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CHAPTER-I:: INTRODUCTION

1.1 Approach & Methodology

As per the Multi Year Tariff Regulations-2024, the Distribution Licensee is required to submit a MYT Petition for Control Period of five years from April 1, 2025 to March 31, 2030. DoP,AP has already submitted the details up to FY 2026-27 vide letter No. CE(COM)/Tariff/31/2023-24/2096-99 Dt. 3rd January 2024. The Hon'ble Commission has also issued order in respect of the MYT Petition. Thereafter, DoP,AP has also submitted True-up for the FY 2023-24, APR for FY 2024-25 & ARR & Retail Tariff Proposal for FY 2025-26 vide letter No. CE(COM)/Tariff/31/2024-25/3218-20 Dt. 29th November 2024 and the same is under consideration of the Hon'ble Commission.

Further, as per the directions of the Hon'ble Commission Dt.23rd December 2024, DoP,AP is hereby submitting the details for the additional years of the Control Period (FY 2027-28 to FY 2029-30). However, it is pertinent to mention that post submission of the MYT Petition, the base figures have changed due to True-up of FY 2023-24 & revision in figures for FY 2024-25 & FY 2025-26 as explained above. Accordingly, the escalation factors, CAGR & the corresponding escalated figures are at variance as compared to the figures/trends as submitted in the MYT petition. The variances have been suitably explained in the respective sections of the instant petition.

However, it is submitted that same approach & methodology as adopted in proposing & projecting various parameters in the MYT Petition submitted up-to FY 2026-27 has been considered for the proposing various factors & parameters during the FY 2027-28 to FY 2029-30. Accordingly, explanation of the approach & methodology for the respective aspects as already submitted in the of the MYT Petition is applicable for the additional years submitted herewith and have not been repeated for the sake of brevity.
Therefore, the Hon'ble Arunachal Pradesh State Electricity Regulatory Commission is requested to accept and approve the submission.

1.2 Number of Consumers

It is submitted that in the MYT Petition, consumer growth was calculated based on average growth rate. However, Hon'ble Commission in the Tariff Order directed to consider CAGR, accordingly, CAGR as explained below has been used for projecting the consumer numbers.

In view of the above, to project the consumer growth for the different consumer categories, 5-year CAGR has been considered for the domestic, commercial, bulk & Agriculture. The 5-year CAGR for industries was showing a negative growth. However, based on the government initiatives for development of industries it is expected that the industry shall have a steady growth during the control period. Accordingly, the 5-year CAGR of Commercial category has been considered for projecting the number of consumers of the Industrial category for the control period. The CAGR along with projected consumer growth has been given for years FY 2027-28, FY 2028-29 & FY 2029-30 in the table below:

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Table1.2: Projected number of consumers control period using an annual average growth rate

SL No	Consumer Category	CAGR (5 Years)*	(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
			IX		
A	**HT & EHT Category**				
1	**Non Commercial Consumers (Domestic)**				
	AC 50Hz,3-Phase, 11KV	9.82%	186	204	225
	AC 50Hz,3-Phase, 33KV	0.00%	4	4	4
2	**Commercial Consumers (Non-Industrial)**				
	AC 50Hz,3-Phase, 11KV	21.80%	1012	1233	1502
	AC 50Hz,3-Phase, 33KV	23.59%	33	40	50
3	**Public Lighting and Water Supply Consumers**				
	AC 50Hz,3-Phase, 11KV	0.00%	12	12	12
	AC 50Hz,3-Phase, 33KV	0.00%	0	0	0
4	**Agricultural Consumers**				
	AC 50Hz,3-Phase, 11KV	0.00%	5	5	5
	AC 50Hz,3-Phase, 33KV	0.00%	0	0	0
5	**Industrial Consumers**				
	AC 50Hz,3-Phase, 11KV	9.56%	122	134	147
	AC 50Hz,3-Phase, 33KV	5.14%	40	42	45
	AC 50Hz,3-Phase, 132 KV	0.00%	3	3	3
6	**Bulk Mixed Consumers**				
	AC 50Hz,3-Phase, 11KV	7.71%	283	305	328
	AC 50Hz,3-Phase, 33KV	0.00%	14	14	14
	AC 50Hz,3-Phase, 132 KV	0.00%	1	1	1
B	**Low Voltage Category**				
1	**Non Commercial Consumers (Domestic)**				
	AC 50Hz,1-Phase, 230 Volt	2.61%	219671	225395	231269
	AC 50Hz,3-Phase, 400 Volt	7.26%	4742	5086	5455
	KJP & BPL connection	0.00%	61791	61791	61791
2	**Commercial Consumers (Non-Industrial)**				
	AC 50Hz,1-Phase, 230 Volt	5.39%	38191	40249	42417
	AC 50Hz,3-Phase, 400 Volt	12.04%	4752	5325	5966
3	**Public Lighting and Water Supply Consumers**				
	AC 50Hz,1-Phase, 230 Volt	0.00%	864	864	864
	AC 50Hz,3-Phase, 400 Volt	9.28%	387	422	462
4	**Agricultural Consumers**				
	AC 50Hz,1-Phase, 230 Volt	25.74%	25	31	40
	AC 50Hz,3-Phase, 400 Volt	0.00%	8	8	8
5	**Industrial Consumers**				
	AC 50Hz,1-Phase, 230 Volt	10.25%	96	106	117
	AC 50Hz,3-Phase, 400 Volt	2.23%	194	199	203

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SL No	Consumer Category	CAGR (5 Years)*	(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
			IX		
6	**Temporary Consumer**				
	LT/HT	41.22%	1424	2011	2840
	Total		**333861**	**343485**	**353766**

1.3 Source of Power

The DoP,AP acquires Power from different sources for distribution within the State as well and the sale the surplus power outside the state.The present power availability for Department of Power, Arunachal Pradesh are from Power Purchase from Central Generating Stations, Department of Hydro Power Development (DHPD), Hydro Power Development Corporation of Arunachal Pradesh Ltd. (HPDCL), Independent Power Producer (IPP) (Dikshi and Khantang) and IEX. Further, the new sources of power from the generating stations scheduled to be commissioned during the ensuing years have also been considered. Accordingly, power availability as submitted for the previous years has been further projected for the FY 2027-28 to FY 2029-30.

1.3.1 Diesel Generating (DG) Sets: -

DoP,AP has DG sets of different capacities installed at different locations with a total installed capacity of about 20.45 MW. These DG sets are kept on standby and used as and when required. Further, DoP,AP is on the way to phasing out the DG Sets slowly due to its high generation cost. Since these sets are owned by DoP,AP, the power generated from it will not be included in the power purchase cost. The Expenditure on DG sets shall be included in Operation and Maintenance Costs.

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CHAPTER-II: ESTIMATION OF AGGREGATE REVENUE REQUIREMENT

According to APSERC Multiyear tariff regulation 2024, the following components shall comprise for recovery of Aggregate Revenue Requirement:

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.

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.

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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: -

To project the Sales growth for the different consumer categories, 5-year CAGR has been considered for the domestic, commercial, bulk & Agriculture. It is submitted that in the MYT petition, CAGR was calculated based on the actual figures up-to FY 2022-23. However, after the availability of actual figures of FY 2023-24, the CAGR has been revised considering figures of FY 2023-24, accordingly, projection for FY 2027-28 to FY 2029-30 has been done considering the revised CAGR. The CAGR along with projected Sales growth for the FY 2027-28, FY 2028-29 & FY 2029-30 in the table below:

Table:: 2.4 Energy sale (With in the State) projection for entire control period

SL No	Consumer Category	CAGR (5 Years)*	Projected Sale in MU		
			FY 2027-28	FY 2028-29	FY 2029-30
A	HT & EHT Category			-	-
1	Non-Commercial Consumers (Domestic)				
	AC 50Hz,3-Phase, 11KV	21.93%	17.20	20.97	25.57
	AC 50Hz,3-Phase, 33KV	0.15%	3.78	3.79	3.80
2	Commercial Consumers (Non-Industrial)				
	AC 50Hz,3-Phase, 11KV	14.16%	29.78	34.00	38.82
	AC 50Hz,3-Phase, 33KV	8.72%	0.18	0.19	0.21
3	Public Lighting and Water Supply Consumers				
	AC 50Hz,3-Phase, 11KV	0.00%	3.22	3.22	3.22
	AC 50Hz,3-Phase, 33KV	0.00%	0.00	0.00	0.00
4	Agricultural Consumers				
	AC 50Hz,3-Phase, 11KV	0.00%	0.02	0.02	0.02
	AC 50Hz,3-Phase, 33KV	0.00%	0.00	0.00	0.00
5	Industrial Consumers				
	AC 50Hz,3-Phase, 11KV	9.82%	30.43	33.42	36.71
	AC 50Hz,3-Phase, 33KV	15.17%	65.36	75.27	86.68
	AC 50Hz,3-Phase, 132 KV	14.47%	382.68	438.04	501.41
6	Bulk Mixed Consumers				
	AC 50Hz,3-Phase, 11KV	0.00%	24.52	24.52	24.52
	AC 50Hz,3-Phase, 33KV	14.68%	22.73	26.07	29.90
	AC 50Hz,3-Phase, 132 KV	0.00%	0.00	0.00	0.00
B	Low Voltage Category			-	-
1	Non-Commercial Consumers (Domestic)				

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SL No	Consumer Category	CAGR (5 Years)*	Projected Sale in MU		
			FY 2027-28	FY 2028-29	FY 2029-30
A	**HT & EHT Category**				
	AC 50Hz,1-Phase, 230 Volt	7.24%	221.19	237.19	254.35
	AC 50Hz,3-Phase, 400 Volt	10.28%	45.08	49.71	54.82
	KJP & BPL connection AC 50Hz,1-Phase, 230 Volt	8.85%	47.46	51.66	56.24
2	**Commercial Consumers (Non-Industrial)**				
	AC 50Hz,1-Phase, 230 Volt	14.87%	77.75	89.32	102.60
	AC 50Hz,3-Phase, 400 Volt	17.97%	69.68	82.20	96.97
3	**Public Lighting and Water Supply Consumers**				
	AC 50Hz,1-Phase, 230 Volt	0.00%	3.42	3.42	3.42
	AC 50Hz,3-Phase, 400 Volt	13.55%	5.31	6.02	6.84
4	**Agricultural Consumers**				
	AC 50Hz,1-Phase, 230 Volt	17.84%	0.04	0.04	0.05
	AC 50Hz,3-Phase, 400 Volt	100.00%	0.66	1.32	2.64
5	**Industrial Consumers**				
	AC 50Hz,1-Phase, 230 Volt	0.00%	0.91	0.91	0.91
	AC 50Hz,3-Phase, 400 Volt	0.00%	1.68	1.68	1.68
6	**Temporary Consumer**				
	LT/HT	0.00%	0.87	0.87	0.87
	Total		**1053.96**	**1183.88**	**1332.26**

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 as projected above.

2.5 Forecast of Sale of Power Outside the State: -

The energy sale forecast outside the state is calculated based on the assessment of energy availability & requirement and the projected AT&C loss trajectory during the respective financial years. and is shown in table 2.5 below:

Table 2.5: Energy Sale Forecast outside the State

SL No	Consumer Category	Ensuing Year		
		FY 2027-28	FY 2028-29	FY 2029-30
		Sale (MU)	Sale (MU)	Sale (MU)
1	Energy Sale (IEX)	173.12	181.78	190.86
2	Bilateral Sale	493.76	273.45	127.12
3	Deviation Export	49.58	47.10	44.74
4	**Total**	716.45	502.32	362.73

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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.	Consumer Category	Ensuing Year (Projected)		
		FY 2027-28	FY 2028-29	FY 2029-30
		Sale (MU)	Sale (MU)	Sale (MU)
1	Within the State	1053.96	1183.88	1332.26
2	Outside the State	716.45	502.32	362.73
3	**Total**	1770.42	1686.20	1694.98

2.7 Power Purchase Estimation: -

The power purchase quantum for the ensuing control period years is estimated considering various factors like previous energy consumptions, energy sale projection, judicious scheduling, likely distribution losses, surplus energy sale during high hydro, restricting deviation import, restricting import from high-cost generators, total energy requirement, etc. and is shown in table 2.7

Table2.7:: Power Purchase Estimation

SL. No.	Name of Project/Source	Owner	Projected (MU)		
			FY 2027-28	FY 2028-29	FY 2029-30
1	LOKTAK	NHPC	12.34	12.34	12.34
2	SUBANSIRI		0.00	0.00	0.00
3	KOPILI-I	NEEPCO	11.91	11.91	11.91
4	KOPILI-II		8.35	8.35	8.35
5	KHANDONG		0.00	0.00	0.00
6	Panyor Lower		72.84	72.84	72.84
	Free Energy Panyor L		140.07	140.07	140.07
7	DOYANG		9.48	9.48	9.48
8	PARE		25.16	25.16	25.16
	Free Energy Pare		57.29	57.29	57.29
9	KAMENG		44.70	44.70	44.70

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SL. No.	Name of Project/Source	Owner	Projected (MU)		
			FY 2027-28	FY 2028-29	FY 2029-30
	Free Energy Kameng		313.16	313.16	313.16
10	AGBPP		98.46	98.46	98.46
11	AGTCCPP		43.79	43.79	43.79
12	PALATANA	OTPCL	122.16	122.16	122.16
13	BgTPP	NTPC	206.55	206.55	206.55
14	FARAKKA		19.70	19.70	19.70
15	KAHALGAON		9.90	9.90	9.90
16	TALCHAR		12.66	12.66	12.66
17	DHPD	GoAP	56.74	56.74	56.74
18	HPDCL	SPSU	6.37	6.37	6.37
19	DIKSHI	IPP	65.26	65.26	65.26
20	Free Energy Dikshi		7.25	7.25	7.25
21	KHANGTANG		25.76	25.76	25.76
22	KEYI		90.67	90.67	90.67
23	DIBRI		12.61	12.61	12.61
24	DIPRE		25.62	25.62	25.62
25	YAMENG		59.13	59.13	59.13
26	PARENG		57.16	57.16	57.16
27	RESSING		47.30	47.30	47.30
28	DENGZI		70.96	70.96	70.96
29	HALAIPANI		63.07	63.07	63.07
30	SOLAR	APEDA	0.55	0.55	0.55
31	Deviation		79.97	75.97	72.17
32	IEX Purchase		23.19	23.19	23.19
33	Banking (Import)		132.61	139.24	146.20
34	Diesel Generation		0.32	0.32	0.32
35	TGNA				
	TOTAL		2033.05	2035.68	2038.84

From the above table, it may be seen that deviation import (UI) is reduced by 5% per year as it is a costly affair. The aggregate power requirement is not increasing proportionately to the increase in sales projection. This is because the DoP,AP shall endeavour to reduce the AT&C loss. Hon'ble Commission is requested to approve the above estimates.

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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%.

2.8:Power Purchase Cost Estimation

Rs in Crore

SL No	Particulars	Ensuing Year		
		FY 2027-28 (Projected)	FY 2028-29 (Projected)	FY 2029-30 (Projected)
1	NEEPCO	226.57	237.90	249.79
2	NTPC (Farakka, Kahal Gaon, Talchar)	24.13	25.34	26.61
3	NTPC (BGTTP)	160.44	168.46	176.89
4	NHPC	7.63	8.01	8.41
5	OTPC	51.34	53.91	56.60
6	Deviation	54.80	57.55	60.42
7	Reactive	0.19	0.20	0.21
8	Devi Enrgies	41.54	43.62	45.80
9	Kangteng Hydro Power Pvt. Ltd.	11.42	11.99	12.59
10	KEYI	47.60	49.98	52.48
11	DIBRI	6.62	6.95	7.30
12	DIPRE	13.45	14.12	14.83
13	YAMENG	31.04	32.60	34.23
14	PARENG	30.01	31.51	33.08
15	RESSING	24.83	26.08	27.38
16	DENGZI	37.25	39.11	41.07

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				Rs in Crore
SL No	Particulars	Ensuing Year		
		FY 2027-28 (Projected)	FY 2028-29 (Projected)	FY 2029-30 (Projected)
17	HALAIPANI	33.11	34.77	36.51
18	DHPD	0.00	0.00	0.00
19	HPDCAPL	2.94	3.09	3.24
20	APPCPL	10.62	11.16	11.71
21	Misc. Exp.	0.24	0.25	0.26
	Total	**815.80**	**856.59**	**899.41**

The Hon'ble Commission is requested to approve the power purchase cost for FY 2027-28 to FY 2029-30 as proposed above.

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 2019-20 to 2022-23 and projected transmission charges during the control period are tabulated in table 2.9(A) below. DoP,AP shall try to reduce power import from outside the State as many projects under IPP are coming up in the state. There is also a chargeable intrastate transmission system constructed by M/s Devi Energy Ltd to evacuate the power generated from the Dikshi SHP and the charges of previous years. Hence, the transmission charge has been calculated based on the proposed energy to be imported during respective years. Further, the transmission charges of last year are escalated by 5% year over year to factor in the yearly cost variations. The projected charges for the control period are shown in table 2.9(B).

2.9: Inter-State and Intra-State Transmission Charges

				Rs in Crore
SL No	Utility	Ensuing Year		
		FY 2027-28	FY 2028-29	FY 2029-30
1	PGCIL	1.9	1.9	1.9
2	CTUIL	144.70	151.94	159.53

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				Rs in Crore
SL No	Utility	Ensuing Year		
		FY 2027-28	FY 2028-29	FY 2029-30
3	APDCL	4.88	5.13	5.38
4	**Total**	151.49	158.97	166.82

Hon'ble Commission is requested to approve the Estimated Inter-State Transmission Charges for FY 2027-28 to FY 2029-30 as proposed above.

				Rs in Crore
SL No	Utility	Ensuing Year		
		FY 2027-28	FY 2028-29	FY 2029-30
1	Devi Energies	11.45	11.45	11.45

DoP,AP has escalated the Intra State Transmission Charges for the previous year by 5% year over year to project the Intra State Transmission Charges. The Hon'ble Commission is requested to approve the estimated Intra State Transmission Charges for FY 2027-28 to FY 2029-30 as proposed above.

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 projected for the FY 2027-28 to FY 2029-30 are tabulated in table 2.10 below.

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2.10. Fees and charges of NLDC/RLDC/SLDC

SL No	Utility	Fee and Charges of NERLDC (Rs in Crore)		
		Ensuing Year (Projected)		
		FY 2027-28	FY 2028-29	FY 2029-30
1	NERLDC Fee	2.30	2.42	2.54
2	NERPC board fund	0.01	0.01	0.01
3	**Total**	2.31	2.43	2.55

Hon'ble Commission is requested to approve the Estimated NERLDC fee and NERPC board fund for FY 2027-28 to FY 2029-30 as proposed above.

2.11 Operation and Maintenance Cost: -

Operation and maintenance cost consists of three components;

1) Employee cost,

2) Repair and Maintenance cost

3) Administrative and General costs.

The DoP,AP has 9988 Nos of total employees. The detail is shown in table 2.11.

2.11: Manpower

Sl. No.	Description	Category	Financial Year Projected		
			2027-28 (Nos)	2028-29 (Nos)	2029-30 (Nos)
1	Opening number of employees	**Regular**	1054	1054	1054
		w/c	2786	2786	2786
		Casual Labour	6189	6189	6189
2	Addition during the year	**Regular**	0	0	0
		w/c	0	0	0
		Casual Labour	0	0	0

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Sl. No.	Description	Category	Financial Year		
			Projected		
			2027-28	2028-29	2029-30
			(Nos)	(Nos)	(Nos)
3	Retirement during the year	Regular	18	27	36
		w/c	119	117	111
		Casual Labour	0	0	0
4	Closing number of year	Regular	1054	1054	1054
		w/c	2786	2786	2786
		Casual Labour	6189	6189	6189

The past and projected cost of these three components for the period FY 2027-28 to FY 2029-30 has been calculated as per Regulation 4.10 of APSERC Regulations, 2024. Accordingly, expenses of previous year has been escalated by escalation factor which has been determined by considering 20% weightage to the average yearly inflation derived based on the monthly wholesale price index (WPI) of the past three financial years (FY 2021-22, FY 2022-23 & FY 2023-24) as per the office of Economic Advisor of Government of India and 80% weightage to the average yearly inflation derived based on the monthly Consumer Price Index (CPI) for industrial workers of the past three financial years (FY 2021-22, FY 2022-23 & FY 2023-24) as per the Labour Bureau, Government of India. The details are shown in table 2.11(B).

2.11A: Operation and Maintenance Cost

Sl. No.	Particulars	(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
1	Employee Expenses	484.84	513.24	543.31
2	A&G Expenses	14.53	15.38	16.28
3	R&M Expenses	43.14	45.67	48.35
4	**Total O&M Expenses**	**542.51**	**574.29**	**607.94**

Hon'ble Commission is requested to approve Estimated O&M expenses for FY 2027-28 to FY 2029-30 as proposed above.

2.12 Interest on Working Capital

Working capital for DoP,AP used to be 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.**

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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

Considering all the aspects depicted above the aggregate revenue requirements of DoP,AP for the ensuing and entire controlled period are summarised in table 2.14.

Table 2.14 :: Aggregate Revenue Requirement

(Rs. In Crores)

S.L No.	Particulars	(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
1	Return on Equity Capital			
2	Interest on Loan Capital			
3	Depreciation			
4	Power Purchase Expenses	815.80	856.59	899.41
5	Interstate Transmission Charges	151.49	158.97	166.82
6	Intrastate Transmission Charges	11.45	11.45	11.45
7	Fees and charges of NERLDC/NERPC	2.31	2.43	2.55
8	O&M expenses	542.51	574.29	607.94
9	Interest on working Capital			
10	Provision for bad and doubtful debt			
11	Annual License Fee	0.05	0.05	0.05
12	Tariff filing fees	0.075	0.075	0.075
13	Training and Safety of Personnel			
14	**Total Revenue Requirement**	**1523.68**	**1603.85**	**1688.29**

Hon'ble Commission is requested to approve the Estimated Aggregate Revenue Requirement for FY 2027-28 to FY 2029-30 as proposed above.

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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 for the FY 2027-28 to FY 2029-30 have been multiplied by category-wise existing tariffs to estimate the expected revenue from within the state and are tabulated in table 3.1

Table 3.1::Revenue projection from the sale within the state in the existing tariff

SL No	Consumer Category	Existing Tariff (Per Kwh)	Ensuing Year					
			FY 2027-28		FY 2028-29		FY 2029-30	
			Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.
A	**High Voltage Category**							
1	**Non Commercial Consumers (Domestic)**							
	3-Phase, 11KV	3.40	17.20	5.85	20.97	7.13	25.57	8.69
	3-Phase, 33KV	3.25	3.78	1.23	3.79	1.23	3.80	1.23
2	**Commercial Consumers (Non-Industrial)**							
	3-Phase, 11KV	4.20	29.78	12.51	34.00	14.28	38.82	16.30
	3-Phase, 33KV	4.00	0.18	0.07	0.19	0.08	0.21	0.08
3	**Public Lighting and Water Supply Consumers**							
	3-Phase, 11KV	4.20	3.22	1.35	3.22	1.35	3.22	1.35
	3-Phase, 33KV	4.00	0.00	0.00	0.00	0.00	0.00	0.00
4	**Agricultural Consumers**							
	3-Phase, 11KV	2.75	0.02	0.00	0.02	0.00	0.02	0.00
	3-Phase, 33KV	2.65	0.00	0.00	0.00	0.00	0.00	0.00
5	**Industrial Consumers**							
	3-Phase, 11KV	3.85	30.43	11.72	33.42	12.87	36.71	14.13
	3-Phase, 33KV	3.50	65.36	22.87	75.27	26.34	86.68	30.34
	3-Phase, 132 KV	3.35	382.68	128.20	438.04	146.74	501.41	167.97
6	**Bulk Mixed Consumers**							
	3-Phase, 11KV	3.75	24.52	9.20	24.52	9.20	24.52	9.20
	3-Phase, 33KV	3.40	22.73	7.73	26.07	8.86	29.90	10.17
	3-Phase, 132 KV	3.25	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	4.00	221.19	88.48	237.19	94.88	254.35	101.74
	3-Phase, 400 Volt	4.00	45.08	18.03	49.71	19.88	54.82	21.93

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SL No	Consumer Category	Existing Tariff (Per Kwh)	Ensuing Year					
			FY 2027-28		FY 2028-29		FY 2029-30	
			Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.
	KJP & BPL connection	2.65	47.46	12.58	51.66	13.69	56.24	14.90
2	**Commercial Consumers (Non-Industrial)**							
	1-Phase, 230 Volt	5.00	77.75	38.88	89.32	44.66	102.60	51.30
	3-Phase, 400 Volt	5.00	69.68	34.84	82.20	41.10	96.97	48.48
3	**Public Lighting and Water Supply Consumers**							
	1-Phase, 230 Volt	5.10	3.42	1.74	3.42	1.74	3.42	1.74
	3-Phase, 400 Volt	5.10	5.31	2.71	6.02	3.07	6.84	3.49
4	**Agricultural Consumers**							
	1-Phase, 230 Volt	3.10	0.04	0.01	0.04	0.01	0.05	0.02
	3-Phase, 400 Volt	3.10	0.66	0.20	1.32	0.41	2.64	0.82
5	**Industrial Consumers**							
	1-Phase, 230 Volt	4.30	0.91	0.39	0.91	0.39	0.91	0.39
	3-Phase, 400 Volt	4.30	1.68	0.72	1.68	0.72	1.68	0.72
6	**Temporary Consumer**							
	LT/HT	6.50	0.87	0.57	0.87	0.57	0.87	0.57
	Total		1053.96	399.88	1183.88	449.23	1332.26	505.59

3.2 Expected revenues from sales outside the state: -

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

SL No	Consumer Category	Average Tariff (Rs Per Kwh)	Ensuing Year					
			FY 2027-28		FY 2028-29		FY 2029-30	
			Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.
1	Energy Sale (IEX)	5.14	173.12	89.06	181.78	93.51	190.86	98.19
2	Bilateral Sale	5.50	493.76	271.56	273.45	150.39	127.12	69.91
3	Deviation Export	-	49.58	0.00	47.10	0.00	44.74	0.00
4	**Total**		716.45	360.62	502.32	243.91	362.73	168.10

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

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

SL No	Consumer Category	Average Tariff (Per Kwh)	Ensuing Year (Projected)					
			FY 2027-28		FY 2028-29		FY 2029-30	
			Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.	Sale (MU)	Rs in Cr.
1	Within the State	3.91	1053.96	480.79	1183.88	540.12	1332.26	607.89
2	Outside the State	3.55	716.45	360.62	502.32	243.91	362.73	168.10
3	**Total**		1770.42	841.41	1686.20	784.03	1694.98	775.99

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 existing rate & the same has been increased in the above ratio to arrive at the total revenue.

3.4 Aggregate Revenue Requirement and Revenue Gap: -

From chapter II, the annual revenue requirement, income, average cost of supply, and revenue gap is tabulated in table 3.4.

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

S.L No.	Particulars	Projected in MYT control period		
		(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
	ARR	**Rs. In Cr.**	**Rs. In Cr.**	**Rs. In Cr.**
1	Return on Equity Capital			
2	Interest on Loan Capital			
3	Depreciation			
4	Power Purchase Expenses	815.80	856.59	899.41
5	Interstate Transmission Charges	151.49	158.97	166.82
6	Intrastate Transmission Charges	11.45	11.45	11.45
7	Fees and charges of NERLDC/NERPC	2.31	2.43	2.55
8	O&M expenses	542.51	574.29	607.94
9	Interest on working Capital			
10	Provision for bad and doubtful debt			
11	Annual License Fee	0.05	0.05	0.05
12	Tariff filing fees	0.075	0.075	0.075
13	Training and Safety of Personnel			
14	**Total Revenue Requirement**	1523.68	1603.85	1688.29
15	**Revenue from EXISTING Tariff**	399.88	449.23	505.59

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Table 3.4 :: Aggregate Revenue Requirement, Income and Revenue Gap in EXISTING tariff				
S.L No.	Particulars	Projected in MYT control period		
		(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
	ARR	Rs. In Cr.	Rs. In Cr.	Rs. In Cr.
16	**Other income**	80.91	90.89	102.30
17	**Total revenue within state (including other income)**	480.79	540.12	607.89
18	Revenue from Sale of Surplus Power	360.62	243.91	168.10
19	**Total Annual Income (14+15)**	841.41	784.03	775.99
20	**Revenue gap (11-16)**	682.27	819.82	912.30
21	Total Energy Sale (MU)	1858.80	1779.01	1792.43
22	Gross Energy Input	2033.05	2035.68	2038.84
23	**Average Cost of Supply (ACS) (11/19 - Rs/Kwh)**	7.49	7.88	8.28

3.5 Revenue gap and its recovery: -

Table 3.7:: Revenue Gap and its Recovery

(Rs. In Cr.)

Table 3.7 :: Revenue Gap and its Recovery				
S.L No.	Particulars	(Rs. In Cr.)	(Rs. In Cr.)	(Rs. In Cr.)
		(Projected) FY 2027-28	(Projected) FY 2028-29	(Projected) FY 2029-30
1	Aggregate Revenue Requirement (ARR)	1523.68	1603.85	1688.29
2	Non-Tariff Income	80.91	90.89	102.30
3	Net ARR (1-2)	1442.77	1512.95	1585.99
4	Income- Sale of power outside State	360.62	243.91	168.10
5	Net ARR from within the state (3-4)	1082.15	1269.05	1417.89
6	Income from proposed tariff	399.88	449.23	505.59
7	Revenue Gap (5-6)	682.27	819.82	912.30
8	Expected Grant from GoAP	682.27	819.82	912.30
9	Net Revenue Gap (5-6-8)	0	0	0

The revenue gap for the FY 2027-28 to FY 2029-30 is expected from the state Government as a **grant**.

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CHAPTER –IV:: AGGREGATE TECHNICAL & COMMERCIAL LOSS

As per APSERC Multiyear Tariff Regulation 2024 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 projected for the entire control period.

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	Ensuing Year		
			FY 2027-28 (Projected)	FY 2028-29 (Projected)	FY 2029-30 (Projected)
Energy Import from Grid	A	MU	1288.47	1284.48	1280.68
Energy Export Out Side the State	B	MU	804.84	595.12	460.17
Energy Injected in State from Grid	C=A-B	MU	483.63	689.35	820.51
Transmission loss on C(3.51%)	D	MU	15.72	22.40	26.67
State Own Generation + RECEIVED FROM OTHER SOURCE	E	MU	744.57	751.20	758.16
Gross Input Energy (including Export outside the state)	F=A+E	MU	2033.05	2035.68	2038.84
Input Energy (in the State)	G=C+E	MU	1228.20	1440.55	1578.67
Net Input Energy (in the State)	H=G-D	MU	1212.49	1418.15	1552.00

4.2 AT&C loss and its projection: -

Due to the scattered load over a vast geographical area, the distribution loss is comparatively high in Arunachal Pradesh. However, many projects are going on under DoP,AP, whose target is to reduce distribution loss and AT&C Loss as per trajectories fixed by Govt of India. But, because of the slow progress of dream projects for the reduction of AT&C losses like IPDS, RDSS, etc, the AT&C loss reduction in Arunachal Pradesh is not up to the expectation. The AT&C loss projection for the FY 2027-28 to FY 2029-30 is tabulated in table 4.2

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Table 4.2 :: AT&C Loss Projection

S No	Particulars	Calculation	Unit	Ensuing Year		
				FY 2027-28 (Projected)	FY 2028-29 (Projected)	FY 2029-30 (Projected)
A	Input Energy (MkWh)	A		1228.20	1440.55	1578.67
B	Transmission Losses(MkWh)	B		15.72	22.40	26.67
C	Net Input Energy (MkWh)	C=A-B		1212.49	1418.15	1552.00
D	Energy Sold(MkWh)	D		1053.96	1183.88	1332.26
E	Revenue from Sale of Energy Inlcuding Government Grant (Rs. Cr.)	E		1163.06	1359.94	1520.19
E (i)	**Likely Collection (92% of Tariff & 100% of Grant)**	E (i)		1114.98	1305.93	1459.40
F	Adjusted Revenue from Sale of Energy on Subsidy Received basis (Rs. Cr.)	F		1163.06	1359.94	1520.19
G	Opening Debtors for Sale of Energy (Rs. Cr.)	G		432.63	480.71	480.71
H	(i) Closing Debtors for Sale of Energy (Rs. Cr.)	(i)		480.71	480.71	480.71
	(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)		480.71	480.71	480.71
J	Collection Efficiency (%)	(E (i)+G-I)/E*100		91.73	96.03	96.00
K	Units Realized (Mkwh) = [Energy Sold*Collection efficiency]	D*J/100		966.82	1136.86	1278.98
L	Units Unrealized (Mkwh)= [Net Input Energy-Units Realized]	C-K		245.66	281.29	273.02
M	**AT&C Losses (%) = [{ Units Unrealized/Net Input Energy}*100]**	**L/C *100**		20.26	19.83	17.59

Hon'ble Commission is requested to approve Estimated AT&C Loss for FY 2027-28 to FY 2029-30 as proposed above.

Dated Itanagar the 10.th January 2025

Petitioner
For the Department of Power
Government of AP
Itanagar
Chief Engineer (Power)
Commercial-cum-CEI
Department of Power, Itanagar