

### **Comments on Staff Paper for Power Market Pricing**

We highly appreciate the Hon'ble Commission for publishing the Staff Paper on Power Market Pricing to review the existing regulatory framework and especially pricing methodology, by taking holistic view of unpredicted global events that have taken place in the past year, in the overall interest of all the stakeholders.

We humbly request the Hon'ble Commission to consider the following comments/suggestions on the subject matter.

#### **A. Pay as bid Methodology**

- With a view of mitigating the super normal profits of Generators/ Sellers in the prevailing Uniform Market Pricing mechanism, Hon'ble Commission has come up with the proposal of Pay as Bid methodology.
- In this regard, it is submitted that given the uncertainty experienced by many countries during the global pandemic and subsequent war crisis resulted in highly disrupted supply-demand chain scenario which resulted in extreme variations in material costs. This can be safely termed as abnormal circumstances which is difficult to predict and incorporate in any statistical methodology.
- Hence, it is kindly requested to the Hon'ble Commission to not factor such unusual circumstances while finalising the mechanism.
- Notwithstanding the above it is submitted that, as already experienced in other countries, there are considerable chances of market manipulation by the Generators even under the 'pay-as-bid' pricing method.
- To secure profits, majority of the generators will participate with high selling price irrespective of their generation cost which will defeat the very purpose of the proposed exercise.
- Moreover, it is submitted that the Hon'ble Commission had introduced the concept of Market Coupler under the Power Market Regulations, 2021. Since the 'pay-as-bid' method does not express a single price in each bidding zone in each hour, the properties of any market coupling outcome would become uncertain. This will increase risk in participating in the market which, in turn, may discourage wide participation.

#### **B. Regulatory Interventions and addressing the Market Cap**

- To eliminate the risk of price spike because of market power or misuse of market position by the suppliers, the Hon'ble Commission is of opinion to intervene or adapt certain provisions like consideration of price capping for inframarginal and supramarginal generators (like Gas based Plants).
- In this regard, it is submitted that Gas-based plants have inherent operational advantages such as quicker start-ups, lower technical minimum, and substantial part load efficiencies. These features can be utilised to optimise grid balancing, to

- effectively meet the emergent power demand and support significant renewable power integration to the grid.
- Also, it may kindly be noted that Gas-based plants also have less SOX/NOX emissions & requires ~25% less water compared to coal-based plants still in our country nearly ~24 GW of gas-based power generation is lying idle.
  - Many major economies around the world have already been growing their renewable generation in tandem with gas power generation.
  - Earlier this month, the European Union parliament has voted to make natural gas as green energy. The European Commission has argued that natural gas plays a key role in transitioning to renewable energy and emits 40% less carbon dioxide than coal which will help EU achieve its pledge by 2030 to cut planet-heating emissions by 55% from 1990 levels.
  - Despite the above, the price ceiling forced gas-based generation under Reserve Shutdown even though market was ready to pay price of such marginal generation of gas-based capacity.
  - Hence, it is submitted that no cap on selling price shall be kept for power intended to be sold from gas-based power plants.

### **C. Market design for incentivising demand response**

- Considering the assessment of demand-supply position in the power sector atleast for next 5 years, it is anticipated that peak power demand will remain significant and of major focus.
- CEA projections on optimal generation mix by the year 2030 deliberated that Battery Energy Storage System (BESS), may play a significant role for RE integration and Grid Stability. However, the cost of such system is significantly higher at present which makes it commercially unviable.
- Even with battery storage attaining commercial viability in future, role of gas-based power plants will be crucial as a viable alternative for RE integration as per report on Optimal Generation Capacity Mix published by CEA. The report states that the country will still need 25 GW of gas-based projects along with 27 GW of Battery Energy storage to achieve ~420 GW of RE capacity.
- Gas-based plants have inherent operational advantages which can be utilised to optimise grid balancing, to effectively meet the emergent power demand and support significant renewable power integration to the grid.
- In our country, nearly ~24 GW of gas-based power generation is lying idle due to policy inconsistencies.
- It may kindly be noted that investments in generation assets are capital intensive and have a long-gestation period. Operation of such plant is imperative to fulfil obligations of the generator such as debt repayment, O&M expenses and fuel offtake commitments.
- Therefore, it is submitted that to ensure energy security, to integrate increased

quantum of RE power to the grid, and to provide reliable RTC power generation of gas-based plants should be considered an integral part of the overall system.

- In reference to the above, we humbly request the Hon'ble Commission to provide market mechanism on the following broad principles:
  - Needs to define source-wise segments.
  - Priority should be assigned to each segment based on various factors such as grid balancing, must-run requirement, exigencies, special dispensation for stressed assets etc.
  - Separate percentage should be applied, for each category in relation to the priority assigned, for all transactions in a day.
- This will ensure that everyone gets equal chance to participate in the market irrespective of any abrupt policy changes.
- Further, enabling provision needs to be carved out where purchase from gas-based power would result in corresponding credit of renewable attributes if such purchase were being done during the period of abnormal renewable generation.