

**Before the Hon'ble Arunachal Pradesh State Regulatory
Commission,**

Itanagar - 791111, Arunachal Pradesh



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Filing No.:

Case No.:

IN THE MATTER OF:

Filing of the Petition for Power Procurement Plan for the FY 2026-27 to FY 2035-36 under Arunachal Pradesh State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulation, 2024 and read with the other relevant guidelines issued time to time.

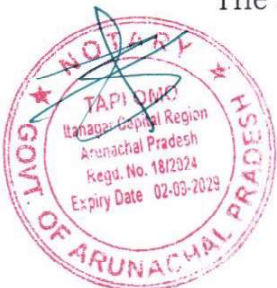
AND

IN THE MATTER OF THE APPLICANT

Department of Power, Govt. of Arunachal Pradesh (herein after referred to as 'DoP' or 'The Petitioner'), which shall mean for the purpose of this Petition the Licensee, having its registered office at Vidyut Bhawan, Itanagar -791111 (Arunachal Pradesh).

The Petitioner respectfully submits as hereunder:

1. The Department of Power, Arunachal Pradesh, (herein after referred to as "DoP" or "Petitioner") is a State Government Department, assigned to carry out all the activities of the Power Sector under the Electricity Act, 2003 and other Rules and Regulations issued by the MoP, the Hon'ble APERC and other competent authority.
2. The Department of Power, Government of Arunachal Pradesh, is a deemed Distribution Licensee for the State of Arunachal Pradesh and responsible to develop and maintain an efficient, co-ordinated and economical distribution system within the area of supply and to supply electricity to its consumers under section 42 & 43 of the Electricity Act, 2003.
3. It is also submitted that the Department of Power is also empowered to implement various Power Projects sanctioned and sponsored by the State and Central Governments from time to time.
4. The DoP is also responsible for procurement of the powers from the Central Generating Companies, State Generating Companies and other IPP's under the Electricity Act, 2003 and other governing rules and regulations.
5. The Hon'ble Arunachal Pradesh State Electricity Regulatory Commission (APERC) has notified APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 which came into force from 7th May 2024.
6. Therefore, under on the said Regulation, the DoP, Arunachal Pradesh needs to file its Power Procurement Plan for all day of the months of the next upcoming year (Short Term) and for next 10 years (Long Term) on monthly basis.
7. Accordingly, the DoP, Arunachal Pradesh had filed its Power Procurement Plan for the FY 2024-25 to FY 2033-34 before the Hon'ble APERC vide letter No. CE(Com)/Tariff/3112024-2514099 dated 14th February 2025.
8. The Hon'ble APERC had reviewed the Petition and in absence of the requisite information, the Hon'ble Commission had put it on hold vide its letter no. APERC/RA-9/IV/2024-25/890, dated 10th March 2025. The relevant extracts of the same are as follows:



“.....In view of the above, the Commission is unable to proceed with the analysis of the petition for the approval of the power procurement plan due to the incomplete information. Hence, as of now the Commission has put the processing of the petition on hold and shall proceed for approval of the petition upon submission of the complete requisite data.....”

9. Further, the Hon'ble APERC vide its daily order dated 24.09.2025 directed the DoP to submit its Power Procurement Plan in accordance with the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 along with requisite information.
10. It is submitted that the financial year 2025-26 has ended and the actual energy data for the year is now available with the DoP, Arunachal Pradesh. Therefore, the DoP has prepared its current Petition for Power Procurement Plan for the FY 2026-27 to FY 2035-36 based on the actual data for the period of last 4years i.e. FY 2022-23 to FY 2025-26.
11. Based on the above, the DoP, Arunachal Pradesh is submitting the instant Petition in the matter of the Power procurement Plan for the FY 2026-27 to FY 2035-36 in accordance with the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 and other guidelines, Rules and Regulations issued by the Hon'ble APERC from time to time.
12. The DoP, Arunachal Pradesh requests the Hon'ble Commission to admit the instant Petition.
13. The DoP, Arunachal Pradesh also respectfully seeks an opportunity to present their case prior to the approval of the same. the DoP believes that such an approach would go a long way towards providing a fair treatment to all the stakeholders and may eliminate the need for a further review or clarification.
14. The DoP may also be permitted to propose suitable changes to the petition on further analysis, prior to the final approval by the Hon'ble Commission.



15. In view of the above, the DoP respectfully prays that the Hon'ble Commission may be pleased to consider and approve the following:

- a. Admit this instant Petition in accordance with the APSERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024;
- b. Review the proposal submitted by the Petitioner in the enclosed Petition for a favourable dispensation;
- c. Permit to enter short term/ long term power procurement agreement/ arrangement with generating stations;
- d. Permit to propose suitable changes to the Petition, prior to the final approval by the Hon'ble Commission;
- e. Condone any inadvertent omission/errors/short comings and permit the petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date;
- f. Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

**The Department of Power,
Govt. of Arunachal Pradesh.
Vidyut Bhawan,
Itanagar -791111
Arunachal Pradesh.**

Dated: 9th July, 2026.

Place: Itanagar.


Chief Engineer (Commercial)-cum-CEI
Department of Power
Govt. of Arunachal Pradesh





AFFIDAVIT

I, Shri Dagyom Ango, aged about 59 years, S/o. Late Gumdag Ango, presently serving as Chief Engineer (Commercial)-cum Chief Electrical Inspector under the Department of Power, Itanagar, Arunachal Pradesh, do hereby affirm and state as follows:

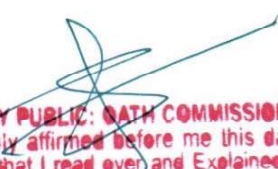
1. That I am fully conversant with the facts and the circumstances of the case and am competent and duly authorised to swear and sign this Affidavit on behalf of the Department of Power, Arunachal Pradesh.
2. That the statements made in paragraphs 1 to 15 of the foregoing petition are true and correct to the best of my knowledge and belief and are based on official records.

"OATH"

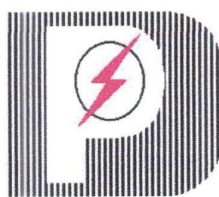
I hereby solemnly affirm that the statements made hereinabove are true and correct to the best of my knowledge and belief and that nothing material has been concealed therefrom.

Signed this Affidavit at Itanagar, Arunachal Pradesh, on this.....^{09th} day of July 2026.


DEPONENT


NOTARY PUBLIC: OATH COMMISSIONER
Solemnly affirmed before me this day, I
Certify that I read over and Explained the
contents to the declarant and that the
deponent seemed perfectly to understand them


Adv. Tapi Omo
Notary Public
Regd. No. 18/2024
Itanagar Capital Region
Arunachal Pradesh



Department of Power
Government of Arunachal Pradesh

Petition for Power Procurement Plan
From FY 2026-27 to FY 2035-36

Submitted to,
Arunachal Pradesh State Electricity Regulatory Commission

Submitted By,
Office of the Chief Engineer (Commercial)
cum Chief Electrical Inspector,
Vidyut Bhawan, Itanagar -791111
(Arunachal Pradesh)

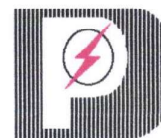


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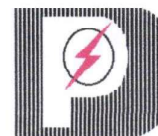
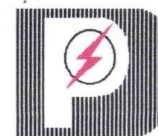


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(1) Introduction

1.1 Historical Facts of DoP, Arunachal Pradesh

The Department of Power (DoP), Government of Arunachal Pradesh, was established in the year 1992 following the bifurcation of the erstwhile Arunachal Pradesh Public Works Department (APPWD). At the time of its establishment, the DoP was entrusted with the responsibility of managing the entire power sector in the State, including generation, transmission, and distribution of electricity.

Subsequently, in the year 2004, the Department of Hydro Power Development (DHPD) was created through bifurcation from the DoP, thereby separating the generation function from the purview of the Department of Power.

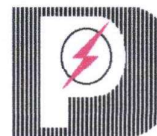
Presently, the Department of Power functioning under the Ministry of Power, Government of Arunachal Pradesh, is engaged in the transmission and distribution of electricity within the State and is recognized as the Deemed Distribution Licensee for the State of Arunachal Pradesh in accordance with the provisions of Section 14 of the Electricity Act, 2003.

1.2 Background of the Petition

The Hon'ble APERC has notified its APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 with effect from 7th May 2024 (hereinafter referred to as the "PPP Regulations, 2024"). In accordance with the said regulation, the Licensee is required to prepare and submit a rolling Power Procurement Plan (PPP) comprising, inter alia, an assessment of the projected demand and energy requirement, evaluation of power availability from existing and committed sources, and identification of additional power requirement to be procured through short-term and long-term arrangements.

Accordingly, the present Petition sets forth the Long-Term Power Procurement Plan of the Department of Power, Arunachal Pradesh, covering a planning horizon of ten (10) financial years, prepared on a monthly basis. The Petition also incorporates the short-term power procurement requirement for the ensuing financial year, thereby constituting an integrated Power Procurement Plan for consideration and approval of the Hon'ble Commission with respect to both long-term and short-term procurement arrangements.

The present Plan has been prepared in compliance with the provisions of the PPP Regulations, 2024, APERC (Framework for Resource Adequacy) Regulations, 2024, APERC (Demand Side Management) Regulations, 2024, APERC (Renewable Power Purchase Obligation and Its Compliance) Regulations, 2012 and further amendments thereof and based on an assessment of projected demand and energy requirement, anticipated power availability from allocated and committed sources, renewable purchase

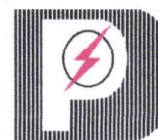


obligation requirements, and the projected demand-supply gap over the planning horizon.

Accordingly, it is submitted that the DoP has prepared its current Petition for Power Procurement Plan for the FY 2026-27 to FY 2035-36 based on the actual data for the period of last 4years i.e. FY 2022-23 to FY 2025-26.

The details of the same are discussed in the subsequent chapters:

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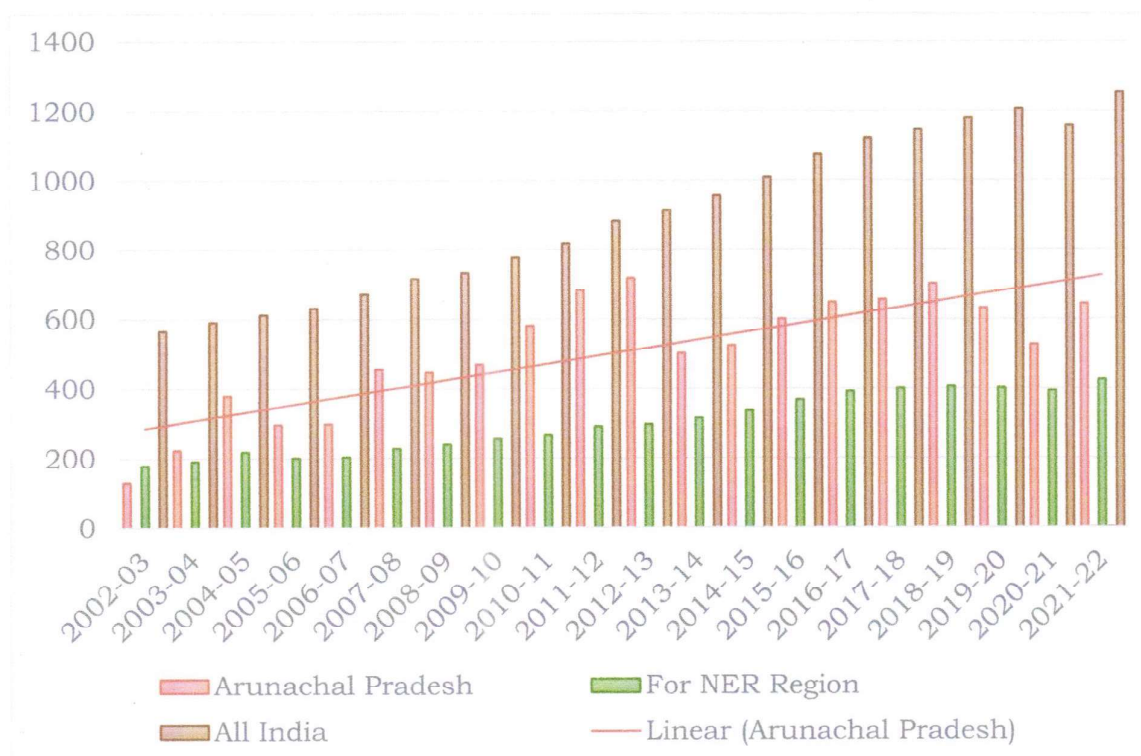


(2) Historical Power Position of Arunachal Pradesh

2.1 Per Capita Consumption of Arunachal Pradesh

It is submitted that the per capita electricity consumption serves as an important indicator of the level of electrification, economic activity, and electricity usage intensity within a State. The historical data published by the Central Electricity Authority (CEA) indicates that the per capita electricity consumption in Arunachal Pradesh has witnessed a significantly higher growth trajectory as compared to the entire North-Eastern Region (NER) and also the national average consumption. The graphical chart of per capita consumption within the state of Arunachal Pradesh compared to NER Region and All India basis are as follows:

Table 2-1: Per Capita Consumption from the period of FY 2002-03 to FY 2021-22 (in KWh)



The historical trend of per capita electricity consumption in Arunachal Pradesh for the period from FY 2002-03 to FY 2021-22 reveals a Compound Annual Growth Rate (CAGR) of 8.69%, as against of 4.63% for the North-Eastern Region (NER) region and 4.27% for all India basis. This indicates that the growth in electricity consumption in Arunachal Pradesh has substantially outpaced both the regional and national averages, reflecting increased electrification, expansion of consumer base, infrastructure development, and enhanced access to electricity across the State.

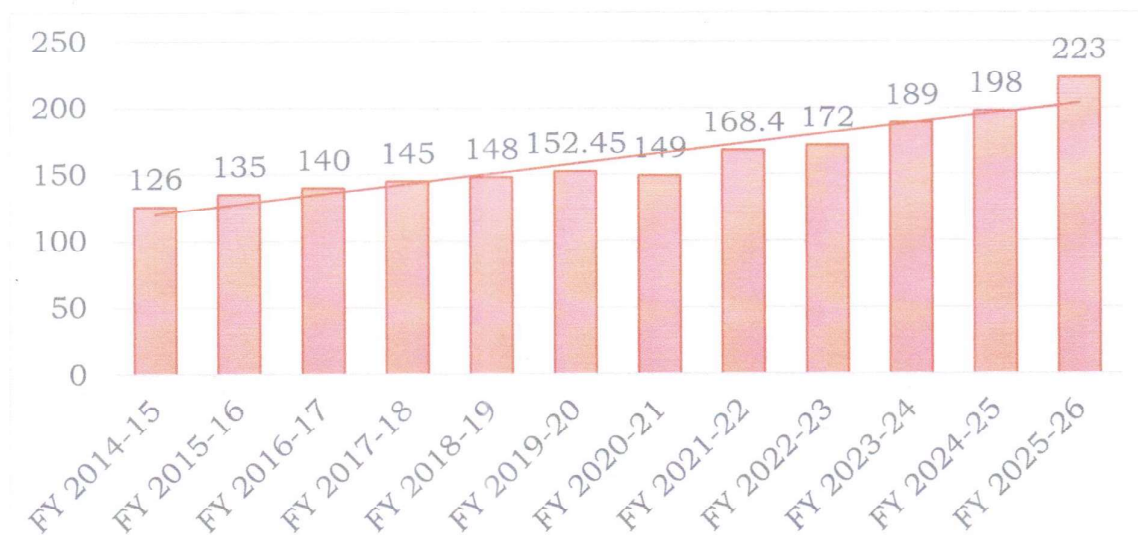


Further, it is submitted that the historical trend demonstrates a consistent increase in electricity consumption intensity within the State of Arunachal Pradesh and thereby substantiating the need for long-term power procurement planning to meet the anticipated growth of demand and energy requirement over the planning horizon.

2.2 Actual Peak Demand

The historical trend of actual peak demand met in the State of Arunachal Pradesh indicates a sustained increase in electricity demand over the years, reflecting growing economic activity, expansion of electrification, increase in consumer base, and rising electricity consumption across various sectors. The actual peak demand met in the State increased from 126 MW during FY 2014-15 to 223 MW in FY 2025-26, demonstrating a significant rise in system demand over the years. The year-wise details of the actual peak demand met in the State are provided in the following table:

Table 2-2: Year wise Actual demand met from FY 2014-15 to FY 2025-26 (in MW)



It is further submitted that the dip in demand during FY 2020-21 is attributable to the nationwide COVID 19 lockdown, during which industrial and commercial activities remained largely suspended. This temporary disruption led to suppressed electricity consumption and does not represent the State's underlying demand growth trend.

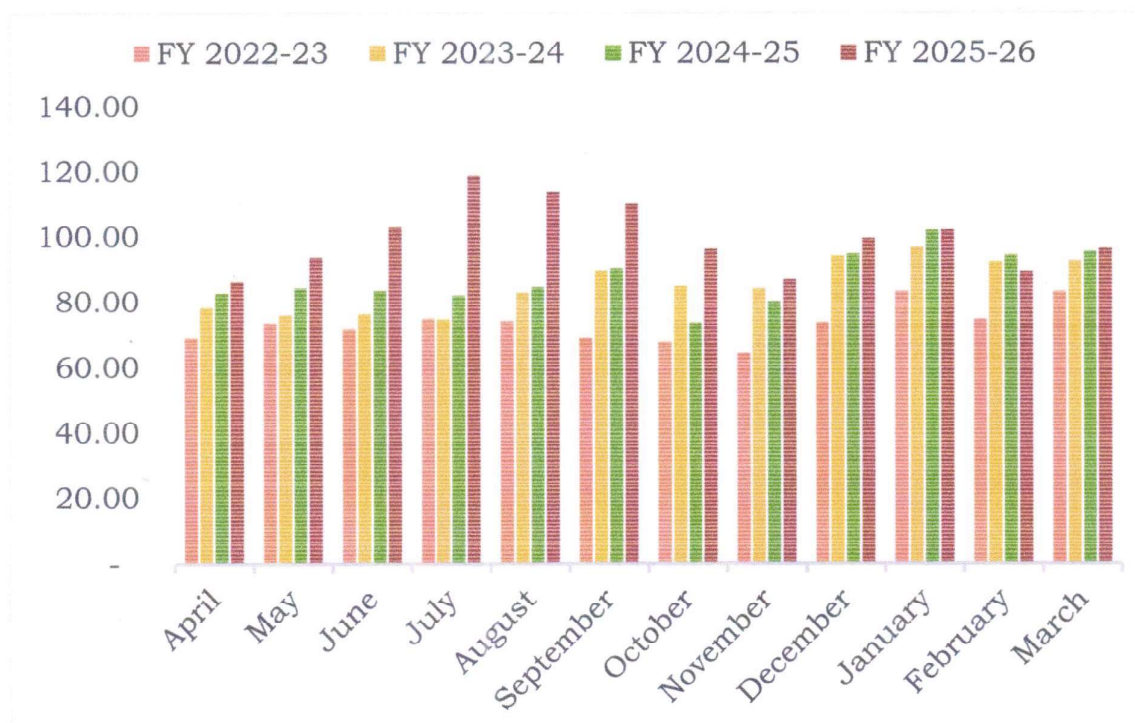
2.3 Actual Energy Drawal

It is submitted that the historical month-wise actual energy drawal of Arunachal Pradesh for the period from FY 2022-23 to FY 2025-26 indicates a gradual and sustained increase in electricity requirement across the State.



The month wise actual energy drawal for the period of FY 2022-23 to FY 2025-26 are as follows:

Table 2-3: Year wise Actual Energy drawal from FY 2022-23 to FY 2025-26 (in MU)



It is submitted that the above analysis of historical drawal pattern further reveals the progressive increase in actual energy drawal over the period. Further, the actual energy drawal of the State has registered a Compound Annual Growth Rate (CAGR) of approximately 10.8% during the aforesaid period, indicating a sustained growth trajectory in electricity requirement.

2.4 Actual Banking Schedule

It is submitted that the historical banking schedule of the Department of Power, Arunachal Pradesh, indicates a distinct seasonal pattern in banking transactions, characterized by both import and export of power depending upon the prevailing demand-supply scenario within the State. The analysis of month wise banking transactions for the period from FY 2022-23 to FY 2025-26 are as follows:


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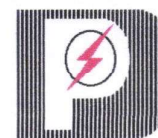
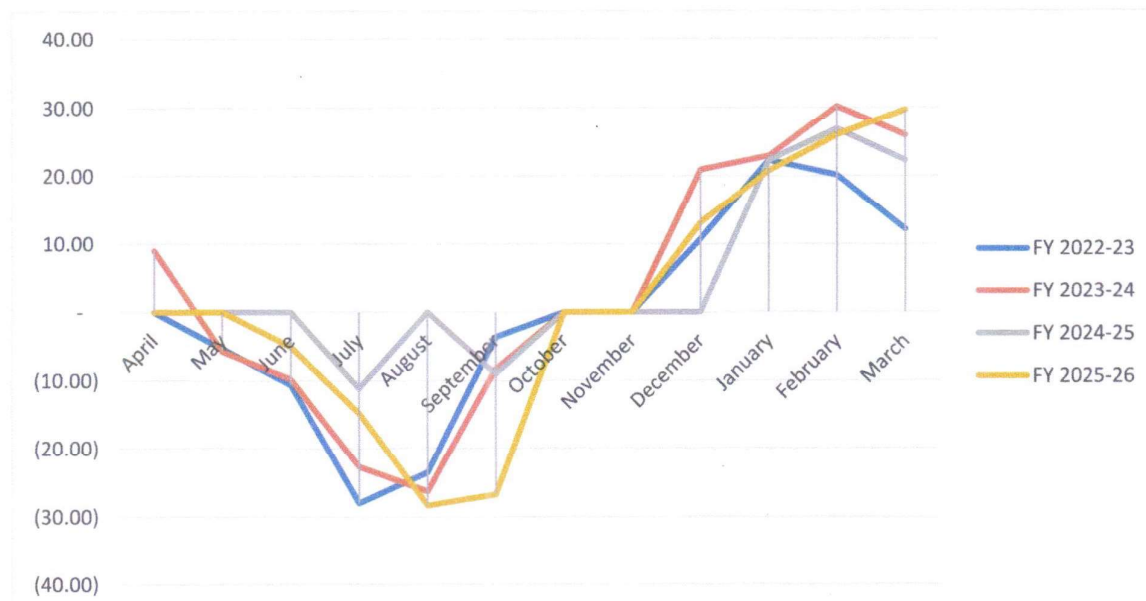


Table 2-4: Year wise Banking Schedule from FY 2022-23 to FY 2025-26 (in MU)



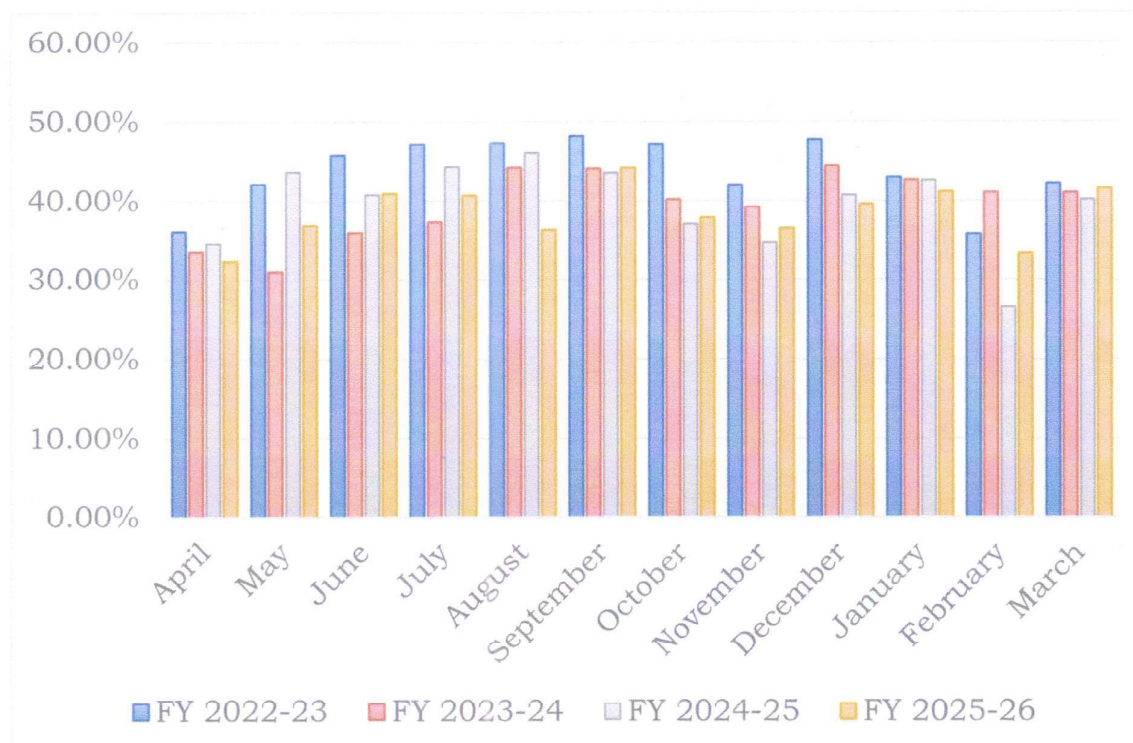
It is submitted that the above graph reveals that the State predominantly remained in a net export position during the monsoon months, while dependence on banked power import was observed during the winter and early summer months.

It is observed that during the months of June to September, the State generally exports surplus power, attributable to comparatively higher hydro power availability. Further, during the months of January to March, the State exhibited positive banking balances, signifying import of banked energy to meet system demand and maintain supply adequacy.

2.5 T&D Losses

It is submitted that the historical trend of Transmission and Distribution (T&D) Losses in Arunachal Pradesh for the period from FY 2022-23 to FY 2025-26 reflects variations across different months, indicating the influence of seasonal demand patterns, network loading conditions, and system operational factors. The analysis of month-wise T&D losses for the period of FY 2022-23 to FY 2025-26 are as follows:

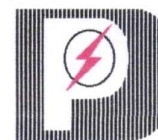
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**Table 2-5: Year wise Actual T&D Losses from FY 2022-23 to FY 2025-26 (in %)**

It is observed that T&D losses remained relatively higher during certain months, particularly coinciding with periods of increased system demand and network loading, while comparatively lower losses were recorded during selective months, reflecting operational and seasonal variations in the power system.

Further, it is submitted that the year wise T&D Losses for the FY 2022-23 to FY 2025-26 are 43.95%, 39.93%, 39.76% and 38.26% respectively which reflects the continued efforts towards reduction of system losses through strengthening of transmission and distribution infrastructure, network augmentation, and improved operational efficiency.


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(3) Assessment of Demand and Energy Requirement

Section 86 (I) (b) of the Electricity Act, 2003 stipulates that the State Commission shall regulate Electricity Purchase and Procurement process of distribution Licensees. Accordingly, the Hon'ble APERC has notified its APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024.

Further, Regulations 4.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that each Licensee shall submit its Demand and Energy Requirements on daily basis for the next 1 year (Short Term) and monthly basis for next 10 years (Long Term). The relevant extract is as follows:

"4.1. The Distribution Licensee (s) shall make an assessment of demand (MW) and energy requirement for peak and off peak period of the day for all the months of the year for next one year (short term) and for next ten years (Long term) on monthly basis. The demand and energy requirements shall be worked on peaking capacity (MW) and energy basis (MU)....."

In compliance of the above Regulations, the DoP, Arunachal Pradesh has prepared its Demand and Energy Requirements on daily basis for the next 1 year and monthly basis for the upcoming 10 years. The basis of the assessment of the same are discussed in the following para.

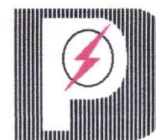
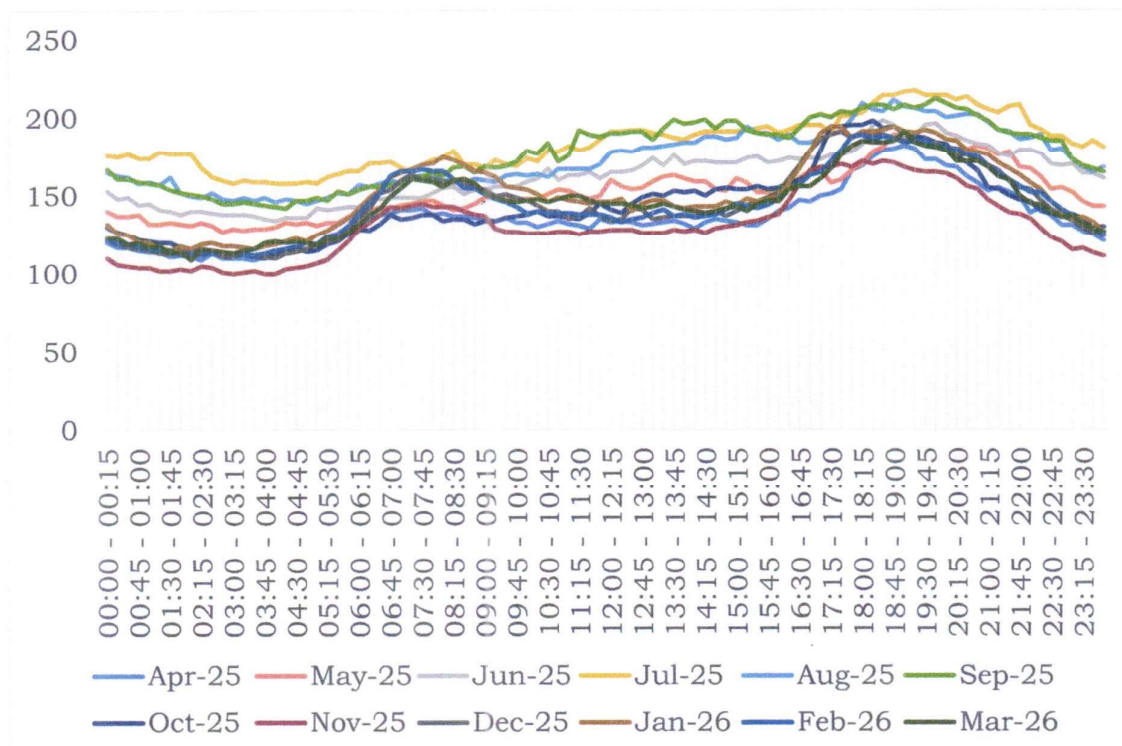
3.1. Load Duration Curve

Regulations 4.1 of the Arunachal Pradesh State Electricity Regulatory Commission (Power Purchase and Procurement Process of Licensee) Regulation, 2024 further provides that the forecast shall be done based on the load duration curve explicitly defining the base load and peak load. The relevant extract is as follows:

"..... The forecast shall be done based on load duration curve explicitly defining the base load and peak load in such a way that unrestricted 24 hours supply of adequate and uninterrupted Power can be ensured to all categories of consumers....."

Based on the said Regulations, the month wise Load duration curve for the FY 2025-26 is as follows:


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**Table 3-1: Month wise Load Curve for the FY 2025-26 (in MW)**

Based on the above chart, it is submitted that the day-time peak load observed between 6:00 AM to 9AM and Evening Peak between 6:30PM to 8:00 PM.

3.2. Demand Forecast

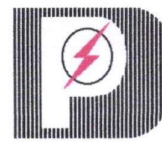
Regulations 4.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that each Licensee shall submit its Demand forecast on daily basis for the next 1 year (Short Term) and monthly basis for next 10 years (Long Term).

Further, Regulation 4.3 and 4.5 provides the consideration factors while making the forecast of demand. The relevant extracts are as follows:

"4.3. While making forecast, Licensee(s) shall also take into consideration the following along with other relevant factors-

- i. Weather forecast and seasonal variations.*
- ii. Overall economic growth projections.*
- iii. Likely impact of implementation of Demand Side Management Regulations.*
- iv. Projected efficiency gains due to implementation of T and D loss reduction initiatives and other improvement Programs.*

.....



4.5. The Distribution Licensee (s) shall also be guided by the methodology adopted in the latest Electricity Power Survey of Central Electricity Authority (CEA) for the Arunachal Pradesh.

It is submitted that the Central Electricity Authority (CEA) has published its 20th EPS Report on November 2022. Therefore, the DOP, Arunachal Pradesh has considered the same for projection of the demand and energy requirements for the FY 2026-27 to FY 2035-36.

Based on the above, the day wise demand projections for the FY 2026-27 are as follows:

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Table 3-2: Day wise Load forecast for the FY 2026-27 (in MW)

Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
1	167	166	159	194	200	202	168	153	167	163	163	181
2	166	162	162	193	197	202	170	143	166	177	185	181
3	170	166	164	195	181	209	173	161	174	183	184	183
4	170	177	171	187	187	193	163	162	176	186	184	166
5	160	177	180	187	199	199	170	156	176	175	181	166
6	172	172	183	180	204	198	177	158	182	194	172	174
7	170	168	184	207	195	196	164	159	173	188	163	171
8	174	177	189	199	189	185	183	158	181	184	156	179
9	170	184	181	176	193	191	173	156	173	182	185	173
10	161	180	187	206	181	190	156	157	180	178	189	183
11	159	172	176	201	184	203	165	166	181	174	186	185
12	163	177	189	191	195	195	169	152	180	186	184	171
13	162	176	189	199	198	191	176	163	175	184	177	160
14	169	169	189	182	206	192	174	159	170	180	180	166
15	168	148	196	199	194	187	179	162	170	180	178	170
16	150	146	172	194	204	179	176	167	179	177	173	166
17	167	140	176	207	202	176	174	164	183	183	169	160
18	175	154	181	200	200	188	169	171	184	182	182	171
19	173	170	177	196	204	198	162	169	183	185	175	164
20	164	148	171	202	199	185	164	172	173	186	174	172
21	163	148	179	211	192	202	166	167	180	183	182	175
22	160	179	183	210	192	208	173	170	175	186	185	170
23	146	165	167	211	202	190	198	162	184	183	176	173



Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
24	138	189	144	214	192	197	172	165	176	188	185	169
25	137	168	185	213	199	212	169	157	177	177	182	174
26	158	184	185	213	198	208	168	166	182	181	180	180
27	159	180	198	206	211	199	168	172	181	186	182	178
28	161	185	188	216	187	203	174	158	174	189	186	191
29	171	174	185	214	174	206	164	171	191	180	-	168
30	182	136	187	223	168	196	166	170	186	185	-	174
31	-	136	-	209	192	-	162	-	169	182	-	178
Peak Demand	182	189	198	223	211	212	198	172	191	194	189	191

Further, Regulation 4.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that the DoP also needs to file its demand for the upcoming 10 years on monthly basis. Accordingly, the month wise projection of demand for the FY 2027-28 to FY 2035-36 are as follows:

Table 3-3: Month wise Load forecast for the FY 2027-28 to FY 2035-36 (in MW)

Months	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
April	190.98	200.77	211.38	221.17	230.15	241.45	253.31	265.75	278.79
May	198.32	208.49	219.51	229.68	239.00	250.74	263.05	275.97	289.52
June	207.77	218.42	229.96	240.62	250.39	262.68	275.58	289.11	303.30
July	234.00	246.00	259.00	271.00	282.00	295.85	310.37	325.61	341.60
August	221.41	232.76	245.06	256.42	266.83	279.93	293.67	308.09	323.22
September	222.46	233.87	246.22	257.63	268.09	281.25	295.06	309.55	324.75
October	207.77	218.42	229.96	240.62	250.39	262.68	275.58	289.11	303.30
November	180.48	189.74	199.77	209.02	217.51	228.19	239.39	251.14	263.48
December	200.42	210.70	221.83	232.11	241.53	253.39	265.83	278.89	292.58

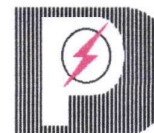


Power Procurement Plan for FY 2026-27 to FY 2035-36

Months	FY 2027- 28	FY 2028- 29	FY 2029- 30	FY 2030- 31	FY 2031- 32	FY 2032- 33	FY 2033- 34	FY 2034- 35	FY 2035- 36
January	203.57	214.01	225.32	235.76	245.33	257.37	270.01	283.27	297.18
February	198.32	208.49	219.51	229.68	239.00	250.74	263.05	275.97	289.52
March	200.42	210.70	221.83	232.11	241.53	253.39	265.83	278.89	292.58
Peak Demand	234.00	246.00	259.00	271.00	282.00	295.85	310.37	325.61	341.60

Therefore, it is requested to the Hon'ble Commission to kindly consider the same and approve the demand forecast as claimed by the DoP, Arunachal Pradesh.

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Department of Power, Itanagar



3.3. Load Factor

It is respectfully submitted that the energy requirement is intrinsically linked with the peak demand and the duration for which such demand is sustained, Therefore, for realistic estimation of the energy requirement over the period, an appropriate load factor needs to be considered.

It is respectfully submitted that, for the purpose of estimation of the future energy requirement, the DoP, Arunachal Pradesh has considered the load factor trajectory in line with the 20th Electric Power Survey (EPS) Report of the Central Electricity Authority (CEA). The year wise load factor considered for computation of the energy requirement for the FY 2026-27 to FY 2035-36 are as follows:

Table 3-4: Load Factor for the FY 2026-27 to FY 2035-36 (in %)

Sl. No.	Financial Year	Load Factor (20 th EPS)
1	FY 2026-27	56.15%
2	FY 2027-28	55.93%
3	FY 2028-29	55.87%
4	FY 2029-30	55.75%
5	FY 2030-31	55.68%
6	FY 2031-32	55.45%
7	FY 2032-33	55.22%
8	FY 2033-34	54.99%
9	FY 2034-35	54.77%
10	FY 2035-36	54.54%

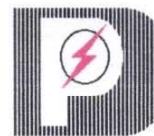
Therefore, it is requested to the Hon'ble Commission to kindly consider the same and approve the load factor as claimed by the DoP, Arunachal Pradesh.

3.4. T&D Losses

The DoP, Arunachal Pradesh respectfully submits that it has also considered the T&D Losses in line with the 20th EPS report prepared by the CEA for computation of the Ex-bus Energy requirement for the FY 2026-27 to FY 2035-36. The year wise details of T&D Losses considered by the DoP, Arunachal Pradesh are as follows:

Table 3-5: T&D Losses for the FY 2026-27 to FY 2035-36 (in %)

Sl. No.	Financial Year	T&D Losses (20 th EPS)
1	FY 2026-27	37.88%
2	FY 2027-28	36.25%



Sl. No.	Financial Year	T&D Losses (20 th EPS)
3	FY 2028-29	34.63%
4	FY 2029-30	33.04%
5	FY 2030-31	31.49%
6	FY 2031-32	29.97%
7	FY 2032-33	28.52%
8	FY 2033-34	27.15%
9	FY 2034-35	25.84%
10	FY 2035-36	24.59%

Further, the DoP, Arunachal Pradesh also submits that it has also considered the loss reduction initiatives while projecting the T&D Losses for the FY 2026-27 to FY 2035-36. Accordingly, the DoP requests the Hon'ble Commission to kindly consider the same and approve the T&D Losses as claimed.

3.5. Energy Forecast

Regulations 4.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 also provides that t Licensee shall submit its energy requirements on daily basis for the next 1 year (Short Term) and monthly basis for next 10 years (Long Term).

In line of the above provisions, the DoP, Arunachal Pradesh has computed the total energy requirements for the FY 2026-27 to FY 2035-36.

Further, it has also considered the Load Factor and T&D Losses for the FY 2026-27 to FY 2035-36 for computation of the net Ex-bus energy requirement for the period of FY 2026-27 to FY 2035-36.

Based on the above, the day wise Ex-Bus energy requirements for the FY 2026-27 are as follows:

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Table 3-6: Day wise Ex-Bus Energy Requirement for the FY 2026-27 (in MU)

Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
1	2.792	2.967	2.455	3.223	3.577	3.622	2.813	2.662	2.829	2.946	2.849	3.014
2	2.693	2.634	2.895	3.290	3.428	3.646	2.879	2.481	2.852	3.014	3.086	3.034
3	2.810	2.778	2.886	3.412	3.130	3.886	2.935	2.583	2.890	3.012	3.055	3.017
4	2.885	2.840	3.139	3.322	3.325	3.639	2.819	2.650	2.971	3.099	3.055	2.799
5	2.636	2.940	3.084	3.313	3.520	3.517	2.706	2.599	2.917	2.988	2.800	2.841
6	2.344	2.931	3.276	3.157	3.655	2.768	2.976	2.537	2.924	3.333	2.905	2.859
7	2.810	2.743	3.204	3.421	3.548	3.386	2.879	2.606	2.947	3.206	2.736	2.794
8	2.813	2.949	3.262	3.543	3.440	3.286	3.135	2.475	3.053	3.128	2.811	2.991
9	2.774	3.025	3.375	3.321	3.234	3.313	2.976	2.571	2.833	3.105	2.959	2.808
10	3.090	2.925	3.438	3.485	3.315	3.366	2.933	2.512	3.031	2.907	3.022	3.052
11	2.439	2.717	3.329	3.578	3.261	3.520	2.829	2.711	3.084	2.982	3.172	3.103
12	2.668	2.922	3.485	3.514	3.390	3.609	2.904	2.648	3.057	3.072	3.122	2.825
13	2.791	2.880	3.528	3.778	3.273	3.080	3.001	2.784	2.946	2.991	3.040	2.869
14	2.780	2.847	3.331	3.588	3.555	3.334	3.033	2.609	2.956	3.064	2.761	2.782
15	2.825	2.331	3.343	3.319	3.562	3.190	3.028	2.717	2.890	3.027	2.885	2.884
16	2.546	2.393	3.071	3.530	3.723	3.170	2.797	2.596	2.970	2.947	2.909	2.710
17	2.428	2.354	3.151	3.715	3.582	3.126	2.962	2.639	3.013	3.107	2.896	2.663
18	2.833	2.580	3.221	3.640	3.735	3.308	2.873	2.800	3.021	3.058	3.036	2.779
19	2.847	2.681	3.222	3.516	3.617	3.517	2.822	2.780	3.044	3.109	3.052	2.924
20	2.703	3.065	3.162	3.647	3.474	3.065	2.787	2.788	3.065	3.126	2.961	2.938
21	2.778	2.417	3.175	3.716	3.016	3.466	2.871	2.774	3.025	3.118	3.051	2.788
22	2.609	2.875	3.255	3.892	3.448	3.786	2.864	2.826	2.932	3.119	3.022	2.571
23	2.534	3.016	3.005	3.983	3.361	3.498	2.957	2.788	3.092	3.107	3.106	2.826
24	2.301	3.135	3.115	4.013	3.402	3.350	2.806	2.810	3.115	3.095	3.124	3.115



Power Procurement Plan for FY 2026-27 to FY 2035-36

Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
25	2.311	3.063	3.041	3.653	3.467	3.776	2.734	3.113	3.090	3.077	2.983	3.047
26	2.373	3.200	3.379	3.788	3.614	3.798	3.190	2.786	3.085	3.101	2.962	3.009
27	2.546	3.078	3.406	3.590	3.641	3.116	3.116	2.735	2.980	3.115	3.042	3.024
28	2.759	3.243	3.297	3.727	3.483	3.464	2.883	3.185	3.031	3.105	2.943	3.101
29	2.922	3.235	3.245	3.695	3.278	3.734	2.839	2.730	3.128	3.093	-	2.990
30	2.980	2.686	3.410	3.813	2.822	3.475	2.778	2.745	3.114	3.139	-	2.900
31	-	2.080	-	3.776	3.203	-	2.774	-	3.069	3.030	-	2.987
Total Requirement	80.6	87.53	96.18	110.9	106.0	102.8	89.8	81.2	92.9	95.3	83.3	90.04
	23	2	7	60	82	11	99	39	54	22	45	5

Further, Regulation 4.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that the DoP also needs to file its Energy requirement for the upcoming 10 years on monthly basis. Accordingly, the month wise Ex-bus energy requirement for the FY 2027-28 to FY 2035-36 are as follows:

Table 3-7: Month wise Ex-bus energy requirement for the FY 2027-28 to FY 2035-36 (in MU)

Months	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
April	84.45	88.56	93.04	97.22	100.83	104.58	108.46	112.48	116.66
May	91.69	96.15	101.01	105.56	109.47	113.54	117.75	122.12	126.66
June	100.75	105.66	111.00	115.99	120.30	124.76	129.39	134.20	139.18
July	115.41	121.89	128.05	133.81	137.81	143.93	149.27	154.81	159.44
August	110.12	116.53	122.42	127.93	131.48	137.60	142.71	148.00	152.12
September	106.69	112.94	118.64	123.98	127.39	133.36	138.31	143.44	147.38
October	93.16	98.75	103.74	108.41	111.24	116.61	120.94	125.43	128.70
November	84.09	89.24	93.75	97.97	100.41	105.38	109.29	113.34	116.17
December	96.36	102.11	107.27	112.09	115.06	120.57	125.05	129.69	133.12



Power Procurement Plan for FY 2026-27 to FY 2035-36

Months	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
January	99.85	104.71	110.00	114.95	119.22	123.64	128.23	132.99	137.93
February	93.11	91.55	96.18	100.51	111.18	108.11	112.12	116.28	128.62
March	94.32	98.91	103.91	108.59	112.62	116.80	121.13	125.63	130.29
Total Energy Requirements	1170.00	1227.00	1289.00	1347.00	1397.00	1448.86	1502.64	1558.41	1616.26

Therefore, it is requested to the Hon'ble Commission to kindly consider the same and approve the demand forecast as claimed by the DoP, Arunachal Pradesh.

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Department of Power, Itanagar



(4) Assessment of the Availability & Surplus/(Deficit)

Regulation 5.1 provides that the licensees shall project its availability of power from different sources for peak and off-peak periods of the day for all the months of the next 1 year (Short term) and month wise for the next 10 years (Long Term).

It is submitted that the DoP, Arunachal Pradesh has prepared its availability of energy based on the existing PPAs along with all the upcoming projects. The details of the same are discussed below.

4.1 Existing Allocation of Power

It is respectfully submitted that the DoP, Arunachal Pradesh has been dependent primarily on Central Sector Generating Stations (CGS) for meeting its firm long-term power requirement. These allocations consist of a combination of firm share (allocated MW) and free power from specific hydro projects. All together, they constitute the State's long-term assured supply portfolio. The total combined long-term availability from CGS sources amounts to 294.16 MW, comprising 160.36 MW of firm share and 133.80 MW of free power from hydro stations. This has remained largely unchanged over recent years except for operational variations due to outages, hydrology and seasonal constraints.

Further, it is also submitted that the DoP, Arunachal Pradesh also has allocation/PPAs from the State-Owned Hydro Projects and Independent Power Producers (IPPs) within the State. However, it is submitted that the generation from these projects remains seasonal and limited over the past periods, therefore the DoP, Arunachal Pradesh at this stage has not considered these projects as firm round-the-clock long-term sources.

The details of the existing Allocation of Power for DoP, Arunachal Pradesh are as tabulated below:

Table 4-1: Source wise Allocation of Power for DoP (in MW)

Sl. No.	Generating Station	Installed Capacity (MW)	AP DoP Firm Share (MW)	AP DoP Free Power (MW)	Total Long Term Availability (MW)
1	Loktak (NHPC)	105.00	5.19	-	5.19
2	Kopili-I (NEEPCO)	200.00	10.38	-	10.38
3	Kopili-II (NEEPCO)	25.00	1.50	-	1.50
4	Khandong (NEEPCO)	46.00	1.93	-	1.93
5	Panyor Lower (NEEPCO)	405.00	26.16	48.60	74.76



Sl. No.	Generating Station	Installed Capacity (MW)	AP DoP Firm Share (MW)	AP DoP Free Power (MW)	Total Long Term Availability (MW)
6	Doyang (NEEPCO)	75.00	5.14	-	5.14
7	Pare (NEEPCO)	110.00	6.46	13.20	19.66
8	Kameng (NEEPCO)	600.00	10.98	72.00	82.98
8	Lower Subansiri HEP	2,000.00	37.51	-	37.51
8	AGBPP (NEEPCO)	291.00	16.56	-	16.56
10	AGTCCPP (NEEPCO)	135.00	9.05	-	9.05
11	Palatana (OTPC)	726.60	22.02	-	22.02
12	BgTPP (NTPC)	750.00	38.48	-	38.48
13	Farakka (NTPC)	1,600.00	3.04	-	3.04
14	Kahalgaoon (NTPC)	840.00	1.60	-	1.60
15	Talcher (NTPC)	1,000.00	1.90	-	1.90
16	Total	8,908.60	197.90	133.80	331.70

It is respectfully submitted that the Subansiri Lower Hydro Electric Project (2,000 MW) being developed by the NHPC, in which Arunachal Pradesh is expected to receive 34.68 MW as its allocated share including 12% free power. However, as per the communication from the Govt. of AP the DoP currently is not entitled to receive any free power from the Subansiri Lower HEP. Therefore, the DoP has not considered the 12% of free power for computation of the Surplus/(Gap) of Power availability and Demand for upcoming years.

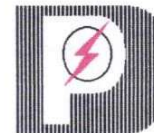
Accordingly, it is requested to the Hon'ble Commission to kindly consider the same.

4.2 State owned Generations/IPPs

The DoP, Arunachal Pradesh respectfully submits that it has also received the energy from the State-owned generating stations/IPPs (i.e. Sambachu(HPDCL), DHPD Generation, Dikshi Generation, Khantang HEP, and Solar & Diesel generations), which primarily cater to the electricity demand within the State. The month wise details of the energy received from the State-owned generations are as follows:

Table 4-2: Details of Energy received from State-owned Generation (in MU)

Months	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
April	8.40	7.42	7.36	12.41
May	9.58	8.08	14.89	15.33
June	12.39	9.82	16.73	17.97
July	16.01	14.94	23.75	20.76
August	17.60	22.04	24.88	22.39
September	12.08	16.92	20.98	21.39



Months	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
October	12.69	14.67	24.27	17.07
November	11.94	10.56	15.04	15.72
December	8.84	8.72	13.04	13.17
January	6.65	7.87	9.87	10.13
February	4.55	7.27	9.59	7.84
March	4.53	8.16	12.39	10.65
Total	125.26	136.48	192.79	184.84

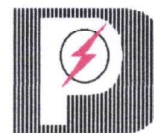
Further, it is submitted that the power and energy available from these generating stations are first utilized to meet the State's own demand and energy requirements, and any residual demand-supply gap is subsequently met through allocations from other sources like Central Generating Stations (CGSs), long-term power purchase arrangements, and short-term procurement, as may be required.

It is pertinent to mention that the historical and projected peak demand as well as energy requirement considered in the present Power Procurement Plan have been assessed at the State periphery, where the State's drawal from the Inter-State Transmission System (ISTS) is metered. Since the generation from the State-owned RE generating stations is consumed within the State distribution network and is not reflected at the State periphery metering point, its contribution is inherently embedded in the State's demand-supply balance and therefore, is not separately accounted for in the computation of peak demand and ex-bus energy requirement.

Accordingly, for the purpose of maintaining methodological consistency and avoiding double accounting, the availability from State-owned generating stations/IPPs has not been considered separately while assessing the projected demand and availability in terms of power and energy requirements and availability under this instant petition.

4.3 Upcoming Generating Stations

It is respectfully submitted that the State of Arunachal Pradesh has several upcoming hydroelectric projects under various stages of development, including State-owned projects, Independent Power Producers (IPPs), and large Central/Joint Venture (JV) projects. These projects represent the State's primary long term resource potential and will play a critical role in meeting the future peak energy requirements arising from industrial, institutional and infrastructure expansion. However, most of these projects are run-of-river (RoR) schemes with seasonal generation characteristics, and their commissioning timelines depend heavily on hydrology, land availability, forest clearances, and infrastructure connectivity. Therefore, while these projects contribute meaningfully to the State's long-term resource adequacy, their ability to provide firm, round-the-clock, dependable MW must be assessed



carefully. The details of the upcoming projects along with their projected Commercial date of Operation (CoD) are as tabulated below:

Table 4-3: Upcoming Power Projects and allocation of DoP (in MW)

SL. NO.	Name of Project	Installed Capacity (MW)	DoP, AP Contracted Capacity (MW)	Expected Commissioning Year
1	Pareng HEP	14.5	14.5	Mar-27
2	Keyi HEP	23.0	23.0	Mar-28
3	Yameng HEP	15.0	15.0	Mar-28
4	Halaipani HEP	16.0	16.0	Jun-28
5	Dengzi HEP	10.0	10.0	Dec-28
6	9 MW Paikangrong SHEP	9.00	9.00	Dec-28
7	Ressing HEP	12.0	12.0	Mar-29
8	500KW Tidal Power Plant, Lohit River	0.5	0.5	Mar-29
9	24.60 MW Kamlang Small HEP	24.60	24.60	Apr-29
10	66 MW Khuitam HEP	66.00	66.00	Dec-29
11	Dibri HEP	3.2	3.2	-
12	Dipre HEP	6.5	6.5	-
13	Total	200.30	200.30	

It is respectfully submitted that the Dibri HEP and Dipre HEP project has been delayed, and there is no such certainty of CoD of the Project in the near future. Therefore, the DoP, Arunachal Pradesh has not considered the same while computing the available power.

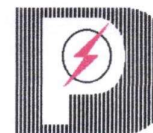
The DoP, Arunachal Pradesh submits the details of CoD for each project as **Annexure – 1** for kind consideration of the Hon'ble Commission.

Accordingly, the DoP, Arunachal Pradesh requests the Hon'ble Commission to kindly consider the same and approve the power availability as claimed by the DoP.

4.4 Surplus/(Deficit) in terms of Power Demand & Availability

Based on the Demand and Availability of power, the DoP, Arunachal Pradesh has computed its Surplus/(Deficit) for the FY 2026-27 to FY 2035-36. The year wise details of the same are as tabulated below:

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**Table 4-4: Surplus/(Deficit) in terms of Availability of Power (in MW)**

Sl. No.	Financial Year	Peak Demand (In MW) (20 th EPS)	Total Long-Term Availability (MW)	Surplus/(Deficit) (MW)
1	FY 2026-27	223.00	346.20	123.20
2	FY 2027-28	234.00	384.20	150.20
3	FY 2028-29	246.00	431.70	185.70
4	FY 2029-30	259.00	522.30	263.30
5	FY 2030-31	271.00	522.30	251.30
6	FY 2031-32	282.00	522.30	240.30
7	FY 2032-33	295.85	522.30	226.45
8	FY 2033-34	310.37	522.30	211.93
9	FY 2034-35	325.61	522.30	196.69
10	FY 2035-36	341.60	522.30	180.70

Based on the above, it is respectfully submitted that if the CoD of the IPP's has been taken place as per their expected CoD submitted by the developer, then there is a surplus in terms of availability from the FY 2026-27 to FY 2035-36.

Further, it is also submitted that DoP, Arunachal Pradesh has only 92.65 MW of firm Power from Thermal Power Generating Stations (i.e. AGBPP, AGTCCPP, Palatana, BGTPP, Farakka, Kahalgaon and Talcher). which contributes only 27.93% of the existing availability of power to the DoP. Therefore, the existing sources are not sufficient enough during off-monsoon period to meet the DoP's power requirement.

Therefore, it is requested to the Hon'ble Commission to kindly consider the same and approve the availability of demand as computed by the DoP, Arunachal Pradesh.

4.5 Availability of Energy

It is respectfully submitted that the DoP has very limited (31.49% of existing long-term allocation) firm power from the Thermal Power Plant. Therefore, the actual availability of energy from the existing sources are also very limited. The details of the actual energy Available from the existing sources from FY 2022-23 to FY 2025-26 are as tabulated below:

**Table 4-5: Actual available Energy from FY 2022-23 to FY 2025-26 (in MU)**

Particulars	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Allocation (MW)	294.19	294.19	294.19	294.19
Energy Available	2577.10	2577.10	2577.10	2577.10
Actual Drawal	879.02	1,022.23	1,048.06	1,195.54
IEX Purchase	6.15	23.19	42.61	66.21
Net Actual Drawal	872.87	999.04	1,005.45	1,129.34
% of Actual Availability	33.87%	38.77%	39.01%	43.82%
Average				38.87%

Therefore, the DoP has considered the average of actual availability of power from the existing sources and accordingly computed the available energy for the next 1 year (Short Term) and for the next 10 years (Long Term).



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The details of day wise available energy for the FY 2026-27 are tabulated below:

Table 4-6: Day wise Available Energy for the FY 2026-27 (in MU)

Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
1	2.946	3.131	2.591	3.402	3.775	3.823	2.968	2.809	2.985	3.109	3.006	3.181
2	2.842	2.779	3.055	3.472	3.617	3.848	3.038	2.618	3.010	3.181	3.257	3.202
3	2.966	2.932	3.046	3.600	3.303	4.101	3.097	2.726	3.050	3.178	3.224	3.183
4	3.045	2.997	3.313	3.506	3.509	3.841	2.975	2.797	3.136	3.271	3.224	2.954
5	2.782	3.102	3.254	3.496	3.715	3.712	2.856	2.743	3.078	3.154	2.954	2.998
6	2.474	3.093	3.457	3.331	3.857	2.921	3.140	2.677	3.086	3.517	3.065	3.017
7	2.966	2.895	3.381	3.610	3.745	3.573	3.038	2.750	3.109	3.383	2.887	2.948
8	2.969	3.112	3.442	3.739	3.630	3.468	3.309	2.612	3.221	3.301	2.966	3.157
9	2.927	3.193	3.562	3.505	3.413	3.496	3.141	2.713	2.990	3.276	3.122	2.964
10	3.260	3.086	3.628	3.677	3.499	3.552	3.095	2.651	3.198	3.068	3.189	3.220
11	2.574	2.867	3.513	3.776	3.442	3.715	2.985	2.861	3.255	3.146	3.348	3.275
12	2.815	3.084	3.677	3.708	3.578	3.808	3.065	2.795	3.226	3.242	3.295	2.982
13	2.946	3.039	3.723	3.987	3.454	3.251	3.167	2.938	3.108	3.157	3.209	3.027
14	2.934	3.005	3.515	3.787	3.752	3.518	3.201	2.753	3.120	3.233	2.913	2.936
15	2.982	2.460	3.528	3.502	3.759	3.367	3.195	2.867	3.050	3.195	3.045	3.044
16	2.687	2.526	3.241	3.726	3.929	3.345	2.951	2.740	3.135	3.110	3.070	2.860
17	2.562	2.484	3.326	3.921	3.780	3.299	3.126	2.785	3.180	3.279	3.056	2.810
18	2.989	2.722	3.399	3.842	3.941	3.491	3.031	2.955	3.188	3.227	3.204	2.933
19	3.004	2.830	3.400	3.710	3.817	3.711	2.978	2.933	3.212	3.281	3.221	3.086
20	2.853	3.235	3.337	3.848	3.666	3.235	2.941	2.943	3.235	3.299	3.124	3.101
21	2.932	2.550	3.351	3.922	3.183	3.658	3.030	2.927	3.192	3.290	3.220	2.942
22	2.753	3.034	3.435	4.107	3.638	3.996	3.022	2.982	3.094	3.292	3.190	2.713
23	2.674	3.182	3.171	4.203	3.547	3.692	3.120	2.942	3.263	3.279	3.278	2.983



Power Procurement Plan for FY 2026-27 to FY 2035-36

Date	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Jan-27	Feb-27	Mar-27
24	2.428	3.309	3.288	4.235	3.590	3.536	2.961	2.965	3.288	3.266	3.297	3.288
25	2.439	3.233	3.209	3.855	3.659	3.985	2.885	3.285	3.261	3.247	3.147	3.215
26	2.505	3.377	3.566	3.998	3.814	4.008	3.367	2.940	3.255	3.273	3.125	3.176
27	2.687	3.248	3.594	3.788	3.842	3.288	3.288	2.886	3.145	3.287	3.210	3.191
28	2.911	3.423	3.479	3.933	3.675	3.655	3.043	3.361	3.199	3.277	3.105	3.272
29	3.084	3.414	3.424	3.900	3.459	3.940	2.996	2.880	3.301	3.264	-	3.156
30	3.144	2.834	3.598	4.024	2.978	3.667	2.932	2.896	3.286	3.313	-	3.061
31	-	2.195	-	3.985	3.380	-	2.927	-	3.238	3.198	-	3.153
Total Available	85.08 0	92.37 1	101.5 05	117.0 95	111.9 48	108.4 96	94.87 0	85.73 1	98.09 3	100.5 93	87.95 3	95.02 4

Further, Regulation 5.1 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that the DoP needs to submit the month wise available energy for the next 10 years. Accordingly, the month wise available energy from FY 2027-28 to FY 2035-36 are tabulated below:

Table 4-7: Month wise Available Energy for the FY 2027-28 to FY 2035-36 (in MU)

Months	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
April	94.42	106.09	128.36	128.36	128.36	128.36	128.36	128.36	128.36
May	102.51	115.18	139.36	139.36	139.36	139.36	139.36	139.36	139.36
June	112.65	126.57	153.14	153.14	153.14	153.14	153.14	153.14	153.14
July	129.14	146.01	176.66	176.66	175.56	176.66	176.66	176.66	175.56
August	123.24	139.59	168.89	168.89	167.53	168.89	168.89	168.89	167.53
September	119.40	135.29	163.68	163.68	162.32	163.68	163.68	163.68	162.32
October	104.28	118.30	143.13	143.13	141.77	143.13	143.13	143.13	141.77
November	94.14	106.90	129.34	129.34	127.98	129.34	129.34	129.34	127.98



Power Procurement Plan for FY 2026-27 to FY 2035-36

Months	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
December	107.86	122.32	147.99	147.99	146.63	147.99	147.99	147.99	146.63
January	111.63	125.44	151.76	151.76	151.76	151.76	151.76	151.76	151.76
February	103.42	109.67	132.69	132.69	140.59	132.69	132.69	132.69	140.59
March	105.45	118.49	143.36	143.36	143.36	143.36	143.36	143.36	143.36
Total Energy Available	1308.14	1469.87	1778.35	1778.35	1778.35	1778.35	1778.35	1778.35	1778.35

Accordingly, the DoP, Arunachal Pradesh requests the Hon'ble Commission to kindly consider the same and approve the available energy as computed by the DoP.

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4.6 Surplus/(Deficit) in terms of Energy Requirement & Availability

Based on the Energy requirements and Availability, the DoP, Arunachal Pradesh has computed its surplus/(deficit) of energy for the FY 2026-27 to FY 2035-36. The year wise summary of the same are as tabulated below:

Table 4-8: Surplus/(Deficit) in terms of Energy Requirement and Availability (in MU)

Sl. No.	Financial Year	Ex-Bus Energy Requirement	Available Energy from Long term Allocations	Surplus/(Deficit)
1	FY 2026-27	1,117.00	1,178.76	61.76
2	FY 2027-28	1,170.00	1,308.14	138.14
3	FY 2028-29	1,227.00	1,469.87	242.87
4	FY 2029-30	1,289.00	1,778.35	489.35
5	FY 2030-31	1,347.00	1,778.35	431.35
6	FY 2031-32	1,397.00	1,778.35	381.35
7	FY 2032-33	1,448.86	1,778.35	329.50
8	FY 2033-34	1,502.64	1,778.35	275.72
9	FY 2034-35	1,558.41	1,778.35	219.94
10	FY 2035-36	1,616.26	1,778.35	162.09

It is respectfully submitted that the state has the energy surplus throughout the period of FY 2026-27 to FY 2035-36.

However, it is submitted that the available energy computed based on the Lower Subansiri HEP and other upcoming HEP's. Therefore, delay in the CoD may affect the available energy during the year.

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(5) Power Procurement Plan

Regulation 6 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024 provides that on the basis of deficit in terms of demand/energy forecast and availability, the DoP shall also file its Short Term and Long-Term power Procurement plan to bridge the gap of demand/ energy. The relevant extracts of the same are as follows:

“6. Power Procurement Plan: On the basis of demand/ energy forecast and availability projections in accordance with provisions of these Regulations, the Distribution licensee shall prepare a power procurement plan for procuring balance power and energy under short term power procurement plan and long-term power procurement plan.”

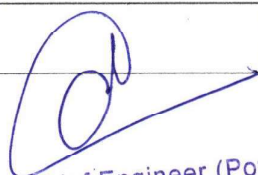
Based on the above, the DoP has projected its Short-Term Power Procurement plan for the FY 2026-27 and its Long-Term power Procurement plan for the FY 2027-28 to FY 2035-36. The details of the same are discussed as follows:

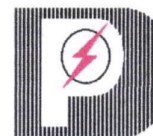
5.1. Short Term Power Procurement Plan

It is respectfully submitted that based on the assessment of projected demand and energy requirement for FY 2026-27, vis-à-vis availability from existing allocation, committed sources, and anticipated generation from State hydro stations, it is observed that the available capacity and energy is expected to remain broadly adequate for meeting the State's peak demand & energy requirement during most periods. However, it is submitted that because of high dependency on Hydro Power, short-term procurement is may require during lean periods, to bridge temporary energy deficits, intra-day imbalances, and unforeseen system contingencies. The summary of the Short-Term energy requirement for the FY 2026-27 are as tabulated below:

Table 5-1: Short Term Demand and Energy Requirement for the FY 2026-27

Sl. No.	Particulars	FY 2026-27
1	Demand Requirements (In MW) (20 th EPS)	223.00
2	Total Long-Term Demand Availability (MW)	346.2
3	Surplus/(Deficit) in Power Demand (MW)	123.20
4	Load Factor (20 th EPS)	56.15%
6	T&D Losses (20 th EPS)	37.88%


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Sl. No.	Particulars	FY 2026-27
7	Ex-Bus Energy Requirement (in MUs)	1,117.00
8	Available Energy from Long term Allocations (in MUs)	1,178.76
9	Energy Surplus/(Deficit) (MUs)	61.76

Accordingly, it is submitted that the short-term procurement has been considered as an operational balancing mechanism to address residual energy supply gaps and ensure reliability of supply in an economically prudent manner.

5.2. Mode of Short-Term Procurement

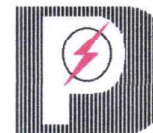
Regulations 6.2.3 provides as follows:

"6.2.3. The short-term power procurement plan for purchase of power shall be the least cost plan [least financial cost to the Distribution Licensee(s)], the ultimate objective being to make available secure and reliable power supply at economically viable tariffs to all consumers while satisfying power supply planning and security standards."

Based on the above, the DoP, Arunachal Pradesh respectfully submits that it will undertake short-term procurement through the following mechanisms, depending upon system requirement and prevailing market conditions:

a. Power Exchanges: The Department may procure power through recognized Power Exchanges, including Indian Energy Exchange (IEX) and Power Exchange India Limited (PXIL), depending upon market competitiveness and availability. Short-term procurement from Power Exchanges may be undertaken through:

- Day Ahead Market (DAM) for anticipated daily deficits;
- Real Time Market (RTM) for addressing unforeseen intra-day imbalance and contingencies;
- Term Ahead Market (TAM), wherever economically prudent and operationally required.



Procurement through power exchanges shall be undertaken based on competitive price discovery and least-cost considerations.

- b. Banking Arrangements:** The DoP, Arunachal Pradesh shall continue to utilise banking arrangements as a balancing mechanism to manage seasonal mismatch between availability and demand requirement. Surplus availability during specific periods may be utilised through banking arrangements, while corresponding withdrawals may be made during deficit periods, subject to availability and mutually agreed terms and conditions.
- c. Bilateral/Contingency Procurement:** In the event of prolonged deficit, transmission constraint, unforeseen outage, or any system contingency, the DoP may also undertake bilateral short-term procurement, if required, in order to maintain reliability and continuity of supply.

Accordingly, the DoP, Arunachal Pradesh requests the Hon'ble Commission to kindly consider the same and approve the flexibility to the DoP, Arunachal Pradesh to procure its Short-Term Power through the above mechanism by considering the least cost plan.

5.3. Long Term Power Procurement Plan

Regulation 6.1.1 and 6.1.2 of the APERC (Power Purchase and Procurement Process of Licensee) Regulations, 2024 provides as follows:

"6.1.1. The long-term Power Procurement Plan shall be prepared by the Distribution Licensee(s) on the basis of the rolling plan for ten Years. The plan shall be prepared on monthly basis as per the principles laid down earlier in the Regulations. The procurement of power through long term should not be less than 95% for meeting peak energy demand of distribution licensee.

6.1.2. The long-term Power Procurement Plan shall be strictly as per merit order principle and it should be the least cost plan [least financial cost to the Distribution Licensee(s)], the ultimate objective being to make available secure and reliable power supply at economically viable tariffs to all consumers while satisfying power supply planning and security standards."

It is respectfully submitted that in accordance with the above provisions of the APERC (Power Purchase and Procurement Process of Licensee) Regulations, 2024, the DoP has estimated its long-term power procurement requirement for the period of FY 2027-28 to FY 2035-36 in order to ensure adequacy of power supply, reliability of service, and sustained resource availability for meeting the projected growth in electricity demand within the State.

The summary of the year wise deficit in demand and energy requirement for the FY 2027-28 to FY 2035-36 are as tabulated below:

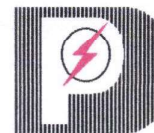


Table 5-2: Long Term Demand and Energy Requirement for the FY 2027-28 to FY 2030-31

Sl. No.	Particulars	FY 2027-28	FY 2028-29	FY 2029-30	FY 2030-31
1	Demand Requirements (In MW) (20 th EPS)	234.00	246.00	259.00	271.00
2	Total Long-Term Availability (MW)	384.2	431.7	522.3	522.3
3	Surplus/(Deficit) in Power Demand (MW)	150.20	185.70	263.30	251.30
4	Load Factor (20 th EPS)	55.93%	55.87%	55.75%	55.68%
5	T&D Losses (20 th EPS)	36.25%	34.63%	33.04%	31.49%
6	Ex-Bus Energy Requirement (in MUs)	1,170.00	1,227.00	1,289.00	1,347.00
7	Available Energy from Long term Allocations (in MUs)	1,308.14	1,469.87	1,778.35	1,778.35
8	Surplus/(Deficit) (MUs)	138.14	242.87	489.35	431.35

Table 5-3: Long Term Demand and Energy Requirement for the FY 2031-32 to FY 2035-36

Sl. No.	Particulars	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
1	Demand Requirements (In MW) (20 th EPS)	282.00	295.85	310.37	325.61	341.60
2	Total Long-Term Availability (MW)	522.3	522.3	522.3	522.3	522.3
3	Surplus/(Deficit) in Power	240.30	226.45	211.93	196.69	180.70



Sl. No.	Particulars	FY 2031-32	FY 2032-33	FY 2033-34	FY 2034-35	FY 2035-36
	Demand (MW)					
4	Load Factor (20 th EPS)	55.45%	55.22%	54.99%	54.77%	54.54%
5	T&D Losses (20 th EPS)	29.97%	28.52%	27.15%	25.84%	24.59%
6	Ex-Bus Energy Requirement (in MUs)	1,397.00	1,448.86	1,502.64	1,558.41	1,616.26
7	Available Energy from Long term Allocations (in MUs)	1,778.35	1,778.35	1,778.35	1,778.35	1,778.35
8	Surplus/(Deficit) (MUs)	381.35	329.50	275.72	219.94	162.09

It is respectfully submitted that due to high dependency on the Hydro Power, the long-term procurement requirement from the reliable sources has been assessed during lean periods, based on projected peak demand as per 20th EPS report.

Further, it is submitted that while significant hydro capacity addition is expected through upcoming generating projects, the State would continue to require a balanced portfolio comprising firm and dispatchable long-term power sources to ensure round-the-clock supply adequacy, particularly during lean hydro periods and high-demand conditions.

Further, Regulation 6.1.4. provides as follows:

“The Licensee(s) shall have to submit the following details for the past three years along with long-term power procurement plan –

(a) Month wise details (with year- wise totals) indicating power produced by generating stations owned or operated by the Distribution licensee(s)/ State, Central sector generation stations and other sources of power with whom long-term power purchase agreements have been entered into short-term purchases of Electricity in MU and expenses along with per unit cost.

(b) Month- wise, category-wise energy sales to consumers and losses in its area of operation.

(c) Month wise details of energy sale outside of the state including its purchaser and tariff.”

Accordingly, the DoP, Arunachal Pradesh respectfully submits its actual data for the period of FY 2023-24 to FY 2025-26 as **Annexure – 2** for kind consideration of the Hon'ble Commission.



5.4. Mode of Long-Term Procurement

It is respectfully submitted that at present, the DoP, Arunachal Pradesh derives its long-term power primarily from allocations from Central Generating Stations (CGS) and existing long-term arrangements, comprising a mix of hydro and thermal generating stations.

The existing allocation portfolio constitutes the foundational supply arrangement for the State and continues to play an important role in meeting the base demand requirement, seasonal balancing, and maintaining system reliability. However, due to increasing electricity demand and seasonal constraints associated with hydro generation, the existing portfolio alone may not remain adequate to meet the projected long-term requirement of the State.

Accordingly, future resource adequacy has been undertaken considering both existing and upcoming generation sources.

- a. Upcoming Long-Term Generation Sources & Independent Power Producer (IPP) Hydro Projects:** The Department has considered the contribution of upcoming Independent Power Producer (IPP) hydro projects within Arunachal Pradesh, which are expected to progressively augment the State's energy availability over the period of FY 2026-27 to FY 2035-36. These projects are expected to contribute additional renewable energy and improve supply availability, particularly during periods of higher hydro generation. However, considering that the majority of these projects are run-of-river (RoR) hydro schemes, their contribution towards dependable round-the-clock firm capacity remains constrained due to seasonal hydrology and reduced availability during lean periods. Accordingly, while the proposed IPP projects have been considered as an important renewable energy component of the long-term portfolio, the same have not been treated as complete substitutes for firm and dispatchable long-term capacity required to support peak demand and ensure uninterrupted supply.

The details of the upcoming projects along with its CoD and allocations for Arunachal Pradesh are as follows:

SL. NO	Name of Project	Installed Capacity (MW)	DoP, AP Contracted Capacity (MW)	Expected Commissioning Year
1	Pareng HEP	14.5	14.5	Mar-27
2	Keyi HEP	23.0	23.0	Mar-28
3	Yameng HEP	15.0	15.0	Mar-28



SL. NO.	Name of Project	Installed Capacity (MW)	DoP, AP Contracted Capacity (MW)	Expected Commissioning Year
4	Halaipani HEP	16.0	16.0	Jun-28
5	Dengzi HEP	10.0	10.0	Dec-28
6	9 MW Paikangrong SHEP	9.00	9.00	Dec-28
7	Ressing HEP	12.0	12.0	Mar-29
8	500KW Tidal Power Plant, Lohit River	0.5	0.5	Mar-29
9	24.60 MW Kamlang Small HEP	24.60	24.60	Apr-29
10	66 MW Khuitam HEP	66.00	66.00	Dec-29
11	Dibri HEP	3.2	3.2	-
12	Dipre HEP	6.5	6.5	-
13	Total	200.30	200.30	

It is respectfully submitted that the commissioning of the Subansiri Lower Hydro Electric Project (HEP) is expected to significantly augment the long-term power availability of the State during the FY 2026-27 to FY 2035-36. The allocation from Subansiri Lower HEP is expected to provide substantial additional hydro generation and improve the overall adequacy of power availability within the State.

Further, it is also respectfully submitted that the Dibri HEP and Dipre HEP project has been delayed, and there is no such certainty of CoD of the Project in the near future.

Based on the above, considering the hydro-dominant nature of the State's supply portfolio and inherent seasonal variation in hydro generation, the Department considers it prudent to maintain adequate firm long-term support to ensure resource adequacy throughout the year.

- b. Existing Thermal Power Allocations:** The Department proposes to continue existing thermal allocations and long-term arrangements, which remain critical for ensuring firm and dependable round-the-clock power availability, particularly during winter months, low hydro availability periods, evening peak demand, and system contingencies. Thermal power sources provide operational flexibility and support the State in maintaining supply reliability, grid stability, and adequacy of firm capacity. Accordingly, continuation of existing thermal allocations forms an integral component of the long-term procurement strategy.



Accordingly, the DoP, Arunachal Pradesh requests the Hon'ble Commission to kindly grant flexibility to the DoP to maintain and adopt a balanced, prudent and least-cost long-term procurement strategy.

Further, it is also submitted that in view of the projected growth in electricity demand and evolving consumption profile of the State, the DoP, Arunachal Pradesh considers long-term procurement as an essential requirement for ensuring reliable, uninterrupted and cost-effective supply of electricity over the period of FY 2026-27 to FY 2035-36.

The proposed long-term procurement framework, comprising existing allocations, committed hydro additions, and continued firm support from thermal sources, is considered necessary to maintain resource adequacy and meet the projected demand of the State in a prudent and economically efficient manner.

Accordingly, the DoP, Arunachal Pradesh requests the Hon'ble Commission to kindly consider the above facts and approve the DoP to enter into long term power purchase agreements or arrangements in accordance with the Regulation 8.2 of the APERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024.

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(6) Reconciliation with the Resource Adequacy Plan (Generation) for Arunachal Pradesh (2025-26 to 2035-36)

The Ministry of Power had notified the Electricity (Amendment) Rules in December, 2022. As per Rule 16 of the Electricity (Amendment) Rules, the Ministry of Power has notified Resource Adequacy (RA) Guidelines.

According to these Guidelines, Central Electricity Authority (CEA) is entrusted with the responsibility of preparing the Long-Term National Resource Adequacy Plan (LT-NRAP). Further, each Distribution Utility is required to carry out a Long-Term Distribution Licensee Resource Adequacy Plan (LT-DRAP) to reliably meet its peak electricity demand and electrical energy requirements.

This plan shall be vetted/validated by CEA to leverage the benefits of national-level optimization for the Distribution Licensees. The LT-DRAP shall be prepared by the Distribution Licensees on an annual rolling basis, factoring in the already contracted capacity and optimizing the requirement for additional capacity. Government of India has notified the Renewable Purchase Obligation (RPO) trajectory up to 2029-30 vide gazette notification dated 20th October 2023, which mandates that a specified portion of energy consumption must be met from renewable energy sources. To support the state in fulfilling this requirement, CEA, initially carried a Resource Adequacy (RA) study with a planning horizon up to FY 2031-32, based on the data available with CEA and NERPC and in compliance with the RPO trajectory specified in the Ministry of Power's Office Memorandum dated 22nd July 2022.

This study has now been updated and extended to cover the period upto FY 2035-36, incorporating the latest data furnished by the States and planning assumptions. The RPO requirement for the states has also been assessed in accordance with the order dated 20th October, 2023. The electrical energy requirement and peak electricity demand for Arunachal Pradesh, as furnished by the DoP, Arunachal Pradesh, are projected to increase with a CAGR of 7.9% and 9.7% during 2025-26 to 2035-36.

However, it is submitted that as per the mid-term review of 20th EPS projections, the electricity energy requirement and peak electricity demand for Arunachal Pradesh is projected to increase with a CAGR of 4.6% and 3.6% during 2025-26 to 2035-36.

It is respectfully submitted that there is an inadvertent error while projecting the electrical energy requirement and peak electricity demand with a CAGR of 7.9% and 9.7% for the FY 2025-26 to FY 2035-36. Therefore, it is requested to the Hon'ble Commission to kindly consider the same and approve the electrical energy requirement and peak electricity demand as claimed herein above in line with the 20th EPS report.



Further, it is also respectfully submitted that there is an inadvertent error while submitting the capacity in respect of Lower Subansiri HEP.

It is respectfully submitted that the total capacity of Lower Subansiri HEP is 250 MW and its allocation for the state of Arunachal Pradesh is 13.875%, which includes 12% of free power. The DoP, Arunachal Pradesh submits the revised allocation of power from Lower Subansiri HEP received from NERPC vide communication dated 22.12.2025 as **Annexure - 3** for kind consideration of the Hon'ble Commission.

Therefore, it requested to the Hon'ble Commission to kindly consider the revised capacity and allocation of the Arunachal Pradesh for approval of the Power Procurement plan for the FY 2026-27 to FY 2035-36.

Further, it is respectfully submitted that the DoP, Arunachal Pradesh also requests the CEA to revise/update its Resource Adequacy Plan for Arunachal Pradesh in line with the approved Power Procurement Plan for the FY 2026-27 to FY 2035-36.

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

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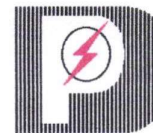
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(7) Prayers

The DoP, Arunachal Pradesh respectfully prays that the Hon'ble Commission may be pleased to consider and approve the following:

- a. Admit this instant Petition in accordance with the APSPERC (Power Purchase and Procurement Process of Licensee) Regulation, 2024;
- b. Review the proposal submitted by the Petitioner in the enclosed Petition for a favourable dispensation;
- c. Permit to enter short term/ long term power procurement agreement/ arrangement with generating stations;
- d. Permit to propose suitable changes to the Petition, prior to the final approval by the Hon'ble Commission;
- e. Condone any inadvertent omission/errors/short comings and permit the petitioner to add/change/modify/alter this filing and make further submissions as may be required at a future date;
- f. Pass such Order as the Hon'ble Commission may deem fit and appropriate keeping in view the facts and circumstances of the case.

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