Getting it right more important than installing smart meters fast

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Introduction

Smart metering of electricity consumers is one of the key measures being adopted to alleviate financial distresses of electricity distribution companies (DISCOMs). This idea gathered steam, when in the union budget speech for 2020, the finance minister announced that all conventional consumer meters would be replaced by smart meters by 2022. Subsequently, a scheme worth ₹ 3.05 lakh crore was announced in the union budget for Financial Year 2021-22, which focuses significantly on smart metering. Primarily under the Smart Meter National Program (SMNP), which is steered by the Government of India owned- Energy Efficiency Services Limited (EESL), 19 lakh smart meters have already been installed in India. A recent media article has reported proposed revision to extend the deadline to 2023 and reducing the scale of the programme.

Smart meters, through automatic bill generation and remote disconnection, are expected to significantly improve metering and billing efficiencies, and in turn, increase DISCOMs' revenues. While revenue gaps of DISCOMs have been increasing, further exacerbated by the pandemic; the dues of DISCOMs to generators have also been piling up, to the tune of about ₹ 70,000 Crores. To address the financial predicament of DISCOMs, significant future investment in smart meters is being proposed by the central government, which is almost half of the ₹ 3.05 lakh Crore scheme. Given the multiple benefits of smart meters, the large-scale rollouts and future investments are primarily being justified on the basis of improving collection efficiency. Thus, a need-based assessment, especially for small consumer, is crucial before State Electricity Regulatory Commissions (SERCs) approve these rollouts.

Tracking smart meter installation rollouts

Monitoring and verification of smart meter rollouts is taking place in varying degrees by different stakeholders in the sector. Very basic details, such as the number of smart meters installed, are already being reported through different sources like the National Smart Meter Program (NSMP) dashboard, and as part of DISCOMs' regulatory information. However, there seem to be discrepancies within these data sets. For instance, DISCOMs in Uttar Pradesh have claimed installation of 24 lakh smart meters at the end of FY21, but NSMP shows only 11 lakh installations. Further, not much information can be accessed in the public domain regarding other aspects of these rollout programmes in various states.

Our analysis of 6 states in India, which have already rolled out smart meters for a few lakh consumers, shows that before implementation, effective cost benefit analyses were not conducted and shared in the public domain. Neither are there any disclosures regarding on-field technical challenges, nor is information available on how DISCOMs plan to operationalize full benefits of smart meters in order to improve consumers' distresses.

The true costs of implementation of smart meters, and assessment of benefits achieved thereof, should be critical for approval of full-scale implementations. Without the necessary regulatory oversight, imprudent costs of such programmes could be passed on to consumers. This creates the need for a transparent, accountable and participatory mechanism to ensure that full benefits of such large-scale investments behind smart metering are achieved.

Need to ensure a consumer centric approach

Transitioning from the current metering system to a smart one needs to be done in such a way that consumer confidence is ensured. On 12th August 2020, about 1.6 lakh smart metered consumers in Uttar Pradesh faced automatic disconnection of supply due to system faults. As per media reports, more than six thousand electricity consumers have opted for permanent disconnection in Uttar Pradesh, following their dissatisfaction and distrust in smart meters. Many issues related to recharging of prepaid meters and other meter related complaints have been reported on Google's Play Store, on apps that are used for meter recharging in Bihar. Several case studies from other countries suggest that without proper consumer engagement, smart metering programmes can face challenges in terms of consumer acceptance. It is hence necessary that DISCOMs invest the required efforts in engaging with consumers, to build required trust in these new systems, and ensure that software developed to manage these meters are tried and tested. SERCs can safeguard consumers by revising their existing regulations, to include specific details on standards of performance for smart meters.

Data privacy

Finally, smart meter data has the capability to reveal sensitive information, which can be deciphered from electricity usage patterns. Ahead of the personal data protection legislation, Ministry of Power should evolve a framework for handling smart meter data, and finalize it in consultation with stakeholders. Regulators should include aspects of data-sharing protocols, purposes, grievance redressal, security, etc. DISCOMs should appoint a data protection officer to get various aspects of privacy right. This will ensure that the rights of consumers, with respect to data privacy, are retained.

In Conclusion

Smart meters certainly have the power to improve the revenue recovery of DISCOMs and ensure better electricity services to the consumer. But such outcomes can be expected only if these rollout programmes are done right. DISCOMs have taken a big challenge in moving towards automation of the interface between them and the consumer. In the haste to achieve targets, there is a chance that the consumer might lose trust. Hence, proper evaluation of such rollouts and allowing for mid-course correction can still help smart meters break the vicious chain of losses.

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