

## **Comments of Statkraft Markets Private Limited on Staff Paper on Power Market**

### **Pricing**

Please find below our comments on “Staff Paper on Power Market Pricing”.

**Issue -1:** Does Pricing Methodology need a change?

*3.1.3 Given these facts, would it make sense to switch to pay-as-bid pricing methodology and would it address the concerns regarding super normal profits for inframarginal generators under Uniform Market Clearing Price?*

**Statkraft view:** In our view, switching to pay-as-bid pricing methodology does not make any sense. As highlighted in Clause 2.5.3.1 of Staff Paper, the observed price rise in the Power Exchanges is not due to any fault in the market design or in the bidding methodology but due to other factors external to market.

Clause 2.3.4 of the Staff Paper concludes that it is not clear which out of “Uniform Market Clearing Price” & “Pay as Bid” would result in higher consumer surplus. However, there are multiple drawbacks of switching to “Pay as Bid” as shown below:

1. **Prices unlikely to reduce** – The expectation that average price to be paid by consumers under Pay as Bid mechanism would reduce assumes that generators would continue bidding at marginal cost. This assumption is wrong. Pay as bid forces the generators to bid at a price above their marginal price. In fact generators would try to “forecast” the price of the highest cost generator which is likely to be cleared and would place their bid as close to that number as possible. Under such a scenario, there is no guarantee that average price paid by consumers will reduce.

On the other hand, under uniform market clearing price mechanism, generators need to bid only their marginal prices and any surplus goes towards recovery of fixed cost and profit (generator margin). There is little likelihood of erosion of this generator margin even if we switch to pay as bid.

2. **Dispatch no longer on Merit Order basis** – Pay as Bid will force bidders to bid above the marginal price (in order to recover part of their fixed cost) and based on their estimate of market clearing price. In such a scenario it may so happen that lower marginal cost generator is not despatched at all. This will create inefficiencies in the market.

3. **Bids not related to underlying cost of generation** – Bids are not based on marginal cost of power but based on the generators' forecast of market price. The merit order dispatch principle would be violated and inefficiencies would creep in the market.
4. **Forecasting of price will introduce additional cost** – Under Pay as Bid, generators will have to spend on forecasting of prices. This additional cost will reflect in higher prices. Further, generators having access to better information & better IT systems will have advantage in forecasting. Bigger generators (as they have economies of scale to reduce per unit forecast cost) are expected to benefit at cost of smaller generators
5. **No incentive for customers for demand side management or to do long term hedges** – The price volatility in Pay as Bid is expected to be lower. Customers typically uses financial products (derivatives), signing medium/long term PPAs to hedge such volatility. With volatility reduced, consumers will have little incentive for signing long duration PPAs. This will result in lower investment in power sector.

Also, price volatility encourages consumers to shift their load from peak hours to off-peak hours and do other demand side management activities. Under pay as bid customers have no incentive to go for demand side management.

To conclude, shifting to Pay as Bid has no guarantee that prices will decrease for consumers. Increase in price is mainly due to factors which are not dependent on market design or price discovery mechanism. On the other hand, as mentioned above, it would introduce many inefficiencies in the system. In view of above the price discovery mechanism should not change.

#### **Issue -2: What should be the criteria for Regulatory Interventions?**

**Statkraft view:** One of the issues brought out in the paper is the concern about “surplus profit” or “super normal profit” earned by the generators due to high prices prevailing in the exchanges. In our view, if there is Regulatory concern about the “super normal profits” the same should be addressed by way of taxation instead of putting a price cap in the Power Exchanges. However, while levying a tax following shall be ensured:

- To encourage investment in power sector, fair return for investors should be ensured. The calculation of “super normal profit” shall be done in a transparent manner and in way that new investments are not discouraged
- It may so happen that it is not the generators who are benefitting from high prices. For example – a generator may be selling power to a DISCOM under a long term PPA, and it is the DISCOM/other consumer which is selling power and earning profits.

A well-functioning electricity market is supposed to give price signals to ensure that new investments are done in the market. Capping the prices at a level which is below what the market price is and still provides incentive for new investments is a tricky task. In any case, almost 90% of the power in Indian market is tied up on long term basis (at a fixed price). Putting a cap on just power exchanges (which is just 6%-7% of total electricity generation) will have a very limited impact.

Further, a price cap gives no incentive to consumers to ration their usage of electricity. As has already been mentioned in the paper, price caps may result in higher priced generators out of market (while we shall make all efforts to increase the supply and not decrease it).

### **Issue -3: What should be the market design for incentivising demand response and energy storage system (ESS)?**

**Statkraft view:** The Staff Paper correctly mentions that there is a need to incentivize demand response and energy storage system (ESS). Ministry of Power (MoP) has already notified Energy Storage Obligation (ESO). This would promote development of Energy Storage System. The CERC has also published Ancillary Service Regulations, which will promote Energy Storage System and demand response services. However, the procurement of Ancillary Services is on a day ahead basis. It is suggested that longer duration contracts should be available (5-7 years) for encouraging investment in Energy Storage System (ESS).

We agree with the suggestion in the Staff Paper that aggregators shall be permitted to pool resources and participate in demand response services. In order to ensure cost recovery, a two part tariff may be paid to such resources. Fixed costs may be paid for making the resources available and a variable cost when the resources are dispatched.



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