

Archana G. Gulati, Joint Administrator, Finance, Universal Service Obligation Fund

The telecom sector is the third largest consumer of diesel in India after defence and the railways. The demand for the fuel is set to escalate with an increase in the number of telecom towers in the country from 500,000-600,000 in the near future. According to the Cellular Operators Association of India, a shared site consumes 3,000 litres of diesel per annum. The situation is likely to worsen with rural areas expected to drive sector growth because almost all rural sites use DG sets for 10-16 hours daily, and at least 40 per cent of villages have no access to grid power.

Besides helping operators to expand their reach to these areas, tower sites in the hinterland facilitate power supply to unelectrified villages. Following the rural expansion ventures of the telecom companies, "community power" is emerging as an important concept. It explores the possibility of renewable energy (RE)-powered mobile sites acting as an anchor for demand and a revenue stream for stand-alone off-grid power stations. These power stations can cater to the requirements of the site and surrounding communities. This concept can be a win-win solution for both the telecom operator as well as the village. The model works best when implemented by a professional third-party energy service company.

USO Fund

The Universal Service Obligation (USO) Fund aims to facilitate the provision of telecom services in rural and remote areas at affordable prices. The role of the USO Fund is to identify the problems and suggest solutions for the same. Power availability is a key issue in providing telecom services in rural areas. Power is an essential element for rural telecom as it is required at both the service provider and subscriber ends. It is also a significant cost component of rural telecom networks, constituting 70 per cent of the opex for rural sites. Grid power availability in rural India is limited, erratic and unreliable, which calls for alternative sources. Diesel, which is currently the most favoured alternative fuel, is expensive, has a complex supply chain, involves pilferage issues and is a major source of pollution.

The solutions that the USO Fund could provide include encouraging the use of energy efficient infrastructure and RE by providing subsidies, and discouraging the use of diesel generators. A key issue faced by operators is the non-standardisation of equipment across their networks.

Standardisation will accelerate growth by providing operators with economies of scale and low unit costs. However, the market has been innovating rapidly and is in a growth phase. Forcing standardisation may discourage innovation and thus hinder growth. Also, the base transceiver stations (BTSs) vary according to their locations and markets, and hence it is very difficult to choose "one size fits all" solutions. Moreover, if the USO Fund selects or promotes specific designs and products, the decision on equipment procurement shifts away from mobile network operators and tower companies, who know the micro issues.

Currently, several USO Fund-led initiatives that are directed towards the subscriber are under implementation or at planning stages. Subsidy on the use of solar energy for digital satellite phone terminals and new village public telephones (VPTs) in uncovered villages is one such step. The USO Fund, in collaboration with the Ministry of New and Renewable Energy (MNRE), provides subsidy for setting up solar chargers at the 50,000 existing VPTs. A similar subsidy is provided for building solar mobile charging stations in 5,000 villages in partnership with The Energy and Resources Institute's LaBL project. The fund has also launched a programme to set up rural women's self-help group-run mobile charging stations under the Department of Telecommunications (DoT)-USO Fund gender budget programme. It also provides subsidy for installing solar panels at satellite broadband kiosks in remote villages.

At the service provider's end, the USO Fund mandates infrastructure sharing and recommends the setting up of outdoor BTSs. In the future, the fund would provide subsidised RE installations to 28 shared mobile infrastructure sites across 27 states under the RE pilot for the Mobile Phase 1 scheme. The pilot will establish the technical feasibility and financial viability of RE use at shared rural sites. Under this scheme, solar or solar-wind hybrid projects would be implemented in Madhya Pradesh, Orissa, Gujarat, Tamil Nadu, Karnataka, Maharashtra, Andhra Pradesh, etc. Also, planned mobile infrastructure programmes aim at meeting at least 75 per cent of the electrical load at a telecom site from RE sources. The USO Fund plans to provide a subsidy of 40 per cent on the capex for installing the RE capacity.

For RE to succeed in rural telecom, it is mandatory that it wins on cost efficiency considerations. Subsidised pilot schemes can establish practical workability and could help increase production volumes initially to drive down costs. But in the long run, the model needs to become profitable on its own as perpetual dependence on subsidy is unfeasible. Localised community power solutions are attractive, with telecom sites serving as anchor tenants, and can benefit from the MNRE-USO Fund subsidy, but these too must be self-sustaining in the long run.

[About Us](#)

[We are Hiring](#)

[Contact Us](#)

[Subscribe](#)

[Privacy Policy](#)

[Advertise](#)

[Terms & Conditions](#)

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

