

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 12/SM/2020 (Suo-Motu)

Coram:

Shri P.K. Pujari, Chairperson

Shri I.S. Jha, Member

Shri Arun Goyal, Member

Date of Order: 14th June, 2020

In the matter of:

Real-time Market for Electricity in India (RTM) - Transmission Corridor
Allocation for the period beyond 14th June 2020.

ORDER

The Commission, in order to implement Real Time Market (hereinafter referred as 'RTM') for electricity in India has, on 12th December 2019 carried out amendments in various regulations viz., Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Sixth Amendment) Regulations, 2019, Central Electricity Regulatory Commission (Open Access in inter-State Transmission) (Sixth Amendment) Regulations, 2019, and Central Electricity Regulatory Commission (Power Market) (Second Amendment) Regulations, 2019.

2. The aforementioned amendments in the Regulations for implementation of RTM, were earlier notified to come into effect from 01.04.2020. However, the



Commission extended the implementation of RTM vide notifications dated 20th March 2020, by two months and accordingly the RTM has since been implemented with effect from 1st June 2020.

3. The Commission vide order dated 28th May 2020 in suo-motu Petition No. 10/SM/2020 stipulated the methodology of allocation of transmission corridor between the power exchanges in the RTM. The relevant extract of the Commission's decisions in the said Order is as follows:

“12. In the light of the above discussion, the Commission decides as under:

- a. The Real Time Market shall be implemented w.e.f. 1st June, 2020 as already notified by the Commission on 20th March, 2020.*
- b. The limit for scheduling of collective transaction during real time for respective Power Exchanges (reference Regulation 6.5 (5) (aa) of Part 6 of the IEGC, added vide the Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Sixth Amendment) Regulations, 2019) shall be worked out in accordance with the following directives:-*
 - i. At Gate Closure, the NLDC shall announce the available transfer capability (ATC) for Real time transactions;*
 - ii. Both the Power Exchanges shall run the process of bid matching considering all the buy and sell bids on their platform, factoring ATC for Real time transactions, announced by the NLDC.*
 - iii. The initial market clearing volume derived in this process shall be submitted to the nodal agency, NLDC. NLDC shall verify the combined volume cleared in both exchanges against the ATC for RTM.*
 - iv. If the combined cleared volume of the two Power Exchanges is within the ATC for Real time transaction, the initial results shall be confirmed by NLDC to the Power Exchanges. In the event of the combined volume exceeding the ATC for RTM, the allocation of available corridor margin between the Power Exchanges shall be in the ratio of the initial market clearing volume of RTM in the respective Power Exchanges, and accordingly, this shall be communicated to the Power Exchanges.*



The Power Exchanges shall thereafter submit the final trades in conformity with the available corridor margin as provided by the NLDC.

- v. *In the extreme event of failure of communication between the NLDC and the Power Exchange(s) or for reasons such as data transfer failure, if the final cleared trades are not received by NLDC for scheduling through the RLDCs, or if the information regarding available corridor margin is not received by Power Exchanges(s), the schedules for such RTM session(s) shall be made zero by NLDC.*
- c. *The entire process as above needs to be completed within 15 minutes. Therefore, the necessary software and communication between NLDC and the Power Exchanges are required to be adequate and the process be made fully automated to ensure smooth run of the market sessions throughout the day. Additionally, Power Exchanges need to ensure robust and redundant communication system for uninterrupted and reliable interfacing with NLDC.*
- d. *The arrangement as described at 12(b) above shall, to start with, be applicable for the period from 1st June, 2020 to 14th June, 2020. The complete record of transactions during the said period, including time block wise - available transmission corridor, initial market clearing volumes of the Power Exchanges, events of transmission congestion, cleared volumes in the Power Exchanges, performance of software and communication link shall be compiled and examined by NLDC and reported to the Commission for the period 1st June, 2020 to 7th June, 2020 and 8th June, 2020 to 12th June, 2020 on 9th June, 2020 and 13th June, 2020, respectively. Based on the report and analysis of NLDC, the Commission shall review and decide the principles for allocation of transmission corridor for the period beyond 14th June, 2020.*

13. The Commission directs NLDC to incorporate the above directions suitably in the detailed procedure for scheduling collective transactions in RTM. The Power Exchanges are also directed to act as per the above directions to ensure smooth implementation of RTM with effect from 1st June, 2020.”

4. In pursuance to the Commission’s directions, NLDC made suitable



provisions in the detailed procedure for scheduling of collective transactions in RTM. Further, in compliance of the directions in the above order (in Petition No. 10/SM/2020), the NLDC has submitted the feedback report on implementation of Real Time Market for the period from 1st June 2020 to 7th June 2020 on 9th June 2020. Subsequently, on 13th June 2020, NLDC has submitted feedback report for the period from 1st June 2020 to 12th June 2020.

Analysis and Decision:

5. NLDC has highlighted in its feedback reports that a web based fully automated RTM clearing engine has been developed at NLDC and Web Based Energy Scheduling (WBES) Applications in different RLDCs have been synchronised. RTM has been implemented as a fully automated clearing mechanism at NLDC without any manual intervention. Certain technical and communication related issues were faced in some of the RTM sessions during 1st June to 7th June 2020, which were resolved. Post 7th June 2020, smooth operation of RTM has been observed at NLDC end as well as Power Exchanges end.

6. NLDC has indicated in its feedback report that for the period from 1st June 2020 to 12th June 2020, the average daily volume traded under RTM was around 12 MU. The minimum and maximum Unconstrained Market Clearing Prices discovered in IEX were Rs. 0.015/kWh and Rs. 4.300/kWh respectively, and those for PXIL were Rs. 1.877/kWh and Rs. 4.000/ kWh respectively. During this period, maximum traded volume was more than 22 MU in a particular day with a maximum cleared volume reaching 1865 MW in a single time block. Total traded



volume during 1st June 2020 to 12th June 2020 was 145 MU.

7. The report shows that during the period from 1st June 2020 to 12th June 2020, the proportion of successful trades was found to be 97%. Partially successful trades occurred only 1% of the times, and unsuccessful trades resulted only 2% of the times. The NLDC in its report of 13th June 2020, has recommended that the current methodology of transmission corridor allocation between Power Exchanges can be continued.

8. The Commission appreciates the efforts of NLDC and the Power Exchanges in implementing RTM, given the strict timelines, especially for clearing and scheduling RTM trades within 15 minutes. The Commission, based on the review of implementation experience and the market results, finds that apart from initial technical/ communication glitches which were swiftly resolved, there were no major challenges in implementation of RTM with the methodology of transmission corridor allocation stipulated vide the Commission's order dated 28th May, 2020. Therefore, the Commission is of the view that, with the existing methodology of transmission corridor allocation, RTM can be implemented reliably. The Commission notes that NLDC has also recommended accordingly.

9. In view of the above, the Commission decides to continue with the same principle and methodology of transmission corridor allocation among the Power Exchanges for RTM beyond 14th June 2020, as provided in the order dated 28th May 2020 in Petition No.10/SM/2020.



10. The Commission directs NLDC and Power Exchanges to give effect to the decisions of the Commission in this order appropriately for smooth implementation of RTM.

11. The NLDC shall compile and examine complete record of transactions under RTM for every month, including time block-wise ATC, initial market clearing volumes of the Power Exchanges, events of transmission congestion, cleared volumes in the Power Exchanges, performance of software and communication and submit a monthly report to the Commission.

12. The NLDC may approach the Commission in case of any difficulty in implementation of the above directions. In that case or Suo-Motu, the Commission may, if required, review the principle and methodology of transmission corridor allocation to ensure smooth and effective implementation of RTM.

13. Suo-Motu Petition No. 12/SM/2020 is disposed of in terms of the above.

Sd/-
(Arun Goyal)
MEMBER

Sd/-
(I.S. Jha)
MEMBER

Sd/-
(P.K. Pujari)
CHAIRPERSON

