

The Market-Based Economic Dispatch (MBED) mechanism

September 23, 2022

In news– A fresh tussle between the Centre and states is brewing over the Market-Based Economic Dispatch (MBED) mechanism that envisages centralised scheduling for dispatching the entire annual electricity consumption of around 1,400 billion units.

What is MBED mechanism?

- The new model proposes a centralised scheduling of power dispatches, both inter-state and intra-state.
- MBED model is seen as **on the relative autonomy of states in managing their electricity sector**, including their own generating stations, and make the discoms entirely dependent on the centralised mechanism which has been buttressed by the Electricity Act 2003 and follow-on reforms.
- There are concerns this could strip states of their freedom to decide their own electricity requirement while managing seasonal and local demand trends.
- The Union power ministry said **MBED as a way forward to deepen power markets in line with the Centre's 'One Nation, One Grid, One Frequency, One Price' formula.**
- The implementation of the first phase of MBED was earlier planned to start with effect from April 1, but was put off for later in 2022, with a date yet to be announced.
- The Centre's argument is that the current model of states doing scheduling is suboptimal. As part of this, **an algorithm developed by the NLDC called the Security Constrained Economic Dispatch (SCED) is being cited as a solution.**
- SCED is aimed at assisting regulators in making informed calls on scheduling decisions on a nationwide basis.

- **Power is in the Concurrent List of the Constitution, with the electricity grid being divided into state-wise autonomous control areas** managed by the State Load Dispatch Centres (SLDCs), which in turn are supervised by Regional Load Dispatch Centres (RLDCs) and the National Load Dispatch Centre (NLDC).
- As things stand, each control area is responsible in real time for balancing its demand with generation resources.
- **The MBED model proposes to change this by putting in place a central market operator** to dispatch the inter-state as well as intra-state generation plants.
- Also, there is an inference that the **new model will narrow the multiple options currently available under the voluntary market design**; with day-ahead contracts turning redundant and, from a state's perspective, the discoms and SLDC needing to buy or sell power in the real-time market, even if it is for the sake of maintaining demand-supply balance in their control areas.

Note:

- **India has a diversified electricity** market ranging from long-term **power purchase agreements (PPAs)**, cross border PPAs, short and medium term bilaterals, day-ahead power exchange, and a real-time online market.
- A **major percentage of the installed power capacity –over 87 per cent – is tied up under long term PPAs** of around 25 years.
- The remaining 13 per cent is transacted in the power markets, with nearly half of this over the power exchanges and the remaining through short-term and medium-term bilateral deals.
- **At present, each control area or state follows merit-order dispatch** (cheapest power dispatched first) from the basket of intra-state and inter-state resources and

buys or sells on the day-ahead power exchange.

- The schedules under long-term PPAs can be revised, but not for the power traded at the day-ahead power exchange.
- The un-tied generators in the private sector scout for buyers in the bilateral market as well as on the power exchanges on a voluntary basis currently.