Comments on staff paper on Market Coupling

Context: The Central Electricity Regulatory Commission notified the Central Electricity Regulatory Commission (Power Market) Regulations, 2021, on 15th February 2021, which came into force on 15th August 2021. Part-5 of the CERC Power Market Regulations 2021 (i.e., Regulations 37 to 39) provides the enabling provisions for market coupling among the Power Exchanges. The CERC has published the staff paper on "Market coupling" on 21st Aug 2023 and requested the stakeholders to submit the comments by 30th Sep 2023.

Background: Currently there are three power exchanges, IEX, PXIL, and HPX, operating in India. The transactions through power exchanges constitute only about 7% of the total electricity generation, and the volume transacted and the number of participants registered with the power exchanges has grown significantly. The multiple power exchange model has often resulted in scenarios where different prices being discovered on different power exchanges. Also, the collective transactions account for more than 70% of the electricity transacted through power exchanges, and the share of only one exchange has been increasing. With this background, CERC has published the staff paper for market coupling.

Some of the major points and our response to them is given below:

1) **Section 3 "International Experience"** - The section details the evolution of Market Coupling in the European Market. It details the Market Coupling, Price Coupling of Regions (PCR), Multi Regional Coupling (MRC), NEW price coupling and SWE price coupling. The section also touches upon Capacity Allocation and Congestion Management (CACM) Regulation, Nominated Electricity Market Operator (NEMO) and the various exchanges which are designated as NEMO.

   Comment: This section refers to the Market Coupling in context of various regions/countries as separate markets, and how those markets coupled to formed form a single European Market. In Indian Context, such regional integration is already existing.

2) **Section 4 "Market Coupling in the Indian Context"**- This section details the key benefits and apprehensions of the market coupling.

   Benefits:

   a) **Discovery of uniform market clearing price:** A uniform market clearing price discovered by the market coupling process would become the single reference price for the market.

      Comment: In the current market design also the prices are being discovered, by the largest exchange, which has the similar effect what is being intended by coupling of the market.

   b) **Optimal use of transmission infrastructure:** The staff paper refers to the under utilization of transmission corridor reserved for smaller exchanges, and

impact of coupling on optimal utilization. The staff paper also states that only 0.54% time blocks saw congestion.
Comment: For the practical purposes, the reservation of corridor plays its role only when there is congestion, which is very miniscule. There is no apparent material benefit arising out of coupling.

c) **Maximization of economic surplus:** The staff paper points that the coupling would result into maximization of the social welfare and economic surplus.

Comment: In the current market design, the liquidity is sufficiently high in the IEX, the leading power exchange, to represent the overall the DAM market thus represents the maximum economic surplus; and the logic of maximization of economic surplus in coupled market does not hold good.

d) **Improvement in Liquidity and Price**: The staff paper notes that the coupled market will increase the liquidity and thus improve the prices.

Comment: For the DAM market in existing design, all the potential market participants and market makers are engaging in the leading power exchange, thus consolidating the liquidity at appropriate level . In the coupled market, same participants will split across different Exchanges and their bid will be collected and processed centrally by coupling operator. This will add one more layer of the operating process, and with each additional layer there is possibility of operational inefficiency and costs. Further, the proposed design and existing design has same intended outcome in terms of liquidity and price

Challenges/ Apprehension

a) **Diminish Role of Power Exchanges:** The role of a power exchange will be reduced to just collecting bids and transferring them to the market coupling operator.
Comment: The staff paper rightly points towards the diminished role of exchanges. This will reduce the scope of responsibilities and for practical purposes there will not be much difference between Trader and Exchange.

b) **Dampen innovation and discourage investment:** The coupling will not leave any incentive or room for power exchanges to innovate on the product offerings.
Comment: The centralized and unified bid matching will not allow power exchanges to innovate on their unique products. There will be less investment on the new products.

3) **Section 5-** This section discusses on various aspects of coupling. Our comments on the matter are given below:

a) Market Coupling Operator: The staff paper explore the possibilities of assigning this responsibility either to Power Exchanges on rotation basis or to a third party. In both cases, there would be technological challenges in

terms of acceptance of common algorithm, data transfer, sanctity of result, inter-exchange settlement etc.

b) Clearing and settlement: In case of coupling, there will be need of a separate entity playing the role of clearing among and between the power exchanges. There could be a situation that one exchange has mostly sell bids, other exchange might have mostly buy bids and third exchange might have combination of buy and sell bids. In such scenario, it is must to have a clearing house/agency which will settle the positions among the power exchanges. Existing power exchanges can play role of clearing and settlement only for their members. This will add one more layer of transaction, leading to operational inefficiencies. Furthermore, for facilitating the coupling there will be additional costs, which will ultimately put burden on the consumers.

Looking into the small market share of power exchanges w.r.t. total generation it would be pragmatic to analyse the additional gains in social welfare, which might accrue due to coupling of exchanges, viz a viz cost/efforts required to put the coupling in place.

Regards,

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