Replies to the objections raised by Stakeholders on TGDISCOMs Petitions seeking consent from Hon'ble TGERC for procurement of power from 1 Unit of 1X800MW of Telangana Super Thermal Power Station Stage-II as against power sale offered from 3 units (3X800MW) vide OP.No.31 of 2025, 1x800MW Stage-II, Singareni Thermal Power Project for a period of 25 years vide OP.No.30 of 2025 & 200MW Solar power from NLCIL under CPSU Scheme Phase-II Tranche-III vide OP.No.29 of 2025.

1. Replies to the objections raised by Sri. M. Thimma Reddy, Convenor, Peoples Monitoring Group on Electricity Regulation on seeking consent for procurement of power from 1 Unit of 1X800MW of Telangana Super Thermal Power Station Stage-II as against power sale offered from 3 units (3X800MW) & 1x800MW Stage-II, Singareni Thermal Power Project:

## 2. In the background of climate change and global warming and India's commitment to transition to net zero no new coal based thermal power plants shall be allowed due to their emission of green house gases including carbon dioxide. Future increase in energy requirement needs to be met from green energy sources including solar power.

**Objections** 

Telangana intends to integrate renewable energy sources in alignment with the Telangana Clean and Green Energy Policy 2025. However, solar and wind energy are only during specific hours. To address the increasing energy demands, it is necessary to enhance the base capacity through coal based thermal power plants, which can provide a continuous supply of electricity throughout the day.

**Replies** 

If the above two petitions are allowed these two power plants may start power generation from the year 2030. The new Green Energy Policy of Government of Telangana aims to install 20,000MW new renewable capacity in the state by 2030. If this renewable energy capacity is achieved there will be no need for the above two coal based thermal power plants. Recently TGDISCOMs filed a petition seeking the Commission's consent to procure 4,000 MW solar power under KUSUM- A component. Recently TGGENCO floated tenders MWbattery energy system(BESS). A few days back the Government of Telangana had entered into MoUs with several developers to setup solar power plants with aggregate capacity of nearly 6,000 MW. These interventions show that the Government of Telangana is serious about its plan to install 20,000 MW new renewable energy capacity by 2030. The Government of Telangana also aims to install 40,000 MW new renewable energy capacity by 2035.

According to the Central Electricity Authority's (CEA) Resource Adequacy Plan, the peak power demand in Telangana is projected to reach 24,215 MW by 2030.To cater to this demand, the state aims to incorporate renewable energy sources. However, since solar and wind energy are only available during certain periods, it becomes imperative to increase base load capacity through coal based thermal plants. This ensures a steady and uninterrupted supply of electricity to consumers.

**4.** As per Ministry of Power of GoI Order on Renewable Power Purchase Obligation (RPO) Telangana has to procure 43.33% of its power requirements from RE sources by the year 2029-30 and 50.50% by the year 2034-35. These RPO point to primacy to be given to RE sources so

Since solar and wind energy are only available during certain periods, it becomes imperative to increase base load capacity through coal based thermal power plants. This ensures a steady and uninterrupted supply of electricity to consumers.

that they account for more than 50% of power generation and consumption. In this plan of things there is limited or no scope for coal based thermal capacity addition in near future.

**5.** According to the additional information provided related to Singareni plant tariff claimed by STPP Stage-I for FY 2024-25 is Rs. 6.782/kWh. In the case of Stage-II plant coal will be sourced from Naini coal fields located in Odisha. Because of higher coal transportation cost tariff of Stage -II will be much higher than Stage-I plant. In the case of NTPC's plant the provisional tariff for power supplied from stage-1 of Telangana STPP is ranging from Rs. 4.88/unit to Rs. 5.98. These tariffs of coal based thermal power plants are much higher than tariffs of RE sources like solar and wind power. At present solar and wind power are available at tariffs lower than Rs. 3/unit. Tariffs of RE under round the clock (RTC) and firm dispatchable renewable energy (FDRE) modes also are comparatively less. Axis Energy Ventures India Pvt Ltd., has come forward to supply 400 MW of RE on the lines of FDRE to APDISCOMs at the rate of Rs. 4.60 per kWh at CUF of 60%. Under these circumstances it is better to procure RE rather than coal based thermal power.

The tariff of Singareni STPP Stage-I is Rs.4.986/kWh (FC=Rs.1.597 and VC=Rs.3.389/kWh) but was erroneously mentioned as Rs.6.782/kWh due to typographic error. Further it is learnt that production has commenced at Naini Coal block and efforts are being made to swap coal from Naini coal block to coal from nearby SCCL to mitigate the transportation cost.

Further, the demand profile for Telangana and Andhra Pradesh are different. Telangana offers uninterrupted 24-hour free electricity supply for agricultural consumers, additionally, peak demand also occurs during non-solar and non-wind energy hours. Based on load profile of Telangana, it is estimated that procuring renewable energy through FDRE would be expensive.

**6.1** TGDISCOMs, as shown in these petitions, based their estimates of energy requirement on the Resource Adequacy Reports of CEA. In the past projections of energy requirement made by CEA proved to be overestimates. This continues to be the case with the present projections also. This comes out clearly with comparison of CEA projections with energy requirement approved by TGERC for 5th and 6th control periods.

Energy requirement (MU)

	2029-30	2033-34
CEA Projections	1,22,627	1,44,206
TGERC	1,07,868	1,30,711
Approved		
Difference	14,759	13,495
%	13.68	10.32

## Peak Demand (MW)

	2029-30	2033-34
CEA Projections	24,215	30,139
TGERC Approved	21,413	25,524
Difference	2,802	4,615
%	13.09	18.08

Telangana has recorded peak demand of 17,162MW on 20<sup>th</sup> March 2025 surpasses the Central Electricity Authority's (CEA) projected peak demand of 16,877 MW for FY 25 under its Resource Adequacy Plan. This occurrence highlights that the CEA's projections cannot be deemed as overestimated.

**6.2** Above tables show that the projections made by CEA are more than 10% higher than the capacities approved by the Commission. It is prudent to take into account energy

Telangana has recorded peak demand of 17,162 MW on 20th March 2025 exceeded the Central Electricity Authority's (CEA) forecast of 16,877 MW for FY25 under its

requirement and peak demand approved by the	Resource Adequacy Plan. Hence, CEA
Commission while planning future capacity	projections cannot be ignored while
additions.	planning future capacity additions.
<b>6.3</b> CEA proposed 3,890 MW additional	As stated earlier, CEA projections needs to
thermal capacity to be created by 2034-35. In	be considered for capacity planning and the
the background of excess peak demand	supply has to be met by increasing the base
projections made by CEA the need for	capacity through coal based thermal power
additional thermal capacity has to be	plants.
scrutinized.	

2. Replies to the objections raised by Sri. M. Thimma Reddy, Convenor, Peoples Monitoring Group on Electricity Regulation on seeking consent for procurement of 200MW Solar power from NLCIL under CPSU(Central Power Sector Undertaking) Scheme Phase - II Tranche - III:

Scheme Phase - II Tranche - III:	<del>.</del>
Objections	Replies
1. According to the design of the CPSU Scheme Phase-II and Tranche-III of the GoI, under which the proposed solar plant is being set up, power generated in this plant has to be used by the Government or Government entities. Under this scheme third party sales is also not allowed. Given this design of this scheme, it is important to identify the Government Departments that will use this power.	The CPSU Scheme mandates for power usage for self-use or use by Government / Government entities, either directly or through DISCOMs. As such, it is proposed to meet the Lift Irrigation loads from the power under this scheme.
3.1 The proposed solar power plant is located in Kutch district of Gujarat. Inter State Transmission System/National grid has to be used to transmit this power to Telangana. According to Clause 1.2 (xxii) of the Power Usage Agreement, "Interface point of Solar PV power station with the transmission system developed by CTU at 765/400/200 KV Bhuj PS substation in Village Palanpur (Badi), Taluka – Nkhatrana, Dist – Kutch at 220 KV voltage level, where usage energy meter(s) are installed. Any cost of building transmission line from Solar PV plant to	The standard bidding guidelines of MoP enable transfer of title of energy from interconnection/delivery/metering point. As such power evacuation responsibility from the Inter-connection point lies on the DISCOMs. As the Solar plant of NLCIL is proposed to be located at Kutch, Gujarat, ISTS charges are attracted.  However, MoP order dated 23rd November 2021 granted waiver of inter-state transmission charges on transmission of

2021 granted waiver of inter-state transmission charges on transmission of electricity from solar and wind sources of energy commissioned on or before 30.06.2025. For the projects commissioned thereafter 30.06.2025, ISTS charges are levied gradually in the following manner –

Period of Commissioning	Inter-State Transmission Charges
01.07.2025 to 30.06.2026	25% of applicable ISTS charges
01.07.2026 to 30.06.2027	50% of applicable ISTS charges

interconnection point/Delivery/Metering point shall be borne by NLCIL. All the

associated transmission charges and

losses beyond the point of interconnection

of Solar Project shall be borne by selected

Power Users..." According to Clause 3.1 of the Power Usage Agreement, "Transfer of title of Energy shall be at the Interconnection Point/Metering Point/ Delivery Point. Power User shall make the required arrangement for evacuation of

Point/Metering Point/ Delivery Point." But according to Letter of Award dated October 04, 2021 issued by IREDA to NLCIL, "... Waiver of ISTS charges and losses, for use of ISTS network, shall be available to Projects set up under the CPSU Phase – II

beyond the Interconnection

Scheme." (Para I, page 2-3) Further offer letters dated 18-02-2023 sent by NLCIL to DISCOMs all over the country included an assurance related to use of ISTS network as follows, "As per orders/guidelines issued by MoP, waiver of ISTS charge for use of ISTS network is available to projects setup under the CPSU Phase - II Scheme." NLCIL in its letter dated 20-04-2023 to D. Prabhkar Rao, C&MD of TGTRANSCO reiterated it as follows, "Waiver of ISTS charge for use of ISTS network shall be available to projects setup under the CPSU Phase-II Tranche-III Scheme, as orders/guidelines issued relevant government authority..." Given these contradictory provisions related to use of ISTS network it has to be clarified whether 200 MW solar power being contracted by TGDISCOMs from NLCIL under CPSU Phase – II, Tranche – III is eligible for waiver of ISTS usage charges.

01.07.2027 to 30.06.2028	75% of applicable ISTS charges
From 01.07.2028	100% of applicable ISTS charges

Further, vide order dated 09.06.2023, MoP has granted benefit of waiver of ISTS charges to the Solar/Wind projects whose date of commissioning is extended by MNRE beyond 30th June 2025 on account of Force Majeure or delay in connectivity.

**3.2** ISTS charges will be about Rs. 1.20 per unit. If these ISTS charges are included total unit cost of this solar power to Telangana will be Rs. 3.77 (2.57+1.20). ISTS charges will account for more than 30% of the cost of accessing this solar power. If waiver of ISTS charge as promised is not forthcoming it is advisable to exit this Power Usage Agreement and set up the solar PV plant of similar capacity in Telangana itself.

MoP order dated 23rd November 2021 granted waiver of inter-state transmission charges on transmission of electricity from solar and wind sources of energy commissioned on or before 30.06.2025. For projects commissioned thereafter 30.06.2025, ISTS charges are levied gradually in the following manner -

Period of	Inter-State
Commissioning	Transmission Charges
01.07.2025 to	25% of applicable
30.06.2026	ISTS charges
01.07.2026 to 30.06.2027	50% of applicable ISTS charges
01.07.2027 to 30.06.2028	75% of applicable ISTS charges
From	100% of applicable
01.07.2028	ISTS charges

Further, vide order dated 09.06.2023, MoP has granted benefit of waiver of ISTS charges to the Solar/Wind projects whose date of commissioning is extended by MNRE beyond 30th June 2025 on account of Force Majeure or delay in connectivity.

4. NLC in the letter dated 14-11-2022 to the Special Chief Secretary, Energy Department, GoTG proposed to set up the 200 MW solar PV plant in Telangana as follows, "Out of 510 MW CPSU Solar Power, 200 MW is available for usage of Telangana Govt. Establishing the 200 MW Solar

In accordance with the RfS issued by IREDA for selection of SPDs for setting up of Grid connected Solar PV projects under CPSU Scheme Phase II Tranche III, the Solar projects can be established anywhere in India and the choice of location is left to the

Project under CPSU Scheme in Telangana, will further bolster not just the partnership between NLCIL and Govt. Of Telangana, but also help to fulfill the RPO obligation of the State and contribute towards the National targets for RE capacity and Energy Transition goal. Developing the Project within the state with STU connectivity will also bring economic benefits to Govt. of Telangana." If the plant was setup in Telangana instead of Kutch in Gujarat the state would not have to undertake burden of ISTS charges. It was not known why Telangana Government did not take up this offer. According to the present petition the Power Agreement was signed on 27-08-2024 and CoD of the plant has to be achieved within 18 months from this date. In case NLCIL has not yet started setting up this plant in Kutch, Gujarat TGDISCOMs may explore the possibility of setting up this plant in Telangana. In that case TGDISCOMs and consumers in the state will benefit from avoiding ISTS charges.

bidder. Accordingly, NLCIL has finalised the location at Kutch to suit their requirements in line with the approved bid tariff.

It is been informed that the required land to the tune of 528 Acres identified in the villages of Zura and Loriya of Bhuj District been acquired. Letter of Award is placed on M/s Kosol Energie Pvt. Ltd. on 16.10.2023 for development of 200 MW Solar Power Project. M/s CTUIL has granted the connectivity for the project at Bhuj-PS Sub-Station and Bay No. 222 is allotted for the project. Connectivity agreement is signed with CTUIL on 22-04-2024.

3. Replies to the objections raised by Sri. M. Venugopala Rao, Journalist & Convener, Centre for Power Studies on seeking consent for procurement of power from 1 Unit of 1X800MW of Telangana Super Thermal Power Station Stage-II as against power sale offered from 3 units (3X800MW):

Objection	Reply
2 a) Under stage I of TSTPS (2x800 MW), TGDISCOMs are getting a share of 86.9%, instead of 100%. COD of stage I was declared on 1.3.2024. Provisional tariff is shown to be ranging between Rs.4.88 to 5.98 per unit, while it is Rs.5.865 per unit for FY 2024-25. Though the PPA was signed on 18.1.2016, final tariff is yet to be determined by the Central Electricity Regulatory Commission. The reasons for such an abnormal delay are inexplicable and what would be the final tariff to be determined by CERC continues to be in the realm of uncertainty.	The TG Discom's have examined the petition filed by NTPC for determination of tariff and has submitted detailed observations and suggestions in its response. The TG Discom's have given detailed observations/ objections pertaining to delay in COD and financial burden due to the delay in commissioning of plant.  Based on established regulatory principles and procedures, Hon'ble CERC would be determining the tariff.
b) It is submitted by the DISCOMs that the 800 MW unit of stage II, if completed as per schedule, would be available by FY 2029-30. Indicative tariff for this unit is shown as Rs.4.12 per unit and a levelized tariff of Rs.3.81 per unit. Though limited LOI was issued on 7.11.2024 to BHEL for execution of the unit, the estimated capital cost of this unit as per detailed project report, if prepared, as well as the basis for the indicative tariff shown, is not given. Going by the experience with stage I of TSTPS, when will the final tariff be determined by CERC is also uncertain.	Based on established regulatory principles and procedures, Hon'ble CERC would be determining the tariff.
c) When tentative tariff for stage I is Rs.5.865 per unit, and when the basis for tentative tariff for 800	The tentative tariff for Stage I is considering the delays. The licensee has

Objection	Reply
MW unit of stage II of TSTPS is not explained, whether it is desirable to give consent to the DISCOMs for procurement of power from this unit is a moot point.	already submitted its objections/observations in this matter.  Tariff determination would be based Terms and Conditions of Tariff Regulation (CERC). In view of the growing energy requirement there is a need for additional power procurement and accordingly, licensee has sought approval for procurement of power from Hon'ble TGERC.
d) Regarding stage I of TSTPS, when the issue came up for public hearing before the Hon'ble Commission, we made elaborate submissions, as incorporated in the order dated 25.8.2021 in OP No.10 of 2016. Considering our suggestions, the Hon'ble Commission, in its interim order dated 30.7.2016, directed the TGDISCOMs to get the draft PPA amended incorporating the provisions as given in the interim order. However, in the order dated 25.8.2021, the Hon'ble Commission accepted the submissions of the DISCOMs not to incorporate the amendments as directed in the interim order. Since it is a matter of record, we are not repeating the said points. The result is that, even after three and a half years from the date of the order of the Commission, final tariff is not yet determined by CERC. Therefore, it is not desirable to give consent to the DISCOMs to procure power from the 800 MW unit of stage II of TSTPS, without knowing the estimated capital cost and basis for the tentative tariff indicated and relying on or replicating the terms and conditions of the PPA of stage I of TSTPS for the subject unit. In this connection, the kind of adverse consequences that have arisen and the kind allegations made as a result of giving order for implementation of BTPS to BHEL, without going in for competitive bidding, also needs to be taken note of. If necessary, the report of the inquiry commission appointed by the state government on implementation of BTPS and YTPC also may be sought and got and examined. There is no explanation as to why the route of real competitive bidding is not being adopted for execution of the subject unit.	AP Reorganization Act (2014) envisages establishment of 4,000 MW of power plant by NTPC in the State of Telangana in order to meet the growing energy needs.  Also in accordance with provisions of Electricity Act, power to determine tariff for Generating plant is available to Hon'ble CERC as per established Terms and Conditions of Tariff' regulation.
a) Experience has been confirming that the estimates being made by the CEA under electricity requirement surveys and in resource adequacy reports tend to be inflated. As per the resource adequacy report of the CEA, availability of surplus power during the 5th control period is very much lesser than what is determined by the Commission for the same period. But the factual position for the FY 2024-25 confirms that the projections of the CEA have turned out to be unrealistic. It confirms the need for reviewing and revising the projections periodically based on changing factual position.	The actual power purchase by the state in FY24 was 86,823 MUs, surpassing the projected requirement for FY25 as per the resource plan.  With regard to CEA projections, the licensee submits that for FY 25, a peak demand of 17,162 MW was successfully met by TGDISCOMs as against the projected CEA peak demand of 16,877 MW.  The licensee submits that the projected load growth is reflective of the increasing demand in the State of Telangana.  The State of Telangana has witnessed
b) The DISCOMs have already sought consent of the Hon'ble Commission for procurement of 4000 MW solar power under PM KUSUM scheme.	steady growth in demand over the years and the same is expected to continue due to conducive economic and policy

Objection	Reply
c) For Telangana, the annual growth rate of energy requirement projected from 2030-31 to 2034-35 is 5.43% to 5.38% and of peak demand 4.58% to 5.83%.	environment. Keeping in view the growing energy needs, TGDISCOMS have planned addition of capacities in an economical manner. Solar capacity additions have been planned after considering the technical, financial implications to ensure smooth and reliable operation of the grid. The State of Telangana has witnessed steady growth in demand over the years and the same is expected to continue due to conducive economic and policy environment. Keeping in view the growing energy needs, TGDISCOMS have planned addition of capacities in an economical manner.
d) The DISCOMs have shown proposed addition of solar power to the tune of 15,015 MW from 2025-26 to 2029-30 and of 7112 MW from 2030-31 to 2034-35, i.e., a total of 22,127 MW. They have pointed out that capacity utilisation factor for existing solar power projects is 21% and for planned projects 23%. 44,581.5 MU can be generated per annum with an installed capacity of the proposed 22,127 MW of solar units with a CUF of 23%.	Energy from solar power capacity additions coupled with gradual addition of BESS/ PSP capacities will enable the licensee in storing surplus RE energy and using the same during periods of higher demand. In addition to solar/ wind capacity, thermal capacity needs to be added to meet the growing base load energy in an economical and reliable manner.
e) The DISCOMs have also proposed pumped storage units and 250 MW/500 MW battery energy storage system by TGGENCO. Pumped storage units can generate additional power to meet peak demand, while BESS is intended for storing the power generated, i.e., surplus power, both RE and thermal. During the public hearing on procurement of 4000 MW solar power under PM KUSUM scheme, CMD of TGSPDCL has stated that the storage cost as of now is Rs.2.5 per unit. As proposed by the DISCOMs. BESS gives 250 MW, 2-hour storage and delivers 2 cycles a day. In other words, BESS can store and deliver 500 MW a day in two cycles of two hours each. With the proposed additions of solar power, need for BESS capacity would increase. The DISCOMs have shown the cost for setting up BESS of 250 MW/500 MW for 2 hours a day as Rs.5.13 crore to Rs.3.13 crore and for 6 hours a day a cost ranging from Rs.11.31 crore to 6.30 crore. The DISCOMs also have projected that the capital cost for setting up solar power units is expected to reduce from Rs.4.5 crore in 2021-22 to Rs.4.1 crore per MW by 2029-30. With technological developments, costs for generation of solar power and storage may come down. As pointed out by the DISCOMs, solar power plants can be set up within a relatively shorter period vis a vis thermal power plants.	It may be noted that 'Pumped Storage Project (PSP)' by itself is not capable of generating any power on its own. As is the case with any storage technology, any surplus renewable power during the day can be stored in PSP/ BESS and this power can be gainfully utilized during periods of high demand. This approach enables in reducing/ avoiding high-cost power purchases during the periods of high demand.  The licensee submits that depending on the cost-economics of using power from storage units, grid operating conditions, the system operator would take a decision of using stored power. Based on trend in prices discovered for battery storage and also considering the requirement of storage based on assessment of surplus RE power across the day, licensee would be contracting for additional storage capacities in a phased manner.
f) That generation capacity additions should be gradual in tune with the growing demand for power is obvious. The moot point that deserves examination is how much generation capacity, both thermal and RE, needs to be added and when. With the proposed addition of 22127 MW solar power capacity over the years, 44,581.5 MU can be generated per annum with a CUF of 23%.	Due to the robust economic growth, the requirement of power is on a steady growth trajectory. In FY 30, the projected energy requirement based on resource adequacy plan of CEA is 122,727 MU. This energy requirement is projected to grow at a CAGR of ~ 4% and reach a level of 150,040 MU by FY 35. The proposed

Objection	Reply
Similarly, with the addition of 1600 MW thermal capacity of the units of SCCL and NTPC (800 MW each), with a plant load factor of 85%, 11,913.6 MU can be generated per annum. Generation from the proposed pumped storage capacities will be additional. With the expected generation of 56,495 MU of thermal and solar power, in addition to the potential for availability of surplus power to the tune of 28,504 MU projected by the DISCOMs for the FY 2025-26, i.e., a total of 84,999 MU, how to balance load curve and power mix, even with the proposed 250/500 MW BESS, needs to be explained and examined.	capacity addition is to meet the growth in demand. It may be noted that, in the absence of any storage option the licensee needs to sell surplus available during any period in day in the short-term market. However, with the gradual addition of BESS/ PSP the licensee will have the option of storing any surplus due periods of low demand and use this power during high demand period.
g) The very fact that the DISCOMs have proposed addition of both thermal and solar power capacities from 2029-30 indicates that thermal power cannot be dispensed with in the years to come, despite addition of solar power, BESS and pumped storage units. It also indicates the limitations and constraints in expanding BESS. Pumped storage capacities, too, have multifarious problems in terms of capital costs, impact on environment, requirement and availability of water, adverse impact on the lives and livelihood of the local people, especially tribal people, depending on the locations where such units are proposed to be set up, etc.	BESS and PSP both offer flexibility to licensee for storing surplus power and using it during periods of high demand. TGGENCO has identified sites for establishing PSP and currently has floated tenders for consultants to carry out detailed pre-feasibility studies. This would address the concerns raised on environmental and other aspects.
h) Once consents are given by the Hon'ble Commission to PPAs, etc., of the proposed projects, neither the government, nor the DISCOMs, nor the Commission can do anything to correct the adverse consequences that may arise as a result of addition of unwarranted generation capacities, with the kind of legally binding obligations in terms of the PPAs that would come into force. Therefore, a cautious and gradual approach is imperative to determine the periodical requirements of addition of generation capacities, both thermal and RE, to meet the fluctuating and growing demand for power in the state.	The capacity addition has been proposed duly considering the demand growth and availability from the contracted sources. 1 x 800 MW capacity addition of NTPC will enable the licensee in supply reliable power to all the consumers in the State of Telangana.