4.00
3	KJP & BPL connection	2.65	2.65
<b>HT - AC 50 Hz</b>			
4	3-Phase, 11KV	3.40	3.40
5	3-Phase, 33KV	3.25	3.25

**APSERC order on ARR and Tariff Petition of APDOP for FY 2024-25 to FY 2026-27**

Sl. No.	Category of Consumers	Existing Tariff (Rs/KWH)	Proposed Tariff (Rs/KWH)
<b>Commercial (Non-Industrial)</b>			
LT - AC 50 Hz			
6	1-Phase, 230 Volt	5.00	5.00
7	3-Phase, 400 Volt	5.00	5.00
HT - AC 50 Hz			
8	3-Phase, 11KV	4.20	4.20
9	3-Phase, 33KV	4.00	4.00
<b>Public Lighting and Water Supply</b>			
LT - AC 50 Hz			
10	1-Phase, 230 Volt	5.10	5.10
11	3-Phase, 400 Volt	5.10	5.10
HT - AC 50 Hz			
12	3-Phase, 11KV	4.20	4.20
13	3-Phase, 33KV	4.00	4.00
<b>Agricultural</b>			
LT - AC 50 Hz			
14	1-Phase, 230 Volt	3.10	3.10
15	3-Phase, 400 Volt	3.10	3.10
HT - AC 50 Hz			
16	3-Phase, 11KV	2.75	2.75
17	3-Phase, 33KV	2.65	2.65
<b>Industrial</b>			
LT - AC 50 Hz			
18	1-Phase, 230 Volt	4.30	4.30
19	3-Phase, 400 Volt	4.30	4.30
HT - AC 50 Hz			
20	3-Phase, 11KV	3.85	3.85
21	3-Phase, 33KV	3.50	3.50
22	3-Phase, 132KV	3.35	3.35
<b>Bulk Mixed</b>			
HT - AC 50 Hz			
24	3-Phase, 11KV	3.75	3.75
25	3-Phase, 33KV	3.40	3.40
26	3-Phase, 132 KV and above	3.25	3.25
27	Temporary Consumer	6.50	6.50

- The filing of the Retail Tariff Proposal has been taken on record by the Hon'ble Commission for the Financial Year 2024-25 vide letter No. APSERC/RA-9/II/2023-24/561-62, date 23-02-2023.
- The existing tariffs and tariffs proposed through the Retail Tariff Proposal are tabulated above and The Department of Power has proposed no modification/alteration in the existing tariff.
- The copy of the petition referred at Para 1 above can be obtained from the Office of the Chief Engineer (Comml) cum CEI, Vidyut Bhawan, Zero Point Tinali, Dept. of Power, Itanagar-791 111 by any interested persons, consumer, or consumer's association on any working day. The petition is also available on the website of the Department of Power, Arunachal Pradesh viz. [www.power.arunachal.gov.in](http://www.power.arunachal.gov.in) for download.
- Objections/suggestions, 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, 2nd Floor, O.T Building, Niti Vihar Market, TT Marg, Itanagar-7891 111 in person or through registered post or by email at [secy-apserc-arn@gov.in](mailto:secy-apserc-arn@gov.in) to reach the Secretary, APSERC on or before 22nd March 2024 and endorse a copy of the same to the Chief Engineer, Commercial cum CEI, Vidyut Bhawan, Zero Point Tinali, Dept. of Power, Itanagar-791111.
- The Objection/suggestions as above should carry the full name and postal address including contact mobile/telephone numbers of the person sending the objections. If the objection is filed on behalf of any organization or any class of consumers, the 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.
- 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.

Sd/-  
Chief Engineer  
Commercial cum CEI

DIPR/ARN/10436-37/2023

## Annexure-II



**ARUNACHAL PRADESH STATE ELECTRICITY REGULATORY COMMISSION**  
**O.T. BUILDING, 2<sup>ND</sup> FLOOR, NITI VIHAR MARKET, T.T. MARG**  
**NITI VIHAR, ITANAGAR - 791111**  
Tel : 0360-2310642, Fax : 0360-2310643, E-mail : [apserc-arn@gov.in](mailto:apserc-arn@gov.in)  
website : [www.apserc.nic.in](http://www.apserc.nic.in)

No. APSERC/RA-14/I/2024-25/153

Date: 12<sup>th</sup> June 2024

### **PUBLIC NOTICE**

**Subject: Public Hearing on Tariff Petition for FY 2024-25**

It is for the information that, the Arunachal Pradesh State Electricity Regulatory Commission has fixed the hearing on "Petition for approval of Multi Year Aggregate Revenue Requirement for the Entire Control Period from 2024-25 to 2026-27 and Retail Tariff proposal for FY 2024-25" filed by the Department of Power, Government of Arunachal Pradesh. This petition outlines the proposed electricity tariffs and related charges for various consumer categories within the state for the FY 2024-25.

In this regard, interested person/stakeholders/consumers may also attend the hearing by registering their names on or before 17.06.2024 in the office of the Commission.

Copies of the tariff petition are available for public inspection at the Department of Power's office during working hours and can also be accessed on the official website of the Department of Power ([www.power.arunachal.gov.in](http://www.power.arunachal.gov.in)) and also from the Commission website ([www.apserc.nic.in](http://www.apserc.nic.in))

#### **Details of the Hearing:**

- **Date:** 18/06/2024
- **Time:** 11:00 AM
- **Venue:** Court Room, APSERC,  
Arunachal Pradesh State Electricity Regulatory Commission,  
O.T. Building, 2<sup>nd</sup> Floor, Niti Vihar Market, T.T. Marg  
Niti Vihar, Itanagar – 791111,  
Arunachal Pradesh

**By the Order of the Commission**

Sd/-

Secretary(i/c), APSERC

