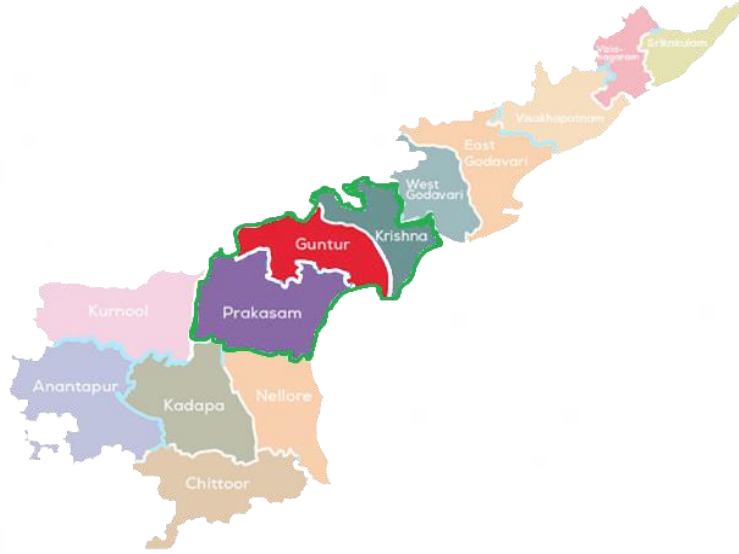


ANDHRA PRADESH CENTRAL POWER DISTRIBUTION CORPORATION LIMITED

Beside Govt. Polytechnic college, ITI Road, Vijayawada



**Business Plan for 5th & 6th Control Periods
(FY2024-25 to FY2028-29 &
FY 2029-30 to FY 2033-34)**

31-10-2023

Contents

1	<i>Business Plan for APCPDCL for the 5th & 6th Control Periods</i>	1
2	<i>Context of the Business Plan</i>	2
2.1	Load Forecast Plan Summary	2
2.1.1	Historical Sales Summary	2
2.1.2	Sales Forecast	2
2.2	Loss Trajectory Summary	3
2.2.1	Energy Requirement (MU)	3
2.2.2	Load Forecast (MW)	4
2.3	Power Procurement Plan Summary	5
2.3.1	Projected peak demand of AP Grid system :	6
2.3.2	Existing Installed/Contracted Capacity from various sources	6
2.3.3	Gist of expected net capacity additions:	8
2.3.4	Contracted Capacities for 5 th & 6 th Control Periods:	9
2.4	Investment Plan Summary	12
3	<i>Metering plan for Metering Interface Points</i>	13
4	<i>Treatment of previous losses</i>	15
5	<i>Performance of APCPDCL as Distribution Licensee</i>	15
5.1	Distribution Loss & AT & C loss	15
5.2	Network Additions to sustain Load growth	17
5.3	Focus to improve reliability of power supply	17
5.4	Taken measures to increase the safety and reduce the accidents	18
5.5	Energy Efficiency Initiatives	19
5.6	Initiatives in Revenue billing and Revenue Collections:	20
5.7	IT & OT Initiatives adopted by APCPDCL	20
5.8	Focus on Industrial Consumers	23
5.9	Cost Reduction plan	23
6	<i>Performance Improvement Plan of APCPDCL for FY 2023-24 to FY 2033-34</i>	23
6.1	Loss Reduction Initiatives	23
7	<i>Key Financial Parameters</i>	25
7.1	Capital Expenditure	25
7.2	Asset Base	25
7.3	Investment	26
7.4	O&M Expense	26
7.5	Depreciation	29
7.6	Consumer Contribution and Grants	30
7.7	Regulated Rate Base	30
7.8	Weighted Average Cost of Capital (WACC)	31
7.9	Return on Capital Employed	32
7.10	Taxes on Income	33
8	<i>Aggregate Revenue Requirement</i>	33
10	<i>Financial Statements of APCPDCL for FY 2022-23 to FY 2028-29</i>	34

1 Business Plan for APCPDCL for the 5th & 6th Control Periods

The Andhra Pradesh Electricity Regulatory Commission (APEREC), Regulation 10 of 2013 directs the licensees to submit a Business Plan for Hon'ble Commission's approval. The Business Plan shall contain the following

- Year Wise Load Growth
- Year Wise Distribution Loss Reduction with Specific Action Plan
- Metering Plan for Metering Interface Points
- Treatment of Previous Losses
- Cost Reduction Plan
- Other important Financial analysis or parameters

The Guidelines as per Regulation 39 of Regulation 10 of 2013 state that the distribution licensee shall submit a Business Plan for such period as the Commission may direct and shall update plan annually.

The licensee herewith submits the Business Plan for FY 2023-24 to FY 2028-29 (5th Control period) & for FY 2029-30 to FY 2033-34 for the review and approval of the Hon'ble Commission.

The Business Plan as submitted by the Licensee consists of the following sections

- Year Wise Load Growth
- Year Wise Distribution Loss Reduction with Specific Action Plan
- Metering Plan for Metering Interface Points
- Other important Financial analysis or parameters

2 Context of the Business Plan

The business plan for the distribution licensee is based on the resource plan filed by the licensee on 29th April 2023 for 5th and 6th Control period. The summary of the Load Forecast Plan and Power Procurement Plan is given below.

2.1 Load Forecast Plan Summary

2.1.1 Historical Sales Summary

The below table captures the 8-year historical sales as presented in Discom Resource Plan.

Category	FY17	FY18	FY19	FY20	FY21	FY22	FY23	CAGR
LT Category								
Domestic	3,785	4,054	4,289	4,829	5,132	5,337	5,295	5.75%
Commercial & Others	825	867	943	1,000	781	916	1,044	4.00%
Industry	416	451	486	489	459	482	477	2.31%
Institutional	228	235	304	254	291	304	322	5.90%
Agriculture & Related	2,515	2,707	2,834	2,830	2,855	2,952	3,029	3.15%
LT Total	7,769	8,314	8,855	9,400	9,518	9,990	10,165	4.58%
HT Category								
Domestic	10	11	11	12	12	13	14	5.54%
Commercial & Others	359	405	415	449	281	367	511	6.06%
Industry	2,846	2,931	3,004	2,672	2,530	3,086	2,798	-0.29%
Institutional	301	332	340	359	287	484	594	12.01%
Agriculture & Related	70	85	94	89	87	70	74	0.97%
HT Total	3,586	3,764	3,863	3,580	3,197	4,021	3,991	1.80%
LT + HT	11,355	12,078	12,718	12,980	12,715	14,010	14,157	3.74%

2.1.2 Sales Forecast

2.1.2.1 Category wise sales projection

Below table summarizes the category-wise sales projection for the period FY 2023-24 to FY 2028-29.

Category	FY23	FY24	FY25	FY26	FY27	FY28	FY29	CAGR
LT Category								
Domestic	5,295	5,685	5,952	6,231	6,524	6,831	7,154	5.14%
Commercial & Others	1,044	1,121	1,168	1,217	1,269	1,322	1,378	4.74%
Industry	477	523	540	558	577	596	616	4.36%
Institutional	322	336	355	376	399	422	448	5.67%
Agriculture & Related	3,029	3,300	3,465	3,659	3,842	4,034	4,236	5.75%
LT Total	10,165	10,965	11,481	12,042	12,610	13,206	13,831	5.27%
HT Category								
Domestic	14	15	15	16	16	17	18	3.95%
Commercial & Others	511	512	539	567	596	628	661	4.37%
Industry	2,798	3,026	3,957	4,122	7,897	8,083	8,282	19.83%
Institutional	594	632	648	667	690	721	753	4.04%
Agriculture & Related	74	96	98	115	118	145	151	12.60%
HT Total	3,991	4,281	5,257	5,486	9,317	9,594	9,865	16.28%
LT + HT	14,157	15,246	16,738	17,528	21,927	22,800	23,696	8.96%

Category	FY 23 (Actuals)	FY30	FY31	FY32	FY33	FY 34	CAGR
LT Category							
Domestic	5,295	7,493	7,849	8,222	8,614	9,026	4.97%
Commercial & Others	1,044	1,436	1,497	1,560	1,626	1,695	4.51%
Industry	477	637	658	681	704	728	3.93%
Institutional	322	474	503	533	565	599	5.83%
Agriculture & Related	3,029	4,448	4,670	4,904	5,149	5,406	5.41%
LT Total	10,165	14,488	15,177	15,899	16,658	17,455	5.04%
HT Category							
Domestic	14	19	19	20	21	22	4.11%
Commercial & Others	511	696	733	773	817	866	4.91%
Industry	2,798	8,493	8,719	8,960	9,216	9,490	11.74%
Institutional	594	792	844	901	970	1,055	5.36%
Agriculture & Related	74	152	153	155	156	157	7.10%
HT Total	3,991	10,152	10,469	10,809	11,180	11,590	10.18%
LT + HT	14,157	24,640	25,646	26,708	27,838	29,045	6.75%

2.2 Loss Trajectory Summary

The licensee has taken various steps to reduce the losses like strengthening of the network infrastructure, addition of network elements, and vigorously undertaking the Energy Audit visit to keep a close tab on the losses.

Based the loss reduction measures carried out in the state, the licensee projects the loss for the period FY 2023-24 to FY 2028-29 & FY 2029-30 to FY 2033-34.

APCPDCL	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Annual LT Loss %	3.74%	3.73%	3.72%	3.71%	3.70%	3.69%	3.68%	3.68%	3.67%	3.66%	3.65%
Annual 11 KV Loss %	3.17%	3.16%	3.15%	3.15%	3.14%	3.13%	3.12%	3.11%	3.11%	3.10%	3.09%
Annual 33 KV Loss %	3.12%	3.11%	3.10%	3.10%	3.09%	3.08%	3.07%	3.07%	3.06%	3.05%	3.04%

**Distribution loss in % as projected by the Licensee in ARR filings for FY 2023-24.*

2.2.1 Energy Requirement (MU)

The methodology followed upon for determination of Energy Input at Discom/State level is described below:

- a) Based on sales forecast and open access sales projected by the Licensee, the energy input at the Discom periphery has been determined by undertaking following steps:
 - Energy Input at LT level = LT sales + LT losses
 - Energy Input at 11 kV level = Energy Input at LT level + 11KV sales+11 kV losses
 - Energy Input at 33 kV level = Energy Input at 11 kV level +33kv Sales+ 33 kV losses
 - The total energy input from various schemes mentioned in section 3.2 at 33 kV level and Energy input from Open access sales at 33 kV level has been separately calculated and added to the discom level Energy input at 33 kV level.

- b) Total Energy Input at Discom periphery = Energy Input at 33 kV level + 132 kV Sales +132 kV Open Access sales.
- c) The Energy Input at State level has been determined by combining the Energy Input of both the Discoms and grossing up that energy with Transmission losses and PGCIL losses.

Based on the category wise sales forecast and loss trajectory, below is the energy requirement for 5th & 6th Control periods

Parameters	FY23 (Actuals)	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Annual LT Loss %	3.75%	3.74%	3.73%	3.72%	3.71%	3.70%	3.69%	3.68%	3.68%	3.67%	3.66%	3.65%
Energy Input at LT level (MU)	10,562	11,379	11,916	12,502	13,099	13,730	14,400	15,115	15,839	16,601	17,402	18,244
Annual 11 kV Loss %	3.18%	3.17%	3.16%	3.15%	3.15%	3.14%	3.13%	3.12%	3.11%	3.11%	3.10%	3.09%
Energy Input at 11KV level (MU)	12,367	13,374	14,012	14,724	15,439	16,212	17,022	17,883	18,766	19,700	20,688	21,736
Annual 33 kV Loss %	3.13%	3.12%	3.11%	3.10%	3.10%	3.09%	3.08%	3.07%	3.07%	3.06%	3.05%	3.04%
Energy Input at 33 kV level (MU)	14,728	15,784	16,546	17,390	18,246	19,179	20,150	21,185	22,254	23,390	24,599	25,889
Total Energy Requirement at 33 KV + 132 KV Sales	15,708	16,889	18,463	19,344	23,840	24,820	25,836	26,919	28,045	29,235	30,502	31,853

2.2.2 Load Forecast (MW)

Licensee determined the load factors based on following method (Reference to Section 4.3 in Resource Plan):

- State/Discom/Circle level demands have been undertaken for each hour during FY 2022-23. On the basis of this hourly demand monthly average for each hour and yearly average demand have been determined.
- State/Discom/Circle level peak demands for each month and year have also been undertaken for FY 2022-23.
- The Load factor is determined using below formula:

$$\text{Load Factor} = \text{Yearly average demand} / \text{Yearly peak demand}$$

On the basis of Energy Input at 33 kV level for discom and circle and assumed load factors for FY2022-23, licensee projected demand in MW for 5th & 6th control period as per formula mentioned below (Reference to Section 4.4 in Resource Plan):

$$\text{Peak Demand (MW)} = \text{Energy required} / (24 \times 365 / 1000) / \text{load factor}$$

The peak load forecasted at state level has been shown below:

Parameters	FY23	FY24	FY25	FY26	FY27	FY28	FY29	CAGR
Energy Req. at state level (MUs)	72400	79472	85365	90924	99731	105179	111378	7.44%
State Peak Demand (MW)	12293	13746	15226	16256	17831	18805	19913	8.37%

Parameters	FY23	FY30	FY31	FY32	FY33	FY34	CAGR
Energy Req at state level (MUs)	72400	117510	124067	131269	138753	146877	6.64%
State Demand (MW)	12293	21042	22251	23561	24944	26870	7.37%

On the basis of non-coincident load factors and energy input at 33 kV level each Discom & circle level, mentioned above, non-coincident peak demands at Discom level & at circle level have also been estimated. Summary of the peak demands at APCPDCL is shown below:

Circle/Peaks at 33 KV level	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Vijayawada	1071	1154	1207	1265	1324	1388	1455	1527	1600	1678	1760	1847
Guntur	980	1041	1088	1139	1191	1250	1310	1375	1442	1513	1591	1674
Ongole	646	696	736	783	828	878	929	983	1040	1099	1162	1229
APCPDCL	2645	2835	2971	3123	3277	3444	3619	3805	3997	4201	4418	4649

2.3 Power Procurement Plan Summary

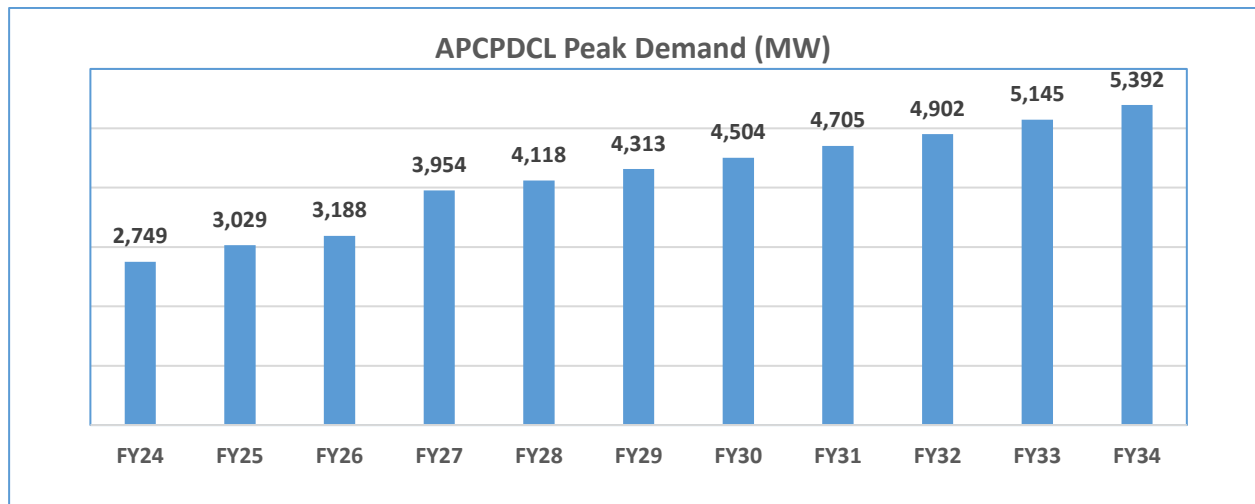
- In pursuant to the provisions of Electricity Act-2003, Bulk Power purchase activity has been vested with APDISCOMs through a transfer scheme notified by the State Govt in June 2005.
- With effect from 1st April 2020, a new distribution licensee by the name of Central Power DISCOM (APCPDCL) has been carved out of APSPDCL to serve three erstwhile Districts of Krishna, Guntur and Prakasam. Consequent to formation of APCPDCL the State Govt vide GO Ms No 13, dt 6th April 2020 have specified sharing Ratios to the three DISCOMs for the purpose of procurement of power through PPAs. These ratios are applicable for all the existing Power Purchase Agreements (PPAs) of combined purchases in respect of all on going and under construction Generation Stations for which PPAs have been signed except for the projects exclusively allocated on the basis of geographical location by the Government of Andhra Pradesh and other PPAs entered into by individual DISCOMs.
- APDISCOMs are sharing the capacities in the specified ratios issued by GoAP in respect of all sources of power. Further vide GO Rt No. 146, dated 02.12.2022 the geographical allocation of NCE PPAs prevailing thereto was changed to proportionate allocation. Presently the ratios of APEPDCL, APSPDCL and APCPDCL (Distribution Licensees in AP) in the Power Purchase Agreements (PPAs) in pursuant to the above, are indicated as below:

Sl.No.	Name of Discom	Allocated Share in %
1	APSPDCL	40.44%
2	APEPDCL	36.22%
3	APCPDCL	23.34%
	Total	100.00%

- d) In accordance with the GoAP letter dated 29.06.2022, the APCPDCL has been designated as Lead Procurer on behalf of APDISCOMs in respect of bulk power purchase activity from all shared power projects.
- e) The details of capacities being availed by APDISCOMs from various power stations as on 31st March 2023 is indicated below.

2.3.1 Projected peak demand of AP Grid system :

Peak Demand forecast as carried out by APCPDCL is aggregated upto the horizon year FY 2033-34 (6th Control Period) is presented below.



- The AP State Grid Demand is expected to increase from the existing level of around 12,500 MW to 26985 MW by 2033-34 at a compounded annual growth rate (CAGR) of 7.25%.
- As per 20th Electric Power Survey (EPC) conducted by the Central Electricity Authority (CEA) the expected peak demand to be met in AP is 24,525 MW by the horizon year at a CAGR of 6.45%.
- Minimum Grid Demand incident on the system (100% Base Load) is expected to increase from the existing level of 5600 MW to 9200 MW by 2034 at a CAGR of 4.6%.

2.3.2 Existing Installed/Contracted Capacity from various sources

The abstract of existing contracted capacities from various sources of generation held by APDISCOMs is presented as below:

SOURCE	INSTALLED CAPACITY(MW)	APDISCOMs SHARE(%)	APDISCOMs CONTRACTED CAPACITY(MW)	APCPDCL SHARE(%)	APCPDCL CONTRACTED CAPACITY(MW)
APGENCO-THERMAL	3410.00	100.00%	3410.00	23.34%	795.89
APGENCO-HYDEL	1773.60	100.00%	1773.60	23.34%	413.96
JOINT SECTOR	2616.82	93.91%	2456.82	23.34%	573.42
CGS	15290.00	12.94%	1978.63	23.34%	461.81
IPPs (Thermal)	3680.00	51.50%	1895.55	23.34%	442.42
IPPs (Gas)	1498.08	46.11%	690.80	23.34%	161.23
NCE	7626.94	100.00%	7626.94	23.34%	1780.13
Total	35895	55.30%	19832.3	23.34%	4628.86

The following are the expected / committed capacity additions in the state of Andhra Pradesh

- i. APGENCO Thermal-VTPS-Stage V-1X800 MW:
APDISCOMs have entered into an amended and restated power purchase agreement on 14-10-2022 with APGENCO for procurement of 100% power from its VTPS-Stage V having an installed capacity of 800 MW for a period of 25 years from the date of COD and the signed PPA was submitted to the Hon'ble Commission for consent vide letter dated 17-10-2022. The plant is expected to achieve Commercial Operation Date (COD) by 1st September 2023. Accordingly, APDISCOMs have considered the power procurement for the ensuing financial year FY 2023-24 and throughout 5th and 6th control periods.
- ii. APGENCO Hydro- Additional two Units at Lower Sileru 2X115 MW:
There is a proposal from AP Genco for installing additional two 115 MW Units are Lower Sileru hydel power during FY 2024-25. These two units would not entail any additional energy bit are helpful in meeting the peak demand within existing water discharge capability. These Units are considered in resource planning for 5th and 6th control periods.
- iii. APGENCO Hydro- Polavaram Hydro Project 12X80 MW:
AP Genco is developing 960 MW Hydro power project at Polavaram Irrigation project. The configuration of the project is 12X80 MW. Polavaram hydel power (7*80MW) during FY2024-25 and (5*80MW) during FY2025-26.
- iv. APGENCO Hydro- Upper Sileru Pumped Storage Hydro Project 9X150 MW
There is a proposal by AP Genco to develop Upper Sileru Pumped Storage Power Plant with the aggregate installed capacity of 1350 MW to be set up during FY2027-28 (8x150 MW) and during FY2028-29 (1x150 MW). Hence, the power from this plant is considered from FY2027-28, FY2028-29 and entire 6th control period.
- v. CGS-Nuclear-Bhavini-100 MW
APDISCOMs sought an allocation of 100 MW from the proposed BHAVINI Nuclear Plant. The plant is expected to be commissioned in the year FY 2024-25.
- vi. CGS-Talcher-Stage-III -264 MW.
APDISCOMs sought an allocation of 264 MW from the proposed Talcher-Stage-III Thermal. The plant is expected to be commissioned in the year FY 2027-28.
- vii. CGS-Telangana Super Thermal Power Station Phase I
APDISCOMs are allocated 8 MW minimum share from the SR pool unallocated quota from the C.O.D of Telangana STPS Phase-I Unit-I, 1x800 MW plant. The C.O.D of Unit-I is going to be declared during April/May'2023. APDISCOMs are expected to get further 1% share of 8 MW from the SR pool unallocated quota from Telangana STPS Phase-I Unit-II, 1x800 MW plant i.e., from the C.O.D of 2nd unit which is expected during FY 2023-24.

viii. SECI-Solar 7000 MW:

- a) The Govt of Andhra Pradesh intends to supply 9 hrs day time uninterrupted power supply to the Agricultural farming consumers in the state on sustainable basis through a separate nodal agency (Andhra Pradesh Rural Agricultural Power Supply Company – APRAPSCom).
- b) M/S SECI, a GOI undertaking made an offer to APDISCOMs in 2021 for procurement of 9000 MW Solar power from the projects being set up at Rajasthan vide Manufacturing linked scheme, with a tariff @ Rs. 2.49 per unit with a waiver of ISTS charges and losses to Andhra Pradesh.
- c) APDISCOMs submitted interim power procurement plan for the 5th control period to the Hon'ble APERC and sought approval for procurement of 7000 MW Solar power from SECI manufacturing linked scheme. Hon'ble APERC vide orders dt.11.11.2021 issued consent for procurement of 7000 MW Solar Power from SECI.
- d) As per the instructions of Govt of A.P, All the three APDISCOMs and Govt of AP had entered into PSA with SECI on dated 01.12.2021 for procurement of 7000 MW (17000 MU) from 2024 September onwards. (3000 MW as on 2024, 6000 MW as on 2025 and 7000 MW as on Sept'2026.).
- e) Upon fully establishment of APRAPSCom, the aforesaid Power Sale Agreement will be transferred from APDISCOMs to APRAPSCom for supply of power to the Agricultural consumers.

ix. Wind Projects

There will be also an addition of 774.9 MW wind power from M/s AXIS and 400 MW wind power from M/s AXIS Bundling, Balancing & Banking (BBB) scheme, totaling to 1174.9 MW during FY2025-26.

2.3.3 Gist of expected net capacity additions:

The following Table summarizes the expected / committed capacity additions year wise, after considering expiry of existing PPAs.

Source	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	Total	APCPDCL share
APGENCO								
Hydro Plants								
Polavaram (12x80MW)		560	400				960	224.06
Lower Sileru (2X115MW)		230					230	53.68
Upper sileru Pumped storage (9X150)					1200	150	1350	315.09
Thermal Plants								
Vijayawada TPS Stage V (1x800 MW)	800						800	186.72
APGENCO Total	800	790	400		1200	150	3340	779.55

Source	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	Total	APCPDCL share
CGS								
Telangana Super Thermal Power Station Phase I (Unit-1&2)	16						16	3.73
Bhavani		100					100	23.34
Talcher stg=III					264		264	61.62
Private Projects								
Wind	-2.5	0	1164.5	-4.5			1157.5	270.16
Solar (SECI from Rajasthan)		3000	3000	999			6999	1633.57
Gas (GVK extn. Gouthami, Konaseema, Vemagiri)		-315.4		-204.8		-170.9	-691.1	-161.30
Other NCE	-77.3	-4.7	-27	-10	-2	-14.66	-135.66	-31.66
Total Capacity addition	736.2	3569.9	4537.5	779.7	1462	-35.56	11049.74	2579.00

2.3.4 Contracted Capacities for 5th& 6th Control Periods:

The summary of year-wise available plant capacities in MW for 5th Control period is shown below.

State	FY23 (Actual)	FY24	FY25	FY26	FY27	FY28	FY29
Source	MW	MW	MW	MW	MW	MW	MW
APGENCO & APPDCL THERMAL	5650	6,450	6,450	6,450	6,450	6,450	6,450
APGENCO Hydel	1,773.6	1,773.6	2563.6	2,963.6	2,963.6	4163.6	4,313.6
AP Discom Gas	0	0	0	0	0	0	0
CGS	1978.628	1994.628	2094.628	2094.628	2094.628	2358.628	2358.628
IPPs(Gas)	0	0	0	0	0	0	0
IPPs - Others	1895.55	1895.55	1895.55	1895.55	1895.55	1895.55	1895.55
NCE Sources	7626.94	7547.14	10,542.4	14679.5	15,664	15,662	15,647.3
MW Availability	18924.72	19660.92	23546.18	28083.28	29067.78	30529.78	30665.08

APCPDCL	FY23 (Actual)	FY24	FY25	FY26	FY27	FY28	FY29
Source	MW	MW	MW	MW	MW	MW	MW
APGENCO & APPDCL THERMAL	1318.71	1505.43	1505.43	1505.43	1505.43	1505.43	1505.43
APGENCO Hydel	413.96	413.96	598.34	691.70	691.70	971.78	1006.79
AP Discom Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CGS	461.81	465.55	488.89	488.89	488.89	550.50	550.50
IPPs(Gas)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IPPs - Others	442.42	442.42	442.42	442.42	442.42	442.42	442.42
NCE Sources	1780.13	1761.50	2460.60	3426.20	3655.98	3655.51	3652.08
MW Availability	4417.03	4588.86	5495.68	6554.64	6784.42	7125.65	7157.23

The summary of year-wise available plant capacities in MW for 6th Control period is shown below.

State	FY30	FY31	FY32	FY33	FY34
Source	MW	MW	MW	MW	MW
APGENCO Coal	6,450	6,450	6,450	6,450	6,450
APGENCO Hydel	4,313.6	4,313.6	4,313.6	4,313.6	4,313.6
AP Discom Gas	0	0	0	0	0
CGS	2358.628	2358.628	2358.628	2358.628	2358.628
IPPs(Gas)	0	0	0	0	0
IPPs - Others	1895.55	1895.55	1895.55	1895.55	1895.55
NCE Sources	15,627.3	15,538.8	15,503.3	15,474.4	15,474.4
MW Availability	30,645.08	30,556.58	30,521.08	30,492.18	30,492.18

APCPDCL	2029-30	2030-31	2031-32	2032-33	2033-34
Source	MW	MW	MW	MW	MW
APGENCO Coal	1,505.43	1,505.43	1,505.43	1,505.43	1,505.43
APGENCO Hydel	1,006.79	1,006.79	1,006.79	1,006.79	1,006.79
AP Discom Gas	0.00	0.00	0.00	0.00	0.00
CGS	550.50	550.50	550.50	550.50	550.50
IPPs(Gas)	0.00	0.00	0.00	0.00	0.00
IPPs - Others	442.42	442.42	442.42	442.42	442.42
NCE Sources	3,647.41	3,626.76	3,618.47	3,611.72	3,611.72
MW Availability	7,152.56	7,131.91	7,123.62	7,116.87	7,116.87

- Based on existing and future planned installed capacities, energy availability in MUs has been determined for each power station, based on formula shown below:

$$\text{Energy generation in MUs} = \text{Plant capacity (MW)} * \text{AP Share (\%)} * (1 - \text{Auxiliary power consumption in \%}) * \text{Plant load factor (\%)} * 24 * 365 / 1000$$

The table below summarizes projected energy Availability:

Sources (all figures in MUs)	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
AP Genco-Thermal	5854	6353	6353	6353	6371	6353
AP Genco-Hydel	693	1063	1327	1327	1331	1327
CGS	3448	3438	3438	3438	3448	3438
JS	3900	3889	3889	3889	3900	3889
IPPs-Thermal	3243	3234	3234	3234	3243	3234
Wind	1387	1384	1827	1826	1829	1826
Solar	1762	3616	5476	6096	6114	6096
NCE-Others	72	82	82	82	82	82
Total	20358	23060	25628	26246	26317	26246

Sources (all figures in MUs)	FY 30	FY 31	FY 32	FY 33	FY 34
AP Genco-Thermal	6353	6353	6371	6353	6353
AP Genco-Hydel	1327	1327	1331	1327	1327
CGS	3438	3438	3448	3438	3438
JS	3889	3889	3900	3889	3889
IPPs-Thermal	3234	3234	3243	3234	3234
Wind	1826	1794	1784	1770	1770
Solar	6096	6096	6114	6096	6096
NCE-Others	82	82	82	82	82
Total	26246	26214	26272	26190	26190

Based on the energy generation and energy input for power procurement the table below summarises Energy (MUs) balance at DISCOM/APCPDCL level:

Surplus/Deficit Energy Requirement Projections for 5th Control Period (MUs)

	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
Energy-Demand	17170	18782	19693	24337	25332	26359
Energy Supply	20358	23060	25628	26246	26317	26246
Surplus/(Deficit)	3189	4279	5934	1909	985	-113

Surplus/Deficit Energy Requirement Projections for 6th Control Period (MUs)

	FY 30	FY 31	FY 32	FY 33	FY 34
Energy-Demand	27442	28581	29785	31050	32417
Energy Supply	26246	26214	26272	26190	26190
Surplus/(Deficit)	-1197	-2366	-3513	-4860	-6227

Power Procurement Plan for meeting the deficit

- On the basis of expected future capacity additions already identified/committed so far, yearly deficit/surplus scenario has been evaluated and presented previously.
- The DISCOM expects to meet the base load capacity requirement to be procured through the Generating Stations capable of operating Round the Clock (RTC) with a PLF from 60% to 85%.
- Remaining procurement may be undertaken with intermediate sources. Further any gap arises on account of day ahead/week ahead basis on account of shortfall in availability from the committed sources or any variations in the generation forecast as may be made available, short term procurement will be undertaken in compliance with the Regulation in force.
- It is further to submit that the DISCOM is also required to procure ancillary services (Secondary or Tertiary) in terms of maintaining the required Reserves in compliance to the CERC's Indian Electricity Grid Code (IEGC), Deviation Settlement Mechanism (DSM) and Ancillary Services Regulations.

2.4 Investment Plan Summary

Below table shows the historical capital expenditure which has been undertaken by the Licensee in last 5 years i.e. FY 2018-19 to FY 2022-23 which has been met by the Licensee through its own funds.

Sr. No.	Item	FY19	FY20	FY21	FY22	FY23
1	New Consumers Capex	158.41	131.45	142.95	188.14	222.68
2	Distribution Transformer Additions	73.17	65.36	35.84	56.80	108.80
3	Feeder Additions	45.73	40.85	22.40	35.50	68.00
4	Loss reduction measures	36.59	32.68	17.92	28.40	54.40
5	Technology Upgradation and R&M	27.44	24.51	13.44	21.30	40.80
6	Agri (New Consumer)	98.71	97.75	61.48	63.50	105.56
	Total Historical CAPEX	440.04	392.60	294.03	393.65	600.24

In addition to the capital investment shown above, the Licensee has also undertaken investments under various ongoing schemes such as Jagananna Housing Colonies, AGL DBT, R-APDRP, HVDS project, World Bank and other grants, as shown below:

Sr. No.	Item	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
1	HVDS	154	112	57	466	471	99	109	-	-	-	-	-	-	-	-	-
2	Solar	202	43	10	-	-	-	-	-	-	-	-	-	-	-	-	-
3	IPDS	72	24	-1	0	7	-	-	-	-	-	-	-	-	-	-	-
4	DDUGJY	39	32	2	2	1	-	-	-	-	-	-	-	-	-	-	-
5	9 Hrs Agl Supply	0	0	108	57	20	-	-	-	-	-	-	-	-	-	-	-
6	JHC	-	-	-	-	241	463	380	-	-	-	-	-	-	-	-	-
7	WB	44	3	23	39	94	9	-	-	-	-	-	-	-	-	-	-
8	AGL DBT	-	-	-	30	117	356	356	144	144	144	144	144	144	144	144	-
9	SI under REC funding	7	1	31	39	51	85	25	-	-	-	-	-	-	-	-	-
10	RGGVY	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	R-APDRP	5	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-
	Total (Rs. Cr.)	526	219	233	635	1,003	1,012	870	144	144	144	144	144	144	144	144	-

The table below provides the projected Capital Expenditure of APCPDCL from FY 2023-24 to FY 2033-34 under DISCOM Proposal.

Sr. No.	Item	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
1	Substations (New)	150	115	135	144	165	183	207	224	252	283	320
2	Power Transformer Augmentation	61	47	55	59	67	75	84	91	102	115	130
3	Distribution Transformer Additions	387	312	362	389	437	488	550	595	663	741	826
4	Lines, Cables & Network	346	274	312	332	369	406	452	483	532	589	650
	Total (Rs. Cr.)*	944	747	864	923	1039	1152	1294	1394	1549	1728	1926

The table below provides the projected total (discoms proposed + ongoing schemes) Capital Expenditure of APCPDCL from FY 2023-24 to FY 2033-34 including ongoing schemes.

S. No.	Item	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
1	CAPEX under ongoing Schemes	1,012	870	144	144	144	144	144	144	144	144	0
2	Capital Expenditure for infrastructure towards new loads (Base Capex)	944	747	864	923	1,039	1,152	1,294	1,394	1,549	1,728	1,926
3	Technology up gradation & Others	1760	1637	934	184	192	200	210	220	231	137	151
	Total (Rs. Cr.)	3715	3254	1942	1251	1375	1496	1647	1757	1924	2009	2077

The rationale for the Capital Expenditure projections is provided in the subsequent sections.

3 Metering plan for Metering Interface Points

The distribution licensee has achieved 100% metering of feeders and consumers (excluding agricultural consumers) in its license area. Further, the licensee has metered around 1,29,020 (19.38%) out of 6,65,708 Nos. distribution transformers in its license area as on date.

There are 166 Nos PTRs HV/LV boundary points between APCPDCL and APTRANSCO in 66 Nos EHT Substations. APCPDCL is considering 132/33 KV LVs as interface points between APTRANSCO and APCPDCL. There are 24Nos EHT consumers directly drawing energy from EHT Transco Substations. All 132/33KV LVs and EHT consumer feeder points have the functional meters to measure the energy drawn by APCPDCL. Monthly Energy Exchanges between APCPDCL and APTRANSCO and inter discom draws (Imported from / Exported to other discoms) will be certified by APSLDC/EBC/APTRANSCO.

Agricultural Metering:

APCPDCL is following the Indian Statistical Institute (ISI) methodology for assessing the free agricultural consumption. In this methodology, per HP Consumption is being arrived from the meters fixed on the LV side of the sampled Agl DTRs in different areas and the total agricultural consumption is extrapolated from the per HP consumption.

APCPDCL has taken initiatives as per the GoAP directives to provide meters to unmetered agriculture consumers to implement DBT in the state. Govt. of AP has ordered for implementation of “YSR Uchita Vyavasaaya Vidyut Pathakam” and instructed for installation of Smart Energy Meters to all the Agriculture Services in APCPDCL vide GO.Ms.No.22 Dt. 01.09.2020. Based on the consumption, agriculture subsidy amount will be credited to the farmer’s bank account and after that, the same amount will be transferred to APCPDCL. The cost of providing meters to agriculture services shall be borne by the Govt. of Andhra Pradesh as subsidy.

The above model is being implemented in Andhra Pradesh as a unique scheme and the Government is implementing DBT scheme for Agriculture services for the first time in India, which has the following advantages:

- Safety to farmers by providing the Auxiliary materials (Earthing, MCCB & Capacitor)
- Avoiding failure of equipment
- Maintaining Voltage regulation
- Meeting RPO obligations and RE installation targets (7000 MW solar power from SECI)
- Green Energy (7000 MW solar power from SECI)
- Enhanced system stability
- Reduction of losses
- Elimination of fatal electrical accidents, etc.

Under this scheme in addition to installing Smart meters, APCPDCL is also providing Auxilliary materials which has the following advantages

SMC Meter Box: A SMC box is a protective housing used to install and safeguard smart meters and related equipment. SMC boxes play a crucial role in the successful deployment and operation of smart metering infrastructure by offering several advantages such as all Weather Protection, Security, Environmental Protection and Cost efficiency.

MCCB: A Molded Case Circuit Breaker (MCCB) is an electrical protection device that can be used in smart metering systems which protects the electrical network from Overcurrent Protection and protection during Faults and also has high operability.

LT Shunt Capacitors: Low Tension (LT) shunt capacitors offer Power Factor Improvement, Energy Efficiency, Improved Voltage Regulation and Reduced Line Losses:

Earthing: Earthing, also known as grounding, plays a critical role in electrical systems by ensuring Safety to equipment and men, voltage stability.

Weather-Proof Twin Core (WPTC) Wire: It is specifically designed to withstand environmental conditions and long life, provide reliable power and data connections for smart meters. It offers several advantages when used in smart meter installations.

Following are the key benefits of smart meters for agricultural consumers:

- Provide Real-time data on energy consumption and usage patterns
- Data Accuracy
- Remote monitoring
- Fault detection
- Predictive maintenance

The Smart Meters are installed to individual farmers instead at Transformer level or Feeder Level due to the following:

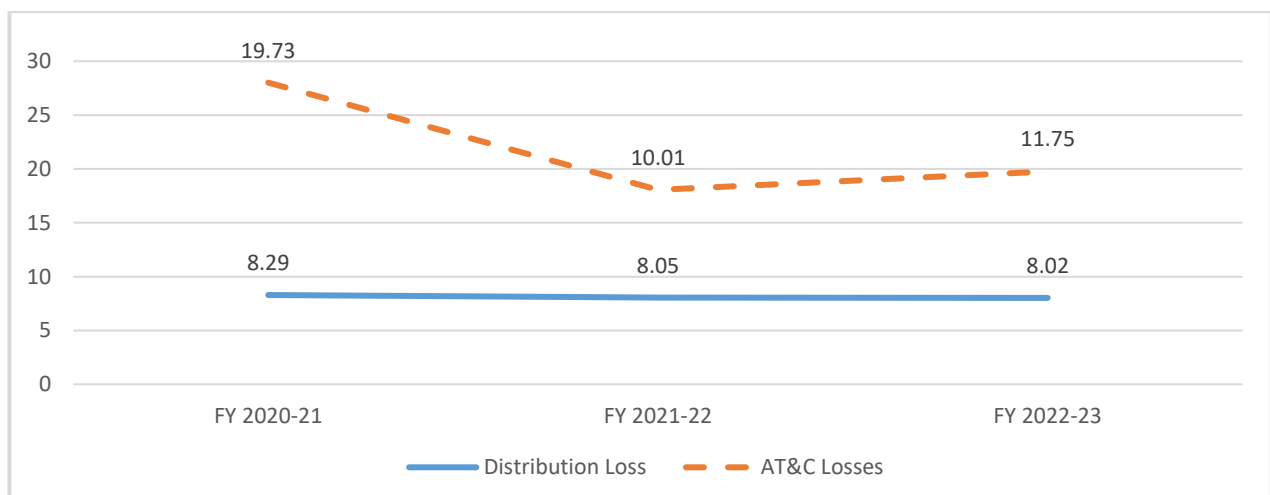
- Smart Meters are installed to Agriculture services as part of the scheme “YSR Uchitha Vyavasaaya Pathakam” Direct Benefit Transfer (DBT) scheme.
- In this way, farmer will be able to know how much benefit is being received and farmer can own the subsidy. This will lead to empowerment of the farmers and accountability at DISCOM level to provide reliable and quality power supply.
- If metered at transformer level, individual consumption of the farmer and subsidy, which depends on the extent of land owned, capacity of the motor used and also based on the dry land or wet land, cannot be arrived and the very purpose of the Government’s DBT scheme is defeated.

4 Treatment of previous losses

The licensee incurred significant loss due to dis-allowance of power purchase cost variations and revenue true up in the true up of retail supply business for the 3rd Control period by the Hon’ble APERC, causing significant working capital loan requirement to meet the above said variations. In order to address the above dis-allowance of the said items, the licensee filed appeals before Hon’ble APTEL, for which the judgment is yet to be delivered. Further, the APSPDCL addressed a detailed letter to the Hon’ble APERC for amending the certain items of Regulation 4 of 2005 that are causing significant damages to the licensees, for which the Hon’ble APERC has issued a draft regulation, Recovery of past losses is contingent on outcome of the appeals filed before the Hon’ble APTEL.

5 Performance of APCPDCL as Distribution Licensee

5.1 Distribution Loss & AT & C loss



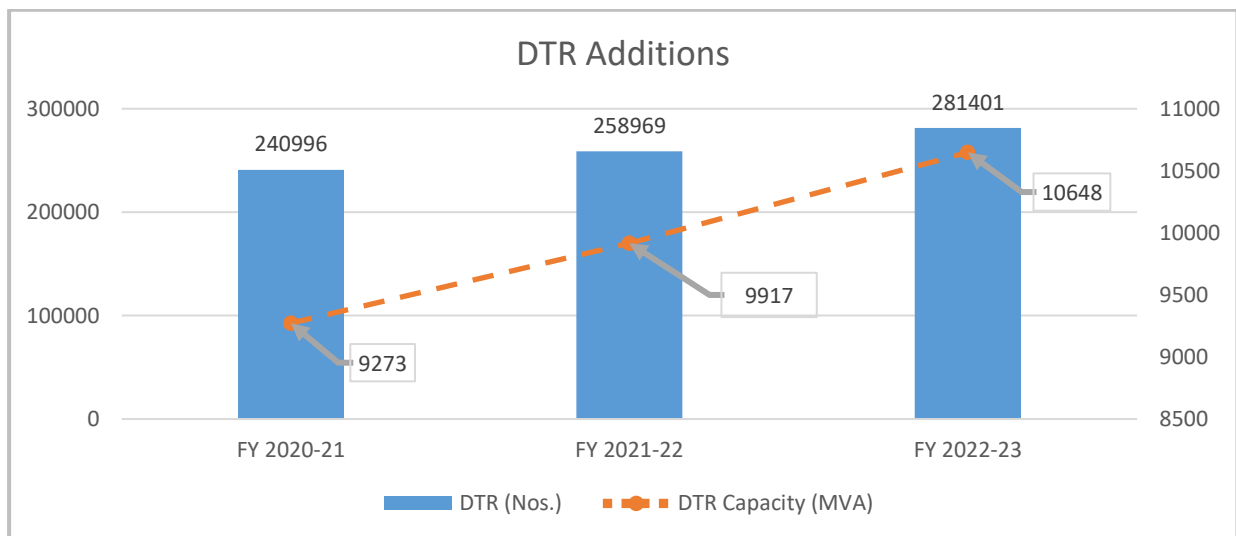
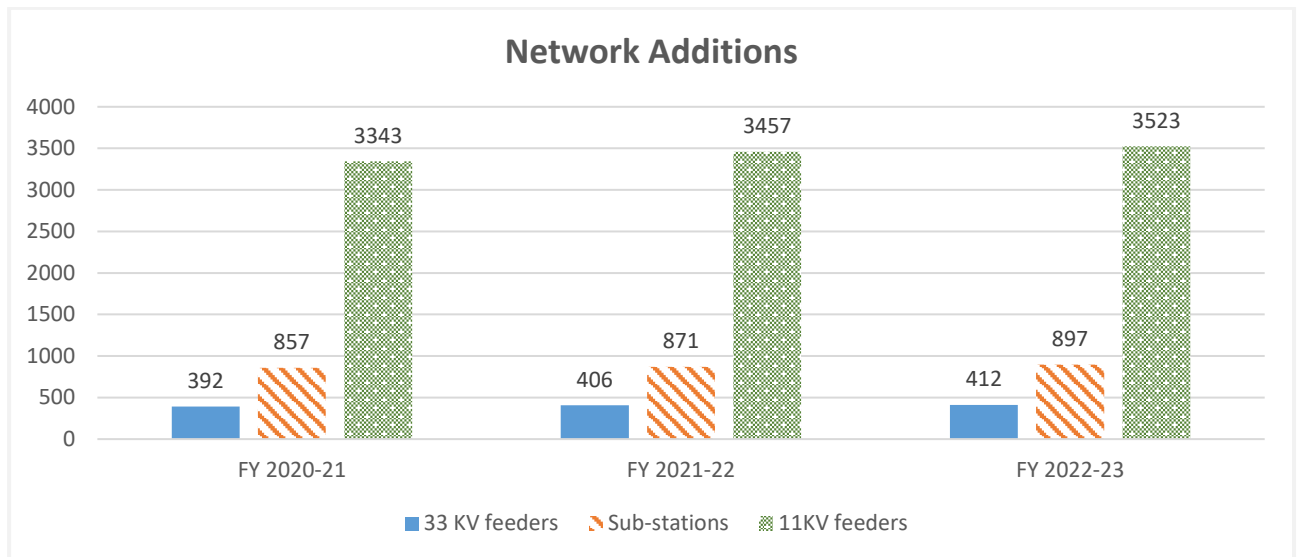
The above graph indicates that there is continues decreasing distribution losses from 8.29% in the FY 2020-21 to 8.02% during the FY 2022-23. Whereas AT&C losses decreased from 19.73% during FY 2020-21 to 10.01% during the FY 2021-22 and then increased to 11.75 % during the FY 2022-23. As arrears of Govt. departments are not fully realized, AT&C losses during the FY 2022-23 are increased.

Initiatives taken to reduce distribution losses from FY 2018-19 to FY 2022-23:

- Erection of new 33/11KV substations.
- Erection of New 33KV& 11KV Feeders
- Replacement of old conductor of 33KV,11KV< Feeders
- Replacement of LT conductor by AB Cable in theft prone areas.
- Replacement of old DTRs and providing of additional DTRs.
- Augmentation of PTRs& Erection of new PTRs
- Conversion of LT line from 1-Phase to 3-Phase where ever required.
- Bifurcation of over loaded 33KV & 11KV feeders.
- Implementation of SCADA projects to improve reliability & GIS of Existing Network.
- Renovation of earthing
- Replacement and refurbishment of 33KV, 11KV breakers.
- 11KV AB cables are proposed whenever there is difficulty in maintaining minimum clearance from overhead lines in cities and towns.
- Regular maintenance of 11KV feeders, LT lines & DTRs are being carried out for minimizing of interruptions, to minimize the losses and improve the sales.
- Conducting intensive inspections on regular basis in theft prone areas by DPE wing in coordination with operation wings.
- Improvement of IRDA Scan Percentage to improve metered sales minimize the billing errors.
- Attending the exceptional list properly (Struck up meters, Door lock services, UDC services& Nil consumption services).
- The existing capacitor banks in the substations are being checked to maintain the 33KV feeder power factor.
- Load balancing of DTRs.
- Replacement of aged & Unrated DTRs with 5star rating DTRs.

5.2 Network Additions to sustain Load growth

The licensee have significantly added Substations, DTR's and Lines (33kV, 11kV and LT) to meet the growing demand.



5.3 Focus to improve reliability of power supply

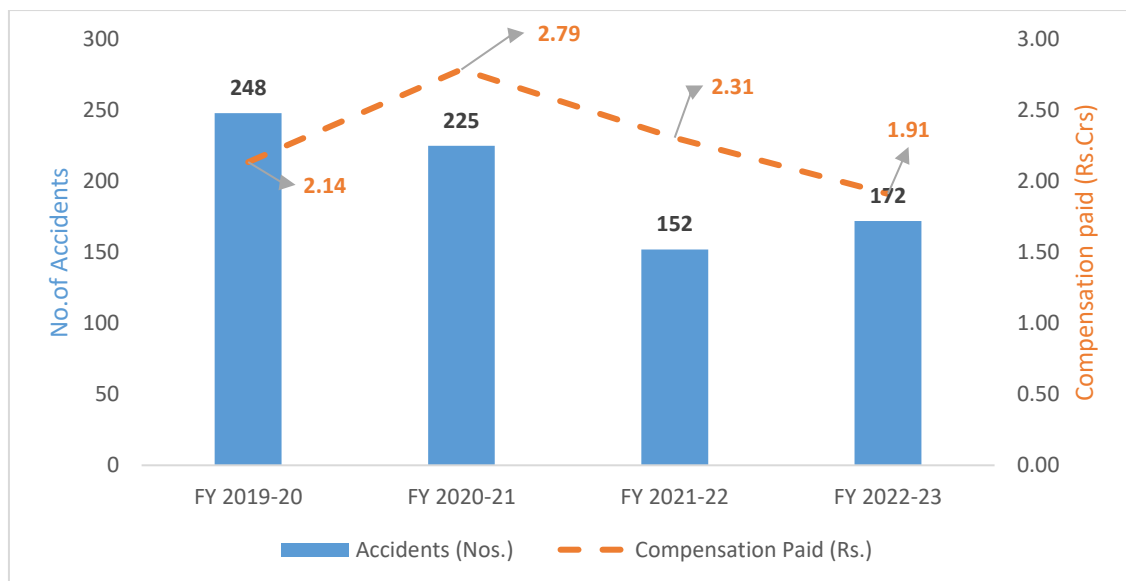
The licensee have taken many measures to improve the reliability of power supply. There has been significant reduction in the SAIDI / SAIFI indices over the past 12 months. The SAIDI / SAIFI trajectory have been highlighted in the table below.

	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23
SAIDI (in Hrs.)	12:58:57	15:34:21	10:56:01	13:17:36	10:34:35	09:22:59	08:44:12	07:14:31	06:44:39	05:20:28	06:24:05	09:44:08
SAIFI (Nos. per customer)	14.39	20.46	15.09	19.68	16	14.19	13.44	10.32	10.51	8.38	8.26	12.82

5.4 Taken measures to increase the safety and reduce the accidents

- Creating public awareness on the possible electrical hazards through print and electronic media (film, posters farmers meetings) explaining Do's and Do nots.
- Providing training to line-men and assistant engineers especially in installation, periodic and preventive operation and maintenance (O&M).
- Promote distribution related skill development initiatives and conducting training programs regarding use of safety equipment to avoid accidents.
- Fixing up of responsibility on the concerned for the cause of accident so that every staff member will be ever aware in reducing accidents.
- During awareness programs conducted regarding conservation of Energy, special emphasis is also given to the measures to be taken to avoid accidents.

Year	No. of Accidents				Compensation Approved/ Paid (Rs.in Crs)		
	Human		Animal	Total	Human	Animal	Total
	Fatal	Non-Fatal	Fatal				
FY 2019-20	85	8	155	248	1.90	0.24	2.14
FY 2020-21	102	12	111	225	2.40	0.39	2.79
FY 2021-22	74	11	67	152	2.00	0.31	2.31
FY 2022-23	84	14	74	172	1.70	0.21	1.91



5.5 Energy Efficiency Initiatives

APCPDCL is taking many initiatives to create awareness and to promote efficient use of energy and its conservation. Energy efficiency across all sectors of economy is essential, while ensuring the energy service demands are met. There is rise in energy consumption year on year because of economic growth. Energy efficiency is aimed at reduction in greenhouse gas emission and there by address global climate change. The following energy efficiency programmes are implemented (and or being implemented) in APCPDCL

On bill finance model:

(i) In coordination with APSEEDCO, it has proposed for large scale promotion and distribution of super energy efficient appliances initially through a pilot project with project implementation models.

a. On bill finance model (EMI)

b. Upfront cost

The proposed implementation of pilot project will result in energy savings by replacement of conventional tube lights with LED tube lights, ceiling fans with super efficient BLDC fans and use of 5 Star rated air conditioners.

Consumers will get benefit in reduced electricity monthly bills, discounted price when compared to make price on upfront cost purchase and No cost EMI for on bill finance scheme from this project.

(ii) Awareness will be created among the consumers of MSME sector for using Internet of Things (IOT).

Internet of Things (IOT) can aid conservation of energy and make industrial operations more energy efficient. It consists of network of smart devices connected over the internet with access to a much larger network including the sensors, smart phones, data management, report system and more. In a plant an operator receives alerts from the hardware installed and delivers live data on errors, mall functions and deviations.

Any failure of automatic power factor controllers (APFC) will be noticed at real time and if average power factor falls because of failure of capacitor banks, messages will be sent to the unique owner. This will help them to avoid excessive bills and equivalent energy savings were save on the same day, otherwise would have delayed for more than a month. Also, the over compensation will result in damage of the motor due to excessive voltage and is not encouraged. The excess voltage will also affect the life of the equipment. The same will be informed to corresponding unit member and necessary action will be taken.

(iii) Replacing the low rated/low efficient DTRs with 5 star rated distribution transformers for improving the efficiency in distribution of energy and providing Bi-metallic PG clamps for LT & HT bushing roads of DTR.

(iv) Conducting Life programs in District/Division headquarters for creating the awareness about the importance of Energy Efficiency in house hold/RWAs (resident welfare Associations)

- (v) Creating consumer awareness by conducting following programs.
 - a. Energy conservation rallies at district headquarters.
 - b. Conducting of painting competition on significance of energy conservation.
 - c. Conducting essay writing, debate competitions on need of energy conservation.
 - d. Erection of hoardings and Distribution of pamphlets on energy efficiency.
 - e. Energy conservation awareness programs in rural areas for spreading energy conservation messages.
 - f. Prize distribution to the meritorious students participated in the competitions.
- (vi) Awareness is being created among the farmers & industrial consumers by conducting substation committee meetings at substation level & HT consumer meets.
- (vii) EV charging stations are being installed in various locations to encourage E-mobility.

5.6 Initiatives in Revenue billing and Revenue Collections:

- Close monitoring of billing to complete the billing as per scheduled dates, HT billing by 5th of every month, Non-slab billing by 5th of every month and slab billing by 9th of every month and to improve billing efficiency.
- IRDA Meters are fixed to all category of LT Services and billing is being done on actual consumption without manual interference.
- SMS alerts are being issued on billing and collections to the consumer mobiles.
- Introduction of mobile payment and wallet payment channels to increase digital payments.
- The scheme is going to be introduced to fix smart meters in respect of all Government, Commercial and Industrial Services under jurisdiction of APCPDCL by the end of December,2023 and also prepaid billing for team is going to be introduced from the month of January,2024 onwards.
- The SBI e-pay payment facility is going to be provided to the HT consumers from this Financial Year 2023-24.

5.7 IT & OT Initiatives adopted by APCPDCL

- 1) APCPDCL has taken no. of IT & OT initiatives to facilitate its consumers by adopting new systems and methodologies using advancements in technologies thus bringing customer satisfaction through various complaint redressal mechanisms and by extending 24 hours quality power supply for all.
- 2) APCPDCL has taken initiative to implement SAP ISU for its automating the Meter to Cash process and rendering the customer services from single platform thus avoiding integration issues.
- 3) Power supply is monitored and controlled by the centralized SCADA control centers established in each of the major towns Guntur and Vijayawada in APCPDCL jurisdiction.
- 4) APCPDCL established a Centralized Electricity Call Center in the year 2020 at Corporate office through Toll free number 1912 for redressal of complaints viz; Billing Related, Disconnection, Emergency, Line Related, Meter Related, New Connection, Other Customer Services Related and general enquiry.

- 5) Consumers across all the three Districts can register their complaints (96 types of complaints) through various channels like (i) www.apcpdcl.in can register a complaint in website (ii) Central Power Customer Mobile APP (iii) Sending SMS to all the consumers after taking the spot bill and while receiving the payments. (iv) Sending proactive SMS alerts through URJA Mitra to all the consumers when there is a power failure in the respective areas.
- 6) These complaints will be visible to field officers & staff in Department Mobile App for field staff for rectification. Feedback on these complaints will be obtained from the consumers after attending by the concerned field officers / staff immediately after closing the complaint.
- 7) The consumers can pay the CC charges through Billdesk, PayTM, APONLINE, ECSC, spot collection machines and TA Wallet. In addition to the above, integration with PhonePe is under process.
- 8) APCPDCL established Collection counters and ATPMs (Any Time Payment Machines) round the clock for 365 days (24*7).
- 9) HT Consumers can sign-in to APCPDCL Website for monitoring of their history of their individual service like Consumption, Demand and Payments made. Initiative has been taken to enable the HT consumers to make online payment through SBI ePay gateway. Billing, information etc., is sent to the HT Consumers through SMS.
- 10) New Industrial connections are registered through a separate single desk portal Industrial services rendering through www.apindustries.gov.in/APIndus/ under Ease of Doing Business initiative.
- 11) Customer Services like New connection registration, service request, complaint registration, collection of CC charges through Mee-Seva Centers, online through Discom website. i.e. www.apcpdcl.in, also through GSWS (Grama Sachivalayam Ward Sachivalayams) established by the Govt. of AP.
- 12) Using consumer mobile app, consumers can register for new connection registration, service request, complaint registration and payment of CC charges. In addition to the above, they can also obtain consumption and payment history for 12 months.
- 13) APCPDCL is providing 53 Nos. services to its customers through the broad Categories namely; New Service Connection Request, Additional Load/ De-ration of Load request, Category changes Name Transfers, Meter Related Complaints (Stuck up/ burnt/ Damage etc.) Billing Related Complaints.
- 14) Customer Requests (Shifting of poles/ DTRs/ Lines etc., complaints services through Real Time Governance System as an initiation of Government of Andhra Pradesh.
- 15) Spot Billing Mobile App is used to scan the consumer meter and issue the electricity bill to the consumer every month. Similarly Spot Collection Mobile App is used to collect the payment of CC charges from the consumer.
- 16) The Disaster Recovery center for the data belongs to APCPDCL was established at VTPS, AEGENCO premises in Vijayawada.

- 17) E-Office was implemented in the APCPDCL for submission of all types of official documents by the field officers and communication of orders by the management to the field officers which made the Discom as paperless office.
- 18) All the consumers are regularly being informed through SMS about the CC charges, new connection demand, Disconnection alerts and additional loads.
- 19) To monitor SAIDI and SAIFI parameters as per the guidelines of APERC, OMS application was developed and now it is used to provide quality of power to the utmost satisfaction of the consumers.
- 20) Cyber security audit has been conducted in the Discom through APTS in 2022 and all our applications being utilized confirms all the security audit conditions.
- 21) Using DTR tracking system, failed DTRs are being replaced in the Rural areas within 48 hours and in Urban areas within 24 hours and these details are being monitored by the management regularly.
- 22) APCPDCL Dashboard - Online Reports related to Revenue and Operation wings are made available in the newly Developed APCPDCL Dashboard. Dashboard Reports related to revenue, OMS, CSC, Consumer Service History and Bill details, MATS, Energy Audit, Customer Care Center (CCC), SAP, Tab reports, HT Billing, Substation Coordinates, HTLT Meter inspection applications
- 23) Bio-Metric Attendance system -APCPDCL has established the Bio-Metric attendance system to deliver transparent, Efficient and time bounded services to the public by monitoring the attendance of its employees at all levels.
- 24) Teleconferencing and Video conferencing with all the field officers up to AE level - Continuous pursuance has been done with all field officers from the management to Section officers through the Teleconference and Video conferencing Facilities provided in order to speed up the operation activities and reviewing the individual officer activities directly.
- 25) E-Stores Process -The process of e-Stores has been implemented in APCPDCL in SAP. This is a process in SAP by which the complete cycle of material requisition, allotment and delivery along with acknowledgement is covered. In this e-Stores system, the material is delivered at the door-step of the section Engineer. Every step of this activity is made online (SAP)
- 26) E-Poles Process - This is a process configured in SAP through which the poles transactions between the Vendor-Section Officer-Civil wing can be performed seamlessly. The complete business cycle is mapped in SAP right from supply of material by the vendor to the section office location to the payments made to the vendor
- 27) Under RDSS scheme, it is proposed to erect smart meters for Government services, high value LT services, HT services, 11kV feeders and DTRs. Integration between the AMISP and Discom application is under progress.

5.8 Focus on Industrial Consumers

In order to encourage HT consumers to consume more power to achieve higher sales targets,

1. DISCOMs are taking effective steps in improving the quality and reliability of power, which is most crucial in increasing the sales.
2. DISCOMs are making wide publicity about the relaxation of TOD tariff during the morning peak hours period, through frequent interactions/ meetings with major HT consumers.
3. Periodical testing of all HT services so that defective meters/meters with errors beyond permissible limits are replaced immediately thereby avoiding any leakage of sales.
4. Ensuring appropriate rating of the metering equipment i.e CTs, PTs and energy meters with 0.2s class of accuracy thereby actual consumption can be recorded.

5.9 Cost Reduction plan

1. Special focus is being made in reduction of energy losses so that there will be reduction in per unit cost of the Supply to the DISCOMs.
2. As part of energy loss reduction measures, star rating DTRs are utilized in field.
3. Improving collection efficiency and billing efficiency which leads to reduction in T & D losses there by reduction in cost of supply.
4. All ordinary energy meters are replaced with IRDA port meters to improve billing efficiency.

6 Performance Improvement Plan of APCPDCL for FY 2023-24 to FY 2033-34

6.1 Loss Reduction Initiatives

- In order to bring down Distribution losses to a sustainable level, Discoms plan to carry on the following key action points:
 - For accurate measurement of line losses feeder and DT level automated online energy accounting system is proposed.
 - It is also proposed to replace existing non communicable DT meters with communicable meters duly providing AMI.
 - Segregation of Agricultural feeders: At present many 11KV agricultural feeders are feeding supply for both Agriculture and Non Agriculture consumers, resultantly non Agriculture consumers in the villages are restricted to 9Hrs 3ph supply during day time only due to this limitation 3phase services in rural areas such as hospitals, drinking water supply, Industrial & educational institutions are badly affected.

Feeders' segregation scheme for separating Agriculture consumers is proposed under RDSS scheme for improving metered sales, reduction of theft and technical losses and to ensure 24/7 3-phase power supply to all other than agricultural consumers.

- APCPDCL regularly identifying the over loaded segments. To reduce the burden on the overloaded segments and for reducing distribution losses from **FY 2023-24 to FY 2033-34**, the following measures will be taken up.
 - Bifurcation of over loaded feeders of 11KV & 33KV and laying of new feeders for relief to overloaded feeders.
 - To reduce technical losses, reconducting is proposed.
 - Following Infrastructure for modernization will be taken up.
 - a. Replacement of old age PTRs.
 - b. Replacement of old age VCBs.
 - c. Augmentation of PTRs.
 - d. New substations.
 - e. Erection of 2MVAR capacitor banks.
 - f. Renovation of earthing.
 - Underground cabling will be proposed as: The overhead lines though cheaper than UG cable suffers be problem of reliability of supply due to bear conductor, during natural calamities.
- It is also proposed to provide prepaid metering for the consumers to ensure 100% recovery which would help in increasing the collection efficiency and financial sustainability of the DISCOM.
- In consumer prepaid metering priority will be given for
 - Amruth cities.
 - Industrial & commercial consumers.
 - All Govt offices at block level and above.
 - Other areas with high losses.

Implementation of SCADA:

Now a days digital control and use of Information and communication technology (ICT) are one of cost effective solutions while improving reliability, optimum operation, intelligent control and protection of power system network. Supervisory control and data acquisition (SCADA) is a computer based system for gathering and analyzing real time data to monitor and control the electrical system.

Training and capacity building:

Now a days the operations are shifting from human interface to automaton. Accordingly the DISCOM officials should be upgraded for new skills like load flow studies, ERP, SCADA, Distribution automation, AMI, GIS mapping etc.

Training and capacity building is a continuous process and training of all the staff (O&M, Engineering and Accounts) is being carried out continuously and will be continued in future.

Solar Roof top:

Solar roof top will be given priority to promote distributed generation that can help towards loss reduction and in avoiding up stream network cost.

7 Key Financial Parameters

The key financial parameters of APCPDCL are detailed below.

7.1 Capital Expenditure

Capital expenditure (CAPEX) is defined as the expenditure incurred by DISCOM on but not limited to acquire or upgrade physical assets such as property, buildings or equipment. It may be noted that the scope of expenditure is limited to physical, immovable assets only.

For the period from FY 2023-24 to FY 2033-34, the licensee has estimated the capital expenditure as below.

S. No.	Item	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
1	CAPEX under ongoing Schemes	1,012	870	144	144	144	144	144	144	144	144	0
2	Capital Expenditure for infrastructure towards new loads (Base Capex)	944	747	864	923	1,039	1,152	1,294	1,394	1,549	1,728	1,926
3	Technology up gradation & Others	1760	1637	934	184	192	200	210	220	231	137	151
	Total (Rs. Cr.)	3715	3254	1942	1251	1375	1496	1647	1757	1924	2009	2077

7.2 Asset Base

Total capitalization for the Base Year and the Control Period has been projected based on the following assumptions:

- 1) Capitalization of Base Investment and Capital Work-in-Progress (CWIP): Capitalization of assets for MYT period has been considered based on historical actual capitalization trends and capital expenditure projected for the Control Period.
- 2) Capitalization of Expenses
 - a) Interest during Construction (IDC): Interest during Construction (IDC) has been calculated as a percentage of the average Capital Works-in-Progress for the year.
 - b) Operational and Maintenance (O&M) Expenses: Operational and Maintenance (O&M) Expenses capitalized has been projected at 11% of capital expenditure incurred for the year.

Thus, the licensee has projected capital investment undertaken and its capitalisation for the Base Year and Control Period as given below:

Closing Balance of CWIP = Opening Balance of CWIP + Capital Expenditure during the year + Expenses Capitalized – Investment Capitalized

Particulars	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Opening Balance of Capital Work in Progress (CWIP)	1,636	4,283	5,653	4,739	2,510	688
Capital Expenditure during the year	3,718	3,254	1,942	1,251	1,376	1,496
Expenses Capitalized	409	358	214	138	151	165
Interest During Construction	130	240	416	449	315	140
Total expenses capitalized	539	598	630	587	467	305
Transfer to fixed assets	1,610	2,482	3,485	4,067	3,664	1,740
Closing CWIP	4,283	5,653	4,739	2,510	688	748

7.3 Investment

For the period from FY2023-24 to FY2028-29, loan requirement is as follows: additional investment required is calculated as follows.

Particulars (Rs. Cr)	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Capital Expenditure	3718	3254	1942	1251	1376	1496
Consumer Contributions & Grants	976	700	492	398	418	439
Loan Requirement	2742	2554	1450	853	958	1058
Ongoing Loans (Receipts)	812	0	0	0	0	0
New Loans Requirement (Receipts)	1930	2554	1450	853	958	1058

7.4 O&M Expense

The Operation & Maintenance (O&M) Expenses consist of the following components:

- Employee Expenses (EE) including Salaries, wages and other employee costs;
- Administrative & General costs (A&G) including legal charges, audit fees, rent, rates and taxes;
- Repairs and Maintenance (R&M) including equipment maintenance, repairs, fault corrections, etc.

Licensee has adopted method recommended by commission in 3rd and 4th Control periods MYT order. The methodology adopted by the licensee for projection of O&M expenses for 5th Control period is as below:

- Repair and Maintenance (R&M) Expenses

As per MYT order for 3rd & 4th Control periods, commission has approved the R&M expenses as 2.05% of the opening balance of the Gross Fixed Assets (GFA) for the year. The distribution licensee has considered the same norms for 5th Control Period.

Below table shows the projections summary of the R&M expenses:

Name of the Parameter	FY24	FY25	FY26	FY27	FY28	FY29
Approved norms	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%
Opening GFA	9,302	10,911	13,393	16,878	20,946	24,610
R&M expenses	191	224	275	346	429	505

b. Employee expenses (EE) and Administrative and General (A&G) expenses

As per MYT order for 3rd Control period, commission has recommended all the licensees to project EE and A&G expense based on the norms linked to Number of Substations (SS), line length (Circuit KM), Number of consumers and Number of DTRs. Licensee has adopted the same methodology for projecting the employee expenses and A&G expenses for 5th Control period. The methodology for projecting employee expenses is explained below. Same methodology has been adopted for projecting A&G expenses:

- (1) For each year, actual Employee expenses is allocated to Substations, Line length, DTRs and Consumers in the ratio of 49%:21%:10%:20%. The following ratios are calculated: Employee expense/ Substation, Employee expense/ circuit km of line length, Employee expense/ DTR, Employee expense/ Consumer.

Below table shows the historical data for Employee expenses, A&G expenses and Number of Substations (SS), line length (Circuit KM), Number of consumers and Number of DTRs.

Parameter	Unit	FY21	FY22	FY23
Employee Expenses (EE)	Rs. Crs.	937	1,296	1,319
A&G Expenses	Rs. Crs.	49	4	67
No. of Consumers	Nos.	47,48,662	48,94,446	49,32,197
Number of DTRs	Nos.	2,40,996	2,58,969	2,81,401
Line Lengths	Kms	1,52,788	1,59,133	1,72,046
Number of SS	Nos.	857	871	897

Below table shows the historical norms for the ratios:

Parameter	Unit	FY21	FY22	FY23
EE / Consumers	Rs./each	395	530	535
EE / DTR	Rs./each	3,887	5,004	4,689
EE / Line	Rs./Kms	12,877	17,101	16,105
EE /SS	Rs./each	53,56,552	72,90,142	72,07,753
A&G Exp/ Consumers	Rs./each	21	2	27
A&G Exp/DTR	Rs./each	204	15	238
A&G Exp/line	Rs./Kms	675	50	819
A&G Exp/SS	Rs./each	2,80,907	21,378	3,66,326

- (2) Average of these ratios for the 3 years between FY2020-21 and FY2022-23 has been considered as the norms for FY2020-21. These norms for FY2020-21 onwards are escalated for by using the escalation rate calculated based on the WPI and CPI index as shown below:

Escalation Rate: For the projections of the expenses, licensee has considered the escalation (inflation) rate as calculated from the WPI and CPI indexes in the 4th Control period as shown below.

Inflation rate depends on the Consumer Price Index (CPI) for industrial workers and Wholesale Price Index (WPI). The below table lists the CPI (Industrial Worker) and WPI data from FY19 to FY23.

Particulars	FY19	FY20	FY21	FY22	FY 23
WPI	118.90	121.20	121.80	135.00	151.30
CPI	294.83	317.42	335.00	351.43	372.17

Source: CPI - www.labourbureau.nic.in, WPI - www.eaindustry.nic.in (Office of the Economic Advisor website)

Basis the observed historical CPI and WPI numbers (CPI- Industrial Workers: 40% and WPI: 60%) and calculated the inflation factor based on the illustrative methodology suggested by CERC as shown below:

Year	WPI	CPI	Composite number	Rt= Yt/Y1	Ln (Rt)	Year -1	Product
FY19	118.9	294.83	189.27				
FY20	121.2	317.42	199.69	1.06	0.05	1	0.05
FY21	121.8	335.00	207.08	1.09	0.09	2	0.18
FY22	135.0	351.43	221.57	1.17	0.16	3	0.47
FY 23	151.3	372.17	239.65	1.27	0.24	4	0.94
A= Sum of Product column			1.65				
B= 6A			9.90				
C= n(n-1)(2n-1); n= number of years of data			180				
D=B/C			0.05				
g= exp (D)-1			0.06				
Escalation rate= g*100			5.65				

Below are the projected norms for FY2020-21 onwards.

Parameter	FY21	FY22	FY23
EE / Consumers	486	514	543
EE / DTR	4,527	4,783	5,053
EE / Line	15,361	16,229	17,146
EE /SS	66,18,149	69,92,074	73,87,127
A&G Exp/Consumers	16	17	18
A&G Exp/DTR	152	161	170
A&G Exp/line	515	544	574
A&G Exp/SS	2,22,870	2,35,462	2,48,766

Parameter	FY24	FY25	FY26	FY27	FY28	FY29
EE / Consumers	574	606	640	676	715	755
EE / DTR	5,338	5,640	5,958	6,295	6,651	7,027
EE / Line	18,114	19,138	20,219	21,362	22,569	23,844
EE /SS	78,04,499	82,45,453	87,11,322	92,03,511	97,23,510	1,02,72,888
A&G Exp/Consumers	19	21	22	23	24	26
A&G Exp/DTR	180	190	200	212	224	236
A&G Exp/line	607	641	677	716	756	799
A&G Exp/SS	2,62,821	2,77,670	2,93,359	3,09,934	3,27,445	3,45,945

- (3) The projected ratios based on the escalation rates are multiplied by the projected Number of Substations (SS), line length (Circuit KM), Number of consumers and Number of DTRs in order to arrive at the employee expenses and A&G expenses for the respective years of 4th Control period.

Below table shows the projected Number of Substations (SS), line length (Circuit KM), Number of consumers and Number of DTRs and the projected employee expense and A&G expenses:

Parameter	Unit	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
No. of Consumers	Nos.	5307376	5432289	5560296	5691462	5825885	5963636
Number of DTRs	Nos.	288601	294091	300131	306261	312791	319681
Line Lengths	Kms	176665	180162	184004	187912	192090	196490
Number of SS	Nos.	954	995	1040	1086	1136	1189
Employee Expenses	Rs. Cr.	1,523	1,660	1,813	1,979	2,162	2,364
A&G Expenses	Rs. Cr.	51	56	61	67	73	80

O&M projections summary for the Control period and break-up are shown in the table below.

Parameter	Unit	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Employee Cost	Rs. Crs	1,523	1,660	1,813	1,979	2,162	2,364
A&G Cost	Rs. Crs	51	56	61	67	73	80
R&M Cost	Rs. Crs	191	224	275	346	429	505
Total O&M Expenses	Rs. Crs	1,765	1,939	2,148	2,391	2,665	2,948

7.5 Depreciation

The depreciation every year for the particular asset class has been calculated as per below formula considering the Depreciation rates for respective asset class of asset base and also Fully Depreciated Assets during the control period.

Depreciation for the year = (Opening balance of the gross fixed assets for the year – Fully Depreciated Assets till previous year) * Rate of depreciation

The Depreciation rates as per CERC notified rates have been assumed to arrive at next 5 years depreciation which is shown below:

Asset Class	Rate of Depreciation
Buildings and Other Civil Works	3.34%
Plant & Machinery and Lines, Cables & Network	5.28%
Lines and Cable net work	5.28%
Metering Equipment	5.28%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Office Equipment and Air Conditioners	6.33%
Computers and IT Equipment	15.00%
Low Value Assets	100%
Intangible assets (Software, Goodwill etc.)	15.00%

The Fully depreciated assets till the year have been deducted from the opening balance of the next year to calculate the depreciation. Depreciation computation after considering the Fully Depreciated Assets (FDA) balances is tabulated below:

Particulars (Rs. Cr.)	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Opening Balance of assets	9302	10911	13393	16878	20946	24610
Asset Additions during the Year	1610	2482	3485	4067	3664	1740
Fully Depreciated assets during the year	189	259	339	463	814	579
Depreciation During the Year	381	457	573	736	925	1075

7.6 Consumer Contribution and Grants

The consumer contribution additions and Grants has been estimated based on the past trend and new consumer additions in the next 5 years of the control period.

Below table provides the projections of the Consumer Contribution in 5th Control period.

Particulars	FY24	FY25	FY26	FY27	FY28	FY29
Opening Balance	1,575	1,693	1,816	1,946	2,082	2,225
Additions during the year	344	361	379	398	418	439
Deductions during the year	226	237	249	262	275	289
Closing Balance	1,693	1,816	1,946	2,082	2,225	2,375

Below table provides the projections of the Grants in 5th Control period.

Particulars	FY24	FY25	FY26	FY27	FY28	FY29
Opening Balance	44	676	1,015	1,128	1,128	1,128
Additions during the year	632	339	113	0	0	0
Deductions during the year	0	0	0	0	0	0
Closing Balance	676	1,015	1,128	1,128	1,128	1,128

7.7 Regulated Rate Base

The Hon'ble Commission has outlined principles for computation of Regulated Rate Base (RRB) in Regulation 4 of 2005.

Calculation of RRB

The honourable commission has proposed a computation methodology (in the excel spreadsheet) for the RRB calculation for the year, which is as follows:

"RRB = (OCFA – AD – CC) + ΔRAB+WC where,

- **OCFA:** Original Cost of Fixed Assets at the beginning of the Year available for use and necessary for the purpose of the licensed business.
- **AD:** Amounts written off or set aside on account of depreciation of fixed assets pertaining to the regulated business at the beginning of the Year.
- **CC:** Total contributions made by the users towards the cost of construction of distribution/service lines by the Licensee and also include the capital grants/subsidies received for this purpose at the beginning of the year.

- **ΔRAB:** Change in the Rate Base in the year. This component would be the average of the value at the beginning and end of the year as the asset creation is spread across a year and is arrived at as follows:

$$\Delta RAB = (Inv - D - CC)/2$$

- Inv: Investments projected to be capitalised during the year of the Control Period and approved.
- D: Amount set aside or written off on account of Depreciation of fixed assets for the year of the Control Period.
- CC: User Contributions pertaining to the ΔRAB and capital grants/subsidies received during year of the Control Period for construction of service lines or creation of fixed assets.

Based on the above computation methodology, RRB has been calculated as shown below table. The Original Cost of Fixed Assets (OCFA), Accumulated Depreciation and Total Consumer Contribution calculated for Base Year and 5th Control period i.e., from 2024-25 to 2028-29 are as follows:

Particulars	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Assets	10,911	13,393	16,878	20,946	24,610	26,350
-OCFA Opening Balance	9,302	10,911	13,393	16,878	20,946	24,610
-Additions to OCFA	1,610	2,482	3,485	4,067	3,664	1,740
Acc Depreciation Closing Balance	4,743	5,199	5,773	6,509	7,434	8,509
- Acc Depreciation Opening Balance	4,362	4,743	5,199	5,773	6,509	7,434
- Depreciation for the year	381	457	573	736	925	1,075
Con Contributions closing balance	2,369	2,831	3,074	3,210	3,353	3,503
-Con Contributions Opening Balance	1,620	2,369	2,831	3,074	3,210	3,353
-Additions to Cons Contributions	750	462	243	136	143	150
Working Capital	181	191	197	211	235	259
Change in Rate Base	239	781	1,335	1,598	1,298	258
Regulated Rate Base	3,741	4,772	6,894	9,840	12,760	14,340

7.8 Weighted Average Cost of Capital (WACC)

The Regulation prescribes that the licensees will be compensated for the financing costs through Return on Capital Employed (ROCE) principles. This principle is aimed to provide the licensee with the return on debt as well as return on equity at a normative level. The licensee has computed the ROCE as provided in the Clause 15 of the Regulation which specifies that the ROCE be computed by multiplying the Regulated Rate Base (RRB) by the Weighted Average Cost of Capital (WACC).

The Regulation specifies the following methodology for computation of ROCE:

Return on Capital Employed (RoCE) for the RRB for the year 'i' shall be computed in the following manner:

$$RoCE_i = WACC * RRB_i$$

Where RRB_i is the Regulated Rate Base for the year 1 and WACC is the Weighted Average Cost of Capital. The detailed computation of RRB is explained in Section 2.5 above. With respect to the WACC, the Regulation specifies the formula as follows:

$$WACC_{RRB} = \left[\frac{D/E}{1 + D/E} \right] r_d + \left[\frac{1}{1 + D/E} \right] r_e$$

Where,

D/E is the Debt to Equity Ratio – Licensee is proposing a normative Debt: Equity ratio of 75:25

- r_d is the Cost of Debt – Licensee has considered the cost of debt as the weighted average of the debt rates for the ongoing loans and projected loans.
- r_e is the Return on Equity – It has been the prevailing regulatory practice to consider 14% as the Return on Equity (ROE) in the ARR of Network business of AP Power Utilities. The APDISCOMs request the Hon'ble APERC to continue the same practice for the 4th Control period also, in view of the prevailing equity market conditions.

Based on the RRB explained earlier, the WACC and the ROCE for the 5th Control Period is as follows:

Particulars	FY24	FY25	FY26	FY27	FY28	FY29
Capital Structure						
Debt Percent	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Equity percent	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Cost of Funds						
Cost of Debt percent	10.8%	10.8%	11.2%	11.5%	11.6%	11.7%
Return on Equity percent	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%
WACC	11.6%	11.6%	11.9%	12.1%	12.2%	12.3%

7.9 Return on Capital Employed

The licensee has arrived at RoCE for all five years of the control period as a product of Regulated Rate Base (RRB) and Weighted Average Cost of Capital (WACC) which is as follows:

Particulars	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
Regulated Rate Base	3,741	4,772	6,894	9,840	12,760	14,340
WACC	11.6%	11.6%	11.9%	12.1%	12.2%	12.3%
Return on Capital Employed	435	554	819	1,195	1,556	1,757

7.10 Taxes on Income

The licensee projects 15% tax (Minimum Alternate Tax) on Return on Equity during the current fiscal and during ensuing control period. The details are as follows:

	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
RRB	3,741	4,772	6,894	9,840	12,760	14,340
25% of Regulatory Rate Base	935	1,193	1,723	2,460	3,190	3,585
ROE %	14%	14%	14%	14%	14%	14%
Expected Profit @ 14% on 25% of RRB	131	167	241	344	447	502
Tax on Income @ 15%	23	29	43	61	79	89

8 Aggregate Revenue Requirement

Following table shows the projected revenue requirement for the distribution licensee during the 5th Control Period.

Particulars	FY24 (RE)	FY25	FY26	FY27	FY28	FY29
O&M Charges (Net)	1,765	1,939	2,148	2,391	2,665	2,948
Depreciation	381	457	573	736	925	1,075
Advance Against Depreciation	0	0	0	0	0	0
Taxes on Income	23	29	43	61	79	89
Other Expenditure	19	20	20	21	22	22
Special Appropriations	0	0	0	0	0	0
Total Expenditure	2,188	2,445	2,785	3,209	3,690	4,134
Less: IDC and expenses capitalized*	130	240	416	449	315	140
Less: O&M expenses capitalized	0	0	0	0	0	0
Net Expenditure	2,058	2,206	2,368	2,760	3,375	3,994
Add Return on Capital Employed	435	554	819	1,195	1,556	1,757
Total Distribution ARR	2,493	2,759	3,187	3,955	4,932	5,751
Less: Wheeling Revenue from Third Party/Open Access/NTI (if any)	248	261	274	287	302	317
Revenue Requirement, (Net transferred to Retail Supply Business)	2,245	2,499	2,914	3,668	4,630	5,435

10 Financial Statements of APCPDCL for FY 2022-23 to FY 2028-29

The profit and loss account for Distribution business of APCPDCL and the balance sheet from FY2022-23 to FY2028-29 are presented in the table below.

Profit and Loss Statement:

Sl. No	Particulars	FY23	FY24	FY25	FY26	FY27	FY28	FY29
	INCOME							
1	Revenue from sale of power	11,099	9,875	11,402	12,500	16,590	18,046	19,624
	Less: State Electricity Duty	487	562	667	695	1,085	1,117	1,150
		10,613	9,313	10,736	11,804	15,505	16,929	18,474
2	Revenue from sale of Solar Power							
3	Revenue Subsidies and grants	1,787	3,820	3,837	3,894	3,685	3,897	4,047
4	Other Income	770	638	663	687	713	740	767
	TOTAL INCOME	13,169	13,771	15,235	16,386	19,904	21,566	23,288
	EXPENDITURE							
5	Purchase of Power	10,147	10,329	11,546	12,433	15,534	16,624	17,785
6	Generation of Power							
7	Repairs & Maintenance (Net of Capitalization)	167	191	224	275	346	429	505
8	Employee Costs (Net of Capitalization)	1,319	1,523	1,660	1,813	1,979	2,162	2,364
9	Administration & General Expenses (Net of Capitalization)	67	51	56	61	67	73	80
10	Depreciation and Related Debits (Net)	510	381	457	573	736	925	1,075
11	Interest and Finance charges	1,012	1,363	1,459	1,540	1,551	1,498	1,442
12	Other Expenses	19	19	20	20	21	22	22
	SUB TOTAL	13,242	13,857	15,421	16,715	20,233	21,734	23,273
	LESS: EXPENSES CAPITALISED							
13	Interest and Finance charges capitalised	75	130	240	416	449	315	140
14	Other expenses capitalised	-	0	0	0	0	0	0
	Sub-Total (13+14)	75	130	240	416	449	315	140
15	Other Debits	-	0	0	0	0	0	0
16	Extra-ordinary items	-	0	0	0	0	0	0
	Sub Total (15+16)	-	0	0	0	0	0	0
	Total Expenditure (5 TO 12 -13-14+15+16)	13,167	13,727	15,182	16,298	19,784	21,418	23,133
	PROFIT/(LOSS) BEFORE TAX	2	45	54	87	120	147	155
17	Provision for Income tax	481	23	29	43	61	79	89
	PROFIT/(LOSS) AFTER TAX	482	22	24	45	59	68	67
18	Net Prior Period Credit /(Charges)	-	0	0	0	0	0	0
	SURPLUS/(DEFICIT)	482	22	24	45	59	68	67

Balance Sheet:

Particulars	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Sources of Funds							
1. Shareholders' Funds							
a) Share Capital	0.10	0.10	0.10	0.10	0.10	0.10	0.10
b) Reserves and surplus	(5,594)	(4,823)	(4,336)	(4,049)	(3,854)	(3,643)	(3,426)
2. Loan Funds							
a) Secured Loans	9,367	9,585	7,316	6,106	4,954	3,788	2,620
b) Un-Secured Loans	315	335	324	324	324	324	324
c) Other long term liabilities	1,504	2,407	7,494	10,235	12,316	14,087	15,667
d) Long term provisions	1,164	1,222	1,283	1,347	1,414	1,485	1,559
Total	6,755	8,726	12,081	13,963	15,155	16,042	16,745
Application of Funds							
1. Fixed Assets							
a) Gross Block	9,302	10,911	13,393	16,878	20,946	24,610	26,350
b) Less: Accumulated Depreciation	4,362	4,743	5,199	5,773	6,509	7,434	8,509
c) Net Block	4,940	6,168	8,194	11,106	14,437	17,176	17,841
d) Capital Work-in-progress	1,636	4,283	5,653	4,739	2,510	688	748
Deferred tax asset	-	0	0	0	0	0	0
Other Non-current assets (Goodwill on demerger)	16	16	17	17	17	18	18
2. Investments	102	102	102	102	102	102	102
Long term loans and advances	3	3	3	3	3	3	3
3. Current Assets, Loans & Advances							
a) Inventories	412	469	417	266	192	217	240
b) Trade Receivables	4,976	3,264	3,457	3,623	4,010	4,210	4,423
c) Other Receivables	2,960	2,937	3,054	3,200	3,355	3,522	3,698
d) Cash & Bank balances	134	141	148	155	163	171	179
e) Loans & Advances	153	161	169	177	186	195	205
	8,635	6,971	7,244	7,421	7,906	8,315	8,745
Less:Current Liabilities and Provisions							
a) Short term Borrowings	1,709	1,668	1,614	1,512	1,489	1,489	1,489
b) Trade Payables	4,397	4,617	4,848	5,090	5,345	5,612	5,892
c) Other current liabilities	2,292	2,407	2,527	2,653	2,786	2,925	3,072
d) Short term Provisions	179	126	144	169	201	234	260
	8,577	8,818	9,132	9,425	9,821	10,260	10,713
Net Current Assets	58	(1,847)	(1,888)	(2,004)	(1,915)	(1,946)	(1,968)
Total	6,755	8,726	12,081	13,963	15,155	16,042	16,745