CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 119/MP/2016

Coram:
Shri Gireesh B.Pradhan, Chairperson
Shri A.K.Singhal, Member
Shri A.S.Bakshi, Member
Dr. M.K.Iyer, Member

Date of Hearing : 09.8.2016
Date of Order : 19.8.2016

In the matter of

Anticipated delay in synchronization of Unit-2 of the 2x1000 MW Kudankulam Nuclear Power Project (KKNPP-2), Nuclear Power Corporation of India Limited.

And
In the matter of

Petition seeking Commission`s permission to continue drawl of startup power from the grid as per Deviation Settlement Mechanism till first synchronization of KKNPP Unit-2 or 30.9.2016, whichever is earlier.

And
In the matter of

Nuclear Power Corporation of India Ltd.,
Nabhikiya Urja Bhawan,
Anushaktinagar, Mumbai-400 094 **...Petitioner**

Vs

1. The Member Secretary
   Southern Regional Power Committee,
   29, Race Course Cross Road, Bangalore-560 009

2. Executive Director
   Power System Operation Corporation (POSOCO) SRLDC
   29, Race Course Road, Bangalore-560 009

3. Executive Director
   Power System Operation Corporation (POSOCO)
   b-9, Qutub Institutional Area,

Katwaria Sarai, New Delhi-110 016 ..**Respondents**

Parties present:

Shri Sandeep Sarwate, NPCIL
Shri S.Mulklalwap, NPCIL

ORDER

This petition has been filed by the petitioner, Nuclear Power Corporation of India Limited under 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 and Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 with the following prayers:

> *"(a) To Permit drawal of start up power from the grid under Deviation Settlement Mechanism (DSM) for KKNPP-2 commissioning till synchronization of KKNPP-2 OR 30.9.2016, , whichever is earlier;*
>
> *(b) Pass such order (s) as deemed fit by the Hon`ble Commission."*

2. Kudankulam Nuclear Power Project ('the project') of the petitioner is located at Kudankulam, Tirunelveli District in the State of Tamil Nadu consisting of Unit-I and Unit-II of 1000 MW each. The project is being set up with the technical cooperation of Russian Federation which is based on WER-1000 type of reactors.

3. The petitioner has submitted that reports with regard to containment integrated leak rate test, primary system hot run, fuel loading and reactor pressure vessel, etc. of the second unit of the project were submitted to Atomic

Energy Regulatory Board (AERB) for review. On 27.6.2016 consent was received from AERB for first criticality and Phase-B2 Low Power Physics Experiments (LPPE). Second unit of the project attained first criticality on 10.7.2016 at 20:56 hrs. On successful completion of LPPEs, clearance for first synchronization is expected to be given by AERB before 30.9.2016.

4. The petitioner has submitted that second unit of the project was delayed due to the following reasons:

(a) All the critical equipments of the plants needs to be subjected to pre-service inspection after completion of hot dummy run which is conducted with dummy fuel assemblies (without nuclear fuel) where all the coolant pumps and the stream generators are operated at their rated temperature and pressured conditions.

(b) After hot run, reactor is opened, dummy fuel assemblies removed and all the equipment were opened, cleaned and subjected to pre-service inspection with variety of NDT techniques as these would not be approachable once nuclear fuel is loaded into the reactor. This required Russian experts for review and analysis of the results which consumed considerable time.

(c) During operation of unit-1, certain equipment of second unit which were already erected, had to be dismantled and shifted to unit-1 due to delay in arrival of spares. They had to be reinstalled with new ones.

(d) Based on the operational experience in unit-1, especially in refueling machine area, improvements became necessary and all these were carried out in refueling machine of second unit.

(e) Certain checks, which were earlier scheduled as sample/random basis, had to be carried out 100% as per the new guidelines of regulatory agencies which contributed additional delay.

(f) Statutory clearances were to be obtained from various agencies such as MOEF, DEA and AERB, etc.

5. The petitioner has submitted that number of tests is required to be performed on various systems to meet the following purposes to:

(a) Determine the reactor characteristic and demonstrate that they are as per the design;
(b) Test all the controls and interlocks functioning during steady state as well transient conditions;
(c) Test all the reactor protection system and demonstrate their operability;
(d) Determine the actual parameters and characteristics of turbine, feed water system and other equipment and systems and demonstrate their compliance with design.
(e) Demonstrate the capability of various control systems to control the parameters during the transient condition;

(f) Test the protections of all major equipment such as turbine, generator, transformers, 400 kV CBs and feed water pumps, etc.

6. The petitioner has submitted that all the tests to be carried out during each stage are pre-defined and after testing, reports would be submitted to AERB for review and obtaining its clearance. The petitioner has submitted that considering the eventualities in system behaviour and rectification of technical issues, if any, second unit is expected to be ready for synchronization with the grid before 30.9.2016.

7. During the course of hearing, the representative of the petitioner reiterated the submission made in the petition and requested to grant permission for drawal of startup power from the grid for second unit upto 30.9.2016.

8. We have considered the submission of the petitioner. The petitioner has sought permission for drawal of start-up power from the grid by 30.9.2016. 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. The petitioner has submitted that all tests enumerated in the petition are mandatory from regulatory point of view for which start-up power from the grid is necessary. We are of the view that non-availability of start-up power would hamper the progress of commissioning work which would jeopardize the commissioning activities and result in further delay in synchronization of second unit. Accordingly, we allow drawal of start-up power for the commissioning tests of second unit up to 30.9.2016 or actual date of synchronization, whichever is earlier. We expect the petitioner to make all efforts to ensure the synchronization of the second unit by this date.

10. With the above, the Petition No. 119/MP/2016 is disposed of.

Sd/-	sd/-	sd/-	sd/-
(Dr.M.K.Iyer)	**(A.S. Bakshi)**	**(A. K. Singhal)**	**(Gireesh B. Pradhan)**
Member	**Member**	**Member**	**Chairperson**