

**ODISHA ELECTRICITY REGULATORY COMMISSION**  
**BIDYUT NIYAMAK BHAWAN**  
**PLOT NO.-4, CHUNOKOLI, SHAILASHREE VIHAR**  
**BHUBANESWAR - 751 021**  
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**Present: Shri S. C. Mahapatra, Chairperson**  
**Shri G. Mohapatra, Member**  
**Shri S. K. Ray Mohapatra, Member**

**Case No. 70/2022**

GRIDCO Limited ..... Petitioner

Vrs.

NTPC & Others ..... Respondents

**In the matter of:**     **Application under Section 86(1)(b) of the Electricity Act, 2003 read with Section 11(1)(e) & Section 21(4)(b) of the OER Act, 1995 seeking approval of Power Purchase Agreement (PPA) executed on 20.01.2007 between M/s. NTPC Ltd. and GRIDCO for purchase of 2000 MW of power from Talcher Super Thermal Power Station (TSTPS), Stage-II, Odisha.**

**For Petitioner:**     Ms. Madhusmita Mishra, DGM (PP), GRIDCO & Shri Prasant Kumar Das, CGM (PP), GRIDCO Ltd..

**For Respondents:**     Shri Puneet Munjal, (Head Regulatory Affairs), TP Central Odisha Distribution Ltd., Shri K. C. Nanda, G.M. (RA & Strategy), TPWODL, Ms. Malancha Ghose, DGM (RA), TPNODL, Shri V. Wagle, (Head Regulatory Affairs), TPSODL and Shri Umashankar Mohanty the representative of M/s. NTPC Ltd.  
Nobody is present on behalf of DoE, GoO

**ORDER**

**Date of Hearing: 11.04.2023**

**Date of Order: 15.04.2023**

The Petitioner-GRIDCO has filed the instant application for approval of the Power Purchase Agreement (PPA) executed between the NTPC and GRIDCO on 20.01.2007 for purchase of power from 2000 MW Talcher Super Thermal Power Station, Stage-II (in short TSTPS-II) of NTPC in the Eastern Region. GRIDCO has prayed the Commission to accord approval for purchase of State's share of 10% power from 2000 MW (4x500 MW) TSTPS-II with the terms and conditions stipulated in the said PPA with regard to the fact that, GRIDCO has been drawing power from the said generating station from

April, 2007 and since then it is being regularly considered by the Commission in the ARR and BSP Orders of GRIDCO.

2. The Petitioner-GRIDCO has submitted that:

- a) The installed capacity of TSTPS-II is 2000 MW (4x500 MW) and the Commercial Operation Dates (COD) of the four Units are 01.08.2003, 01.03.2004, 01.11.2004 and 01.08.2005 respectively.
- b) The Ministry of Power, Government of India, vide its letter dated 26.08.2006, has consented for approval of 10% share from TSTPS-II in favour of Odisha. Accordingly, the Department of Energy, Govt. of Odisha, vide its letter dated 06.09.2006, had requested NTPC to ensure allocation of 200 MW power from this power station as home state share of Odisha.
- c) GRIDCO has entered into PPA with NTPC on 20.01.2007 to procure power from TSTPS-II as per share allocation of 10 % capacity, subject to finalization by MoP, GoI after signing of PPA.
- d) GRIDCO is procuring power from TSTPS-II with effect from April'2007 for the consumers of the State, which has already been approved by this Commission in the ARR and BSP Orders of GRIDCO from time to time.
- e) At present, GRIDCO has share allocation of 200 MW i.e., 10% of the installed capacity in TSTPS-II, excluding the solar equivalent bundled thermal power.

3. In its application, GRIDCO has submitted that it prefers to avail power from TSTPS-II on the following grounds:

- a) TSTPS-II is a Pit Head generating station. Hence, the Energy Charge Rate (ECR) of this power station is low due to lower cost of coal from the captive coal mines on account of less transportation cost.
- b) As per the Tariff Application filed by NTPC before the CERC for FY 2019-24, the normative costs arrived for TSTPS-II are:

Fixed Cost : 89.05 Paisa/kWh (for FY 2022-23)

Variable Cost : 185.00 Paisa/kWh

Total Cost : 274.05 Paisa/kWh

- c) In the ARR Orders of GRIDCO, drawl of power from TSTPS-II has always been approved by the Commission for State consumption basing upon the Merit Order Despatch (MOD) principle. It is the cheapest source of power among all thermal generating stations available for Odisha.

- d) GRIDCO has been paying the Fixed Cost for TSTPS-II for a longer period (more than 15 years). Thus, it is prudent to avail power from this generating station when the plant is nearing to depreciate in full.
- e) From the Load Generation Balance Report (LGBR) projected by GRIDCO for the period 2022-30, there would be a peak power deficit to the tune of 336-1676 MW. If the procurement of power from TSTPS-II is not considered, the peak deficit would be enhanced further by 154 MW approximately. As per the said LGBR, now GRIDCO is already having peak shortfall. Unless there is adequate capacity to meet this peak shortfall, in case of sudden breakdown of large units of 500 MW and above, reliable and uninterrupted power supply strategy of the State Government would be at a stake.
- f) In view of uncertainty in supply of power by IPPs like JITPL and Vedanta and frequent outage of large size thermal units, GRIDCO shall be in dire need of thermal power in order to provide base load support during evening peak hours. Power procurement from newly operational super critical thermal units, such as Barh STPS (Unit 2 & Unit 3), North Karanpura STPS Stage-I, TTPS Expansion Project, and NLC, Talabira, which are yet to be commissioned, may take time for stable operation in a sustainable manner.
- g) As the prevailing market rates are quite high due to PAN India coal scarcity, many industries in the State have expressed their willingness to further enhance their existing Contract Demands. As per initial estimates, the above enhancements may lead to around 200-300 MW to meet further increase in demand. During FY 2022-23, around 648 MW additional power has been released in favour of the DISCOMs to be availed by their consumers.
- h) In the recent past, the State has witnessed unexpected power crisis due to rise in power demand in the post pandemic period, outage of the super critical thermal units like OPGC Stage-II and Darlipali Stage-I and unavailability of coal. During this period, GRIDCO was compelled to procure power from the un-reliable power market at a maximum cap rate of Rs.12/- per unit which is much higher than the rate of TSTPS Stage-II. In view of the above experience of acute power shortage scenario in the country, requirement of thermal power cannot be completely ruled out for meeting the ever-increasing demand of power in spite of accelerated infusion of RE power to the energy mix. As a consequence of such power crisis, the rates discovered in Power Exchanges were exorbitantly high and in some days power was not available in the Exchanges even at the highest capping price. The

average rate of Day Ahead Market for the months of April, 2022 to September, 2022 was much higher than that from TSTPS-II. According to GRIDCO, in the current power scenario of the country and recent market trend, procurement of power from Power Market is not at all economical and reliable. Hence, it may be prudent for GRIDCO to procure power from TSTPS-II with affordable price.

- i) In the present scenario, thermal power is the only available compensating power against the increasing addition of solar power to meet RPO as other sources of storage energy are still not viable and not expected in near future.
4. The Respondents TPNODL and TPWODL have submitted that the Commission, in the BSP orders of GRIDCO for the FY 2022-23 and FY 2023-24, has allowed procurement of power from TSTPS-II at a tariff of 256.85 p/u and 285.15 p/u respectively, which are the lowest among the central thermal power stations for the corresponding financial years. Hence, the Commission may consider the petition of GRIDCO for approval of the subject PPA suitably.
5. The Respondent-TPCODL has submitted that the Commission has approved the cost of 285.15 p/u towards procurement of power from TSTPS-II consisting of fixed cost @73.87 p/u, energy charge @197.92 p/u and other costs @13.36 p/u. GRIDCO has placed the advantage of TSTPS-II as it is a pit-head thermal power plant, so the fuel is readily available and transportation cost of coal will be less resulting in less ECR. Additionally, the tariff is quite reasonable with variable cost @197.92 p/u, which is within the merit order. Therefore, considering the TSTPS-II as a pit-head power station with dedicated coal availability and supplying power to the State at reasonable tariff and also in the vesting order it is mentioned to avail power from this power station, TPCODL has no objection to the post facto approval of the subject PPA as per the existing terms and conditions.
6. During hearing, the Commission inquired from GRIDCO and NTPC about inclusion of cost of FGD in the estimated tariff and preparedness to comply with the requirements of CEA (Flexible Operation of Coal Based Thermal Generating Units) Regulations, 2022 regarding flexible operation and ramp rate. GRIDCO and NTPC informed that the estimated tariff is exclusive of FGD cost. NTPC confirmed its preparedness to comply with the requirements of above CEA's Regulations.
7. Heard the parties through hybrid mode (both physical and virtual mode) and their written notes of submission and arguments during hearing are considered.

8. The Commission observed that:
- a) The TSTPS-II of NTPC, having installed capacity of 2000 MW (4x500 MW), is a pit-head power station situated in the State of Odisha and supplying 10% State share of power to GRIDCO from April, 2007 onwards.
  - b) Being a pit-head power station with dedicated coal availability, the tariff of TSTPS-II is comparatively on lower side among the existing thermal power stations. As per the tariff filing of NTPC before CERC for the control period FY 2019-24 the estimated tariff is 274.05 p/u (fixed cost - 89.05 p/u and variable cost - 185.00 p/u) excluding FGD cost.
  - c) The Commission, in the ARR and BSP orders, has been allowing GRIDCO to avail power from TSTPS-II for State consumption as the tariff of this power station comes under merit order. Further, the discovered price in Power Exchange is too high as compared to the estimated tariff of this power station.
  - d) As per the LGBR projected by GRIDCO for the period 2022-30, the State would have a peak deficit in the range of 336 to 1676 MW during this period. If the drawl from TSTPS-II is not considered, the peak deficit may increase further.
  - e) Requirement of thermal power cannot be ruled out in spite of accelerated infusion of Renewable power in the energy mix. In the present scenario, the flexible operation of thermal units is essential for balancing against the increasing Renewable power integration to the grid.
  - f) The concerned DISCOMs have also agreed for availing such low cost power from TSTPS-II of NTPC.
9. In view of the above observations and considering the uncertainty in availability of power from IPPs and sudden forced outage of large generating units of capacity more than 500 MW, the Commission is inclined to accord post facto approval to the PPA executed between NTPC and GRIDCO on 20.01.2007 for purchase of State share of power by GRIDCO from Talcher Super Thermal Power Station, Stage-II (TSTPS-II) of NTPC for ensuring reliable and uninterruptible (24x7) power supply to the consumers of the State. However, GRIDCO is directed to approach the Commission for approval of PPAs prior to availing power from the concerned power station in future.
10. With the above observations the Case is disposed of.

Sd/-  
**(S. K. Ray Mohapatra)**  
Member

Sd/-  
**(G. Mohapatra)**  
Member

Sd/-  
**(S. C. Mahapatra)**  
Chairperson