

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 392/MP/2014

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri M. Deena Dayalan, Member

Shri A.K Singhal, Member

Shri A.S.Bakshi, Member

Date of Hearing: 14.10.2014

Date of Order : 17.10.2014

In the matter of

Petition seeking permission for allowing injection of infirm power for testing including full load testing for Unit-3 (500 MW) of Vallur TPP of NTECL beyond six months from initial synchronization.

And

In the matter of

NTPC Tamil Nadu Energy Company Limited
No. 123, G- Block, Anna Nagar (East)
Chennai - 600102.

....Petitioner

Vs

1. Transmission Corporation of Andhra Pradesh Limited
Vidyut Soudha, Khairatabad,
Hyderabad- 500082
2. Southern Power Distribution Company of A.P. Limited
D. No: 19-13-65/A,
Srinivasapuram,
Tiruchanoor Road,
Tirupathi (AP)- 517501
3. Eastern Power Distribution Company of A.P. Limited
P&T Colony, Seetammadhara,
Vishakapatnam (AP)- 503013.



4. Transmission Corporation of Telungana Limited
Vidyut Soudha, Khairatabad,
Hyderabad- 500082
5. Northern Power Distribution Company of A.P. Limited
H. No. 1-1-504, opp. NIT petrol pump,
Chaityanayapuri colony,
Hanmkonda,
Warangal (Telangana)- 506004
6. South Power Distribution Company of Telangana Limited
2nd floor, H. No. 6-1-50,
Mint Compound, Hyderabad- 500063.
7. Power Company of Karnataka Limited
KPTCL Complex,
Kaveri Bhawan,
Bangalore- 560009.
8. Bangalore Electricity Supply Company Limited
Krishna Rajendra Circle,
Bangalore- 560001.
9. Mangalore Electricity Supply Company Limited
Paradigm Plaza, A.B. Shetty Circle
Mangalore- 575001.
10. CESC Mysore (Chamundeshwari Electricity Supply Corp. Ltd.)
No. 927, L.J Avenue,
New Kantharaj Urs Road,
Saraswathipuram
Mysore- 570009.
11. GESCOM (Gulbarga Electricity Supply Corp. Ltd.)
Main Road, Gulbarga,
Gulbarga, Karnataka- 585102.
12. HESCOM (Hubli Electricity Supply Corp. Ltd.)
P.B. Road, Navanagar,
Hubli- 580025.
13. Kerala State Electricity Board
Vaidyuthi Bhavanam, Pattrom

Thiruvananthapuram- 695004.

14. Tamil Nadu Generation and Distribution Corporation Limited
144, Anna Salai,
Chennai- 600002.
15. Electricity Department
Govt. of Puducherry
137, NSC Bose Salai,
Punucherry- 605001.

....Respondents

Following were present:

Shri K.M.K. Prusty, NTECL
Shri S. Muley, NTECL
Shri S.K. Mandal, NTECL

ORDER

This petition has been filed by the petitioner, NTPC Tamil Nadu Energy Company Limited (NTECL), seeking permission of the Commission for injection of infirm power into the grid during testing including full load testing beyond the period of 6 months from the date of first synchronization up to declaration of commercial operation of unit 3 of the Vallur thermal power project (generating station) (3x500 MW) (hereinafter referred to as 'the project') in terms of Clause (7) of Regulation 8 of the Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2009 as amended from time to time (Connectivity Regulations).

2. The petitioner has submitted that the 1st and 2nd units of the generating station have already been declared commercial on 29.11.2012 and 25.8.2013

respectively. The third unit of the generating station (Unit) was synchronized on 28.2.2014, which was expected to be declared under commercial operation by 28.8.2014. The various systems/works required for declaration of commercial operation are in advanced stage of completion.

3. The Commission by its order dated 25.8.2014 in Petition No. 129 /MP/2014 had allowed injection of infirm power from the Unit of the project for testing including full load testing till 15.10.2014 or upto the declaration of commercial operation of unit, whichever is earlier. The petitioner has submitted that COD of the Unit could not be achieved by 15.10.2014 due to technical issue relating to failure of CW pump.

4. The petitioner in this petition, while praying for extension of time for testing and full load testing and consequent injection of infirm power, has mainly submitted as under:

(a) Boiler was lighted up to 12.9.2014 for start trial operation. Steam dumping has been carried out to achieve the desired parameter for turbine rolling. The turbine rolling was about to be started after achieving the desired steam parameters. However, unexpected heavy leakages in pipe lines of HVAC (AC and Ventilation) system, led to tripping of air conditioning system of Unit control room. Unit was stopped on advice of M/s BHEL to prevent the failure of electronic cards in UCB due to insufficient cooling. However, HVAC

leakages were attended and in addition, tower ACs were also provided for the control room as a standby cooling system.

(b) During the period one of CW Pumps tripped on very high vibration. After inspection, catastrophic failure observed in the CW Pump. Sea water with IDCT is envisaged for the project as circulating water for condenser cooling system. The project has been provided with 6 nos. of CW Pumps for three units (2 per unit). Since the pumps are of vertical wet pit and impeller pull out type pumps manufactured by M/s WPIL in collaboration with MHI (Japan), stand by pumps are not envisaged in the scheme. The petitioner has been facing problems with the availability of pumps owing to high pump vibration and high motor thrust bearing temperature.

(c) The problems associated with pumps have taken up with WPIL (manufacturer), reviewed the causes of failures and revised several engineering aspects to overcome the vibration problem. The pump has under several modifications such as modification at site and WPIL Works and redesign/design ratification by WPIL in association with MHI (Japan). The modifications carried out at site reduced the failure rates. However, the manufacturer proposed to change the design of impeller such as introduction of additional shells in the suction bell, flow stream liner in the bowl guide, provision of leather gaskets between the taper seating surface of the bowl and bowl guide to address the vibration problem. All the above modifications have been made in one of the pumps.

(d) On 2.9.2014, WPIL was requested to perform inspection and root cause analysis. In response, WPIL vide its letter dated 3.9.2014 informed the petitioner that components required for modification in the failed pump will be procured at their works and necessary modification and repair will be made at the earliest.

(e) The petitioner vide its letter dated 10.9.2014 addressed to WPIL expressed serious concern over sustained high vibration level and repeated failure of pumps and motors and insisted on the requirement of all 6 pumps in proper working condition for declaration of commercial operation of the Unit by September 2014.

(f) On 19.9.2014 a meeting was convened with Original Equipment Manufacturer i.e WPIL regarding problems in CW pumps and the petitioner requested WPIL to take necessary action to bring down the vibration to acceptable limits.

5. The petitioner has indicated the schedule of the remaining commissioning activities to be undertaken before declaration of COD as under:

S.No.	Activity	Start date	completion date
1.	Transportation of pump to Kolkata	26.9.2014	6.10.2014
2.	Repair of Pump	6.10.2014	20.11.2014
3.	Transportation to Chennai	20.11.2014	30.11.2014
4.	Installation and commissioning	30.11.2014	15.12.2014
5.	Boiler Light up and Synchronization	16.12.2014	20.12.2014
6.	Trial Operation and Stabilization	21.12.2014	30.12.2014
7.	Commercial operation declaration	31.12.2014	31.12.2014

6. The petitioner has submitted that it is seeking extension of time for *bonafide* reasons for completion of the balance works indicated in the petition and not for the purpose of trading in infirm power or otherwise to derive any undue advantage. The petitioner has stated that the Unit, which has been synchronized, will be tested from time to time and will be subjected to trial operation, etc. and in this regard, infirm power needs to be injected into the grid.

7. During the course of hearing on 14.10.2014, the representative of the petitioner reiterated the submission made in the petition.

8. We have considered the prayer of the petitioner. The fourth proviso to Regulation 8 (7) of the Connectivity Regulations, as amended from time to time, provides as under:

"Provided that the Commission may in exceptional circumstances, allow extension of the period for inter-change of power beyond the period as prescribed in this clause, on an application made by the generating station at least two months in advance of completion of the prescribed period:

Provided further that the concerned Regional Load Despatch Centre while granting such permission shall keep the grid security in view."

9. It is observed that the main reason for delay in COD of Unit is due to failure of CW pump on very high vibration. The petitioner has taken up the problems associated with CW pump with the manufacturer, reviewed the causes of failures and revised several engineering aspects. The petitioner has also sent the failed pump to Kolkata Works of OEM (WPIL) to make necessary modification in the design and engineering aspect of impeller, bowl guide, etc. to overcome the

vibration problem. The petitioner has submitted that the pump is expected to be available in service at site only by December 2014. Taking note of the submission of the petitioner, we allow extension of time for injection of infirm power into the grid for the commissioning tests including full load test of Unit up to 31.12.2014 or actual date of commercial operation, whichever is earlier. It is clarified that the extension of time as allowed in this order shall not automatically entitle the petitioner for IEDC/IDC for the delay in declaration of COD from the scheduled COD and the same shall be considered on merits at the time of determination of tariff of the unit/generating station.

10. With the above, the Petition No. 329/MP/2014 is disposed of.

Sd/-	sd/-	sd/-	sd/-
(A.S.Bakshi) Member	(A. K. Singhal) Member	(M. Deena Dayalan) Member	(Gireesh B. Pradhan) Chairperson