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To,

**The Secretary,**  
**CENTRAL ELECTRICITY REGULATORY COMMISSION**  
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**Sub: Staff Paper on “Market Coupling”- comments and suggestions thereon**



Sir,

At the outset, we appreciate the efforts taken by staff of hon’ble commission in drafting the Paper and bringing out the staff paper for discussion among stakeholders. We are a boutique consulting firm in the area of power transmission, power market and renewable energy having experience working with Power Trading companies, Power exchange and upcoming OTC platform. We would like to submit our views/ comments/suggestions as per attached annexure – 1, primarily from the view point of end user of electricity.

If the Hon’ble commission finds merit in our submission, we would be pleased to present our submissions during the hearing.

Thanking you for allowing us to make our submissions on the subject, we remain,

Your faithfully  
For Chlorofyl Eco Ventures Pvt Ltd



(Vijay Barthwal)  
Director



**Annexure- 1**

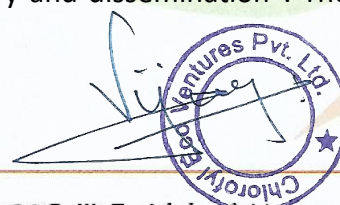
**Staff Paper on “Market Coupling”- comments and suggestions thereon on behalf of Chlorofyl Eco Ventures Pvt Ltd (CHLOROFYL)**

**Background**

01. **Market Coupling or Exchange Coupling:** A Power Exchange (PX) in itself does not constitute the whole market. The market includes the OTC market and upcoming OTC platforms, apart from the existing Power exchanges. Sec 66 of Indian Electricity Act states that “The Appropriate Commission shall endeavour to promote the development of a market (including trading) in power.....”, which makes it amply clear that market is not limited to power exchanges or trading only. Market has been further defined in Power Market regulation 2021 as “a platform where buyers and sellers, either directly or through Trading Licensees, or through Power Exchanges, buy or sell electricity .....”. Therefore, in our humble opinion, issue being deliberate is more like “**coupling of exchange transactions**” and less of “**coupling the markets**”.
02. The market coupling examples of Europe would be more appropriate, when different geographical markets like Bangladesh, Nepal, Sri Lanka are coupled with Indian market for SAARC market or SAARC market is coupled with Middle East or ASEAN market under One Sun One World One Grid (ODOWOG). Considering that the term is being used in policy documents and Regulations, this may be continued for time being, however, hon’ble commission may like to review the term and use “**Exchange Coupling**” and “**Exchange Coupling Operator**” terms either now or during future review of regulations to avoid any conflict of interpretation in future. We are using term Market Coupling for sake of simplicity in subsequent discussion.
03. **Multiple to Single Exchange:** The examples of electricity exchanges in Europe LPX, EPAX spot and EEX are nearer to the situation in India, but they were merged. Considering that way back in 2006 the hon’ble commission had decided that “*As a logical consequence of the above (voluntary participation, no mandate for one PX, no restriction regarding ownership, and minimal regulation), the Commission would not like to impose any management structure, rules or procedures for PX.*”, therefore, any tinkering with this mandate would require a major change in philosophy and hon’ble commission need to revisit the management structure, rules and procedures of single surviving exchange, if so happens.

**Discussion Points**

04. **Does the current Indian power market scenario form a compelling case for market coupling?** Looking at the Objectives of Power Exchange, the PMR 2021 states “The Power Exchanges shall be established and operated with the following objectives: ..... (2) To ensure fair, neutral, efficient and robust price discovery..... (3) To facilitate extensive, quick and efficient price discovery and dissemination”. The question will require answers to following questions:





- a. Will **double side closed auction with uniform price discovery** for **delivery-based contracts** of **extremely perishable commodity** like electricity result in same price in more than one exchanges, in case of simultaneous bidding? We feel that, in the absence of financial settlement and arbitrage opportunity, achieving same price is not possible.
  - b. Do we actually need same benchmark price on different exchanges for a **“fungible commodity”** like electricity? It is most desirable outcome. In case, there are different benchmark prices on different exchanges, it is remotely possible that the price on exchange with low liquidity are manipulated, which could impact the financially settled contracts based on benchmark price on an exchange, resulting in gambling or financial fraud.
  - c. How can uniform price be obtained? There is only one way, all bids are processed simultaneously. This can be achieved by either merging all the exchanges or only merging all the bids. As first one is not desirable under current regulations, second one is most appropriate. The multiple exchanges exist in Norway, Nord Pool and EPEX, and the bids are sent to the Coupling Operator by the exchanges for rate discovery, this is most relevant case for India.
  - d. Will the volume and price discovery be impacted after coupling? Price discovery would requires study and simulation using bidding data. In case of less volume on one exchange, there could be non-serious bids also, therefore, simulation results can not be fool-proof. Still, the issue of unmet demand and unsold generation would reduce and minor increase in clearing volume is expected.
05. **Effect of coupling on technological innovation and competition:** Power Exchanges, so far, are collecting service fee on the bids cleared on both sides. More cleared volume results in more revenue, at the same time uncleared bids mean no revenue. In case one exchange becomes more liquid, it becomes dominant and slowly becomes monopoly in collective transaction segment. This, in fact, kills competition and reduces the appetite for being innovative. The focus remains on maintain the dominant position. In case of coupling, when exchanges become “bid-collecting agency”, the incentive to just maintain liquidity will reduce and **exchanges will find new avenues to compete on service, innovation and other parameters.**
06. **Who shall be the Market Coupling Operator:** From the user’s perspective, it does not matter if one of the Exchange becomes Market Coupling Operator or an Independent market operator/ super exchange does it, however **it should not lead to additional financial implications for users.**
07. **Which Algorithm should be adopted for a coupled market:** The consideration would be the transparency and consistency in price discovery and bid clearing. Even in the current situation, bids within the clearing price band are rejected (not cleared) due to reasons best known to exchanges.

08. **How will the clearing & settlement be carried out:** From the customer's perspective the PX, where the bid is submitted, should be responsible for their clearing and settlement. It is assumed that the clearing & settlement of consumer/Clients bidding thru Trading Members (Power Trading Licensees) is currently being taken care by Trading members and there would be neither any change or impact due to market coupling. The clearing and settlement is applicable to Power Exchange Members only.
- While the power exchanges will be the counterparty to the market participants, would the Market Coupling Operator act as a counterparty to the power exchanges with regard to settlement rights and obligations.** Although this does not impact users, but direct settlement among exchanges should be preferred to avoid additional time delay due to addition of one more layer. Typical example of UPI transactions or RTGS (Real Time Gross Settlement) could be considered.
  - Would it be advisable to allow the Market Coupling Operator to charge transaction fees from the power exchanges, which in turn charge related transaction fees from the market participants.** Market coupling operator, whether one of the exchange or new operator, would need funds to operate, but this can be managed by Power Exchanges thru their existing transaction fee only. It is anticipated that market coupling would result in more optimized resource utilization, that would improve realization to power exchanges and they can absorb the additional cost. In any case Exchanges are free to determine their transaction fee, based on their business plan, they can decide their fees model by considering the impact of market coupling cost on their operations.
  - What should the grievance handling framework be:** No Comments. Power Exchanges and Market Coupling operators along with Grid India can decide.
09. **Changes in the settlement process:** If Traders starts bidding directly to the market coupling operator, the very existence of power exchanges would become questionable. It is the clients, who has decided to bid thru traders instead of bidding directly on exchange by paying margin to traders along with transaction fee of exchange, after considering value add by traders, therefore **any change in present process, in our opinion, is not required.**
10. **In which market segment should the coupling be introduced first:** The purpose of market coupling is to have efficient price discovery. The price discovery is relevant to DAM (including G-DAM and HP-DAM) and RTM. Considering the short gate closure window, to begin with, RTM can be kept outside market coupling. The bids for regular DAM and G-DAM are submitted simultaneously and after clearing of G-DAM bids, all bids are considered for regular DAM, therefore both these segments combined are best use case for market coupling. HP-DAM can also be considered for market coupling. Considering low volume, but high price impact, a pilot or simulation can be initiated on HP-DAM.