



Power Foundation of India

(An autonomous Society under the Ministry of Power, Govt of India)

Dated: 21st June 2024

To,

The Secretary

Central Electricity Regulatory Commission

7th Floor, Tower B,

World Trade Centre, Nauroji Nagar,

New Delhi- 110029

Subject: Comments on Staff Paper on Regulatory Oversight on Bidding Behaviour in Power Exchanges

Ref: CERC Public Notice No. Eco-14/5/2024 dated May 4, 2024

Dear Sir,


With reference to your above-mentioned public notice and its extension thereof, Power Foundation of India, a society under the aegis of Ministry of Power (GoI) which is led by Director General Shri Sanjiv Nandan Sahai (Former Secretary in MoP (GoI)), has analysed the CERC Staff Paper *Regulatory Oversight on Bidding Behaviour in Power Exchanges, 2024*.

Accordingly, our comments/suggestions on the said Staff Paper are enclosed herewith as Annexure-I which have also been emailed to secy@cercind.gov.in , ashutosh.sharma@nic.in and uploaded on Saudamini portal.

Warm Regards,

encl: Annexure – I

Yours Sincerely,



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Comments/Suggestions from Power Foundation of India (PFI): CERC Staff Paper Regulatory Oversight on Bidding Behaviour in Power Exchanges, 2024

- 1) PFI is a Policy Research and Advocacy entity, a registered society under the aegis of the Ministry of Power, Government of India, and supported by twelve leading Central Power Sector Organisations, to undertake evidence-based policy research and facilitate informed decision making by the Regulators, Ministry and stakeholders concerned with the Power Sector. It is led by Director General Shri Sanjiv Nandan Sahai (Former Secretary in Ministry of Power, Government of India).
- 2) Central Electricity Regulatory Commission (CERC) has sought comments / suggestions from various stakeholders on *Staff Paper on Regulatory Oversight on Bidding Behaviour in Power Exchanges* (hereinafter referred to as “Staff Paper”). Section 4 of the Staff Paper proposes a framework for monitoring and surveillance of Sell Bids & Buy Bids. This proposed framework is based upon the review of the Sell Bid data of the past year, i.e., from Jan 2023 to Dec 2023 and proposed the concept of Benchmark supply Offer (BSO), Allowable Bid Offer (ABO), ex-ante screening and ex-post screening based on Pivotal Supplier Test (PST), Benchmark Analysis Models and Simulation Models (BAMSM) test.
- 3) PFI welcomes this move of staff of CERC wherein through the said Staff Paper they have tried to initiate certain steps for Monitoring and Surveillance of Buy Bids and Sell Bids in Power Exchanges. However, the methodology stipulated to regulate price of Sell Bid defeats the overall concept of “**Development of Market**” as enunciated u/s 66 of the Electricity Act 2003 (hereinafter referred to as “Act”) and “**Double Sided Closed Auction**” which forms the basis of determination of prices in Power Exchanges. It is suggested that the role of CERC should be to focus on increasing market liquidity, addressing actual instances of manipulative practices and should aim to support a competitive power market.
- 4) As sought, PFI has reviewed the said Staff Paper and accordingly our comments / suggestions in the proposed mechanism are as follows:

A. General Comment: “Alternative Market clearing Mechanism”

- a) The staff paper addresses the challenge of market manipulation and ensures fair competition, for all the market participants. The proposed framework introduces multiple measures, to enhance the transparency and accountability in the power exchanges. Also, it mandates detailed cost disclosures from generators, monitoring Bid price behaviour, and evaluating supply offers for potential market abuse using the Pivotal Supplier test.

- b) While monitoring and surveillance through regulatory oversight is crucial for preventing market manipulation but it is also essential to strike a balance between regulated environment and free market for a competitive and sustainable power markets operation.
- c) The framework aims to promote market integrity, prevent unfair practices, and support efficient market operations. However, it is essential to consider that imposing Bid Price capping on Sellers by way of BSO/ABO may undermine the basic framework of market which is “Double Sided Closed Auction”.
- d) It is also important to note that powers granted to CERC u/s 178 (2) (y) of the Act does not empower CERC to determine the methodology of bid pricing and direct the market participants to submit their bid considering a particular value. After all, the buyers and sellers are price takers in the market and not price setters which have also been recognised in the para 3.5 of the Staff Paper. Linking sale bid price with energy charge rate and verification of the same by an independent agency defeats the basic structure of “**Development of Market**” as enunciated u/s 66 of the Act and “**Double Sided Closed Auction**”. In no way, due to lack of legal jurisdiction, CERC or a central agency appointed by CERC can seek information from State GENCOs, Merchant Power Plants and DISCOMs for the price determination through bidding process. The power granted to CERC, to frame Regulations, u/s 178 (2) (y) has been linked to Section 66 “Development of Market” wherein CERC has to be guided by National Electricity Policy (NEP). In this context, Section 5.7 of the NEP 2005 mandates to increase the depth of the Power Markets, however, as per proposal in the Staff Paper the existing small sized Power Market will be further diminished due to limited participation. Introducing price caps is likely to send negative signals to market participants.
- e) A more constructive approach for CERC would be to focus on increasing market liquidity and addressing actual instances of manipulative practices rather than imposing restrictive price caps. Regulatory intervention should aim to support a competitive power market that attracts investments and ensures efficient growth. Price caps on bids fundamentally contradict the core principles of a free market, jeopardizing the overall efficiency and reliability of the power sector.
- f) PFI, vide its letter dated 6/05/2024, had proposed to Ministry of Power, (GoI) an alternative approach for determination of Regulated Market Clearing Price and Volume which would overcome attempt at market manipulation and allow fairer price discovery. According to the present IEX market clearing rules and regulations, under supply constrained scenarios the market is designed to clear at a ceiling price, currently capped at Rs. 10/kWh, and the entire economic surplus is allocated to the sellers. Further, in the present price discovery construct, suppliers in supply shortage situations can disproportionately push up prices by offering a very small quantity at a high price in the market.

- g) The PFI proposal of an alternative price discovery process for all supply constrained situations, will result in reallocation of a share of the overall economic surplus from the sellers to consumers keeping the overall economic surplus same or only marginally reducing the overall surplus by removing negligible quantities from the market. This would yield financial benefit to consumers without significantly impacting the sellers or quantity offered in the market.
- h) Determining whether the bidding price of a generator is manipulated or not is a complex issue that should not be governed by arbitrary benchmarks such as 1.2 or 1.6 times the variable cost. Cost, especially for merchant generators, calculations should encompass opportunity costs on both demand and supply sides, outage risks, and the economic risk of the company and investors. This complexity makes it an inappropriate area for regulatory intervention. Regulators should refrain from imposing strict controls unless they can ensure compensation for potential future income losses. Over Regulation throttles the very existence of market. Moreover, binding ceiling would encourage electricity suppliers to evade the cap by selling outside the capped market or exchange. Therefore, sellers should have the freedom to set the prices and volumes of electricity they offer, provided they do not engage in anti-competitive or manipulative practices.
- i) Monitoring bidding behaviours of market participants and collecting their data is a positive step towards market monitoring and surveillance. Ensuring that buy bids are realistic will reduce artificial orders and help to assess the actual demand-supply gap. The focus on applying bid caps (Ex-ante screening) of sell bids and further regulating their bid prices is against the inherent philosophy of “**Development of Market**” as enunciated u/s 66 of the Act.
- j) Further, in supply constraint situations, the last despatched generator, often a gas power plant utilising R-LNG with a high variable charge (around Rs. 8-9/kWh), will likely have an ABO of more than Rs. 10/kWh (1.6 times the BSO - Variable Charge) which will be, however, capped at ceiling price of Rs. 10/kWh. Thus, the introduction of the BSO and ABO concepts will have no relevance in supply constraint situations.
- k) The staff paper also mentions international experience and application of offer price caps as a standard practice in other electricity markets in section 4.8 to 4.10 of the said paper. However, it is noted that there are differences in energy market structure and the offer cap price approach in those evolved international markets. The price cap of Generator is quite higher than its cost of generation, as illustrated below:

| Sources | Average Cost of Generation (\$/MWh) | Average Cost of Generation (Rs./kWh) | Offer caps (Rs./kWh) | Capping Times of Cost of Generation |
|-------------|-------------------------------------|--------------------------------------|----------------------|-------------------------------------|
| Natural Gas | 36.93 | 3.14 | 85 | 27.1 |
| Coal | 74.94 | 6.37 | 85 | 13.3 |
| Nuclear | 87.40 | 7.43 | 85 | 11.4 |
| Hydropower | 46.23 | 3.93 | 85 | 21.6 |

| Sources | Average Cost of Generation (\$/MWh) | Average Cost of Generation (Rs./kWh) | Offer caps (Rs./kWh) | Capping Times of Cost of Generation |
|------------|-------------------------------------|--------------------------------------|----------------------|-------------------------------------|
| Wind | 40.56 | 3.45 | 85 | 24.7 |
| Solar PV | 32.78 | 2.79 | 85 | 30.5 |
| Biomass | 95.55 | 8.12 | 85 | 10.5 |
| Geothermal | 43.43 | 3.69 | 85 | 23.0 |

Source: <https://www.eia.gov/electricity/annual/>

- l) Therefore, in the Staff paper, the reliance on international markets for introducing the concept of BSO / ABO is misplaced. As illustrated in table above, the capping in bid price in US Power markets is in the range of 10-30 times the cost of generation whereas in the Staff paper it is proposed to be only 1.6 times the Variable Cost of Generator. Even, this 1.6 times is same for tied up and merchant plants despite the fact that merchant plants have to also recover Fixed Cost which in the case of tied up projects is already paid up by beneficiaries, scheduled or not.
- 5) **As stated above, PFI disagrees with the approach related to ABO and BSO since it defeats the basic framework of “Development of Market” stipulated u/s 66 of the Act and “Double sided Closed Auction” which forms the basis of determination of prices in Power Exchanges. Nonetheless, we have following specific observations/suggestions on the approach mentioned in the Staff Paper which further underscores the gaps / inconsistencies:**
- a) **BSO for Generator Covered Under Section 62 & 63:** While the provision in respect of generators u/s 62 appear reasonable, there can be instances of multiple rates for the same generator who are Selling power to different States u/s 62 and 63 both. So, it needs to be clarified as to which approved rates should be treated as BSO. There might be cases when break up of tariff under the heads of Fixed Cost and Variable Cost is not available with the Regulators in case of single part tariff discovered and adopted by them u/s 63 projects.
 - b) **BSO for DISCOMs as Seller:** The staff has proposed that the marginal Energy Charge Rate in the contracts shall be used as BSO. In our opinion, this instead should be based on the scheduled contracts. As such it is suggested that BSO of DISCOMs for a particular month may be Weighted Average Variable cost of last despatched Unit of each day for previous month.
 - c) **BSO for Traders as Sellers:** As the trader offer their Bids against each customer ID, therefore BSO in respect of trader Bids should be as per the category of the corresponding customers (DISCOMs & Generators as per above).
 - d) To enhance the transparency of the power market, it is proposed that the Variable Cost (VC) or Marginal Rate declared by all suppliers participating in the Power Exchanges be disclosed to all market participants. Such

transparency will enable participants, both Buyers and Sellers, to plan their Bidding strategies more efficiently and competitively.

- e) Period under study in Staff Paper is from January 2023 to December 2023 which represents a stressed timeframe where the market was already capped by CERC. It is suggested that the study period for market monitoring and surveillance should be for 3-4 years under free market conditions and the calculations for arriving out 1.6 multiplier factor to be shared by CERC.
- f) The merchant power plant also needs to recover the fixed cost from the market therefore the multiplying factor between ABO and BSO should be such that enables merchant power plant and encourages participant to transact more through markets instead of long-term contracts.
- g) The generators (u/S 62) which are Selling in the market recover their fixed cost from their beneficiaries, their ABO multiplying factor should be less than those of merchant power plants.
- h) The Pivotal Supplier Index (PSI) is a valuable market concentration indicator, identifying suppliers with significant market power, but it does not directly indicate market manipulation. Given India's relatively small power market, supplier concentration is naturally higher than in more developed markets. Imposing bid restrictions could discourage generator to enter in the market further causing hindrance in growth of the market. Therefore, regulators should focus on monitoring and penalizing abuse rather than imposing strict price controls.
- i) It is noted that there are three Power Exchanges in India. Even if each exchange verifies ATC (available Transmission Capacity) individually, the aggregate bid quantum across all exchanges can still exceed the residual ATC. The Staff Paper does not clarify how to handle this scenario in the framework. It appears to assume that Buyers will only engage with one exchange for each time block, which may not align with actual Buyer behaviour.
- j) The *CERC (Open Access Inter-state Transmission) Regulation 2008* along with its 5th Amendment dated 2nd Jan 2019 has inter-alia amended Regulation 8 regarding “*Standing Clearance by Load Despatch Centre for Short Term Transactions...*”. It provides that RLDC or SLDC, as the case may be, shall verify availability of surplus transmission capacity in intra/interstate network and issue a Standing Clearance to the short term open-access customer which shall be valid for a maximum period of 3 months at a time. Now, the concept of residual ATC as introduced in the Staff Paper may lead to additional procedure and will also require changes in the Open Access regulation. Therefore, it is requested that the proposed concept of residual ATC may be reviewed and the existing procedure of Standing Clearance may be modified on dynamic basis disabling a buyer to not to place bid for more than the residual capacity.

- k) DISCOMs may increase residual ATC by part scheduling long term generator and utilising underutilised residual ATC in its Buy Bid at Exchanges. Thereafter, post Market clearance, DISCOMs may revise its schedule depending upon availability from generator, as per CERC IEGC Regulations 2023, for such earlier part scheduled long term generator. This strategy might allow States to show available ATC artificially thereby manipulating the market.

B. CONCLUSION

- a) While monitoring and surveillance through regulatory oversight is crucial for preventing market manipulation but it is also essential to strike a balance between regulated environment and free market for a competitive and sustainable power markets operation. Powers granted to CERC u/s 178 (2) (y) linked to Section 66 of the Act also guided by National Electricity Policy 2005 does not empower CERC to determine the methodology and thereafter determining Bid Prices. If all aspects are regulated, it raises the question of the necessity of having a market at all. Considering the underlying market principle “**Double Sided Closed Auction**” we believe market participants should retain the freedom to set the price and volume of electricity they offer from any asset, provided they do not engage in practices that distort competition or manipulate the market.
- b) A more constructive approach for CERC would be to focus on increasing market liquidity and addressing actual instances of manipulative practices rather than imposing restrictive caps. Regulatory intervention should aim to support a competitive power market that attracts investments and ensures efficient growth.
- c) **In view of above, CERC should not consider the proposal of their Staff, since it lacks jurisdiction for determining / directing market participants to submit their bid prices in a regulated way and devoid of Fundamental Principles of Market, mentioned in the Staff Paper “Regulatory Oversight on Bidding Behaviour in Power Exchanges” of May 2024.**
