



TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
5th Floor, Singareni Bhavan, Red Hills, Lakdi-ka-pul, Hyderabad 500 004

O.P.No.46 of 2022

Dated 22.06.2022

Present

Sri T. Sriranga Rao, Chairman
Sri M. D. Manohar Raju, Member (Technical)
Sri Bandaru Krishnaiah, Member (Finance)

In the matter of consent to Power Usage Agreements (PUAs) read with corresponding Supplementary Agreements entered between TSDISCOMs and NTPC Limited for purchase of 400 MW, 923 MW and 369 MW (total 1692 MW) Solar Power from NTPC ISTS connected solar power projects under Central Public Sector Undertaking (CPSU) Scheme Phase-II at Usage Charges of Rs.2.86/kWh for 1296 MW, Rs.2.74/kWh for 90 MW and Rs.2.69/kWh for 306 MW for 25 years from the date of declaration of Commercial Operation (COD) of the station.

The matter having been taken on file in O. P. No. 46 of 2022 and having considered the TSDISCOMs submissions, the written suggestions / objections / comments received from the stakeholder, the issues raised during the Public Hearing held on 16.05.2022, responses to the same by TSDISCOMs and all other relevant material placed on record the Commission passed the following:

COMMON ORDER

Background:

1. As part of Paris Climate Agreement, India has committed to install 40% of its electricity capacity from non-fossil fuels by 2030. For achieving this goal, India has set an ambitious target of setting up 175 GW of renewable energy capacity, by 2022. The Union Cabinet, as per its decision dated 17th June, 2015 revised the solar capacity target from 20 GW to 100 GW by 2022. This needs to be done in a manner

which is compliant to the World Trade Organization (WTO) Regulations. The Ministry of New and Renewable Energy (MNRE), Government of India (GoI) has issued order No. 302 / 4 / 2017 - Grid Solar, dated 05.03.2019 for implementation of Central Public Sector Undertaking (CPSU) Scheme Phase-II (Government Producer Scheme) for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) Power Projects by the Government Producers with Viability Gap Funding (VGF) support for self-use or use by Government / Government entities, either directly or through Distribution Companies (DISCOMs).

2. TSDISCOMs viz., Southern Power Distribution Company of Telangana Limited (TSSPDCL) and Northern Power Distribution Company of Telangana Limited (TSNPDCL) have given consent to NTPC for Solar Power from the Inter-State Transmission System (ISTS) connected solar power projects under CPSU Scheme and executed the Power Usage Agreements (PUAs) which shall remain operative upto completion of twenty five (25) years from the date of declaration of Commercial Operation (COD) of the station unless it is specifically extended on mutually agreed terms as detailed below:

Table 2: The details of Power Usage Agreements (PUAs)

Sl. No.	Name of the Seller	Location of the Plant	Capacity of Plant in MW	Contracted Capacity	Rate Rs. / kWh	Date of PUA	Date of Supplemental Agreement to PUA
1	NTPC Solar PV Station	Devikot, Jaisalmer, Rajasthan	150	100%	2.86	30-Dec-2019	30-Dec-2020
2		Kolayat, Bikaner, Rajasthan	250	100%	2.86	30-Dec-2019	30-Dec-2020
3		Shambu-Ki-Burj, Bikaner, Rajasthan	300	100%	2.86	13-Mar-2020	30-Dec-2020
4		Nokhra, Bikaner, Rajasthan	300	100%	2.86	13-Mar-2020	30-Dec-2020
5		Fatehgarh, Jaisalmer, Rajasthan	296	100%	2.86	13-Mar-2020	30-Dec-2020
6		Devikot, Jaisalmer, Rajasthan	90	100%	2.74	13-Mar-2020	30-Dec-2020

Sl. No.	Name of the Seller	Location of the Plant	Capacity of Plant in MW	Contracted Capacity	Rate Rs. / kWh	Date of PUA	Date of Supplemental Agreement to PUA
7		Kawas, Surat, Gujarat	56	100%	2.69	26-Nov-2020	30-Dec-2020
8		Gandhar, Bharuch, Gujarat	20	100%	2.69	26-Nov-2020	30-Dec-2020
9		Navalakkapatti, Ettayapuram Taluk, Tuticorin, Tamil Nadu	230	100%	2.69	26-Nov-2020	30-Dec-2020
		Total =	1692				

3. TSSPDCL on behalf of TSDISCOMs vide letters (1) Lr. No. CGM (IPC&RAC) / SE (IPC) / F. NTPC / D. No. 1101 / 19, dated 29.01.2020; (2) Lr. No. CGM (IPC&RAC) / SE (IPC) / F. NTPC CPSU Scheme / D. No. 1347 / 19, dated 27.03.2020; and (3) Lr. No. CGM (IPC&RAC) / SE(IPC) / F. NTPC CPSU Scheme / D. No. 57 / 21, dated 15.04.2021; has submitted before the Commission for approval/consent of Power Usage Agreements (PUAs) read with corresponding supplementary agreements under Section 86 (1) (b) of the Electricity Act, 2003 duly submitting the following justification.

Justification given by TSDISCOMs

4. Taking into consideration growing electricity demand in the State and to meet the additional demand of the Lift Irrigation Projects taken up by the State Government, TSDISCOMs have been concluding the power purchase agreements (PPAs) to ensure 24x7 uninterrupted power supply to all the categories of consumers in the State including Agricultural consumers. Further, while entering PPAs for purchase of power from renewable energy source, TSDISCOMs are also examining the RPPO targets in vogue both at State level and National level. The RPPO achieved by TSDISCOMs in comparison to the targets notified by Ministry of Power (MoP), Government of India (GoI) and this Commission are as detailed below:

FY	RPO of	Solar	Non-solar	Total
2018-19	TSERC	5.33%	0.67%	6.00%
	MOP	6.75%	10.25%	17.00%
	TSDISCOMs	9.57%	0.83%	10.40%

FY	RPO of	Solar	Non-solar	Total
2019-20	TSERC	5.77%	0.73%	6.50%
	MOP	7.25%	10.25%	17.50%
	TSDISCOMs	9.86%	0.67%	10.53%
2200-21	TSERC	6.21%	0.79%	7.00%
	MOP	8.75%	10.25%	19.00%
	TSDISCOMs	9.20%	0.79%	9.99%
2021-22	TSERC	7.10%	0.90%	8.00%
	MOP	10.50%	10.50%	21.00%

5. In view of the proposed Amendment to Section 3 of the Electricity Act, 2003, which proposes for notification of National Renewable Energy Policy prescribing uniform purchases from Renewable Energy (RE) sources and imposing penalties for non-compliance ranging from Rs.0.25 / kWh to Rs.2 / kWh, TSDISCOMs are required to be prepared to meet higher RPPO targets. Further, in view of the increasing loads estimated at 8% growth annually (such as upcoming Lift Irrigation projects, agricultural pump sets, additional industrial loads etc.) on TSDISCOMs, the requirement for purchase of RE power to be enhanced for meeting proportionate increase in RPPO. The solar power capacity now being proposed for procurement will not only be helpful in meeting the demand during the day but also be helpful in achieving a reduction in overall power purchase cost of TSDISCOMs. The existing Lift Irrigation loads are around 6000 MW and the upcoming proposed loads are around 8000 MW. The particulars of sales in MU of TSDISCOMs for the past years is as given below:

FY/DISCOM	TSNPDCL	TSSPDCL	Total
2014-15	11105	28078	39183
2015-16	11566	29084	40650
2016-17	12885	30844	43729
2017-18	14937	35589	50526
2018-19	17195	40343	57538
2019-20	18612	39909	58521
2020-21	18774	38275	57049

6. The following are the Regulatory provisions in the matter of approval or consent of PPAs / PSAs.

Section 86 (1) (b) of the Electricity Act, 2003 [Functions of State Commission]

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.

Regulation No.1 of 2019

4.3. Determination of Tariff for Existing Generating Station

4.3.1. Where the Commission has, at any time prior to April 1, 2019, approved a power purchase agreement or arrangement between a Generating Entity and a Distribution Licensee or has adopted the Tariff contained therein for supply of electricity from an existing generating Unit/Station, then the Tariff for supply of electricity by such Generating Entity to the Distribution Licensee shall be in accordance with the Tariff mentioned in such power purchase agreement or arrangement for such period as so approved or adopted by the Commission.

4.3.2. Where, as on April 1, 2019, the power purchase agreement or arrangement between a Generating Entity and a Distribution Licensee for supply of electricity from an existing Generating Unit/Station or the tariff therein has not been approved by the Commission, or where there is no power purchase agreement or arrangement, the supply of electricity by such Generating Entity to the Distribution Licensee after April 1, 2019 shall be in accordance with a power purchase agreement approved by the Commission.

Provided that the petition for approval of such power purchase agreement or arrangement shall be filed by the Distribution Licensee with the Commission within three months from the date of notification of these Regulations:

Provided further that the supply of electricity shall be allowed to continue under the present agreement or arrangement until such time as the Commission approves such power purchase agreement, and

shall be discontinued forthwith if the Commission rejects it, for reasons to be recorded in writing.

Proceedings

7. The Commission has taken the requests of TSDISCOMs on record. By considering the correspondence made by TSDISCOMs, examining with reference to the provisions of the Electricity Act, 2003, provisions under applicable Regulations and sustainability of the clauses in the PUAs the Commission decided to finalise the approval/consent of PUAs through public consultation process and assigned the O.P.No.46 of 2022.

Notification inviting suggestions / objections / comments

Response to Notice

8. In response to the Notice, suggestions / objections / comments have been received from One (1) stakeholder, whose details are given in Annexure-II.

9. Considering one of the request of the stakeholder, the Commission decided to conduct public hearing on 13.05.2022 at 11.30 am onwards at TSERC Court Hall and directed the TSDISOCMs vide Lr. No. TSERC / Secy / JD (TE) / F. No. E-250094 & 98 / D. No. 238 / 22, dated 06.05.2022 to issue public notice in two Telugu, Two English and One Urdu newspapers. Accordingly, TSDISCOMs published notice on 09.05.2022 and submitted compliance vide Lr. No. CGM (IPC) / SE (IPC) / F. NTPC/ D. No.192 / 2022, dated 10.05.2022. The date of public hearing was rescheduled to 16.05.2022 and the same information was published in newspapers, whose details are given in Annexure-III. The details of objectors who attended the public hearing held on 16.05.2022 at the Commission's Court Hall at 11.30 AM are given in Annexure-IV.

10. The issues have been identified, summarised by considering all the written/oral (during public hearing) suggestions/objections/comments received from the stakeholders, corresponding responses given by TSDISCOMs and the same are discussed in the subsequent paragraphs.

Issue 1: Timely submission of Power Purchase Agreements

Stakeholder Comments

11. TSDISCOMs are habituated that instead of submitting power purchase agreements immediately after signing of the same for the consideration of the Commission, TSDISCOMs are submitting for consent of the same after execution of the power units concerned when they are nearing completion or completed and the Commission too has been taking up the same for consideration similarly.

TSDISCOMs' Replies

12. It may kindly be noted that TSDISCOMs have prayed for consent of the Commission soon after signing the Power Usage Agreements, duly submitting the agreement copies, as detailed below:

Table 3: The details of submissions of TSDISCOMs for consent of PUAs

Aggregated capacity	Date of signing of PUA	Date of request for consent
400 MW	30.12.2019	29.01.2020
923 MW	13.03.2020	27.03.2020
369 MW	26.11.2020	15.04.2021

Commission's View

13. The Commission has taken note of the submissions of the stakeholder and TSDISCOMs.

Issue 2: Public Hearing

Stakeholder Comments

14. There is no justification in not holding public hearings on the subject PUAs. Avoiding public hearing on the subject issues does not serve any useful purpose, except the purpose intended or unintended of avoiding any discomfort or embarrassment to the parties to the subject PUAs and the need to respond to the submissions of the objector. The Commission may reconsider its approach in its regulatory process and hold public hearings on the subject issues, uphold the principles of transparency, accountability and public participation in a meaningful and effective manner and direct the parties to the agreements to respond to the submissions of the objectors and make their submissions during the public hearings.

TSDISCOMs' Replies

15. Not in the scope of TSDISCOMs.

Commission's View

16. Considering the request of the stakeholder, the Commission held a public hearing on the subject matter on 16.05.2022 at 11:30 am onwards in the Court Hall of the Commission.

Issue 3: RPPO Obligation

Stakeholder Comments

17. In the Renewable Power Purchase Obligation (Compliance by Purchase of Renewable Energy/Renewable Energy Certificates) Regulation, 2022 (Regulation No.4 of 2022) dated 01.04.2022 notified by the Commission the targets fixed for the year 2022-23 are of minimum purchase of 7.5% for solar and one percent (1%) for non-solar power. As per the retail supply tariff order for the year 2022-23 issued by the Commission, against a total dispatch of energy, excluding NCE/RE and hydel, of 66856.18 MU, purchase of solar power to the extent of 7096 MU approved by the Commission works out to 10% and non-solar power of 596.37 MU works out to 1%. In other words, with the availability approved by the Commission in RST order for 2022-23 TSDISCOMs are going to exceed the minimum targets fixed therein for the current financial year. Hence, under RPPO Regulation, 1692 MW of solar power from NTPC is not required by TSDISCOMs and the latter are not under any mandatory obligation to purchase the same. While admitting that the RPPO regulation prescribes the minimum percentages of RE to be purchased, TSDISCOMs has not explained whether the proposed 1692 MW solar power is required to meet the RPPO in force.

TSDISCOMs' Replies

18. The RPPO Regulation prescribes the minimum percentages to be met from the Renewable Energy Sources. Planning of RE power purchases are being done keeping in view both the future RPPO targets and power demands. However, the proposed solar procurement would not only help TSDISCOMs meet the load but will also result in reducing the average Power Purchase Cost.

Commission's View

19. The Commission has notified the RPPO Regulation No.4 of 2022 prescribing the trajectory i.e., minimum percentage of renewable energy which an Obligated Entity is required to purchase for the period from FY 2022-23 to FY 2026-27. The Commission is in agreement with TSDISCOMs that they may need to procure RE power on economic principles not only to meet their RPO obligation but also to meet increase in load growth due to Lift Irrigation schemes and 24x7 uninterrupted quality power supply to all the categories of supply including Agriculture sector.

Issue 4: Entering into Long Term PPAs

Stakeholder Comments

20. TSDISCOMs are bounded by the obligations under RPPO Regulation notified by the Commission and not by the proposals of the MoP, Gol. The presumption of TSDISCOMs that the State RPPOs may be directed to align with the MoP RPPO is baseless and imprudent. That the Commission has notified its RPPO Regulation for a period of five years ending 2026-27 rightly unrelated to the proposals of the MoP, Gol, confirms that it is for the SERCs to determine targets under RPPO taking into account requirements and interests of the States concerned, that the proposals of MoP, Gol, are not binding on the States and SERCs and that uniform targets under RPPO for all the States is an imprudent and impracticable proposal, with the kind of diversity relating to RE sources available in different States. The apprehension of TSDISCOMs about imposition of penalties for non-compliance of RPPO, on the face of it, is artificial for the simple reason that the Gol has been constrained not to go ahead with its proposed amendments to the EA, 2003, over the years, in the face of strong opposition to the same from several quarters, including the Government of Telangana State. Arbitrary actions and orders of the Gol can always be contested legally. TSDISCOMs need not be apprehensive about meeting RPPO targets likely to be imposed in future and take hasty decisions to enter into long-term PPAs to purchase unwarranted RE / NCE in advance based on presumptions, as any such targets cannot be imposed to be achieved immediately; as and when targets under RPPO are determined, there will be adequate time for TSDISCOMs to achieve the same, as the Commission's latest RPPO Regulation makes it clear abundantly.

TSDISCOMs' Replies

21. TSDISCOMs have been executing the power purchase agreements taking into consideration increase in the load growth in the State and to meet the additional demand of Lift Irrigation Projects to ensure 24x7 uninterrupted power supply to all the categories of the consumers including the Agricultural consumers. Besides it is also necessary to take into consideration the proportionate increase in RPPO requirement in line with growing demand. As such, TSDISCOMs entered into PUAs for procurement of 1692 MW solar power for fulfilling the RPPO requirements and also for meeting the increasing demand. It is pertinent to submit that such procurement at a tariff below Rs.3/kWh would result in reducing the overall power purchase cost.

Commission's View

22. The Commission takes note of the submissions of the stakeholder and TSDISCOMs.

Issue 5: Necessity for power purchase from NTPC

Stakeholder Comments

23. In the retail supply tariff order for 2022-23, the Commission has approved availability of 82492.57 MU and requirement of despatch of 78274.05 MU, with a surplus of 4218 MU. At the same time, during some months of 2022-23, the Commission has determined a requirement of short-term purchases of 2171.87 MU and total surplus of 6390.39 MU. It shows that due to purchase of 2171.87 MU under short-term arrangement, i.e., from the exchanges and the market, TSDISCOMs will be constrained to back down thermal power to that extent and pay fixed charges therefor. Addition of the proposed 1692 MW solar power from NTPC would lead to backing down of thermal power to that extent and payment of fixed charges therefor. It also further confirms that the NCE / RE already available/to be purchased from NTPC under the subject arrangement cannot meet peak demand. If it meets peak demand, to what extent the proposed purchases under short-term arrangement can be reduced need to be explained by TSDISCOMs.

24. In the retail supply tariff order for 2022-23, if the Commission has determined availability and requirement of power during 2022-23, without taking into account 1692 MW solar power from NTPC, then availability of surplus power would increase,

with the proposed commencement of supply as per the scheduled dates of commencement of supply in the months of November and December, 2021 and February and April, 2022, as shown in the subject agreements.

TSDISCOMs' Replies

25. The growing demand especially from LI loads and facilitation of continuous reliable 24x7 supply resulted in the grid becoming more dynamic. As such, it is necessary to estimate the loads more crucially and get prepared by way of long term as well as short term planning. Taking this into consideration the present procurement is proposed which will enable to meet the growing demand. In order to honour the must-run status of these solar plants merit order despatch would help TSDISCOMs in reducing the overall power purchase cost as the thermal generators of higher variable cost can be backeddown.

26. Out of 1692 MW, capacity of around 199.72 MW has been early commissioned as on date and the rest of capacity is proposed to be commissioned from April 2022 till October 2022. The present procurement of Solar power is envisaged not only to meet the growing demand but also to reduce the average power purchase cost. The availability of surplus power due to purchase of this additional solar power would only be momentary and facilities for sale of such excess power in the open market through GTAM/GDAM can also be availed by TSDISCOMs.

Commission's View

27. The Commission takes note of the submissions of stakeholder and TSDISCOMs.

Issue 6: Surplus power during non-operation of LIS

Stakeholder Comments

28. The reply of TSSPDCL that the requirement for purchase of RE power is increased for meeting proportionate increase in RPPO in view of increased loads due to the upcoming Lift Irrigation projects is vague and generalised in nature. While issuing the retail supply tariff order for the year 2022-23, the Commission has taken requirements of power for lift irrigation schemes also. To the tariff proposals of TSDISCOMs, we already pointed out that the submissions of TSDISCOMs in their

ARR and tariff proposals for the year 2022-23 relating to requirement of power by the lift irrigation schemes are full of uncertainties and the replies of TSDiscoms were evasive. It is to be clarified whether lift irrigation projects will be operated throughout the day and year or whether water will be pumped depending on availability and requirement, daily and seasonally. If water for lift irrigation projects is pumped subject to availability and requirement, daily and seasonally, during the periods of their non-operation, the solar power proposed to be purchased from NTPC becomes surplus, unless supplied to meet demand of other consumers. TSDISCOMs have not explained whether the solar power which becomes surplus during the periods of non-operation of LISs can be supplied to other consumers, that, too, without backing down thermal power.

29. When TSDISCOMs project availability of surplus/deficit during a financial year, say, 2022-23, it must be based on projected demand and availability of power daily and monthly. On the matter whether thermal power stations will be backed down to purchase power from must-run RE units, TSDISCOMs are equally evasive by contending that depending on the grid load dynamics, steps would be taken for merit order despatch in case of grid constraints.

TSDISCOMs' Replies

30. The operation of grid which is dynamic in nature purely depends on the load at a particular time. The proposed solar procurement is not alone for meeting the LI loads but also for meeting other industrial & agricultural loads. Efforts are made to flatten the peak load by way of shifting the LI loads. However, in case of momentary surplus power, to honour the must run status of the solar plants, higher Variable Cost (greater than Rs. 3 / kWh) Thermal plants would be backed down.

31. It is submitted that taking into consideration growing load requirements, TSDISCOMs proposed for procurement of this 1692 MW solar power at cheaper rates. As established earlier, decision for backing down of Thermal stations depends on grid dynamics.

Commission's View

32. The Commission takes note of the submissions of stakeholder and TSDISCOMs.

Issue 7: Tariff for Solar Power

Stakeholder Comments

33. TSSPDCL maintained that comparison of Rs. 2.86 per unit of solar power of NTPC with the present pooled cost of Rs. 4.28 per kWh shows that it helps reducing average cost of power purchase. It is irrational to compare the present cost of purchase of solar power with pooled cost worked out on average taking into account high-cost power from various projects of the past with whom TSDISCOMs had long-term PPAs. Comparison of the projected tariffs for solar power from NTPC should be made with tariffs for solar power discovered through real competitive biddings contemporarily. In other words, even if solar power is required, attempts should be made to procure the same through real competitive biddings to ensure the benefit of competitive tariffs to the consumers. The manner of conducting biddings by SECI on behalf of MNRE has not been within the purview of TSDISCOMs. Orders of CERC on PPAs based on such biddings cannot protect interests of TSDISCOMs, who have no role in floating competitive biddings and framing terms and conditions for the same to ensure participation of as many bidders as possible to ensure competitive tariffs. TSDISCOMs simply avoided to make a comparison of terms and conditions of biddings and tariffs for solar power from NTPC and terms and conditions and tariffs discovered through competitive biddings in the country for solar power during the same period.

34. The contention of TSDiscoms that fall of Solar power tariff has reached a saturation point and tariff below Rs. 3.00 per unit (with exemption of ISTS charges & losses) would be the most economical tariff for TSDISCOMs is contrary to factual position that the tariffs for solar power discovered through competitive biddings in the country came down to as low as Rs. 2 per kWh.

35. When TSDISCOMs contended that the landed cost of solar power from NTPC from its plants in Rajasthan, Gujarat and Tamil Nadu would range from Rs. 2.69 to Rs. 2.74 and Rs. 2.86 per kWh, they did not make it clear whether the cost of inter-

State transmission losses and all the associated costs incorporated in the subject agreements were also taken into account. In the agreements between TSDISCOMs and NTPC, it is clearly stated that ISTS / STU charges and losses, cross subsidy charges, RLDC & SLDC fee, scheduling, generation forecasting fee, etc., shall be in the scope of power user, i.e., all these costs have to be borne by TSDISCOMs. If that was not the case, it should have been made clear in the agreements that no other costs would be required to be borne by TSDISCOMs, except the tariffs shown in the agreements and that the onus for the same would rest with NTPC. TSDISCOMs have neither quoted the relevant provisions therein, nor attached the said order of the GoI to the agreements in support of their clarification that no ISTS charges and losses for solar power of units which are being commissioned till 30.6.2023 would be applicable as per the order of the GoI dated 05.08.2020. TSDISCOMs had extolled earlier the benefits of distributed solar power, i.e., setting up solar power plants nearer to load centres in the State itself, thereby avoiding inter-State transmission losses, charges and other associated costs, as well as reducing transmission losses within the State, claiming that they have been implementing the same. Getting supply of solar power from NTPC's plants in other States goes contrary to this justifiable and prudent stand TSDISCOMs had taken earlier in favour of distributed solar power and practised the same.

TSDISCOMs' Replies

36. The proposed solar power procurement at a tariff from Rs. 2.69 / kWh to 2.86/kWh would help in reducing the overall power purchase cost. It is pertinent to submit that as per the CPSU Scheme SECI was appointed as the authorized agency for conducting bidding in accordance with the guidelines issued by MNRE / MoP. It is relevant to submit that the factors like cost of land, radiance have bearing on the tariff discovered in the competitive bidding. Taking into cognizance that the bid processes have been conducted in line with standard bidding guidelines, CERC deemed it fit to adopt the ceiling usage charges under section 63 of Electricity Act, 2003 in respect of 1692 MW capacity under Tranche I & II.

37. It is submitted that the tariff discovered through Competitive Bidding process is dependent on various factors / parameters such as, location of the plant, cost of land, radiance thereby CUF, Central / State policy, levy of taxes & duties at the time

bidding, whether park concept (where necessary infrastructure is readily available) or individual solar generators etc., Also, tariff discovered is time specific, whereby tariff discovered during a particular period of time is difficult to be compared with later discovered tariffs. The PUAs for the present procurement were signed in 2019 & 2020.

38. In accordance with the MoP order dated 23.11.2021, waiver of inter-state transmission charges is applicable for the Solar, Wind, Hydro PSP and BESS projects commissioned upto 30.06.2025. A copy of the said order is enclosed herewith for ready reference. It was further clarified in the order that the ISTS losses are waived for the projects whose bidding was completed upto 15.01.2021.

39. In light of the said MoP orders, ISTS transmission charges & losses are exempted for the present procurement of 1692 MW Solar power and levy of RLDC / SLDC fee is in line with any other procurement. The advantages of distributed generation nearer to load centres cannot be denied. But, in view of higher land cost and non-availability of land in the Telangana State, it would be challenging to discover tariffs below Rs. 3 / kWh.

Commission's View

40. The Commission is of the view that the tariffs discovered are lower than energy charges of some of the Thermal Power Plants.

Issue 8: Benefits of viability gap funding

Stakeholder Comments

41. Under CPSU scheme phase II, 12,000 MW grid-connected solar photovoltaic power projects are being taken up by Government producers with viability gap funding support with an agreement for selling the power for 25 years from the date of signing the agreement by NTPC and TSDISCOMs. It is claimed that bidding will be on the basis of solar photovoltaic cell and modules manufactured domestically as per specification and testing requirement fixed by MNRE and to adjust the difference in cost of cells and modules manufactured in foreign countries and indigenously, the Gol proposed to provide a viability gap funding of a "maximum" of Rs.76 lakh per MW against an estimated cost of Rs. 48,000 crore for 12,000 MW, as per its order dated March 5, 2019. In the name of "make in India," MNRE can select through SECI

bidders with its terms and conditions which need not necessarily ensure competitive tariffs. Going by the three tariffs shown in the agreements between TSDISCOMs and NTPC, the viability gap funding does not ensure competitive tariffs. In other words, the scheme is really intended to ensure market for private indigenous manufacturers of the choice of MNRE. The very fact that SECI refused to appear before CERC to justify the bidding process it adopted indicates that there has been scope for manipulations in the bidding process itself. Moreover, for solar power plants to be set up by NTPC, why SECI, a relatively new trading agency of the GoI, is chosen by MNRE to conduct the bidding process and imposing the selected bidders on NTPC is a legitimate question. NTPC, which is under Ministry of Power, GoI, is competent to float such competitive biddings independently. In the name of viability gap funding, MNRE arrogated to itself the authority to get the competitive biddings conducted by SECI as per its terms and conditions, leaving no scope for NTPC to take decisions and actions independently.

42. Under the CPSU NTPC phase II scheme for the entire country, out of a total capacity of 12,000 MW, what prompted the Government of Telangana to opt for 1692 MW or 14% is perplexing and inexplicable, especially in view of the fact that 1692 MW of solar power is required neither under RPPO, nor to meet fluctuating demand for power in the State. The benefits of economy of scale for bidding for 12,000 MW, even with the viability gap funding, are not getting reflected in the proposed tariffs. Compared to the tariffs shown in the agreements between TSDISCOMs and NTPC, tariffs for solar power being discovered through competitive biddings in the country during the last two years are very much lower and TSDISCOMs can take benefit of real competitive biddings with a condition to set up solar power plants at load centres in Telangana, especially in view of their earlier stand and practice for distributed solar power.

TSDISCOMs' Replies

43. The Ministry of Power, Government of India, vide orders dated 05.03.2019, has conveyed sanction of the President for implementation of Central Public Sector Undertaking (CPSU) Scheme Phase-II (Government Producer Scheme) for setting up 12,000 MW grid-connected Solar Photovoltaic (PV) power projects by the Government Producers with Viability Gap Funding (VGF) support for self-use or use

by Government / Government entities, either directly or through Distribution Companies (TSDISCOMs) as per the provisions of the scheme. SECI was appointed on behalf of MNRE for conducting Bidding on VGF basis, for selection of Government producers for implementing the Scheme. Taking into cognizance that the bid processes have been conducted in line with standard bidding guidelines, CERC deemed it fit to adopt the ceiling usage charges under section 63 of Electricity Act, 2003 in respect of 1692 MW capacity under Tranche I & II.

44. Taking the growing demands of the State into consideration and to meet the additional demand of the Lift Irrigation Projects taken up by the State Govt, TSDISCOMs have concluding the agreements to ensure 24 Hr uninterrupted power supply to all the categories of the consumers in the state, including the Agricultural consumers. The present procurement of solar power not only helps meet the demand during daylight but also enables TSDISCOMs to cut down the average power purchase cost. Being set up under 'make in India' concept, TSDISCOMs are saved from extra burden on account of levy of Basic Customs Duty.

Commission's View

45. Commission has taken note of the submissions made by stakeholder and TSDISCOMs.

Issue 9: Period for setting up of solar plants

Stakeholder Comments

46. A period of four years from 2019-20 to 2022-23 is provided for adding 12,000 MW solar power capacity under CPSU scheme phase II. It is well known that a period of four years is not required to set up solar power plants and setting up solar power plants and adding required transmission capacity can be coordinated to be completed within a span of one to two years. Giving a period of four years for adding solar power generation capacity provides undue benefit to the bidders to quote old higher rates and actually use the latest technology with lower rates, without providing the benefit of the latter to TSDISCOMs by fixing the tariffs at lower level as per the latest market trends.

TSDISCOMs' Replies

47. Total capacity of 12,000 MW is envisaged under CPSU Scheme Phase-II, which is proposed to be added in 4 years period i.e., from FY 2019-20 to FY 2022-23. The total capacity is segregated into tranches and bidding is conducted separately for each tranche. As such, the period of implementation differs from tranche to tranche. As such the apprehension of quoting higher rates and using latest technology with lower rates is not true. Further, it is also to be taken into consideration that since the PUA ensures for supply of minimum energy, TSDISCOMs can be ensured of that energy.

Commission's View

48. The Commission is in agreement with the replies given by TSDISCOMs.

Issue 10: Scheduled Commercial Operation Date

Stakeholder Comments

49. Though the nine PUAs were signed on different dates, scheduled commercial operation dates (SCOD) and tariffs are different for various projects. The SCODs for three PUAs relating to purchase of 56 MW and 20 MW from NTPC's plants in Gujarat and 230 MW from its plant in Tamil Nadu were signed on 26.11.2020, and the SCODs of the same were shown as 24.12.2021, 9.11.2021 and 19.02.2022, respectively. The PUAs for supply of 350 MW and 250 MW from NTPC's plants in Rajasthan were signed on 30.12.2019, and their SCODs are shown as 28.02.2022. The PUAs for 300 MW, 300 MW, 296 MW and 90 MW from NTPC's plants in Rajasthan were signed on 13.03.2020, and their SCODs are shown as 27.04.2022, 28.02.2022, 27.04.2022 and 19.02.2022. The following points, among others, need to be examined:

- a) There is no justification for different periods of SCODs for these plants from the dates of signing the PUAs. For the first three projects mentioned above, the SCODs are declared within one year to about 15 months from the date of signing PUAs. For the other six plants, the SCODs range from 23 months to 27 months from the date of signing the respective PUAs.
- b) TSDISCOMs have claimed that supply of solar power from these plants has not started yet. They have also not made it clear when supply of

power from these nine projects would commence. It shows that unrelated to requirement of solar power from the subject plants, TSDISCOMs signed the PUAs in advance for higher tariffs.

- c) The dates of signing PUAs, SCODs of the projects concerned and not commencing supply of power from the SCODs give rise to the question whether the SCODs of the plants concerned were declared as shown in the agreements. The gap between SCODs shown is from one year to 27 months from the dates of signing PUAs for the plants concerned confirms that NTPC must have taken advantage of the latest technology and got the benefit of lower capital costs for its plants. Or the same undue benefit must have been ensured to the manufacturers, as per the terms and conditions of the biddings. The difference in tariffs from Rs. 2.86 to Rs. 2.74 and Rs. 2.67 per kWh confirms this fact. However, reduction of tariffs by Rs. 0.12 / kWh for some plants and by 19 paise per kWh for some other plants is not commensurate with the lower tariffs discovered for solar power periodically during the last 27 months in the country, that, too, after NTPC getting the viability gap funding by the GoI and exemption from paying ISTS charges. TSDISCOMs have been deprived of the benefit of real competitive tariffs which have come down to as low as Rs. 2 / kWh for solar power through competitive biddings in the country.
- d) Without establishing and justifying need for solar power from NTPC from specific periods, by entering into PUAs with the latter hastily much in advance, TSDISCOMs have acted in an imprudent manner. The arrangements under the PUAs show that TSDISCOMs would take solar power from NTPC as and when the latter's plants concerned start generation and supply. This is a desultory arrangement not expected of TSDISCOMs and not suited to planned addition of generation capacity based on a realistic load forecast
- e) TSDISCOMs are not expected to enter into long-term PPAs for purchase of RE / NCE based on a presumed requirement of the same in future and unrelated to the RPPO order in force.

TSDISCOMs' Replies

50. It may be kindly noted that the PUAs were signed in three different phases; the SCOD is dependent on the RfS of bidding document. The bidding was conducted tranche wise and the RfS varies from bid to bid. The details of SCOD and revised SCOD (granted in view of COVID-19 pandemic) of the proposed plants is as submitted below:

Table 4: The details of SCOD of the NTPC Solar PV Station

NTPC Solar PV Station	Installed Capacity	Date of PUA	SCOD	Revised SCOD
Devikot, Jaisalmer, Rajasthan	150 MW	30.12.2019	29.09.2021	28.08.2022
Kolayet, Bikaner, Rajasthan	250 MW	30.12.2019	29.09.2021	28.08.2022
Shambu-ki-burj, Bikaner, Rajasthan	300 MW	13.03.2020	12.08.2021	25.10.2022
Nokhra, Bikaner, Rajasthan	300 MW	13.03.2020	12.08.2021	28.08.2022
Fatehgarh, Jaisalmer, Rajasthan	296 MW	13.03.2020	12.08.2021	27.04.2022
Devikot Village, Jaisalmer, Rajasthan	90 MW	13.03.2020	12.08.2021	19.08.2022
Kawas, Surat (D), Gujarat	56 MW	26.11.2020	24.12.2021	24.06.2022
Navalakkapatti, Ettayapuram Taluk, Tuticorin, Tamil Nadu	230 MW	26.11.2020	19.02.2022	19.08.2022

51. As submitted in the above, the SCODs of the plants have been revised in view of the approval accorded by MoP taking into consideration shortage of domestically manufactured Solar PV Cells and COVID-19 pandemic.

52. It is submitted that the tariff discovered through Competitive Bidding process is dependent on various factors / parameters such as, location of the plant, cost of land, radiance thereby CUF, Central / State policy, levy of taxes & duties at the time bidding, whether park concept (where necessary infrastructure is readily available) or individual solar generators etc., Also, tariff discovered is time specific, whereby tariff discovered during a particular period of time is difficult to be compared with later discovered tariffs.

53. TSDISCOMs consent for entering into agreements with NTPC is based on forecasting of the load requirements. Unless arrangement has been made for usage of proposed solar power by way of Agreements, construction & commissioning of the plants does not take place.

54. TSDISCOMs have concluded the PUAs taking the growing demands of the State into consideration and to meet the additional demand of the Lift Irrigation Projects and also to ensure 24x7 uninterrupted power supply to all the categories of the consumers in the state, including the Agricultural consumers. The present procurement of solar power not only helps meet the demand during daylight but also enables TSDISCOMs to cut down the average power purchase cost.

Commission's View

55. The Commission takes note of the requirements of TSDISCOMs in entering into PUAs in view of growing demands of the State.

Issue 11: Payment Security Mechanism

Stakeholder Comments

56. It is provided in the PUAs that TSDISCOMs at their cost shall provide unconditional monthly revolving letter of credit (LC), covering 105% of the one month's billing and also a default escrow agreement. These will add to the costs to be borne by the consumers. One of the two arrangements is enough.

57. The contention of TSDISCOMs that the payment security mechanism in the PUAs is standard clause and is common for all the agreements indicates that the same has been accepted without its justifiability. The so-called standard clause does not protect the interests of the consumers.

58. TSDISCOM's contention that short supplies of solar power below the agreed CUF would be paid @ 25% is in line with the CPSU scheme guidelines and the RfS approved by MNRE / MoP shows that, since such guidelines are there, they are meekly accepted, without questioning their irrationality and imbalance.

TSDISCOMs' Replies

59. The Payment security mechanism in the PUAs is standard clause and is common for all the agreements.

Commission's View

60. The Commission is of the view that opening of Letter of Credit and Escrow Account are standard clauses of PPAs. Such clauses are available in the PPAs between TSGenco and TSDISCOMs also. Further, the clauses of PSAs are as per the Model PSA issued by MoP, Gol.

Issue 12: Short supplies of solar power

Stakeholder Comments

61. The terms and conditions in the agreements once again confirm how NTPC takes TSDISCOMs of the State for a ride. In the said agreements, it is incorporated that, if NTPC short supplies solar power to TSDISCOMs, for the quantum of power which is less than generation under the agreed capacity utilisation factor, it would pay to TSDISCOMs 25% of the so-called power usage charges, that, too, to make good the cost of RPO obligations to TSDISCOMs. NTPC has nothing to do with the RPPO obligations of TSDISCOMs. If NTPC short supplies solar power below the agreed CUF, TSDISCOMs may be constrained to purchase power from other sources during that period at higher tariffs. Whatever NTPC pays to TSDISCOMs should cover at least the difference between the so-called power usage charges and the tariffs to be paid by TSDISCOMs to purchase additional power from other sources during that period.

62. Following short supply of solar power by NTPC, in order to meet the RPPO obligations in force, TSDISCOMs have to purchase the so-called renewable energy certificates at the rate of Re.1 per unit at present. If NTPC pays only 25% of the so-called usage charges, it will work out to 67 to 71 paise per unit, which does not meet even the cost of REC.

TSDISCOMs' Replies

63. The said clause is in line with the CPSU Scheme guidelines and the RfS approved by MNRE / MoP. TSDISCOMs are comfortably meeting the RPPO % mandated by TSERC. The proposed procurement is not only for meeting the load requirements but also helps TSDISCOMs for reducing the overall power purchase cost.

Commission's View

64. The Commission takes note of the submissions of stakeholder and TSDISCOMs.

Issue 13: Generation above maximum CUF

Stakeholder Comments

65. It is incorporated in the agreements that, if TSDISCOMs fail, for any reason, to take solar power generated and supplied by NTPC, they have to pay to the latter 75% of the so-called power usage charges. Let same percentage of tariff be fixed for both TSDISCOMs and NTPC to be paid to each other whenever TSDISCOMs or NTPC fail to take or supply, as the case may be, solar power, fully or partly, under the agreements. Amendments to this effect should be brought about in the agreements. However, it should be made clear in the agreements that, when TSDISCOMs are constrained to back down solar power of NTPC due to reasons of grid security or safety under applicable grid code, TSDISCOMs should not pay any charges to NTPC for such backing down. It is all the more justified in view of the fact that solar power units are enjoying must-run status which compels TSDISCOMs to purchase the same, even if generated and supplied above the agreed CUF, and for that purpose, they have to back down thermal power, in a situation of availability of surplus power, and pay fixed charges for the capacities backed down. At the same time, if solar power cannot meet peak demand, TSDISCOMs will be constrained to purchase power in the market at higher prices. There is no protection to the interests of TSDISCOMs and their consumers from these double burdens that arise as a result of the unilateral arrangement of must-run status given to solar and other RE power plants with a corresponding and binding obligation imposed on TSDISCOMs to purchase such power irrespective of their requirement and cost.

66. It is incorporated in the agreements that the excess generation above the maximum annual CUF shall be transferred to power user (TSDISCOMs) at 75% of the applicable power usage charges. When tariffs are fixed with the agreed maximum annual CUF, it is obvious that, they cover the entire fixed cost. For solar power, there are no variable costs. In other words, NTPC does not incur any additional expenditure for generating solar power above the agreed CUF. Therefore, it is absurd to demand and agree to pay 75% of the so-called power usage charges

for solar power generated and supplied above the agreed CUF. For any such excess generation and supply of solar power to TSDISCOMs by the NTPC above the agreed CUF, an incentive of 25 paise per kWh, without any tariff, fully or partly, is fair enough. The related terms and conditions in the agreement should be amended accordingly. If NTPC units fail to generate solar power at agreed CUF, they have to face it as a business risk, having got the undue advantage of must-run status, guarantees for purchase of that power and payment for the same.

67. In the supplementary agreement dated 30.12.2020 for supply of 90 MW @ Rs. 2.74 per kWh, it is incorporated that “the maximum Annual CUF against the contracted capacity (i.e., 90 MW) is 27.02% (213.17 MU on Annual Basis) provisionally for the first year, subject to revision after one year of operation. The excess generation above the maximum Annual CUF shall be transferred to Power User at 75% of the applicable Power Usage Charges.” This shows that there is scope for achieving higher CUF than what is shown in the PUAs. In the light of the proposed scheduled dates of commercial operation of the units in nine PUAs, it is much more so. As such, the CUFs need re-examination and re-determination upwards and based on that revision of tariffs downwards. For the reasons explained above, for excess generation above the determined CUF, an incentive of 25 paise per kWh, without any tariff, fully or partly, is fair enough. The related terms and conditions in the agreement should be amended accordingly.

TSDISCOMs’ Replies

68. Payment of 75% Usage charges for the generation above maximum CUF specified in the respective agreements is in line with the CPSU scheme & standard bidding guidelines issued by MoP. It is submitted that article 3.6 of the PUA clearly stipulates that no solar power shall be backed down except for cases where the back down is on account of events like consideration of grid security or safety of any equipment or personnel or such other conditions.

69. Payment of 75% Usage charges for the generation above maximum CUF specified in the respective agreements is in line with the CPSU scheme & standard bidding guidelines issued by MoP.

Commission's View

70. The Commission is of the view that Renewable Generation is provided the "must-run" status to promote such generation as per the provisions in the Electricity Act, 2003. Further, the clauses in PSA are as per the Model PSA issued by MoP, Gol.

Issue 14: Promotion of "make in India" scheme

Stakeholder Comments

71. TSDISCOMs submitted that they are purchasing the subject solar power from NTPC to promote "make in India" scheme. In reality, they are promoting private manufacturers selected under the terms and conditions of bidding decided by MNRE at the cost of consumers of power in the State, obviously.

TSDISCOMs' Replies

72. Make in India concept is one among the various advantages envisaged by TSDISCOMs with the proposed procurement of 1692 MW Solar power under CPSU Scheme. Since the scheme mandated use of domestically manufactured solar cells and modules, levy of BCD can be avoided.

Commission's View

73. The Commission is in agreement with the reply of TSDISCOMs.

Issue 15: exemption from levy of ISTS Transmission charges and losses

Stakeholder Comments

74. The contention of TSDISCOMs that they are purchasing this power on the ground of "saving on power costs" also is untenable, because the tariffs incorporated in the PUAs are higher compared to the tariffs for solar power discovered through competitive biddings in the country and compared to the benefits of decentralised distribution of solar power by setting up units near load centres in the Telangana State.

TSDISCOMs' Replies

75. With exemption from levy of ISTS Transmission charges and losses, the procurement of this 1692 MW Solar from ISTS projects is as good as procurement of power within the State. With increasing land cost in the Telangana State, which is a

major factor determining the tariff, discovering tariffs below Rs.3/kWh would be challenging. As such TSDISCOMs are benefitted in both the ways, viz., availing power at competitive tariff and thus enabling to reduce the average power purchase cost.

Commission's View

76. The Commission has noted the submissions of the stakeholder and TSDISCOMs. Waiver of ISTS transmission losses are applicable for 1692 MW solar power through NTPC as the bidding was completed before 15.01.2021 (as per MoP, GoI order dated 23.11.2021).

Issue 16: Necessity for power purchase from NTPC

Stakeholder Comments

77. Though TSDISCOMs contended that they are purchasing this solar power from NTPC to “help meeting renewable power purchase obligations,” they have failed to establish the need for this power to meet demand and fulfil their obligations under RPPO order in force. TSDISCOMs have to give details of requirement of power, its availability under PPAs in force and from power projects under execution in the State public sector with whom they had or will be having PPAs on long-term basis during the current financial year and the next four years, at least, to ascertain whether the subject solar power is required or not.

78. When renewable energy is required and its purchase justified in terms of meeting demand, costs of purchase and technical requirements like integration with the grid, such justifiable purchase automatically adds to green portfolio to sources of power.

79. For the reasons explained above, the subject power from NTPC is not required, price not justified, options for cheaper solar power are available through real competitive biddings, scope for lesser expenditure for evacuation of decentralised distribution of solar power in the State itself is available, relatively advantageous terms and conditions in the PPAs can be ensured, and GoTS can provide possible support for setting up solar power plants in the State itself.

80. The subject PUAs were signed by TSDISCOMs before the present RPPO Regulation notified by the Commission, and as such, that Regulation cannot be the basis for justifying signing of the said agreements in the past. Though TSDISCOMs has maintained that the proposed purchase of 1692 MW solar power is intended to meet growing demand and to meet RPPO requirements that would increase with increase in demand, it has not substantiated the same with their long-term load forecast, procurement plan, etc.

81. TSDISCOMs contention that the operation of grid which is dynamic in nature purely depends on the load at a particular time. That is the reason why a near realistic long-term load forecast, procurement plan, etc., and their periodical review based on experience are very much imperative. TSDISCOMs has stated that, as directed by the Commission, the details of power procurement plan and load generation balance for the ensuing 10 years were submitted to it. However, the TSDISCOMs have not justified requirement of the 1692 MW solar power based on the said projections of power procurement plan and load generation balance, etc.

TSDISCOMs' Replies

82. 1692 MW PUA signing was done based on the present and future anticipated RPPOs and also present & future anticipated power demands & consumptions. As directed by the Commission, the details of power procurement plan for FY 2022-23 and load forecast for the ensuing 10 years has been submitted to the Commission.

83. The following advantages are envisaged by TSDISCOMs through the proposed procurement of 1692 MW Solar power under CPSU Scheme:

- (a) Not only help meet the load requirements but also fulfil RPPO;
- (b) Saving on power purchase costs by aiming to reduce the overall average power purchase costs;
- (c) Promoting 'Make in India' concept and thus avoiding levy of BCD which impacts the tariff;
- (d) Adding green portfolio in line with the huge targets envisaged by Gol;
The matter of directing TSDISCOMs to go for competitive bidding is in the purview of the Commission.

Commission's View

84. The Commission has taken note of the submissions made by the stakeholder and reply of TSDISCOMs.

85. In Telangana, the highest peak demand of 14,160 MW was recorded in March 2022 compared to 7000 MW in the year 2014. Though at present the total energy requirement of Telangana is about 65000 MU, the requirement may go up to 88000 MU by 2025-26 due to load growth. Surplus Power availability scenario is temporary as 3000 MW demand only has come up against 11595.02 MW (<https://irrigation.telangana.gov.in/icad/projects/LisUp>) as envisaged in the Lift Irrigation Projects. As Kaleswaram LI project is partly commissioned, the Lift Irrigation projects of Kaleswaram, Palamuru Rangareddy, Sitaram Projects would come into operation in the near future.

86. TSDISCOMs need to plan for the future demands with RE Power, keeping the Thermal Power as the base load stations.

Issue 17: Power Usage Agreement

Stakeholder Comments

87. The intended purport and purpose of terming the agreements “power usage agreement” is inexplicable and incomprehensible. Power is not something TSDISCOMs use and return to the supplier, paying the so-called usage charges. TSDISCOMs are not users of power; they are suppliers of power. It is the consumers who consume power. Therefore, the so-called power usage agreement between NTPC and TSDISCOMs is an agreement between two suppliers of power. It is simply sale of power by NTPC and, at the same time, purchase of the same by TSDISCOMs and such transactions are an end in themselves. Such agreements are being appropriately termed power purchase agreements, as has been the standard practice over the years.

TSDISCOMs' Replies

88. Central Public Sector Undertaking (CPSU) Scheme Phase-II (Government Producer Scheme) is designed for setting up of grid connected Solar PV projects by the Government Producers with Viability Gap Funding (VGF) support for self-use or use by Government/Government entities, either directly or through Distribution

Companies (TSDISCOMs). Since the scheme intends for self-use by Government entities either directly or through TSDISCOMs, the agreements are termed as Power Usage Agreements and the tariff as Power Usage charges.

Commission's View

89. The Commission takes note of the submissions of stakeholder and TSDISCOMs.

Issue 18: Reduction in overall power purchase cost

Stakeholder Comments

90. The contention of TSDISCOMs that procurement of the said solar power at a tariff below Rs. 3/- per kWh would result in reducing the overall power purchase cost again evades the issue of purchasing solar power, through real competitive bidding and plants to be set up in the Telangana State itself to reap the benefit of the lowest possible tariffs. In such a case, the question of exemption from ISTS charges and losses does not arise. Moreover, the admission of TSDISCOMs that, even if thermal power is backed down in merit order despatch in order to purchase must-run 1692 MW solar power, it would result in reducing the overall power purchase cost is generalised and vague, without any substantiation of various issues involved in such purchase, including commercial and technical issues, and savings in power purchase costs.

91. The contention of TSDISCOMs that consent for entering into agreements with NTPC is based on the forecasting the load requirements does not explain how the PUAs with NTPC were based on the forecasting of the load requirements with relevant data and details.

TSDISCOMs' Replies

92. The overall growth rate of electricity demand in the State has been increasing at an average of 8% to 9%. Accordingly, TSDISCOMs are planning for both capacity additions and also complying with RPPO targets. TSDISCOMs substantiated procurement of the present solar power from NTPC by giving following reasons:

- All the old Thermal Power Plants may be closed after their respective PPA periods and in future Battery Energy Storage Systems may cater to the Peak Demand needs.

- Telangana State has no future plans for expansion of Thermal Power Generation Plants to cater to the needs of the Long-Term Power Demands. Instead, going with Solar Power Capacity addition.
- Due to escalation in Coal prices year on year and capital expenditure to be incurred due to introduction of new technology, VC charges of thermal power may increase in coming years; but Solar power tariffs being levelized for 25 years would help in reduction of average Power Purchase Cost.

Apart from these, TSDISCOMs are also ensuring for reduction in average power purchase cost. Keeping all these factors in view, solar power purchases at overall competitive tariffs is justified

Commission's View

93. The justification given by TSDISCOMS is satisfactory.

Issue 19: Sale of excess power in open market through GTAM/GDAM

Stakeholder Comments

94. The contention of TSDISCOMs that availability of surplus power due to purchase of this additional solar power would be only momentary and facilities for sale of such excess power in the open market through GTAM/GDAM can also be availed by TSDISCOMs does not correspond to the ground reality and experience so far. TSDISCOMs has not given details pertaining to availability of surplus power, to what extent it has been backed down and the fixed charges paid therefor and to what extent the surplus power has been sold in the market and the profit and loss incurred as a result of the same during the recent past years. In view of must-run status bestowed on solar power plants, when surplus power is available to TSDISCOMs, the latter cannot sell the surplus and costly thermal power in the market without incurring loss, leave aside earning profit on such purchases. TSDISCOMs has not substantiated its contention to the contrary based on experience so far.

TSDISCOMs' Replies

95. The situation in the Telangana State is unique; TSDISCOMs in the State are obligated with the mandate given by Government of Telangana State to ensure 24x7 power supply to all the consumers and also to meet power demand for huge

seasonal LI schemes. Keeping all these in view, whenever there is surplus power in specific periods, TSDISCOMs are selling it in the market.

Commission's View

96. Since the Renewable Energy projects are accorded must run status, the power from these projects needs to be mandatorily off taken by TSDISCOMs. However, depending on the grid load dynamics, steps have to be taken for merit order despatch in case of grid constraints. Further, the latest market conditions enable TSDISCOMs to sell surplus RE power to the other needy purchasers in real time market through Green Term-Ahead Market (GTAM.). TSDISCOMs by means of economic models to explore for storage of excess solar power, if any, by means of pumped hydro power storage facilities available at Nagarjunasagar and Srisaïlam hydel projects, in managing its peak demand occurring during night-time when the solar power is not available.

Issue 20: Bidding process

Stakeholder Comments

97. The contention of TSDISCOMs that, taking into cognizance that the bid processes have been conducted by SECI in line with the standard bidding guidelines, CERC deemed it fit to adopt the ceiling usage charges under Section 63 of the Electricity Act, 2003 in respect of 1692 MW capacity under Tranche I and II does not clarify, whether the so-called standard bidding guidelines are justifiable or manipulative to favour a few selected bidders of their choice.

TSDISCOMs' Replies

98. The Bidding process is as per the guidelines approved by MoP / Gol.

Commission's View

99. The Commission takes note of the reply of TSDiscoms.

Issue 21: Extension of SCOD

Stakeholder Comments

100. The contention of TSDISCOMs that tariff discovered is time specific, whereby tariff discovered during a particular period of time is difficult to be compared with later discovered tariffs and that the PUAs were signed in 2019 and 2020 and the revised

SCODs of the solar power plants pertaining to 1692 MW, does not confirm wide gap between tariff discovered, time of signing PUAs and revised SCODs and whether is it beneficial to TSDISCOMs and their consumers. The entire process is not in consonance with periodical requirement of 1692 MW solar power by TSDISCOMs. The clarification of TSDISCOMs that the SCODs of the plants have been revised in view of the approval accorded by MoP taking into consideration shortage of domestically manufactured solar PV cells and COVID-19 pandemic, confirms that it is the convenience of the manufacturers of solar PV cells and not periodical requirement of the solar power by TSDISCOMs that has been considered in the entire process.

TSDISCOMs' Replies

101. The SCODs of the projects have been revised by considering the approval accorded by MoP / GoI granting extension of time taking into consideration shortage of domestically manufactured solar PV cells and on account of national lockdown due to COVID-19 pandemic.

Commission's View

102. The Commission takes note of the submissions of stakeholder.

Issue 22: Impact of increase in land cost

Stakeholder Comments

103. The basis for the contention that increasing land cost in the Telangana State is a major factor determining the tariff and that discovering tariffs below Rs.3 per kWh for solar power would be challenging is not substantiated, especially in the light the earlier claims made by TSDISCOMs extolling the benefits of distributed setting up of solar power plants at load centres in the State itself.

TSDISCOMs' Replies

104. Considering the benefits like exemption of ISTS transmission charges & losses and Trading margin in CPSU scheme, it is as good as projects in the State itself. In addition, considering the VGF benefit supported by GoI and higher land costs in Telangana, the subject power purchase is beneficial.

Commission's View

105. The reply of TSDISCOMs is satisfactory.

Summary and Commission's findings

106. The Commission is of considered view that the following main contentions of TSDISCOMs are of significance for approval/consent of the PUAs on procurement of Solar Power from NTPC.

- a) To meet the additional demand arising out of load growth, 24x7 reliable and quality power supply to all the categories of supply including agriculture and Lift Irrigation Schemes;
- b) To meet solar RPPO targets set out by the Commission and reduce emissions;
- c) To get the benefit of waiver of Inter-State Transmission Charges and Losses for a period of 25 years, for the Solar Power projects commissioned by 30th June, 2025 vide MoP order No.23 / 12 / 2016 – R & R-Part (1) [239444], dated 21.06.2021 and MoP order No. 23 / 12 / 2016 - R&R dated 23.11.2021;
- d) Since usage charges for 1,692 MW Solar Photovoltaic (PV) Power Station (Tranche - I & II) connected to the Inter-State Transmission System and selected through competitive bidding process under Central Power Sector Undertaking (CPSU) Scheme Phase-II dated 05.03.2019 were adopted by CERC vide order dated 13.12.2021 in Petition No. 714 / AT / 2021;

107. In view of the above, and as discussed in the foregoing paragraphs on dealing with the issues based on the suggestion / objections / comments received from the stakeholders the Commission hereby accords consent under Section 86 (1) (b) of the Electricity Act, 2003 to the Power Usage Agreements as given below:

Table 2: The Power Usage Agreements (PUAs) consented by the Commission

Sl. No.	Name of the Seller	Location of the Plant	Capacity of Plant in MW	Contracted Capacity	Rate Rs. / kWh	Date of PUA	Date of Supplemental Agreement to PUA
1	NTPC Solar PV Station	Devikot, Jaisalmer, Rajasthan	150	100%	2.86	30-Dec-2019	30-Dec-2020
2		Kolayat, Bikaner, Rajasthan	250	100%	2.86	30-Dec-2019	30-Dec-2020
3		Shambu-Ki-Burj, Bikaner, Rajasthan	300	100%	2.86	13-Mar-2020	30-Dec-2020
4		Nokhra, Bikaner, Rajasthan	300	100%	2.86	13-Mar-2020	30-Dec-2020
5		Fatehgarh, Jaisalmer, Rajasthan	296	100%	2.86	13-Mar-2020	30-Dec-2020
6		Devikot, Jaisalmer, Rajasthan	90	100%	2.74	13-Mar-2020	30-Dec-2020
7		Kawas, Surat, Gujarat	56	100%	2.69	26-Nov-2020	30-Dec-2020
8		Gandhar, Bharuch, Gujarat	20	100%	2.69	26-Nov-2020	30-Dec-2020
9		Navalakkapatti, Ettayapuram Taluk, Tuticorin, Tamil Nadu	230	100%	2.69	26-Nov-2020	30-Dec-2020
		Total	1692				

108. Accordingly, these matters are disposed of.

This Order is corrected and signed on this the 22nd day of June, 2022.

Sd/-
(BANDARU KRISHNAIAH)
MEMBER

Sd/-
(M.D.MANO HAR RAJU)
MEMBER

Sd/-
(T.SRIRANGA RAO)
CHAIRMAN

//CERTIFIED COPY//

ANNEXURE-I
NOTICE



TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
5th Floor, Singareni Bhavan, Red Hills, Lakdi-ka-pul, Hyderabad 500004

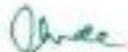
NOTICE

1. TSSPDCL viz., Southern Power Distribution Company of Telangana Limited (TSSPDC) on behalf of TSDISCOMs viz., Southern Power Distribution Company of Telangana Limited (TSSPDC) & Northern Power Distribution Company of Telangana Limited (TSNPDCL) submitted before the Telangana State Electricity Regulatory Commission (TSERC) proposal for consent of Power Usage Agreements(PUAs) and Supplementary Power Usage Agreements entered with M/s NTPC Limited for procurement of 1692 MW Solar power from NTPC ISTS connected solar power projects under CPSU Scheme with the Tariff of Rs. 2.86/kWh for 1296 MW, Rs.2.74/kWh for 90 MW and Rs.2.69/kWh for 306 MW

The TSDISCOMs have requested the Commission to accord consent to the above mentioned PUAs and Supplementary PUAs

2. Copies of the proposals along with the related documents are uploaded on the Commission's website www.tserc.gov.in. Suggestions/Objections/Comments in the subject matter are invited from all stakeholders and public at large, so as to reach the following address on or before **21.04.2022 by 5.00 P.M.**

Commission Secretary (FAC)
Telangana State Electricity Regulatory Commission
5th Floor, Singareni Bhavan, Red Hills, Lakdi-ka-pul,
Hyderabad 500004
E-mail id: secy@tserc.gov.in


COMMISSION SECRETARY(FAC)

DATE: 31.03.2022

ANNEXURE-II

LIST OF STAKEHOLDERS WHO SUBMITTED WRITTEN SUGGESTIONS/ OBJECTIONS / COMMENTS

SI. No.	Name of the stakeholder
1)	Sri M. Venugopal Rao, Senior Journalist & Convener, Centre for Power Studies, Hyderabad.



Indian Express

The Pioneer

BEFORE THE HONOURABLE
TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
 D.No.11-4-660, 5th Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSSPDCL) & **NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSPNDCL)**

PUBLIC NOTICE
 Revised Schedule for O.P.No.46 of 2022

1. TSSPDCL viz., Southern Power Distribution Company of Telangana Limited (TSSPDCL) on behalf of TSDISCOMs viz., Southern Power Distribution Company of Telangana Limited (TSSPDCL) & Northern Power Distribution Company of Telangana Limited (TSPNDCL) issued Public Notice 09.05.2022 regarding Public hearing in the matter of TSDISCOMs proposal for consent of Power Usage Agreements(PUAs) and Supplementary PUAs entered with M/s NTPC Limited for procurement of 1692 MW Solar power from NTPC ISTS connected solar power projects under CPSU Scheme with the Tariff of Rs. 2.86kWh for 1296 MW, Rs.2.74kWh for 90 MW and Rs.2.69kWh for 306 MW on 13.05.2022 at 11.30 AM onwards at TSERC Court Hall. - The Hon'ble TSERC re-scheduled the public hearing in O.P.No.46 of 2022 as detailed below:

Sl. No.	Event	Scheduled Date/Time	Revised Scheduled Date/Time
1	Public hearing in the matter of TSDISCOMs proposal for consent of PUAs and Supplementary PUAs entered with M/s NTPC Limited for procurement of 1692 MW Solar Power from NTPC ISTS connected Solar Power Projects under CPSU Scheme	13.05.2022/ 11.30 AM	16.05.2022/ 11.30 AM

Hyderabad 11.05.2022
 Sd/- Chairman & Managing Director (TSSPDCL) Sd/-Chairman & Managing Director (TSPNDCL)
 R.O. No. : 110-PP/CL-AGENCY/ADVT/1/2022-23 Date: 11-05-2022

BEFORE THE HONOURABLE
TELANGANA STATE ELECTRICITY REGULATORY COMMISSION
 D.No.11-4-660, 5th Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSSPDCL) & **NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSPNDCL)**

PUBLIC NOTICE
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Hyderabad 11.05.2022
 Sd/- Chairman & Managing Director (TSSPDCL) Sd/-Chairman & Managing Director (TSPNDCL)
 R.O. No. : 110-PP/CL-AGENCY/ADVT/1/2022-23 Date: 11-05-2022

Marana Telangana

Namasthe Telangana

గౌరవనీయు తెలంగాణ స్టేట్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ సమాజ్ కమిషన్
 D.No. 11-4-660, 5వ అంతస్తు, సింగరేణి భవన్, రెడ్ హిల్స్, హైదరాబాద్-500004

SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSSPDCL) & **NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSPNDCL)**

వివేచన ప్రకటన
 O.P. నం. 46/2022 కొరకు పరిమోదన పేర్కొనడం

1. ఈ సోదరులు ద్వారా తెలంగాణ రాష్ట్ర విద్యుత్ సరఫరా కమిషన్ (TSERC) అనగా పబ్లిక్ పవర్ డిస్ట్రిబ్యూషన్ కంపెనీ ఆఫ్ తెలంగాణ లిమిటెడ్ (TSSPDCL) & నార్థన్ పవర్ డిస్ట్రిబ్యూషన్ కంపెనీ ఆఫ్ తెలంగాణ లిమిటెడ్ (TSPNDCL) వారు పబ్లిక్ విద్యుత్ సరఫరా సంస్థలకు (PUAs) మరియు అదనపు (PUAs) సమావేశం Rs. 2.86kWh for 1296MW, Rs. 2.74kWh for 90 MW and Rs. 2.69kWh for 306 MW లాంటివి CPSU పథకం క్రింద సౌకర్య పుష్కల ప్రాజెక్టులకు సంబంధించి TSDISCOMలు ప్రతిపాదనలు సమర్పించి తేదీ: 09.05.2022 నాటి వాణిజ్య ప్రవచన సంబంధించి NTPC ISTS నుండి 1692MW సౌకర్య పుష్కల M/s NTPC Limitedలో అనుమతి కోరుతున్నారని TSERC కోర్టు వారు పేర్కొని 13.05.2022 నుండి 11.30 గంటల వరకు ప్రాజెక్టులకు సంబంధించి సేవలను సేవించారు. అనుమతి కోరుతున్న TSERC పేర్కొని O.P.No. 46/2022లో ప్రకటించారు కొరకు క్రింద పేర్కొనినట్లు 16- మార్చి 2022 వేసారు.

క్ర. సం.	వివేచన	పేర్కొనడం తేదీ/సమయం	పరిమోదన పేర్కొనడం తేదీ/సమయం
1.	CPSU పథకం క్రింద సౌకర్య పుష్కల ప్రాజెక్టులకు సంబంధించి NTPC ISTS నుండి 1692MW సౌకర్య పుష్కల M/s NTPC Limitedలో అనుమతి కోరుతున్న PUAs మరియు అదనపు PUAs లకు సంబంధించి TSDISCOMలు ప్రతిపాదనలు సమర్పించి ప్రకటించారు సేవలను	13.05.2022/ ఉ. 11.30	16.05.2022/ ఉ. 11.30

హైదరాబాద్
 11.05.2022
 స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSSPDCL) స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSPNDCL)
 DIPR RO NO. 1382-PP/CL/ADVT/1/2022-23, Dt: 11-05-2022

గౌరవనీయు తెలంగాణ స్టేట్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ సమాజ్ కమిషన్
 D.No. 11-4-660, 5వ అంతస్తు, సింగరేణి భవన్, రెడ్ హిల్స్, హైదరాబాద్-500004

SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSSPDCL) & **NORTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LIMITED (TSPNDCL)**

వివేచన ప్రకటన
 O.P. నం. 46 ఆఫ్ 2022 కొరకు పేర్కొనడం

TSERC కోర్టు పేర్కొనినట్లు 13.05.2022 నుండి 11.30 గంటల వరకు ప్రాజెక్టులకు సంబంధించి NTPC ISTS నుండి 1692 MW సౌకర్య పుష్కల M/s NTPC Limitedలో అనుమతి కోరుతున్న PUAs మరియు అదనపు PUAs లకు సంబంధించి TSDISCOMs ప్రతిపాదనలు సమర్పించి ప్రకటించారు సేవలను

క్ర. సం.	వివేచన	పేర్కొనడం తేదీ/సమయం	పరిమోదన పేర్కొనడం తేదీ/సమయం
1	CPSU పథకం క్రింద సౌకర్య పుష్కల ప్రాజెక్టులకు సంబంధించి NTPC ISTS నుండి 1692 MW సౌకర్య పుష్కల M/s NTPC Limitedలో అనుమతి కోరుతున్న PUAs మరియు అదనపు PUAs లకు సంబంధించి TSDISCOMs ప్రతిపాదనలు సమర్పించి ప్రకటించారు సేవలను	13-05-2022/ ఉ.11.30 గం.	16-05-2022/ ఉ.11.30 గం.

హైదరాబాద్
 11-05-2022
 స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSSPDCL) స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSPNDCL)
 DIPR RO.No. 1382-PP/CL/ADVT/1/2022-23, Dt: 11-05-2022

Etemaad

روبرو معزز
تلكاتنه استیت الکٹریسیٹی ریگولیری کمیٹی
 500004 آءااء ٤٦٠٠٠٤

اعلان عام
 نظر ثانی شدہ شیڈول برائے او پی نمبر 46 آف 2022

1. اس سہولتوں کے ذریعے ریگولیری کمیٹی (TSERC) کے پاس پبلک پاور ڈسٹری بیوشن کمپنی آف تلانگنا لمیٹڈ (TSSPDCL) اور نارتھ پاور ڈسٹری بیوشن کمپنی آف تلانگنا لمیٹڈ (TSPNDCL) کے ذریعے پبلک ویڈیو سہولتوں (PUAs) اور سپلیمنٹری PUAs کے لیے درخواستیں جمع کرائی گئی ہیں۔ یہ درخواستیں 09-05-2022 کو جمع کرائی گئی تھیں۔

ক্র. সং.	বিবেচনা	পেঁকোঁনডোঁ তেঁদী/সময়	পরিমোঁডন পেঁকোঁনডোঁ তেঁদী/সময়
1.	CPSU পথক ক্রিঁদ সৌকর্য পুশকল প্রাজেক্টুলকু সন্বন্ধিঁচিঁ NTPC ISTS নুঁদি 1692MW সৌকর্য পুশকল M/s NTPC Limited-লৌ অনুমতি কোঁরুতুন্ন PUAs মরিনু অদনপু PUAs লকু সন্বন্ধিঁচিঁ TSDISCOMs প্রতিপাদনলু সন্নর্পিন্চিঁ প্রকটিন্চিঁ সেরলনু	13-05-2022/ ఉ. 11.30	16-05-2022/ ఉ. 11.30

హైదరాబాద్
 11-05-2022
 స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSSPDCL) స/- చైర్మన్ & మేనేజింగ్ డైరెక్టర్ (TSPNDCL)
 R.O. No. : 110-PP/CL-AGENCY/ADVT/1/2022-23 Date: 11-05-2022

ANNEXURE-IV

**LIST OF STAKEHOLDERS WHO ATTENDED PUBLIC HEARING ON 16.05.2022,
AT 11.30 AM, AT TSERC COURT HALL**

Sl. No.	Name of the stakeholder
1)	Sri M. Venugopal Rao, Senior Journalist & Convener, Centre for Power Studies, Hyderabad.

