

60% of surveyed smart meter consumers are satisfied with the technology, can pay bills easily: CEEW

*- Shri R. K. Singh, Union Minister of Power, and New & Renewable Energy, launched the study, saying, "The government envisions all smart meters to be prepaid and digitised without human intervention."
-Over 90% of surveyed users had a smooth smart meter installation experience and 50% reported improvements in billing regularity since switching to smart meters*

20 March 2023, New Delhi: "We have transformed the power sector in the last few years and connected the country to one grid. The smart meter project started with a need – automating the reading of meters and sending electricity bills to 2.90 crore houses on time. Scaling up smart meters will lead to further digitalisation, automation and efficiency of the power system. Further, we envision almost all smart meters to be prepaid. This will significantly reduce the financial burden of discoms as prepaid metering reduces the cost of financing their operations. Smart meters will help bring down the cost of electricity by 2-2.5 per cent," said Shri R. K. Singh, Union Minister of Power, and New & Renewable Energy, at the 'National Dialogue on Smart-metered India for a Digitalised and People-centric Power Sector', organised today by the Council on Energy, Environment and Water (CEEW) in collaboration with IntelliSmart.

He further added that the consumer would be at the centre of India's smart meter system. Saying, "We are focusing on the rights of consumers and have set up a consumer redressal mechanism to ensure that there is timely resolution of complaints. Accountability now pervades the power system." He emphasised the role of domestic manufacturers in India's smart meter transition and urged them to keep meter prices consumer friendly.

He released CEEW's study 'Enabling a consumer-centric smart metering transition in India' at the event. The report, supported by Bloomberg Philanthropies and the MacArthur Foundation, found that around 60 per cent of smart meter users surveyed in six Indian states are satisfied with their billing and payment, and would recommend prepaid smart meters to their friends and relatives. Only 20 per cent were unsatisfied with the smart meters installed, while another 20 per cent were neutral about it. Ninety-two per cent of the consumers also reported a smooth smart meter installation experience. Further, nearly 50 per cent of the consumers reported improvements in billing regularity since switching to smart meters. India has installed 5.5 million smart meters, of which 97 per cent are deployed in 12 states and UTs.

The CEEW study is based on a survey of nearly 2,700 urban households – covering 1,200 prepaid and 1,500 postpaid consumers – across six Indian states, 18 districts and 10 public discoms. These six states account for 80 per cent of all smart meters installed in India. The survey was facilitated by REC Limited. The study highlighted that around 30 per cent of prepaid users of smart meters recharged more than once a month, with the highest share in Uttar Pradesh (38 per cent). More than a third of the consumers across six states also reported co-benefits such as a greater sense of control over electricity expenses, a drop in electricity theft, and improved power supply to the locality.

Shri Alok Kumar, Secretary, Ministry of Power, said, "Smart metering is very important from the consumer's perspective. Wrong or delayed billing is a bane. Prepaid metering is the core of fixing this issue. If consumers are satisfied, then they are willing to pay for the services. This is a revolution."

Vivek Kumar Devangan, Chairman and Managing Director, REC Ltd., said, "Smart meters are a game changer in power sector reforms. The studies released today will help us formulate a people-centric power sector. Real-time data through smart meters will help India better manage the grid and

improve its stability. This is a unique opportunity to generate skilled jobs and stimulate economic growth.”

Among the states surveyed, Assam has the highest share of consumers who are satisfied and feel that smart (prepaid) meters have enabled greater control over electricity expenses. Bihar reports the highest awareness and uptake of the smart meter app (80 per cent), driven by intensive consumer engagement efforts.

Dr Arunabha Ghosh, CEO, CEEW, said, "India's ambitious drive to link smart meters to all electricity connections would not only make consumers active participants in the country's energy transition but could also significantly improve the financial health of discoms. Discoms must leverage smart metering infrastructure to deliver affordable and quality electricity services to consumers by improving operational efficiency and integrating distributed renewables into the grid cost-effectively. Scaling up awareness campaigns to educate consumers about the benefits of smart meters and their mobile apps would be critical."

The CEEW study also highlighted challenges faced by consumers as part of the nationwide smart meters rollout. Due to gaps in digital literacy and limited awareness of smart meter apps, many consumers rely solely on SMS updates, which do not provide a breakup of bills. As a result, 70 per cent of consumers would like to continue receiving paper bills. Also, only half of the consumers were aware of smart meter mobile apps, and just 45 per cent used them. App usage was highest in Bihar (80 per cent), followed by Assam (47 per cent). However, app usage was extremely low in Haryana (14 per cent) and Madhya Pradesh (13 per cent). Further, nearly 12 per cent of consumers reported that paying bills had become difficult since the switch to smart meters for multiple reasons: fear of disconnection upon failing to recharge in time, cash flow issues, and barriers to digital payments.

The study also highlighted that a higher share of prepaid smart meter consumers were satisfied (63 per cent) compared to postpaid consumers (55 per cent). However, very few postpaid users were willing to switch to prepaid mode due to a lack of awareness, status quoism, and fear of disconnection.

Shalu Agrawal, Senior Programme Lead, CEEW, said, “Currently, provisions governing prepaid smart meters in India are scattered across different regulatory orders and directives, which makes them inaccessible to key stakeholders, especially consumers. The central power ministry and the state electricity regulators should consider issuing smart (prepaid) meter guidelines to ensure a uniform consumer experience.”

The transition to smart metering should include consumers as important allies by making consumer-friendly policies and engaging with them. The CEEW study recommends that discoms spread sustained awareness of the benefits and features of smart meters and their mobile apps. They should continue giving paper bills and slowly phase them out. Prepaid consumers must get timely alerts and diverse payment options to facilitate a smooth recharge experience and dispel the fear of disconnection.

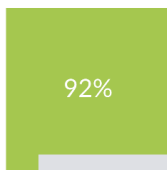
CEEW also released the study ‘Making India’s Advanced Metering Infrastructure (AMI) Resilient’ at the event. The study finds that discoms require deeper technical support to implement the existing rules on cyber security of AMI and to improve their preparedness against cyber threats. Based on an analysis of contracts signed between discoms and AMI service providers in five states, the study recommends that important clauses of these contracts should be uniform across states to reduce vulnerability to cyber threats, and that incentives for information disclosure by discoms and vendors need to be strengthened by regulators.

You can read the full studies here: [‘Enabling a consumer-centric smart metering transition in India’](#) and [‘Making India’s Advanced Metering Infrastructure Resilient’](#).

For media queries contact **Tulshe Agnihotri** – tulshe.agnihotri@ceew.in | +91 9621119643

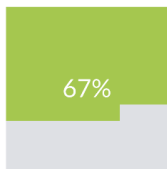
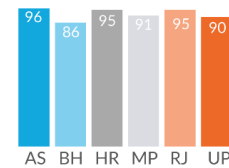
~60% of surveyed smart meter users are satisfied, would recommend it to others

All-India data (%)

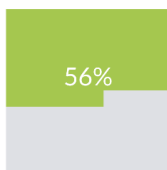
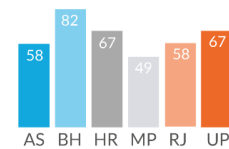


More than 90% of surveyed consumers **did not face any issues during installation**

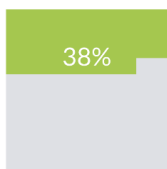
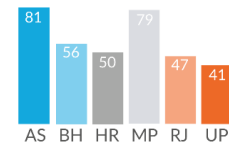
State-specific data (%)



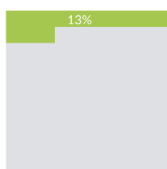
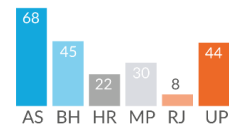
~70% users feel **bill payment has become easier and more flexible** since shifting to smart meters. More positive payment experiences are reported among prepaid users than postpaid.



A little more than half of the surveyed consumers could access a detailed breakup of the bill. Majority households (70%) would like to continue receiving detailed paper bills, if given the option.



~40% people feel they can exercise better control of their electricity expenses, the biggest factor, in determining satisfaction



Only 13% postpaid consumers are willing to shift to prepaid mode. GOI envisions all smart meters to be prepaid by 2025-26.



■ Assam (AS) ■ Bihar (BH) ■ Haryana (HR) ■ Madhya Pradesh (MP) ■ Rajasthan (RJ) ■ Uttar Pradesh (UP)

Note: 100% of the smart meters installed in Bihar are prepaid

Source: Enabling a Consumer-centric Smart Metering Transition in India (2023)

About CEEW

The Council on Energy, Environment and Water (CEEW) is one of Asia’s leading not-for-profit policy research institutions. The Council uses data, integrated analysis, and strategic outreach to explain – and change – the use, reuse, and misuse of resources. It prides itself on the independence of its



high-quality research, develops partnerships with public and private institutions, and engages with wider public. In 2021, CEEW once again featured extensively across ten categories in the 2020 Global Go To Think Tank Index Report. The Council has also been consistently ranked among the world's top climate change think tanks. Follow us on Twitter @CEEWIndia for the latest updates.