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Report puts Â£28.8bn price tag on FTTH

Rolling out true fibre-to-the-home (FTTH) to 21 million households in the UK could cost as much as Â£28.8 billion (â‚¬36 billion), according to a report published this week by the Broadband Stakeholder Group (BSG) — the UK government's advisory group on broadband issues.

The report, produced by Analysys Mason for the BSG, sets out the costs of the various technology options in detail and explains how those costs mount up as fibre is pushed out across the country. It suggests that rolling out fibre nationwide would cost between Â£5.1 bilion and Â£28.8 billion, depending on the technology used, and that the costs of deploying in rural areas will far exceed the costs in urban areas.

The report is significant because it gives a detailed breakdown of actual costs for rolling out fibre-optic infrastructure nationwide. Other countries have performed similar studies, but the results are not usually made publicly available.

A key conclusion of the BSG report is that the national deployment of true fibre-to-the-home (FTTH) would cost over five times more than a network comprising fibre-to-the-cabinet (FTTC) combined with VDSL over the existing copper cable from street cabinets to the home.

FTTC/VDSL is the cheapest broadband option for the UK, costing Â£5.1 billion. To put this in perspective, this is still three or four times more than the UK telecoms sector spent deploying today's broadband services, says the BSG. Point-to-point fibre is the most expensive option at Â£28.8 billion.

The report comes only two months after UK incumbent operator BT unveiled plans to invest Â£1.5 billion in what it calls "super-fast broadband" based predominantly on FTTC/VDSL. No doubt BT, its wholesale broadband customers and alternative UK operators will be considering the implications of the BSG report in detail as they formulate their broadband strategies.

"This is the most comprehensive analysis produced to date on the costs of deploying fibre in the UK", claims Antony Walker, chief executive of the BSG. "It should focus minds of commercial players, policy makers and regulators on the

potential solutions to these challenges."

Why is FTTH so expensive? It won't come as a surprise to learn that: "The largest single cost component is the civil infrastructure (the cost of deploying and installing the fibre in new or existing ducts)," according to the BSG report.

The long-term view

However, Hartwig Tauber, director general of the FTTH Council Europe, feels that the BSG report falls short because it focuses on deployment cost, and in doing so misses out a number of important considerations in the business case for true FTTH.

"If you talk to incumbents such as Deutsche Telekom or France Telecom they say they know that FTTH will be the end-game solution, they say they will have to build it in the next five to ten years," Tauber says.

The active equipment may become cheaper in future, but the biggest cost element in rolling out FTTH — the civil works — is not likely to change, he notes. Sooner or later, network operators are going to have to bite the bullet and upgrade to FTTH. So the longer they wait, the longer they'll have to wait to recoup their investment.

The knowledge that FTTH is the end-game raises another question: if an operator invests in the intermediate solution of a FTTC/VDSL network, and then afterwards has to invest again in a FTTH network, will that operator have time to make enough money from its FTTC/VDSL investment before it has to dig deep in its pockets again for FTTH? This upgrade scenario was completely left out in the study, says Tauber.

Tauber also points out that the BSG report makes an important assumption, namely that the operational costs of a FTTH network will be 30% less than a VDSL network, but it doesn't really investigate what this means in the long-term, especially in terms of energy costs, which have been rising far faster than inflation in the UK.

"We know that VDSL technology needs a lot of power, not only for the technical equipment but also for acclimatisation equipment of the street cabinets," Tauber explains.

"What is also not taken into account is — and maybe it wasn't asked for in this study — is the environmental issues. [Given that VDSL] has so much power consumption, then really the question is if VDSL is a sustainable technology for such a project."

About the author

Pauline Rigby is editor of *fibresystems.org*.