

**PETITION FOR APPROVAL
OF
ANNUAL PERFORMANCE REVIEW
FOR
FY 2024-25
UNDER SECTION 62 & 64
OF
THE ELECTRICITY ACT 2003**

**Submitted by:
Department of Power, Arunachal Pradesh**



TABLE OF CONTENTS

Contents

| | |
|---|----|
| CHAPTER-I: INTRODUCTION | 4 |
| 1.1 About Arunachal Pradesh Department of Power | 4 |
| 1.2 Number of Consumers | 4 |
| 1.3 Source of Power | 7 |
| 1.3.1 Central Sector Generating Stations Allocation: - | 7 |
| 1.3.2 Power from within the State: - | 8 |
| 1.3.3 Power received from the other Sources: | 10 |
| 1.4 Necessity for Filing of Annual Performance Review: - | 11 |
| 1.5.2 Estimation of Annual Revenue Income: - | 13 |
| 1.5.3 Determination of Revenue Gap: - | 13 |
| CHAPTER-II :: ESTIMATION OF AGGREGATE REVENUE REQUIREMENT | 14 |
| 2.1 Return on Equity Capital | 14 |
| 2.2 Interest on Loan Capital | 14 |
| 2.3 Depreciation | 14 |
| 2.4 Category-wise energy Sale Forecast within the State: - | 14 |
| 2.5 Forecast of Sale of Power Outside the State: - | 17 |
| 2.6 Total Energy Sale Forecast: - | 18 |
| 2.7 Power Purchase Estimation: - | 18 |
| 2.8 Power Purchase Cost Estimation: - | 20 |
| 2.9 Inter-State and Intra-State Transmission Charges: - | 22 |
| 2.10 Fees and charges of NLDC/RLDC/SLDC etc.: - | 23 |
| 2.11 Operation and Maintenance Cost: - | 24 |
| 2.12 Interest in Working Capital | 27 |
| 2.13 Bad and doubtful debt | 27 |
| 2.14 Aggregate Revenue Requirement | 27 |
| CHAPTER – III:: EXPECTED REVENUE AND REVENUE GAP RECOVERY | 29 |
| 3.1 Expected revenue in the existing tariff from the sale within the state: - | 29 |
| 3.2 Expected revenues from sales outside the state: - | 32 |
| 3.3 Expected revenue from sales both within and outside the state: - | 32 |
| 3.4 Aggregate Revenue Requirement and Revenue Gap: - | 33 |



| | |
|---|----|
| 3.5 ARR & ACS Gap for FY 2024-25: - | 34 |
| 3.6 Revenue gap and its recovery: - | 34 |
| CHAPTER –IV: AGGREGATE TECHNICAL & COMMERCIAL LOSS | 36 |
| 4.1 Net Input Energy Calculation Projection: - | 36 |
| 4.2 AT&C loss and its projection: - | 36 |
| CHAPTER- V: TARIFF FOR DISTRIBUTION WHEELING BUSINESS | 39 |
| CHAPTER – VI: PRAYER | 42 |


Chief Engineer (Power)
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List of Abbreviations used

| | |
|---------|---|
| AGBPP | Assam Gas Based Power Plant |
| AGTCCPP | Agartala Gas Thermal Combine Cycle Power Plant |
| DoP,AP | 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 |
| IPP | Independent Power Producer |
| 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 | State Load Dispatch Centre |
| SPSU | State Public Sector Undertaking |
| T&D | Transmission and Distribution |
| TGNA | Temporary General Network Access |
| GNA | General Network Access |

CHAPTER-I: INTRODUCTION

1.1 About Arunachal Pradesh Department of Power

The Arunachal Pradesh Department of Power (DoP,AP) was created in 1992 by separating from the Arunachal Pradesh Public Works Department (APPWD). At that time, the entire power management including generations, transmissions, and distributions was the responsibility of the DoP,AP. In the year 2004, a Department of Hydro Power Development (DHPD) was created by bifurcating from the DoP,AP and thereby separating the generation from the purview of the DoP,AP. The DoP,AP, a Government Department, functioning under the Ministry of Power, Government of Arunachal Pradesh is the Deemed Distribution Licensee of Arunachal Pradesh as per provision of Section 14 of the Electricity Act, 2003. The DoP,AP has 300264 consumers and annual energy consumption was about 673.41 MUs in the FY 2023-24.

1.2 Number of Consumers

The DoP,AP has at present 300264 consumers in different categories. Table 1.2A shows the number of consumers in the last 5 years and using the Compound Annual Growth Rate (CAGR) of the preceding 5 years, DoP,AP has determined the number of consumers for the FY 2024-25.

Table 1.2A: Number of consumers for FY 2024-25

| SL No. | Consumer Category | | | | | | CAGR (5 Years) * | Estimated |
|--------|--|------------|------------|------------|------------|------------|------------------|----------------------|
| | | Actual | | | | | | Current Year 2024-25 |
| | | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | | VI |
| | | I | II | III | IV | V | | |
| A | HT & EHT Category | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 88 | 96 | 109 | 121 | 128 | 9.82% | 141 |
| | AC 50Hz,3-Phase, 33KV | 4 | 4 | 4 | 4 | 4 | 0.00% | 4 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 209 | 244 | 276 | 372 | 460 | 21.80% | 560 |
| | AC 50Hz,3-Phase, 33KV | 6 | 6 | 11 | 13 | 14 | 23.59% | 17 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 19 | 20 | 21 | 9 | 12 | 0.00% | 12 |
| | AC 50Hz,3-Phase, 33KV | 0 | 0 | 0 | 0 | 0 | 0.00% | 0 |
| 4 | Agricultural Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 0 | 0 | 5 | 5 | 5 | 0.00% | 5 |
| | AC 50Hz,3-Phase, 33KV | 1 | 0 | 0 | 0 | 0 | 0.00% | 0 |
| 5 | Industrial Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 59 | 62 | 65 | 76 | 85 | 9.56% | 93 |
| | AC 50Hz,3-Phase, 33KV | 27 | 27 | 26 | 31 | 33 | 5.14% | 35 |
| | AC 50Hz,3-Phase, 132 KV | 3 | 3 | 3 | 3 | 3 | 0.00% | 3 |
| 6 | Bulk Mixed Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 156 | 159 | 138 | 173 | 210 | 7.71% | 226 |
| | AC 50Hz,3-Phase, 33KV | 15 | 13 | 32 | 15 | 14 | 0.00% | 14 |



| SL No. | Consumer Category | Actual | | | | | CAGR (5 Years) * | Estimated |
|--------|---|---------------|---------------|---------------|---------------|---------------|------------------|----------------------|
| | | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | | Current Year 2024-25 |
| | | I | II | III | IV | V | | VI |
| | | | | | | | | |
| | AC 50Hz,3-Phase, 132 KV | 1 | 1 | 1 | 1 | 1 | 0.00% | 1 |
| B | Low Voltage Category | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 178813 | 188148 | 195620 | 197129 | 198192 | 2.61% | 203356 |
| | AC 50Hz,3-Phase, 400 Volt | 2706 | 2844 | 3197 | 3538 | 3582 | 7.26% | 3842 |
| | KJP & BPL connection | 64273 | 66058 | 64369 | 63085 | 61791 | 0.00% | 61791 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 25098 | 26034 | 27594 | 29675 | 30960 | 5.39% | 32628 |
| | AC 50Hz,3-Phase, 400 Volt | 1914 | 2073 | 2344 | 2486 | 3016 | 12.04% | 3379 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 1202 | 1118 | 1198 | 948 | 864 | 0.00% | 864 |
| | AC 50Hz,3-Phase, 400 Volt | 190 | 185 | 235 | 239 | 271 | 9.28% | 296 |
| 4 | Agricultural Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 4 | 4 | 6 | 8 | 10 | 25.74% | 13 |
| | AC 50Hz,3-Phase, 400 Volt | 16 | 13 | 13 | 7 | 8 | 0.00% | 8 |
| 5 | Industrial Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 44 | 48 | 80 | 75 | 65 | 10.25% | 72 |
| | AC 50Hz,3-Phase, 400 Volt | 163 | 173 | 162 | 169 | 178 | 2.23% | 182 |
| 6 | Temporary Consumer | | | | | | | |
| | LT/HT | 90 | 194 | 240 | 265 | 358 | 41.22% | 506 |
| | Total | 275101 | 287527 | 295749 | 298447 | 300264 | | 308048 |

The summary of the approved number of consumers in Tariff Order dated 26.07.2024 and estimated Number of consumers for FY 2024-25 is given below:



Table 1.2B: Number of consumers for FY 2024-25

| SL No | Consumer Category | Approved in Tariff Order 26.07.2024 | Estimated | Deviation |
|----------|---|--|------------|------------|
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | | I | II | I-II |
| | | | | |
| A | HT & EHT Category | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | |
| | AC 50Hz,3-Phase, 11KV | 141 | 141 | 0 |
| | AC 50Hz,3-Phase, 33KV | 4 | 4 | 0 |
| 2 | Commercial Consumers (Non-Industrial) | | | |
| | AC 50Hz,3-Phase, 11KV | 557 | 560 | -3 |
| | AC 50Hz,3-Phase, 33KV | 19 | 17 | 2 |
| 3 | Public Lighting and Water Supply Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 9 | 12 | -3 |
| | AC 50Hz,3-Phase, 33KV | 0 | 0 | 0 |
| 4 | Agricultural Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 5 | 5 | 0 |
| | AC 50Hz,3-Phase, 33KV | 0 | 0 | 0 |
| 5 | Industrial Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 93 | 93 | 0 |
| | AC 50Hz,3-Phase, 33KV | 35 | 35 | 0 |
| | AC 50Hz,3-Phase, 132 KV | 3 | 3 | 0 |
| 6 | Bulk Mixed Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 188 | 226 | -38 |
| | AC 50Hz,3-Phase, 33KV | 15 | 14 | 1 |
| | AC 50Hz,3-Phase, 132 KV | 1 | 1 | 0 |
| B | Low Voltage Category | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | |
| | AC 50Hz,1-Phase, 230 Volt | 217949 | 203356 | 14593 |
| | AC 50Hz,3-Phase, 400 Volt | 4200 | 3842 | 358 |
| | KJP & BPL connection | 65652 | 61791 | 3861 |
| 2 | Commercial Consumers (Non-Industrial) | | | |
| | AC 50Hz,1-Phase, 230 Volt | 33198 | 32628 | 570 |
| | AC 50Hz,3-Phase, 400 Volt | 2806 | 3379 | -573 |
| 3 | Public Lighting and Water Supply Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 948 | 864 | 84 |
| | AC 50Hz,3-Phase, 400 Volt | 289 | 296 | -7 |
| 4 | Agricultural Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 8 | 13 | -5 |
| | AC 50Hz,3-Phase, 400 Volt | 7 | 8 | -1 |
| 5 | Industrial Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 75 | 72 | 3 |
| | AC 50Hz,3-Phase, 400 Volt | 169 | 182 | -13 |
| 6 | Temporary Consumer | | | |



Table 1 2B: Number of consumers for FY 2024-25

| SL No | Consumer Category | Approved in Tariff Order 26.07.2024 | Estimated | Deviation |
|-------|-------------------|--|------------|------------|
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | | I | II | I-II |
| | LT/HT | 362 | 506 | -144 |
| | Total | 326733 | 308048 | 18685 |

1.3 Source of Power

The Generation aspects in the entire state do not come under the purview of DoP, AP. The generation in the state is looked after by the:

1. Department of Hydro Power Development (DHPD)
2. Hydro Power Development Corporation of Arunachal Pradesh Limited (HPDCAPL)
3. Arunachal Pradesh Energy Development Agency (APEDA)
4. Independent Power Producers (IPP) (Devi Energies)
5. Independent Power Producers (IPP) (Kangteng Hydro Power Pvt Ltd) COD 08-05-2024

DoP, AP is solely responsible for transmitting and distributing power to the consumers in the state by procuring and receiving power from various sources, as per requirement, as elaborated in the following section.

1.3.1 Central Sector Generating Stations Allocation: -

Power allocation from Central Sector Generators with whom the DoP, AP already has long term PPA, meets the majority of the power requirement. The power purchased from each generating stations in FY 2023-24 are given in table 1.3.1.

| 1.3.1: Power Purchased/ Received from Central Sector Generators | | | |
|---|-----------------|--------|------------------------|
| Sl. No. | Name of Project | Owner | Power Received (MU) |
| | | | FY 2023-24 (Actual) |
| 1 | LOKTAK | NHPC | 12.34 |
| 2 | KOPILI-I | NEEPCO | 11.91 |
| 3 | KOPILI-II | NEEPCO | 8.35 |
| 4 | KHANDONG | NEEPCO | 0 |
| 5 | Panyor Lower | NEEPCO | 72.84 |



| 1.3.1: Power Purchased/ Received from Central Sector Generators | | | |
|---|--------------------------|--------|---------------------|
| Sl. No. | Name of Project | Owner | Power Received (MU) |
| | | | FY 2023-24 (Actual) |
| | Free Energy Panyor Lower | | 140.07 |
| 6 | DOYANG | NEEPCO | 9.48 |
| 7 | PARE | NEEPCO | 25.16 |
| | Free Energy Pare | | 57.29 |
| 8 | KAMENG | NEEPCO | 44.7 |
| | Free Energy Kameng | | 313.16 |
| 9 | AGBPP | NEEPCO | 98.46 |
| 10 | AGTCCPP | NEEPCO | 43.79 |
| 11 | PALATANA | OTPCL | 122.16 |
| 12 | BgTPP | NTPC | 206.55 |
| 13 | FARAKKA | NTPC | 19.7 |
| 14 | KAHALGAON | NTPC | 9.9 |
| 15 | TALCHAR | NTPC | 12.66 |
| Total | | | 1208.5 |
| Total Unit Purchased (MU) | | | 698 |
| Total Free Unit Received (MU) | | | 510.51 |

1.3.2 Power from within the State: -

Apart from the Central Sector Share, there are power generators within the state of Arunachal Pradesh from where DoP,AP is receiving/purchasing the entire power generated by them which are mentioned below;

(i) DHPD: -

Department of Hydro Power Development (DHPD) presently has an installed capacity of 81.54 MW consisting of different capacities located in different locations of Arunachal Pradesh. DoP,AP received about 56.74 MU during FY 2023-24 from DHPD. As DHPD is under the same state Govt. (AP) and hence, DoP,AP 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) Hydro Power Development Corporation of Arunachal Pradesh Limited (HPDCAPL): -

Hydro Power Development Corporation of Arunachal Pradesh 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 generation of this project is entirely utilised by Tawang Electrical Division for Tawang District. The DoP,AP received about 6.37 MU during FY 2023-24 from this project.

(iii) **Dikshi Small Hydro Electric Project: -**

Dikshi SHP is a small hydropower project with an installed capacity of 24 MW at Rupa of West Kameng District, developed by M/s Devi Energy Ltd, an Independent Power Producer (IPP). This project was commissioned in the year 2019 and declared Date of Commercial Operation (COD) on 19 September 2019. The DoP,AP entered into a Power Purchase Agreement (PPA) with M/s Devi Energy Ltd for purchasing the entire power generated from this project over and above the 10% Free Power Share to the State. DoP,AP purchased about 65.26 MU during FY 2023-24 from this project.

(iv) **Khantang Small Hydro Electric Project: -**

Khantang SHP is a small hydropower project with an installed capacity of 7.5 MW located at Khantang Nallah, Seru village, Tawang District, developed by M/s Kangteng Hydro Power Pvt Ltd, an Independent Power Producer (IPP). This project was commissioned in the year 2024 and declared Date of Commercial Operation (COD) on 08 May 2024. The DoP,AP entered into a Power Purchase Agreement (PPA) with M/s Kangteng Hydro Power Pvt Ltd for purchasing the entire power generated from this project over and above the 12.6% (8% free power plus the offer of 4.6% additional free power) Free Power Share to the State from the power generated after the moratorium period of 2 (two) years from the date of COD.

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

The Arunachal Pradesh Energy Development Agency is under the Ministry of Power, Govt. 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, DOP,AP has received about 0.55 MU of energy free of cost during the FY 2023-24. Since it is also under the same umbrella of the State Government and therefore, it may also be treated as free power. The energy so received is utilized to partially meet the annual Solar Renewable Power Purchase Obligation (RPO) of the state.

(vi) **Diesel Generation: -**

DG sets are purely a temporary arrangement to meet any emergency requirement in case of non-availability of power from any other sources and it is mostly kept on standby. The energy generated through DG set in the FY 2023-24 is 0.32 MU.

The power received/purchased from the above-mentioned sources for the FY from 2023-24 is tabulated below in Table 1.3.2.

| Table 1.3.2: Power Purchased/Received from within the State Generators | | | |
|--|--------------------|---------|-------------|
| Sl No. | Name of projects | Owner | Energy (MU) |
| | | | FY 2023-24 |
| | | | (Actual) |
| 1 | DHPD | GoAP | 56.74 |
| 2 | Sumbachu | HPDCL | 6.37 |
| 3 | DIKSHI | IPP | 65.26 |
| | Free Energy Dikshi | | 7.25 |
| 4 | SOLAR | APEDA | 0.55 |
| 5 | Diesel Generation | DoP, AP | 0.32 |
| Total | | | 136.48 |

1.3.3 Power received from the other Sources:.

The following are the other sources from where DoP,AP draws power: -

- (i) **Deviation:** - DoP,AP never purchases power deliberately through deviation. But the deviation of power does occur due to various reasons. DoP, AP schedules its power drawal based on immediate past trend consumption and on the declared capacity of the generators; however, unexpected changes often lead to deviations. Run-of-river hydro projects like Panyor Lower, Pare, and Kameng revise their declared capacity at times, causing DoP, AP to deviate from the original schedule very often, leading to drawl of power in excess of the scheduled power. Apart from this, sometimes industrial unit sudden breakdowns or sudden starts lead to deviation, and sometimes transmission line breakdowns also cause deviation. DoP, AP tries its best to avoid deviations, but they happen.
- (ii) **IEX Purchase:** -In case of any shortage of power, the DoP,AP resorts to purchasing power from Real-Time Market (RTM) or Day Ahead Market (DAM) from IEX to avoid or minimize Deviation. DoP,AP purchased 23.19 MU in FY 2023-24 to meet the power shortage at that time.

- (iii) **Banking:** - DoP,AP 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 DOP,AP 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 109.10 MU in FY 2023-24
- (iv) **Energy Import under TGNA** - TGNA regime started from 1st October 2023. The initial General Network Access (GNA) granted to DoP,AP was 134MW only, due to this restriction, DoP, AP has procured 1.21MU power through Temporary General Network Access in accordance with the provisions of Central Electricity Regulatory Commission (Connectivity and General Network Access to the inter-State Transmission System) Regulations, 2022. The revised GNA to DoP,AP is 225MW w.e.f 1st April 2024.

Table 1.3.3: Power received from the other Sources in FY 2023-24

| Sl. No. | Source of Power | Unit | FY 2023-24 |
|---------|------------------|-----------|---------------|
| | | | (Actual) |
| 1 | Deviation | MU | 98.18 |
| 2 | IEX Purchase | MU | 23.19 |
| 3 | Banking (Import) | MU | 109.1 |
| 4 | TGNA | MU | 1.21 |
| | Total | MU | 231.69 |

1.3.4 Total Power received: -

Table 1.3.4: Total Power Received in FY 2023-24

| Sl. No. | Source of Power | Unit | FY 2023-24 |
|---------|----------------------------|-----------|----------------|
| | | | (Actual) |
| 1 | Central Sector Allocation | MU | 1208.5 |
| 2 | State Generation (IPP+Own) | MU | 136.48 |
| 3 | From Other Sources | MU | 231.69 |
| 4 | Total | MU | 1576.67 |

1.4 Necessity for Filing of Annual Performance Review: -

The Electricity Act 2003 under sections 62 and 64 provides for the determination of tariff by the appropriate commission on application by a licensee. The Arunachal Pradesh State Electricity Regulatory Commission (APSERC) notified Multi-Year Tariff Regulations- 2018 which provides for the filing of Annual Performance Review. The Regulation, 2.6(1) of Multi-Year Tariff Regulations- 2018 is produced below.

"The Generating Company, Transmission Licensee or Distribution Licensee as the case may be shall be subject to an annual review of performance and True Up during the Control Period



in accordance with this Regulation. The Licensee shall file an application for annual performance review of current year, Truing up of the previous year and determination of tariff for the ensuing year in not less than 120 days before the close of each year of the control period..... ”

In compliance to the directive contains in this regulation, DoP,AP is hereby filling this petition for Annual Performance Review for the FY 2024-25.

1.5 Procedure Adopted in preparation for this Annual Performance Review: -

While preparing the APR petition, the DoP,AP adopted the principle, guidelines, and procedure prescribed by Hon'ble Commission in the Multi-Year Tariff Regulation 2018. First of all, the aggregate revenue requirement of the DoP,AP is worked out as per guidelines provided in the financial principle of Multiyear Tariff Regulation 2018, then the expected revenue in the existing tariff is worked out. The revenue gap of that year is the difference between the Expected ARR and the Expected Revenue of that year. DoP,AP is not proposing the recovery of the revenue gap as the same is being funded as grant from the Government of Arunachal Pradesh. However, final Gap if any for the year shall be submitted for consideration of the Hon'ble Commission at the time of True-up for the year.

1.5.1 Estimation of Aggregate Revenue Requirement: -

According to Chapter 10.2(1) of APSCRC Multi-Year Tariff Regulation 2018, the tariff for retail supply by a Distribution Licensee shall provide for recovery of the Aggregate Revenue Requirement of the Distribution Licensee for the financial year, as approved by the Commission and comprising the following components.

- a) Return on Equity Capital
- b) Interest on Loan Capital
- c) Depreciation
- d) Cost of own power generation/ power purchase expenses
- e) Inter-state Transmission charges
- f) Intra-state Transmission charges
- g) Charges for intervening transmission facilities, if any
- h) Fees and charges of NLDC/RLDC/SLDC etc
- i) Operation and maintenance expenses
- j) Interest in working capital and consumer security deposits and
- k) Provision for bad or doubtful debt.

Minus

- 1) Non-tariff income
- 2) Income from wheeling charges recovered from the open-access customer
- 3) Income from other businesses to the extent specified in this regulation.
- 4) Receipt from cross-subsidy surcharges from open-access consumers, and
- 5) Receipt from the additional surcharge on charges of wheeling from open access consumers.
- 6) Any revenue subsidy or grant received from the state government other than subsidy under section 65 of the electricity act 2003.

1.5.2 Estimation of Annual Revenue Income: -

On the trends of energy consumption by different categories of consumers in the last few years, the likely consumption of each category of the consumers in the year have been projected. The projected quantities of the year have been thereafter multiplied by the corresponding projected tariff of each category of consumers to give the estimated Annual Revenue Income.

1.5.3 Determination of Revenue Gap: -

The difference in amount between the estimated Aggregate Revenue Requirement and estimated Annual Revenue Income is Revenue Gap for the year.



CHAPTER-II :: ESTIMATION OF AGGREGATE REVENUE REQUIREMENT

2.1 Return on Equity Capital

DoP,AP being a Government Department, all funding comes from the State Government/Central Government as a grant without any obligation to pay back. DoP,AP is not incorporated/registered as a company, hence there is no shareholder/equity as a result **return on equity capital** does not arise. Hence, the DoP,AP will not claim a Return on Equity Capital.

2.2 Interest on Loan Capital

DoP,AP functions under the Government of Arunachal Pradesh. All financial matters of DoP,AP are controlled by the finance department of the Government. Taking a loan and its repayment are decided by them. Hence, DoP,AP 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 DoP,AP, its repayment is handled by the Government from its sources. Therefore, expenses on interest on the loan may be considered as Nil and DoP,AP shall not claim any for purpose of ARR.

2.3 Depreciation

Entire Assets under the control of DoP,AP are created from the grant of the Government of Arunachal Pradesh or the Government of India without any obligation to return. As per the regulatory direction, no depreciation can be claimed on the assets created from subsidies or grants which has no obligation to return. Therefore, DoP,AP shall not claim any depreciation for ARR.

2.4 Category-wise energy Sale Forecast within the State: -

The category-wise energy sale forecast is tabulated below in table 2.4A. This forecast is devised by using the Compound Annual Growth Rate (CAGR) of the preceding 5 years as required by section 10.10(2) APSC Multi-Year Tariff Regulation 2018. As seen from the category-wise monthly sale for the FY 2023-24, there is no effect on seasonal change, hence annual basis forecast has been adapted instead of a monthly basis.

**Table: 2.4A Energy sale (With in the State) estimation for FY 2024-25**

| SL No | Consumer Category | Past Year Energy Consumption data (in MU) | | | | | CAGR (5 Years) * | Estimate (MU) |
|-------|--|---|------------|------------|------------|------------|------------------|---------------|
| | | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | | FY 2024-25 |
| | | I | II | III | IV | V | | VI |
| | | | | | | | | |
| A | HT & EHT Category | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 3.52 | 4.48 | 5.33 | 8.18 | 7.78 | 21.93% | 9.49 |
| | AC 50Hz,3-Phase, 33KV | 3.74 | 3.86 | 3.92 | 4.40 | 3.76 | 0.15% | 3.77 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 10.32 | 10.34 | 11.97 | 17.18 | 17.53 | 14.16% | 20.01 |
| | AC 50Hz,3-Phase, 33KV | 0.09 | 0.28 | 0.33 | 0.27 | 0.13 | 8.72% | 0.14 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 3.58 | 3.72 | 3.00 | 3.26 | 3.22 | 0.00% | 3.22 |
| | AC 50Hz,3-Phase, 33KV | 0.00 | 0.62 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 |
| 4 | Agricultural Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 0.00 | 0.19 | 0.00 | 0.01 | 0.02 | 0.00% | 0.02 |
| | AC 50Hz,3-Phase, 33KV | 0.00 | 0.34 | 0.00 | 0.00 | 0.00 | 0.00% | 0.00 |
| 5 | Industrial Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 14.38 | 14.30 | 18.71 | 20.17 | 20.92 | 9.82% | 22.97 |
| | AC 50Hz,3-Phase, 33KV | 21.12 | 27.85 | 32.27 | 38.00 | 37.15 | 15.17% | 42.79 |
| | AC 50Hz,3-Phase, 132 KV | 129.84 | 84.05 | 157.83 | 158.52 | 222.91 | 14.47% | 255.15 |
| 6 | Bulk Mixed Consumers | | | | | | | |
| | AC 50Hz,3-Phase, 11KV | 16.98 | 16.38 | 16.70 | 18.51 | 24.52 | 0.00% | 24.52 |
| | AC 50Hz,3-Phase, 33KV | 7.60 | 8.18 | 9.14 | 9.01 | 13.14 | 14.68% | 15.07 |
| | AC 50Hz,3-Phase, 132 KV | 22.73 | 1.49 | 0 | 0 | 0.00 | 0.00% | 0.00 |
| B | Low Voltage Category | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 126.49 | 131.11 | 145.19 | 165.04 | 167.27 | 7.24% | 179.37 |
| | AC 50Hz,3-Phase, 400 Volt | 20.61 | 22.21 | 25.34 | 26.41 | 30.48 | 10.28% | 33.61 |
| | KJP & BPL connection AC 50Hz,1-Phase, 230 Volt | 24.08 | 25.72 | 28.00 | 32.63 | 33.81 | 8.85% | 36.80 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 25.64 | 25.43 | 30.35 | 41.31 | 44.65 | 14.87% | 51.29 |
| | AC 50Hz,3-Phase, 400 Volt | 18.58 | 17.67 | 21.73 | 29.54 | 35.98 | 17.97% | 42.45 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 2.84 | 2.45 | 2.620 | 3.15 | 3.42 | 0.00% | 3.42 |
| | AC 50Hz,3-Phase, 400 Volt | 1.92 | 2.53 | 2.380 | 2.56 | 3.19 | 13.55% | 3.62 |
| 4 | Agricultural Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 0.01 | 0.18 | 0.010 | 0.009 | 0.02 | 17.84% | 0.02 |
| | AC 50Hz,3-Phase, 400 Volt | 0.01 | 0.06 | 0.050 | 0.037 | 0.04 | 100.00% | 0.08 |
| 5 | Industrial Consumers | | | | | | | |
| | AC 50Hz,1-Phase, 230 Volt | 0.50 | 0.34 | 1.630 | 0.498 | 0.91 | 0.00% | 0.91 |
| | AC 50Hz,3-Phase, 400 Volt | 1.08 | 0.98 | 1.260 | 1.917 | 1.68 | 0.00% | 1.68 |
| 6 | Temporary Consumer | | | | | | | |



| SL No | Consumer Category | Past Year Energy Consumption data (in MU) | | | | | CAGR (5 Years) * | Estimate (MU) |
|-------|-------------------|---|---------------|---------------|---------------|---------------|------------------|---------------|
| | | FY 2019-20 | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | | FY 2024-25 |
| | | I | II | III | IV | V | | VI |
| | LT/HT | 0.24 | 0.37 | 0.480 | 1.489 | 0.87 | 0.00% | 0.87 |
| | Total | 455.90 | 405.11 | 518.24 | 582.10 | 673.41 | | 751.29 |

In cases where there CAGR is negative, the growth factor has been considered as NIL. Hon'ble Commission is requested to approve the projected Energy Sale within the state for FY 2024-25 at 751.29 MU respectively.

The summary of the approved energy sale (within the state) in tariff order dated 26.07.2024 and the estimated energy sale (within the state) for the FY 2024-25 is given below

| Table: 2.4B Energy sale (With in the State) estimation for FY 2024-25 | | | | |
|--|---|---|---------------|------------|
| SLNo | Consumer Category | Approved in Tariff Order 26.07.2024 | Estimate (MU) | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | | I | II | I-II |
| A | HT & EHT Category | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | |
| | AC 50Hz,3-Phase, 11KV | 12.36 | 9.49 | 2.87 |
| | AC 50Hz,3-Phase, 33KV | 5.02 | 3.77 | 1.25 |
| 2 | Commercial Consumers (Non-Industrial) | | | |
| | AC 50Hz,3-Phase, 11KV | 22.98 | 20.01 | 2.97 |
| | AC 50Hz,3-Phase, 33KV | 0.36 | 0.14 | 0.22 |
| 3 | Public Lighting and Water Supply Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 3.26 | 3.22 | 0.04 |
| | AC 50Hz,3-Phase, 33KV | 0 | 0.00 | 0.00 |
| 4 | Agricultural Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 0.01 | 0.02 | -0.01 |
| | AC 50Hz,3-Phase, 33KV | 0 | 0.00 | 0.00 |
| 5 | Industrial Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 25.33 | 22.97 | 2.36 |
| | AC 50Hz,3-Phase, 33KV | 49.56 | 42.79 | 6.77 |
| | AC 50Hz,3-Phase, 132 KV | 195.46 | 255.15 | -59.69 |
| 6 | Bulk Mixed Consumers | | | |
| | AC 50Hz,3-Phase, 11KV | 18.51 | 24.52 | -6.01 |
| | AC 50Hz,3-Phase, 33KV | 9.92 | 15.07 | -5.15 |
| | AC 50Hz,3-Phase, 132 KV | 0 | 0.00 | 0.00 |
| B | Low Voltage Category | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | |
| | AC 50Hz,1-Phase, 230 Volt | 189.25 | 179.37 | 9.88 |
| | AC 50Hz,3-Phase, 400 Volt | 30.63 | 33.61 | -2.98 |
| | KJP & BPL connection AC 50Hz,1-Phase, 230 Volt | 40.6 | 36.80 | 3.80 |

**Table: 2.4B Energy sale (With in the State) estimation for FY 2024-25**

| SLNo | Consumer Category | Approved in Tariff Order 26.07.2024 | Estimate (MU) | Deviation |
|------|---|---|---------------|---------------|
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | | I | II | I-II |
| 2 | Commercial Consumers (Non-Industrial) | | | |
| | AC 50Hz,1-Phase, 230 Volt | 53.38 | 51.29 | 2.09 |
| | AC 50Hz,3-Phase, 400 Volt | 38.58 | 42.45 | -3.87 |
| 3 | Public Lighting and Water Supply Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 3.15 | 3.42 | -0.26 |
| | AC 50Hz,3-Phase, 400 Volt | 2.59 | 3.62 | -1.03 |
| 4 | Agricultural Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 0.01 | 0.02 | -0.01 |
| | AC 50Hz,3-Phase, 400 Volt | 0.04 | 0.08 | -0.04 |
| 5 | Industrial Consumers | | | |
| | AC 50Hz,1-Phase, 230 Volt | 0.5 | 0.91 | -0.41 |
| | AC 50Hz,3-Phase, 400 Volt | 1.92 | 1.68 | 0.24 |
| 6 | Temporary Consumer | | | |
| | LT/HT | 1.8 | 0.87 | 0.93 |
| | Total | 705.24 | 751.29 | -46.06 |

2.5 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 table 2.5 below:

Table 2.5: Energy Sale Forecast outside the State

| SL No | Particulars | Unit | FY 2020-21 (Actual) | FY 2021-22 (Actual) | FY 2022-23 (Actual) | FY 2023-24 (Actual) | Current Year |
|-------|-------------------|-----------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| | | | | | | | FY 2024-25 (Estimate) |
| 1 | Energy Sale (IEX) | MU | 179.66 | 168.22 | 234.12 | 142.43 | 149.55 |
| 2 | Bilateral Sale | MU | 7.20 | 96.71 | 130.42 | 125.68 | 131.96 |
| 3 | Deviation Export | MU | 14.89 | 13.14 | 14.76 | 42.93 | 57.82 |
| 4 | Banking Export | MU | 83.52 | 47.82 | 71.52 | 72.72 | 76.35 |
| | Total | MU | 285.28 | 325.89 | 450.82 | 383.75 | 415.68 |



The Hon'ble Commission advised the DoP,AP through tariff order to reduce the sale outside the state as the sale at IEX is lower than the purchase price. DoP,AP do sell is selling power in the IEX at the rate discovered in the Exchange for a particular slot. Due to free power allocated from the Generating station located in Arunachal Pradesh, as being the home state, there used to be surplus power at times, especially during the high hydro season, hence the sale outside the state has to be continued. Hence, outside state sales has been projected for the current year. Therefore, Hon'ble Commission is requested to approve the estimated Energy Sale outside the state through IEX and bilateral sale for FY 2024-25 of 149.55 MU and 131.96 MU respectively.

2.6 Total Energy Sale Forecast: -

The total energy sale forecast both within the state and outside the state is tabulated in the table 2.6 below:

Table 2.6: Total Energy Sale Forecast

| SL No | Particulars | Unit | FY 2020-21 (Actual) | FY 2021-22 (Actual) | FY 2022-23 (Actual) | FY 2023-24 (Actual) | Current Year |
|-------|-------------------|-----------|------------------------|------------------------|------------------------|------------------------|--------------------------|
| | | | | | | | FY 2024-25 (Estimate) |
| 1 | With in the State | MU | 405.11 | 518.25 | 582.10 | 673.41 | 751.29 |
| 2 | Outside the State | MU | 285.28 | 325.89 | 450.82 | 383.75 | 415.68 |
| | Total | MU | 690.38 | 844.14 | 1032.92 | 1057.15 | 1166.97 |

2.7 Power Purchase Estimation: -

The power purchase quantum for the current year 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 2.7A

Table2.7A: Power Purchase Estimation

| SL No | Name of Project/Source | Owner | Energy Received (MU) | Multiplying Factor | Estimated (MU) |
|-------|------------------------|--------|----------------------|--------------------|------------------------|
| | | | FY2023-24(ACTUAL) | | Current Year FY2024-25 |
| 1 | LOKTAK | NHPC | 12.34 | 0% | 12.34 |
| 2 | KOPILI-I | NEEPCO | 11.91 | 0% | 11.91 |
| 3 | KOPILI-II | NEEPCO | 8.35 | 0% | 8.35 |
| 4 | KHANDONG | NEEPCO | 0.00 | 0% | 0 |
| 5 | Panyor Lower | NEEPCO | 72.84 | 0% | 72.84 |
| | Free Energy Panyor L | | 140.07 | | 140.07 |



| SL No | Name of Project/Source | Owner | Energy Received (MU) | Multiplying Factor | Estimated (MU) |
|-------|------------------------|--------|----------------------|--------------------|------------------------|
| | | | FY2023-24(ACTUAL) | | Current Year FY2024-25 |
| 6 | DOYANG | NEEPCO | 9.48 | 0% | 9.48 |
| 7 | PARE | NEEPCO | 25.16 | 0% | 25.16 |
| | Free Energy Pare | | 57.29 | | 57.29 |
| 8 | KAMENG | NEEPCO | 44.70 | 0% | 44.70 |
| | Free Energy Kameng | | 313.16 | | 313.16 |
| 9 | AGBPP | NEEPCO | 98.46 | 0% | 98.46 |
| 10 | AGTCCPP | NEEPCO | 43.79 | 0% | 43.79 |
| 11 | PALATANA | OTPC | 122.16 | 0% | 122.16 |
| 12 | BgTPP | NTPC | 206.55 | 0% | 206.55 |
| 13 | FARAKKA | NTPC | 19.70 | 0% | 19.70 |
| 14 | KAHALGAON | NTPC | 9.90 | 0% | 9.90 |
| 15 | TALCHAR | NTPC | 12.66 | 0% | 12.66 |
| 16 | DHPD | GoAP | 56.74 | 0% | 56.74 |
| 17 | HPDCL | SPSU | 6.37 | 0% | 6.37 |
| 18 | DIKSHI | IPP | 65.26 | 0% | 65.26 |
| 19 | Free Energy Dikshi | | 7.25 | 0% | 7.25 |
| 20 | KHANGTANG | IPP | | | 23.35 |
| 21 | SOLAR | APEDA | 0.55 | 0% | 0.55 |
| 22 | Deviation | | 98.18 | -5% | 93.27 |
| 23 | IEX Purchase | | 23.19 | 0% | 23.19 |
| 24 | Banking (Import) | | 109.10 | 5% | 114.55 |
| 25 | Diesel Generation | | 0.32 | 0% | 0.32 |
| 26 | TGNA | | 1.21 | | 0.00 |
| | TOTAL | | 1576.67 | | 1599.36 |

From the above table, it may be seen that deviation import (UI) is projected to be reduced by 5% during the year as it is a costly affair. Estimated Energy Requirement for FY 2024-25 is kept a 1599.36 MU.

The summary of the approved power purchase in the tariff order dated 26.07.2024 and the estimated power purchase for the FY 2024-25 is given below: -

**Table 2.7B: Power purchase Comparison for the FY 2024-25**

| SL No | Name of Project/Source | Owner | Approved in Tariff Order 26.07.2024 (MU) | Estimated (MU) | Deviation (MU) |
|-------|------------------------|--------|---|-------------------|-------------------|
| | | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | LOKTAK | NHPC | 24.21 | 12.34 | 11.87 |
| 2 | KOPILI-I | NEEPCO | 11.91 | 11.91 | 0.00 |
| 3 | KOPILI-II | NEEPCO | 8.35 | 8.35 | 0.00 |
| 4 | KHANDONG | NEEPCO | 0 | 0.00 | 0.00 |
| 5 | Panyor Lower | NEEPCO | 84.4 | 72.84 | 11.56 |
| | Free Energy Panyor L | | 155.67 | 140.07 | 15.60 |
| 6 | DOYANG | NEEPCO | 10.6 | 9.48 | 1.12 |
| 7 | PARE | NEEPCO | 28.74 | 25.16 | 3.58 |
| | Free Energy Pare | | 63.31 | 57.29 | 6.02 |
| 8 | KAMENG | NEEPCO | 42.11 | 44.70 | -2.59 |
| | Free Energy Kameng | | 272.12 | 313.16 | -41.04 |
| 9 | AGBPP | NEEPCO | 79.93 | 98.46 | -18.53 |
| 10 | AGTCCPP | NEEPCO | 52.79 | 43.79 | 9.00 |
| 11 | PALATANA | OTPCL | 129.18 | 122.16 | 7.02 |
| 12 | BgTPP | NTPC | 130.24 | 206.55 | -76.31 |
| 13 | FARAKKA | NTPC | 20.29 | 19.70 | 0.59 |
| 14 | KAHALGAON | NTPC | 10.61 | 9.90 | 0.71 |
| 15 | TALCHAR | NTPC | 14.09 | 12.66 | 1.43 |
| 16 | DHPD | GoAP | 55.54 | 56.74 | -1.20 |
| 17 | HPDCL | SPSU | 3.59 | 6.37 | -2.78 |
| 18 | DIKSHI | IPP | 56.58 | 65.26 | -8.68 |
| 19 | Free Energy Dikshi | | 11.64 | 7.25 | 4.39 |
| 20 | KHANTANG | IPP | | 23.35 | -23.35 |
| 21 | SOLAR | APEDA | 0.65 | 0.55 | 0.10 |
| 22 | Deviation | | | 93.27 | -93.27 |
| 23 | IEX Purchase | | | 23.19 | -23.19 |
| 24 | Banking (Import) | | | 114.55 | -114.55 |
| 25 | Diesel Generation | | 0.34 | 0.32 | 0.02 |
| 26 | TGNA | | | 0.00 | 0.00 |
| | TOTAL | | 1266.89 | 1599.36 | -332.47 |

2.8 Power Purchase Cost Estimation: -

The power purchase cost has been estimated by escalating the actual amount paid in the previous year to the Source/Agency by 5%. Further, as shown in Table 2.8A, the drawl from Deviation is proposed to be reduced by 5%, accordingly, the Purchase Cost from deviation is reduced by that extent.


Chief Engineer (Power)
Commercial-cum-CEI
Department of Power, Itanagar

Table 2.8A: Power Purchase Cost Estimation

| SL No | Particulars | Previous Year (Rs in Crore) | Multiplying Factor for units (in %) | Multiplying Factor for cost (in %) | Current Year (Rs in Crore) |
|-------|------------------------------------|-----------------------------|-------------------------------------|------------------------------------|----------------------------|
| | | FY 2023-24 (Actual) | | | FY 2024-25 (Estimated) |
| 1 | NEEPCO | 186.40 | 0 | 5 | 195.72 |
| 2 | NTPC (Farakka, Kahalgaon, Talchar) | 19.85 | 0 | 5 | 20.85 |
| 3 | NTPC (BGTPP) | 132.00 | 0 | 5 | 138.60 |
| 4 | NHPC | 6.27 | 0 | 5 | 6.59 |
| 5 | OTPC | 42.24 | 0 | 5 | 44.35 |
| 6 | Deviation | 54.80 | -5 | 5 | 54.80 |
| 7 | Reactive | 0.15 | 0 | 5 | 0.16 |
| 8 | Devi Energies | 34.18 | 0 | 5 | 35.88 |
| 9 | Kangteng Hydro Power Pvt. Ltd. | | | | 8.97 |
| 10 | DHPD | 0.00 | 0 | 0 | 0.00 |
| 11 | HPDCAPL | 2.42 | 0 | 5 | 2.54 |
| 12 | APPCPL | 8.74 | 0 | 5 | 9.18 |
| 13 | Misc. Exp. | 0.20 | 0 | 5 | 0.20 |
| | Total | 487.25 | | | 517.84 |

The Hon'ble Commission is requested to approve the power purchase cost for FY 2024-25 at Rs 517.84 Cr respectively.

The summary of the approved power purchase cost in tariff order dated 26.07.2024 and the estimated power purchase cost for the FY 2024-25 is given below:

Table 2.8B: Power Purchase Cost Comparison for FY 2024-25

| SL No | Particulars | Rs in Crore | | |
|-------|-------------------------------------|-------------------------------------|------------|------------|
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | NEEPCO | 155.74 | 195.72 | -39.98 |
| 2 | NTPC (Farakka, Kahal Gaon, Talchar) | 24.69 | 20.85 | 3.84 |
| 3 | NTPC (BGTPP) | 136.19 | 138.60 | -2.41 |
| 4 | NHPC | 9.50 | 6.59 | 2.91 |
| 5 | OTPC | 41.51 | 44.35 | -2.84 |



| SL No | Particulars | Rs in Crore | | |
|-------|------------------------------|-------------------------------------|---------------|----------------|
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 6 | Deviation | | 54.80 | -54.80 |
| 7 | Reactive | | 0.16 | -0.16 |
| 8 | Devi Enrgies | 29.7 | 35.88 | -6.19 |
| 9 | Kangteng Hydro Power Pvt Ltd | | 8.97 | -8.97 |
| 10 | DHPD | 17.00 | 0.00 | 17.00 |
| 11 | HPDCAPL | 1.29 | 2.54 | -1.25 |
| 12 | APPCPL | | 9.18 | -9.18 |
| 13 | Misc. Exp. | | 0.20 | -0.20 |
| | Total | 415.61 | 517.84 | -102.23 |

2.9 Inter-State and Intra-State Transmission Charges: -

The entire interstate power transmission in DoP,AP is transmitted through the PGCIL transmission infrastructure. The transmission charges incurred during 2020-21 to 2023-24 and projected transmission charges during the FY 2024-25 are tabulated in table 2.9(A) below. There is also a chargeable intrastate transmission system constructed by M/s Devi Energy Ltd to evacuate the power generated from the Dikshi SHP. Hence, the transmission charge has been calculated based on the proposed energy to be imported during the year. Further, the transmission charges of last year are escalated by 5% year over year to factor in the yearly cost variations. The estimated charges for the FY 2024-25 are shown in table 2.9(A).

Table: 2.9 (A) Inter State Transmission Charges

| SL No | Utility | Previous Year (Actual) | | | | | Rs in Crore |
|-------|--------------|------------------------|------------|------------|------------|--------------------------|-------------|
| | | | | | | Current Year (Estimated) | FY 2024-25 |
| | | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | | |
| 1 | PGCIL | 54.12 | 28.17 | 1.90 | 4.74 | | 1.90 |
| 2 | CTUIL | | 74.65 | 107.83 | 93.34 | | 99.35 |
| 3 | APDCL | 2.12 | 2.81 | 2.79 | 0.00 | | 7.80 |
| 4 | Total | 56.23 | 105.63 | 112.52 | 98.08 | | 109.05 |

Hon'ble Commission is requested to approve the Estimated Inter-State Transmission Charges for FY 2024-25 at Rs 109.05 Cr respectively.

The summary of the approved interstate transmission charges in the tariff order dated 26-07-2024 and the estimated interstate transmission charges is given below:



Table: 2.9 (B) Inter State Transmission Charges

| SL No | Utility | Rs in Crore | | |
|-------|--------------|---|------------|------------|
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | PGCIL | | 1.9 | -1.90 |
| 2 | CTUIL | 98.01 | 99.35 | -1.34 |
| 3 | APDCL | 3.08 | 7.80 | -4.72 |
| 4 | Total | 101.08 | 109.05 | -7.96 |

Table: 2.9(C) Intra State Transmission Charges

| SL No | Utility | Rs in Crore | | | | |
|-------|---------------|-------------------------|------------|------------|------------|--------------------------------|
| | | Previous Years (Actual) | | | | Current Year (Estimated) |
| | | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | FY 2024-25 |
| 1 | Devi Energies | 11.81 | 11.45 | 11.45 | 11.45 | 11.45 |

The Hon'ble Commission is requested to approve the estimated Intra State Transmission Charges for FY 2024-25 as proposed above.

The summary of the approved intra state transmission charges in the tariff order dated 26.07.2024 and the estimated intra state transmission charges for the FY 2024-25 is given below:

Table: 2.9(D) Intra State Transmission Charges

| SL No | Utility | Rs in Crore | | |
|-------|---------------|---|------------|------------|
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | Devi Energies | 11.45 | 11.45 | 0.00 |

2.10 Fees and charges of NLDC/RLDC/SLDC etc.: -

The fees for NERLDC have been estimated with proposed annual increment @ 5% of the previous year. Fees and charges for NERLDC and NERPC during 2020-21 to 2023-24 and estimated fee for the FY 2024-25 is tabulated in table 2.10A below:

| Table: 2.10A Fee and Charges of NERLDC | | | | | | |
|---|------------------|---|------------|------------|------------|--------------------------|
| SL No | Utility | Fee and Charges of NERLDC (Rs in Crore) | | | | |
| | | Previous Years (Actual) | | | | Current Year (Estimated) |
| | | FY 2020-21 | FY 2021-22 | FY 2022-23 | FY 2023-24 | FY 2024-25 |
| 1 | NERLDC Fee | 0.64 | 1.01 | 1.11 | 1.89 | 1.99 |
| 2 | NERPC board fund | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 3 | Total | 0.65 | 1.02 | 1.12 | 1.90 | 2.00 |

Hon'ble Commission is requested to approve the Estimated NERLDC fee and NERPC board fund for FY 2024-25 at Rs 2.00 Cr.

The summary of the approved NERLDC fees in the tariff order dated 26.07.2024 and estimated NERLDC fees for the FY 2024-25 is given below:

| Table: 2.10B Fee and Charges of NERLDC | | | | |
|---|------------------|-------------------------------------|------------|------------|
| SL No | Utility | Rs in Crore | | |
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | NERLDC Fee | 1.22 | 1.99 | -0.77 |
| 2 | NERPC board fund | 0.01 | 0.01 | 0.00 |
| 3 | Total | 1.23 | 2.00 | -0.77 |

2.11 Operation and Maintenance Cost: -

Operation and maintenance cost consist of three components;

- 1) Employee cost,
- 2) Repair and Maintenance cost
- 3) Administrative and General costs.

The DoP,AP will have estimated 9892 Nos of total employees in FY 2024-25. The detail is shown in table 2.11A.



| Table: 2.11(A) Number of Employees | | | | | | |
|------------------------------------|------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|
| Description | Category of Employees | (Actual) FY 2020-21 | (Actual) FY 2021-22 | (Actual) FY 2022-23 | (Actual) FY 2023-24 | FY 2024-25 (Estimate) |
| Opening No of employees | Regular Employees | 1054 | 1054 | 1054 | 1054 | 1054 |
| | Work Charged Employees | 2786 | 2786 | 2786 | 2786 | 2786 |
| | Casual Employees | 6148 | 6148 | 6148 | 6148 | 6189 |
| | Total | 9988 | 9988 | 9988 | 9988 | 10029 |
| Addition during the year | Regular Employees | 0 | 0 | 0 | 0 | 0 |
| | Work Charged Employees | 0 | 0 | 0 | 0 | 0 |
| | Casual Employees | 0 | 0 | 0 | 41 | 0 |
| | Total | 0 | 0 | 0 | 41 | 0 |
| Retirement during the year | Regular Employees | NA | NA | NA | NA | 18 |
| | Work Charged Employees | NA | NA | NA | NA | 119 |
| | Casual Employees | NA | NA | NA | NA | 0 |
| | Total | NA | NA | NA | NA | 119 |
| Closing no of employees in year | Regular Employees | 1054 | 1054 | 1054 | 1054 | 1036 |
| | Work Charged Employees | 2786 | 2786 | 2786 | 2786 | 2667 |
| | Casual Employees | 6148 | 6148 | 6148 | 6189 | 6189 |
| | Total | 9988 | 9988 | 9988 | 10029 | 9892 |

The estimated cost of Employee Expenses, A&G Expenses and R&M Expenses for the year has been calculated as per APERC guidelines provided in format 5 of MYT regulation 2018. The O&M expenses of the FY 2024-25 have been computed by escalating the average of the previous 3 years by 5.72% twice. The details are shown in table 2.11(B).

| Table:: 2.11(B) Operation and Maintenance Cost | | | | | | | |
|--|-------------------------------|---------------------|---------------------|---------------------|---------------------|----------------|------------------------|
| Sl. No. | Particulars | Previous Year | | | | 3 Year Average | Current Year |
| | | (Actual) FY 2020-21 | (Actual) FY 2021-22 | (Actual) FY 2022-23 | (Actual) FY 2023-24 | | (Estimated) FY 2024-25 |
| 1 | Employee Expenses | 315.38 | 336.88 | 372.93 | 393.35 | 367.72 | 409.79 |
| 2 | A&G Expenses | 5.46 | 9.24 | 15.11 | 8.70 | 11.02 | 12.28 |
| 3 | R&M Expenses | 40.83 | 28.85 | 28.96 | 40.36 | 32.72 | 36.47 |
| 4 | Total O&M Expenses | 361.67 | 374.97 | 417.00 | 442.41 | 411.46 | 458.53 |

The summary of the approved O&M expenses in the tariff order dated 26.07.2024 and estimated O&M expenses for the FY 2024-25 is given below:

| Table: 2.11(C) Operation and Maintenance Cost | | | | |
|---|-------------------------------|-------------------------------------|---------------|---------------|
| Sl. No. | Particulars | Rs in Crore | | |
| | | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | Employee Expenses | 376.71 | 409.79 | -33.08 |
| 2 | A&G Expenses | 10.45 | 12.28 | -1.83 |
| 3 | R&M Expenses | 39.78 | 36.47 | 3.31 |
| 4 | Total O&M Expenses | 426.94 | 458.53 | -31.59 |

Hon'ble Commission is requested to approve Estimated O&M expenses for FY 2024-25 458.53 Cr respectively.



2.12 Interest in Working Capital

Working capital for DoP,AP is provided by the Government of AP as a grant as and when required, and therefore no interest on working capital is required to be paid by DoP,AP. Hence, interest in working capital may be considered Nil.

2.13 Bad and doubtful debt

DoP,AP does not have any bad and doubtful debt as per records. Therefore, provision for bad and doubtful debt may be considered Nil.

All Minus components, that is, all components that are to be subtracted from the components of ARR are Nil, namely, non-Tariff income, Income from Wheeling, Cross Subsidy, Other Business, etc.

2.14 Aggregate Revenue Requirement

The summary of the approved aggregate revenue requirement in the tariff order dated 26.07.2024 and the estimated aggregate revenue requirement for the FY 2024-25 is given below:

Table 2.14 : Aggregate Revenue Requirement

| (Rs. In Crores) | | | | |
|-----------------|-------------------------------------|---|------------|------------|
| S.L No. | Particulars | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 1 | Return on Equity Capital | | 0 | 0.00 |
| 2 | Interest on Loan Capital | | 0 | 0.00 |
| 3 | Depreciation | | 0 | 0.00 |
| 4 | Power Purchase Expenses | 415.61 | 517.84 | -102.23 |
| 5 | Interstate Transmission Charges | 101.08 | 109.05 | -7.97 |
| 6 | Intrastate Transmission Charges | 11.45 | 11.45 | 0.00 |
| 7 | Fees and charges of NERLDC/NERPC | 1.23 | 2.00 | -0.77 |
| 8 | O&M expenses | 426.94 | 458.53 | -31.59 |
| 9 | Interest on working Capital | | 0 | 0.00 |
| 10 | Provision for bad and doubtful debt | | 0 | 0.00 |



| (Rs. In Crores) | | | | |
|-----------------|----------------------------------|---|----------------|----------------|
| S.L No. | Particulars | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| 11 | Annual License Fee | 0.05 | 0.05 | 0.00 |
| 12 | Tariff filing fees | 0.075 | 0.075 | 0.00 |
| 13 | Training and Safety of Personnel | 0.75 | 0 | 0.75 |
| 14 | Total Revenue Requirement | 957.19 | 1099.00 | -141.81 |

Hon'ble Commission is requested to approve the Estimated Aggregate Revenue Requirement for FY 2024-25 at Rs.1099.00 Cr.



CHAPTER – III:: EXPECTED REVENUE AND REVENUE GAP

RECOVERY

3.1 Expected revenue in the existing tariff from the sale within the state: -

The category-wise energy sale in MU has been projected in table 2.4A. by using CAGR. These energy sale projections have been multiplied by category-wise existing tariffs to estimate the expected revenue from within the state and are tabulated in table 3.1A

Table 3.1A: Revenue estimation for FY 2024-25 from the sale of energy within the state in the existing tariff

| SL No | Consumer Category | Existing Tariff (Per Kwh) | Previous Year (Actual) | | Current Year (Estimated) | |
|-------|--|---------------------------|------------------------|-----------|--------------------------|-----------|
| | | | FY 2023-24 | | FY 2024-25 | |
| | | | Sale (MU) | Rs in Cr. | Sale (MU) | Rs in Cr. |
| A | High Voltage Category | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | |
| | 3-Phase, 11KV | 3.40 | 7.78 | 2.65 | 9.49 | 3.23 |
| | 3-Phase, 33KV | 3.25 | 3.76 | 1.22 | 3.77 | 1.22 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | |
| | 3-Phase, 11KV | 4.20 | 17.53 | 7.36 | 20.01 | 8.41 |
| | 3-Phase, 33KV | 4.00 | 0.13 | 0.05 | 0.14 | 0.05 |
| 3 | Public Lighting and Water Supply Consumers | | | | | |
| | 3-Phase, 11KV | 4.20 | 3.22 | 1.35 | 3.22 | 1.35 |
| | 3-Phase, 33KV | 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | Agricultural Consumers | | | | | |
| | 3-Phase, 11KV | 2.75 | 0.02 | 0.00 | 0.02 | 0.00 |
| | 3-Phase, 33KV | 2.65 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Industrial Consumers | | | | | |
| | 3-Phase, 11KV | 3.85 | 20.92 | 8.05 | 22.97 | 8.85 |
| | 3-Phase, 33KV | 3.50 | 37.15 | 13.00 | 42.79 | 14.98 |
| | 3-Phase, 132 KV | 3.35 | 222.91 | 74.67 | 255.15 | 85.48 |
| 6 | Bulk Mixed Consumers | | | | | |
| | 3-Phase, 11KV | 3.75 | 24.52 | 9.20 | 24.52 | 9.20 |
| | 3-Phase, 33KV | 3.40 | 13.14 | 4.47 | 15.07 | 5.13 |
| | 3-Phase, 132 KV | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| B | Low Voltage Category | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | |
| | 1-Phase, 230 Volt | 4.00 | 167.27 | 66.91 | 179.37 | 71.75 |



| SL No | Consumer Category | Existing Tariff (Per Kwh) | Previous Year (Actual) | | Current Year (Estimated) | |
|-------|---|---------------------------|------------------------|-----------|--------------------------|-----------|
| | | | FY 2023-24 | | FY 2024-25 | |
| | | | Sale (MU) | Rs in Cr. | Sale (MU) | Rs in Cr. |
| | 3-Phase, 400 Volt | 4.00 | 30.48 | 12.19 | 33.61 | 13.45 |
| | KJP & BPL connection | 2.65 | 33.81 | 8.96 | 36.80 | 9.75 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | |
| | 1-Phase, 230 Volt | 5.00 | 44.65 | 22.32 | 51.29 | 25.65 |
| | 3-Phase, 400 Volt | 5.00 | 35.98 | 17.99 | 42.45 | 21.22 |
| 3 | Public Lighting and Water Supply Consumers | | | | | |
| | 1-Phase, 230 Volt | 5.10 | 3.42 | 1.74 | 3.42 | 1.74 |
| | 3-Phase, 400 Volt | 5.10 | 3.19 | 1.63 | 3.62 | 1.85 |
| 4 | Agricultural Consumers | | | | | |
| | 1-Phase, 230 Volt | 3.10 | 0.02 | 0.01 | 0.02 | 0.01 |
| | 3-Phase, 400 Volt | 3.10 | 0.04 | 0.01 | 0.08 | 0.03 |
| 5 | Industrial Consumers | | | | | |
| | 1-Phase, 230 Volt | 4.30 | 0.91 | 0.39 | 0.91 | 0.39 |
| | 3-Phase, 400 Volt | 4.30 | 1.68 | 0.72 | 1.68 | 0.72 |
| 6 | Temporary Consumer | | | | | |
| | LT/HT | 6.50 | 0.87 | 0.57 | 0.87 | 0.57 |
| | Total | | 673.41 | 255.48 | 751.29 | 285.01 |

The following tables shows the total income that including revenue from existing tariff as well as non -tariff income for the FY 2024-25.

| | Table 3.1B Revenue for FY 2024-25 | | | | | | | | |
|-------|-------------------------------------|---------------------------|------------------------------------|-----------|-------------------|------------|-------------------|-------------------------|----------------------|
| SL No | Consumer Category | Existing Tariff (Per Kwh) | Current Year (Estimate) FY 2024-25 | | | | | | |
| | | | Revenue from existing tariff | | Non-Tariff Income | | | Total non-tariff income | Total Revenue Billed |
| | | | Energy Charge | | LPS | Metre Rent | Any Other Charges | | |
| | | | Sale (MU) | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. |
| A | High Voltage Category | | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | | |
| | 3-Phase, 11KV | 3.4 | 9.49 | 3.23 | 3.28 | 0.03 | 0.00 | 3.31 | 6.54 |
| | 3-Phase, 33KV | 3.25 | 3.77 | 1.22 | 0.36 | 0.01 | 0.00 | 0.37 | 1.60 |



| Table 3.1B Revenue for FY 2024-25 | | | | | | | | | |
|-----------------------------------|--|---------------------------|------------------------------------|-----------|-------------------|------------|-------------------|-------------------------|----------------------|
| SL No | Consumer Category | Existing Tariff (Per Kwh) | Current Year (Estimate) FY 2024-25 | | | | | | |
| | | | Revenue from existing tariff | | Non-Tariff Income | | | Total non-tariff income | Total Revenue Billed |
| | | | Energy Charge | | LPS | Metre Rent | Any Other Charges | | |
| | | | Sale (MU) | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | | |
| | 3-Phase, 11KV | 4.2 | 20.01 | 8.41 | 2.12 | 0.08 | 0.00 | 2.21 | 10.61 |
| | 3-Phase, 33KV | 4 | 0.14 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | | |
| | 3-Phase, 11KV | 4.2 | 3.22 | 1.35 | 0.90 | 0.00 | 0.00 | 0.90 | 2.26 |
| | 3-Phase, 33KV | 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | Agricultural Consumers | | | | | | | | |
| | 3-Phase, 11KV | 2.75 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | 3-Phase, 33KV | 2.65 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | Industrial Consumers | | | | | | | | |
| | 3-Phase, 11KV | 3.85 | 22.97 | 8.85 | 1.13 | 0.02 | 0.00 | 1.15 | 9.99 |
| | 3-Phase, 33KV | 3.5 | 42.79 | 14.98 | -0.74 | 0.02 | 0.00 | -0.72 | 14.25 |
| | 3-Phase, 132 KV | 3.35 | 255.15 | 85.48 | 0.00 | 0.04 | 0.00 | 0.04 | 85.51 |
| 6 | Bulk Mixed Consumers | | | | | | | | |
| | 3-Phase, 11KV | 3.75 | 24.52 | 9.20 | 0.89 | 0.03 | 0.02 | 0.93 | 10.13 |
| | 3-Phase, 33KV | 3.4 | 15.07 | 5.13 | 0.01 | 0.01 | 0.00 | 0.02 | 5.15 |
| | 3-Phase, 132 KV | 3.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| B | Low Voltage Category | | | | | | | | |
| 1 | Non-Commercial Consumers (Domestic) | | | | | | | | |
| | 1-Phase, 230 Volt | 4 | 179.37 | 71.75 | 25.61 | 1.35 | 0.00 | 26.96 | 98.71 |
| | 3-Phase, 400 Volt | 4 | 33.61 | 13.45 | 2.93 | 0.06 | 0.00 | 2.99 | 16.43 |
| | KJP & BPL connection | 2.65 | 36.80 | 9.75 | 7.94 | 0.31 | 0.00 | 8.25 | 18.00 |
| 2 | Commercial Consumers (Non-Industrial) | | | | | | | | |
| | 1-Phase, 230 Volt | 5 | 51.29 | 25.65 | 5.05 | 0.23 | 0.00 | 5.28 | 30.93 |
| | 3-Phase, 400 Volt | 5 | 42.45 | 21.22 | 3.96 | 0.06 | 0.00 | 4.02 | 25.24 |
| 3 | Public Lighting and Water Supply Consumers | | | | | | | | |
| | 1-Phase, 230 Volt | 5.1 | 3.42 | 1.74 | 0.72 | 0.01 | 0.00 | 0.72 | 2.47 |
| | 3-Phase, 400 Volt | 5.1 | 3.62 | 1.85 | 0.54 | 0.01 | 0.00 | 0.55 | 2.40 |
| 4 | Agricultural Consumers | | | | | | | | |
| | 1-Phase, 230 Volt | 3.1 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| | 3-Phase, 400 Volt | 3.1 | 0.08 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 |
| 5 | Industrial Consumers | | | | | | | | |
| | 1-Phase, 230 Volt | 4.3 | 0.91 | 0.39 | 0.21 | 0.00 | 0.00 | 0.21 | 0.60 |
| | 3-Phase, 400 Volt | 4.3 | 1.68 | 0.72 | 0.36 | 0.00 | 0.00 | 0.37 | 1.09 |
| | | | | | | | | | |
| | LT/HT | 6.5 | 0.87 | 0.57 | 0.09 | 0.00 | 0.00 | 0.09 | 0.66 |



| Table 3.1B Revenue for FY 2024-25 | | | | | | | | | |
|-----------------------------------|-------------------|---------------------------|------------------------------------|-----------|-------------------|------------|-------------------|-------------------------|----------------------|
| SL No | Consumer Category | Existing Tariff (Per Kwh) | Current Year (Estimate) FY 2024-25 | | | | | | |
| | | | Revenue from existing tariff | | Non-Tariff Income | | | Total non-tariff income | Total Revenue Billed |
| | | | Energy Charge | | LPS | Metre Rent | Any Other Charges | | |
| | | | Sale (MU) | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. | Rs in Cr. |
| | Total | | 751.29 | 285.01 | 55.38 | 2.27 | 0.02 | 57.67 | 342.68 |

The actual revenue billed (Within the State) is Rs. 307.18 Cr for FY 2023-24. The total revenue includes other charges such as Late Payment Surcharge, Meter Rent etc. in addition to revenue from Tariff. The petitioner has calculated the ratio of total revenue & revenue from Tariff for the FY 2023-24. Further, revenue from tariff for the ensuing years have been calculated at the proposed rate & the same has been increased in the above ratio i.e. 1.20 to arrive at the total revenue.

3.2 Expected revenues from sales outside the state: -

Table 3.2::Revenue estimation from sales outside the state in the existing tariff

| SL No | Consumer Category | Current Year (Estimated) | |
|-------|-------------------|--------------------------|-----------|
| | | FY 2024-25 | |
| | | Sale (MU) | Rs in Cr. |
| 1 | Energy Sale (IEX) | 149.55 | 149.58 |
| 2 | Bilateral Sale | 131.96 | 0.56 |
| 3 | Deviation Export | 57.82 | 0.00 |
| 4 | Total | 339.33 | 150.14 |

3.3 Expected revenue from sales both within and outside the state: -

Table 3.3: Revenue estimation from the sale within and outside the state in the existing tariff

| SL No | Consumer Category | Current Year (Estimated) | |
|-------|-------------------|--------------------------|-----------|
| | | FY 2024-25 | |
| | | Sale (MU) | Rs in Cr. |
| 1 | With in the State | 751.29 | 342.68 |
| 2 | Outside the State | 339.33 | 150.14 |
| 3 | Total | 1090.62 | 492.81 |

**3.4 Aggregate Revenue Requirement and Revenue Gap: -**

The summary of the approved aggregate revenue requirement and revenue gap in the tariff order dated 26.07.2024 and the estimated aggregate revenue requirement and revenue gap for FY 2024-25 is given below: -

Table 3.4 :: Aggregate Revenue Requirement, Income and Revenue Gap in Existing tariff

| Sl. No. | Particulars | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
|---------|--|---|------------|------------|
| | | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| | | Rs. In Cr. | Rs. In Cr. | Rs. In Cr. |
| 1 | Return on Equity Capital | | 0 | 0.00 |
| 2 | Interest on Loan Capital | | 0 | 0.00 |
| 3 | Depreciation | | 0 | 0.00 |
| 4 | Power Purchase Expenses | 415.61 | 517.84 | -102.23 |
| 5 | Interstate Transmission Charges | 101.08 | 109.05 | -7.97 |
| 6 | Intrastate Transmission Charges | 11.45 | 11.45 | 0.00 |
| 7 | Fees and charges of NERLDC/NERPC | 1.23 | 2.00 | -0.77 |
| 8 | O&M expenses | 426.94 | 458.53 | -31.59 |
| 9 | Interest on working Capital | | 0 | 0.00 |
| 10 | Provision for bad and doubtful debt | | 0 | 0.00 |
| 11 | Annual License Fee | 0.05 | 0.05 | 0.00 |
| 12 | Tariff filing fees | 0.075 | 0.075 | 0.00 |
| 13 | Training and Safety of Personnel | 0.75 | 0 | 0.75 |
| 14 | Total Revenue Requirement | 957.19 | 1099.00 | -141.81 |
| 15 | less: Non-Tariff Income | 41.59 | 57.67 | -16.08 |
| 16 | Net ARR (14-15) | 915.60 | 1041.33 | -125.73 |
| 17 | Revenue from EXISTING Tariff | 269.75 | 285.01 | -15.26 |
| 18 | Revenue from Sale of Surplus Power | 194.10 | 150.14 | 43.96 |
| 19 | Total Annual Income (17+18) | 463.85 | 435.15 | 28.70 |
| 20 | Total Grant from GOAP required (16-19) | 451.75 | 606.18 | -154.44 |
| 21 | Revenue Gap (16-19-20) | Nil | Nil | |

3.5 ARR & ACS Gap for FY 2024-25: -

The ACS and ARR Gap has been calculated as per the guidelines of Central Electricity Authority. The ACS-ARR gap for the FY 2024-25 is shown in the table below.

| Sl. No | Table No. 3.5 ACS-ARR Gap of FY 2024-25 | | |
|--------|---|-------------|---------|
| 1 | Total Revenue Requirement | Rs in Crore | 1099.00 |
| 2 | Gross Energy Input | in MU | 1599.36 |
| 3 | Revenue from Existing Tariff | Rs in Crore | 285.01 |
| 4 | Other income (Late payment, Meter rent etc) | Rs in Crore | 57.67 |
| 5 | Total revenue within state (including other income) | Rs in Crore | 342.68 |
| 6 | Revenue from Sale of Surplus Power | Rs in Crore | 150.14 |
| 7 | Total Annual Income (5+6) | Rs in Crore | 492.81 |
| 8 | Revenue Gap (1-7) | Rs in Crore | 606.18 |
| 9 | Expected Revenue Grant from GoAP | Rs in Crore | 606.18 |
| 10 | Average Cost of Supply (Rs/Kwh) (1/2*10) | RS/KWH | 6.87 |
| 11 | Average Realisable Revenue (Rs/Kwh) {(7+9)/2*10} | Rs/KWH | 6.87 |
| 12 | ACS-ARR (10-11) | Rs/KWH | 0.00 |

3.6 Revenue gap and its recovery: -

Table 3.6: Revenue Gap and its Recovery for the FY 2024-25

| S.L No. | Particulars | Rs. In Crore |
|---------|-------------------------------------|------------------------|
| | | (Estimated) FY 2024-25 |
| 1 | Aggregate Revenue Requirement (ARR) | 1099.00 |
| 2 | Less: Other Income | 57.67 |
| 3 | Net ARR (1-2) | 1041.33 |



| S.L No. | Particulars | (Estimated) FY 2024-25 |
|---------|---|---------------------------|
| 4 | Less: Income- Sale of power outside State | 150.14 |
| 5 | Net ARR from within the state (3-4) | 891.19 |
| 6 | Income from Existing tariff | 285.01 |
| 7 | Expected Government Grant (5-6) | 606.18 |
| 8 | Net Revenue Gap (5-6-7) | 0.00 |

The revenue gap stands at Rs.606.18 Cr. for the FY 2024-25, The recovery of this gap is expected from the state Government as a **grant**.

CHAPTER –IV: AGGREGATE TECHNICAL & COMMERCIAL LOSS

As per Clause 10.14 of APERC Multiyear Tariff Regulation 2018 the licensee has to provide complete information about the AT&C losses during the previous year and that projected for the years for which the application is being made. In this chapter, the AT&C loss is analysed and estimated for FY 2024-25.

4.1 Net Input Energy Calculation Projection: -

The detailed calculation of Net Energy Input used in AT&C Loss Projection is given below in Table 4.1;

| Table 4.1 Net Input Energy Calculation Projection | | | |
|--|-------------|------|------------------------|
| Particulars | Calculation | Unit | Current Year |
| | | | FY 2024-25 (Estimated) |
| Energy Import from Grid | A | MU | 1301.78 |
| Energy Export Out Side the State | B | MU | 415.68 |
| Energy Injected in State from Grid | C=A-B | MU | 886.10 |
| Transmission loss on C(3.51%) | D | MU | 31.10 |
| State Own Generation + Received from Other Sources | E | MU | 297.58 |
| Gross Input Energy (including Export outside the state) | F=A+E | MU | 1599.36 |
| Input Energy (in the State) | G=C+E | MU | 1183.68 |
| Net Input Energy (in the State) | H=G-D | MU | 1152.58 |

4.2 AT&C loss and its projection: -

Due to the scattered load over a vast geographical area, no meters and defective meters at feeder level, at DT level, and at consumer level the AT&C loss is high in Arunachal Pradesh. However, a flagship project called RDSS is being implemented presently, through which the required metering will be done along with other loss reduction infrastructure works to reduce AT&C Loss.



The AT&C loss projected for the current year is tabulated in table 4.2A

| S No | Particulars | Calculation | Current Year |
|-------|--|---------------------|------------------------|
| | | | FY 2024-25 (Estimated) |
| A | Input Energy (MkWh) | A | 1183.68 |
| B | Transmission Losses (MkWh) | B | 31.10 |
| C | Net Input Energy (MkWh) | C=A-B | 1152.58 |
| D | Energy Sold (MkWh) | D | 751.29 |
| E | Revenue from Sale of Energy including Government Grant (Rs. Cr.) | E | 948.86 |
| E (i) | Likely Collection (92% of Tariff & 100% of Grant) | E (i) | 921.44 |
| F | Adjusted Revenue from Sale of Energy on Subsidy Received basis (Rs. Cr.) | F | 948.86 |
| G | Opening Debtors for Sale of Energy (Rs. Cr.) | G | 317.19 |
| H | (i) Closing Debtors for Sale of Energy (Rs. Cr.) | (i) | 351.46 |
| | (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) | 351.46 |
| J | Collection Efficiency (%) | $(E (i)+G-I)/E*100$ | 93.50 |
| K | Units Realized (Mkwh) = [Energy Sold*Collection efficiency] | D*J/100 | 702.45 |
| L | Units Unrealized (Mkwh)= [Net Input Energy-Units Realized] | C-K | 450.12 |
| M | AT&C Losses (%) = [{Units Unrealized/Net Input Energy} *100] | L/C *100 | 39.05 |

The summary of the approved AT&C Loss in the tariff order dated 26.07.2024 and the estimated AT&C loss for the FY 2024-25 is given below:

| Table 4.2 B: AT&C Loss Projection | | | |
|-----------------------------------|---|------------|------------|
| Particulars | Approved in Tariff Order 26.07.2024 | Estimate | Deviation |
| S.L No. | FY 2024-25 | FY 2024-25 | FY 2024-25 |
| AT&C Loss (%) | 22.00 | 39.05 | -17.05 |

The original approved AT&C Loss trajectory as per the sanctioned RDSS is as shown below:

| Year | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
|-----------|---------|---------|---------|---------|---------|
| AT&C Loss | 46% | 45% | 35% | 28% | 22% |

But, due to the ground reality of AT&C Loss status in Arunachal Pradesh, and in order to be able to maintain the AT&C Loss Trajectory during the implementation period of RDSS, the DoP,AP has proposed a revised AT&C Loss trajectory in consultation with Power Finance Corporation of India Ltd. (PFC), which was recommended by the Distribution Reform Committee (DRC) and submitted to the Monitoring Committee of Ministry of Power, Govt. of India. Now, the revised AT&C Loss trajectory is as shown below:

| Year | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
|-----------|---------|---------|---------|---------|---------|
| AT&C Loss | 51.82% | 50% | 48% | 45% | 40% |

Therefore, the Hon'ble Commission is requested to approve Estimated AT&C Loss for the FY 2024-25 at 39.05% .

CHAPTER- V: TARIFF FOR DISTRIBUTION WHEELING BUSINESS

Chapter 9 of APSERC Multi-Year Tariff 2018 provides the tariff for the distribution wheeling business and chapter 9.1 provides for segregation accounts for Wheeling Business and Retail Supply Business. Chapter 9.5 provides for the adoption of the following allocation matrix in case of non-segregation of accounts.

| Particulars | Wire Business (%) | Retail Supply Business (%) |
|--|-------------------|----------------------------|
| Power Purchase Expenses | 0 | 100 |
| Intra-State Transmission Charge (Intra and Inter both) | 0 | 100 |
| SLDC Charge | 0 | 100 |
| Open Access Charge | 0 | 100 |
| Employee Expenses | 60 | 40 |
| Administration and General Expenses | 50 | 50 |
| Repair & 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 |

Since APDoP does not have a separate account for the Wire Business and Retail Supply Business, the allocated matrix is followed.



Distribution Business

The wheeling charges for the FY 2024-25 are tabulated below:

| SL No | Particulars | Wire Business (%) |
|-------|--|------------------------|
| | | Current Year |
| | | FY 2024-25 (Rs in Cr.) |
| 1 | Power Purchase Expenses | |
| 2 | Intra-State Transmission Charge (Intra and Inter both) | |
| 3 | SLDC Charge | |
| 4 | Open Access Charge | |
| 5 | Employee Expenses | 245.87 |
| 6 | Administration and General Expenses | 6.14 |
| 7 | Repair & Maintenance Expenses | 32.82 |
| 8 | Depreciation | |
| 9 | Interest on Long-term Loan Capital | |
| 10 | Interest on Working Capital and on Consumer Security Deposit | |
| 11 | Bad Debt Written off | |
| 12 | Income Tax | |
| 13 | Contribution to contingency reserves | |
| 14 | Return on Equity | |
| 15 | Non-Tariff Income | 5.77 |
| 16 | Total | 279.06 |



| SL No | Particulars | Unit | Wheeling Charge |
|-------|------------------------------------|-------------|-----------------|
| | | | Current Year |
| | | | FY 2024-25 |
| 1 | ARR for Wire Business | Rs in Crore | 279.06 |
| 2 | Energy input | MU | 1599.36 |
| 3 | Wheeling Charge (ARR/Energy Input) | Rs per Unit | 1.74 |

Hon'ble Commission is requested to approve the wheeling charge for FY 2024-25 at Rs. 1.74 per kWh respectively.


Chief Engineer (Power)
Commercial-cum-CEI
Department of Power, Itanagar




CHAPTER – VI: PRAYER

The DoP,AP respectfully prays to the Hon'ble Commission-

1. To admit this Petition for approval of APR for FY 2024-25.
2. To grant any other relief as the Hon'ble Commission may consider appropriate.
3. To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
4. The petitioner craves leave of the Hon'ble Commission to allow further submissions, additions, and alterations to this petition as may be necessary from time to time.

Dated Itanagar the 28..th November 2024


Petitioner
For the Department of Power
Government of AP
Itanagar

**Chief Engineer (Power)
Commercial-cum-CEI
Department of Power, Itanagar**