



Regulatory accountability of smart meter rollout plan in Uttar Pradesh

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Uttar Pradesh DISCOMs have been frontrunners in formulating and implementing a smart meter rollout plan, much ahead of many states in India. The rollout comes at a time when the Ministry of Power has asked the Forum of Regulators to formulate strategies for rolling out advanced metering systems. This is also in line with provisions in the National Tariff Policy, 2016, which advocates for installation of smart meters. Since the UP DISCOMs are one of the firsts to implement this, much can be learnt from this process for future scaling-up in UP and for conducting pilots in other states.

In May 2018, the UP DISCOMs were asked to submit the detailed rollout plan for [UPERC's approval](#). In August 2018, UPPCL, the holding company for the UP DISCOMs, submitted the plan, which targets to install 40 Lakh smart meters in 47 towns across all its DISCOMs by March 2021. The installations are planned to be done in a phase-wise manner, starting with high energy input urban areas, which experience significant AT&C losses, and targeting consumers with consumption greater than 500 units per month. Remaining consumers are intended to be covered in later phases.

Energy Efficiency Services Limited (EESL) has been chosen as the implementing agency since it has experience in low cost bulk procurement. EESL will make the upfront necessary capital investment, while DISCOMs will pay EESL Rs. 86 per meter per month, post meter installation. Meter suppliers and system integrators have been chosen by EESL through competitive bidding processes.

The DISCOMs anticipate a 5-7% increase in billing efficiency and foresee a net gain of Rs. 4,056 Crore in 8 years, given the investment. It is to be noted that this gain is solely hinged on anticipation of increased revenue recovery. The installation of smart meters, along with Automated Metering Infrastructure (AMI) is also expected to improve data analytics. Additionally, existing consumers will not have to pay any extra charges for replacing existing meter while new consumers will only have to pay meter charges as per existing rates. The DISCOMs will also provide for grievance redressal through existing mechanisms.

While approving the proposal, UPERC has raised some concerns with implementation of the project. This includes issues with consumer's data privacy as data is being proposed to be stored at a third-party cloud server. Along with this, there is lack of clarity on hardware compatibility with different network technology as well. Other hindrances include shortage of supply of smart meters and their quality.

Since the large-scale smart meter implementation program is one of the first in the country, this roll out plan will set precedence. Thus, it is important that all on-ground implementation challenges are not only documented well by DISCOMs and EESL, but also be available in the public forum so that lessons can be drawn for future projects.

UPERC has directed the DISCOMs to submit quarterly progress reports while installation of meters take place. The Commission has also directed the DISCOMs to submit reports on actual collection efficiency and billing efficiency achievements after the roll out of the plan is complete. The Commission has noted that billing efficiency should increase to 98% and collection efficiency to 95%.

Since the issuance of the order by UPERC in November 2018, it is not known if progress reports have been submitted by the DISCOMs as none can be found in the public domain (UPERC's or DISCOMs' websites). Presently, UPERC has only set a target for collection and billing efficiency, but it needs to be stated as to what happens if these standards are not met. Given the crucial nature of these parameters, the Commission should also clearly define and specify the standardized methodology to estimate billing and collection efficiency.

Moreover, it is unclear how costs would be allocated. For instance, if the costs are passed on as Operation and Maintenance costs, and meter adoption does not result in increased revenue realization, will these costs be entirely passed through to consumers? If so, there will be significant increase in consumer tariffs. It is also uncertain if this cost will be recovered as meter charges in bills of specific consumers or if the cost will be socialized among all consumers through a tariff increase. Further, it is not known if there will be a mechanism for gain and loss sharing (akin to the treatment of distribution losses in the Multi-Year Tariff Determination framework) given this investment.

Before the tariff process for FY 21 is initiated, the Commission needs to formulate a framework for evaluation of costs and benefits of this project for improvement of billing and collection efficiency, keeping in mind other required investments. The Commission would also need to deliberate on methodologies to quantify larger benefits to the DISCOMs due to any increased data intelligence on consumption patterns. Besides verification of costs and benefits, such a framework should also approve methodology for the treatment of costs over and above the realised benefits. Given the potential impact on DISCOM finances, consumer service and tariffs, the framework should be finalised through a public process.

Since large scale installation of smart meters by public DISCOMs is still a relatively new step, it is crucial that UPERC puts in place a regulatory framework which can also be adopted by other states. Since installation of meters are already underway in Uttar Pradesh, for greater clarity on treatment of costs, and better idea on benefits, it would be good if at least in the initial years, this periodic evaluation takes place through a separate process rather than approved through the larger tariff determination process.

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ⁱⁱ This article is part of an ongoing series called Power Perspectives which provides brief commentaries and analysis of important developments in the Indian power sector, in various states and at the national level. The portal with all the articles can be accessed here: <https://prayaspune.org/peg/resources/power-perspective-portal.html>
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