



**Southern Power Distribution Company of Telangana Limited**

#6-1-50, Corporate Office, Mint Compound, Hyderabad 500 063

Phone No.(040) 2343 1008 Fax Nos.(040) 2343 1395/1452 website [www.tssouthernpower.com](http://www.tssouthernpower.com)

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. 264 /23, Dt:22-07.2023.

Sir,

Sub: TSSPDCL -Responses to the objections received - In the matter of filing of Resource Plan (Sales Forecast, Load Forecast, Capital Investment Plan & Power Procurement plan) for 5th & 6th Control Periods from F.Y. 2024-25 to F.Y. 2033-34 -Submission- Reg.

Ref: Lr.No.TSERC/Secy/JD(TE)/F.No.Resource.plan/D.No.421/23,Dt23.06.23

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The Licensee is submitting the replies to the objections received from the stake holders in the matter of filing of Resource Plan (Sales Forecast, Load Forecast, Capital Investment Plan & Power Procurement plan) for 5th & 6th Control Periods from F.Y. 2024-25 to F.Y. 2033-34 with a request to place the same before the Hon'ble Commission for approval.

Encl: Replies to the objections



Yours faithfully

Chief General Manager (RAC)  
Name: Chilukamari Chakrapani  
Designation: CGM (RAC)  
Email Id: ractspdcl@gmail.com

**SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED**

**RESPONSES TO OBJECTIONS / SUGGESTIONS**

**On**

**Filing of Resource Plan for 5<sup>th</sup> and 6<sup>th</sup> Control Periods**

**(FY 2024-25 to FY 2028-29 &**

**FY 2029-30 to FY 2033-34)**

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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; <a href="https://energy.prayaspune.org">https://energy.prayaspune.org</a> , <a href="mailto:energy@prayaspune.org">energy@prayaspune.org</a>	16-23
3.	The Federation of Telangana Chambers of Commerce and Industry, Federation House, Federation Marg, 11-6-841, Red Hills, Hyderabad 500004, Telangana, India. Tel: 91-40-23395515 to 22 (8 lines), Fax: 91-40-23395525, e-Mail: <a href="mailto:info@ftcci.in">info@ftcci.in</a> ; Website: <a href="http://www.ftcci.in">www.ftcci.in</a>	24-31

**1. Response to M Venugopala Rao**

<b>1</b>	<b>M. Venugopala Rao, Senior Journalist &amp; Convener, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Serilingampally Mandal, Hyderabad - 500 032</b>	
<b>S.No.</b>	<b>Summary of Objections / Suggestions</b>	<b>Response of the Licensee</b>
<b>1.</b>	<b>We thank the Hon'ble Commission for extending time for submissions on the subject issues till 28.6.2023, i.e., by thirteen days, and again up to 15.7.2023. We welcome the right decision of the Hon'ble Commission for holding public hearings on the subject issues, rightly giving up the earlier questionable practice of not even making details of load forecast, procurement plan, etc., of the licensees public, leave aside holding public hearings on the same.</b>	TS Discoms shall abide by the directions given by the Hon'ble Commission in this regard.
<b>2.</b>	<b>The licensees should have made and submitted an analysis of the load forecast, etc., approved by the Commission for the 4th control period, actual position, reasons for variations, etc. It would have given a clear picture as to the correctness or otherwise of the load forecast, etc., approved by the Commission vis a vis ground reality, whether the utilities and the Commission followed the approved load forecast, etc., if any deviations took place, whether they were justified and the consequences thereof. Apart from ensuring transparency and accountability, such an exercise would have been useful for forecasts for the 5th control period, as multi-faceted issues have been involved in the entire process. The Hon'ble Commission is also expected to examine the projected load forecast, etc., for the 5th and 6th control periods, keeping in view the experiences during the 4th control period for taking appropriate decisions for the 5th and 6th control periods. It is all the more imperative in view of the fact that during the 4th control period, the DISCOMs have been facing a situation full of imbalances, with availability of substantial surplus power, purchasing unwarranted renewable energy, paying hefty fixed charges for backing down thermal power declared to be available to purchase must-run RE, purchasing power in the open market and through exchanges, imposing thousands of crores of Rupees on the consumers in the form of true-up charges or borne by the GoTS, in addition to annual tariff hikes, despite hefty subsidy being provided by the GoTS and cross subsidy being provided by subsidising categories of consumers, etc.</b>	The suggestion of the Objector regarding analysis of load forecast is noted. However, the current Resource Plan is prepared in accordance with the relevant guidelines by the Hon'ble Commission.
<b>3.</b>	<b>Guidelines for load forecasts, resource plans and power procurement issued in December 2006 by APERC and adopted by TSERC rightly underline the</b>	

imperative of ensuring “an adequate, safe, and economical supply of electricity” to the consumers. It is also emphasized that “the power procurement plan shall be an optimal least-cost portfolio of long-term and short-term (least financial cost,” “with the ultimate objective being to make available secure and reliable power supply at economically viable rates to all consumers,” “to optimise trade-off between price risk and demand variation,” “fuel diversity in power procurement,” “supplier diversity and viability,” “the plan for additional power procurement indicating portfolio mix of unit sizes, technology and fuel type, capacity contracted to meet peak/off-peak and seasonal load,” etc. In other words, the following points, among others, should be the objectives of load forecast, and resource and investment plans of the licensees:

- a) Ensuring adequate, reliable and safe supply of least-cost power to the consumers.
- b) Ensuring ideal mix of power in tune with fluctuating demand curve, daily and seasonal, to see that it leads to availability of the lowest possible quantum of surplus power and need for backing down the same to the extent practicable, technically and economically. In other words, while entering into long-term and medium term agreements for procurement of power, various diverse factors pointed out in the said guidelines need to be taken into account to ensure economically viable tariffs to the consumers and avoidance of need for purchasing power in the open market, power exchanges, etc., except in unavoidable exigencies, that, too, for a limited period and limited quantum of power.
- c) Resource plans and investment plans should ensure timely completion of required and permitted works with prudent expenditure based on realistic norms to be decided by the ERCs linked to market trends and real competitive biddings.
- d) ERCs are expected to do prudence check based on market trends, how bidding process is being adopted by the licensees, how bidders are being selected, whether prudent norms are being adopted to ensure lowest possible expenditure/prices - this process should be undertaken for

- a) Discoms have always tried and trying to maintain the adequate, reliable and affordable supply of power by ensuring supply by sufficient long term supply tie ups with Central Generating Supply, Telangana State Gencos (Thermal & Hydro), Non-Conventional Sources of Energy, Independent Power Producers. There are also expected generating capacity additions during the 5<sup>th</sup> & 6<sup>th</sup> control period in order to ensure sufficient supply for increasing no. of consumer & connected load.
- b) The Discoms have tried to ensure ideal mix of power by tying up long term capacity with Thermal and hydro to serve base load capacity. Further in order to reduce variability of renewable power sources, bundling them with thermal power sources have also been ensured. Purchase from renewable sources has also been ensured to slowly increase the renewable capacity in the state’s portfolio. Purchases from power exchanges are considered only for limited period and limited quantum.
- c) Discoms have always complied and will comply with Hon’ble TSERC’s capital expenditure norms and guidelines ensuring transparency.
- d) It is submitted that the bidding process for procurement is carried out in a transparent manner and in accordance with procurement policy and conventional best practices. Further, TS Discoms shall abide by the directions

	<p>according approval and reviewing actual trends post-approval periodically and necessary changes be brought about. In other words, once approved, load forecast, procurement plans and resource plans should not be treated as sacrosanct and unalterable. This process should be transparent, by holding public hearings and making details of all such transactions public periodically.</p>	<p>given by the Hon'ble Commission.</p>																								
4.	<p><b>Bureaucratic subservience to the diktats of the government of the day, whether they are prudent or questionable and detrimental to larger public interest, is inherent in the system, with honourable exceptions. As independent quasi judicial bodies with powers of a civil court, ERCs are expected to exhibit professional integrity, intellectual honesty and moral courage to exercise their authority timely and fully, within the limitations of law, to recognise and tell the truth, what is right or wrong, to protect larger consumer interest. That is the very reason and purpose for the creation and continued existence of ERCs. Executive diktats of the governments, both at the centre and in the states, encroaching upon the powers and responsibilities of the ERCs, without legal sanctity, need not be followed mechanically. ERCs are expected to act assertively, within the limitations of, and in accordance with, law, to protect larger consumer interest to the extent possible.</b></p>	<p>This objection pertains to the Hon'ble Commission, however, TS Discoms submit that they shall abide by any directions given by the Hon'ble Commission in delivering its objectives.</p>																								
5.	<p>The following projections at state level are made by the licensees for the 5th control period:</p> <table border="1"> <thead> <tr> <th></th> <th>2024-25</th> <th>2025-26</th> <th>2026-27</th> <th>2027-28</th> <th>2028-29</th> </tr> </thead> <tbody> <tr> <td><b>Energy availability (MU)</b></td> <td><b>121754</b></td> <td><b>127451</b></td> <td><b>127126</b></td> <td><b>126658</b></td> <td><b>122090</b></td> </tr> <tr> <td><b>Energy requirement (MU)</b></td> <td><b>84997</b></td> <td><b>89768</b></td> <td><b>94774</b></td> <td><b>100285</b></td> <td><b>105957</b></td> </tr> <tr> <td><b>Surplus/deficit</b></td> <td><b>36758</b></td> <td><b>37683</b></td> <td><b>32352</b></td> <td><b>26374</b></td> <td><b>16133</b></td> </tr> </tbody> </table> <p><b>The projections show utter inefficiency in planning to maintain prudent balance between requirement for power to meet fluctuating and growing demand and ideal power mix. In the face of projected requirement for energy for the five</b></p>		2024-25	2025-26	2026-27	2027-28	2028-29	<b>Energy availability (MU)</b>	<b>121754</b>	<b>127451</b>	<b>127126</b>	<b>126658</b>	<b>122090</b>	<b>Energy requirement (MU)</b>	<b>84997</b>	<b>89768</b>	<b>94774</b>	<b>100285</b>	<b>105957</b>	<b>Surplus/deficit</b>	<b>36758</b>	<b>37683</b>	<b>32352</b>	<b>26374</b>	<b>16133</b>	<p>It is to be noted that projection demand of LIS Loads for the 5th &amp; 6th control period from Irrigation department has been given much more higher growth than the nominal growth rate values, whereas due to slow progress of LIS project, the actual projections of LIS has been considered in Resource plan was based on Nominal growth rate of 10%. If we consider the 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.</p> <p>In this regard 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.</p>
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financial years of the 5th control period, energy availability is projected to be almost stagnant, with abnormal quantum of surplus availability during the entire control period, confirms anarchy in the policy approaches and decisions of the powers-that-be and the regulatory approaches in giving consents to PPAs entered into indiscriminately with power projects by the TS DISCOMs, obviously, at the behest of the Government of Telangana and the GoI. All our valid objections and prudent suggestions submitted during public hearings on various issues over the years cautioning about the impending problems of DISCOMs being, and will be, saddled with unwarranted surplus power with resultant disastrous consequences fell on the deaf ears of the powers-that-be. But the disastrous reality continues to be staring in the face. The projections of the DISCOMs also confirm that the irreparable damage caused will continue during the 5th control period as well. In this background, we request the Hon'ble Commission to examine the following points, among others:

- a) The DISCOMs have maintained that, with the requirement growing year-on-year and capacity not matching the requirement, they have been forced to depend on short-term purchases during the FY 2021-22 and FY 2022-23. It confirms their imprudent decisions in failing to maintain ideal power mix to the extent practicable and their failures of commission in entering into long-term PPAs to purchase unwarranted power at the behest of the GoTS over the years, despite being cautioned repeatedly during the public hearings of the Commission and otherwise about the detrimental consequences that continue.
- b) The submission of the DISCOMs that they have purchased substantial quantum of power through trading in the market at higher rates of tariff during the last two financial years fails to give details relating to availability of power from committed sources, non-availability of power from such sources at threshold levels of PLF/CUF as incorporated in the respective PPAs and the reasons therefor, whether purchase of unwarranted renewable energy, which cannot meet peak demand, led to backing down thermal power and at the same time purchasing power in the market at higher prices during the 4th control period.

a&b) In addition to the submissions above, it is to be noted that the Discoms have been purchasing the power 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 only in the cases when the availability of power is not matching with the demand. Further, it is to be noted that the availability of surplus power (as shown in the RP Petition) for future years is not constant. It is annual consolidated figure considering energy from all sources. Depending on the load dynamics, there appears surplus power in certain blocks in a day and there might be deficit in certain other time blocks of a day.

As regards to providing of details relating to availability of power from committed sources etc., TS Discoms shall provide detailed justifications in the relevant Petition(s) to be filed before the Hon'ble TSERC.

c) **Despite their claim that the requirement for power is expected to grow due to lift irrigation schemes and load additions in industrial and commercial categories and that, hence, they have entered into PPAs with TS GENCO, CGSs and NCES (solar) generators to provide 24x7 quality and reliable power supply to all the categories of consumers does not correspond to the persistent ground reality. That the DISCOMs claim that the energy surplus scenario for the 5th control period is due to “addition of new capacity” from YTPS of TS GENCO, Telangana STPP of NTPC and NCES stations through SECI and CPSU schemes fails utterly to explain as to why they entered into long-term PPAs to purchase unwarranted power on an abnormal scale in the past leading to availability of the abnormal quantum of surplus power projected to be available during the 5th control period, whose irresponsible decisions have been responsible for the disastrous consequences, the kind of avoidable burdens being and will be imposed on the consumers of power, etc. The past, present and the projected future situation confirms that the GoTS and the DISCOMs failed miserably and continue to fail to follow the elementary principles of entering into long-term PPAs in a prudent manner to ensure balance between requirement of power and its procurement, to ensure the kind of ideal power mix that can lead to optimum load factor to the extent practicable, addition of generation capacity in a phased manner in tune with fluctuating and growing demand. In other words, they failed and continue to fail in following the above-mentioned guidelines for load forecasts, resource plans and power procurement.**

d) **The fact that the DISCOMs have shown expected addition of generating capacity from all sources to the tune of 7295 MW from April 2023 to April 24 for the 5th and 6th control periods, projecting availability of abnormal quantum of surplus power during the 5th control period, confirms how hasty and faulty their capacity addition planning has been. It also confirms that there has been, and will be, abnormal mismatch between demand growth and availability of power from committed sources. This again emphasizes need for analysing the demand projections made for the 4th control period and addition of capacities**

c,d,e & g) As submitted above, it is to be noted that projection demand of LIS Loads for the 5th & 6th control period from Irrigation department has been given much more higher growth than the nominal growth rate values, whereas due to slow progress of LIS project, the actual projections of LIS has been considered in Resource plan was based on Nominal growth rate of 10%. If we consider the 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.

f) It is to be noted that TSDISCOMs are bound to purchase power from open market



proposed and implemented to draw proper lessons from failures of commission and omission on the part of the powers-that-be.

- e) **The claim of the DISCOMs that they have taken care of good energy mix by entering into PPAs with both thermal and RE generating stations for 5th control period verges on bluff-mastery in the face of the projected availability of abnormal quantum of surplus power during the same period and the lower load factors projected to be stagnating during the 5th control period.**
- f) **The DISCOMs have maintained that for the 5th control period also, on a real-time basis, if the market conditions are favourable, they shall engage in the sale of surplus power, as done in the recent years. The very condition that, “if the market conditions are favourable” for sale of surplus power falls in the realm of speculative uncertainty. In view of mandatory implementation of the principle of merit order dispatch, surplus energy is invariably with higher variable cost. Sale of surplus power presupposes deficit for power for other states. Barring availability of limited quantum of unavoidable surplus power that is inherent in the very nature of power sector, policies and practice of the powers-that-be that lead to availability of abnormal quantum of avoidable surplus power and the irresponsibility pertaining to the same cannot be justified on the basis of projections for selling the same conditionally. That the DISCOMs could not make any projections on quantum of surplus power they can sell during the 5th control period confirms speculative uncertainty based on which PPAs for procurement of power should not be entered into indiscriminately.**
- g) **The DISCOMs have submitted that they are planning to enter into a PPA with SCCL unit 3 (800 MW) and that the unit is expected to be commissioned during FY 2026-27. Though the DISCOMs have shown it under capacity to be added during the 6th control period, if the unit is commissioned as show, it will add to the already projected availability of abnormal quantum of surplus power during the last three financial years of the 5th control period. Such an eventuality would lead to**

during power deficit time blocks to cope up with the demand and opt for sale of power during surplus times. Any surplus power available in any 15 minutes time Block will be traded in Exchange only after making a comparison whether the prevailing Exchange price is higher than the variable cost of Thermal plants. All efforts are being made to sell the surplus power through Exchanges in a most effective way so as to earn some revenue to TSDISCOMs resulting in reduction of some financial burden on TSDISCOMs and the consumers in turn. Considering the above, it is difficult to project the quantum of sale of surplus power.

	<p>committing the blunder of getting unwarranted power in advance by a few years with resultant avoidable burdens on the consumers. They have stated that there is scope for installation of 1600 MW additional capacity from SCCL's units 4 and 5 and 2400 MW (3x800 MW) from Telangana STPP, besides their negotiations for getting the balance 15% share in TSTPP 1600 MW plant of NTPC. Such additions should be appropriately planned in a phased manner to meet requirement for power, leaving no scope for adding to the unwarranted surplus power already available and projected to be available during the 5th control period.</p>	
<p>6.</p>	<p>The DISCOMs have explained that the availability from CGS stations for 1019 MW, including 539 MW from Simhadri project, is reduced during the 6th control period due to expiry of PPAs. They have proposed that they would ensure the cost effectiveness and would explore option of extending PPAs, if required. The Ministry of Power, Govt, of India, has notified on 20th April 2023, a Scheme for Pooling of Tariff of those CGS plants whose PPAs have expired. This scheme is effective from 1st July 2023 onwards. It is mainly designed for CGS stations which have completed 25 years of service. Common pool will be created with total installed capacity with uniform fixed. cost and variable cost by deallocating power from the original beneficiaries. As per the scheme, the beneficiaries have to requisition power for the required quantum within 15 days from the announcement of common pool website. Priority will be given to the original beneficiaries thereafter first come first serve. Beneficiaries have to enter separate PPAs for a minimum period of 5 years for requisitioning power from common pool after obtaining proper consent for entering PPAs and for the quantum of power. The CGS plants after completion of 25 years will be added to the common pool subsequently. One year prior intimation will be given to the beneficiaries before completion of 5 years agreement period. A single Window System shall be created through which the desiring State(s)/Discoms including the existing beneficiaries shall submit their willingness for power allocation (quantum as well as period) within 15 days from the formation of Common Pool. The minimum requisition period for power from the Common Pool shall be 5 years. The States/DISCOM shall have to enter a contract (PPA) for a minimum period of 5 years from the intended date of Start of drawl of power from the Common Pool. In view of the said</p>	<p>The suggestion is noted. It is submitted that decision of signing a contract of power purchase from power plant post the expiry of the PPA will be done considering the requirement of TS Discoms, landing cost, availability of alternative sources, renewable purchase obligations, TSERC regulations etc.</p>

	<p>scheme of MoP, GoI, and its impact on the DISCOMs yet to be studied, a balanced stand on procurement of power to meet requirement of TS DISCOMs and its financial impact need to be analysed and a prudent decision be taken.</p>	
7.	<p>The DISCOMs have explained that they are procuring solar power in two modes of distributed mode (generating plants are placed close to sub-stations to reduce losses) and centralised mode (“generating plants are concentrated in a single region like SECI, CPSU, etc.”) and that they would explore these options in future based on cost-competitiveness. Procurement of power from generating stations set up within the state and nearer to load centres, with well-known benefits, should be the standard practice within given circumstances. Ignoring such opportunities available and preferring purchase of power, especially RE, from projects set up in other states by crony capitalists being pampered by the central and state governments and getting consents for such agreements from regulatory commissions has become the preferred practice of the powers-that-be. In the past, the TS DISCOMs rightly extolled the benefits of distributed mode of adding solar power. Based on the experience of procuring RE from projects set up within the state and outside during the same period, the DISCOMs should have made a comparative analysis of pros and cons of both the methods and explained their benefits or avoidable burdens to take prudent decisions. The very fact that the DISCOMs have projected stagnation in procurement of NCEs during the fifth control period confirms that they have been hasty in entering into long-term PPAs with RE units in such a questionable way that they will not require any addition to it during the entire 5th control period. How far the DISCOMs would be able to stick to this stand during the 5th control period is a big question mark in view of the kind of policies the Modi government has been trying to thrust on the states and their DISCOMs and decisions GoTS would take from time to time.</p>	<p>The priority of the TS DISCOMS is procuring 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.</p>
8.	<p>The DISCOMs should have projected peak demand and hourly and seasonal surplus/deficit depending on projected availability of power and requirement during the 5th control period. The DISCOMs have to explain as to how their projected power procurement plan, with their expected compliance under RPPO every year during the 5th control period, would contribute to meeting the state grid demand and peak demand, without creating avoidable technical and financial problems to the DISCOMs and TS GENCO and imposing avoidable burdens on consumers of power. Going by the questionable decisions</p>	<p>The DISCOMs have projected peak demand and hourly and seasonal surplus/deficit depending on projected availability of power and requirement during the 5th &amp; 6<sup>th</sup> control period and as part of the Additional Information requested by the Hon’ble Commission, TS Discoms have submitted the above data in spreadsheet formats to the Hon’ble Commission.</p> <p>As submitted above, it is to be noted that It is to be noted that projection demand of LIS Loads for the 5th &amp; 6th control period from Irrigation department has been given</p>

	<p><b>of the GoTS and practice of the DISCOMs at its behest and the way TSERC has been giving consents to long-term PPAs the DISCOMs had with private generators and with trading wings of the central public sector power companies which are acting as middlemen to sell power of private generators for purchasing unwarranted RE over the years and the adverse consequences being experienced, it is all the more necessary to make a comprehensive and holistic analysis of the experience during the 4th control period, including the legacy of the earlier period, and likely consequences that would follow during the 5th control period.</b></p>	<p>much more higher growth than the nominal growth rate values, whereas due to slow progress of LIS project, the actual projections of LIS has been considered in Resource plan was based on Nominal growth rate of 10%. If we consider the 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.</p> <p>As regards to RPPO, it is to be noted that that TS DISCOMS have the mandate provided by the TSERC to fulfill the RPPO specified in the Regulations. Further, the PPA's with RE sources are either signed under the Section 63 (Competitive Bidding) of Electricity Act, 2003 or determined by Hon'ble TSERC (Section 62 of Electricity Act, 2003) considering multiple factors. The additional RE sources PPA would serve part of peak demand in the day and add to energy security during the 6<sup>th</sup> CP when there is a deficit.</p>
<p>9.</p>	<p><b>That the DISCOMs have been constrained to make self-contradictory claims and arguments on their justification for entering into long-term PPAs for purchasing RE depending on the somersaulting of GoTS in the arena of questionable decision-making to serve vested interests of chosen private developers and of the powers-that-be is a matter of record. We have been articulating these issues elaborately and repeatedly over the years as and when they came up for consideration of the Commission and our submissions are also a matter of record. Experience confirms that neither the GoTS, nor the DISCOMs, nor TSERC take any responsibility and accountability for such questionable decisions and orders and the resultant adverse consequences. They assume airs of infallibility even in the face of adverse consequences detrimental to larger consumer interest arisen as a result of such questionable decisions and orders. Moreover, the unfortunate tendency of not responding analytically to valid submissions made by objectors in the orders of the Commission has been discernible in some of the issues. The licensees have been allowed to avoid giving relevant information, facts and explanations in response to the valid and relevant questions being raised by objectors. It is also a matter of record and a number of examples can be given. For example, in our submissions dated 9.7.2021, we submitted that "in their presentation during the public hearing on 30.6.2021 in OP Nos.15 to 19 of 2021 relating to the PPAs they signed with TS Genco, TS Discoms projected availability of total installed capacity of 25,760 MW by 2022-23. This also does not include the balance of 2400 MW from TSTPP. Out</b></p>	<p>The Capacity addition is done with the intention of providing 24X7 supply in the future to the consumers of the State. In this regard, as submitted above, 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 scenario leads to gap between the demand and supply.</p> <p>The addition of the new capacity like from SECI and the CPSU schemes will reduce the power purchase cost for the consumers and will help the RPPO compliance to the TSERC and the probable future compliance of MOP suggested Renewable energy compliance.</p> <p>Further the PPA's entered are approved by the Hon'ble Commission after due proceedings. It is further submitted that the TS DISCOMS have projected the scenario of the Energy availability surplus only in 5<sup>th</sup> CP and the first year of the 6<sup>th</sup> CP. It is further submitted that had the additional PPA's not signed, there would have a Energy Availability deficit in the 5<sup>th</sup> CP as well.</p>

of 25,760 MW, solar power is 5565 MW, wind power 128 MW and other RE 196 MW, i.e., a total RE of 5889 MW. Against a contracted capacity of 21878.73 MW, as approved by the Commission in the MYT order for TS Transco, do the Discoms require 25,760 MW, i.e., 3882 MW additionally? What is the basis and justification for requirement of the additional capacity? The said presentation of the Discoms avoided to explain the same. In the above-mentioned presentation, TS Discoms informed that there has been no load relief from 20.11.2014 and that as on 1.6.2021, against a maximum demand of 13,688 MW, the contracted capacity is 16,603 MW. With this capacity, when the Discoms are in a position to meet maximum demand during 2021-22, the transmission contracted capacity approved by the Commission for the same year to the tune of 21,370.12 MW is, obviously, very high. Then, what is the basis for additional requirement of an additional capacity of 9,157 MW (25,760 – 16,603 = 9,157) by 2022-23, i.e., an increase of 55.15% within a span of less than two years? In which way the subject 800 MW of solar power, which cannot meet peak demand, its generation and supply being between 8 AM and 6 PM, that, too, with occasional intermittence, is required to meet maximum demand?" **The DISCOMs did not respond to the same. The Hon'ble Commission simply considered the proposals of the DISCOMs and issued order for purchase of the said solar power from NTPC and SECI, without any analysis and justification for the same. And this kind of spree of entering into long-term PPAs for purchase of solar power continued by the DISCOMs and giving consent to the same by the Hon'ble Commission also continued subsequently. Now, in the subject submissions, the DISCOMs have admitted that the reason for their energy surplus scenario is addition of new capacity from TS GENCO, CGS and NCES (SECI and CPSU schemes) stations, without explaining as to why they have been entering into long-term PPAs for purchasing such unwarranted power and seeking consents of the Commission to the same.**

10. **The way load factor is projected by the licensees to be stagnating or decreasing during the 5th control period also confirms their failure to ensure patterns of supply of power to various categories of consumers to increase load factor.**

The Class Load factors provided in Section 6.1.6 of TSSPDCL and Section 5.2.5 in TSNDPCL are separate for each category and standalone values which are arrived based on circle wise, substation wise and division wise data for all over the state.

After collecting the demand data from all circles and subdivisions, load curves are arrived based on weighted average of each circle and substation and peak demand for each of the consumer categories.

		Since the Class Load Factors provided are standalone for each category, there is no failure by the licensees to supply power to any category of consumers to increase load factor.
11.	<b>The policy of time of the day tariffs, with higher tariffs during peak hours and lower tariffs during off peak hours, for HT industries is claimed to be intended for consuming more power during off peak hours and reducing consumption during peak hours, thereby enhancing the general load factor. For other categories of consumers, such a change of pattern in power consumption is not possible, because of the nature and time of requirement of power for their activities. In any case, other categories of consumers have been using power during peak and off peak hours, depending on their requirement. Any attempt to impose TOD tariffs on non-industrial consumers, as proposed by the MoP, GoI, is whimsical and irrational, especially in terms of load forecast and procurement plans for various reasons. This questionable approach goes against the policy of free supply of power to agriculture throughout the day, especially during peak hours.</b>	The objection made is against the policies of MoP, GoI. In this regard, TS Discoms shall abide by the directions of the Hon'ble Commission.
12.	<b>The projections made by the DISCOMs on the basis of the policy of supply of power to agriculture 24x7 and supply of power for lift irrigation schemes have elements of uncertainty for various reasons. The DISCOMs have to give actual hours of consumption of power by agricultural consumers and for lift irrigation schemes based on experience so far and substantiate need for projected requirement. Due to various factors like rainfall, availability of ground water, cropping pattern, availability of water in canals, durations of pumping water, etc., requirement of power for agriculture and lift irrigation changes. The experience in Telangana, as submitted by the TS DISCOMs themselves, and considered by TSERC in the RSTOs of the last two financial years is that there is declining trend in power consumption for agriculture and vast difference between estimated requirement and actual consumption of power for lift irrigation schemes. Requirement of power for agriculture being seasonal, estimates for the same need to be realistic based on actual experience over the years. For meeting seasonal requirement and daily requirement for limited hours, need for ensuring an ideal power mix to the extent practicable is obvious.</b>	<p>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>TSDISCOMs have extended power supply to agriculture consumers on par with other category consumers except during evening peak hours with the consent of consumers in certain areas.</p> <p>It is submitted that the DISCOMs have projected the HT IV category sales considering the licensee's experience of the historical consumption along with other allied factors. Also the DISCOMs have projected the sales for agriculture consumption as per the Actuals during 4<sup>th</sup> Control Period.</p> <p>To meet the seasonal requirement and daily requirement for limited hours, the TS DISCOMs procured short term power from the markets in unavoidable exigencies for a limited period.</p>
13.	<b>The financial impact of transmission and PGCIL losses and inter-state transmission charges, outwardly claimed to be waived as a matter of policy,</b>	The Resource Plan Petition submitted does not involve the projection of transmission cost. Further, the subject of PGCIL charges is a matter of Retail Supply Tariff Petition

	<p>without the Modi government reimbursing the same to PGCIL, but imposed on consumers in a manipulative way through the orders issued by CERC, for inter-state supply of power would turn out to be substantial running into thousands of Crores of Rupees during the period of the PPAs concerned, apart from several other adverse consequences detrimental to the interest of the state and consumers of power as explained in our earlier submissions on the ARR and tariff proposals of the DISCOMs for the year 2023-24. In the subject submissions, the DISCOMs have not explained the impact, present and future, of PGCIL charges as determined questionably by CERC in tune with the whimsical policies of the Modi government at the centre.</p>	<p>and the computation of such charges are not in purview of the TS DISCOMs.</p>
14.	<p>Surplus power backed down and the fixed charges paid therefor during the 4th control period and likely position during the 5th control period as per the projections made by the DISCOMs needs to be revealed and examined. In other words, the Hon'ble Commission is expected to ensure, to the extent possible and practicable in given circumstances, that the objectives of the subject plans, as pointed out in point number 3 above, are achieved. When changed circumstances demand review and modification of the subject plans as approved by the Commission, it should be done through the process of public hearings, ensuring transparency, substantiation of proposals made for such a review and modification and their justification. When a PPA or PPAs come before the Hon'ble Commission for its consideration, it provides an apt opportunity to make such a review, as procurement of power under the PPAs concerned needs to be justified by the DISCOMs.</p>	<p>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. TS Discoms shall abide by the directions given by the Hon'ble Commission during the review of PPAs.</p>
15.	<p>Availability of power from committed sources should be worked out on normative basis as per the terms and conditions in the PPAs concerned.</p>	<p>The availability of power from the committed sources is either projected based on the terms and conditions in the PPAs concerned or as per the Regulations notified by the Hon'ble Commission depending on the nature of procurement</p>
16.	<p>The DISCOMs have submitted that by considering the actual agriculture sales, the loss at LT voltage level is higher than the loss approved by the Hon'ble Commission. The incremental losses have resulted in additional procurement of energy for FY 2021-22 for which they have not gained any additional revenue, the DISCOMs have argued. They have requested the Hon'ble Commission to consider the actual losses of FY 2021-22 to arrive at the loss trajectory for the next two control periods. When supply of power to agriculture comes down compared to the quantum determined by the Commission in the retail supply</p>	<p>It is to be noted that the TS Discoms are striving hard to reduce the distribution losses and the recent years data shows that the losses have come down (TSSPDCL: 12.92% in FY 2014-15 to 9.14% in FY 2021-22 &amp; TSNPDCL: 14.69% in FY 2014-15 to 10.8% in FY 2021-22). In this regard it is to be noted loss reduction is associated with capital expenditure and after achieving certain level of distribution losses further reduction of losses requires huge capital expenditure. It is to submit that, in 3<sup>rd</sup> year CAGR &amp; 4<sup>th</sup> year CAGR, the actual sales of agriculture LT-V is positive and more than 3% growth rate, so we have projected 5% nominal</p>

	<p>tariff order, losses also should come down and availability of surplus power should increase. In such a situation, need for purchase of additional power to meet demand of agriculture does not arise. Moreover, experience in a particular FY should not be the basis for arriving at the lost trajectory for the next two control periods. The claim of the DISCOMs that they are striving to reduce the losses by implementation of loss reduction measures during the 5th and 6th control periods goes against their request for determination of loss trajectory for the control periods based on the experience of FY 2021-22. Therefore, we request the Hon'ble Commission to take a realistic view of the expenditure proposed to be incurred by the DISCOMs for loss reduction and the declining trend of consumption of power for agriculture and fix targets for loss reduction during the 5th and 6th control periods in a balanced way.</p>	<p>growth for 5<sup>th</sup> &amp; 6<sup>th</sup> Control period.</p>
<p>17.</p>	<p>The regulatory process of the Commission should not facilitate concealing of all the relevant information from public gaze and consumers of power at large are entitled to know the reality, as they are, and will be, bearing all the burdens relating to the expenditures being and proposed to be incurred by the DISCOMs and approved by the Commission. The prudence check by the Hon'ble Commission should cover how the process of tendering, their terms and conditions, for selection of bidders for purchases being made by the DISCOMs and prices and charges being finalised by them for purchase of materials and maintenance charges with required comparative study based on results and experience in other states and market trends relating to the issues concerned and the details be made public. Experience confirms that the successive Commissions have been avoiding making such information public. We have already submitted our objections to DBT in our submissions to the Hon'ble Commission during the public hearings on ARR and tariff proposals of the DISCOMs.</p>	<p>TS Discoms shall abide by the directions given by the Hon'ble Commission.</p>
<p>18.</p>	<p>I request the Hon'ble Commission to permit me to make further submissions during public hearings on the subject issues, and after receiving responses of the licensees to our submissions.</p>	<p>No comment</p>



## 2. Response to Sreekumar Nhalur and Maria Chirayil

2	<b>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; <a href="https://energy.prayaspune.org">https://energy.prayaspune.org</a> , <a href="mailto:energy@prayaspune.org">energy@prayaspune.org</a></b>	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
	<p><b>1.1. Presentation of key demand forecast data can be better</b></p> <p>The petitions present historical and forecast demand data in pdf tables, in some cases in scan format (example: Annexures). SPDCL petition does not give historical data, while NPDCL has it from FY17. It is mentioned that the forecast has been prepared based on circle-wise analysis (Section 2.3), but data is not made available.</p> <p>It is important that crucial historical and future data related to category-wise number of consumers, connected load and energy sales are provided in spreadsheet format. This could be done immediately. In future, TSERC could prepare suitable formats, which should be uniformly followed by both the DISCOMs. Similar presentation is important for data related to generation, distribution network and transmission network.</p> <p><b>1.2. Essential to cover the many data gaps</b></p> <p>Petition provides only annual energy, load factor, coincident peak demand and non-coincident peak demand. Using only energy and peak demand data for resource planning may be suitable decades ago, characterised by high base load capacity, and acute power shortage. Today, when the proportion of renewable capacity is on the rise and power shortages do not exist, it is essential to employ better resource planning methods.</p> <p>A few suggestions in this regard: It is necessary to provide daily load curves for at least typical days in each season for all the years being analysed. It is also necessary to provide load duration curves for all the years. These could be prepared for different scenarios – based on demand growth, penetration of renewable and growth of market. Such an analysis would help to identify the required base load capacity and peak load/energy requirements, which could</p>	<p>1.1</p> <p>TS Discoms along with the Resource Plan Petitions have submitted Annexures which details the historical and future data related to category wise numbers of consumers, connected load and energy sales.</p> <p>As part of the Additional Information requested by the Hon'ble Commission, TS Discoms have submitted the above data in spreadsheet formats to the Hon'ble Commission.</p> <p>1.2</p> <p>The suggestions listed by the Stakeholder are noted.</p> <p>As regards to the projection of Peak Demand, Historic data (hourly demands of each Discoms over a period of 5 years) is taken into account to establish the pattern of hourly demand and the pattern is then used to project the future hourly demand using time series analysis.</p>

be met through market purchase or storage options. It is also important to plan for energy efficiency and demand side management. The impact of such measures on energy and peak demand should be considered. It is not possible to manage intermittency and variability of renewable power without storage options. Battery based storage or pumped storage options are surprisingly not elaborated in the petitions.

**1.3. Rigorous analysis of historical data and better forecasting methods needed**

A mix of trend and end use methods has been used to prepare the forecast. But the basis for underlying assumptions are not sufficiently explained. Considerations like end use efficiency, potential for shifting demand and impact of a roll out of Time of the Day (ToD) tariff are not covered. A few points regarding four major consumer categories are given in the next paragraphs.

**Table 1: Proportion of demand of major consumer categories**

Category proportion /Year	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29	FY34
LT Domestic	21	20	21	22	22	22	21	21	21	21	21	20
LT Agriculture	36	36	31	34	31	28	29	29	29	28	28	26
HT Industry	21	22	21	20	23	25	24	24	24	24	24	25
HT Lift Irrigation	4	4	8	6	6	4	6	6	7	7	7	10
Total LT	67	65	61	65	62	59	59	59	59	58	58	55

As regards to suggestion on consideration of Battery based storage, it is submitted that the battery-based storage is still nascent and are not economical as yet as a source in Telangana. It is submitted that TS DISCOM will ensure the procurement from power plant with economical storage options.

Total HT	33	35	39	35	38	41	41	41	41	42	42	45
Total demand MU	50,562	57,538	58,522	57,049	61,160	65,002	73,972	78,249	82,746	87,708	92,916	125,184

Source: Compiled by Prayas (Energy Group), from Resource plan petitions and FY24 Tariff filings of DISCOMs

Table 1 gives the proportion of demand by four consumer categories from FY19 to FY24 (FY23 and FY24 data are estimates) and forecast from FY25-FY29 and for FY34. From Table 1, it can be seen that these four consumer categories, namely LT Domestic, LT agriculture, HT Industry and HT Lift Irrigation are the major categories driving demand growth. They together account for about 80% of the total demand. The petitions provide a forecast and note that the energy and demand forecast are close to the projections in the 20th EPS of CEA. Notwithstanding the issues with EPS projections, it can be seen that there are differences in category-wise forecasts of EPS and DISCOMs for the same period (FY25-29), for the Telangana state. For domestic category, YoY growth rate as per EPS is about 6.5%, whereas DISCOM project 5.4%. For HT industry, EPS projects 9.5% YoY growth rate, whereas it is 6.2% as per DISCOMs. EPS combines LT and HT irrigation and projects a YoY growth rate of 4.5%, whereas DISCOMs projects 5% YoY growth rate for LT irrigation and 10% for HT. 20th EPS was released in November 2022, and it is not clear how such major changes in growth trends have occurred. Detailed analysis of the historic trends of these categories is essential to prepare a robust forecast.<sup>1</sup>

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<sup>1</sup> LT and HT commercial categories are not energy intensive, and as per the data provided, the proportion of their demand remains around 11% during the whole period from FY19 to FY34.

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The sales growth projections of different category are based on past trends in each circle. The DISCOMs considered different year CAGR's considering the past trends. Further the DISCOMs considered actual historical sales from FY 17 to H1 of FY 23.

The EPS report, however, considered Input data from FY 11 to FY 21 from the DISCOMs. Whereas, TS Discoms in this Resource Plan Petition have considered the data from FY 2016-17 till H1 of FY 2022-23. In this regard it is to be noted that the electricity consumption during FY 22 & FY 23 has been asymmetrical compared to the electricity consumption recorded in FY 20 and FY 21 on account of COVID 19 Pandemic. The above elements might have resulted in the difference between the growth trends between the Petitions filed and EPS reports.

Considering the past trend in the domestic sales in each Circle, the Discoms have adopted 5 yr CAGR & 1 yr CAGR for most of the circles and has arrived at appropriate

**For domestic, the DISCOMs have used trend analysis, suggesting that historic Year on Year (YoY) growth for some of the years (it varies from 4 to 8%) or the 5-year CAGR (which is about 5.5%) would be used. The YoY growth rates used by both DISCOMs appear higher than the growth rates in the past few years. For the TS state, also a YoY growth rate and CAGR of 5.4% is used for the forecasts.**

**A similar approach is followed for LT and HT commercial categories, which together account for 10-11% of the demand. Their forecast has also been done based on trend method, but the YoY growth rate assumed for the state is 6.5%, much lower than the 14-18% YoY growth rates based on figures for the post Covid years.**

**It is surprising that the potential for energy efficiency, which is quite high in domestic and commercial, involving appliances such as air conditioner, refrigerator and fan have not been considered at all. With the reducing growth rate in ~~in~~ population (and households), increasing saturation of appliance penetration and use of efficient appliances, the electricity consumption growth rate is expected to reduce in the years to come. Migration to roof top solar is also likely to be high, in high consumption slabs. Section 5.2.7.1 of NP petition 6.1.7.1 of SP petition mention that roof top solar has been considered during forecast, but no details are provided.<sup>2</sup>**

**2 From 6.1.7.1 of SP petition: “The licensee has factored in the above as part of the sales forecast. However detailed modelling on the revenue impact, category-wise would be carried out by the licensee at the time of ARR and Tariff filing.”**

**In case of LT agriculture, the forecast is not easy to prepare, firstly because there are many challenges in current consumption estimation method based on a few sample DTs. Better measurement would hopefully be available when**

growth rates at Discom level. In the domestic category 1 year or YoY growth rates have been used for certain circles considering either the higher growth rates in the recent periods or the circles which are experiencing rapid growth in domestic consumption on account of establishment of new colonies etc.

As regards to the approach followed for LT and HT Commercial categories, it is to be noted that projections made by TS Discoms are based the growth rates observed in individual circles. It is to be noted that projections based on CAGR has been conventionally used over YOY projections as projections based on CAGR can even out fluctuations due to extreme events. Further the high YOY growth rate during the post covid years is considering the expansion of demand after extreme contraction due to COVID 19.

As regards to the projection of sales for the future period, it is to be noted that Discoms while projecting also have to consider that the economic growth over the years will invariably increase the purchasing capacity of the consumers which will result in increasing demand from the consumers.

the TSERC directive of 100% DT metering is implemented, by the specified deadline of March 2024.<sup>3</sup> But even with better measurements, future agriculture consumption depends on many factors such as, released connections, hours of supply, cropping pattern, spread of lift irrigation, rainfall, temperature and efficiency measures (in electricity and water use).

3 Directive 18 in Appendix B of the FY23 Retail Tariff order of TSERC mentions: “The Commission directs the DISCOMs to achieve 100% Agricultural DTR metering within a period of 2 years and to furnish the quarterly progress on the status of implementation in this regard.”

The logic behind the forecast provided in the petition needs to be explained. DISCOM petitions (Section 2.3.5) indicate that the YoY growth is low or negative, and summarily states that: “... the licensee expects the growth rate of 5% in agricultural category keeping in view the irrigation lands still to be cultivated which needs pumping water.” The YoY growth of agriculture consumption reported by DISCOMs has been negative for the past three years. This was also highlighted during the FY24 Retail Tariff process. Section 4.16 of the FY24 Retail Tariff order of TSERC covers this aspect. It mentions that DISCOMs have admitted that “...consumption under LT-V category would not further increase given the fall in use of borewells and a rise in canal-based cultivation ...”. TSERC approved agriculture consumption higher than what was proposed by the DISCOMs, using connected load data and 10/12 hours (10 for NPDCL, 12 for SPDCL) of operation for 180 days in a year.<sup>4</sup> Thus, it is not clear how the DISCOMs have assumed a uniform 5% growth in agriculture consumption for the next two control periods.

4 The basis for 180 days and 10/12 hours/day assumptions of TSERC is also not clear. Moreover, as per a Times of India news report of 8/6/2023, the TSERC chairperson has observed that there are 10 lakh illegal connections, in addition to the existing 27.5 lakh connections. If this is true, the consumption estimates would have to be drastically changed. Only DT metering or

As acknowledged by the stakeholder, it is to be noted that the projection of sales for the agricultural category is difficult and as regards to the submissions of TS Discoms in RST filings for FY 2023-24, along with the submissions made in respect of agricultural sales, the DISCOMs have also requested the Hon’ble Commission to consider the actual sale during the time of true up in case the actual sales emerge to be higher than the projected sales.

The Discoms in the Resource Plan petition have have projected the Agricultural Sales considering nominal growth rates in view of the regular sales and the irrigation lands still to be cultivated which needs pumping water.

agriculture pumpset census can clear the air on this.

Table 2 gives the number of consumers, consumption, average capacity, hours of pumping and units/hp/year for the past few years and the next control period. From historical data, it is clear that the average capacity has stabilised at 5 hp and hours of pumping at 2000 hours. DISCOM petitions assume that both the number of consumers and average connected load would increase by around 2.5% YoY, thus resulting in 5% YoY consumption growth, while maintaining hours of operation to around 2000. The basis for these assumptions need to be explained.

**Table 2: Analysis of Agriculture consumption**

Detail/Year	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 29
No. of consumers (lakhs)	22.4	23.1	23.9	25.1	26.4	26.2	27.4	27.5	28.1	28.8	29.5
Consumption (BU)	20.8	17.9	19.6	19.1	18.3	20.5	21.6	22.7	23.8	25	26.2
Average capacity (hp)	5	5	5	5	5	5.2	5.3	5.4	5.5	5.7	5.8
Hours of pumping/year	2,481	2,081	2,195	2,036	1,856	2,001	2,004	2,049	2,052	2,055	2,057
Units/hp/year	1,851	1,552	1,638	1,519	1,384	1,492	1,495	1,529	1,531	1,533	1,535

Source: Compiled by Prayas (Energy Group), from Resource plan petitions and FY24 Tariff filings of DISCOMs

**In case of Lift Irrigation and HT Industry**, since the consumers are few and granular data is available through electronic meters, one would expect consumer-wide detailed analysis of historical data and detailed explanation for load forecast. This is not provided in the petitions, as detailed below.

**For HT industry**, DISCOMs have taken annual growth rate (around 6% YOY for the state) and some specific considerations. But the details of arriving at the YoY growth rates by DISCOMs is not provided. Section 2.4.10

As regards to the observation on projection of sales of HT Industry category of TSNPDCL, the circles with low growth (growth rate – 2%) in sales are much less in number than circles with higher growth rate (growth rate - 5%). This asymmetry of number of circles with different growth rates is affecting the overall growth rate of TSNPDCL.

For 11kV voltage level, TSSPDCL has projected the sales by considering 5 year CAGR (for few circles) and 4 Year CAGR (for remaining circles) of the past trends of those

of NPDCL petition mentions that growth rates have been low and 2 or 5% growth rates are assumed for circles. But Table 20, gives YoY growth rates of 6 – 8% for FY25-29. This is not clear, even after considering the reduction of sales due to SCCL captive and increase due to Kakatiya textile park, mentioned in the next paragraph. Section 2.3.10 of the SPDCL petition does not explain the method of arriving at the 6.3- 6.5% YoY growth rates given in the table.

Specific considerations include HMR Hyderabad for SPDCL and Warangal Kakatiya mega textile park for NPDCL increasing demand, SCCL captive power in NPDCL reducing demand. It will be good if TSERC independently checked the status of these projects or any other such project which have major impact on HT industry demand.

The basis for forecast of open access and captive given in the petitions (Section 5.2.2 and 5.2.4 for NPDCL and Sections 6.1.2 and 6.1.4 for SPDCL) is not given. Considering the national trend, open access sale of 2% of HT sale and captive capacity of 10% peak demand looks low. It may be noted that, as per 20th EPS projections for Telangana, captive power is expected have a YoY growth rate of 20% and Roof Top Solar a growth rate of 30%.

HT Lift irrigation, especially at 132 kV was expected to be a major contributor to energy and peak demand in the MYT petitions for the 4th Control Period (FY19-24), filed by TSTRANSCO in 2020. As per these petitions, in FY24, Lift Irrigation was expected to account for 25% of the total energy demand and 37% of the peak power demand. The total connected load of Lift irrigation projects was expected to be close to 10,000 MW. But as per the current petitions, the progress of lift irrigation projects seems to be slower than expected.

Table 3: 132 kV Lift Irrigation Projects

circles.

For 33kV & 132 kV voltage levels, SPDCL has projected the sales by considering different growth rates for different circles

For circles with a clear past trend the appropriate CAGR (Compounded Annual Growth Rate (%)) has been computed and this CAGR has been used for projection.

For remaining circles, the growth rate has been projected considering moderated growth rates ranging from 2% to 10%. The varying moderated growth rate (s) for circle(s) have been considered based on the level of variations observed in the historical CAGRs i.e., moderated growth rate of 2% or 5% has been used in cases where the variation is either from negative to lower positive CAGRs and 10% in the circles where the variation is very much higher. It is also to be noted that in HT 33 kV & 132 kV, reduction or addition of even 1 consumer will result in high variance.

Further, the specific considerations in projection of HT category sales have been only done after receiving such communication from concerned consumers.

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.

It is submitted that the DISCOMs have projected the HT IV category sales considering the the licensee's experience of the historical consumption along with other allied factors.

Detail/Year	FY 22	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	FY 34
No. of consumers	40	48	49	49	49	49	49	49
Consumption (MU)	3,787	2,753	4,184	4,401	4,842	5,326	5,858	10,853
Connected load MW/MVA	3,042	4,000	4,000	3,966	3,966	3,966	3,966	3,966
Hours of operation/year	1,245	6,88	1,046	1,110	1,221	1,343	1,477	2,737

**Source: Compiled by Prayas (Energy Group), from Resource plan petitions and FY24 Tariff filings of DISCOMs** It can be seen that the number of consumers and connected load is same from FY23 till FY34. Historical data does not indicate any definite trend in consumption, but as per the petition, the consumption is projected to increase by 10% every year. As per the initial plans, LI projects were to be operated for upto 16 hours for 120 days in a year, amounting to 1920 hours in a year. As seen in the last row in Table 3, the number of hours of operation in the past few years has been erratic and projects increase a steady increase till FY34. No explanation is given on the increase hours of operation or how 10% YoY growth rate was calculated. DISCOMs should provide project wise metering data on Lift irrigation projects, so that the actual trends in operation can be understood.



### 3. Response to The Federation of Telangana Chambers of Commerce and Industry

3	<b>The Federation of Telangana Chambers of Commerce and Industry, Federation House, Federation Marg, 11-6-841, Red Hills, Hyderabad 500004, Telangana, India. Tel: 91-40-23395515 to 22 (8 lines), Fax: 91-40-23395525, e-Mail: info@ftcci.in; Website: www.ftcci.in</b>	
S.No.	Summary of Objections / Suggestions	Response of the Licensee
1.	<p><b><u>INTRODUCTORY COMMENTS.</u></b></p> <p>a. A capital expenditure of Rs 42213 cr is being proposed jointly by TRANSCO, DISCOMs &amp; TSGENCO during the 5TH CP, for a <b><u>forecasted</u></b> energy supply of 478717 MU during the CP. Similarly, an additional Rs 31 ,693 cr is being proposed for the 6TH CP for augmenting energy supply to a <b><u>forecasted</u></b> supply of 636449 MU during the entire CP.</p> <p>b. The investments translate as Rs.8,81,794 for augmenting the energy supply by one MU during the 5th CP and during the 6th CP, this proposed investment comes to Rs 4,97,966 per million units of energy supply.</p> <p>c. We note, as the table given in page 25 of TSTRANSCO submissions, there is <b>surplus energy</b> available during the 5TH CP, ranging from 30% to 16% (19,981 MU to 38032 MU).</p> <p>d. From the above table we note that during the 6th cp THERE ARE SHORTAGES FORECASTED from FY30-31 TO FY 33-34. The shortages range from 3% to 23%, 4089 MU in FY30-31 peaking to 26684 MU in FY33-34.</p> <p>e. How the surplus is going to dealt with has not been detailed by the DISCOMs while there is a reference (page x in NPDCL Submissions) to dealing with shortages in 6th CP. Bridging the deficit in 6TH CP is just 7 years ie shortages forecasted from FY 30-31. The statement by NPDCL in the above referred page for overcoming shortages is "if &amp; but", not a definitive action plan considering that shortage is equivalent to a to a supply from a 500 MW thermal plant operating at 80% Normative even in FY 30-31 and going to 3500 MW thermal plant by FY 33-34. Most states have not</p>	<p>a&amp;b) The Capital Expenditure plan proposed by TS DISCOMs is not dependent on load growth only as is beng insinuated but depends on number of factors including but not limited to the existing scenario of network infrastructre in the field, loading of existing feeders/sub-stations/PTRs etc. Also, TS DISCOMs always endeavor to provide quality and reliable power supply with a focus on reducing the losses and improving the safety and efficiency of the system. Further , the existing system needs to be renovated and modernized simulataneously to cater to the needs of the consumer and to further improve the sustainability of the organization. All such factors are considered in the proposal for capital expenditure.</p> <p>c&amp;d) 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. TS Discoms shall abide by the directions given by the Hon'ble Commission during the review of PPAs.</p> <p>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 scenario leads to gap between the demand and supply. In this regard 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 challengs 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.</p>

	<p>planned any NEW THERMAL. So, bridging the deficit needs an explanation.</p> <p>f. The surplus availabilities in 5th CP are also not easy to sell considering that most states are likely to have adequate availability. We note that the neighboring state, AP, forecasts as per their SEP, shortage of about 5000MU in FY 29-30.</p> <p>g. It is not clear if the Expenditure plans for the 5th &amp; 6TH CP has the approval of MoP, a requirement as we understand?</p> <p>h. we note that in Page 48 of TSTRANSCO "INVESTMENT PLANS FOR FY 22-23 &amp; FY23-24" has shown for Sub-stations Rs 18 crores, for Lines Rs 1963 crores, Rs 77 For augmentation of PTR, Rs 13 crores for Capacitors and Rs 33 crores for Bay extensions, a total of Rs 2104. It is not clear if this 4th C.P EXPENTIDURE IS AN OVER-RUN or there is provision in the Approved 4th CP budget.</p> <p>i. Similarly, in the NPDCL submissions (page xii) under paragraph BASE CAPITAL EXPENDITURE an amount of Rs 836.96, not part of 5th CP, IS SHOWN FOR FY 23- 24. Is it an over-run in the approved 4TH CP?</p>	<p>e) It is to be noted that the TS DISCOMs in their Petitions have detailed the energy balance scenario both in the Affidavits and in individual sections of Power Procurement Plan (Section 7.4 in TSSPDCL Petition and Section 6.4 in TSNPDCL Petition). It is to be noted that the energy balance scenario for 6<sup>th</sup> Control Period is indicative and accordingly TS DISCOMs have indicated the possible sources from which the energy balance can be achieved.</p> <p>f) TS DISCOMs submit that TS DISCOMs have been purchasing the power following Merit Order dispatch principle for scheduling of power on daily basis from all the available generating stations and it is to be noted that the availability of surplus power (as shown in the RP Petition) for future years is not constant. It is annual consolidated figure considering energy from all sources. Depending on the load dynamics, there appears surplus power in certain blocks in a day and there might be deficit in certain other time blocks of a day. Any surplus power available in any 15 minutes time Block will be traded in Exchange after making a comparison whether the prevailing Exchange price is higher than the variable cost of Thermal plants. All efforts are being made to sell the surplus power through Exchanges in a most effective way so as to earn some revenue to TSDISCOMs resulting in reduction of some financial burden on TSDISCOMs and the consumers in turn</p> <p>g) The expenditure plan of TS DISCOMs is to be approved by Hon'ble TSERC as per relevant regulations prescribed by Hon'ble TSERC and there is no requirement of the approval from MoP in this regard.</p> <p>i) The amount shown under Base Capital Expenditure for FY 23-24 is just a projection figure forming a part of the basis on which projection of 5th CP has been done. It is not an over run of the approved capex of 4th CP in any way.</p>
2.	<p><b><u>OUR APPREHENSIONS IN THE STATE ELECTRICITY PLAN.</u></b></p> <p>a. The 5th &amp;6th C.P <i>FORECAST OF ENERGY CONSUMPTION</i>, network flow analysis is the decisive factor in arriving at the CAPEX, the basis for fixed network cost (Rs/unit) in MYT of the C.P.</p> <p>b. The current regulations allow <b><u>a pass through of</u></b> expenses across the</p>	<p>b) It is to be noted that the even though the current regulations allow a pass through of expenses across the supply, it is to be noted that the TS Discoms are allowed the capital expenditure or tariff as per the procedures mentioned in the Regulations with prudence</p>

supply with the ULTIMATE CONSUMER shouldering the consequences of omissions or commissions of incorrect forecasting or planning, including revenue TRUE UPS.

- c. **Hence the importance and need for a rigorous methodology in SALES FORECASTING for we consumers.** The petitions have PDF or scan formats of historical annual data. Whereas NPDCL states in (page x) that "**The historical subdivision wise actual sales LT+11KV are considered for last 5 years (FY2017-18 TO FY2021-22) and CAGRs are computed**". But data is not available. SPDCL petition DOES not GIVE any historical data for arriving at CAGR. We request that standardized formats as approved by TSERC should be used by both the DISCOMs
- d. The data for arriving at future demand is based on annual energy consumption and peak load trends, relevant perhaps when situation was, high base load capacity and acute power shortages, a situation two decades back. Today power shortages are history and proportion of renewable energy is on the increase. This calls for more than TREND ANALYSIS OR TIMES SERIES. The current data for future 10 years based on simple CAGR BASED ON TREND ANALYSIS with regulations heavily in favor of DISCOMs for TRUEUPS irrespective is **highly unsatisfactory for the consumers.**
- e. It can be seen from Tariff filing for FY 2023-24 that almost 80% of demand drivers are just four categories namely LT Domestic, LT Agriculture, and HT Industry & HT Lift irrigation. The YOY growth trend presumption for C.P at 5.4% for LT DOMESTIC **appears too optimistic considering that white goods are progressively getting more efficient and increasing use of Solar Roof top use.**

check held by the Hon'ble Commission along with due public consultations from stakeholders.

c) As regards to Historical actual sales, as part of the Additional Information requested by the Hon'ble Commission, TS Discoms have submitted the referred data in spreadsheet formats to the Hon'ble Commission.

As regards to objection pertaining to actual sales of LT+ 11 kV, the historical subdivision wise actual sales (LT+11 KV) is only considered for projection of network requirement. It is one of the component out of many based on which network projection is done. The methodology followed is similar in both the DISCOMs with minor variations based on field situation and it is explicitly mentioned in Petition of TSSPDCL also.

d) As regards to the objection on Trend Analysis, it is to be noted that the TS Discoms have adopted trend analysis (CAGR) on the actual sales recorded of each categories in each individual circle and then the projections of each circle are clubbed to arrive at the projection of TS DISCOMs. In this regard it is to be noted that this method evens out any fluctuations due to extreme events and in some categories TS Discoms have considered moderated growth rates considering the situations specific to that circle. Further, TS DISCOMs have also considered sales projections as per End use method for certain categories for which the individual consumers have been consulted. Considering the above, TS DISCOMs believe that the sales projections arrived shall serve the purpose. However, TS DISCOMs have noted the suggestion of the stakeholder.

As regards to usage of Time Series Analysis, TS Discoms believe that projection of Peak demand by using Time Series Analysis along with inputs received from end users is apt considering its wide usage and it is to be noted that even the projections in 20<sup>th</sup> EPS by CEA were being arrived by a combination of ime series analysis and End Use Method. However, TS DISCOMs have noted the suggestion of the stakeholder.

e) Considering the past trend in the domestic sales in each Circle, the Discoms have adopted 5 yr CAGR & 1 yr CAGR for most of the circles and has arrived at appropriate growth rates at Discom level. In the domestic category 1 year or YoY growth rates have been used for certain circles considering either the higher growth rates in the recent periods or the circles which are experiencing rapid growth in domestic consumption on account of establishment of new colonies etc.

<p>Although the annualized growth trends shown by DISCOMS is shown to be close to EPS, the category wise forecasts are at variance. For example, DISCOMS forecast 5.4% for HT Industry, EPS reports 9.2%. Similarly EPS combines HT&amp; LT Lift irrigation and projects 4.5% YOY growth, whereas DISCOMS project 5% for YOY for LT irrigation and 10% for HT Lift irrigation.</p> <p>Arguably LT V agriculture requirements depend on rain Gods and difficult to predict. Forecasting can be improved if DTR Metering as directed by the Commission is in place as given in DIRECTIVE 18 in Appendix B of Tariff order FY22-23.</p> <p>f. In the case of LT V Agriculture, the YOY growth has been negative as reported by the DISCOMs in Section 4.16 in FY 23-24 T.O <b><i>"Consumption under LT-V would not further increase given the fall in the use of bore wells and a rise in canal irrigation"</i></b> It is therefore not understandable how DISCOMs have assumed a YOY 5% uniform growth.</p>	<p>As regards to the projection of sales for the future period, it is to be noted that Discoms while projecting also have to consider that the economic growth over the years will invariably increase the purchasing capacity of the consumers which will result in increasing demand from the consumers.</p> <p>It is to be noted that the EPS report considered Input data from FY 11 to FY 21 from the DISCOMS. Whereas, TS Discoms in this Resource Plan Petition have considered the data from FY 2016-17 till H1 of FY 2022-23. In this regard it is to be noted that the electricity consumption during FY 22 &amp; FY 23 has been asymmetrical compared to the electricity consumption recorded in FY 20 and FY 21 on account of COVID 19 Pandemic. The above elements might have resulted in the difference between the growth trends between the Petitions filed and EPS reports.</p> <p>f) As acknowledged by the stakeholder, it is to be noted that the projection of sales for the agricultural category is difficult and as regards to the submissions of TS Discoms in RST filings for FY 2023-24, along with the submissions made in respect of agricultural sales, the DISCOMs have also requested the Hon'ble Commission to consider the actual sale during the time of true up in case the actual sales emerge to be higher than the projected sales. The Discoms in the Resource Plan petition have have projected the Agricultural Sales considering nominal growth rates in view of the regular sales and the irrigation lands still to be cultivated which needs pumping water.</p> <p>g) As regards to the observation on projection of sales of HT Industry category of TSNPDCL, the circles with low growth (growth rate – 2%) in sales are much less in number than circles with higher growth rate (growth rate - 5%). This asymmetry of number of circles with different growth rates is affecting the overall growth rate of TSNPDCL</p>
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	<p>g. HT INDUSTRY &amp; LIFT IRRIGATION, as the number of consumers are fewer. Therefore a detailed analysis of HISTORICAL DATA and individual customer survey would have helped forecasting. NPDCL in their petition records in section 2.4.10 low growth rate but TABLE 20 assumes 6-8% GROWTH RATE FOR FY 25-29.</p> <p>h. A Status note on the Warangal Kakatiya Mega Textile Park and HMR included in special considerations as growth drivers will be useful to be realistic in assessing demand.</p> <p>i. 20th EPS projects open access YOY growth at 20% and 30% for SOLAR ROOF TOPs in Telangana. Considering national trends a mere 2% open access HT sale and Captive Capacity of 10% of peak demand looks too low . No basis for these assumptions have been given in Sections 5.2.2 /5.2.4 NPDCL OR IN Sections 6.1.2/6.1.4 SPDCL Petitions.</p> <p>j. Thus the Energy requirement and availability and energy surplus/deficit shown in the TSTRANSCO resource plan petition in page 25 requires a review and a more prudent forecasting method be made in light of our apprehensions given that an ambitious o CAPEX of Rs 73,906 crores is being proposed <b>(summary in page 6&amp;7)</b></p>	<p>h) The projections from Warangal Kakatiya Mega Textile Park and HMR have been considered only after receiving written communication from the concerned. Further, TS DISCOMs shall provide information as sought by the Hon'ble Commission in this regard.</p> <p>i)It is to be noted that the 20<sup>th</sup> EPS has included the projection of Open Access sales under "Others" category which also includes the sales of categories not falling under 9 different categories and the growth rate of the above referred "Others" category is not more than 6%. As regards to projection of sales for Solar Rooftop, it is to be noted that the projections made in 20<sup>th</sup> EPS report are aligned with the target of Installed Capacity of 50 GW by the year FY 2031-32. As regards to growth rate of Captive Capacity, it is to be noted that the 20<sup>th</sup> EPS report projects the captive self consumption in MU, whereas TS DISCOMs have provided projection of Captive Capacity in MW.</p>
3	<p><b><u>STATE ELECTRICITY PLAN WITHOUT A REVIEW OF THE EARLIER PLAN.THE 4TH CONTROL PERIOD?</u></b></p> <p>Every resource plan/business plan should be, ideally, preceded by a review of the previous period plan with details of PLAN VS ACTUALS, WITH REASONS FOR DEVIATIONS AND CORRECTIVE ACTION PROPOSED FOR FUTURE. According to the regulation the entities are to submit periodic progress reviews to the Honorable commission. We consumers should have benefit of this review to be able to make a</p>	<p>TS Discoms take note of the suggestion provided the stakeholder and shall carryout necessary activities in future.</p>

	meaningful assessment the SEP in this case. We pray this Honorable commission considers our submission.																						
4	<p><b><u>GENERATION PLANS (Reference page 9 to 11 of TS TRANSCO PETITION)</u></b></p> <table border="1"> <thead> <tr> <th>Source</th> <th>Energy MU Availability End of 5<sup>th</sup> CP</th> <th>Energy MU Availability End 6<sup>th</sup> CP</th> </tr> </thead> <tbody> <tr> <td>TS GENCO Thermal</td> <td>58940</td> <td>58537</td> </tr> <tr> <td>TS GENCO Hydel</td> <td>3443</td> <td>3396</td> </tr> <tr> <td>CGS</td> <td>26830</td> <td>22922</td> </tr> <tr> <td>NCE</td> <td>19300</td> <td>19408</td> </tr> <tr> <td>Others</td> <td>18327</td> <td>11604</td> </tr> <tr> <td>Total</td> <td>126840</td> <td>115867</td> </tr> </tbody> </table> <p>REF: Page 25 of TS TRANSCO Resource Plans submissions for 5<sup>th</sup> and 6<sup>th</sup> Control Period.</p>	Source	Energy MU Availability End of 5 <sup>th</sup> CP	Energy MU Availability End 6 <sup>th</sup> CP	TS GENCO Thermal	58940	58537	TS GENCO Hydel	3443	3396	CGS	26830	22922	NCE	19300	19408	Others	18327	11604	Total	126840	115867	No comments
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4.1	<p><b><u>Observations and Comments on Generation plans</u></b></p> <p>a. At the end of 5th CP as per the referred table there is a surplus availability of 19981 MU, a surplus of 16%.</p> <p>b. At the end of 6th CP there is a substantial deficit of 26684 MU, about 23% deficit.</p> <p>c. We can note that there is deficit in energy supply from FY 2030-31</p>	<p>a&amp;b) It is submitted 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 scenario leads to gap between the demand and supply. In this regard 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.</p> <p>Further, the figures referred by the stakeholder refers to the energy balance of the entire State considering the generation of power not only from generating Stations of TS</p>																					

onwards. The resource plans of TS TRANSCO & TSDISCOMS show an investment plans of Rs 921 cr & Rs 30751 cr, a total of Rs 31693 cr. CAN THIS BE JUSTIFIED? Presumably YES, but can we consumers learn why?

- d. At the end of 6th cp, WHAT WILL BE TRANSMISSION AND DISTRIBUTION NETWORK CAPACITIES IN TERMS OF ENERGY IN MU & PEAK LOAD CAPACITY IN MW?
- e. Further as we note TSGENCO has proposed a **CAPEX of Rs 14,130 during 5th cp but there is no capacity addition.**
- f. As we know TSGENCO is not a licensee of this Honorable commission. But its orders are mandatory when TSDISCOMS (TSERC licensees) enters into PPAs with TSGENCO or any private or public sector generators including CGS.
- g. TSGENCO in their application for Business plan dated 1 st April 2023 have claimed that their application is complying to CLAUSE 7 of Regulation I of 2019. We have perused the 16 pages of the TSGENCO application and wish to state that application does comply to the requirements of the Regulation I of 2019 clauses in 7.2, 7.3 or 7.7. An application for getting an approval for a purported capital expenditure of Rs. 14,150 crores is given under paragraph 11 (SUMMARY of CAPITAL INVESTMENT PLAN) in page 3 of their submissions.
- h. We note that the application merely states the name of 16 stations and year wise expenditure and a grand total of Rs14130 crores. There are no details as required under clauses 7.2, 7.3 or 7.6. There are NO additions to the current TSGENCO capacity 0484.26 MW during both the control periods and hence it is NOT CLEAR if this expenditure can justifiably be claimed under the head of Capital expenditure, EXCEPTION the required FGD. In fact, RTS B is expected to be decommissioned during in 5th CP. The future plan of repurposing or cost of decommissioning is not given in the submission.
- i. WE THEREFORE SUBMIT THAT THE HONORABLE COMMISSION REJECTS THIS APPLICATION OF TSGENCO

GENCO but also from CGS, IPPs & NCEs with whom TS DISCOMS have signed PPAs with.

c&d). It is to be noted that the Capital Expenditure plan proposed by TS DISCOMS is not dependent on load growth or energy balance only as is being insinuated but depends on number of factors including but not limited to the existing scenario of network infrastructure in the field, loading of existing feeders/sub-stations/PTRs etc. Also, TS DISCOMS always endeavor to provide quality and reliable power supply with a focus on reducing the losses and improving the safety and efficiency of the system. Further , the existing system needs to be renovated and modernized simultaneously to cater to the needs of the consumer and to further improve the sustainability of the organization. All such factors are considered in the proposal for capital expenditure.

FOR 5TH CONTROL PERIOD BUSINESS	
<b>5</b>	<p><b><u>TRANSMISSION &amp; DISTRIBUTION PLANNING.</u></b></p> <p>The T&amp;D flows the sales and availability forecast both in terms of elaborate network need, the cushioning for N-l flow, the PTR, DTR, sub-stations and whole system. TSTRANSCO &amp; TSDISCOMS have years of experience and expertise to put together the RESOURCE PLAN further MOP by procedure vets the application before stamping its approval. The financials will thus have the regulations for compliance. A procedurally satisfactory techno-commercial- regulatory compliance process.</p> <p>We have the following queries:</p> <ol style="list-style-type: none"> <li>a. The solar and wind at 3400 Mw is just 16% in terms of total installed capacity and supplying about 15% energy at end of 5th CP &amp; 19% at the end of 6TH CP. How much more of these variable sources of solar &amp; wind can the transmission and distribution system take while ensuring 100% requirement is met.</li> <li>b. Are there micro grids planned to meet Agriculture needs through solar power?</li> </ol>
	<p>The expenditure plan of TS DISCOMs is to be approved by Hon'ble TSERC as per relevant regulations prescribed by Hon'ble TSERC and there is no requirement of the approval from MoP in this regard.</p> <p>TS Discoms have projected the energy requirement and energy availability from all the contracted sources of power and also have provided submissions on how the energy balance is met both in the Petitions and in the above replies.</p>



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**OUR PRAYERS**

- a. We request the Honorable Commission to direct the DISCOMs to conduct a more structured forecasting, the foundational requirement in the light of our concerns pointed out by us in these submissions.
- b. We request the honorable commission to direct the TSTRANSCO & TSDISCOMs to present a review of 4TH CP presenting ACTUALS of 4th CP inclusive of 4 years actual and the fifth year expected YEAR FY 2023-24 VERSUS FORECASTED 4TH CP in all the terms of status of projects, the CAPEX used & CAPEX available for balance work Their comments of over-run in costs and time delays.
- c. We request this Honorable commission to reject the application of TSGENCO for the reasons we have submitted.
- d. Direct TSTRANSCO & TS DISCOMS to confirm if their their RESOURCE plans have been approved by MOP.
- e. Grant us the permission to make additional submissions and pray that we be permitted to present our case during the hearing in person or virtually

TS Discoms have responded to the objections mentioned here as part of the detailed replies to the objections above.