Maintaining a steady revenue stream is one of the key challenges faced by renewable energy-based microgrid operators when electrifying the unserved and underserved population of the country. Difficulties in revenue collection and payment defaults are some of their most important concerns since rural consumers have limited resources and often suffer from liquidity constraints. Moreover, the revenues are not substantial and need to be collected at short intervals. In such a scenario, the existence of a medium- to large-scale commercial load in and around these communities/rural areas can act as a major source of comfort for microgrid operators in terms of securing revenues.

Telecom tower sites, in particular, are rapidly emerging as anchor loads for microgrids. Telecom tower operators face a major issue in getting reliable power supply, particularly in the rural areas. Moreover, energy costs typically constitute around 40 per cent of the operational costs of tower sites. The issue is exacerbated with the energy requirements increasing with the introduction of new technologies and the expansion of the rural telecom subscriber base.

Meanwhile, with power supply in rural areas remaining a challenge, diesel continues to be used as the major source of power. However, diesel is an expensive and polluting fuel, which typically costs over Rs 15 per unit. Pilferage of diesel is another problem. As per market experts, this increases the cost of generation by another Rs 2-Rs 3 per unit. Therefore, telecom tower operators have started devising strategies for effective energy management and use of alternative energy sources.

Another factor that strengthens the business case of telecom towers is the Telecom Regulatory Authority of India’s mandate that at least 50 per cent of rural cellphone towers and 20 per cent of urban towers should be supplied hybrid power by 2015. Further, by 2020, 75 per cent of rural towers and 33 per cent of urban towers are expected to be powered by hybrid energy. A hybrid solution could comprise power from renewable sources and grid electricity.

In this scenario, microgrid operators fit this niche well. In fact, many of them, including Omnigrid Micropower Company (OMC) Power, DESI Power and Gram Power, have already been supplying power to telecom tower sites. Renewable energy service company (resco) OMC, for instance, sells power to both mobile networks and rural communities. For mobile network operators, OMC’s per unit tariff decreases as site load increases and as more customers sign up for the service. For communities, power distribution revolves around the concept of power on

demand. It is supplied as wired (minigrid) or packaged power. OMC's micropower plants are based on solar, wind and biogas, and have a battery bank, generators for backup and a power management system for optimal energy efficiency and remote access.

DESI Power is involved in the setting up of mini- and microgrids to deliver power to customers, including telecom towers. The company has different models for revenue collection. For telecom towers, the bill is collected on a monthly basis. Gram Power's smart microgrids provide on-demand, reliable power to telecom towers and rural households under a prepaid purchase model.

In 2012, the Tower and Infrastructure Providers Association had backed the resco model for the procurement of green energy for telecom tower sites. As per the model, the tower companies were to be the anchor customers and the rescos would provide surplus power to the surrounding rural communities through a separate/ direct engagement with them. To this end, a request for proposal had also been floated for a pilot project. However, the proposal failed to garner interest from the industry. Although discussions were held with around 70 applicants, only two companies were finally engaged. Thus, while the model is being adopted at a micro level, large-scale adoption is yet to be witnessed.

In sum, one of the foremost barriers faced by renewable energy microgrid operators is the absence of business models or revenue streams that would ensure cost recovery in reasonable time frames. In this context, having telecom towers as anchor loads is a win-win solution for telecom site operators as well as for microgrid operators. The industry can play a productive role in not only scaling up the operations of these players but also in improving the economics of their business models.

About Us We are Hiring Contact Us

Subscribe Privacy Policy Advertise Terms & Conditions

Copyright © 2010, tele.net.in All Rights Reserved