



Southern Power Distribution Company of Telangana Limited

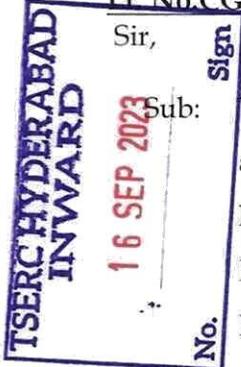
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From
Chief General Manager (RAC),
TSSPDCL, Corporate Office,
6-1-50, Mint Compound,
Hyderabad - 500 063.

To
The Secretary,
TSERC, 11-4-660,
5th Floor, Singareni Bhavan
Red Hills, Hyderabad.

Lr. No.CGM(RAC)/SE(RAC)/DE(RAC)/F. A.102 /D.No.404/23, Dt:16 -09.2023.



Sir,

Sign

Sub:

TSSPDCL -Submission of data for justification of Energy Balance, Detailed analysis on 4th Control Period & replies to the objections raised during the Public hearings held on 01.09.2023 at Hyderabad (Court Hall of TSERC) on the filings of Resource Plan (Sales Forecast, Load Forecast, Capital Investment Plan & Power Procurement plan) & Business plan for 5th & 6th Control Periods from FY2024-25 to FY2033-34 - Reg.

Ref: Lr.No.TSERC/Secy/JD(TE)/F.No.E-591193&94/D.No.482/23,Dt26.07.2023

The Licensee herewith submits the replies to the objections raised along with detailed analysis on 4th Control Period (Annexure-I) and the data for justification of Energy Balance(Annexure-II) as per directions of Hon'ble TSERC during the Public hearing held on 01.09.2023 at Hyderabad (Court Hall of TSERC) on the filings of Resource Plan (Sales Forecast, Load Forecast, Capital Investment Plan & Power Procurement plan) & Business plan for 5th & 6th Control Periods from FY2024-25 to FY2033-34 and requested to place the same before the Hon'ble Commission for approval.

- Encl: 1) Replies to the objections
2) Annexure-I (Detailed analysis on 4th Control Period)
3) Annexure-II (Justification of Energy Balance)

Yours faithfully

Chief General Manager (RAC)



**NORTHERN POWER DISTRIBUTION COMPANY OF T.S LIMITED
VIDYUTH BHAVAN : CORPORATE OFFICE : WARANAGL**

From
Chief General Manager,
IPC&RAC, TSNPDCL,
Corporate Office, Vidyuth Bhavan,
Nakkalagutta, **WARANGAL**

To
The Commission Secretary,
TSERC, # 11-4-660, 5th Floor,
Singareni Bhavan, Red Hills,
HYDERABAD

Lr.No.CGM/I&R/GM/I&R/DE/RAC/TSNPDCL/WGL/F.32/D.No.191/23, Dt:16.09.2023

Sir,

SUB :- TSNPDCL/WGL –Submission of data for justification of Energy Balance, Detailed analysis on 4th Control Period & replies to the objections raised during the Public hearings held on 01.09.2023 at Hyderabad (Court Hall of TSERC) on the filings of Resource Plan (Sales Forecast, Load Forecast, Capital Investment Plan & Power Procurement plan) & Business plan for 5th & 6th Control Periods from FY2024-25 to FY2033-34 - Reg.

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- Encl:** 1) Replies to the objections
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Yours faithfully,


**CHIEF GENERAL MANAGER
IPC&RAC/TSNPDCL/WGL**

ANNEXURE-I

Detailed Analysis of 4th Control Period

TSDISCOMs filed the Resource Plan Petition for 5th (FY 2024-25 to FY 2028-29) and 6th Control Period (FY 2029-30 to FY 2033-34) on 01.04.2023. Hon'ble TSERC conducted Public hearing on the filed Resource Plan petitions on 01.09.2023. On the suggestion of the stakeholders, Hon'ble TSERC directed the TSDISCOMs to undertake an analysis on performance of 4th Control period.

In line with the direction of Hon'ble TSERC, TSDISCOMs are hereby submitting an analysis of the Sales and Power Procurement. The analysis of Sales and Power Procurement at the time of filing and their actual position in the of 4th Control Period are provided in the following sections.

Further a detailed Justification for the Energy balance scenario for 5th and 6th Control period is also provided.

Analysis of Power Procurement of TS Discoms in 4th Control Period

In accordance with the Telangana State Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff for Wheeling and Retail Sale of Electricity), Regulation 4 of 2005, Resource Plan shall contain Sales forecast, Load forecast, Power procurement plan and Distribution plan.

TSDISCOMs filed the 4th Control Period Resource Plan on 31.10.2018 which consisted of Sale forecast, load forecast and distribution plan and submitted that the Power procurement plan will be submitted shortly.

However, TSDISCOMs were unable to file the Power Procurement plan before the Hon'ble Commission considering the following reasons:

- a) Hon'ble TSERC was not operational from 9.01.2019, after the Chairman of Hon'ble TSERC demitted office after attaining the age of 65 years.
- b) Enforcement of Model Code of Conduct in the State of Telangana from 10.03.2019 till 23.05.2019 in view of Lok Sabha election.
- c) Enforcement of Model Code of Conduct for the Municipal elections from 23.12.2019 to 25.01.2020.

Since the TSDISCOMs were unable to file power procurement plan for the 4th Control period, there has been no approval of such power procurement plan by the Hon'ble Commission. In the absence of the approved power procurement plan for the 4th Control Period, the comparison of the actual power procurement with the approved power procurement plan is infeasible. In the absence of approval of power procurement plan, other possibility of analyzing the power

procurement in the 4th Control Period is by considering the submissions made by TSDISCOMs in their ARR- filings.

For FY 2019-20, FY 2020-21 and FY 2021-22 TSDICOMs were unable to submit the ARR filings before the Hon’ble Commission within the timelines as per Regulation No. 4 of 2005 on account of factors which were beyond the control of TSDISCOMs. Subsequently, the ARR filings FY 2019-20, FY 2020-21 and FY 2021-22 were submitted before the Hon’ble Commission on 31.03.2021, however, the same were not admitted by the Hon’ble Commission due to non-submission of tariff proposals by the TS Discoms. In view of the non approval of the power procurement plan for FY 2019-20, FY 2020-21 and FY 2021-22, TSDISCOMs in this analysis is considering the submissions made by them in filings which were made before the Hon’ble Commission on 31.03.2021.

Further, in the absence of the approved figures for the power procurement for FY 2019-20, FY 2020-21 and FY 2021-22, the approved values of the power procurement in the latest Tariff Order i.e., FY 2018-19 have been considered for the purpose of comparison.

As the filing of FY 2019-20 was carried out on 31.03.2021, TSDISCOMS used actual data of power purchase, hence the variance between the filed availability and the actual purchase is zero.

For FY 2022-23, the analysis of power procurement has been done considering the submissions made by TSDISCOMs in their ARR filings.

For FY 2023-24, the analysis is limited to Q1 of FY 2023-24 only considering the limitation of availability of information.

Year wise analysis of the power procurement is as follows

FY 2019-20

- Considering the filing of FY 2019-20 was carried out on 31.03.2021, TSDISCOMS used actual data of power purchase, hence the variance between the filed availability and the actual purchase is zero.
- Further it is to be noted that Surplus sale for FY 2019-20 is 1068 MU.

Table 1: Power Surplus/ Deficit Variance (MU) for FY 2019-20

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2019-20	FY 2018-19	FY 2019-20	
1	2	3	4	5	6 = 5-3
Energy Availability					
1a	TS GENCO	23837	21661	23837	0
1b	CGS	13460	15791	13460	0

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2019-20	FY 2018-19	FY 2019-20	
1	2	3	4	5	6 = 5-3
1c	NCE	6402	5200	6402	0
1d	Others*	17644	21786	17644	0
1e	Short term Power Purchase**	6755	1159	6755	0
1f	Interstate Sales (Surplus Sales)	(1068)	0	(1068)	0
1	Total Energy Availability	67030	65596	67030	0
Energy Requirement (Sales)					
2	Total Energy Requirement[§]	67044	57631	67044	0
3	Surplus / (Deficit)	(14)	7965	(14)	0

* SEIL, CSPDCL, Singareni, APGPCL, PTC India

** Includes 488 MU of UI

§ Requirement calculated by using actual losses

FY 2020-21

- The filing of FY 2020-21 was carried out on 31.03.2021 along with ARR for FY 2019-20, FY 2020-21 and FY 2021-22. For FY 2020-21, TSDISCOMs used actual data of power purchase for H1 of FY 2020-21 and projected the energy requirement for H2 of FY 2020-21.

Table 2 Power Surplus/ Deficit Variance (MU) for FY 2020-21

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2020-21	FY 2018-19	FY 2020-21	
1	2	3	4	5	6 = 5-3
Energy Availability					
1a	TS GENCO	21946	21661	23022	1076
1b	CGS	12524	15873	11965	(559)
1c	NCE	6280	5200	6558	278
1d	Others*	18576	21785	16236	(2340)
1	Total Energy Availability from firm sources	59326	64519	57781	(1545)
2	Total Energy Requirement[§]	64068	57631	66252	2184
3	Surplus/ (deficit) before Market purchase	(4742)	6888	(8471)	(3729)
4	Short term Power Purchase	4929	1159	8973	4044
5	Total Energy Availability from firm sources including market sources	64255	65678	66753	2498
6	Surplus/ (deficit) including Market purchase	187	8047	501	314

* SEIL, CSPDCL, Singareni, PTC India

§ Requirement calculated by using approved losses

- For CSPDCL, scheduling is less than 50% of the availability projected. The reasons for less scheduling than the contracted capacity are the discrepancies in the invoices like the claim of Trading Margin and other incidental charges till the finalization of the appeal No. 391/2018 filed by TSDISCOMs at APTEL against Hon'ble CSERC order on determination of Capital Cost of Marwa TPP and final consent to PPA and tariff by Hon'ble TSERC.
- For few plants like NPC Kaiga unit III & IV scheduling was zero.
- For other CGS plants like Simhadri I & NLC II scheduling was low.
- Considering the high variable charge of plants like NTPC Kudgi, their scheduling was low in accordance with the Merit Order Despatch.
- It is further submitted that in FY 2020-21, actual Hydel generation was 14% higher than the energy dispatch as approved by the Hon'ble Commission which led to lower scheduling from other remaining optional plants (like CGS, TSGENCO etc).
- It is further submitted that TSDISCOMs has considered 187 MU of actual surplus power sold in H1 of FY 2020-21 in the filing.
- As we can see above, the dispatch did not match the requirement, TSDISCOMs had to depend purchase from short term market for the deficit of 8973 MU.

FY 2021-22

Table 3 Power Surplus/ Deficit Variance (MU) for FY 2021-22

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2021-22	FY 2018-19	FY 2021-22	
1	2	3	4	5	6 = 5-3
Energy Availability					
1a	TS GENCO	29708	21661	28570	(1138)
1b	CGS	14449	15873	15172	723
1c	NCE	7964	5200	6649	(1315)
1d	Others*	22447	21785	16917	(5530)
1	Total Energy Availability	74568	64519	67308	(7260)
2	Total Energy Requirement[§]	77901	57631	73486	(4415)
3	Surplus/ (deficit) before Market purchase	(3333)	6888	(6178)	(2845)
4	Short term Power Purchase	3335	1159	6784	3449
5	Total Energy Availability from firm sources including market sources	77901	65678	74092	(3809)
6	Surplus/ (deficit) including Market purchase	0	8047	606	606

* SEIL, CSPDCL, Singareni, PTC India

§ Requirement calculated by using approved losses

- It can be seen from the above table that there has been a significant variance between all major firm sources.
- In CGS , BTPS Unit 1, 2 & 3 were commissioned in FY 20 and 4th unit was to be commissioned in July 2021. However, the commissioning of 4th Unit was delayed and the plant was commissioned on January 2022 leading to delay in the expected quantum of power to TSDISCOMs from the BTPS plant.
- For few plants like NPC Kaiga unit III & IV there was zero scheduling.
- For other CGS plants like Simhadri I, scheduling was low.
- Considering the high variable charge of plants like Kudgi, their scheduling was less in accordance with the Merit Order Despatch.
- Scheduling from NCE's (Solar plants in particular) was 3912 MU lower than projected availability.
- For CSPDCL scheduling was 5200 MU lower than the availability projected. In addition to the few issues related to discrepancies in invoices raised by CSPDCL (as explained above) there was also dispute over the outstanding dues as per CSPDCL and TSDISCOMS. These disagreements resulted in considerably low scheduling of power by CSPDCL.
- It is further submitted that in FY 2021-22, actual Hydel generation was 80% higher than the energy dispatch as approved by the Hon'ble Commission which led to lower scheduling from other remaining optional plants (like CGS, TSGENCO etc).
- As we can see above, the dispatch did not match the requirement, TSDISCOMs had to depend purchase from short term market for the deficit of 6784 MU.

FY 2022-23

Table 4 Power Surplus/ Deficit Variance (MU) for FY 2022-23

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2022-23	FY 2022-23	FY 2022-23	
1	2	3	4	5	6 = 5-4
Energy Availability					
1a	TS GENCO	31123	30626	29402	(1224)
1b	CGS	19402	20089	15621	(4468)
1c	NCE	8953	7699	8630	931
1d	Others*	21902	22748	14944	(7804)
1	Total Energy Availability	81380	81162	68597	(12565)
2	Total Energy Requirement[§]	84222	78274	73309	(4965)

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2022-23	FY 2022-23	FY 2022-23	
1	2	3	4	5	6 = 5-4
3	Surplus/ (deficit) before Market purchase	(2842)	2888	(4712)	(7600)
4	Short term Power Purchase	2791	2172	9404	7232
5	Total Energy Availability from firm sources including market sources	84171	83334	78001	(5333)
6	Surplus/ (deficit) including Market purchase	(51)	5060	4692	(368)

* SEIL, CSPDCL, Singareni, PTC India

§ Requirement calculated by using approved losses

- In TSGENCO, several plants like KTPS VII, KTPS II, BTPS showed high variance when compared to the projected availability.
- Scheduling from several CGS plants like NTPC Ramagundam I, II & III, NLC TPS II was significantly lower.
- At the time of filing of FY 2022-23, the expected COD of Telangana STPP (Phase I) Unit I & Unit II was October 2022 and January 2023 respectively. However, the COD of TSTPP was delayed resulting in zero scheduling of its power.
- CSPDCL scheduled zero power as against projected availability of 6350 MU at the time of filing. The dispute over the outstanding amount remained unresolved considering which CSPDCL scheduled zero power in FY 2022-23. It is further submitted entire undisputed outstanding amount along with surcharge was covered by TSDISCOMs under the LPS- Rules 2022 however, CSPDCL is still Scheduling Zero energy to TSDISCOMs.
- It is further submitted that in H1 of FY 2022-23, actual Hydel generation was 46% higher than the energy dispatch as approved by the Hon'ble Commission which led to lower scheduling from other remaining optional plants (like CGS, TSGENCO etc).
- It is pertinent to mention that the State of Telangana has started supplying 24*7 power to agriculture sector from 01.01.2018. This has increased the power purchase requirement of FY 2022-23. The licensee after exhausting all their sources considered quantum of 9404 MU power purchase from Short term sources.

FY 2023-24

Table 5 Power Surplus/ Deficit Variance (MU) for Q1 of FY 2023-24

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2023-24 (Q1)	FY 2023-24 (Q1)	FY 2023-24 (Q1)	
1	2	3	4	5	6 = 5-4
Energy Availability					
1a	TS GENCO	6889	6741	6942	201

S. No	Particulars	Filed	Approved	Actuals	Variance
		FY 2023-24 (Q1)	FY 2023-24 (Q1)	FY 2023-24 (Q1)	
1	2	3	4	5	6 = 5-4
1b	CGS	5170	4445	3365	(1080)
1c	NCE	2903	2887	2829	(58)
1d	Others*	3939	5888	3590	(2298)
1	Total Energy Availability	18901	19961	16726	(3236)
2	Total Energy Requirement[§]	19035	20271	18527	(1744)
3	Surplus/ (deficit) before Market purchase	(134)	(310)	(1802)	(1492)
4	Short term Power Purchase	134	887	2210	1323
5	Total Energy Availability from firm sources including market sources	19035	20848	18935	(1913)
6	Surplus/ (deficit) including Market purchase	0	577	408	(169)

* SEIL, CSPDCL, Singareni, PTC India

§ Requirement calculated by using approved losses

- Scheduling from several CGS plants like NTPC Ramagundam I, II & III, NLC TPS II was significantly less.
- At the time of Resource Plan filing, the expected COD of Telangana STPP (Phase I) Unit I & Unit II was April 2023 and June 2023 respectively. However, the COD of TSTPP has been delayed resulting in zero scheduling of its power.
- CSPDCL scheduled zero power as against claimed dispatch of 1697 MU at the time of filing. The dispute over the outstanding amount remained unresolved considering which CSPDCL scheduled zero power in Q1 of FY 2023-24.
- As we can see above, the dispatch did not match the requirement, TSDISCOMs had to depend purchase from short term market for the deficit of 2210 MU.

Conclusion from the analysis of 4th Control period

- From the variance information tabulated above and its reasons provided thereof it can be concluded that even in case of long term PPA done for a contracted capacity with firm power source, the variance between the claimed/ projected availability and the power scheduled from those sources can be significantly high.
- This variance can be attributed to different reasons like coal shortage, reduction in PLF ascribed to performance issues, transmission constraints, backing down of a power plant due to availability of cheaper power from a difference source, delay in COD of a unit/ plant, malfunctioning of the power plant, high quantum of dispatch from the Hydel power plants attributable to higher rainfall, etc.

- It can be seen that originally the expected COD of Telangana STPP (Phase I) Unit I & Unit II was October 2022 and January 2023 respectively. However, TSTPP has not been commissioned even till August 2023.
- Further, scarcity of coal in H1 of FY 2022-23 lead to few plants reduced its declared plant availability.
- From FY 2019-20 to FY 2022-23, because of high rainfall, the dispatch from the Hydel plants were very high. However, the changing climate have changed the pattern of rainfall made them more unpredictable. So dependence on Hydel plants will be erroneous.
- All the above cited reasons are beyond the control of TSDISOMs. This leads to deficit in demand and supply leading to requirement of power purchase from markets which are unpredictable in terms of its purchase price and quantum. This leads to imposition of burden of high-cost short term power purchase on the consumers.

Variance of Sales of TS Discoms in 4th Control Period

TSDISCOMs employ standard modified trend method to arrive at projected sales at the time of filing. However, during the 4th Control period, significant variance between the projected sales and the actual position of sales can be observed. The year wise, discom wise and consumer category wise variance in sales is tabulated below:

It is to be noted that, as the filing of FY 2019-20 was carried out on 31.03.2021, TSDISCOMS used actual data of sales , hence the variance between the filed availability and the actual purchase is negligible.

FY 2019-20

TSSPDCL

Figures in MU

Consumer Category	Filed (MU)	Actual (MU)	Variance
LT Category	23569	23569	0
Category I - Domestic	8710	8710	0
Category II - Non-domestic/Commercial	2582	2582	0
Category III - Industry	847	847	0
Category IV - Cottage Industries	9	9	0
Category V - Agriculture	10818	10818	0
Category VI - St. Lighting & PWS	484	484	0
Category VII - General	77	77	0
Category VIII-Temporary Supply	43	43	0
HIGH TENSION	16340	16337	2
HT-I: Industry	10622	10622	0
HT-II: Others	2583	2581	0
HT-III: Airports, Bus Stations and Railway Stations	91	91	0
HT-IV: Irrigation & Agriculture and CPWS	2380	2380	0
HT-V: Railway Traction (including HMR)	331	249	82
HT-VI: Townships and Residential Colonies	195	276	-81
HT-VII: Temporary	136	136	0
HT- VIII: RESCOs	0	0	0
HT-IX: EV Charging Station	2	0	2
TOTAL(LT + HT)	39909	39907	2

TSNPDCCL

Figures in MU

Consumer Category	Filed (MU)	Actual (MU)	Variance
LT Category	12065	12065	0
Category I - Domestic	3547	3547	0
Category II - Non-domestic/Commercial	758	758	0
Category III - Industry	244	244	0
Category IV - Cottage Industries	8	8	0
Category V - Agriculture	7140	7140	0
Category VI - St. Lighting & PWS	308	308	0
Category VII - General	60	60	0
Category VIII-Temporary Supply	0	0	0
HIGH TENSION	6548	6548	0
HT-I: Industry	1851	1851	0
HT-II : Others	154	154	0
HT-III: Airports, Bus Stations and Railway Stations	8	8	0
HT -IV: Irrigation & Agriculture and CPWS	3019	3019	0
HT-V: Railway Traction	447	447	0
HT-VI: Townships and Residential Colonies	152	152	0
HT-VII: Temporary	48	48	0
HT VIII: RESCOs	869	869	0
HT-IX: EV Charging Station	0	0	0
TOTAL(LT + HT)	18612	18612	0

FY 2020-21TSSPDCL

Figures in MU

Consumer Category	Filed (MU)	Actual (MU)	Variance
LT Category	22110	24286	-2177
Category I - Domestic	9079	8912	167
Category II - Non-domestic/Commercial	2237	2161	76
Category III - Industry	828	880	-52
Category IV - Cottage Industries	9	10	0
Category V - Agriculture	9355	11745	-2390
Category VI - St. Lighting & PWS	498	478	19
Category VII - General	59	48	12
Category VIII-Temporary Supply	44	53	-9

Consumer Category	Filed (MU)	Actual (MU)	Variance
Category IX- Evs Charging Stations	0	0	0
HIGH TENSION	14680	13987	-693
HT-I Industry	9223	8444	-779
HT -I B Ferro-alloys	129	130	1
HMWSSB	0	830	830
HT-II - Others	2110	1845	-265
HT-III Airports, Bus Stations and Railway Stations	72	53	-20
HT -IV A Irrigation & Agriculture	2092	1617	-474
HT-IV B CPW Schemes	517	512	-5
HT-V Railway Traction (including HMR)	211	192	-19
HT-VI Townships and Residential Colonies	207	261	54
HT-VII Temporary	118	103	-15
HT-VIII RESCO	0	0	0
HT-IX EVs Charging Station	2	0	-2
Total (HT+LT)	36790	38273	1483

In the case of TSSPDCL, we can observe, actual LT sales were higher by 2177 MU's than the claimed. For HT sales actual sales were lower by 693 MU than the quantum claimed at the time of filing of petition. In total actual sales were higher by 1483 MU's than the projected sales.

TSNPDCL

Figures in MU

Consumer Category	Filed	Actual	Variance
LT Category	11927	12928	1001
Category I - Domestic	3849	3769	79
Category II - Non-domestic/Commercial	700	649	51
Category III - Industry	237	246	-9
Category IV - Cottage Industries	8	8	0
Category V - Agriculture	6768	7904	-1136
Category VI - St. Lighting & PWS	320	322	-2
Category VII - General	44	27	17
Category VIII-Temporary Supply	1	2	-1
HIGH TENSION	7395	5846	-1548
HT-I Industry	1694	1767	72
HT - I B Ferro-alloys	36	37	1

Consumer Category	Filed	Actual	Variance
HT-II - Others	125	115	-10
HT-III Airports, Bus Stations and Railway Stations	7	6	0
HT -IV A Irrigation & Agriculture	3718	1958	-1760
HT-IV B CPW Schemes	406	449	43
HT-V Railway Traction	277	318	41
HT-VI Townships and Residential Colonies	154	151	-3
HT-VII Temporary	80	107	27
HT-VIII RESCOs	897	938	41
Total (HT+LT)	19321	18774	-547

In the case of TSNPDCL, we can observe, actual LT sales were higher by 1001 MU's than the claimed. For HT sales actual sales were lower by 1548 MU than the quantum claimed at the time of filing of petition. In total actual sales were lower by 547 MU's than the projected sales.

FY 2021-22

TSSPDCL

Figures in MU

Consumer Category	Filed	Actual	Variance
LT Category	24423	25607	-1184
Category I - Domestic	9558	9435	122
Category II - Non-domestic/Commercial	2970	2494	477
Category III - Industry	973	901	73
Category IV - Cottage Industries	10	9	0
Category V - Agriculture	10277	12154	-1876
Category VI - St. Lighting & PWS	512	469	42
Category VII - General	77	62	14
Category VIII-Temporary Supply	45	83	-37
Category IX- EVs Charging Station	1	0	1
HIGH TENSION	20256	17477	2779
HT-I: Industry	12294	11860	434
HT-II: Others	2971	2265	706
HT-III: Airports, Bus Stations and Railway Stations	91	51	40
HT -IV: Irrigation & Agriculture and CPW Schemes	4195	2533	1661
HT-V: Railway Traction (including HMR)	336	299	38

Consumer Category	Filed	Actual	Variance
HT-VI: Townships and Residential Colonies	219	312	-93
HT-VII: Temporary	136	154	-18
HT VIII: RESCOs	0	0	0
HT-IX: EVs Charging Station	15	3	11
TOTAL(LT + HT)	44679	43085	1594

In the case of TSSPDCL, we can observe, actual LT sales were higher by 1184 MU's than the claimed. For HT sales actual sales were lower by 2778 MU than the quantum claimed at the time of filing of petition. In total actual sales were lower by 1594 MU's than the projected sales.

TSNPDCL

Figures in MU

Consumer Category	Filed	Actual	Variance
LT Category	12509.04	12654.02	-144.98
Category I - Domestic	4175.73	3863.42	312.30
Category II - Non-domestic/Commercial	871.68	743.86	127.82
Category III - Industry	281.01	235.74	45.28
Category IV - Cottage Industries	7.99	8.18	-0.19
Category V - Agriculture	6783.26	7419.51	-636.25
Category VI - St. Lighting & PWS	326.82	344.52	-17.70
Category VII - General	61.07	33.79	27.28
Category VIII-Temporary Supply	1.49	5.01	-3.52
HIGH TENSION	11533.14	5987.80	5545.34
HT-I: Industry	1822.29	1914.98	-92.69
HT-II: Others	176.75	146.25	30.50
HT-III: Airports, Bus Stations and Railway Stations	7.72	7.14	0.57
HT-IV: Irrigation & Agriculture and CPWS	7940.57	2332.78	5607.79
HT-V: Railway Traction	447.09	482.07	-34.99
HT-VI: Townships and Residential Colonies	157.08	138.60	18.48
HT-VII: Temporary	35.71	42.07	-6.36
HT-VIII: – RESCOs	943.50	923.90	19.60
HT-IX: EVs Charging Station	2.42	0.00	2.42
TOTAL(LT + HT)	24042.18	18641.82	5400.36

In the case of TSNPDCL, we can observe, actual LT sales were higher by 144 MU's than the claimed. For HT sales actual sales were lower by 5545 MU than the quantum claimed at the time of filing of petition. The major change was in HT sales was on account of consumer

category Government LIS schemes. In total actual sales were lower by 5400 MU's than the projected sales.

FY 2022-23

TSSPDCL

Figures in MU

Consumer Category	Filed	Approved	Actual	Variance (Approved-Actual)
LT Category	25246	25789	26751	-961
Category I - Domestic	9884	10722	9952	770
Category II - Non-domestic/Commercial	2639	3111	3077	34
Category III – Industry	930	906	933	-28
Category IV - Cottage Industries	10	9	10	0
Category V - Agriculture	11182	10391	12127	-1736
Category VI - St. Lighting & PWS	473	484	467	17
Category VII - General	57	94	88	6
Category VIII-Temporary Supply	71	71	96	-25
Category IX- Evs Charging Station	2	2	1	1
HIGH TENSION	23576	22752	20800	1952
HT I: Industry	13864	13935	14262	-328
HT II: Others	2794	3261	3134	127
HT III: Airports, Bus Stations and Railway Stations	86	114	65	48
HT IV: Irrigation & Agriculture and CPW Schemes	5948	3862	2352	1510
HT V: Railway Traction and HMR	448	1139	475	664
HT VI: Townships & Residential Colonies	273	276	308	-32
HT VII: Temporary	151	151	194	-43
HT VIII RESCOs	0	0	0	0
HT IX: EV Charging Stations	14	14	6	8
TOTAL(LT + HT)	48823	48541	47550	990

In the case of TSSPDCL, we can observe, actual LT sales were lower by 961 MU's than the approved . For HT sales actual sales were lower by 1951 MU than the quantum approved in Tariff Order. In total actual sales were lower by 990 MU's than the projected sales.

TSNPDCL

Figures in MU

Consumer Category	Filed	Approved	Actual	Variance (Approved-Actual)
LT Category	13261	13313	13304	9
Category I - Domestic	4259	4437	3892	545
Category II - Non-domestic/Commercial	820	970	875	95
Category III – Industry	251	244	237	7
Category IV - Cottage Industries	9	9	8	0
Category V - Agriculture	7525	7238	7868	-630
Category VI - St. Lighting & PWS	341	326	355	-29
Category VII - General	53	85	59	26
Category VIII-Temporary Supply	5	5	10	-6
Category IX- Evs Charging Station	0	0	0	0
HIGH TENSION	12643	7383	5946	1437
HT I (A): Industry	1795	1791	1905	-114
HT II: Others	147	202	200	2
HT III: Airports, Bus Stations and Railway Stations	7	8	8	-1
HT IV: Irrigation & Agriculture and CPW Schemes	9014	3741	2069	1672
HT V: Railway Traction	480	480	571	-90
HT VI: Townships & Residential Colonies	147	160	126	34
HT VII: Temporary	36	36	31	4
HT VIII: RESCO	1013	960	1036	-76
HT-IX: EV Charging Stations	5	5	0	5
TOTAL LT + HT	25905	20696	19250	1446

In the case of TSNPDCL, we can observe, actual LT sales were lower by 9 MU's than the approved. For HT sales actual sales were lower by 1436.81 MU than the approved. The major change was in HT sales was on account of consumer category Government LIS schemes. In total actual sales were lower by 1446.14 MU's than the projected sales.

Network & Capex Plan: Analysis of 4th Control Period for TSSPDCL

1. **Need for Capex Requirement:** Capital investment is required to improve Power supply reliability, reduce the AT&C losses, ensure the safety and security of network, make the network adequate to cater the load growth and implementation of the technology to bring process efficiency in the operations.

Further TSSPDCL has been framing its Capex requirement which is broadly based on the following:

- a. **Statutory & Safety:** Investment required for addressing unsafe conditions and making the network statutory compliant. This covers Refurbishment jobs, set up of safety culture through PPEs and testing equipment.
- b. **Loss Reduction:** Investment required for taking initiatives to improve Billing or collection efficiency or reducing the technical Losses in the network. This includes Energy auditing, LT Bare to AB Cable and Defective cable replacement etc.
- c. **Reliability:** Investment required to improve the Reliability and Quality of Power Supply by taking various initiatives like Feeder addition / augmentation, Transformer addition / augmentation and N-1 redundancy etc.
- d. **Load Growth:** Investment is required to meet the Load Growth in the network and making the network future ready. This includes Augmentation / Addition of Feeder, Transformers, sub-stations etc.
- e. **Technology and Infrastructure:** Investment related to technology adoption and strengthening of various infrastructure to improve internal as well as external customer satisfaction. This includes IT infrastructure, GIS implementation, Civil infrastructure, Transformer Workshop and Admin assets.

Power for all-24 hours supply concept: TSSPDCL is committed to provide 24 hours power supply in all the areas under its jurisdiction which requires comprehensive plan for system strengthening loss reduction and reliability improvement.

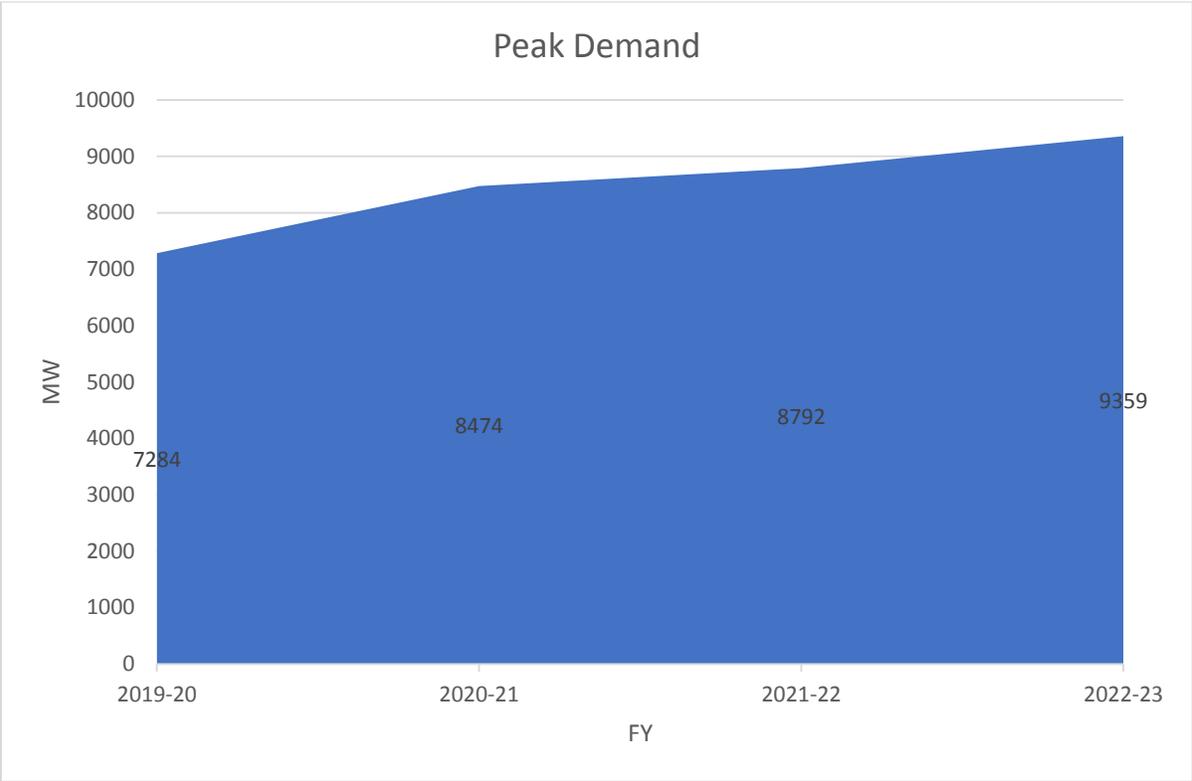
2. **Key Network Statistics are as given below:**

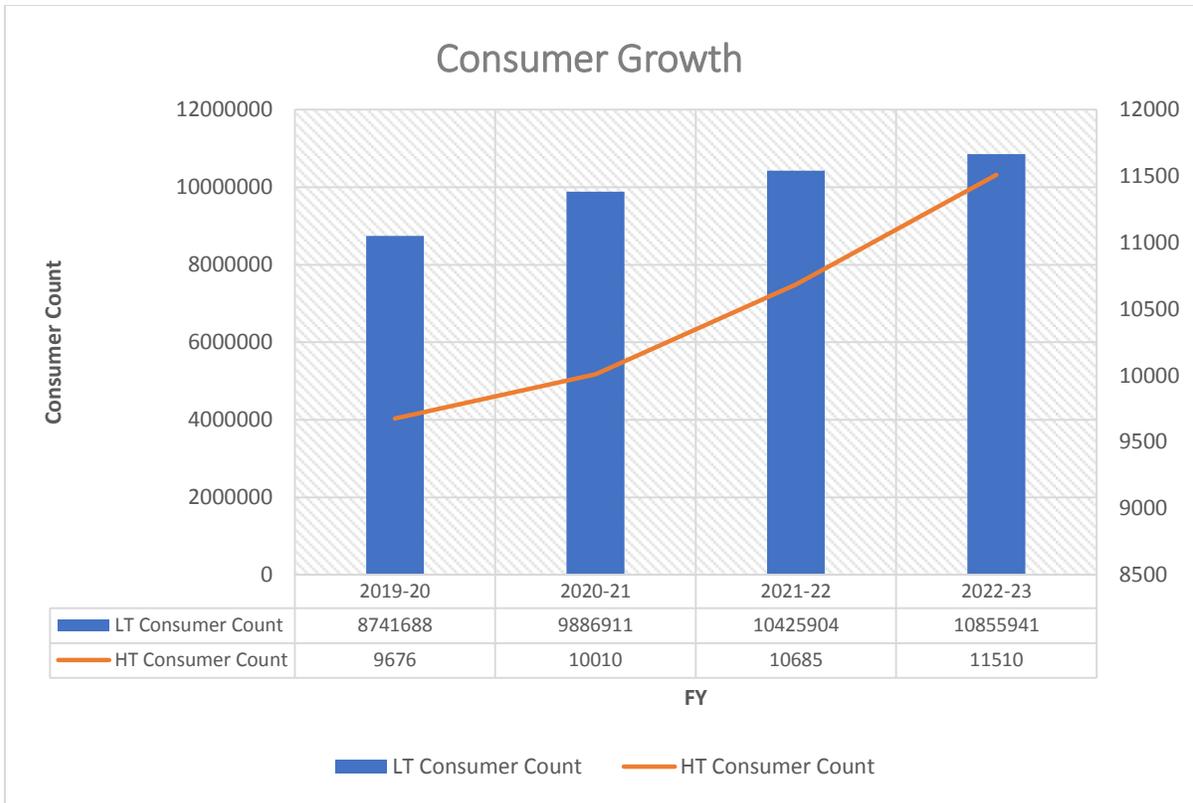
TSSPDCL Network Infrastructure (FY 2022-23)		
Key Network Elements	Unit	Quantity
33/11 KV Sub-station	Nos.	1700
PTRs	Nos.	3223
PTR Capacity	MVA	21060
DTRs	Nos.	499695
DTR Capacity	MVA	24244
33 KV Feeders	Nos.	1314

TSSPDCL Network Infrastructure (FY 2022-23)		
Key Network Elements	Unit	Quantity
11 KV Feeders	Nos.	7865
Line length	KM	368100
Capacitor Bank	Nos.	1583

Data as on June 2022

3. Consumer & Peak Demand Growth in 4th CP:





4. Investment Summary of 4th Control Period:

The summary of the Capex filed, approved in Distribution MYT order and Actual expenditure against the approved capex for the 4th Control Period (FY 2019-20 to FY 2023-24) is as given below:

TSSPDCL Capex (in Rs. Crore)					
FY	Filed Capex	Approved Capex	Actual Capex	Variation (Approved over Filed)	Variation (Actual over Approved)
2019-20	1632.06	1120.93	1384.82	-31%	24%
2020-21	1736.13	1420.34	1205.88	-18%	-15%
2021-22	2248.32	1881.41	1379.28	-16%	-27%
2022-23	2741.42	2150.7	1606.63	-22%	-25%
2023-24	2903.52	2299.35		-21%	
Total	11261.45	8872.73	5576.61	-21%	

Note: Actual Capex for FY 2022-23 is Provisional Figure.

- a. It can be observed that the variation in the Filed capex against the Approved number for 4th Control Period is 21%. Further, for FY 2019-20, FY 2020-21, FY 2021-22 & FY 2022-23, the variation in Actual expenditure incurred by DISCOM over the Approved expenditure is 24%, -15%, -27% & -25% respectively.

- b. It can be ascertained from the data given above that the cumulative capex expenditure in first four financial year of 4th CP against the approved capex is almost 85%.
- c. The reduction in expenditure in FY 2020-21 & FY 2021-22 is mostly due to the impact of Covid-19 and consequent lockdowns imposed across the country. The Pandemic had widespread impact on the availability of skilled/unskilled labor and supply chain affecting the progress of existing work and further initiation of new projects.

Also, it is to be noted that the actual capital expenditure done by DISCOM depends on number of factors, some of which are beyond the control of the DISCOM, apart from the planning based on existing network situation, present network loading, projected future loads, loss reduction measures, reliability improvement measures etc.

The liquidity available with the DISCOM and funding from PFC/REC also plays a major role in the execution of planned capex which are beyond the control of DISCOM and is influenced by several external factor including the financial health of the Company.

Adoption of new technologies for monitoring of the network, providing quality & reliable power supply, prompt service to the customers also depend to a large extent on the availability of fund for investment.

The expenditure after the approval of the Hon'ble commission is planned and executed by DISCOM in a phased manner and this process automatically considers any variation, if expected in projected loads.

The capital expenditure claimed in 4th CP was based on planning as per the same methodology as has been considered in the Resource Plan petition for 5th & 6th CP.

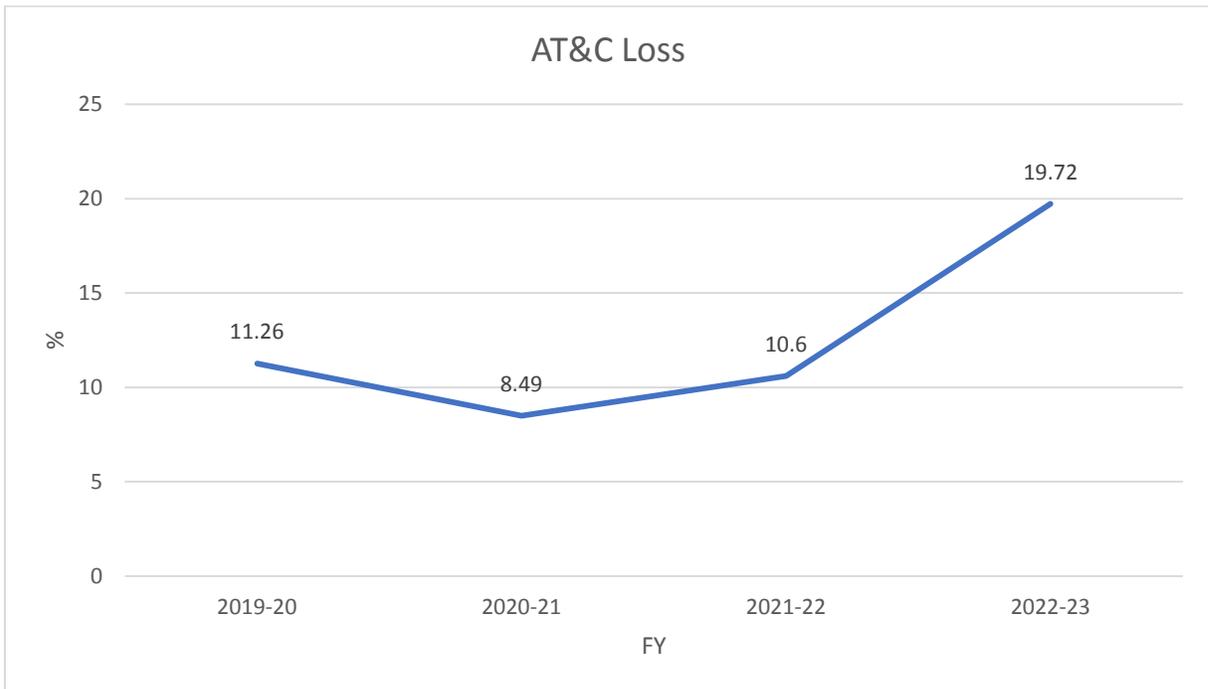
5. Impacts of capex expenditure in 4th CP:

- a. The expenditure done by TSSPDCL in 4th CP reflects the network strengthening work done for extending 24 hours power supply to agricultural consumers as per the policy of the state govt.
- b. There has been considerable reduction in AT&C Loss of the DISCOM over the 4th CP i.e., from 11.26% in FY 2019-20 to 10.60 % in FY 2021-22 with substantial improvement in billing efficiency and collection efficiency.
- c. The average hours of supply in rural and urban areas have improved and is at 23:58 Hrs. in FY 2022-23.
- d. Reliability Index like SAIFI has improved over the 4th CP from 79.99 in FY 2019-20 to 30.48 in FY 2022-23.
- e. Further SAIDI has improved considerably from 1888.46 minutes in FY 2019-20 to 794.27 minutes- in FY 2022-23.
- f. The Customer service has been digitized with 100% new connections being released through online system. The integration of necessary IT/OT systems has improved customer services to a great extent and facilitated DISCOM in extending its services

digitally without manual intervention. Such technological intervention has allowed the DISCOM to reduce new connection application processing time to an average of 7 days in urban areas and 10 days in rural areas. Outage alerts are being sent to the consumers on regular basis and almost 100% consumer complaints are being registered through 24X7 customer Call center.

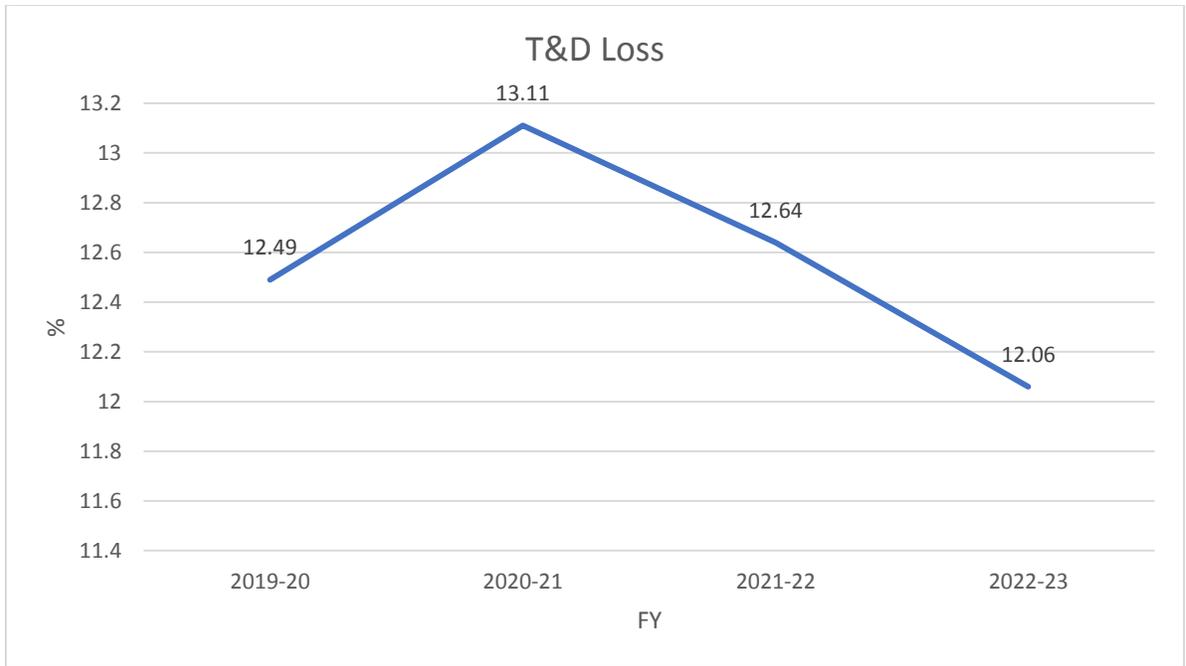
- g. The DT failure rate has been maintained consistently below 8% in 4th Control Period.
- h. Average Hours of Supply has been maintained close to 24 hours in the 4th CP.

6. AT & C Loss:



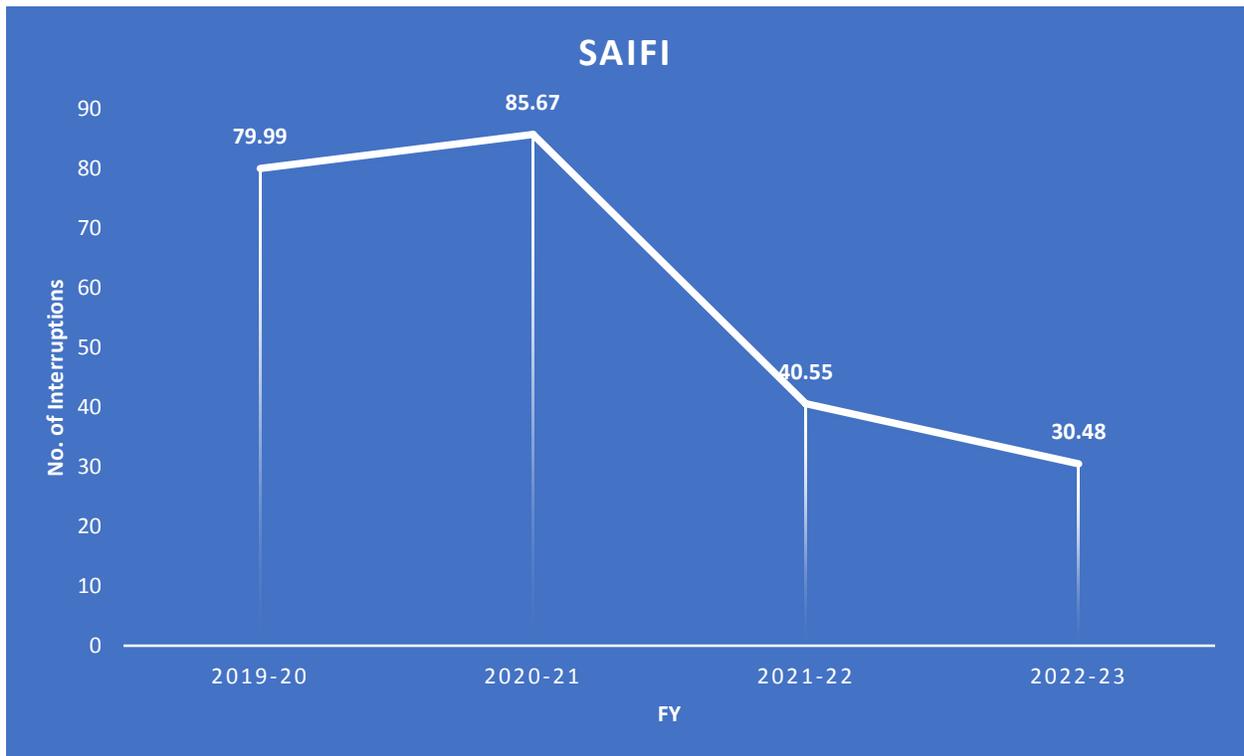
High AT&C Loss in FY 2022-23 is due to low collection efficiency on account of Govt. receivables.

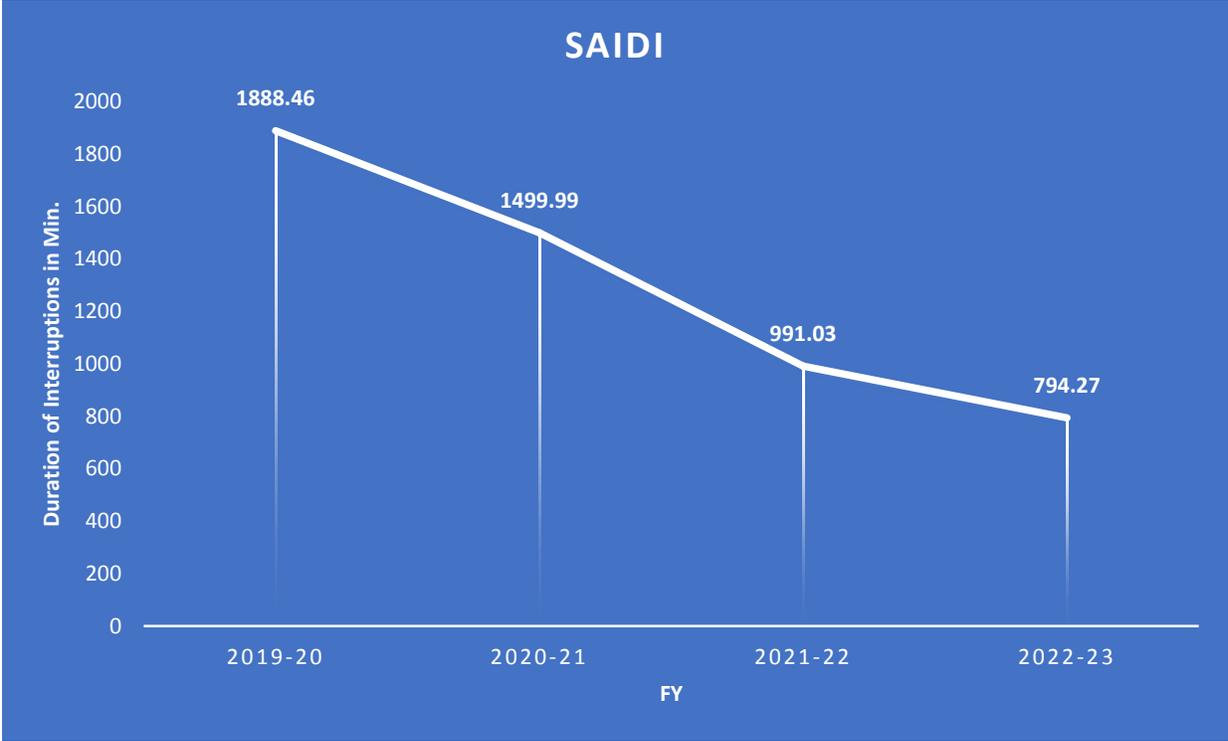
7. T&D Loss:



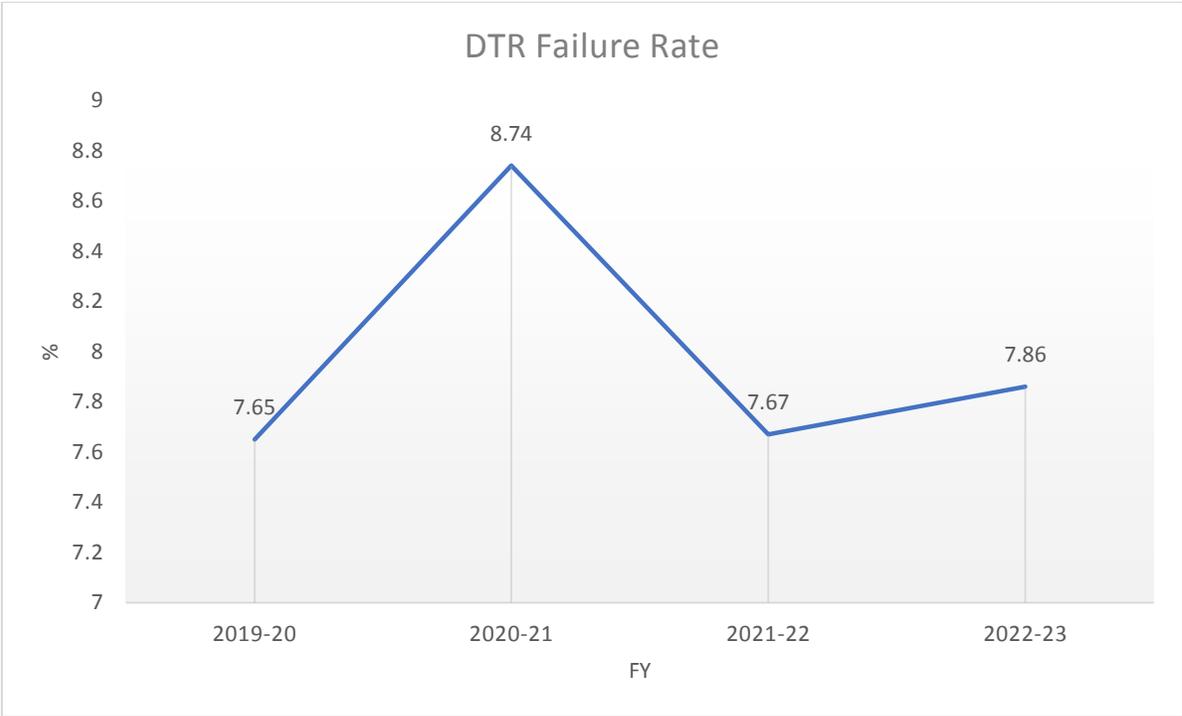
FY 2022-23 figure is estimated.

8. SAIFI & SAIDI:

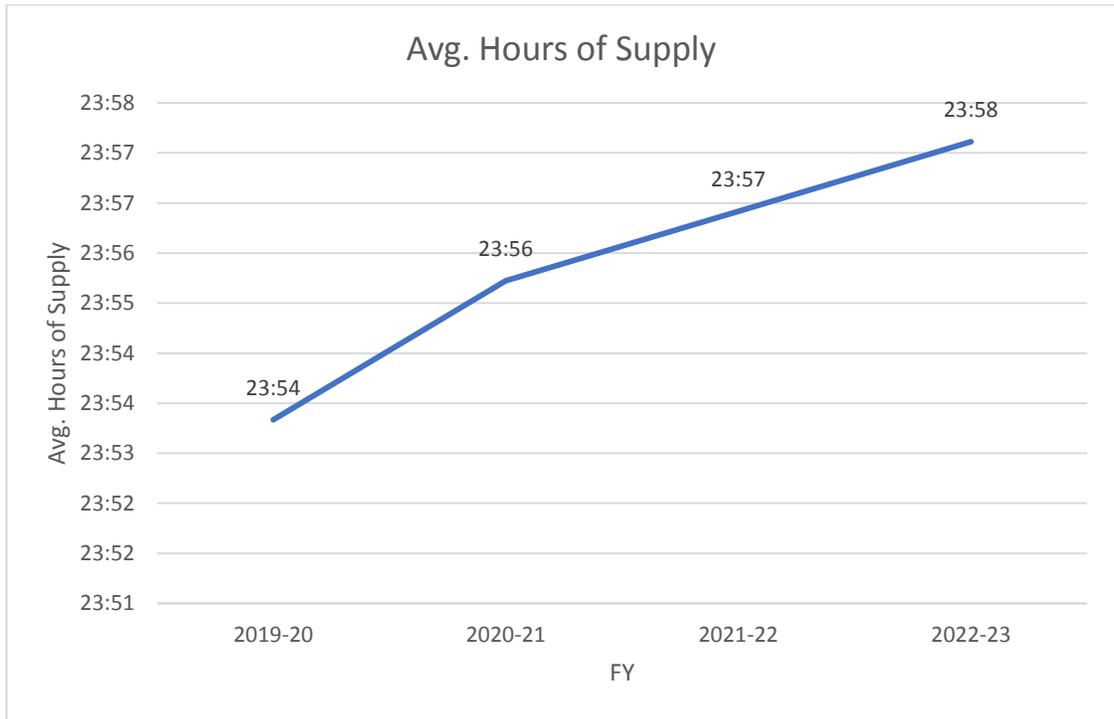




9. DTR Failure Rate:



10. Average Hours of Supply:



Capex Plan: Analysis of 4th Control Period for TSNPDCL

1. **Need for Capex Requirement:** Capital investment is required to improve Power supply reliability, reduce the AT&C losses, ensure the safety and security of network, make the network adequate to cater the load growth and implementation of the technology to bring process efficiency in the operations.

Further TSNPDCL has been framing its Capex requirement which is broadly based on the following:

- a. **Statutory & Safety:** Investment required for addressing unsafe conditions and making the network statutory compliant. This covers Refurbishment jobs, set up of safety culture through PPEs and testing equipment.
- b. **Loss Reduction:** Investment required for taking initiatives to improve Billing or collection efficiency or reducing the technical Losses in the network. This includes Energy auditing, LT Bare to AB Cable and Defective cable replacement etc.
- c. **Reliability:** Investment required to improve the Reliability and Quality of Power Supply by taking various initiatives like Feeder addition / augmentation, Transformer addition / augmentation and N-1 redundancy etc.
- d. **Load Growth:** Investment is required to meet the Load Growth in the network and making the network future ready. This includes Augmentation / Addition of Feeder, Transformers, sub-stations etc.
- e. **Technology and Infrastructure:** Investment related to technology adoption and strengthening of various infrastructure to improve internal as well as external customer satisfaction. This includes IT infrastructure, GIS implementation, Civil infrastructure, Transformer Workshop and Admin assets.

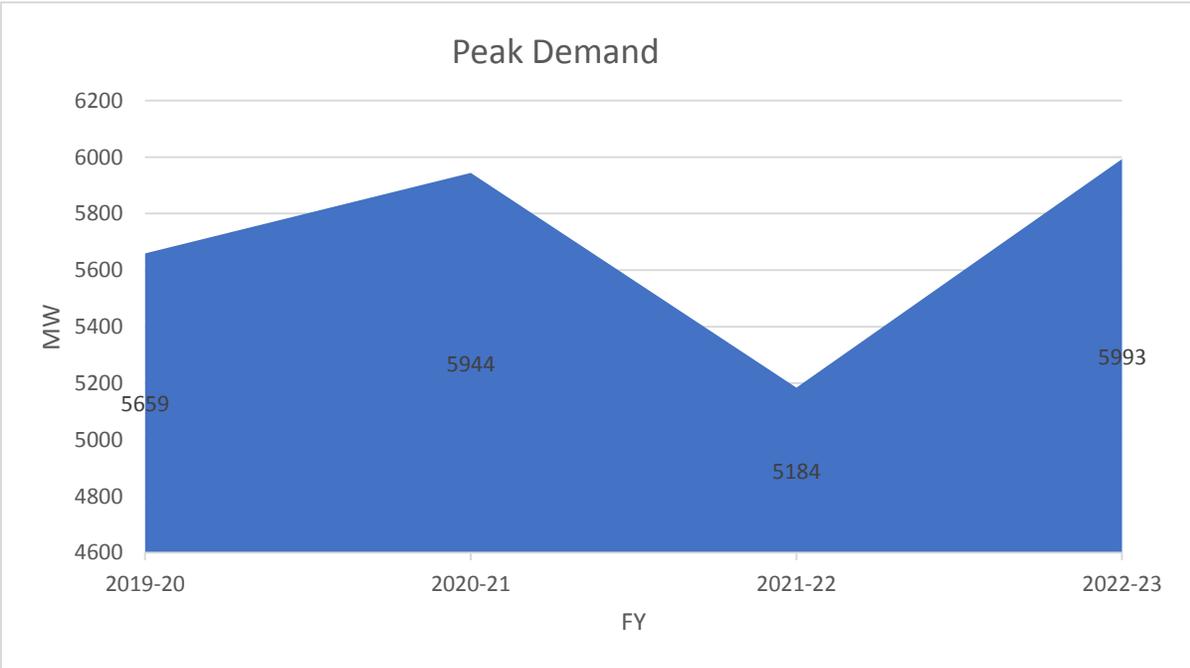
Power for all-24 hours supply concept: TSNPDCL is committed to provide 24 hours power supply in all the areas under its jurisdiction which requires comprehensive plan for system strengthening loss reduction and reliability improvement.

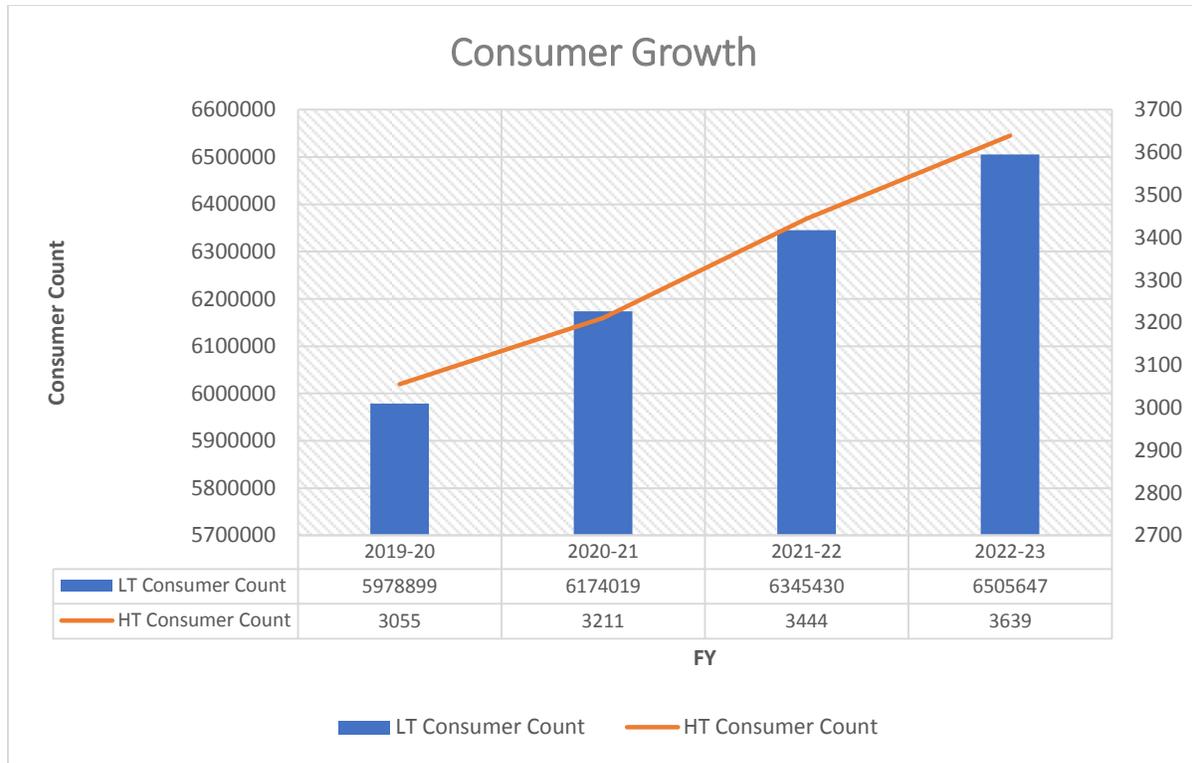
2. Key Network Statistics are as given below:

TSNPDCL Network Infrastructure (FY 2022-23)		
Network Elements	Unit	Quantity
33/11 KV Sub-station	Nos.	1479
PTRs	Nos.	2406
PTR Capacity	MVA	12432
DTRs	Nos.	317970
DTR Capacity	MVA	11944
33 KV Feeders	Nos.	655

TSNPDCL Network Infrastructure (FY 2022-23)		
Network Elements	Unit	Quantity
11 KV Feeders	Nos.	6291
Line length	KM	281881
Capacitor Bank	Nos.	1385

3. Consumer & Peak Demand Growth in 4th CP





4. Investment Summary of 4th Control Period:

The summary of the Capex filed, approved in Distribution MYT order and Actual expenditure against the approved capex for the 4th Control Period (FY 2019-20 to FY 2023-24) is as given below:

TSNPDCL (in Rs. Cr)					
FY	Filed Capex	Approved Capex	Actual Capex	Variation (Approved over Filed)	Variation (Actual over Approved)
2019-20	1351.22	1055.78	536.30	-22%	-49%
2020-21	1937.31	1396.33	401.12	-28%	-71%
2021-22	2025.91	1386.61	504.41	-32%	-64%
2022-23	2595.24	1572.79	512.31	-39%	-67%
2023-24	2484.16	1794.05		-28%	
Total	10393.84	7205.56	1954.14	-31%	

Note: Actual Capex for FY 2022-23 is Provisional Figure.

- a. It can be observed that the variation in the Filed capex against the Approved number for 4th Control Period is 31%. Further, for FY 2019-20, FY 2020-21, FY 2021-22 & FY 2022-23 the variation in actual expenditure incurred by DISCOM over the approved expenditure is -49%, -71%, -64% & -67% respectively.

- b. It can be ascertained from the data given above that the cumulative capex expenditure in first four financial year of 4th CP against the approved capex is almost 36%.
- c. TSNPDCL in current FY i.e., FY 2023-24 has already incurred approx. 300.28 Crore till the month of August 2023. The Expenditure in current financial year is expected to be much higher than previous years.
- d. The reduction in expenditure in FY 2020-21 & FY 2021-22 is mostly due to the impact of Covid-19 and consequent lockdowns imposed across the country. The Pandemic had widespread impact on the availability of skilled/unskilled labor and supply chain affecting the progress of existing work and further initiation of new projects.
- e. Also, TSNPDCL expected investment through RDSS scheme from FY 2021-22 to FY 2024-25 but since the RDSS scheme is yet to be approved by DRC, the estimated investment under the scheme did not materialize. Most of the important works like AGL feeder segregation, Loss reduction, DTR Metering, Technological upgradation etc. were covered under the DPR of RDSS and the DISCOM expected these expenditures in the 4th CP.

It is to be noted that the actual capital expenditure done by DISCOM depends on number of factors, some of which are beyond the control of the DISCOM, apart from the planning based on existing network situation, present network loading, projected future loads, loss reduction measures, reliability improvement measures etc.

The liquidity available with the DISCOM and funding from PFC/REC also plays a major role in the execution of planned capex which are beyond the control of DISCOM and is influenced by several external factor including the financial health of the Company.

Adoption of new technologies for monitoring of the network, providing quality & reliable power supply, prompt service to the customers also depend to a large extent on the availability of fund for investment.

The expenditure after the approval of the Hon'ble commission is planned and executed by DISCOM in a phased manner and this process automatically considers any variation, if expected in projected loads.

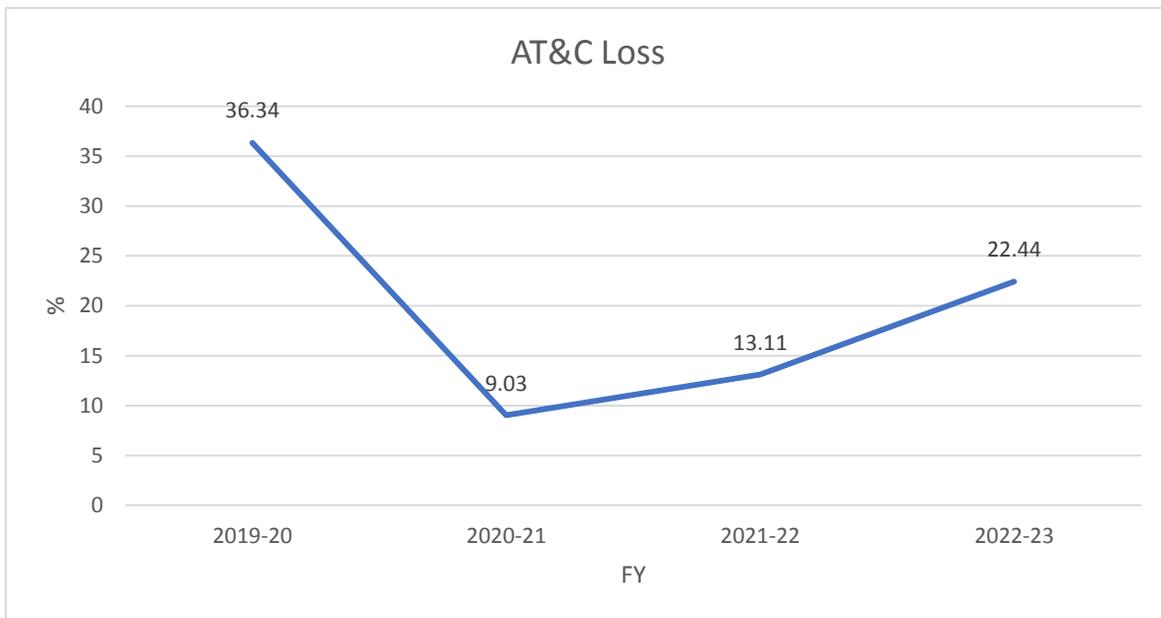
The capital expenditure claimed in 4th CP was based on planning as per the same methodology as has been considered in the Resource Plan petition for 5th & 6th CP.

5. Impacts of Capex in 4th CP:

- a. The expenditure done by TSNPDCL in 4th CP reflects the network strengthening work done for extending 24 hours power supply to agricultural consumers as per the policy of the state govt.

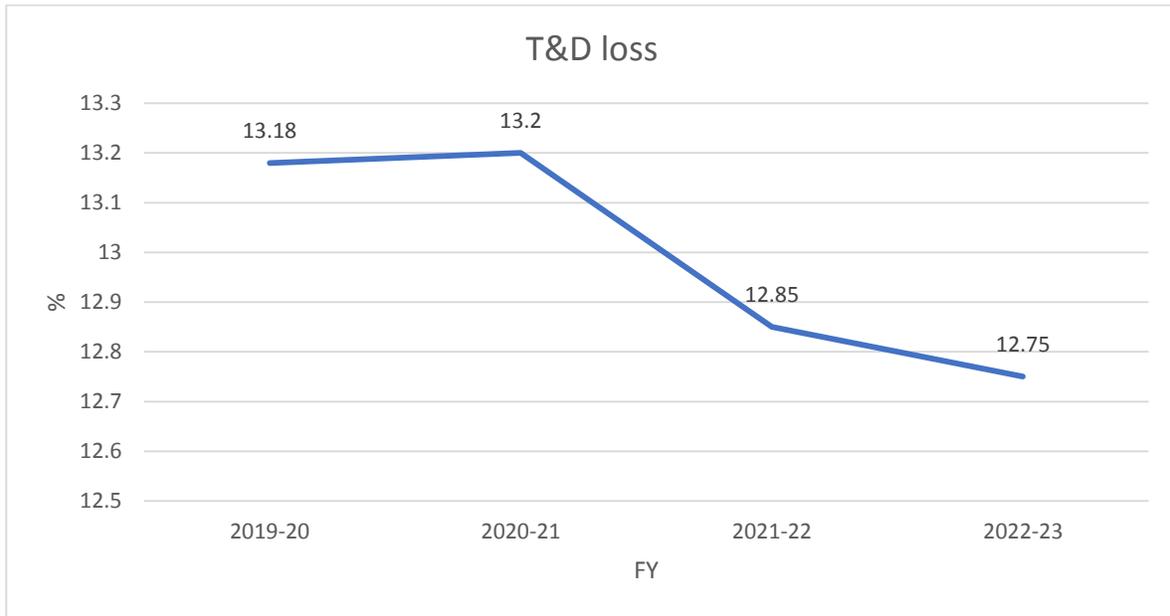
- b. There has been considerable reduction in AT&C Loss of the DISCOM over the 4th CP i.e., from 36.34% in FY 2019-20 to 13.11% in FY 2021-22 & 22.44% in FY 2022-23 due to considerable improvement in billing efficiency and collection efficiency over 4th CP.
- c. The average hours of supply in rural and urban areas have improved and is at 23:50 Hrs. in FY 2022-23.
- d. Reliability Index like SAIFI has improved over the 4th CP and is at 43 in FY 2022-23. SAIDI has been maintained at a consistent level and has a decreasing trend till FY 2021-22.
- e. The Customer service has been digitized with 100% new connections being released through online system. The integration of necessary IT/OT systems has improved customer services to a great extent and facilitated DISCOM in extending its services digitally without manual intervention. Such technological intervention has allowed the DISCOM to reduce new connection application processing time to an average of 1.9 days in urban areas and 4.2 days in rural areas. Outage alerts are being sent to the consumers on regular basis and almost 100% consumer complaints are being registered through 24X7 customer Call center.
- f. The DT failure rate has also come down from 11.16% to 9.80% from FY 2019-20 to FY 2022-23.

6. AT & C Loss:

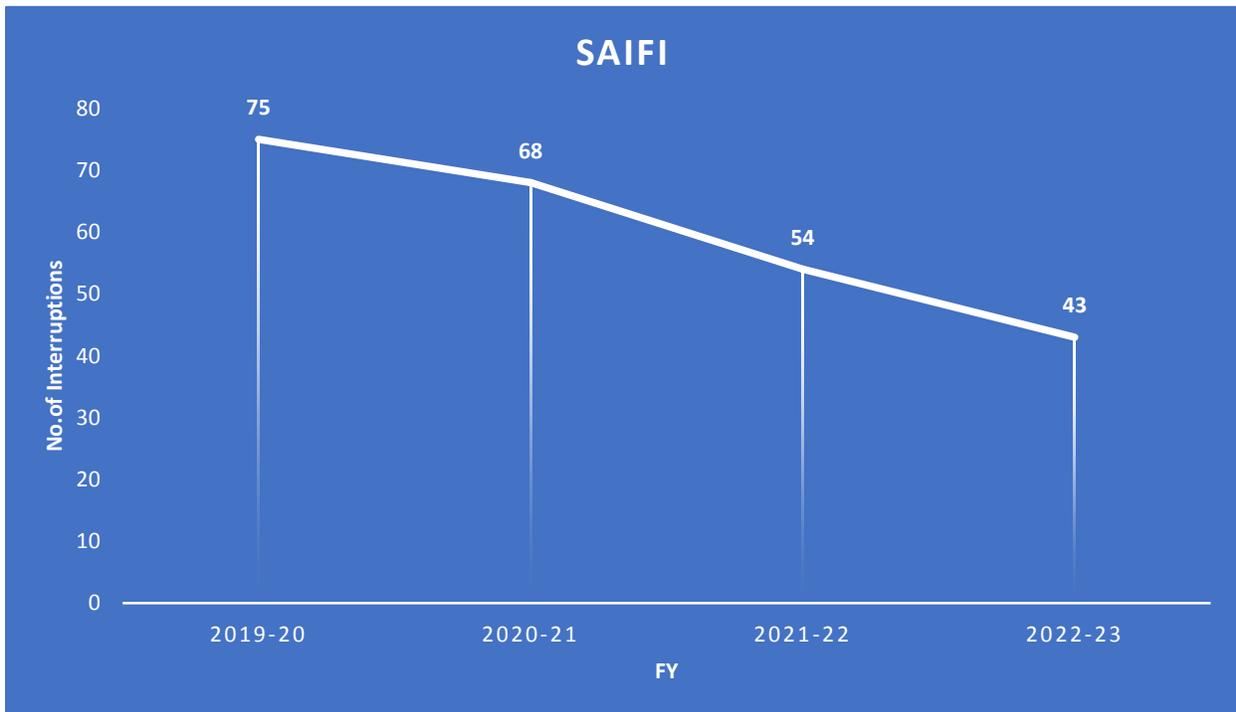


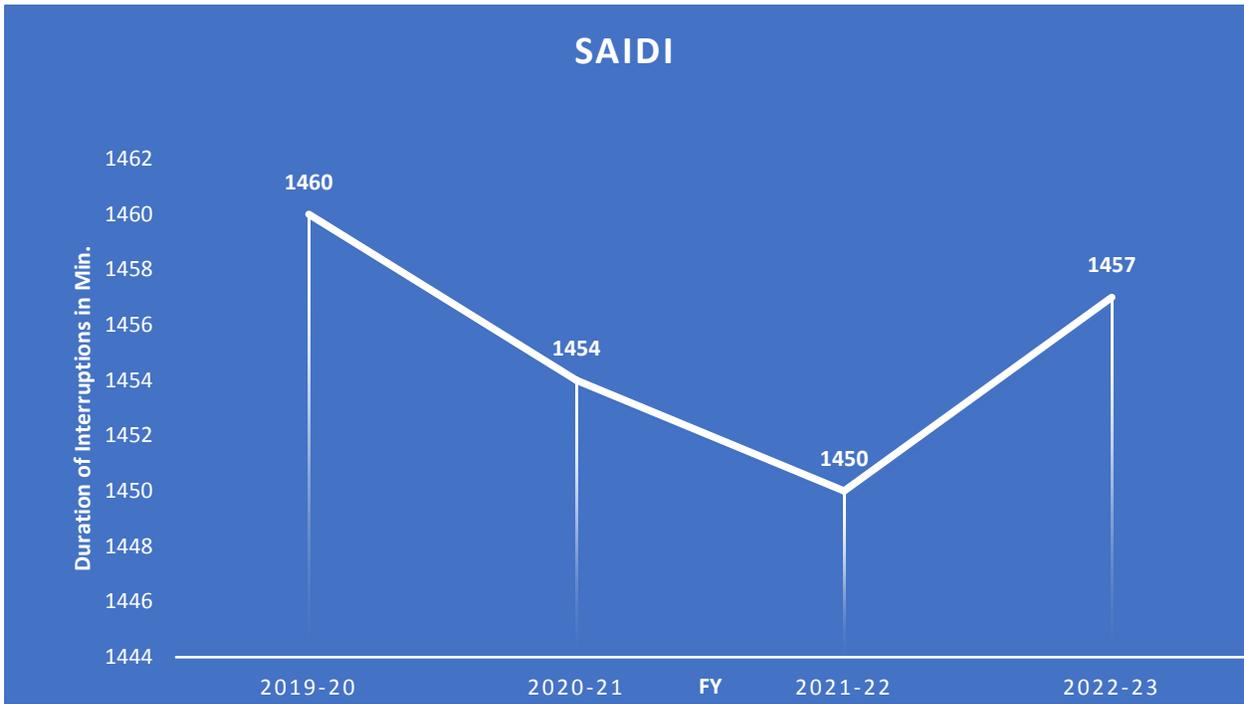
High AT&C Loss in FY 2022-23 is due to low collection efficiency on account of Govt. receivables.

7. T&D Loss:

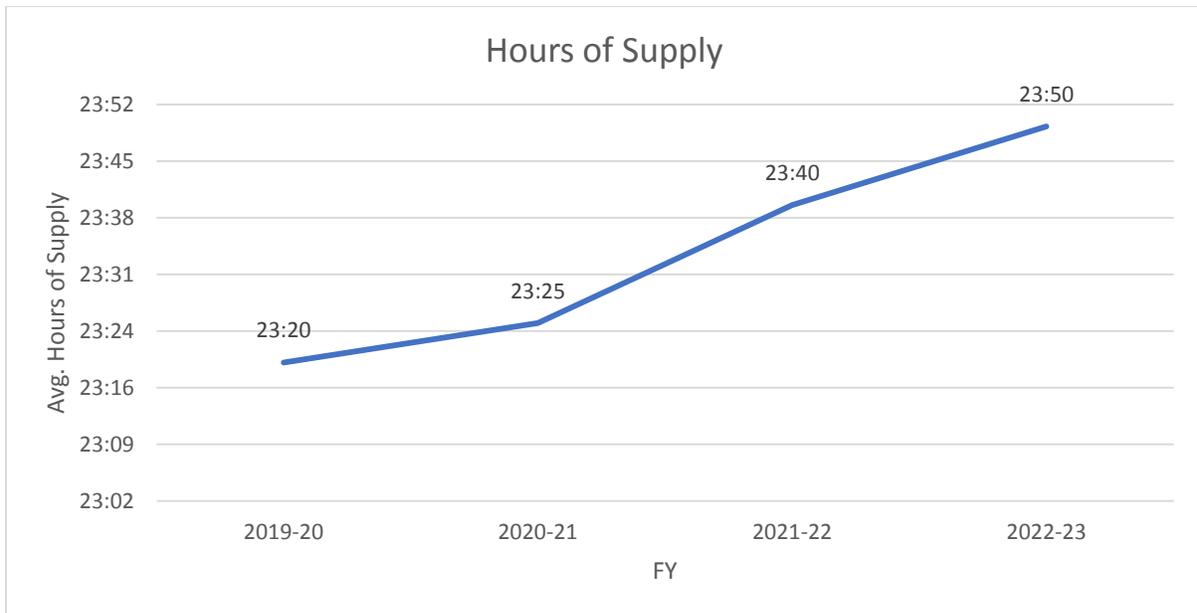


8. SAIFI & SAIDI:

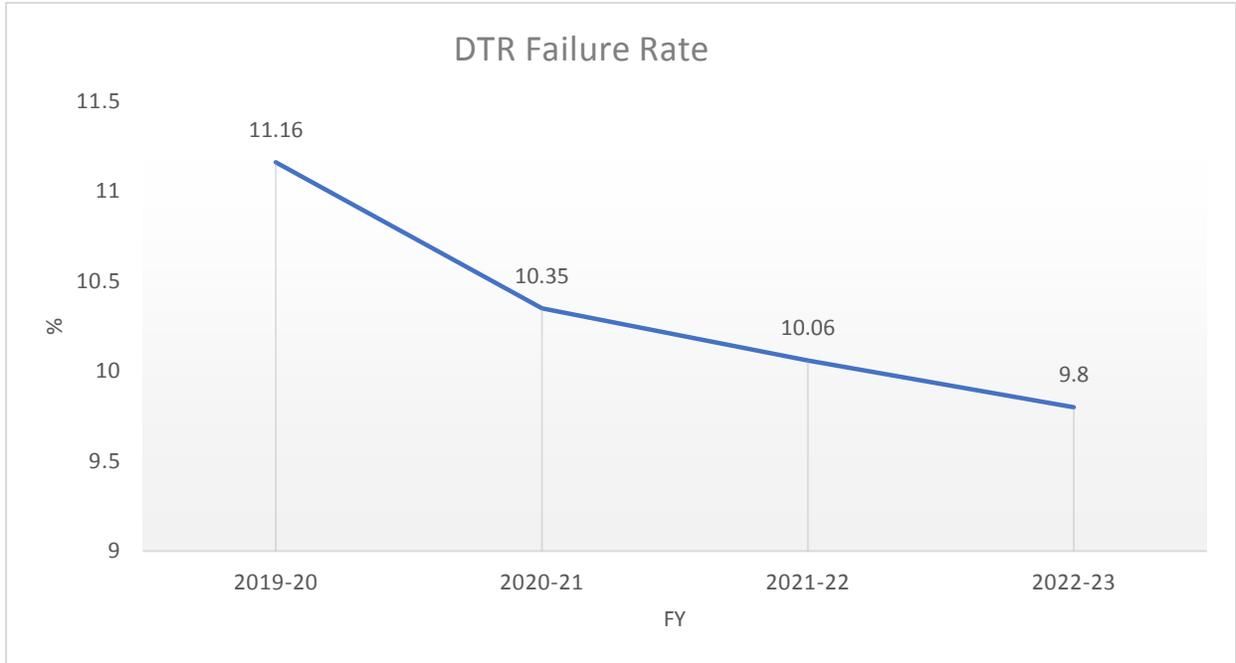




9. Average Hours of Supply:



10. DTR Failure Rate:



Annexure-II

Justification for the Energy Balance of 5th and 6th Control Periods

The energy balance of the State as submitted in the Resource Plan filings for 5th and 6th Control Periods is as follows:

Table 1 Energy Balance of the State as submitted in Resource Plan filing (Figures in MU)

Particular	Energy Balance in Telangana State									
	5th Control Period					6th Control Period				
	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Energy Availability	121754	127451	127126	126658	122090	115424	114555	114608	114601	114657
Energy Requirement	84997	89768	94774	100285	105957	111638	118116	125101	132599	140637
Surplus/(Deficit)	36758	37683	32352	26374	16133	3786	(3561)	(10493)	(17997)	(25981)
% of Surplus to Availability	43%	42%	34%	26%	15%	3%	-3%	-8%	-14%	-18%

From the above Energy Balance, it can be seen that there is a surplus of power in the 5th Control Period which is decreasing from 43% in FY 2024-25 to 15% in FY 2028-29 and in the 6th Control Period there is a deficit which is increasing from 3% to 18% except in the first year of 6th Control Period where there is a nominal surplus of 3%.

The above energy balance i.e., both Energy Availability & Energy Requirement gets effected significantly in the following circumstances.

- A) Projected sales from I&CAD for the Lift Irrigation Schemes for 5th and 6th Control Period
- B) Delay in Commissioning of new Generating Stations
- C) Variation of Actual PLF when compared to Normative

A) Projected sales from I&CAD for the Lift Irrigation Schemes for 5th and 6th Control Period

The energy balance of the State provided in the Resource Plan is considering the energy requirement which is dependent on the projection of sales of individual categories of consumers and any variation of actual sales with projected sales will have an impact on the energy balance.

The projection of one of the major contributors of sales of Discoms i.e., sales of Lift Irrigation Schemes (falling under 132 kV level of HT IV A Category) is very challenging. The growth trend in this category has many variations due to variations in the operation of Lift Irrigation pumps based on rainfall, water levels in reservoirs, etc. Considering the implementation of ambitious lift irrigation projects, the projections for this category for 4th and 5th Control Period have been made considering the submissions made by I & CAD Department. The quantum of sales considered during the Resource Plan filings done for 4th and 5th Control Period are as follows:

Table 2 Sales of Lift Irrigation schemes considered in Resource Plan filings for 4th and 5th CP (MU)

Particulars	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
TSSPDCL	4127	8459	11445	14420	17455	19178	19561	19952	20351	20758	21174
TSNPDCL	8407	18804	18804	21656	21656	21656	21656	21656	21656	21656	21656
Total	12533	27263	30249	36076	39111	40834	41217	41608	42007	42414	42830

Considering the above ambitious projections made by I&CAD Department, Discoms have made their power procurement plans and accordingly have made PPAs with new generating stations and while entering into PPAs with new generating stations, PPAs with Renewable Energy stations especially from Solar stations have been entered considering that the price per unit is lower than the variable charges of thermal power generation stations so that it shall optimize the average cost of power purchase of the Discoms. Further, as the power from Renewable power projects is not available throughout the day, in order to compensate the same PPAs with conventional sources have also been entered.

However, the actual sales recorded under this category were much lower than the projections and the same are follows:

Table 3 Actual Sales recorded against Lift Irrigation Schemes in 4th Control Period till FY 2022-23

Particulars	2019-20	2020-21	2021-22	2022-23
TSSPDCL	1862	1561	1878	1642
TSNPDCL	2601	1892	1793	1490
Total	4463	3453	3670	3132

Considering the lower actual sales recorded, the Discoms in the current Resource Plan filings have sought for the realistic projections from I&CAD, however, there has been a delay in receipt of the projected sales from I&CAD department. In view of the delay in receipt of the information, the Discoms have projected the sales against the lift irrigation schemes considering a growth rate of 10% based on the historical actual sales (TSSPDCL considered the base sales as recorded in FY 2021-22 and TSNPDCL considered the base sales as recorded in FY 2020-21). The quantum of sales considered in the current Resource Plan filings are as follows:

Table 4 Sales of Lift Irrigation schemes considered in current Resource Plan filings (MU)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
TSSPDCL	2015	2217	2439	2682	2951	3246	3570	3927	4320	4752	5227
TSNPDCL	2169	2386	2625	2887	3176	3493	3843	4227	4650	5115	5626
Total	4184	4603	5063	5570	6126	6739	7413	8154	8970	9867	10853

Subsequently, TS Discoms have received the projected sales from I&CAD for the Lift Irrigation Schemes which are operational as on date and are expected to be commissioned in the 5th Control Period.

The quantum of sales received from I&CAD for the 5th and 6th Control Period are as follows:

Table 5 Sales of Lift Irrigation schemes as submitted by I&CAD for 5th and 6th CP (MU)

Particulars	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
TSSPDCL	1989	4869									
<i>Inservice</i>	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989	1989
<i>Upcoming</i>		2881	2881	2881	2881	2881	2881	2881	2881	2881	2881
TSNPDCL	3868	5185									
<i>Inservice</i>	3278	3278	3278	3278	3278	3278	3278	3278	3278	3278	3278
<i>Upcoming</i>	590	1907	1907	1907	1907	1907	1907	1907	1907	1907	1907
Total	5857	10055									

It is further to be noted that the sales from upcoming projects are expected to be realized considering the commissioning of Palamuru Ranga Reddy Lift Irrigation Scheme (8x145 MW Pumps) by the end of September 2023 (Source: <https://www.thehindu.com/news/national/telangana/prlis-engineers-plan-to-commission-yellur-pump-house-by-month-end/article67269626.ece>) along with increased pace of construction of distributary canals which will increase the utilization of existing as well as upcoming lift irrigation projects.

Considering the difference in approach of projection by I&CAD for 5th and 6th Control Periods, it is expected that there shall be not much variation between the projected and actual sales in the 5th and 6th Control Periods.

The revised energy balance of TS Discoms by revising the energy requirement by considering the sales projections received from I&CAD for 5th and 6th Control Period with the availability as submitted in Resource Plan for 5th and 6th Control period is as follows:

Table 6 Impact of considering LIS projections as submitted by I&CAD for 5th and 6th CP and availability as submitted in 5th and 6th CP filings (based on Normative PAF)

Particular	Impact of Energy Balance in Telangana State									
	5th Control Period					6th Control Period				
	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Energy Availability	121754	127451	127126	126658	122090	115424	114555	114608	114601	114657
Energy Requirement	90587	94885	99371	104310	109354	114344	120062	126205	132790	139819
Surplus/(Deficit)	31168	32566	27756	22348	12736	1080	(5507)	(11597)	(18189)	(25163)
% of Surplus to Availability	34%	34%	28%	21%	12%	1%	-5%	-9%	-14%	-18%

B) Delay in Commissioning of new Generating Stations

In the Resource Plan filings, the Discoms have submitted that power from the following new generating stations have been considered in 5th and 6th Control Period:

Table 7 New Generating Stations availabilities considered in Resource Plan filings

Station	Capacity (MW)	Date of Commissioning & Capacities
YTPS	4000	Unit#1, Dec' 2023, Unit#2, Mar' 2024, Unit#3, May' 2024, Unit#4, July' 2024, Unit#5, Sept' 2024.
Telangana STPP	1360	Unit-I Apr-23 Unit-II Jun-23
SECI 400 MW	130	270 MW is already Commissioned Balance 130 MW - Apr'23
SECI 1000 MW	1000	1000 MW - Oct'23
NTPC CPSU 1692 MW	260	1432 MW is already Commissioned Balance: 100 MW - Mar'23 10 MW - Apr'23 150 MW - Mar'24
NTPC CPSU 1045 MW	1045	735 MW - Nov'23 310 MW - Apr'24
NHPC CPSU 500 MW	500	500 MW - Apr'24

The availability of power from the above stated generating sources has been considered from their CODs in the 5th and 6th Control Period as follows:

Table 8 Availability of power from New Generating Stations considered in Resource Plan filings

Generating Station	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
YTPS - 4000 MW	23811	29784	29784	29784	29784	29784	29784	29784	29784	29784
TSTPP – 1360 MW	11718	11682	12216	12216	12074	12038	12216	12216	12074	12216
SECI ISTS Tr-VI -400 MW	876	876	876	876	876	876	876	876	876	876
NTPC CPSU Tr-I & II - 1692 MW	3706	3706	3706	3706	3706	3706	3705	3705	3705	3705
NTPC CPSU Tr-III - 1045 MW	2289	2289	2289	2289	2289	2289	2289	2289	2289	2289
NHPC CPSU Tr-III - 500 MW	1095	1095	1095	1095	1095	1095	1095	1095	1095	1095
SECI ISTS Tr-IX - 1000 MW	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190
Total MU addition	45684	51621	52155	52155	52013	51977	52155	52155	52013	52155

However, it is to be noted that in case the commissioning of any of the above stations is delayed it will be having an impact on the energy balance above and accordingly the quantum of surplus in the respective years will come down. It is to be noted that many of the newly constructed power projects are being delayed on account of numerous factors which includes land acquisition.

The updated status of commissioning of new generating stations as per the latest status is as follows:

Station	Capacity (MW)	Date of Commissioning considered in Resource Plans	Latest status of Commissioning
YTPS	4000	Unit#1, Dec' 2023, Unit#2, Mar' 2024, Unit#3, May' 2024, Unit#4, July' 2024, Unit#5, Sept' 2024.	Unit#1, Dec' 2023, Unit#2, Dec' 2023, Unit#3, Oct' 2024, Unit#4, Sept' 2024, Unit#5, Dec' 2024. (As received from CE, Thermal Projects Construction, TS Genco dt. 08.06.2023)
Telangana STPP	1360	Unit-I Apr-23 Unit-II Jun-23	Unit-I Sept-23 Unit-II Nov-23 (Retained the gap between stations as two months considering original submission in Resource Plan)
SECI 400 MW	130	270 MW is already Commissioned Balance 130 MW - Apr'23	Total Capacity Commissioned
SECI 1000 MW	1000	1000 MW - Oct'23	1000 MW - May'24
NTPC CPSU 1692 MW	260	1432 MW is already Commissioned Balance: 100 MW - Mar'23 10 MW - Apr'23 150 MW - Mar'24	1542 MW is already Commissioned Balance: 150 MW - Mar'24
NTPC CPSU 1045 MW	1045	735 MW - Nov'23 310 MW - Apr'24	735 MW - Nov'23 310 MW - Sep'24
NHPC CPSU 500 MW	500	500 MW - Apr'24	500 MW - Apr'24

Analysis of delay in commissioning of the new generating stations/units and their impact on the energy balance of the State is as follows:

Table 9 Impact of delay in Commissioning of new Generating Stations with availability as submitted in Resource Plan (based on Normative PLF)

Particular	Impact of Energy Balance in Telangana State	
	5th Control Period	6th Control Period

	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Energy Availability	113113	127451	127126	126658	122090	115424	114555	114608	114601	114657
Energy Requirement	84997	89768	94774	100285	105957	111638	118116	125101	132599	140637
Surplus/(Deficit)	28116	37683	32352	26374	16133	3786	(3561)	(10493)	(17997)	(25981)
% of Surplus to Availability	33%	42%	34%	26%	15%	3%	-3%	-8%	-14%	-18%

C) Variation of Actual PLF when compared to Normative:

The projections of Energy availability from individual generating stations as shown above have been obtained from the respective generating stations which were usually projected based on the installed capacity and Normative Plant Availability Factor (the average of the daily declared capacities (DCs) for all the days during the period expressed as a percentage of the installed capacity in MW less the normative auxiliary energy consumption) of the plant. However, it is to be noted that the actual PLFs (the ratio of the actual energy generated by a power plant to the maximum possible energy it could have generated during a given period) of generating stations are usually less than the normative on account of various factors like availability of fuel owing to either external factors or internal factors, lower power demand etc.

For example, the all India average PLF of Central Generating Stations for Coal & Lignite based Stations for FY 2022-23 is 64.15% (Source: <https://powermin.gov.in/en/content/power-sector-glance-all-india>) which is less than the normative Plant Availability Factor ranging from 72% to 85%, it is also to be noted that this lower PLF is not on account of lower demand as in FY 2022-23, at India level there was an energy deficit of 0.5% and peak deficit of 4% (Source: <https://powermin.gov.in/en/content/power-sector-glance-all-india>).

Similarly, the actual PLFs of all the generating sources with which the TS Discoms have tied up will be usually less on account of various reasons, however for Hydro generating stations the PLF depends on the monsoon levels and varies accordingly. A snapshot of actual PLFs of all the contracted sources of generating sources is as follows:

Station	Actual Capacity as on 22-23 (MW)	FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 19-20 to FY 22-23 (4 Years)	
		Energy (MU)	PLF (%)	Total Energy (MU)	AVG PLF (%)						
TSGENCO											
KTPS (ABC)	720	2038	32%	0	0%	0	0%	0	0%	2038	8.1%
KTPS (D) V	500	3211	73%	2444	56%	2921	67%	3174	72%	11750	67.1%
KTPS VI	500	3393	77%	3386	77%	2956	67%	3462	79%	13198	75.3%
RTS B	63	351	64%	250	46%	236	43%	232	42%	1069	48.8%
Kakatiya - KTPP I	500	2912	66%	2353	54%	3390	77%	2979	68%	11633	66.4%

Station	Actual Capacity as on 22-23 (MW)	FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 19-20 to FY 22-23 (4 Years)	
		Energy (MU)	PLF (%)	Total Energy (MU)	AVG PLF (%)						
Kakatiya - KTPP II	600	4244	81%	3673	70%	3366	64%	4167	79%	15449	73.5%
KTPS VII	800	3390	48%	5833	83%	5587	80%	4013	57%	18824	67.2%
Bhadradri - BTPS (units I to IV)	1080	0	0%	1658	18%	4701	50%	5633	60%	11992	31.7%
TS Genco Hydro	2325	4297	21%	3424	17%	5414	27%	5742	28%	18877	23%
Central Generating Stations											
NTPC (SR) - I & II	345.45	2031	67%	2125	70%	2126	70%	1984	66%	8266	68%
NTPC (SR) Stage III	86.72	536	71%	501	66%	628	83%	473	62%	2138	70%
Talcher Stage 2	214.43	1374	73%	1504	80%	1558	83%	1711	91%	6148	82%
NTPC Simhadri Stage I	538.90	2616	55%	1604	34%	3185	67%	3220	68%	10625	56%
NTPC Simhadri Stage II	231.30	1204	59%	1092	54%	1406	69%	1536	76%	5239	65%
NTPC Kudigi - I, II & III	271.68	565	24%	538	23%	828	35%	1135	48%	3066	32%
NLC Stage-I	59.89	366	70%	295	56%	359	69%	68	13%	1088	52%
NLC Stage-II	105.04	626	68%	315	34%	557	60%	103	11%	1600	43%
NNTPP (New Neyveli)	62.10	34	6%	190	35%	365	67%	443	81%	1031	47%
NLC Expansion 1	0.00	0		0		0		24		24	
NLC Expansion 2	0.00	0		0		0		10		10	
NPC-MAPS	22.76	75	38%	70	35%	43	21%	73	36%	260	33%
NPC-Kaiga unit I & II	145.08	1085	85%	1052	83%	1106	87%	1087	86%	4330	85%
NPC-Kaiga unit III & IV										0	
NPC- Kudankulam	50.00	179	41%	294	67%	349	80%	351	80%	1174	67%
Kudankulam (KKNPP) Unit-II										0	
Vallur Thermal Power Plant (NTECL - Vallur)	110.65	430	44%	218	22%	571	59%	705	73%	1924	50%
NLC Tamilnadu Power Ltd (Tuticorin)	152.33	750	56%	806	60%	648	49%	930	70%	3135	59%
NSM Bundled Ph II	200.00	1378	79%	1156	66%	1223	70%	1516	87%	5274	75%
NVVNL B.P-Coal	45.81	211	52%	204	51%	220	55%	252	63%	887	55%
IPPs											
Sembcorp Unit I	269.50	2273	96%	1879	80%	2145	91%	2186	93%	8484	90%
Sembcorp Unit II	570.00	4524	91%	4207	84%	4368	87%	4037	81%	17135	86%

Station	Actual Capacity as on 22-23 (MW)	FY 19-20		FY 20-21		FY 21-22		FY 22-23		FY 19-20 to FY 22-23 (4 Years)	
		Energy (MU)	PLF (%)	Total Energy (MU)	AVG PLF (%)						
NCE											
NCE - TSNPDCL	925.60	1771	22%	1786	22%	1759	22%	1754	22%	7070	22%
NCE - TSSPDCL	2128.14	3831	21%	3905	21%	3837	21%	3960	21%	15533	21%
NTPC CPSU/NTPC Solar Phase-1	1296.00	-	-	-	-	65	1%	1439	13%	1503	3%
SECI	400.00	-	-	-	-	138	4%	617	18%	755	5%
NTPC Bundled Scheme under JNNSM Ph-1	45.81	58	14%	52	13%	43	11%	41	10%	193	12%
NTPC Bundled Scheme under JNNSM Ph-II (400 MW)	400.00	794	23%	815	23%	807	23%	819	23%	3235	23%
OTHERS											
Singareni CCL	1200.00	8602	82%	6875	65%	8773	83%	8721	83%	32971	78%
CSPDCL	1000.00	2245	26%	3275	37%	1631	19%	0	0%	7152	20%

It is also to be noted that when the availability of a generating station is lower than the normative availability, the fixed charges eligible to be recovered by the generating station will also reduce as per the Regulatory provisions of Generation Tariff Regulations. A comparison of approved Fixed Charges paid (as approved in RST Order) and actual Fixed Charges paid for FY 2022-23 and FY 2023-24 (Q1) is as follows:

Table 10 Comparison of approved and actual Fixed Charges paid for FY 2022-23

Generating Station	Fixed Charges (Rs Cr)		Fixed Charges Variance
	Approved	Actual	Approved-Actual
TS GENCO Thermal			
KTPS V	372	372	0
KTPS VI	522	522	0
KTPS VII	1061	760	301
RTS B	113	84	29
KTPP I	490	471	19
KTPP II	720	720	0
BTPS	1934	1486	448
YTPS	0	0	0
TOTAL TSGENCO THERMAL	5212	4416	796
TS GENCO Hydel			
Nagarjuna	347	347	-

Generating Station	Fixed Charges (Rs Cr)		Fixed Charges Variance
	Approved	Actual	Approved-Actual
Sagar complex			
SLBHES	464	464	-
LJHES	265	265	-
PCHES	124	124	-
Pochampad II	10	10	-
Small Hydel	49	49	-
Mini Hydel	9	9	-
PJHES	62	62	-
TOTAL TS GENCO HYDRO	1331	1331	1331
TOTAL TS GENCO	6543	5747	796
Central Generating Stations			
NTPC (SR)*	181	191	-10
NTPC (SR) Stage III	54	52	2
Talcher Stage 2*	110	172	-62
TSTPP	712	0	712
NTPC Simhadri Stage I*	357	668	-311
NTPC Simhadri Stage II*	245	363	-118
NLC TS II- Stage I*	28	33	-5
NLC TS II- Stage II	52	7	46
NPC-MAPS	0	0	0
NPC-Kaiga unit I&ii	0	0	0
NPC-Kaiga unit III&IV	0	0	0
NPC Kudankulam NPP Unit 2	0	0	0
Vallur Thermal Power Plant	0	219	-219
Tuticorin	0	0	0
NPC- Kudankulam	0	0	0
NLC Tamil Nadu Power Ltd	0	171	-171
Kudigi*	294	347	-53
NNTPP*	78	80	-2
Expn I	0	2	-2
Expn II	0	2	-2
TOTAL CGS	2112	2308	-196
Singareni	1416	1399	17
Thermal Power Tech	334	327	8
CSPGCL	1526	0	1526
Thermal Power Tech Unit II	1137	1121	16
TOTAL OTHERS	4414	2847	1567

Generating Station	Fixed Charges (Rs Cr)		Fixed Charges Variance
	Approved	Actual	Approved-Actual
TOTAL	13069	10901	2168

* The higher fixed charges are on account of True Up of the Generating Stations

Table 11 Comparison of approved and actual Fixed Charges paid for FY 2023-24

Station Name	Approved Fixed Charges (Rs Cr) for FY 2023-24	Approved Fixed Charges (Rs Cr) for FY 2023-24 Q1	Actual Fixed Charges (Rs Cr)	Variation in Fixed Charges (Rs Cr)
<u>TSGENCO</u>				
KTPS-V	394	131	96	36
KTPS-VI	509	170	149	20
KTPS-VII	1334	445	336	108
RTS-B	117	39	22	17
KTPP-I	402	134	105	29
KTPP-II	749	250	187	62
BTPS	1412	471	308	163
YTPS	111	37	0	37
Sub-total	5028	1676	1203	472
<u>TSGenco-Hydel</u>				
PJHES	49	16	13	4
Nagarjuna Sagar Complex	321	107	82	25
SLBHES	425	142	109	32
LJHES	259	86	66	20
PCHES	92	31	23	7
Pochampad II	10	3	2	1
Small Hydel	57	19	13	6
Mini Hydel	10	3	2	1
Sub-total	1224	408	311	97
TSGENCO Total	6252	2084	1514	570
<u>CGS</u>				
NPC Madras APS	0	0	0	0
NPC Kaiga APS Units 1 & 2	0	0	0	0
NPC Kaiga APS Units 3 & 4	0	0	0	0
NPC Kudankulam NPP Unit 2	0	0	0	0
NTPC(ER) - Farakka-1	0	0	0	0

Station Name	Approved Fixed Charges (Rs Cr) for FY 2023-24	Approved Fixed Charges (Rs Cr) for FY 2023-24 Q1	Actual Fixed Charges (Rs Cr)	Variation in Fixed Charges (Rs Cr)
NTPC(ER)-Kahalgaon	0	0	0	0
NTPC(ER)-Talcher-I	0	0	0	0
NTPC FGTPS 2 Pushp	0	0	0	0
NTPC NSTPS 1 Pushp	0	0	0	0
NTPC Ramagundam Stage I & II	178	59	43	16
NTPC Ramagundam Stage III	53	18	16	1
NTPC Simhadri Stage I*	357	119	140	-21
NTPC Simhadri Stage II	258	86	80	6
NTPC Talcher TPS II*	109	36	41	-4
NTPC Kudgi*	286	95	102	-7
NLC TPS II Stage I	2	1	1	0
NLC TPS II Stage II	3	1	0	1
NNTPP	78	26	20	6
Neyveli New Unit - 1	4	1	1	1
Neyveli New Unit - 2	7	2	1	1
TSTPP Unit 1	1518	506	0	506
NTECL Vallur TPS	0	0	30	-30
NLC Tamilnadu Power Ltd.,	0	0	38	-38
CGS TOTAL	2854	951	514	437
Others				
SEIL (LT 1) 269.45 MW	318	106	79	27
SEIL (LT 2) 570 MW	1135	378	280	98
STPP	1330	443	332	111
CSPDCL	1486	495	0	495
Sub-TOTAL	4268	1423	692	731
TOTAL	13374	4458	2720	1738

* The higher fixed charges are on account of True Up of the Generating Stations

Considering the above, analysis has been done where the availability of power various contracted sources has been considered based on the historical averages of actual PLFs for the period FY 2019-20 to FY 2022-23.

Further, the availability of power from one of the contracted sources of TS Discoms i.e., CSPDCL has been considered in the 5th and 6th Control Period as per the normative availability,

however, it is to be noted that the power from this station has not been scheduled from April 2022 i.e., from a period of 16 months on account billing issues with CSPDCL.

Since there is no clarity on the availability of power from CSPDCL, the scheduling of power from CSPDCL has not been considered in this analysis. However, there is a possibility that the energy is scheduled after the issues between TS Discoms and CSPDCL are resolved.

The specific considerations of various generation sources is as follows:

Power Source	Considerations for projection of availability
TS Genco – Thermal	Average PLF of the period FY 2019-20 to FY 2022-23 except BTPS and YTPS. For BTPS, PLF is considered as 60% which is the actual PLF for FY 2022-23 for all the years. Similarly, for YTPS, PLF is considered as 60% for the period from CoD of respective units for all the years.
TS Genco – Hydel	Considered as projected in Resource Plan considering that the availability exceeds only when there are good monsoons which is not so frequent.
Central Generating Stations	Average PLF of the period FY 2019-20 to FY 2022-23 except (i) NLC exp. 1 & 2 (ii) Nuclear & (iii) TSTPP. For these three plants the projections have been considered as filed in Resource Plan.
NCES	Considered as projected in Resource Plan.
Sembcorp Energy (IPPs)	Average PLF of the period FY 2019-20 to FY 2022-23
CSPDCL (Chhattisgarh)	Not considered the same since the power is not being scheduled from April 2022
Singareni	Average PLF of the period FY 2019-20 to FY 2022-23

With the above considerations, the availability of power from the contracted sources has come down and accordingly has impacted the energy balance of the State and the same is as follows:

Table 12 Impact of availability considering historical actual availabilities (MU)

Particular	Energy Balance in Telangana State									
	5th Control Period					6th Control Period				
	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Energy Availability	97432	100071	99840	99136	96449	96416	96256	93728	95907	96058
Energy Requirement	84997	89768	94774	100285	105957	111638	118116	125101	132599	140637
Surplus/(Deficit)	12435	10303	5066	(1149)	(9508)	(15222)	(21860)	(31373)	(36692)	(44579)
% of Surplus to Availability	15%	11%	5%	-1%	-9%	-14%	-19%	-25%	-28%	-32%

Conclusion:

The surplus for 5th and 6th Control Periods will be reduced in case the combined impact of considering LIS projections as received from I&CAD for 5th and 6th Control Period, the delay in commissioning of new generating stations and availability as per historical actual PLFs is considered. The combined impact is as follows:

Table 13 Combined impact of delay of commissioning, LIS projection from I&CAD and availability as per historical actual PLFs

Particular	Impact of Energy Balance in Telangana State									
	5th Control Period					6th Control Period				
	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
Energy Availability	93191	100071	99840	99136	96449	96416	96256	93728	95907	96058
Energy Requirement	90587	94885	99371	104310	109354	114344	120062	126205	132790	139819
Surplus/(Deficit)	2604	5186	469	(5174)	(12905)	(17928)	(23806)	(32477)	(36884)	(43761)
% of Surplus to Availability	3%	5%	0%	-5%	-12%	-16%	-20%	-26%	-28%	-31%

D) Spinning Reserve

It is to be noted that for the power system as a whole of the State there has to be a spinning reserve of 500 MW which corresponds to a 3723 MU with 85% availability. In addition to the above surplus/deficit (combined impact of delay of commissioning, LIS projection from I&CAD and availability as per historical actual PLFs) the Discoms have to maintain such quantum in order to maintain the fluctuations in demand and also to maintain 24x7 reliable supply. However, the surplus/deficit obtained above is less than the requirement of energy corresponding to spinning reserve.

E) Month wise fluctuations of demand and supply

It is to be observed that the analysis of the energy balance of the State has been done considering the availability of power as well as demand for the year as a whole, however in actual month on month basis there will be surplus energy available in certain spells of the day as well as months and also energy deficit in certain spells of the day as well as months.

Considering the combined impact of delay of commissioning, LIS projection from I&CAD and availability as per historical actual PLFs in the 5th Control Period, TS Discoms shall explore entering into PPAs with upcoming projects of TS Genco for RGO obligation along with Singareni Phase II (2x800 MW).

In addition to the above stated submissions (A, B, C, D& E), there are numerous other factors which will affect the energy balance of the State.

Notwithstanding to the above, Discoms shall closely monitor the progress of the construction of new generating stations along with the materialization of additional loads (MU) and accordingly estimate the timelines of availability of power from such generating stations and shall strive to better utilize resultant surplus power in the times blocks/ days / months and reduce the burdens on the consumers of the state. In delivering the stated objective, Discoms shall consider the following possibilities either individually or combined:

- a) Discoms shall explore the possibility of entering Banking Agreements with other states who have different power requirement patterns based on the availability/requirement of power. Banking of power is always beneficial to Discoms as Power will be received during Peak season where market rates will be higher and returned during non-peak season.
- b) Discoms shall utilize the Surplus Power Portal i.e., PUSHp platform an initiative by MoP, GoI where it is possible for the Discoms to indicate their surplus power in times blocks/ days / months on portal from all of their tied-up sources. Those Discoms of other States who need power will be able to requisition the surplus power and the new buyer has to pay both Fixed Charges and Variable Charges as determined by the appropriate Regulatory Commission. This shall reduce the fixed cost burden on the Discoms and will also enable all the available generation capacity to be utilized. TS Discoms, have already utilized the services of PUSHp platform in order to meet its requirements in the month of May 2023.
- c) Apart from the above two possibilities, Discoms shall also strive to materialize revenue from any resultant surplus in smaller time periods by selling the surplus power in the power exchanges. In the year FY 2022-23, TS Discoms have sold 2952 MU and realized a revenue of Rs. 1694 Crore and for FY 2023-24 Q1, TS Discoms have sold 482 MU and realized a revenue of Rs. 179 Crore.
- d) TS Discoms shall explore the Battery energy storage systems for utilizing the surplus energy and feeding back to the system during the period of peak hours thereby reducing the dependency on the short-term power purchases to balance the demand and supply.

**SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED & NORTHERN
POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED**

**RESPONSES TO OBJECTIONS / SUGGESTIONS
Received during Public Hearing**

On

**Filing of Resource Plan and Business Plan for 5th and 6th Control Periods
(FY 2024-25 to FY 2028-29 &
FY 2029-30 to FY 2033-34)**

INDEX

S.No.	Name and Address of the Objector	Pg.No.
1	M. Venugopala Rao , Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032	3-12
2	Sreekumar Nhalur and Maria Chirayil, Prayas (Energy Group) , Unit III A and B, Devgiri, Joshi Museum Lane, Kothrud Industrial Area, Kothrud, Pune - 411 038, India, Phone: +91-20-2542 0720, 2542 0722, Fax: 2543 9134; https://energy.prayaspune.org , energy@prayaspune.org .	13-14

1. Response to M. Venugopala Rao

1	M. Venugopala Rao, Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
1.	The DISCOMs have simply stated that the suggestion of the objector regarding analysis of load forecast, etc., for the 4th control period is noted. The Hon'ble Commission should have directed the DISCOMs to submit analysis of the subject plans approved by TSERC for the 4th control period for the reasons explained in our written submissions dated 11.7.2023. We once again request the Hon'ble Commission to direct the DISCOMs to submit a detailed analysis of the implementation and consequences of the subject plans for the 4th control period and provide us the same to study and make further submissions.	In line with the directions of the Hon'ble Commission, the analysis of 4 th Control Period is attached as AnnexureI to this response.
2.	The generalised contention of the DISCOMs that they “have to plan their power generation sources and in discharge of the same itself the TS Discoms have signed all the power purchase agreements and subsequently approached Hon'ble Commission for approval of the same” cannot justify their hasty decisions, obviously, at the behest of the state government, to enter into long-term power purchase agreements to purchase excess and unwarranted power and get consents of the Commission to the same.	<p>The licensees re iterate that the projection of demand and supply of electricity is done as per certain assumptions and any variation in the projected demand and supply of electricity with that of actual scenario leads to gap between the demand and supply. It is to be noted that the projection of demand for electricity has to be supported with installation of generation capacity and this installation of new generating capacity requires time in the span of years (minimum 4 to 5 years for thermal generation capacity and 1.5 to 2 years for renewable energy sources). Considering the above stated time constraints and challenges of ensuring demand for electricity, the Discoms have to plan their power generation sources and in discharge of the same itself the TS Discoms have signed all the power purchase agreements and subsequently approached Hon'ble Commission for approval of the same. The PPAs entered by the TS Discoms are considering the demand projections for the 4th and 5th Control Period including the significant projections received from I&CAD. Detailed justification in this regard are attached as AnnexureII.</p> <p>It is submitted the decision(s) of power purchase are made only after detailed deliberations and are submitted before the Hon'ble Commission for approval and the Hon'ble Commission provides approvals for any procurement only after due considerations to the submissions made by the stakeholders.</p>

1	M. Venugopala Rao, Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
	<p>By no stretch of imagination that a surplus of 43.24% for 2024-25, of 41.97% for 2025-26, of 34.13% for 2026-27, of 26.29% for 2027-28 and of 15.22% for 2028-29 be considered justifiable and required to meet fluctuating and growing demand. Nor does such an availability of abnormal surplus reflect “ideal power mix.”</p> <p>The argument of the DISCOMs that availability of surplus power as projected for future years is not constant has no relevance, for, it cannot avoid imposition of avoidable burdens on consumers of power in the form of paying fixed charges for surplus power backed down and higher tariffs being paid for purchasing power through exchanges and in the market. If analysis of actual position of availability of power, surplus power, fixed charges paid for backing down, quantum of costs of power purchased through exchanges and in the market, etc., for the 4th control period is provided with all relevant data, hollowness of the claims of the DISCOMs would be exposed thoroughly. The response of the DISCOMs that they “shall provide detailed justifications in the relevant Petition(s) to be filed before the Hon’ble TSERC” is evasive, as in the subject petitions, too, such information needs to be provided and examined.</p>	<p>As regards to submission on projection of surplus power, it is submitted that the surplus capacity which is the difference between the availability and the actual demand is dependent on the assumptions of both the availability and demand, and any variation, whether minor or major will have an impact on the quantum of surplus power. For instance, in the year FY 2022-23 on account of shortage of coal in the market there has been a reduction in the availability of power when compared to the projections of availability of power in the tariff Order for FY 2022-23. This variation has led to the purchase of short-term power in the market at higher rates. These types of instances are regularly observed during the operation of power system in any year and licensees cannot project such instances before the start of any year in their tariff filings. In this regard, a detailed justification of the energy balance scenario observed in 4th Control Period and the calculation of energy balance for 5th and 6th Control Periods considering the projection of availabilities with historical average PLFs along with other scenarios impacting energy balance is provided in the Annexures I&II attached.</p> <p>It is further to be noted that dispatch of power is done following Merit Order dispatch principle for scheduling of power on daily basis from all the available generating stations and have resorted to purchase from short term sources in the cases when the availability of power is not matching with the demand and in certain cases is done when the variable charges per unit of generating stations is more than the prices of power in exchanges only to optimize the overall power purchase cost and pass on the benefits to the consumers. While following the Merit Order dispatch principle, the total available capacity from must run sources is dispatched and from the sources other than must run sources the power is scheduled from the sources with ascending order of variable charges. In view of the above, the submission of the stakeholder that surplus power backed down and higher tariffs being paid for purchasing power through exchanges and in the market does not even arises.</p> <p>As regards to providing of details relating to availability of power from committed sources etc., the licensees re-iterate that they shall provide detailed justifications in the relevant Petition(s) to be filed before the Hon’ble TSERC as the current filings</p>

1	M. Venugopala Rao, Senior Journalist & Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
	<p>The argument of the DISCOMs that “if we consider the projected demand from LIS Department, there is no question of surplus energy, the energy requirement for respective years will increase drastically, hence that could meet the availability” falls in the hypothetical realm of uncertainty. That the DISCOMs have been constrained to drastically reduce the demand for lift irrigation schemes projected by the department concerned for the purpose of formulating the subject plans confirms that considering the demand projected by LIS department is unrealistic and does not correspond to ground reality. The DISCOMs also could not provide any substantiation and justification for requirement of the projected availability of surplus power during the 5th control period to meet demand of lift irrigation schemes with any degree of certainty. The DISCOMs have not explained as to how much power is supposed to be required for lift irrigation schemes even as per the projections of the department concerned and even after that how much would be the surplus power projected to be available during the fifth control period. Such a haphazard approach cannot be considered as planning. Moreover, that the DISCOMs have been maintaining silence as to who should bear the avoidable burdens arising as a result of the projected availability of abnormal quantum of surplus power that cannot be consumed as per the demand projected by the LIS department and others shows irresponsibility in decision making, without any accountability.</p>	<p>are made on the Resource Plan only.</p> <p>Considering the lower actual sales recorded for Lift Irrigation Schemes (132 kV and above voltage level), the Discoms in the current Resource Plan filings have sought for the realistic projections from I&CAD, however there has been a delay in receipt of the projected sales from I&CAD department. In view of the delay in receipt of the information, the Discoms have projected the sales against the lift irrigation schemes considering a growth rate of 10% based on the historical actual sales (TSSPDCL considered the base sales as recorded in FY 2021-22 and TSNPDCL considered the base sales as recorded in FY 2020-21).</p> <p>In this regard, a detailed justification of sales projections received from I&CAD and the energy balance scenarios of 5th and 6th Control Periods is provided in the AnnexureII attached</p>
3.	<p>The DISCOMs claim on the one hand that “all efforts are being made to sell the surplus power through Exchanges in a most effective way”, and on the other, they claim that “it is difficult to project the quantum of sale of surplus power.” This dichotomy brings to the fore the fact that any efficient planning should not lead to availability of abnormal quantum of surplus power. It also implies that planning should not lead to availability of abnormal quantum of surplus power in the hope of selling it in the market, without any certainty.</p>	<p>It is to be noted the words “all efforts are being made to sell the surplus power through Exchanges in a most effective way” will be applicable during the operation of the power system on day-to-day basis. Regarding the narrative of difficulty of projection of quantum of surplus power, the same pertains to the time when projections are made during the filings before the Hon’ble Commission before the start of the financial year. In view of the same, the above two narratives need to be looked in separately.</p>

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S.No.	Summary of Objections / Suggestions	Response of the Licensee
4.	<p>While pointing out that their priority is procuring power from plant which is nearer to the load centres, the DISCOMs have maintained that “if the landing variable charge is lower in case a RE plant outside the state, it is prudent to purchase power from the said plant which will allow the consumers of Telangana with benefit of economical power.” Was that the basis for the DISCOMs when they entered into long-term PPAs with entities like SECI and CPSUs like NTPC, which act as middlemen, to purchase solar power of private power projects set up in other states?</p>	<p>The licensees re-iterate that it is the priority of the TS DISCOMS to procure power from a plant which is nearer to the load centers. However, in case the if the landing variable charge is lower in case a RE plant outside the state, it is prudent to purchase power from the said plant which will allow the consumers of Telangana with benefit of economical power. The following points can be considered in support of the above:</p> <ul style="list-style-type: none"> a) Even though the power is wheeled from other States, the landed cost does not include the impact of Inter State Transmission losses and Inter State Transmission charges as per the notifications issued by MoP, GoI for the RE plants installed till 30.062025. b) Further, one of the important aspects of landed cost of solar power i.e., the cost of land (contributing about 5%-20% of total cost), in the State of Telangana the cost of land is on the higher side compared to the cost of land in other States (Even in 2017, the cost of land in Telangana is Rs. 10-20 Lakh per acre when compared to the States like Madhya Pradesh and Rajasthan where the cost was in the range of Rs. 5-10 Lakh per acre; Source-https://shaktifoundation.in/wp-content/uploads/2018/01/Study-Report-Addressing-Land-Issues-for-Utility-Scale-Renewable-Energy-Deployment-in-India.pdf) considering that there are no barraen lands and more area being cultivated year on year.
5.	<p>The contention of the DISCOMs that “the additional RE sources PPA would serve part of peak demand in the day and add to energy security during the 6th CP when there is a deficit” needs to be substantiated. Moreover, to meet deficit during the 6th CP, entering into long-term PPAs with RE units during the 4th and 5th control periods is premature and unwarranted. In the name of meeting demand during the 6th control period, a situation of availability of abnormal quantum of surplus power should not be created during the preceding control periods.</p>	<p>It is submitted that the PPAs with RE sources will help Discoms to meet the power requirements of the State and also enable to bring down the average power purchase cost, while complying with the Renewable Power Purchase Obligation targets fixed by the Hon’ble Commission.</p> <p>Though at present, it is not mandatory for the State DISCOMs to comply with the MoP notified RPPO trajectory, it is likely that the State RPPOs may be directed to align with the MoP RPPO, in terms of various notifications issued. And particularly in view of the proposed amendment to the section 142 of the Electricity Act 2003, which proposes for imposing penalties (ranging from Rs. 0.25/kWh to Rs.</p>

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		<p>0.55/kWh) for non-compliance of RPPO targets, it is required that the TS Discoms shall be prepared to meet the larger RPPO targets in phased manner, that may be imposed in future by MOP, GoI on all the states, including the State of Telangana.</p> <table border="1" data-bbox="1378 428 2475 837"> <thead> <tr> <th>MNRE RPPO Targets</th> <th>2022-23</th> <th>2023-24</th> <th>2024-25</th> <th>2025-26</th> <th>2026-27</th> <th>2027-28</th> <th>2028-29</th> <th>2029-30</th> </tr> </thead> <tbody> <tr> <td>Wind</td> <td>0.81</td> <td>1.60</td> <td>2.46</td> <td>3.36</td> <td>4.29</td> <td>5.23</td> <td>6.16</td> <td>6.94</td> </tr> <tr> <td>Hydro including PSP</td> <td>0.35</td> <td>0.66</td> <td>1.08</td> <td>1.48</td> <td>1.80</td> <td>2.15</td> <td>2.51</td> <td>2.82</td> </tr> <tr> <td>Others</td> <td>23.44</td> <td>24.81</td> <td>26.37</td> <td>28.17</td> <td>29.86</td> <td>31.43</td> <td>32.69</td> <td>33.57</td> </tr> <tr> <td>Total RPPO target</td> <td>24.60</td> <td>27.07</td> <td>29.91</td> <td>33.01</td> <td>35.95</td> <td>38.81</td> <td>41.36</td> <td>43.33</td> </tr> </tbody> </table> <p>(source: https://powermin.gov.in/sites/default/files/webform/notices/Renewable_Purchase_Obligation_and_Energy_Storage_Obligation_Trajectory_till_2029_30.pdf)</p> <p>It is also submitted that even before the 5th CP starts, PPA's of 1287 MW of the generation capacity (TS share) will expire. Since the demand is continuously increasing and old PPA's will shortly expire, it is prudent to sign new PPA's with a diverse supply mix.</p> <p>Further, a detailed justification of the energy balance for 5th and 6th Control Periods considering the various scenarios impacting energy balance is provided in the AnnexureII attached.</p>	MNRE RPPO Targets	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	Wind	0.81	1.60	2.46	3.36	4.29	5.23	6.16	6.94	Hydro including PSP	0.35	0.66	1.08	1.48	1.80	2.15	2.51	2.82	Others	23.44	24.81	26.37	28.17	29.86	31.43	32.69	33.57	Total RPPO target	24.60	27.07	29.91	33.01	35.95	38.81	41.36	43.33
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6.	The DISCOMs have contended that “it is to be noted that projection of demand and supply of electricity is done as per certain assumptions and any variation in the projected demand and supply of electricity with that of actual	It is once again humbly, submitted that the surplus capacity which is the difference between the availability and the actual demand is dependent on the assumptions of both the availability and demand, and any variation, whether minor or major will																																													

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	<p>scenario leads to gap between the demand and supply.” While the contention of the DISCOMs that “certain assumptions” and “any variation in the projected demand and supply of electricity with that of actual scenario leads to gap between the demand and supply,” is unsubstantiated, projection of availability of abnormal quantum of surplus power during the 5th control period will certainly not be in tune with the likely gap between the demand and supply in view of the fact that the said availability of surplus power is projected based on availability of power from stations with whom the DISCOMs had PPAs with specified threshold levels of PLF/CUF. Even the variations in generation of power by those stations for any reasons cannot be in tune with the likely gap between the demand and supply in view of high degree of availability of abnormal quantum of surplus power. In other words, likely gap between demand and supply cannot absorb the projected surplus power. On the other hand, if the projected demand decreases, availability of surplus power would increase during the 5th control period, with resultant adverse consequences.</p>	<p>have an impact on the quantum of surplus power.</p> <p>For instance, in the year FY 2022-23 on account of shortage of coal in the market there has been a reduction in the availability of power when compared to the projections of availability of power in the tariff Order for FY 2022-23. This variation has led to the purchase of short-term power in the market at higher rates. These types of instances are regularly observed during the operation of power system in any year and licensees cannot project such instances before the start of any year in their tariff filings.</p> <p>In this regard, a detailed justification of the energy balance scenario observed in 4th Control Period and the calculation of energy balance for 5th and 6th Control Periods considering the projection of availabilities with historical average PLFs along with other scenarios impacting energy balance is provided in the Annexures I&II attached.</p>
7.	<p>The DISCOMs have pointed out that “the Telangana government has initiated the ambitious Kaleshwaram lift irrigation project along with the existing ones, to meet the needs of the agriculture consumers in the State. The growth trend in this category has many variations due to variations in the operation of Lift Irrigation pumps based on rainfall, water levels in reservoirs, etc.”</p> <p>To meet the said needs the DISCOMs are expected to procure required power and create required distribution network.</p> <p>If many variations take place in the growth trend in this category, i.e., if projected demand comes down substantially, who should bear the resultant burdens is the point on which the DISCOMs have been and continue to be evasive. If projected demand for this category comes down substantially,</p>	<p>\</p> <p>It is to be noted that the major planning for infrastructure of lift irrigation schemes is done at 132 kV level and does not affect the planning of distribution infrastructure (which is up to 33 kV voltage level).</p> <p>Considering the lower actual sales recorded for Lift Irrigation Schemes (132 kV and above voltage level), the Discoms in the current Resource Plan filings have sought for the realistic projections from I&CAD, however there has been a delay in receipt of the projected sales from I&CAD department. In view of the delay in receipt of the</p>

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	<p>revenue to the DISCOMs would come down proportionately, availability of surplus power would increase, proportionate capacity in transmission and distribution networks would remain idle - who should bear the burden of all these non-utilisations? Is it all the consumers or consumers under this category?</p> <p>The DISCOMs have been deciding contracted maximum load and load factor for HT industries and collecting charges applicable. The DISCOMs have been avoiding to respond to our requests for the kind of terms and conditions in the agreements, if any, they had with the department concerned for supply of power to LIS schemes.</p>	<p>information, the Discoms have projected the sales against the lift irrigation schemes considering a growth rate of 10% based on the historical actual sales (TSSPDCL considered the base sales as recorded in FY 2021-22 and TSNPDCL considered the base sales as recorded in FY 2020-21).</p> <p>In this regard, a detailed justification of sales projections received from I&CAD and the energy balance scenarios of 5th and 6th Control Periods is provided in the AnnexureII attached.</p> <p>In case the projected demand is less than the actual demand, the existing system is capable of handling the variation and in case the actual demand is lower than the projected demand there shall be lower utilization of transmission infrastructure created and it does not result in idling of distribution infrastructure. It is to be noted that the idling of infrastructure (either generation, transmission or distribution) is not during the entire year and corresponds to certain period/days/months of an year, whereas the planning of power system has to be made taking into consideration the peak demand which might not be the case of entire duration of demand and considering the same the narrative of burden of non utilization during certain period cannot be made.</p> <p>The supply of power to LIS schemes and the tariff being levied to lift irrigation schemes is as per the terms and conditions specified by the Hon'ble Commission for HT IV (B) tariff category in the RST Orders for respective years.</p>
8.	<p>The DISCOMs have reiterated that “the surplus power arises during few time blocks of the day and some unseasonal period during the year. It is also submitted that there are deficit of power in certain time blocks on the days of surplus power due to dynamic and fluctuating loads there is no unwarranted fixed charges paid by the TS Discoms.” Due to the said variations, provision for five percent of spinning reserve or reserve margin is generally considered sufficient. The abnormal quantum of surplus power projected to be available</p>	<p>It is humbly submitted that as per the 5th Amendment to IEGC, spinning reserve is “the Capacities which are provided by devices including generating station or units thereof synchronized to the grid and which can be activated on the direction of the System Operator and effect the change in active power (Source-https://cercind.gov.in/2017/regulation/130.pdf)”. From the quoted definition it can be inferred that spinning reserve is the capacity which can be used to balance the real-time fluctuations of supply and demand of the power system, whereas, the surplus or</p>

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	<p>during the 5th control period by the DISCOMs is unwarranted. Due to entering into long-term PPAs for purchasing unwarranted power indiscriminately and getting regulatory consents for the same, unmindful of the need for maintaining ideal power mix to be in tune with fluctuating demand to the extent technically and practically possible, a situation of backing down abnormal quantum of surplus power and paying fixed charges therefor has been arising as per terms and conditions in the PPAs concerned. Therefore, the contention of the DISCOMs that “no unwarranted fixed charges paid” by them for backing down surplus power does not hold water.</p> <p>It is mainly due to indiscriminate entering into long-term PPAs and getting regulatory consents to the same, that a situation of availability of abnormal quantum of surplus power, far exceeding the technically unavoidable surplus, has been arising and such unwarranted decisions and orders are mainly responsible for the unwarranted situation of backing down abnormal quantum of surplus power and paying fixed charges therefor, and as such, backing down avoidable and unwarranted surplus power and payment of fixed charges therefor and imposing the burden thereof on consumers of power is unwarranted and avoidable. It is the imprudent decisions taken by the GoTS and imposed on the DISCOMs and regulatory consents given to the same which are responsible for this unwarranted situation. That is the reason why experience during the 4th control period needs to be analysed, proper lessons be drawn, possible corrections be carried out and costly blunders should not be repeated during the next control periods.</p>	<p>deficit capacities in certain time blocks pertain to the submissions made by the Discoms to the respective load dispatch centres for T+1 day (day ahead basis).</p> <p>Further, a detailed justification of the energy balance scenario for 5th and 6th Control Periods considering the projection of availabilities with historical average PLFs along with other scenarios impacting energy balance is provided in the AnnexureII attached.</p>
9.	<p>Even while stating in its business plan that it had already purchased 18812 pre-paid meters and installed 15035 meters to offices of the government, NPDCL has avoided to reveal the price per unit paid and annual maintenance charges being paid. It is the consumers of power who have to bear the burden of these unwarranted pre-paid meters and as such they are entitled to know those burdens they have to bear. NPDCL has simply replied that the procurement of the pre-paid meters is being done by following the standard</p>	<p>Vide GO MS No.1, Dt:03.01.2016, Energy (Budget) Department, Govt. of Telangana decided that all Govt. Departments should have prepaid meters at their own cost w.e.f 1st April, 2016. In this regard it is to be noted that the prepaid meters were procured, installed and are being maintained with the cost being borne by the respective departments of GoTS. In view of the above GO, TS Discoms have floated tenders with specification Nos.CGM/P&MM/STN-113/15 and STN-114/15. Pre-bid meeting was conducted on 29.01.2016 and participation from 6 and 7 prospective</p>

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	<p>practice of competitive bidding with the process being done in the e-procurement platform. If the entire process of calling for tenders, their terms and conditions, finalising them and giving orders for purchase and maintenance of pre-paid meters is transparent and prudent, the DISCOMs should not avoid revealing of those details. How many prospective bidders participated in the pre-bid meeting, if any held by the DISCOMs, who are the bidders who actually participated in the bidding and what are the rates quoted by them for sale of pre-paid meters and charges for their annual maintenance? How much amount the DISCOMs are collecting from the consumers and how for installing pre-paid meters, and whether such installation is being carried out with consent of the consumers concerned need to be explained. All this information also needs to be examined by the Hon'ble Commission for prudence check and appropriate decisions. We request the Hon'ble Commission to call for records from the DISCOMs relating to these issues, examine them and subject them to prudence check. We also request the Hon'ble Commission to direct the DISCOMs to provide the said information to us to enable us to study them and make further submissions. In this connection, we would like to inform the Hon'ble Commission that, in response to our persistent requests during the public hearing held on the 19th instant, Hon'ble APERC has directed AP DISCOMs to provide cost analysis of pre-paid meters purchased by them, their annual maintenance charges and analysis of the subject plans for the 4th control period (on direction, the DISCOMs submitted it to APERC) to objectors within one week and permitted the objectors to make further submissions within two weeks thereafter.</p>	<p>bidders was seen for three phase and single-phase bids respectively. The price quotes from all the qualified bidders for Supply, Installation and FMS were matched in the bidding process. Purchase Order for single phase meters were placed on 3 successful bidders, however only two parties have supplied the meters and for 3 phase Purchase Orders were placed on 4 successful bidders, however only two parties have supplied the meters. The cost of the meter was included in the CC bills of the Government Services where prepaid meters were installed and they were allowed to pay the meter cost in three (3) installments as per the orders contained in the above G.O cited.</p> <p>The cost per meter, installation and annual maintenance charges per meter paid from whom the materials were supplied are as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Prepaid Meters supply cost</th> </tr> <tr> <th style="text-align: center;">Sl. 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S.No.	Summary of Objections / Suggestions	Response of the Licensee			
		2	M/s. Genus Power Infrastructures Limited, Jaipur	100.58 (Per month)	118.09 (Per month)
		Facility Management Service (FMS) charges paid			
		Sl. No.	Name of the supplier	Single phase Rs./LOA.No.	3-phase Rs./LOA No.
		1	M/s. HPL Electric & Power Ltd., New Delhi	Rs.20,62,230.00 82/25.07.2022	Rs.5,23,478.00 83/25.07.2023
				Rs.6,98,008.00 88/23.03.2023	Rs.1,61,329.00 89/22.03.2023
		2	M/s. Genus Power Infrastructures Limited, Jaipur	Rs.10,71,272.00 84/28.01.2023	Rs.3,37,759.00 87/28.01.2023
				Rs.15,26,809.00 85/28.01.2023	Rs.3,67,458.00 86/28.01.2023
10.	We request the Hon'ble Commission to permit us to make further submissions during the public hearing scheduled on the 1st September.	No Comments			

2. Response to Sreekumar Nhalur and Maria Chirayil

2	Sreekumar Nhalur and Maria Chirayil, Prayas (Energy Group), Unit III A and B, Devgiri, Joshi Museum Lane, Kothrud Industrial Area, Kothrud, Pune - 411 038, India, Phone: +91-20-2542 0720, 2542 0722, Fax: 2543 9134; https://energy.prayaspace.org , energy@prayaspace.org	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
	<p>Optimize time while presenting before Hon'ble Commission</p> <p>A lot of replies are qualitative, comparison of reliability and safety indices for network plan should be given.</p> <p>Lower participation of stakeholders in the current proceedings</p> <p>Demand growth is less but the supply is much higher. How Optimization of power purchase will be done is not given in the plan.</p> <p>Storage is not economical – surprised with the submission of Discoms on the aspect of cost</p> <p>The current tariff proceedings followed by the Hon'ble Commission is not an</p>	<p>Discoms have noted the objections and shall improve in future submissions</p> <p>Discoms have noted the objections. However, quantitative inputs viz. on reliability, safety are provided to the Hon'ble Commission as part of SoPs of the Discoms</p> <p>Discoms have taken the measures to publish the Resource Plan and Business Plan for 5th and 6th Control Period in leading Daily newspapers including notices for extension of Public Hearings as informed by the Hon'ble Commission along with placing them in their websites for access to the stakeholders.</p> <p>Discoms in the Annexure II attached have provided various factors which impact the energy balance of the Discoms. Notwithstanding the above, Discoms shall strive to narrow the difference between supply and demand in future. With regards to the surplus power, TS Discoms submit that they shall closely monitor the progress of the construction of new generating stations along with the materialization of additional loads (MU) and accordingly estimate the timelines of availability of power from such generating stations and shall strive to better utilize resultant surplus power in the times blocks/ days / months and reduce the burdens on the consumers of the state. In delivering the stated objective, Discoms shall consider the following possibilities either individually or combined: Discoms shall explore the possibility of entering Banking Agreements with other states who have different power requirement patterns based on the availability/requirement of power. Banking of power is always beneficial to Discoms as Power will be received during Peak season where market rates will be higher and returned during non-peak season. Discoms shall utilize the Surplus Power Portal i.e., PUSHP platform an initiative by MoP, GoI where it is possible for the Discoms to indicate their surplus power in times blocks/ days / months on portal from all of their tied-up sources. Those Discoms of other</p>

<p>MYT process at all. There is need for better regulations and guidelines for resource plan. Commission needs to review it.</p> <p>The granular information used in projections of Resource Plan and Business Plan filings needs to be made available to the stakeholders</p>	<p>States who need power will be able to requisition the surplus power and the new buyer has to pay both Fixed Charges and Variable Charges as determined by the appropriate Regulatory Commission. This shall reduce the fixed cost burden on the Discoms and will also enable all the available generation capacity to be utilized. TS Discoms, have already utilized the services of PUSHp platform in order to meet its requirements in the month of May 2023.</p> <p>Apart from the above two possibilities, Discoms shall also strive to materialize revenue from any resultant surplus in smaller time periods by selling the surplus power in the power exchanges.</p> <p>TS Discoms shall explore the Battery energy storage systems for utilizing the surplus energy and feeding back to the system during the period of peak hours thereby reducing the dependency on the short-term power purchases to balance the demand and supply.</p> <p>The ancillary services for Energy Storage Systems are the emerging trends and due to shortage of said services it is not economical at this juncture. As and when the said services are ample, the Discoms shall explore the possibility of storage of surplus energy when it is feasible.</p> <p>Discoms shall abide by the directions of the Hon'ble Commission in this regard</p> <p>Discoms have already provided information to the Hon'ble Commission and also placed the same in their websites.</p>
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