



India's Centralised Power Market Shift

For Prelims: European Union, Market-Based Economic Dispatch (MBED), One Nation One Grid One Frequency One Price, Electricity Act, 2003, Electricity Distribution Companies (DISCOMs), Renewable energy, Electric vehicles.

For Mains: Market-Based Economic Dispatch (MBED) Model, Concerns Associated with the Centralised Model of MBED.

Why in News?

India is changing its [power market](#) system **from a decentralized, voluntary and short-term market to a mandatory pool model** that eliminates fixed-price contracts. While, the [European Union is going in the opposite direction](#).

What is the European Union's Policy Related to the Power Market?

- The **EU wants to change its power market** because a gas shortage caused high [electricity](#) prices in 2022.
 - The high prices happened because electricity prices are set by the most expensive power plant, usually a gas plant.
- The [European Commission](#) is considering different ways to change how power plants sell electricity.
 - They want to use long-term contracts that give power plants a fixed price for their electricity.
 - This will help make electricity prices more stable for households and businesses.

What is India's New Market-Based Economic Dispatch (MBED) Model?

- India is developing a new electricity market model called the **MBED mechanism**.
 - This will centralize scheduling for dispatching the **country's annual electricity consumption of around 1,400 billion units**.
- MBED is a way forward to deepen power markets in line with the Centre's '[One Nation, One Grid, One Frequency, One Price](#)' formula.
 - It will ensure that **the cheapest electricity generating resources across the country** are supplied to meet the overall system demand and will therefore be a win-win for both the distribution companies and the generators and result in savings for consumers.
 - It will also mark a clear shift from a decentralized model which is backed by the [Electricity Act, 2003](#).
- Currently, the electricity grid is divided into state-wise autonomous control areas managed by the **State Load Dispatch Centers (SLDCs)**, which in turn are supervised by **Regional Load Dispatch Centers (RLDCs)** and the **National Load Dispatch Centre (NLDC)**.
 - The MBED model wants to change this by having a **central market operator in charge of all the electricity**. This new model would limit the current options and **discoms** and **State Load Dispatch Center** would have to buy or sell electricity in real-time even if

it's **just to balance demand**.

- India is also making a new rulebook for the electricity grid and a new way for people to use the electricity network called **GNA (General network access)** that is more **open and flexible**.

What are the Concerns Associated with the Centralized Model of MBED?

- **Impact on State Autonomy:** MBED will have effect on the relative autonomy of states in managing their electricity sector, including their own generating stations, and make the [Electricity Distribution Companies \(DISCOMs\)](#) (mostly state-owned) entirely dependent on the centralized mechanism.
- **Clash with Emerging Decentralized Market:** It could potentially clash with emerging market trends i.e., **increase in renewable energy** in the overall generation mix and the increasing numbers of **electric vehicles** plugging into the grid.
 - All of these actually necessitate greater decentralization of markets and voluntary pools for efficient grid management and operations.
- **Grey Areas:** The **must-run status of some power stations such as Trombay TPS, Mumbai or the Dadri TPS in the NCR region** will come under question.
 - These power stations are critical for **security of supply to key cities such as Mumbai or Delhi** and in islanding operations in the event of a grid failure.

Way Forward

- Power, being a subject of [Concurrent List of Indian Constitution](#), **recommendations from states should be taken into consideration** for effective implementation of the new model.
- **Security Constrained Economic Dispatch (SCED)**, an algorithm developed by the NLDC can be the potential solution, which is aimed at assisting regulators in making informed calls on scheduling decisions on a nationwide basis.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q1. Consider the following statements: (2019)

1. Petroleum and Natural Gas Regulatory Board (PNGRB) is the first regulatory body set up by the Government of India.
2. One of the tasks of PNGRB is to ensure competitive markets for gas.
3. Appeals against the decisions of PNGRB go before the Appellate Tribunals for Electricity.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (b)

Q2. Which one of the following is a purpose of 'UDAY', a scheme of the Government? (2016)

- (a) Providing technical and financial assistance to start-up entrepreneurs in the field of renewable sources of energy
- (b) Providing electricity to every household in the country by 2018
- (c) Replacing the coal-based power plants with natural gas, nuclear, solar, wind and tidal power plants over a period of time
- (d) Providing for financial turnaround and revival of power distribution companies

Ans: (d)

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