

SOUTHERN POWER DISTRIBUTION COMPANY OF A.P LIMITED

19-13-65/A, Vidyut Nilayam, Srinivasapuram, Tirupati (www.apspdcl.in)



Summary of Aggregate Revenue Requirement and Tariff Proposal for the Retail Supply Business for FY 2022-23



13th December 2021

Filings on Annual basis for FY 2022-23

The licensee has requested the Honourable APERC for permission to file the ARR & Tariff petitions relating to Retail Supply Business on Annual basis for FY 2022-23, which is the fourth year of the 4th control period in view of the uncertainties involved in sales forecast (looming threat of 3rd wave of Covid-19) and commissioning and costs of generating stations and the Honourable APERC has permitted the licensees to file the same on Annual basis vide APERC Proceedings No.13/T-94/2021, Dt.27-11-2021. Further, the APDISCOMs requested the Honourable Commission for extension of time to file the ARR & Tariff proposals upto 07-12-2021 and the Honourable APERC granted time upto 6-12-21 vide Lr.No. APERC / Secy / Tariff / F:94 / D.No.623/2021, dt.01-12-2021. The APDISCOMs sought further extension of time till 13-12-2021 and the Honourable APERC has granted time upto 13-12-2021 vide Lr.No.APERC/Secy/Tariff/F:94/D.No.652/2021,dt.13-12-2021.

1 Analysis of expected performance for Current Year FY 2021-22 for Retail Supply Business

1.1 Introduction

This chapter analyses the performance of the licensee during the Current Year as compared to the previous year. Only the key operating and financial parameters have been considered for this analysis.

1.2 Operating Performance

1.2.1 Energy Balance

Particulars	2020-21				2021-22			
	APERC Order		Actuals		APERC Order		Present Estimate	
	MU	%	MU	%	MU	%	MU	%
Metered Sales (incl. EHT)	16312.94	62.44%	14797.25	63.29%	15936.08	61.21%	17569.05	65.05%
LT Agricultural Sales	7702.88	29.48%	6663.00	28.50%	8078.48	31.03%	7357.43	27.24%
Total Sales	24015.82	91.93%	21460.25	91.79%	24014.56	92.24%	24926.48	92.29%
EHT Sales	4046.89		3753.19		3837.01		5168.17	
DISCOM Input (Exc. EHT sales)	22078.17		19626.23		22197.32		21841.89	
DISCOM Losses (Exc. EHT sales)		9.55%		9.78%		9.10%		9.54%
DISCOM Input	26125.06	100.00%	23379.41	100.00%	26034.32	100.00%	27010.06	100.00%
Loss Including EHT Sales %		8.07%		8.21%		7.76%		7.71%

1.2.2 Distribution Loss

Year	Circles / districts	Actual		No. of 11 KV T & Mhq. feeders for which energy audit done	11 KV 2 MVAR capacitor banks added to the system	Additional 33/11 KV sub-stations charged
		Excl. EHT (%)	Incl. EHT (%)			
FY 2009-10	6 Districts	14.03	12.98	823		90
FY 2010-11		13.37	12.21	853	122	13
FY 2011-12		12.53	11.29	866	136	67

FY 2012-13		11.87	10.71	966	193	128
FY 2013-14		11.84	10.68	1024	35	208
FY 2014-15	8 Districts	11.72	10.33	1348	75	75
FY 2015-16		9.57	8.47	1424	35	33
FY 2016-17		9.54	8.47	1563	30	30
FY 2017-18		9.56	8.31	1636	112	112
FY 2018-19		9.45	8.26	1764	32	32
FY 2019-20		9.26	8.19	1775	47	47
FY 2020-21	5 Districts	9.78	8.21	945	23	23
FY 2021-22 (H1)		9.65	8.23	971	8	8

As seen from the above table, the actual losses for the FY 2020-21 is 8.21% (5 districts). The licensee is expected to meet voltage wise loss level targets set by the Honourable APERC.

1.2.3 Metered Sales

As can be seen from the table above (Table No.2.2.1), in 2021-22, the percentage of metered sales is 65.05 % as against 63.29% during 2020-21.

The total load curtailment (due to Load relief) during FY 2020-21 is 1.84 MU, which is very negligible and the same is due to certain emergencies. In FY 2021-22, the metered sales are expected to 65.05%.

1.2.4 Agricultural Sales

In the previous year 2020-21 the actual Agriculture Consumption is 6663.00MU. In the current year FY 2021-22(H1), the agriculture consumption is 3489.50MU and the projection for the entire year is 7357.43MU, which is 721.05MU (-8.93%) less over the approved agricultural sales.

1.3 Financial Performance

1.3.1 Revenues

For the key categories, the licensee has estimated the revenue as below:

The revenue during FY 2020-21 is Rs. 10193.94 crores (including non-tariff income). The NTI during FY 2020-21 is Rs.973.22 crores. During FY 2021-22, the estimated revenue from sale of power (inclusive of Non-tariff income) is Rs. 11865.56 crores. The expected NTI during FY 2021-22 is Rs. 1031.61 crores.

Rs. in Crs.

Category	2020-21		2021-22	
	APERC Target	Revenue as per Form-7	APERC Target	Present estimate
HT				
Domestic	10.82	12.86	13.45	14.59
Commerical & Others	519.52	364.09	391.11	418.05
Industry	3490.86	3499.18	3652.12	4314.97
Institutional	679.61	516.63	631.28	628.77
Agriculture & Related	1083.53	1291.96	1618.76	1651.87
RESCO's	33.57	45.32	0.00	49.96
HT Total	5817.92	5730.04	6306.72	7078.23
LT				
Domestic	2246.99	2200.87	2263.79	2318.56
Commerical & Others	1063.36	901.47	975.44	991.09
Industry	421.00	484.38	498.41	528.02
Institutional	633.26	546.34	595.19	579.14
Agriculture & Related	567.61	330.84	392.33	370.52
LT Total	4932.21	4463.90	4725.16	4787.34
Grand Total (LT+HT)	10750.13	10193.94	11031.88	11865.56

1.3.2 Expenditure and Revenue Gap

The following table provides an overview of APSPDCL's financial performance for the current year and compares it with the APERC orders:

Rs. in Crs.

2021-22		
Particulars	Approved	Present Estimate
Transmission Cost	992.72	992.70
SLDC Cost	43.34	43.34
Distribution Cost	3159.87	3485.48
Addl. Interest on Penion bonds of APGenco Order	385.92	385.92
PGCIL Expenses	599.58	373.66
ULDC Expenses	6.00	1.99
Network and SLDC Cost (A)	5187.43	5283.10
Power Purchase/Procurement Cost	9885.22	10723.45
Interest on Consumer Security Deposits	83.46	91.13
Supply Margin	30.78	30.78
Other Cost	151.83	162.35
Supply Cost (B)	10151.29	11007.71
Aggregate Revenue Requirement	15338.72	16290.80
True-up for 4 years	867.45	
Provisional True-down for FY 2020-21	1370.93	
Gross ARR (A+B)	14835.24	16290.80
Total Revenue earned	11155.05	15256.78
Tariff Income	10231.06	10833.96
Non Tariff Income, CSC & RE	923.99	4422.83
Surplus (Gap)	(3680.19)	(1034.02)
Subsidy	3680.19	3680.19
Net Regulatory Gap	0.00	2646.17

2 Power Purchase Cost for Current Year (FY 2020-21) Second Half and Ensuing Year (FY 2021-22)

Consequent to formation of APCPDCL which has commenced business operations w.e.f. 1st April 2020, the State Govt vide GO Ms No 13, dt 6th April 2020 have specified Ratios to the three DISCOMs, that will be 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.

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%

The details of capacities being availed by APDISCOMs from various power stations have been described in the subsequent paragraphs.

APGENCO & APPDCL STATIONS

APDISCOMs have been purchasing power from APGENCO Stations based on the long term PPAs/approval of Hon'ble APERC. Consequent to the Power Regulations imposed by APGenco on TS DISCOMs and TS Genco on APDISCOMs, power supply from thermal power projects located in TS has been stopped and APDISCOMs are availing 100% of AP Genco capacities, with effect from 11-06-2017.

CENTRAL GENERATINGSTATIONS

APDISCOMs have been purchasing power from Central Generating Stations owned /controlled by Central Public Sector Undertakings (CPSUs) based on the long term PPAs.

The PPA with NTPC Ramagundam I & II was expired on 31.10.2017 and the PPA with NLC TPS-II Stage-I & II is going to expire by 31.03.2021. Power procurement is continued from Ramagundam I & II plant owing to its low price.

During December 2021, responding to the repeated requests of APDISCOMs the Ministry of Power Govt. of India has deallocated the remaining 500 MW of Thermal Power capacity from SR & WR stations as part of bundled power-II scheme. The entire allocated costly thermal power quantum of 625 MW allocated as part of JNNSM-Bundled Power scheme-Phase-II has been surrendered by

APDISCOMs as a result of their best timely efforts and keeping the commercial interests to reduced the power purchase cost. Based on the adequacy of the “Base Load” thermal capacity requirement in the system to extend 24X7 reliable, secured and cost effective power supply to the Consumers, APDISCOMs are continuing procurement of power from these pithead stations viz. Ramagundam-Stage-I&II and NLC- TPS-II. For the purpose of ARR exercise for the Current Financial Year and the Ensuing Financial Year, these projects are taken into account in the Power Purchase Cost calculations.

Joint Sector Projects

SDSTPS-Stage-I 2X 800 MW

Andhra Pradesh Power Development Corporation (APPDCL) which is owning & operating Sri. Damodaram Sanjeevaiah Super Thermal Power Station -Stage-I (SDSTPS-Stage-I) with a capacity of 2X800 MW at Krishnapatnam. APDISCOMs have 90% share in the Installed capacity of the project as Contracted Capacity.

GGPP-216 MW

The second project covered in the Joint Sector is the GVK-I plant which was bought by APDISCOMs upon expiry of PPA. The PPA with GVK-I expired on 19.06.2015. Subsequently, APDISCOMs bought the power plant on 22.04.2016 and renamed it as GGPP. The plant is being operated by the employees deputed from APGENCO. APDISCOMs are at present procuring the energy from this plant based on the approval given by Hon’ble APERC in the Retail Tariff Order for FY 2021-22. The Plant capacity is 216 MW. Availing the services of AP Genco, the Plant is being operated. The Plant is presently operated with the available APM Gas.

APGPCL:

Presently there is no procurement of power from APGPCL by the APDISCOMs for during the current financial year (FY 2022) and the ensuing financial year (FY 2023).

THERMAL – INDEPENDENT POWER PRODUCERS

Sembcorp Energy India Limited (Formerly Thermal Powertech Corporation India Limited):

APDISCOMs and Telangana DISCOMs signed PPA with the company for a contracted capacity of 500 MW under Long term basis through case-I bidding for a period of 25 years w.e.f. 20.04.2015. APDISCOMs share of contracted capacity in the plant is 46.11% i.e., 230.55 MW out of the said total contracted capacity of 500 MW. The plant is connected to CTU network in AP. As per the PPA, APDISCOMs are obligated to reimburse the applicable LongTerm Open Access (LTOA) charges to the generator.

Hinduja:M/s Hinduja has set up 1040 MW (2X520 MW) Thermal Power Plant at Visakhapatnam. In pursuant to the directions of Hon’ble APTEL power was availed till 18th July 2020. The issue of procurement of power from this plant is presently subjudice at Hon’ble Supreme Court of India and as such power is not procured from this plant.

GAS – NEW INDEPENDENT POWER PRODUCERS

APDISCOMs of erstwhile united AP State entered into long term PPAs with GVK Extension (220 MW), GVPGL(GMR Vemagiri Power Generation Limited-370 MW), Gouthami CCPP(464 MW) and Konaseema Gas Power Limited(444.08 MW). These new IPPs were commissioned during the years 2006 (GVPGL), 2009 (GVK Extension, Gouthami CCPP) and 2010 (Konaseema Gas Power Limited). After bifurcation of AP State, APDISCOMs of the present AP State were allocated 46.11% of share of capacity in these plants. The Natural gas supplies from RIL KG D-6 fields to the aforesaid IPPs became zero w.e.f. 01.03.2013. As a result, there is no generation from these plants as of now. Further, there is no official communication from MoP&NG on the availability of natural gas to these plants. The e-bid RLNG Scheme ended by 31.03.2017 and MoP/GOI has not extended the scheme. Therefore, APDISCOMs are not proposing to procure any power from these plants. Further, APDISCOMs are not presently paying any fixed charges to these plants.

New Thermal Projects

APGENCO (Thermal) – NTTPS (Stage-V) (formerly VTPS-V) of 800 MW and APPDCL (Thermal) – SDSTPS (Stage-II) of 800 MW

The Amended and Restated PPAs are not signed as on date with APGENCO/ APPDCL by APDISCOMs for supply of power to APDISCOMs

ENERGY REQUIREMENT

The DISCOM wise Energy Requirement are tabulated below.

DISCOM	FY 2021-22	FY 2022-23
APEPDCL	25347.32	27733.72
APCPDCL	16141.97	17344.76
APSPDCL	28002.59	29736.76
Total	69491.88	74815.24

The energy requirement of APDISCOMs has been arrived at by grossing up the sales with appropriate transmission and distribution losses. The external losses (PGCIL losses) on the power purchased from CGS (excluding NTPC Simhadri-I), KSK Mahanadi and Sembcorp Energy India Limited have also been factored for arriving at the above energy requirement.

3.1 PP COST SUMMARY

Based on the availability, requirement and costs for each source, the summary of power purchase cost for APDISCOMs for the Current Financial Year FY 2021-22 is projected as follows:

As per Revised Estimates:

State							
Ownership/Source	Dispatch	Fixed Costs (Rs Crs)	Variable Cost (Rs Crs)	Total Cost (Rs Crs)	Fixed Cost (Rs./Unit)	Variable Cost (Rs./Unit)	Total Cost (Rs./Unit)
AP Genco-thermal	19619.09	2440.49	6867.33	9307.82	1.24	3.50	4.74
CGS	13238.39	1462.26	3801.69	5263.94	1.10	2.87	3.98
Thermal-IPPs	1736.34	296.57	390.15	712.50	1.71	2.25	4.10
Joint Sector	7993.86	1802.77	2477.95	4280.72	2.26	3.10	5.36
Hydel	2926.74	614.25	0.00	614.25	2.10	0.00	2.10
NCE/RE	14747.30	0.00	4457.82	4457.82	0.00	3.02	3.02
Market/Short Term	9230.18	0.00	3821.90	3821.90	0.00	4.14	4.14
Total	69491.89	6616.34	21816.84	28458.95	0.95	3.14	4.10
APSPDCL							
Ownership/Source	Dispatch	Fixed Costs (Rs Crs)	Variable Cost (Rs Crs)	Total Cost (Rs Crs)	Fixed Cost (Rs./Unit)	Variable Cost (Rs./Unit)	Total Cost (Rs./Unit)
AP Genco-thermal	7933.96	986.93	2777.15	3764.08	1.24	3.50	4.74
CGS	5353.61	591.34	1537.40	2128.74	1.10	2.87	3.98
Thermal-IPPs	702.17	115.58	157.78	283.77	1.65	2.25	4.04
Joint Sector	3232.72	729.04	1002.08	1731.12	2.26	3.10	5.36
Hydel	1183.57	248.40	0.00	248.40	2.10	0.00	2.10
NCE/RE	14495.89	0.00	4327.34	4327.34	0.00	2.99	2.99
Market/Short Term	3732.68	0.00	1545.58	1545.58	0.00	4.14	4.14
D to D Sales	-8632.01	0.00	-3305.59	-3305.59	0.00	3.83	3.83
Total	28002.59	2671.29	8041.74	10723.45	0.95	2.87	3.83

Based on the availability, requirement and costs for each source, the summary of power purchase cost for Andhra Pradesh for FY 2022-23 is projected as follows:

Projections for FY 2022-23

State							
Ownership/Source	Dispatch	Fixed Costs (Rs Crs)	Variable Cost (Rs Crs)	Total Cost (Rs Crs)	Fixed Cost (Rs./Unit)	Variable Cost (Rs./Unit)	Total Cost (Rs./Unit)
AP Genco-thermal	24602.81	2456.45	9233.44	11689.89	1.00	3.75	4.75
CGS	14142.10	1475.24	4246.20	5721.44	1.04	3.00	4.05
Thermal-IPPs	1707.21	270.36	393.93	717.09	1.58	2.31	4.20
Joint Sector	11615.71	1801.19	3801.83	5603.03	1.55	3.27	4.82
Hydel	3119.35	628.10	0.00	628.10	2.01	0.00	2.01
NCE/RE	14363.75	0.00	4408.45	4408.45	0.00	3.07	3.07
Market/Short Term	5264.31	0.00	2105.72	2105.72	0.00	4.00	4.00
Total	74815.24	6631.34	24189.58	30873.72	0.89	3.23	4.13

APSPDCL							
Ownership/Source	Dispatch	Fixed Costs (Rs Crs)	Variable Cost (Rs Crs)	Total Cost (Rs Crs)	Fixed Cost (Rs./Unit)	Variable Cost (Rs./Unit)	Total Cost (Rs./Unit)
AP Genco-thermal	9949.38	993.39	3734.00	4727.39	1.00	3.75	4.75
CGS	5719.06	596.59	1717.16	2313.75	1.04	3.00	4.05
Thermal-IPPs	690.40	109.33	159.31	289.99	1.58	2.31	4.20
Joint Sector	4697.39	730.42	1537.46	2267.89	1.55	3.27	4.83
Hydel	1261.47	254.00	0.00	254.00	2.01	0.00	2.01
NCE/RE	13991.66	0.00	4199.91	4199.91	0.00	3.00	3.00
Market/Short Term	2128.89	0.00	851.55	851.55	0.00	4.00	4.00
D to D Sales	-8701.48	0.00	-2610.44	-2610.44	0.00	3.88	3.00
Total	29736.76	2683.74	9588.95	11530.47	0.90	3.22	4.13

4 Losses

4.1 DISCOM losses

The DISCOM losses for FY 2021-22(H2) is projected to reduce by 0.5% over previous year. and for FY 2022-23, losses are projected to reduce 0.5% over previous years. The table given below provides the voltage level losses for projecting APSPDCL energy requirement for FY 2021-22 (H2), FY 2022-23.

Voltage Level	FY 2021-22 (H2)	FY 2022-23
33 KV	3.22%	3.21%
11 KV	3.34%	3.33%
LT	4.61%	4.54%

The following table gives the details of losses projected by SPDCL for FY 2021-22 and FY 2022-23.

Particulars	2021-22		2022-23	
	Excl. EHT	Incl. EHT	Excl. EHT	Incl. EHT
Approved by APERC	9.10%	7.76%	-	-
Projection of APSPDCL	9.78%	8.21%	9.57%	7.75%

4.2 TRANSCO losses and Losses external to Transco System

The Transco losses and losses external to Transco system for H2 FY 2021-22 and FY 2022-23 have been taken as given below:

Particulars	H2 FY 2021-22	FY 2022-23
Transmission & External Losses	3.52%	4.00%

5 Expenditure Projections for APSPDCL

5.1 APTransco Charges

The Transmission cost has been computed based on the Transmission Tariff Order for the fourth control period (FY 2019-20 to FY 2023-24) and is tabulated below.

Form - 1.1 – Transmission Cost

Year	Load not eligible for Open Access			Open Access			Total Cost (Rs. Crs.)
	MW	Tariff (Rs./kW/month)	Cost (Rs. Crs.)	Load Eligible for Open Access			
MW				Tariff (Rs./kW/month)	Cost (Rs. Crs.)	MW	Tariff (Rs./kW/month)
APTransco							
2018-19	5354.46	94.44	606.81	2862.19	94.44	324.37	931.18
2019-20	4021.97	119.28	575.69	3253.03	119.28	465.63	1041.31
2020-21	2513.51	138.88	418.89	2302.50	138.88	289.70	708.60
2021-22	2903.85	154.54	538.51	2449.15	154.54	454.19	992.70
2022-23	3212.65	173.79	669.99	2571.61	173.79	536.30	1206.30

5.2 PGCIL and ULDC Charges

With the advent of new PoC Regulation which was implemented from 1st November 2020 there was a drastic change in the sharing of ISTS transmission charges & losses methodology which was altered from expected usage basis to LTA contract basis with cost allocation based on National, Regional & State Components and AC usage & non-usage components. The Per MW transmission charges for current financial year are around Rs 3.9 lakhs/MW and are expected to increase to Rs 4.85 Lakhs/MW including Regional Transmission Deviation (RTD) charges that are payable in case ISTS drawl is more than the contracted quantum. The State contracted capacity is 1750 MW. Out of the State contracted capacity, the SPDCL share is 707.7 MW (40.44%). The rates in Rs. Lakhs per MW per month and PGCIL charges computed as per the rate are as follows.

PGCIL charges for FY 2021-22 = 707.7 x 4.3999 x 12 = Rs. 373.66 Crs.

for FY 2022-23 = 707.7 x 5.4999 x 12 = Rs. 467.07 Crs

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
PGCIL Charges	424.50	373.66	467.07
ULDC Charges	6.37	1.99	2.49

5.3 SLDC Charges

The SLDC cost has been computed as per the SLDC Tariff Order for the fourth control period (FY 2019-20 to FY 2023-24) and allocated to DISCOMs as per Proceedings No.APERC/Secy/ Tariff / T-83/17, dt.28-01-2021 is tabulated below. For FY 2021-22 & FY 2022-23, the generation capacity approved is distributed among DISCOMs as follows

Form – 1.2 SLDC Charges

2022-23							
	Annual Fee			Charges			Total Cost (Rs. Crs.)
	MW	Tariff (Rs./MW/year)	Cost (Rs. Crs.)	MW	Tariff (Rs./MW/month)	Cost (Rs. Crs.)	
Load not eligible for Open Access	12582.39	4997.87	6.29	12582.39	2150.21	32.47	38.75
Open Access							
Load Eligible for Open Access	2571.61	4997.87	1.29	2571.61	2150.21	6.64	7.92
Availed (within area of supply)			0.00			0.00	0.00
Availed (Outside Area of supply)			0.00			0.00	0.00
2023-24							
	Annual Fee			Charges			Total Cost (Rs. Crs.)
	MW	Tariff (Rs./MW/year)	Cost (Rs. Crs.)	MW	Tariff (Rs./MW/month)	Cost (Rs. Crs.)	
Load not eligible for Open Access	12481.81	6382.27	7.97	12481.81	2235.65	33.49	41.45
Open Access							
Load Eligible for Open Access	2700.19	6382.27	1.72	2700.19	2235.65	7.24	8.97
Availed (within area of supply)			0.00			0.00	0.00
Availed (Outside Area of supply)			0.00			0.00	0.00

5.4 Distribution Costs

The Distribution Cost is considered as per actuals for FY 2018-19, FY 2019-20 & FY 2020-21. For the remaining years of the control period, distribution cost is computed based on the Tariff Order for distribution business for fourth control period and is tabulated below.

Year	Load not eligible for Open Access			Open Access			Adjustment for actuals	Grand Total
				Load Eligible for Open Access				
	MW	Tariff (Rs./kW/m onth)	Cost (Rs. Crs.)	MW	Tariff (Rs./kW/m onth)	Cost (Rs. Crs.)		
1	2	3	4	5	6	7	8	8=4+7+8
2018-19	7104.58		2873.46	1112.08		46.21	1727.30	4646.96
2019-20	4981.14		3513.24	948.86		108.67	1708.43	5330.34
2020-21	3446.75		2571.74	687.47		77.32	618.10	3267.17
2021-22	3849.11		3398.03	703.83		87.45		3485.48
2022-23	4304.30		3692.94	715.87		97.37		3790.31

5.5 Additional Interest on Pension bonds of APGenco Order :

The APSPDCL sought permission from the Honourable APERC to include the additional commitment of interest on pension bonds separately in DISCOM ARR instead of power purchase cost keeping the Aggregate Revenue Requirement of DISCOM intact in order to avoid the skewed representation of fixed cost of APGenco stations vide Lr.No.CGM/RAC/ SPDCL/TPT/GM/RAC/ F:/D.No.337/20,dt.12-05-2020. This amount is approved in APGenco Tariff Order for 4th Control period. The amount approved under this head for FY 2022-23 is Rs.399.43 Crores and the same is considered for projection.

5.6 Interest on Consumer Security Deposits

Interest on Security Deposit is calculated based on the past trend. The interest is calculated @ 5.25% per annum for 2021-22 to FY 2022-23 on the average of opening and closing balances.

Form 1.5: The computation on Interest on Consumer Security Deposit is given below

Revenue Requirement Item (Rs. Crs.)		2018-19	2019-20	2020-21	2021-22	2022-23
A	Opening Balance	2298.86	2558.84	1643.42	1703.40	1768.18
B	Additions during the Year	1544.28	573.29	240.60	259.85	280.64
C	Deductions during the Year	1284.30	280.19	180.62	195.07	210.68
D	Closing Balance	2558.84	2851.95	1703.40	1768.18	1838.14
E	Average Balance ((A+D)/2)	2428.85	2705.39	1673.41	1735.79	1803.16
F	Interest @ % p.a. #	6.20	5.96	4.02	5.25	5.25
G	Interest Cost (E*F)	150.67	161.24	67.22	91.13	94.67

5.7 Supply Margin

The supply margins for FY 2018-19 to FY 2022-23 are as follows :

Form – 1.6 - Supply Margin		Rs. in Crores			
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Supply Margin	13.05	28.31	23.15	30.78	39.37

5.8 Other Costs

The other costs during FY 2021-22 & FY 2022-23 are submitted below.

Rs. Crs.

Other Costs		
Particulars	2021-22	2022-23
Agricultural Solar Pumpsets	19.51	19.35
Energy Efficient Pump Sets	20.18	31.26
DELP Payment		
Energy Efficient Grants	1.27	1.27
Compensation for victims of electrical accidents	10.00	10.00
Grants to APSEEDCO	1.00	1.00
Financial impact on account of extension of time line for payment of C.C.Bills due to Covid19 in FY 2020-21		2.72
True-up of solar pump sets cost	83.45	
SLDC Differential cost for FY 2020-21	26.94	
Interest subsidy under NEP for FY 2016-17 & FY 2017-18 (Received from REC, dt.11-06-21)		-57.26
Total	162.35	8.34

5.7 Summary of ARR

Aggregate Revenue Requirement (ARR) for Retail Supply Business(Form-1) (Rs. in Crores)

S.No	Revenue Requirement Item (Rs. Crs.)	2019-20	2020-21	2021-22	2022-23
1	Transmission Cost	1,041.31	708.60	992.70	1,206.30
2	SLDC Cost	33.02	23.93	43.34	46.67
3	Distribution Cost	5,330.34	3,267.17	3,485.48	3,790.31
4	Additional Interest on Pension bonds of APGenco Order	566.56	372.66	385.92	399.43
5	PGCIL Expenses	1,026.14	424.50	373.66	467.07
6	ULDC Charges	10.17	6.37	1.99	2.49
7	Network and SLDC Cost (1+2+3+4+5+6)	8,007.55	4,803.21	5,283.10	5,912.27
8	Power Purchase / Procurement Cost	17,513.33	10,297.56	10,723.45	12,294.04
9	Interest on Consumer Security Deposits	161.24	67.22	91.13	94.67
10	Supply Margin in Retail Supply Business	28.31	23.15	30.78	39.37
11	Other Costs, if any	106.79	62.34	162.35	8.34
12	Supply Cost (7+8+9+10+11)	17,809.67	10,450.27	11,007.71	12,436.42
13	Aggregate Revenue Requirement (7+12)	25,817.22	15,253.49	16,290.80	18,348.69

6 Revenue Projections

Sales Forecast

The APCPDCL was granted license by the Honourable APERC for carrying out distribution activities in the Krishna, Guntur & Prakasam districts with effect from 01-04-2020. Hence for the purpose of carrying out sales forecast the licensee has captured actuals of 5 districts only for the period from FY 2015-16 to FY 2020-21.

1. The licensee has adopted Monthly Trend based on Time Series Data approach for forecasting of sales for Annual ARR exercise, in the present filings.
2. **The Monthly Linear Trend** method is a time series model of sales forecasting which assumes that the underlying factors, which drive the demand for electricity, are expected to follow the same monthly /annual trend as in the past and hence the forecast for electricity is also based on the assumption that the past trend in consumption of electricity will continue in the future.
3. However, the trend-based approach has to be adjusted for judgment on the characteristics of the specific consumer groups/ categories. For example, while this method may provide a better estimate of consumption by the domestic and commercial, Industrial & Institutional categories of consumers, it may not be very suitable for the Lift Irrigation category because of the high dependence of demand on the end-use. In any case, the forecasts arrived at by using the trend method need to be modified in order to account for the impact of recovery from Covid-19 and additional demand drivers such as commissioning of lift irrigation schemes and Govt. housing colonies.

4. The GoAP has recommended for exemption from license to the Resco, Kuppam vide Letter No. ENE01/491/2020, dated 18-10-2021. The Honourable APERC has granted exemption from license to Resco, Kuppam till 31-12-2021 vide Proceedings No. APERC / Secy / 12 / 2021, dt.26-11-2021. The category wise sales of Resco, Kuppam are projected for FY 2022-23 based on actuals for the period from FY 2019-20 to FY 2021-22 (H1) and are shown as part of DISCOM sales only. The category wise no. of consumers pertaining to Resco, Kuppam are added in FY 2022-23.
5. The licensee has obtained the data on upcoming lift irrigation schemes from Water resources department and added the same to the actual consumption of previous year in order to arrive at the consumption for H2 FY 2021-22 & FY 2022-23. The licensee has added an estimated 27 MU & 75,000 Nos. new connections towards Jagananna Colonies.
6. In so far as LT Agriculture Consumption is concerned, the GoAP has taken a major decision to implement Direct Beneficiary Transfer (DBT) scheme in Agriculture power supply which is expected to make a paradigm shift in the way the Agriculture Consumption is estimated and the subsidy gets administered. As enshrined in the Agriculture DBT scheme, all the LT Agriculture consumers who are not installed with meters for measurement of their consumption, will be provided with proper meter for measurement of consumption which is a pre-requisite for facilitating DBT. The agriculture consumption which was hitherto being estimated based on metering at sampled Distribution Transformers (DTRs) will be measured with Meters in similar lines of other consumers after installation of meters. Thus for the ensuing financial year FY 2022-23, even though Agriculture consumption is projected based on sampled DTR meter data, at this juncture, the actual measured consumption will be made available once the meters are installed and made operational.

Sales forecast is carried out based on actuals for the period from FY 2015-16 to FY 2020-21 and FY 2021-22 (H1). The forecast is carried out based on time series data from Oct'21 to Mar'23.

The growth rates arrived with the trend and seasonality indices were moderated based on factors discussed above.

Category	FY 2020-21			2021-22
	H1 Actuals	H2 Actuals	Total	H1 Actuals
Domestic	2767.46	2244.18	5011.64	2927.33
Commerical & Others	379.92	426.94	806.86	475.12
Industry	230.41	275.52	505.93	286.70
Institutional	329.61	324.16	653.77	354.09
Agriculture & Related	3633.41	3644.30	7277.71	3880.66
LT Total	7340.81	6915.10	14255.91	7923.90
Domestic	8.11	7.57	15.69	9.99
Commerical & Others	131.96	161.50	293.46	180.82
Industry	1701.07	2565.74	4266.81	2789.53
Institutional	222.11	319.38	541.49	379.51
Agriculture & Related	554.96	1103.52	1658.48	429.83
Resco	204.42	224.01	428.43	252.67
HT Total	2822.63	4381.71	7204.34	4042.34
Grand Total (LT+HT)	10163.44	11296.81	21460.25	11966.24

Category	Growth as per LR + SI Method	Moderate Growth	H2 Sales Forecast	Growth as per LR + SI Method	Moderate Growth	Sales Forecast
Domestic	7.21	7.22	2406.20	6.19	6.19	5748.45
Commerical & Others	3.48	3.48	441.81	3.87	3.87	964.27
Industry	1.74	1.77	280.38	1.38	3.50	599.34
Institutional	7.45	7.48	348.39	6.17	7.50	782.93
Agriculture & Related	15.23	15.01	4191.25	1.06	0.98	8947.89
LT Total			7668.04	18.67		17042.88
Domestic	-26.22	7.22	8.12	-30.67	6.19	19.23
Commerical & Others	10.11	10.11	177.82	3.37	3.37	370.73
Industry	-17.51	8.00	2791.96	-2.62	4.00	5827.65
Institutional	8.97	8.97	348.03	-1.59	1.00	759.25
Agriculture & Related	29.32	6.00	1712.86	14.72	6.00	2315.69
Resco	16.79	16.79	253.41			0.00
HT Total			5292.20			9292.54
Grand Total (LT+HT)			12960.24			26335.41

Process of Estimation of Agriculture sales:

The Agriculture consumption in all the 5 circles are being worked out with ISI Methodology. The actual sales are considered for FY 2020-21 & FY 2021-22 (H1). For FY 2021-22 (H2) & FY 2022-23, the sales are projected based on historical sales.

According to GoAP policy of releasing new agriculture connections in the year 2021-22, about 27277 nos. new connections were released from April to October 2021. Further, during the FY 2021-22 (H2) about 23723 Nos. new connections will be released. During FY 2022-23, 51,550 Nos. services are proposed to be released including these services to be released under YSR Jala Kala programme to BPL (Below Poverty Line) consumers. The consumption from these new connections (addition in agriculture Pump sets) has been taken into consideration while projecting the sales.

The unrestricted sales projected for FY 2021-22 for this category is 7357.92 MU.

The agricultural demand met through Off Grid Solar Pump sets (Around 55.08 MU) is adjusted to the Agricultural demand for the Licensee.

Particulars	FY 2021-22	FY 2022-23
Agricultural demand met through Grid Power	7357.92	8153.68
Agricultural demand met through Solar	55.08	55.08
Total agricultural Demand (MU)	7413.00	8208.76

Category wise and Voltage level wise actual sales (Form – 3) Sales in MU

Sales / Forecast Sales (MU)	2021-22	2022-23
LT Category	15591.94	17042.88
Domestic	5333.53	5748.45
Commercial & Others	916.93	964.27
Industry	567.08	599.34

Sales / Forecast Sales (MU)	2021-22	2022-23
Institutional	702.49	782.93
Agriculture & Related	8071.92	8947.89
HT Category		
HT Cat-I : Domestic		
(B): Townships, Colonies, Gated Communities and Villas	18.11	19.23
11 kV	15.42	14.36
33 kV	2.69	4.87
132 kV & Above	0.00	0.00
HT Cat-II : Commercial & Others	358.63	370.73
Commercial	255.19	251.62
11 kV	213.77	214.69
33 kV	19.87	13.44
132 kV & Above	21.55	23.49
Commercial, ToD	64.63	70.66
11 kV	50.39	55.49
33 kV	5.76	5.01
132 kV & Above	8.48	10.15
(iv) Function Halls/Auditoriums	2.90	3.04
11 kV	2.90	3.04
33 kV	0.00	0.00
132 kV & Above	0.00	0.00
(B): Start up power	35.67	44.82
11 kV	0.23	0.25
33 kV	29.05	36.60
132 kV & Above	6.39	7.97
(C): Electric Vehicles (Evs) / Charging stations	0.00	0.00
11 kV	0.00	0.00
33 kV	0.00	0.00
132 kV & Above	0.00	0.00
(D): Green Power	0.25	0.59
11 kV	0.13	0.18
33 kV	0.11	0.41
132 kV & Above	0.00	0.00
HT Cat-III : Industry	5581.48	5827.65
(A): Industrial General	1306.12	1358.36
11 kV	371.85	386.72
33 kV	456.08	474.32
132 kV & Above	478.19	497.32
Industry, ToD Peak ((6 AM to 10 AM & 6 PM to 10 PM)	1769.82	1840.61
11 kV	298.99	310.95
33 kV	679.64	706.82
132 kV & Above	791.19	822.83
Industry, ToD Off Peak (10 PM to 6 AM)	1916.96	1993.64
11 kV	286.20	297.65

Sales / Forecast Sales (MU)	2021-22	2022-23
33 kV	746.33	776.18
132 kV & Above	884.43	919.81
Industrial colonies	9.85	10.25
11 kV	0.07	0.07
33 kV	0.97	1.01
132 kV & Above	8.81	9.16
(B): Seasonal Industries	6.16	6.40
11 kV	5.95	6.19
33 kV	0.21	0.21
132 kV & Above	0.00	0.00
(C): Energy Intensive Industries	572.57	618.38
11 kV	1.52	1.64
33 kV	195.32	210.94
132 kV & Above	375.73	405.79
HT Cat-IV : Institutional	727.54	759.25
(A): Utilities - Composite Protected Water Supply Schemes	101.56	113.33
11 kV	36.65	38.57
33 kV	64.91	74.77
132 kV & Above	0.00	0.00
(B): General Purpose	45.53	46.05
11 kV	42.77	42.54
33 kV	2.76	3.51
132 kV & Above	0.00	0.00
(C): Religious Places	20.43	24.43
11 kV	4.03	4.30
33 kV	16.40	20.13
132 kV & Above	0.00	0.00
(D) Railway Traction	560.01	575.43
HT Cat-V : Agricultural & Related	2142.69	2315.69
(B): Aquaculture and Animal Husbandry	20.78	20.56
11 kV	20.78	20.56
33 kV	0.00	0.00
132 kV & Above	0.00	0.00
(E): Government / Private Lift Irrigation	2121.92	2295.13
11 kV	11.11	11.11
33 kV	77.42	119.93
132 kV & Above	2033.39	2164.10
RESCO		
Kuppam	506.08	0.00
Grand Total (LT+HT)	24926.48	26335.41

7. Revenue from Current Tariffs

The computation of revenue at current tariff for FY 2021-22 and FY 2022-23 for each customer category is carried out as follows:

Revenue from Tariffs =

- Energy Estimate * Approved Energy Charges ... (a)
- + Contracted Demand / Load Estimate * Approved Demand / Fixed Charges (b)
- + Incremental Revenue on account of Monthly Minimum Charges ('MMC') ... (c)
- + Customer Charges (d)
- + Other Charges ----- (e)

Based on the above approach, the gross revenue (excl. NTI) for FY 2021-22 is expected to be Rs.10833.96 Cr, while that for FY 2022-23 is expected to be Rs.11473.52 Cr. The NTI for FY 2021-22 is Rs. 1031.61 Crs., while for FY 2022-23 NTI is Rs.1093.50 crores. The table below provides the category-wise revenue for FY 2020-21 and FY 2021-22:

Category-wise revenue (Excl. NTI) (Form-5)		(Rs. Crores)	
Category	2021-22	2022-23	
LT Category	4303.83	4648.31	
Domestic	2005.39	2177.01	
Commercial & Others	937.25	988.00	
Industry	494.73	523.59	
Institutional	537.89	597.66	
Agriculture & Related	328.57	362.05	
HT Category	6530.13	6825.20	
HT Cat-I : Domestic			
(B): Townships, Colonies, Gated Communities and Villas	13.53	14.31	
11 kV	11.51	10.77	
33 kV	2.02	3.55	
132 kV & Above	0.00	0.00	
HT Cat-II : Commercial & Others	397.00	412.31	
(ii) Major			
11 kV	247.01	248.58	
33 kV	24.61	20.15	
132 kV & Above	21.85	23.15	
Commercial, ToD			
11 kV	43.59	48.00	
33 kV	4.58	3.98	
132 kV & Above	6.53	7.82	
(iv) Function Halls/Auditoriums			
11 kV	3.65	3.82	
33 kV	0.00	0.00	
132 kV & Above	0.00	0.00	

Category	2021-22	2022-23
(B): Start up power		
11 kV	0.29	0.32
33 kV	36.67	45.93
132 kV & Above	7.89	9.83
(C): Electric Vehicles (Evs) / Charging stations		
11 kV	0.00	0.00
33 kV	0.00	0.00
132 kV & Above	0.00	0.00
(D): Green Power		
11 kV	0.17	0.22
33 kV	0.14	0.51
132 kV & Above	0.00	0.00
HT Cat-III : Industry	3987.24	4143.28
(A): Industrial General		
11 kV	474.11	488.09
33 kV	567.13	583.25
132 kV & Above	546.29	564.63
Industry, ToD Peak (6 AM to 10 AM & 6 PM to 10 PM)		
11 kV	218.27	227.00
33 kV	465.55	484.17
132 kV & Above	506.36	526.61
Industry, ToD Off Peak (10 PM to 6 AM)		
11 kV	151.69	157.76
33 kV	361.97	376.45
132 kV & Above	389.15	404.71
Industrial colonies		
11 kV	0.05	0.05
33 kV	0.68	0.71
132 kV & Above	6.17	6.41
(B): Seasonal Industries		
11 kV	7.80	8.09
33 kV	0.62	0.62
132 kV & Above	0.00	0.00
(C): Energy Intensive Industries		
11 kV	0.89	0.96
33 kV	104.52	112.88
132 kV & Above	186.00	200.88
HT Cat-IV : Institutional	586.05	605.48

Category	2021-22	2022-23
(A): Utilities		
Composite Protected Water Supply Schemes		
11 kV	38.20	39.79
33 kV	57.00	63.85
132 kV & Above	0.00	0.00
(B): General Purpose		
11 kV	49.51	49.48
33 kV	3.17	3.71
132 kV & Above	0.00	0.00
(C): Religious Places		
11 kV	2.13	2.27
33 kV	8.45	10.32
132 kV & Above	0.00	0.00
(D) Railway Traction	427.58	436.06
HT Cat-V : Agricultural & Related	1526.06	1649.82
(B): Aquaculture and Animal Husbandry		
11 kV	8.45	8.37
33 kV	0.00	0.00
132 kV & Above	0.00	0.00
(E): Government / Private Lift Irrigation		
11 kV	8.14	8.14
33 kV	55.50	85.89
132 kV & Above	1453.97	1547.42
RESCO		
Kuppam	20.24	0.00
Grand Total (LT+HT)	10833.96	11473.52

7 Average Revenue Realized vs Average CoS break up for APSPDCL in FY 2021-22 and FY 2022-23

Average Revenue Realized vs Average CoS break up for APSPDCL in FY 2022-23

- Average Revenue Realisation (ARR) for FY 2022-23 through proposed tariffs is Rs.6.97/kWh
- Average Cost of Supply (CoS) for APSPDCL - Rs. 6.97/kWh
- Average CoS break-up (per unit of Sales) for APSPDCL is as follows:-

Particulars	FY 2021-22 Approved (Rs./Unit)	FY 2021-22 Projected (Rs./Unit)	FY 2022-23 Projected (Rs./Unit)
Power Purchase cost	3.68	3.83	4.13
T&D Loss Cost	0.44	0.47	0.53
Network Cost	2.00	1.96	2.09
Other Cost	0.06	0.27	0.21
Cost of Service	6.18	6.54	6.97

- The estimated revenue gap for the licensee for FY 2022-23 is as follows:

S.No.	Particulars	FY 2022-23
A	Total Revenue at proposed tariffs (including CSS)	18,348.69
B	Aggregate Revenue Requirement (Rs. Crs.)	18,348.69
C = A - B	Revenue (Deficit) / Surplus (Rs. Crs.)	0.00

8 Subsidies to be received and expected to be received

The Government of Andhra Pradesh is providing subsidies to various categories of consumers as given below :

Description	FY 2020-21					FY 2021-22 (upto Sep'21)				
	Consumers	OB	Demand	Receipt	CB	Consumers	OB	Demand	Receipt	CB
Tariff Subsidy	1039930	7413.61	6438.58	6712.94	7139.25	1075930	7139.25	2044.90	2082.90	7101.25
Subsidy to SC Consumers	630311	152.41	149.75	74.89	227.27	647987	227.27	41.55	0.00	268.82
Subsidy to ST Consumers	136865	60.77	29.03	14.12	75.67	139623	75.67	7.84	0.00	83.51
MBC consumers						67	0.00	0.01	0.00	0.01
Landries (Rajika communities)						62	0.00	0.01	0.00	0.01
Naye Bramhin community						1947	0.00	0.10	0.00	0.10
Handlooms						21	0.00	0.01	0.00	0.01
Gold smiths						79	0.00	0.01	0.00	0.01
Incentives to Ferro alloys	13	3.39	0.00	0.00	3.39	13	3.39	0.00	0.00	3.39
Incentives to Aqua farmers	13866	225.47	196.52	89.77	332.22	13878	332.22	44.33	17.99	358.56
Subsidy to Power looms	10184	4.18	5.50	0.00	9.68	10234	9.68	1.62	0.00	11.30
Total Subsidy Arrears from Govt	1831169	7859.83	6819.38	6891.72	7787.49	1887665	7787.49	2140.23	2100.89	7826.83

9 Statement of variation in controllable items of ARR for Distribution Business :

The licensee is submitting the statement of variation in controllable items of ARR for Distribution business as given below:

S. No.	Name of the Parameter	Units		FY 2019-20			FY 2020-21		
				Approved	Actuals	Deviation	Approved	Actuals	Deviation
1	Operation & Maintenance Charges	Rs. Crs.	Controllable	3,003.00	4,322.64	1,319.64	2,129.00	2,618.00	489.00
2	Return on Capital Employed	Rs. Crs.	Controllable	635.69	628.93	-6.76	524.00	371.77	-152.23
3	Depreciation	Rs. Crs.	Controllable	666.64	1,034.05	367.41	497.00	708.64	211.64
4	Taxes on Income	Rs. Crs.	Un Controllable	49.55	0.00	-49.55	41.00	0.00	-41.00
5	Other Expenditure	Rs. Crs.	Controllable	38.00	47.32	9.32	22.00	22.45	0.45
6	Expenses Capitalized	Rs. Crs.		304.00	240.80	-63.20	203.00	203.32	0.32
7	Total Expenditure (1+2+3+4+5)-6	Rs. Crs.		4,088.88	5,792.14	1,703.26	3,010.00	3,517.54	507.54
8	Non Tariff Income	Rs. Crs.	Controllable	466.45	461.28	-5.17	360.00	249.44	-110.56
9	Net ARR(7-8)	Rs. Crs.		3,622.43	5,330.86	1,708.43	2,650.00	3,268.10	618.10

Note :

- 1) The O&M Expenses have increased due to creation of provision of Rs.1546.99 Cr towards future terminal benefits in FY 2019-20 which is an uncontrollable factor
- 2) The O&M Expenses have increased due to creation of provision of Rs.989.06 Cr towards future terminal benefits in FY 2020-21 which is an uncontrollable factor

10 Retail Supply Business & Distribution Business True-up for FY 2020-21:

Distribution Business True-up for FY 2020-21 : As per Clause 10.5 of the Regulation No.4 of 2005, the distribution licensee shall be eligible to claim variations in uncontrollable items in the ARR for the year succeeding the relevant year of the control period. As taxes on income is an uncontrollable item, the licensee is filing for true-down of the same. Further, in view of the adverse financial situation arisen due to Covid-19 pandemic during FY 2020-21 and resultant financial stress, the licensee requests to consider other items of distribution business for true-up as well. The details are as follows

S. No.	Name of the Parameter	Units		FY 2020-21		
				Appr.	Actuals	Deviation
1	Operation & Maintenance Charges	Rs. Crs.	Controllable	2,129.00	2,618.00	489.00
2	Return on Capital Employed	Rs. Crs.	Controllable	524.00	371.77	-152.23
3	Depreciation	Rs. Crs.	Controllable	497.00	708.64	211.64
4	Taxes on Income	Rs. Crs.	Un Controllable	41.00	0.00	-41.00
5	Other Expenditure	Rs. Crs.	Controllable	22.00	22.45	0.45
6	Expenses Capitalized	Rs. Crs.		203.00	203.32	0.32
7	Total Expenditure (1+2+3+4+5)-6	Rs. Crs.		3,010.00	3,517.54	507.54
8	Non Tariff Income	Rs. Crs.	Controllable	360.00	249.44	-110.56
9	Net ARR(7-8)	Rs. Crs.		2,650.00	3,268.10	618.10

The operation and maintenance expenditure has increased mainly due to provision created for pension contribution and terminal benefits of APSEB origin employees of Rs.989.06 Crs. as per the actuarial valuation for FY 2020-21. The depreciation has increased over the approved depreciation due to capitalization of assets created in the past. Non-Tariff income has decreased due to non reduction of amortization of capital contribution received from APCPDCL (now APSPDCL) at the time of merger of Anantapur & Kurnool circles in FY 2014-15. While calculating Amortisation of Capital

Contributions each year from FY 2014-15 to FY 2019-20, the above amount of Rs.190.74 Crores is not reduced and as such excess amortization totaling to Rs. 57.89 Crores was provided till 31-03-2020. Hence, the excess amount of Rs.57.89 Crores is reduced while arriving at the Amortisation of Capital Contribution Amount for FY 2020-21.

Retail Supply True-Up Claim for FY 2020-21:

Final true-up considering the power purchase, other items of Retail Supply Business, Distribution Business and revenue true-up is shown in the following table. Carrying cost for the true-up is calculated considering a working capital interest rate of 12% (which is SBI MCLR + 3.50%).

Total True-up for FY 2020-21 (Rs. in Cr)		
S.No	Particulars	SPDCL
A	Power Purchase True-down	-869.45
B	Other ARR Items of Retail Supply Business	-402.20
C	ARR items of Distribution Business	618.10
D	Revenue True-up	-1393.97
E	Total (A+B+C-D)	740.42
F	Carrying Cost @ 12% interest Rate (for one year)	88.85
G	Total true-up (E+F)	829.27

The Petitioners also request the Hon'ble Commission to take into consideration the carrying cost to be incurred by the licensee till the complete true-up mentioned above is recovered.

11 Cost of Service for FY 2022-23

The Licensee has been filing Cost of Service (CoS) in embedded cost methodology. As per the directions, the study of various CoS methods was done and report submitted to Hon'ble commission. In Tariff Order FY 2019-20, the Hon'ble commission having examined the report on various methods of CoS, finally decided to adopt the same methodology as in FY2018-19 for arriving at the Cost of Service for FY2019-20 and FY 2020-21 also, considering the under lying complex exercise involved in data collection etc., in arriving CoS though the Embedded cost methodology is robust. Thus, considering the inferences drawn by Commission, the Licensee is adopting Hon'ble Commission's approach in arriving CoS for FY 2022-23. Based on the energy sales and the apportioned ARR at the respective voltage levels, the Licensee has calculated Cost of Service per unit for different voltage levels for FY 2022-23 as shown in the Table below:

Estimated Cost of Service (CoS) for FY 2022-23	
Particulars	Rs./Unit
For at LT Level	7.19
For at 11 KV Level	6.87
For at 33 KV Level	6.64
For at 132 KV Level and above	6.43
Average	6.97

12 Tariff Proposals for FY 2022-23

APDISCOMs propose to rationalize the tariffs in certain categories viz. LT Domestic, LT Commercial and LT Institutional – Religious purpose for the ensuing financial year FY 2023. Accordingly, the proposed per unit energy charges along with full cost recovery tariff (Rs./Unit) as per Go.Rt.No.161, dt.15-11-2021 is arrived for FY 2022-23 as given below.

Proposed Tariffs - FY 2022-23

Category	Group	Sub -Category	Fixed Charges (Rs/KW/Month or Rs/KVA/ Month)	Proposed Energy Charges	Full Cost Recovery Energy Charges as per the directions of GoAP (Rs./Unit)
LT Power Supply					
From 01-04-2022 to 31-07-2022:					
LT Cat-I : Domestic	A	0-50	10	1.45	1.45
LT Cat-I : Domestic	A	51-75		2.60	2.60
LT Cat-I : Domestic	B	0-50		2.60	2.60
LT Cat-I : Domestic	B	51-100		2.60	2.60
LT Cat-I : Domestic	B	101-200		3.60	3.60
LT Cat-I : Domestic	B	201-225		6.90	6.90
LT Cat-I : Domestic	C	0-50		2.65	2.65
LT Cat-I : Domestic	C	51-100		3.35	3.35
LT Cat-I : Domestic	C	101-200		5.40	5.40
LT Cat-I : Domestic	C	201-300		7.10	7.10
LT Cat-I : Domestic	C	301-400		7.95	7.95
LT Cat-I : Domestic	C	401-500		8.50	8.50
LT Cat-I : Domestic	C	>500		9.95	9.95
From 01-08-2022 to 31-03-2023:					
LT Cat-I : Domestic	A	0-30	10	1.45	1.45
LT Cat-I : Domestic	A	31-75		2.80	2.80
LT Cat-I : Domestic	B	0-100		4.00	4.00
LT Cat-I : Domestic	B	101-200		5.00	5.00
LT Cat-I : Domestic	B	201-300		7.00	7.00
LT Cat-I : Domestic	B	>300	7.50	7.50	
LT Cat-II : Commercial & Others	A (ii)	0-50	75	5.40	5.40
LT Cat-II : Commercial & Others	A (ii)	51-100		7.65	7.65
LT Cat-II : Commercial & Others	A (ii)	101-300		9.05	9.05
LT Cat-II : Commercial & Others	A (ii)	301-500		9.60	9.60
LT Cat-II : Commercial & Others	A (ii)	>500	10.15	10.15	
LT Cat-II : Commercial & Others	A (iii)	Advertising Hoardings	100	12.25	12.25
LT Cat-II : Commercial & Others	A (iv)	Function Halls/ Auditoriums	-	12.25	12.25
LT Cat-II : Commercial & Others	B	Start up power	-	12.25	12.25
LT Cat-II : Commercial & Others	C	Electric Vehicles (Evs) / Charging stations	-	6.70	6.70
LT Cat-II : Commercial & Others	D	Green Power	-	12.25	12.25
LT Cat-III : Industry	A	Industry(General)	75	6.70	6.70
LT Cat-III : Industry	B	Seasonal Industries (off season)	75	7.45	7.45
LT Cat-III : Industry	D	Cottage Industries upto 10HP	20	3.75	3.75
LT Cat-IV : Institutional	A	Utilities	75	7.00	7.00
LT Cat-IV : Institutional	B	General Purpose	75	7.00	7.00
LT Cat-IV : Institutional	C	Religious Places	30	5.00	5.00
V_Agriculture	A (i)	Corporate Farmers	200/HP/Month	0.00	0.00
V_Agriculture	A (ii)	Non-Corporate Farmers	-	0.00	6.56
V_Agriculture	A (iii)	Salt farming	-	2.50	2.50
V_Agriculture	A (iv)	Sugarcane crushing	-	0.00	6.56
V_Agriculture	A (v)	Rural Horticulture Nurseries	-	0.00	6.56
V_Agriculture	A (vi)	Floriculture in Green House	75	4.50	4.50
V_Agriculture	B	Aquaculture and Animal Husbandry	30	3.85	3.85
V_Agriculture	D	Agro Based Cottage Industries upto 10HP	20	3.75	3.75
V_Agriculture	E	Government/Private Lift Irrigation Schemes	-	6.34	6.34

HT Power Supply

Category	Group	SubCategory	Fixed Charges (Rs/KW/Month or Rs/KVA/Month)	Proposed tariff (Rs./Unit)			Full Cost Recovery Energy Charges as per the directions of GoAP (Rs./Unit)		
				11 kV	33 kV	EHT	11 kV	33 kV	EHT
I Domestic		DOMApt	75.00	7.00	7.00	7.00	7.00	7.00	7.00
II Commercial & Others	A (ii)	COM Maj	475.00	7.65	6.95	6.70	7.65	6.95	6.70
II Commercial & Others	A (iv)	COM ToD (Peak)		8.65	7.95	7.70	8.65	7.95	7.70
II Commercial & Others	A (iv)	COM FunHall	-	12.25	12.25	12.25	12.25	12.25	12.25
II Commercial & Others	B	COM Startup Power	-	12.25	12.25	12.25	12.25	12.25	12.25
II Commercial & Others	C	COM Elec Veh	-	6.70	6.70	6.70	6.70	6.70	6.70
II Commercial & Others	D	COM Green Power	-	12.25	12.25	12.25	12.25	12.25	12.25
III Industrial	A	INDGen	475.00	6.30	5.85	5.40	6.30	5.85	5.40
III Industrial	A	INDToD Peak		7.30	6.85	6.40	7.30	6.85	6.40
III Industrial	A	INDToD OffPeak		5.30	4.85	4.40	5.30	4.85	4.40
III Industrial	A	IND IndColny	-	7.00	7.00	7.00	7.00	7.00	7.00
III Industrial	B	IND Seasn	475.00	7.65	6.95	6.70	7.65	6.95	6.70
III Industrial	C	IND Enelnt	-	5.80	5.35	4.95	5.80	5.35	4.95
IV Institutional	A	INST Util	475.00	7.65	6.95	6.70	7.65	6.95	6.70
IV Institutional	B	INST Gen	475.00	7.95	7.25	7.00	7.95	7.25	7.00
IV Institutional	C (ii)	INST Reliq	30.00	5.00	5.00	5.00	5.00	5.00	5.00
IV Institutional	D	INST Railway	350.00	5.50	5.50	5.50	5.50	5.50	5.50
V Agriculture	B	AGRI AquaAH	30.00	3.85	3.85	3.85	3.85	3.85	3.85
V Agriculture	E	Lifting	-	7.15	7.15	7.15	7.15	7.15	7.15

Note : The new tariffs and structure for domestic category are applicable from 01-08-2022 and for other categories the tariffs and structure shown above are applicable from 01-04-2022 onwards only

3 APDISCOMs-HT Industrial Sector - Proposed Seasonal - ToD Price Variation

ToD-Slot	Nature	February-May (High Grid Demand)	June-August (Low Grid Demand)	Sept-Oct (High Grid Demand)	Nov-Jan (Low Grid Demand)
06-10	Peak	2.00	1.00	2.00	1.00
10-15	Day	-0.50	-0.50	-0.50	-0.50
15-18	Normal	0.00	0.00	0.00	0.00
18-22	Peak	2.00	1.00	2.00	1.00
22-24	Normal	0.00	0.00	0.00	0.00
24-06	Off-Peak	-0.50	-0.50	-0.50	-0.50

With a view to incentivise Industrial Consumption during Day time which coincides with cheaper power availability from different sources, to cover General Shift industrial consumers also, the APDISCOMs have worked out a season (High Grid Demand / Low Grid Demand) based ToD system which is expected to increase the Industrial Consumption without burdening the sectorial Consumers.

Other Proposals :

1) Restrict Bulk Consumers to access RTM:

The Hon'ble CERC has instituted Real Time Market (RTM) in the Power exchanges where in the entities can purchase power at a much lesser advance period /lead time of just 6time blocks (1 hour 30 Minutes before). The Distribution Companies are furnishing the drawal schedules on day ahead basis and the State Load Dispatch Centre (SLDC) is confirming the drawal schedules based on the Load Generation Balance Report (LGBR) for the next day by the evening of preceding day. The Distribution Companies are also tying up the necessary shortfall / surplus quantum, time block wise for the next day as indicated by APSLDC, in the power exchange. The RTM is being availed by the DISCOMs for meeting any intraday shortfall that may arise on account of deviations from scheduled sources, Renewable Energy Intermittencies, weather changes effecting wind generation, real time Load

Variations etc. RTM is being used as a balancing resource only since there are lot of restrictions on incidental over drawal from ISTS. The proposed CERC DSM regulation which discourages under drawal by the DISCOMs by making zero compensation would also force the DISCOMs to restrict to their schedule without any deviations.

It is gathered that certain Bulk Consumers are also accessing RTM to optimize their power purchase cost. This tantamount to interference in the drawl schedule of the DISCOMs in the real time during the day of operations. By the time market obligation sheets on RTM are notified, the DISCOMs lose the opportunity to change their drawl schedules and they could be forced to under draw from ISTS during the periods of procurement of power by Bulk Consumers in RTM. In this connection, it is humbly requested that, necessary directions may be issued to the State Load Dispatch Center (SLDC) not to issue NOCs to the Bulk Consumers to access power in the Real Time Market, in view of the operational constraints as explained above.

2) Restoration of Grid support Charges :

- A. **It is proposed** to incorporate Grid Support Charges from FY 2022-23 in compliance to Hon'ble Supreme court's Order.
- B. **It is also proposed** to request Hon'ble APERC for modification in the definition to incorporate **“Co-Generation Plants”** as below:

“GRID SUPPORT CHARGES

*Persons operating Captive Power Plants (CPPs)/**Co-Generation Plants** in parallel with A.P. Grid have to pay 'Grid Support Charges' on the difference between the capacity of **CPP/Co-Generation Plant** in kVA and the contracted Maximum Demand in kVA with Licensee and all other sources of supply, at a rate equal to 50% of the prevailing demand charge for HT Consumers. In case of **CPPs/Co-Generation Plants** exporting firm power to APTRANSCO, the capacity, which is dedicated to such export, will also be additionally subtracted from the **CPP/ Co-Generation Plant** capacity.”*

This modification is inevitably required in view of **objections being raised** by certain Co-Generation plants to the demands raised by DISCOM leading to litigations stating that **“we are a Cogeneration plant not a CPP”** by misinterpreting the definition where CPP only is explicitly mentioned in it, but does not specifically indicate Co-Generation Plant.

It is also an established fact that the Cogeneration plant though different from CPP so far as the operation is concerned but not different on the aspect of operation in parallel with the Grid. In other States like Tamil Nadu, Gujarat etc., also the Grid support charges are being levied on Captive Power Plants / Co-generators.

- C. **In addition to the above proposal, it is further proposed** that the **levy of Grid support charges needs to be reckoned from FY 2009-10 onwards, in similar lines** reckoned by Hon'ble commission while re-determining Cross Subsidy Surcharge from for FY 2005-06 to FY 2012-13 and FY 2015-16 vide order dated 16-11-2016 in O.P.Nos. 16 of 2005, 13 of 2006, 5 of 2007, 73

of 2012, 74 of 2012, 75 of 2012, 76 of 2012, 77 of 2012 and 8 of 2015 in pursuant to Hon'ble APTEL and Hon'ble Supreme Court's judgments.

Revenue Impact : The overall impact due to above tariff proposals is shown in the table below.

Revenue impact due to proposed Tariffs							
Category	LT Supply			HT Supply			Total Impact (LT+HT)
	FY 2022-23 as per present tariffs (Cr.)	FY 2022-23 as per Proposed tariffs (Cr.)	Impact	FY 2022-23 as per present tariffs (Cr.)	FY 2022-23 as per Proposed tariffs (Cr.)	Impact	
Domestic	2522.74	2847.37	324.63	15.47	15.47	0.00	324.63
Commerical & Others	1045.99	1039.31	-6.68	434.61	434.61	0.00	-6.68
Industry	559.63	559.66	0.03	4493.76	4493.76	0.00	0.03
Institutional	644.74	645.54	0.80	651.14	651.14	0.00	0.80
Agriculture & Related	409.85	5754.66	5344.81	1789.09	1789.09	0.00	5344.81
Resco				0.00	0.00	0.00	0.00
Total	5182.95	10846.54	5663.59	7384.07	7384.07	0.00	5663.59

Note : The revenue at proposed tariff is arrived as per the directions in Go.Rt.No.161,dt.15-11-2021

13 Revenue Gap

The estimated revenue gap with proposed tariffs for the licensee for FY 2022-23 is as follows:

S.No.	Particulars	FY 2022-23
A	Aggregate Revenue Requirement	18348.69
B	Revenue from Current Tariffs (Net of incentives) (Rs. Crs.)	12567.02
C	Revenue changed through proposed tariff	5663.59
D	Revenue from Cross Subsidy Surcharge	118.08
E	Revenue from Additional Surcharge	0.00
F	Revenue from REC	0.00
G = (B+C+D+E+F)	Total Revenue	18348.69
H = G-A	Revenue (Deficit) / Surplus (Rs. Crs.)	0.00

14 Determination of Cross Subsidy Surcharge for FY 2022-23

The licensee has calculated the cross subsidy surcharge based on the formula specified in the revised National Tariff Policy issued on 28.01.16.

Computation of CSS

For the computation of CSS;

T – is the average revenue realization excluding NTI, customer charges, minimum charges, DPS

C – Weighted average Cost of Power purchase (As per Tariff filing)

D – Calculated from the MYT orders of Transmission and Distribution

L – As per Tariff filing

R – Considered as zero

The category-wise CSS computation for APSPDCL is as follows :

Category			Average Revenue Realization (Only Demand & Energy Charges)	Per Unit Cost of Power Purchase	Wheeling Charges	Applicable Loss	Cost of Regulatory Asset	CSS (Rs./Unit)	20 % of Average Revenue Realization	Applicable CSS (Rs./Unit)
11 KV										
I	B	Townships & Colonies	7.46	4.13	1.22	10.18%	0	1.64	1.49	1.49
II	A	Commercial & Others	10.93	4.13	1.22	10.18%	0	5.11	2.19	2.19
II	iv	Function Halls/Auditoriums	12.25	4.13	1.22	10.18%	0	6.43	2.45	2.45
II	B	Start up power	12.25	4.13	1.22	10.18%	0	6.43	2.45	2.45
II	D	Green Power	12.25	4.13	1.22	10.18%	0	6.43	2.45	2.45
III	A	Industrial General	8.74	4.13	1.22	10.18%	0	2.92	1.75	1.75
III	B	Seasonal Industries	12.98	4.13	1.22	10.18%	0	7.16	2.60	2.60
III	C	Energy Intensive	5.80	4.13	1.22	10.18%	0	0.00	1.16	0.00
IV	A	CPWS	10.28	4.13	1.22	10.18%	0	4.46	2.06	2.06
IV	B	General Purpose	11.59	4.13	1.22	10.18%	0	5.77	2.32	2.32
IV	C	Religious Places	5.22	4.13	1.22	10.18%	0	0.00	1.04	0.00
V	B	Aqua and Animal Husbandry	4.05	4.13	1.22	10.18%	0	0.00	0.81	0.00
V	E	Govt./ Pvt. Lift Irrigation	7.15	4.13	1.22	10.18%	0	1.33	1.43	1.33
33 KV										
I	B	Townships & Colonies	7.26	4.13	0.50	7.08%	0	2.31	1.45	1.45
II	A	Commercial & Others	13.01	4.13	0.50	7.08%	0	8.06	2.60	2.60
II	iv	Function Halls/Auditoriums	0.00	4.13	0.50	7.08%	0	0.00	0.00	0.00
II	B	Start up power	12.25	4.13	0.50	7.08%	0	7.30	2.45	2.45
II	D	Green Power	12.25	4.13	0.50	7.08%	0	7.30	2.45	2.45
III	A	Industrial General	7.37	4.13	0.50	7.08%	0	2.42	1.47	1.47
III	B	Seasonal Industries	28.87	4.13	0.50	7.08%	0	23.91	5.77	5.77
III	C	Energy Intensive	5.35	4.13	0.50	7.08%	0	0.40	1.07	0.40
IV	A	CPWS	8.53	4.13	0.50	7.08%	0	3.58	1.71	1.71
IV	B	General Purpose	10.54	4.13	0.50	7.08%	0	5.59	2.11	2.11
IV	C	Religious Places	5.13	4.13	0.50	7.08%	0	0.17	1.03	0.17
V	B	Aqua and Animal Husbandry	0.00	4.13	0.50	7.08%	0	0.00	0.00	0.00
V	E	Govt./ Pvt. Lift Irrigation	7.15	4.13	0.50	7.08%	0	2.20	1.43	1.43
132 KV										
I	B	Townships & Colonies	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
II	A	Commercial & Others	9.20	4.13	0.40	4.00%	0	4.50	1.84	1.84
II	iv	Function Halls/Auditoriums	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
II	B	Start up power	12.25	4.13	0.40	4.00%	0	7.55	2.45	2.45
II	D	Green Power	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
III	A	Industrial General	6.68	4.13	0.40	4.00%	0	1.97	1.34	1.34
III	B	Seasonal Industries	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
III	C	Energy Intensive	4.95	4.13	0.40	4.00%	0	0.25	0.99	0.25
IV	A	CPWS	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
IV	B	General Purpose	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
IV	C	Religious Places	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
IV	D	Railway Traction	7.58	4.13	0.40	4.00%	0	2.87	1.52	1.52
V	B	Aqua and Animal Husbandry	0.00	4.13	0.40	4.00%	0	0.00	0.00	0.00
V	E	Govt./ Pvt. Lift Irrigation	7.15	4.13	0.40	4.00%	0	2.45	1.43	1.43

15 Prayer

Based on the information available, the Applicant has made sincere efforts to comply with the Regulation of the Honourable Commission and discharge its obligations to the best of its abilities. However, should any further material information become available in the near future, the Applicant shall file such additional information and consequently amend/ revise the application.

In the aforesaid facts and circumstances, the Applicant requests that this Honourable Commission may be pleased to:

- a. Take the accompanying ARR, Tariff Proposal for FY 2022-23 and provisional true-up for FY 2020-21 and Cross Subsidy Surcharge Application of APSPDCL on record and treat it as complete;
- b. Grant suitable opportunity to APSPDCL within a reasonable time frame to file additional material information that may be subsequently available;
- c. Consider and approve APSPDCL's ARR and Tariff application including all requested regulatory treatments in the filing;

Pass such order as the Honourable Commission may deem fit and proper in the facts and circumstances of the case