

Loksatta, December 20, 2020

Mahavitaran's problems of agricultural supply and long term solutions

By Priya Jadhav

The last month has seen much discussion on the precarious financial state of the Maharashtra State Electricity Distribution Company Ltd. (MSEDCL), or Mahavitaran. A major part of this was said to be due to farmers not paying their bills. Yesterday, Shri Vishwas Pathak wrote here that the former Power Minister Shri Bawankule asked that farmers not be disconnected for non-payment in light of their difficult circumstances in a period of drought, which resulted in them defaulting.

In general, farmer tariffs are low enough that even if all farmers paid up the collection would cover less than 25% of the total cost of supply. This has been the state for decades, with the additional cost being covered by the government and through cross-subsidy from other consumers. In any case, the Hon. Minister should have recompensed Mahavitaran from the state budget. However, there have been questions about the actual figures regarding agricultural electricity consumption as claimed by MSEDCL with two studies having been conducted by experts over the last five years to determine this figure.

However, regardless of who pays for the agricultural electricity, many inefficiencies exist in the system. Reactive power loss and Distribution Transformer breakdown, are two issues that can be fixed through the use of capacitors - a simple and low-cost solution. Both of these problems add high maintenance costs to Mahavitaran, and are a cause for voltage problems and lack of supply in the peak rabi season.

One positive development is that the number of agricultural connections has gone up substantially as pointed out by Shri Vishwas Pathak. He has also written about HVDS (High Voltage Distribution System). While this system does result in good voltage supply, it is an expensive technology, and cannot be given to all farmers. Considering the high cost the government has limited this to farmers who are close enough to the High Tension feeders. A farmer who has a water source cannot afford not to irrigate, and they will draw energy by hooking. In fact, this is the ground reality. Hence, energy is being drawn by farmers whether sanctioned or not, but unfortunately, because the distribution conductors and transformers are not designed for that load, all farmers suffer from system breakdowns, and also add to maintenance costs for the state. Mahavitaran needs to find an effective method to give connections at low costs.

The number of wells has increased over the years and the network has developed haphazardly over the years, resulting in poor voltages, and increased energy loss on the conductors. A restructuring of the Low Tension conductors (network) can result in good voltage supply to all farmers, and low cost connections. Additionally, if farmers on a Distribution Transformer coordinate on pump usage timings, infrastructure costs for new connections can further reduce. The Centre for Technology Alternatives for Rural Area, IIT Bombay (CTARA) is conducting research in this area, but there is need for much more.

Solar photovoltaic energy has a very low feed-in tariff at present. But in case of Solar Agricultural feeders, where small plants (3 – 8 MW) are connected at the substation level, the total system cost depends on the configuration of that particular local system. Only a modelling exercise of that local system will reveal if the cost of power is lowered by using the solar Ag feeder configuration. For this Mahavitaran needs to publish energy and power drawl by Ag and non-Ag sources, infrastructure,

and other data, down to the district and substation level, so that engineering institutes and colleges can conduct such studies.

In fact, as an example, such data would have made it possible to analyse the economic downturn and recovery at the district level in the current COVID crisis.

Most solutions are not one-size fits all, but need analysis. Unless data is made available in the public domain, academics and experts will not be drawn into analysis and are thereby unable to propose better solutions.

For example, the possible privatisation of MSEDCL calls for a careful investigation of the effect it may have on cropping patterns in the state. In many rainfed areas, farmers need one or two irrigations for kharif (monsoon) crops, but these protective irrigations are crucial. A distribution company that runs on market principles will find it unviable to serve such farmers, putting a question mark on the livelihood of a large proportion of farmers in the state. Agricultural electricity supply has an important role as a public system.

Short-term sops and Beneficiary-waad will not lead to a better system for the farmers. Hard analysis based on ground level data and the involvement of more experts in the business of the state will. Considering the looming threat of privatization, all technology and policy solutions should be investigated to bring MSEDCL back to a profitable state.

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