

1. Not So Smart Meters

Why is in News?

- The Union Finance Minister, urged states and union territories to replace all conventional electricity meters with prepaid smart meters over the Next Three Years.

What is a Smart Meter?

- A smart meter is a digital meter that replaces old analog meters, which are used in homes to record electrical usage.
- These digital meters can **transmit energy consumption information to the utility (as it is connected to the internet) in frequent intervals, and can monitor consumption more precisely, thereby enabling more informed energy choices.**

How Smart Meters Help?

- For consumers, **smart meters help in monitoring and managing electricity consumption and save money.** It can be like your mobile pre-paid connection. You can buy electricity for a fixed amount, and use it. After finishing, you can top-up, just like a mobile recharge.
- It can **Reduce Billing Errors.**
- Smart meters help **power distribution companies (discom) to conduct power-quality analysis in near-real time**, taking into consideration factors such as maximum demand, voltage fluctuation, outage detection etc.
- It helps **discoms reduce peak power purchase cost, thereby improve business efficiency.** This in turn reduces their debt, thereby helping the economy.
- **Smart meters also aids in the recovery of receivables, which has caused a huge stress on the system.** Estimates say that Rs 1 lakh crore worth power was unbilled last year. So, it can help discoms plug leakages in the whole chain.

Limitations of Smart Meters:

- Prepaid meters address only a small part of the problem of discom finances – non-payment of billed amounts. Discom losses have two additional components: **Line losses in the distribution network, and theft outside the meters, neither of which will be helped by smart meters.**

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- Smart meters **will require access to network and support architecture to transmit and store data.** There is no clarity on the network costs, who will bear it, and the impact on the electricity bills of the poor.
 - Prepaid meters invert the order between consumption and payment, but are unlikely to address the fundamental problem: **Weak accountability between discoms and consumers.**
 - Prepayment in the current tariff structure **does not eliminate the discoms' incentive to prioritise their affluent consumers over the poor.**

Conclusion:

- The Centre's push for smart meters may be an important ingredient for transitioning to a 21st century electricity-system.
- However, let us not pretend it is the silver bullet to solve the long-standing problems of discom finance and losses, and accountability and governance in the Indian electricity system.

Source: The Indian Express

