

FTTH dream team: Telcos and power companies



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European Commission (EC) targets for gigabit connection speeds plus consumer demand for fast connections are spurring an interest in widespread FTTH rollout. But, the high costs of FTTH means that savings must be made to ensure scheme viability.

By Rod Parker, Manager at Analysys Mason

An electric power infrastructure allows FTTH to be deployed more cost effectively than a new build, with overhead poles better for rollout than underground ducts, particularly in rural and suburban areas. The EC's Cost Reduction Directive encourages different infrastructure providers to share their infrastructure. However, to enter the FTTH market, power companies must be sure they won't compromise the availability of power services or safety.



In the wholesale model, telcos access network services from the power company, meaning the latter doesn't need to provide a full end-to-end service. The power company can also sell network services to multiple retail providers, giving them an alternative to the incumbent's access infrastructure.

The leasing model has lower investment risks but higher operating risks for the power network, as it gives telcos access to its poles and ducts. Telcos that are planning their own access networks can reduce costs and simplify the process of gaining access rights.

The right model

Four possible business models can facilitate FTTH deployment by a power company on its own or in partnership with one or more telcos.

In the integrated model, the power company goes it alone and provides an end-to-end service that can potentially yield higher revenues. But, it bears a bigger investment risk that's exacerbated by a lack of telco skills.

The joint venture (JV) model shares the investment risk between the power company and a telco. It brings the telco skill set into the mix, enables both the network and retail facets of the business to function effectively, and works well with the wholesale model.

Examples of success

Telcos with access to a power infrastructure through a wholesale model, JV, or a combination of both have the best chance of success, providing that the operating model suits both parties.

SIRO in Ireland and OpEn Fiber in Italy are good examples of strong partnerships. SIRO is a JV between the power company ESB and Vodafone. Majority-owned by the Irish government, ESB issued tenders in 2012, aiming to find a partner to deploy an FTTH

network using its network infrastructure. After Vodafone's successful bid, SIRO was formed in 2014 to build and manage an FTTB network. The JV provides a 100 percent FTTB broadband network, offering open access to all authorized broadband providers in Ireland and allowing consumers and businesses to sign-up to SIRO through their service provider.

Enel, a major power company in Italy, set up Enel Open Fiber (EOF) in December 2015 to deploy FTTH. At the end of 2016, Metroweb was incorporated into the renamed OpEn Fiber (OF), which now uses Enel's power infrastructure to provide FTTH. Much like SIRO, OF is active in the wholesale market and doesn't sell broadband services directly to end users.

Generally, fiber can be installed below the power lines in a well-designed overhead power distribution network, which is exactly what OF did throughout its network. It's also more suitable for rolling out FTTH than an underground scheme, especially in suburban and rural areas where overhead power deployment is prevalent and cost savings are higher.

Underground power networks often encounter more issues due to a lack of spare ducts or because the network is buried rather than ducted, which often occurs at the last drop to the customer. Blockages and collapsed ducts are also common problems. OF is planning to roll out broadband networks in 250 cities and regions in Italy, which requires robust FTTH ODNs. OF has found reuse potential to be much lower in underground networks than overhead ones.

Huawei's in-house modeling framework calculates the cost of FTTH deployment in different urban, suburban, and rural scenarios after considering different reuse factors. Using the infrastructure of power companies is likely to provide the biggest cost benefits in suburban and rural schemes where overhead deployment is more widespread. While

the cost per home for FTTH deployment depends on location, reusing infrastructure can slash costs. In rural scenarios, cost savings can reach 45 percent.

So far for OF, Huawei has deployed its N2510 intelligent optical fiber solution for O&M and assurance in nine Italian cities, helping the JV accelerate acceptance testing, perform intelligent maintenance, and rapidly and precisely locate faults, overcoming traditional problems with ODNs and lowering TCO.

Three things to keep in mind

We've identified three key considerations for partnerships between power companies and telco partnerships in the FTTH market. One, a power network can provide a more universal network or be better suited to FTTH rollout in certain locations based on space availability and infrastructure robustness. This could be attractive to incumbent telcos that want to provide a more universal service. For alternative telcos, deploying FTTH based on power networks may provide access to better products and more attractive pricing. It can also stimulate competition in a way that benefits policy makers.

Two, each of the four business models has its own strengths and weaknesses. Partners need to select the option that best meets their mutual objectives and reflects market conditions like the availability of partners and competing infrastructure.

Three, not all of a power network will suit FTTH deployment, with underground infrastructure likely to be more problematic.

When developing its business case, a power company and its telco partner need to be realistic when assessing what proportion of its network is reusable and where it will need to build new infrastructure. [www](#)