

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 97/MP/2015

Coram:

Shri Gireesh B. Pradhan, Chairperson

Shri A.K. Singhal, Member

Shri A.S.Bakshi, Member

Date of Order : 1.4.2015

In the matter of

Anticipated delay in the declaration of commercial operation date (COD) of Unit-I of the 2x250 MW NLC-Thermal Power Station-II Expansion.

And

In the matter of

Seeking Commission's permission to maintain status quo for injection of infirm power under UI mechanism till declaration of COD of Unit-I or 30.6.2015 whichever is earlier.

And

In the matter of

Neyveli Lignite Corporation Limited
Neyveli house, 135, EVR Periyar road,
Kilpauk, Chennai- 600010.

....Petitioner

Vs

1. The Member Secretary
Southern Regional Power Committee
29, Race Course Cross Road, Bangalore- 560009

2. Executive Director (SEF & CE)
Power Grid Corporation of India Limited,
'Saudamini', plot no. 2, sector- 29,
Near IFFCO Chowk, Gurgaon- 122001, Haryana

3. The General Manager (Commercial)
Power Grid Corporation of India Limited,
Southern Region Transmission System II,
Pragati Mahalakshmi, South Block (2nd and 3rd floor),



No. 62, 3rd Cross, NEI road, Industrial suburd,
Yeshwantpur, Bangalore- 560022

4. Executive Director
POSOCO, Southern Regional Load Despatch Centre,
29, Race Course Cross road, Bangalore-560009

5. The Chief Engineer (Planning)
Tamil Nadu Generation and Distribution Corporation Limited,
6th floor, eastern Wing, 144, Anna Salai, Chennai- 600002.

6. The Chief Engineer/Corporate Planning TRAC
Kerala State Electricity Board,
8th Floor, Vidyuthi Bhawanam,
Pattom, Thiruvananthpuram-695 004

7. Director (Commercial)
State Power Purchase Co ordination Committee
Power Company of Karnataka Ltd.
Kaveri Bhawan, Bangalore-560 009

8. The Superintending Engineer
Puducherry Electricity Department
137, NSC Bose Road, Puducherry-605001

9. Chief Engineer (Commercial)
A.P. Power Coordination Committee
Vidyut Soudh, Khairatabad
Hyderabad-500 082

....Respondents

ORDER

This petition has been filed by the petitioner, Neyveli Lignite Corporation Limited, seeking permission of the Commission for injection of infirm power into the grid during testing, commissioning and commercial operation of NLC-TPS II (Expansion) (the generating station) till declaration of COD of Unit-1 (unit) or 30.6.2015, whichever is earlier.



2. Neyveli Lignite Corporation Limited (NLC) is in the process of establishing NLC-TPS II Expansion (2x250 MW) CFBC boiler based power plant at Neyveli, Tamil Nadu. This is the first 250 MW unit size CFBC based power plant being installed in the country. Unit of the generating station was first synchronized with the grid on 18.5.2011 with oil firing and on 27.6.2011 with lignite firing. Due to technical problems, COD of the generating station got delayed resulting in prolonged injection of infirm power into the grid.

3. The Commission by its order dated 19.1.2015 in Petition No. 131/MP/2014 had allowed injection of infirm power from the unit of the generating station for testing including full load testing till 30.3.2015.

4. The petitioner in the present 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) With the certain improvements, unit was able to sustain higher loads, crossed 200 MW on number of occasions and rated load of 250 MW was reached on 6.1.2015. Fine tuning of parameters and meticulous efforts by Operation Engineers resulted in continuous running of unit for more period, latest by 22 days.

(b) Sustained operation over 200 MW was stalled by water wall tube punctures, failure of non-metallic expansion joints, overloading of ID fans due to

high suction pressure and refractory failures. Stoppage of unit on each occasion was utilized to rectify the defects and further fine tuning of parameters.

(c) Unit is under shutdown from 13.3.2015 for attending start up burner seal box and Backpass Coil punctures, Refractory works in Fluidized Bed Heat Exchangers Economizer Enclosure duct repair works, lignite feeding system rectification works and RAPH and ESP higher pressure drop leading to overloading of ID fans when the load is above 200 MW.

(d) 72 hrs full load trial run and COD is likely to be shifted beyond 31.3.2015, considering events affecting the sustenance of load above 200 MW.

(e) NLC and BHEL are in the process of fine tuning of the operational parameters, resolving issues affecting the sustenance of load above 200 MW to enable COD of the unit.

(f) NLC has been actively pursuing with M/s BHEL to resolve all the issues effectively in order to enable COD of the unit of the generating station for sustained operation. In view of the problems encountered in the early stages of testing, commissioning and commercial operation, NLC has been insisting on M/s BHEL to ensure that all the parameters are properly dealt with and the performance of Boiler is satisfactorily established to avoid any issues while operating the plant.

(g) It is not in a position to operate continuously after modifications in the Fluidized Heat Exchangers, Seal Plot Refractory works, Non-metallic expansion joints. However, sustenance of load above 200 MW was not possible due to restriction on pressure drop across RAPH and ESP leading to overloading of ID fans. Minor issues in Fluidized Bed Heat Exchanger, Refractory works, and lignite feeding system and Coil punctures in the Backpass start up burner refractory erosion are to be attended.

(h) The injection of infirm power into the grid by NLC for testing and commissioning is for reasons beyond its control and solely with the intention to achieve the COD. The total injection of infirm power from unit during the period from 1.7.2014 to 28.2.2015 is only 70.01 MUs.

5. The petitioner has submitted that in the facts and circumstances mentioned above and as per the revised commissioning schedule prepared by NLC and BHEL, it may require time till 30.6.2015 to carry out the testing and commissioning including injection of infirm power into the grid for such operation.

6. The petitioner has requested that taking into account the difficulties encountered in declaring COD, NLC may be permitted to inject infirm power into the grid for testing including full load testing till 30.6.2015 or actual date of commercial operation, whichever is earlier.

Analysis and Decision:

7. We have considered the prayer of the petitioner. The fourth proviso to Regulation 8 (7) 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 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."

8. The petitioner has adopted CFBC boiler of 250 MW size for efficient combustion of low grade fuel (lignite) and environment friendly technology for its project. We appreciate the technology adopted by the petitioner but at the same time express concern that there are multiple failures/problems in CFBC boiler being faced by the petitioner in commissioning of the unit which is taking a long time to be rectified properly.

9. Under the above circumstances, rectification of all the defects requires to be completed and tested properly so that the unit could sustain the operation of its rated capacity once the commercial operation is declared. The petitioner has submitted the revised schedule of the commissioning activities for unit of the generating station as on 15.3.2015 to be undertaken before declaration of COD as under:

S. No.	Description of activities	Target date
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	Unit-I Shut down on 13.03.2015 to attend Backpass coil punctures and Start up Burner 3 & 4 refractory erosion and seal box damages	
1	Back pass coil puncture attending and hydro test	By 1st week of April, 2015
2	Completion of Combustor Refractory application	By end of April, 2015
3	FBHE REFRACTORY WORKS	-do-
4	Refractory Dryout	By 1st week of May, 2015
5	FBHE Casing leakages	By end of April, 2015
6	Economiser Enclosure Duct tear	By 3rd week of April, 2015
7	RAPH and ESP Higher pressure drop Inspection, choke removal, adjustment of RAPH seals , air leak test	By end of April, 2015
8	Lignite Feeding system- rectification such as frequent shear pin failure, higher operating currents , replacement of motor & trial run	By 3rd week of April, 2015
9	Preparatory works for unit light up like removal of debris, clearing the coarse bed material, filing with fresh bed material	By 2nd week of May,2015
10	Light up and raising the load	By 3rd week of May,2015
11	Initial operation	By end of May ,2015
12	Trial run completion and COD	
	Raising load to 60% MCR & sustaining	By 2nd week of June, 2015
	Raising load to 80% & sustaining	By 3rd week of June, 2015
	Raising load to 100% & sustaining and completion of COD	By end of June,2015

10. Taking into consideration the submission of the petitioner, revised schedule jointly prepared by NLC and BHEL and keeping in view the difficulties being faced by 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 for a further period up to 30.6.2015 or actual date of commercial operation, whichever is earlier.

11. 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.

12. With the above, the Petition No. 97/MP/2015 is disposed of.

Sd/-
(A.S.Bakshi)
Member

sd/-
(A. K. Singhal)
Member

sd/-
(Gireesh B. Pradhan)
Chairperson

