

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Suo motu Petition No.70/ 2011

**Coram: Dr Pramod Deo, Chairperson
Shri S Jayraman, Member
Shri V.S.Verma, Member**

Date of Order: 11.3.2011

In the matter of:

Audit of Trading Software Algorithm Used for Price Discovery by Power Exchanges

And

In the matter of:

Indian Energy Exchange, New Delhi

Power Exchange of India Limited, Mumbai

... Respondents

ORDER

In discharge of its statutory responsibilities under Section 66 of the Electricity Act,2003 read with para 5.7.1 (f) of the National Electricity Policy, the Commission has specified the Central Electricity Regulatory Commission (Power Market) Regulations, 2010 (hereinafter called "Power Market Regulations") which came into force with effect from 21.1.2010.

2. Regulation 10 of Power Market Regulations enjoins upon the Power Exchanges to function with the following objectives:

- (a) Ensure fair, neutral and robust price discovery;
- (b) Provide extensive and quick price dissemination;

- (c) Design standardized contracts and work towards increasing liquidity in such contracts.

3. Further Regulation 24 of Power Market Regulations provides that the power exchange shall function according to its By-laws, Rules and Business Rules as approved by the Commission. Clauses (iv) and (v) of Regulation 31 of Power Market Regulations which deal with the software algorithm of the trading system in the exchange and auditing of software by the Commission are extracted hereunder:

“(iv) The algorithm of the software application for price discovery and market splitting shall be in compliance with the methodology mentioned in Bylaws, Rules and Business Rules of Power Exchange as approved by the Commission.

(v) The Commission may Audit or appoint an agency to audit the Software application used by the Power Exchanges in operation for price discovery and market splitting on a random basis. The Power Exchange shall produce the test results of test cases and scenarios provided by the Commission.”

4. In terms of proviso to Regulation 14 of Power Market Regulations, the power exchanges which have been granted approval/in principle approval are deemed to have been registered under the regulations. The Commission has approved the Bye-laws, Rules and Business Rules of the power exchanges which were in operation on the date of coming into effect of the Power Market Regulations. The Commission has decided to get the “Trading Software Algorithm used for Price Discovery” audited by a competent Audit Firm in compliance with clause (v) of Regulation 31 of Power Market Regulations. Brief scope of the audit will be as under:

- (a) The Commission shall invite bids from competent international and national firms for selecting the auditor for the audit of Trading Software Algorithm Used for Price Discovery by Power Exchanges.
- (b) The selected auditor shall audit the trading software algorithm

for its compliance with the order matching rules mentioned in the Rules/Bye laws/Business Rules of the Power Exchange and any other directions of the Commission issued through separate orders.

- (c) The audit will encompass the Day Ahead, Term Ahead (including day ahead contingency, daily, intra-day and week ahead) and Renewable Energy Certificates (REC) markets.
- (d) The procedure and timeline of audit will be in accordance with the tender notice which will be issued separately by the Commission.

5. In order to ensure that the auditing of software algorithm system is conducted in a smooth and well coordinated manner, the power exchanges shall be required to extend all cooperation to the auditor. Particularly the power exchanges shall be required to:

- (a) Identify and nominate a nodal officer to facilitate the exchange of information with the auditor. The nodal officer shall be the point of contact for the auditor with the power exchange.
- (b) Facilitate the efforts of the auditor to familiarize its team with the trading systems of the exchange.
- (c) Provide necessary inputs and demonstrations to the auditor/ audit team to enable them to operate the test environment on their own.
- (d) Provide access to the automated audit trail that the exchanges are required to maintain as per Power Market Regulations.
- (e) Create the test environment in the presence of the auditor.
- (f) Provide the auditor access to its test environment in order to run the test cases.
- (g) Preserve the test environment till further directions from the Commission.
- (h) Provide the version trail of the software, details on version change and the corresponding documents..
- (i) Provide the operations manual of the software to the auditor.

6. On the basis of the audit report, if it comes to the notice of the Commission that any power exchange has failed to maintain and comply with the Trading Software Algorithm used for Price Discovery in accordance with the approved Bylaws, Rules and Business Rules of the exchange, the Commission may issue such directions or initiate such actions as may be considered necessary in accordance with the provisions of Power Market Regulations and Electricity Act, 2003.

7. We direct the Secretary of the Commission to complete the process of selecting a competent Audit firm for the auditing of 'Trading Software Algorithm used for Price Discovery' within a period of two months from the date of issue of this order.

Sd/-
(V.S.Verma)
Member

Sd/-
(S.Jayaraman)
Member

Sd/-
(Dr. Pramod Deo)
Chairperson