

Tata Power's Comments on CERC's Staff Paper on Power Market Pricing

1. Views on the Pricing Methodologies

Uniform Market Clearing Price (UMCP) results in propagating efficiency as generators stick to their marginal cost of generation while placing the bids. **It gives price signal to the market to set up more efficient generating stations and also on fuels which results in lower marginal cost of generation.** The methodology is more apt for price determination on account for following:

- The methodology gives a correct price signal of the day ahead demand as the generators offer their variable cost and buyers submit its price as per the demand
- Uniform Clearing Price for pricing methodology is adopted by all leading Power Exchanges across developed nations, viz. Europe, Scandinavia, Russia, North America, Australia, Japan etc.

In case “**Pay-as-bid**” pricing methodology is adopted as price discovery mechanism, Generators/Sellers will change their bidding strategy and may increase their bid price. **It will result in generators bidding on prices which may be more than marginal cost of generation thereby giving an incorrect price signal for addition of new generation capacities.**

In view of the above, switching to “**Pay-as-bid**” may not solve the purpose. Besides, the UMCP was performing very well since it was put in place in 2008/2009 till March 22, when there were a number of generating stations under outage and the summer demand started early.

However, under UMCP Methodology the following changes can be made with consumer centric approach taking a clue from High Price Market Segment proposed by MoP:

- a. CERC /SERCs needs to fix for each generator what maximum price it can quote while bidding. The maximum price needs to be based on what can be said to be below super normal profit. This will help prevent the market from becoming seller driven.
- b. CERC needs to define slabs for bidding **by sellers** e.g. 5 slabs can be defined as ---upto Rs. 5/unit, Rs. 5.01 to 10/unit, Rs. 10.01 to 15/unit, Rs. 15.01 to 20/unit and more than Rs. 20/unit. This will ensure merit order dispatch and limit the abnormal profits as sale will be regulated in a price band for each seller.
- c. Buyers may bid a price and will fall in one of the slabs defined by CERC. Bids not cleared and those cleared partially will be considered in the next higher price slab for clearing. Competitive ones will be cleared first and those with highest cost will be cleared at the end.
- d. Benefits of creating such slabs- **Price Based Market Segmentation**,
 - i. Super normal profits of generators will be avoided,
 - ii. Buyers will get power at economical rates and
 - iii. Burden on consumers will be reduced with comparatively cheaper power.

2. Potential Policy/Regulatory Interventions that can be Undertaken

The following can be undertaken:

a) Mechanism for sharing of super normal profit made by Infra-marginal generating stations with the buyers

Tariff principles notified by various regulatory commissions specify reasonable rate of return to be made by generating companies. Sub-section (1) of Section 11 of the Electricity Act, 2003 specify that Appropriate Government may specify that a generating company shall, in extraordinary circumstance operation and maintain any generating station in accordance with the directions of that Government. Infra-marginal generating stations making returns more that the specified reasonable rate of return may be recouped through regulatory intervention and may be shared with the buyers in proportion to their purchases in the power exchanged. Such intervention can be on a monthly basis as REA/SEA gets finalized on monthly basis

b) Imposition of windfall gain Tax on sale of power

- Instead of putting a cap on revenue, a levy may be made applicable on such generators earning huge profits. E.g. in case generator makes windfall profit of more than 30% as compared to last 3 years avg, levy may be made applicable on them on profit beyond 30%. Hence, more the profit, more the tax, similar to tax slabs methodology being used in Income tax.
 - ✓ For Solar / Wind / Hydro – levy on profit beyond 30% of 3 yrs avg.
 - ✓ For New technologies (with unpredictable prices)– No levy to be imposed
- The levy collected from such sale proceeds to be paid back to the Utilities in proportion to their power procured in the short term market / energy requirement.

c) Demand side corrections through Time-of-Day (ToD Tariff) may be introduced across all states to bring down the prices

- ToD tariff needs to be applicable across the DISCOMs on Pan India basis.
- Peak shaving is one of the important aspect of reducing the peak pricing
- Additional Incentive for operating at higher load factor during off-peak hours (above 80% LF) in addition to the lower TOD tariff during off-peak hours

The above option would encourage load intensive and discerning customers to shift their requirement to off peak hours, thus would help in reducing peaking requirement

d) CIL to provide Coal linkages to Utilities and Utilities to come out with Medium term procurement

There are more than 10000 MW of thermal assets running their assets on Spot coal. These plants (operational / stranded) are not getting coal linkages due to absence of Medium / Long term tie up with Utilities. Regulators to push Utilities to procure thermal power on Medium term with Coal linkages. Coal will be pass through at concessional rate and

generators to offer only the Fixed cost and heat rate guarantee. This would enable generators to perform efficiently and supply power at a competitive tariff to Utilities.

e) Availability of Domestic coal for Spot market at competitive price

Till last year, there were separate bidding window of coal procurement for Power / Non-Power sectors. During crisis situation, CIL closed multiple coal procurement routes and opened a single window option for all segments. This resulted in increase in coal price due to competition among coal consumers. In order to overcome this situation:

- Separate bidding window for power and non-power
- Price cap on auction of domestic coal to be put by CIL
- Similar levies to be imposed on CIL as well

f) Incentive to Peaking Plants

With Solar / Wind assets getting into the power system, there has been huge power deficit during low generation from these RE projects as the coal based projects are not able to ramp up at the same pace. This has resulted in increase in the spot prices during these time blocks. In order to take care of such situation, there is a need to augment generation from peaking plants like ESS. In order to promote players getting into these segments, following may be proposed:

- Incentive schemes to be provided, the way support systems were developed for Solar / Wind during initial phase GBI / VGF etc.
- Single window clearance for ease of permission for the developers.
- Govt to identify sites for development of PSP across the country
- Support to stranded gas based plants that can operate during peak hours.

3. What should be the market design for incentivising demand response and energy storage system (ESS)?

If actual Time of Day tariff is applicable, consumers are incentivised to shift their consumption to the time slots wherein the power prices are cheaper. Such ToD tariff should be applicable to all consumers including domestic consumers to facilitate a flatter load curve.

Energy Storage System (ESS) may also provide similar benefits when connected at various load centres to flatten the load curves. Cost benefit study may be undertaken to assess which option yields better consumer benefit in terms of costs. Ideally, it should be a combination of both. **DISCOMs should be encouraged by SERCs** to install BESS to the extent of handling its peak demand and help in grid balancing in the wake of large scale RE penetration.